CERTIFICATE OF APPROVAL
No CF 386

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

SCHOTT UK LIMITED

Drummond Road, Stafford. ST16 3EL
Tel: 01785 223166 Fax: 01785 223522

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT	TECHNICAL SCHEDULE
'PYRANOVA® S2.0/2.1' Fire Resisting Glass	**TS 25 Fire Resistant Glass, Glazing Systems and Materials**

Signed and sealed for and on behalf of Exova (UK) Limited trading as Warrington Certification

Paul Duggan
Certification Manager

Issued:	12th April 2005
Revised:	21st December 2017
Valid to:	17th August 2020

CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0/2.1 Fire Resisting Glass

This Certificate of Approval relates to the fire resistance of SCHOTT UK Limited 'PYRANOVA® S2.0/2.1' laminated glass products when used in the following applications, as defined in BS EN 1364-1: 1999 subject to the undermentioned conditions.

Glass Specification	Application	Fire Resistance Performance (mins)		Page No.
		Integrity	Insulation	
PYRANOVA® S2.0.7	Timber based door leaves	30	0	5
PYRANOVA® S2.1.11	Timber based door leaves	30	0	6
PYRANOVA® S2.0.7	Timber framed screens	30	0	7
PYRANOVA® S2.0.7	Timber framed fixed lights	30	0	8
PYRANOVA® S2.0.7	Steel framed screens	30	0	9
PYRANOVA® S2.1.11	Timber framed screens	30	0	10
PYRANOVA® S2.1.11	IGU's in Timber framed screens	30	0	11
PYRANOVA® S2.0.7/S2.1.11	IGU's in Steel framed screens	30	0	12
PYRANOVA® S2.0.11/S2.1.15	Timber based door leaves	30	Up to 30	13
PYRANOVA® S2.0.11/S2.1.15	Timber framed fixed lights	30	Up to 30	15
PYRANOVA® S2.0.11/S2.1.15	Timber framed screens	30	30	16
PYRANOVA® S2.0.11/S2.1.15	Steel framed screens	30	30	17
PYRANOVA® S2.0.11/S2.1.15	Timber based door leaves	60	0	18
PYRANOVA® S2.0.11/S2.1.15	Timber framed screens	60	0	20
PYRANOVA® S2.0.11/S2.1.15	Steel framed fixed lights	60	0	21
PYRANOVA® 30-S2.0/2.1	Timber based door leaves	30	30	22
PYRANOVA® 30-S2.0/2.1	Timber framed screens	30	30	23
PYRANOVA® 30 S2.0/2.1	Steel based door leaves	30	30	24
PYRANOVA® 30 S2.0/2.1	Steel framed screens	30	30	26
PYRANOVA® 30 S2.0/2.1	IGU's in steel based door leaves	30	30	27
PYRANOVA® 30-S2.0/2.1	IGU's in Timber framed screens	30	30	29
PYRANOVA® 30 S2.0/2.1	IGU's in metallic framed screens	30	30	30
PYRANOVA® 30-S2.0/2.1	IGU's inTimber framed screens	60	30	32
PYRANOVA® 30 S2.0/2.1	IGU's in metallic framed screens	60	30	33
PYRANOVA® 30 S2.0/2.1	Butt-Jointed in timber screens	30	30	34
PYRANOVA® 30 S2.1	Butt-Jointed in timber screens	30	30	36
PYRANOVA® 30 S2.0/2.1	Butt-Jointed in steel screens	30	30	38
PYRANOVA® 60 S2.0/2.1	Steel door leaves	60	60	40
PYRANOVA® 60 S2.0/2.1	Timber framed screens	60	60	41
PYRANOVA® 60 S2.0/2.1	Steel framed screens	60	60	42
PYRANOVA® 60 S2.0/2.1	IGU's in timber framed screens	60	60	43
PYRANOVA® 60 S2.0/2.1	IGU's in steel framed screens	60	60	44

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This product is approved on the basis of:

a) Initial type testing
b) A design appraisal against TS25
c) Certification of quality management system to BS EN ISO 9001: 2008
d) Inspection and surveillance of factory production control
e) Audit Testing in accordance with TS25

This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and Materials.

General Requirements

Where the glass is installed in a timber or steel framed screen, the orientation of the screen shall be no more than ±10º from the vertical.
There is no restriction to the direction of exposure for the glass. Orientation may, however, be restricted by the requirements of a non-symmetrical framing system or certain insulating glass unit specifications. The edge cover to each pane shall be no less than 12 mm minimum in all systems that utilise frames.

PYRANOVA® S2.0/2.1 Fire Resisting Glass

The glass is approved in the following nominal thicknesses:

Glass Specification	Application	Fire Resistance Performance (mins)	
		Integrity	Insulation
PYRANOVA® S2.0.7	7 mm thick (internal)	30	0
PYRANOVA® S2.1.11	11 mm thick (external)	30	0
PYRANOVA® S2.0.11	11 mm thick (internal)	Up to 60	Up to 30
PYRANOVA® S2.1.15	15 mm thick (external)	Up to 60	Up to 30
PYRANOVA® 30-S2.0	15 mm thick (internal)	30*	30
PYRANOVA® 30-S2.1	19 mm thick (external)	30*	30
PYRANOVA® 60-S2.0	23 mm thick (internal)	60	60
PYRANOVA® 60-S2.1	27 mm thick (external)	60	60

* May be used for 60 minutes integrity as part of an insulating glass unit

Maximum Cut Size of PYRANOVA®

The range of PYRANOVA® glasses is currently available up to a maximum size of 2900 mm by 1900 mm. The maximum available size will also vary depending on fire rating and therefore should be used for guidance only. Please check with the SCHOTT Technical Department.

Silk Screening and Sand-Blasting

The PYRANOVA® glass may be provided with silk screen printing with any colour from the 'RAL' range to either face within both single and insulating glass unit systems. The printing may account for any area of the glass.

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Similarly, sand-blasting may be included to either face of the glass. The sand-blasting may account for any area of the glass.

Additionally, sheets of plain, patterned, textured or coloured glass may be laminated to the base product. A silk sheet material may be included within the extra laminate/interlayer.

Alternatively, patterned, textured or coloured glass may be substituted for one of the 3 mm annealed float elements in the base product.

Butt Jointed Systems

The PYRANOVA® glass panes used in butt jointed systems may be substituted with thicker panes without compromising either the fire resistance performance, the maximum permitted glass dimensions or the butt joint specifications.

Multi-Paned Systems

PYRANOVA S2 products may be installed in multi-pane glazed screens incorporating transoms and mullions unless indicated otherwise.

Laminated PYRANOVA®

Additional glass from 6 to 19 mm thickness may be laminated to any thickness of PYRANOVA® glass using an interlayer from 0.38mm to 1.52 mm thickness.

PYRANOVA®, when laminated as described above, may be used in any timber or steel framed assemblies covered by this certificate but subject to a maximum pane size of 4.8 m^2.

Other Glass Combinations

PYRANOVA® glass products detailed in this Certificate are also suitable for use either in combination with or laminated to SmartGlass and/or X Ray glass and may be used as one or more panes of a fire tested Insulating Glass Unit construction.

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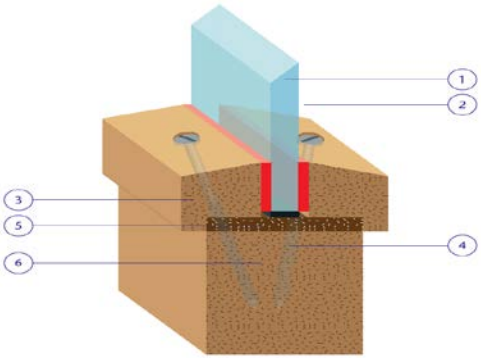
PYRANOVA® S2.0.7 glass (including IGU construction) in 44 mm thick timber based doorsets for periods of 30 minutes integrity

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



1 PYRANOVA® S2.0.7 glass

2 20 mm by 4 mm Kerafix Flexlit intumescent strip

3 Minimum 20 mm high by 30 mm wide square or chamfered hardwood or softwood glazing beads, flush or bolection glazed, minimum density 420 kg/m^3 or FORMline MDF E1 glazing beads, minimum density 600 kg/m^3

4 60 mm long steel screws or pins at 215 mm centres (30^o to glass)

5 Setting blocks 5 mm thick by 7 mm wide by 80 mm long.

6 Any 44 mm thick softwood FD30 door leaf minimum density 420 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.7 glass shown in Figure 5 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these glass dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

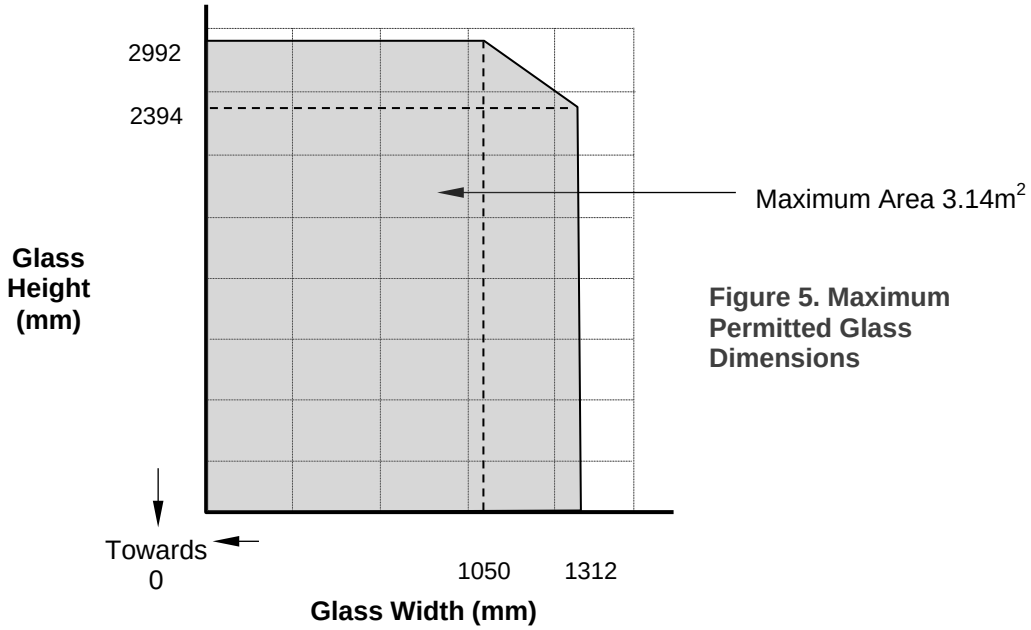


Figure 5. Maximum Permitted Glass Dimensions

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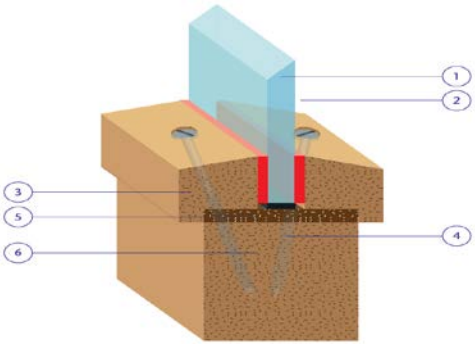
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.1.11 glass (including IGU construction) in 44 mm timber based doorsets for periods of 30 minutes integrity

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



1 PYRANOVA® S2.1.11 glass
2 4.3 x 20 mm Kerafix Flexlit tape
3 Minimum 22 mm high by 13 mm wide hardwood, softwood or FORMline MDF E1 square or chamfered glazing beads, flush or bolection glazed, minimum density 600 kg/m^3.
4 2.7 x 70 mm long steel pins or screws at 194 mm centres on the vertical edges and 166 mm on the top and bottom edges (approx 34^o to glass)
5 3 x 9 x 80 mm Flammi 12 non-combustible setting blocks
6 Any 44 mm thick CERTIFIRE approved FD30 timber door leaf

This Certificate of Approval relates to the sizes of PYRANOVA® S2.1.11 glass shown in Figure 6 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these glass dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

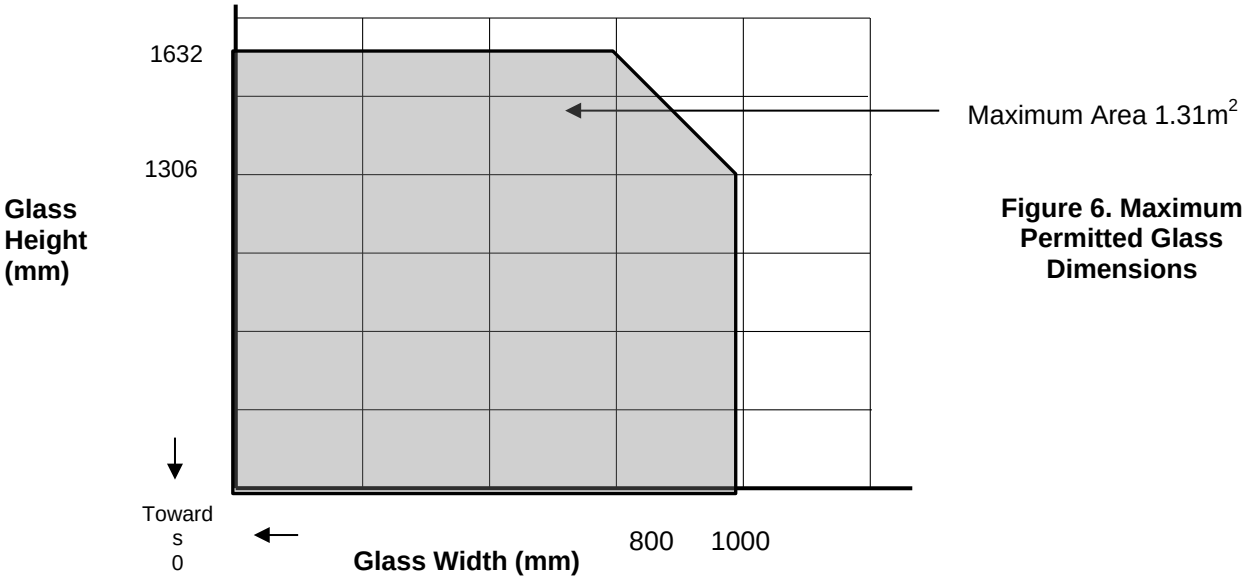


Figure 6. Maximum Permitted Glass Dimensions

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CERTIFICATE No CF 386
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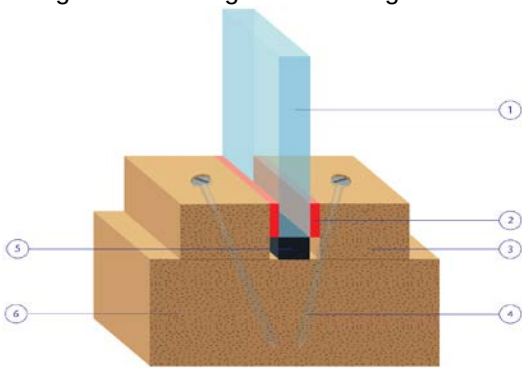
PYRANOVA® S2.0.7 glass (including IGU construction) in timber framed screens for periods of 30 minutes integrity

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.0.7 glass
2 20 mm by 4 mm ceramic fibre based tape
3 Minimum 20 mm high by 30 mm wide square or chamfered softwood glazing beads, flush or bolection glazed, minimum density 420 kg/m^3 or FORMline MDF E1 square or chamfered glazing beads, minimum density 600 kg/m^3
4 60 mm long steel screws or pins at 450 mm centres (30^o to glass)
5 Non-combustible setting blocks
6 75 mm by 40 mm softwood framing sections, minimum density 420 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.7 glass shown in Figure 1 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

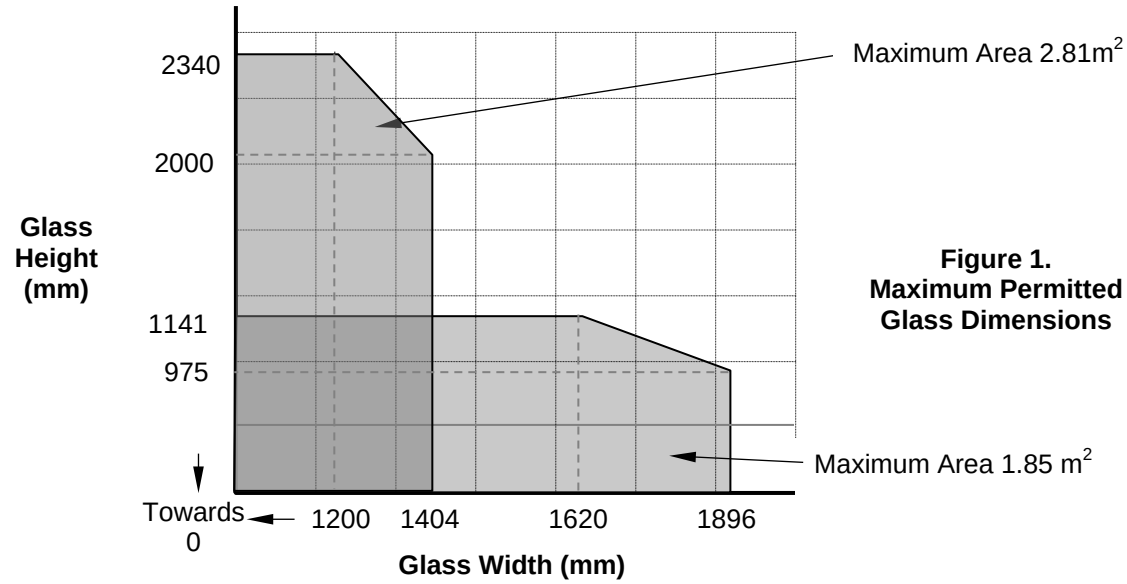


Figure 1. Maximum Permitted Glass Dimensions

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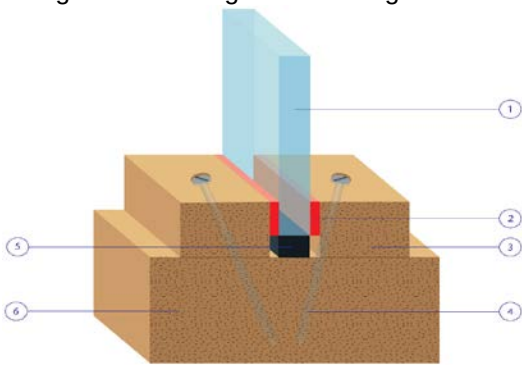
PYRANOVA® S2.0.7 glass (including IGU construction) in <u>single pane fixed</u> timber framed screens for periods of 30 minutes integrity

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.0.7 glass
2 20 mm by 4 mm ceramic fibre Kerafix 2000 tape
3 Minimum 20 mm high by 30 mm wide chamfered softwood glazing beads, flush or bolection glazed, minimum density 420 kg/m^3
4 60 mm long steel screws 450 mm centres (30^o to glass)
5 Non-combustible setting blocks
6 75 mm by 40 mm softwood framing sections, minimum density 420 kg/m^3

Note: bead to <u>fire side only</u> may be square and may be machined from solid without the need for screw fixings

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.7 glass shown in Figure 2 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

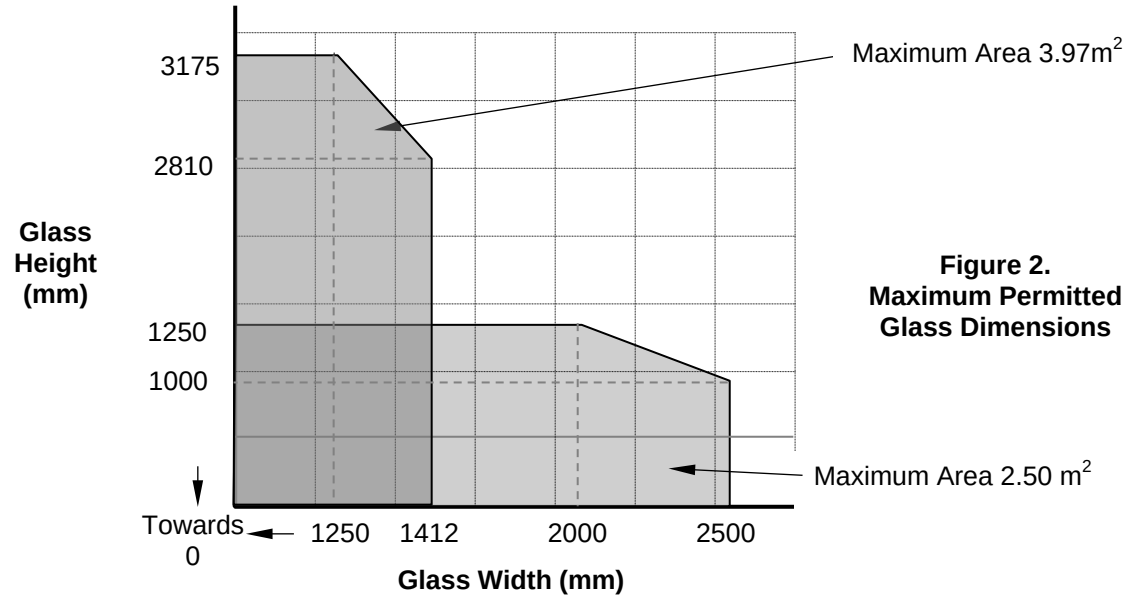


Figure 2. Maximum Permitted Glass Dimensions

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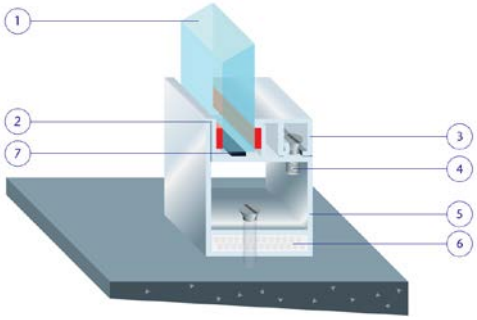
PYRANOVA® S2.0.7 glass (including IGU construction) in steel framed screens for periods of 30 minutes integrity

The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1 PYRANOVA® S2.0.7
2 Fiberfrax Glazing Tape 3 x 12mm
3 Steel glazing bead
4 Glazing bead screw
5 Steel frame profile
6 Frame insulation
7 Non-combustible setting block

The framing system shall have test evidence, such as Jansen Economy 50 (as detailed above), or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.7 glass shown in Figure 3 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

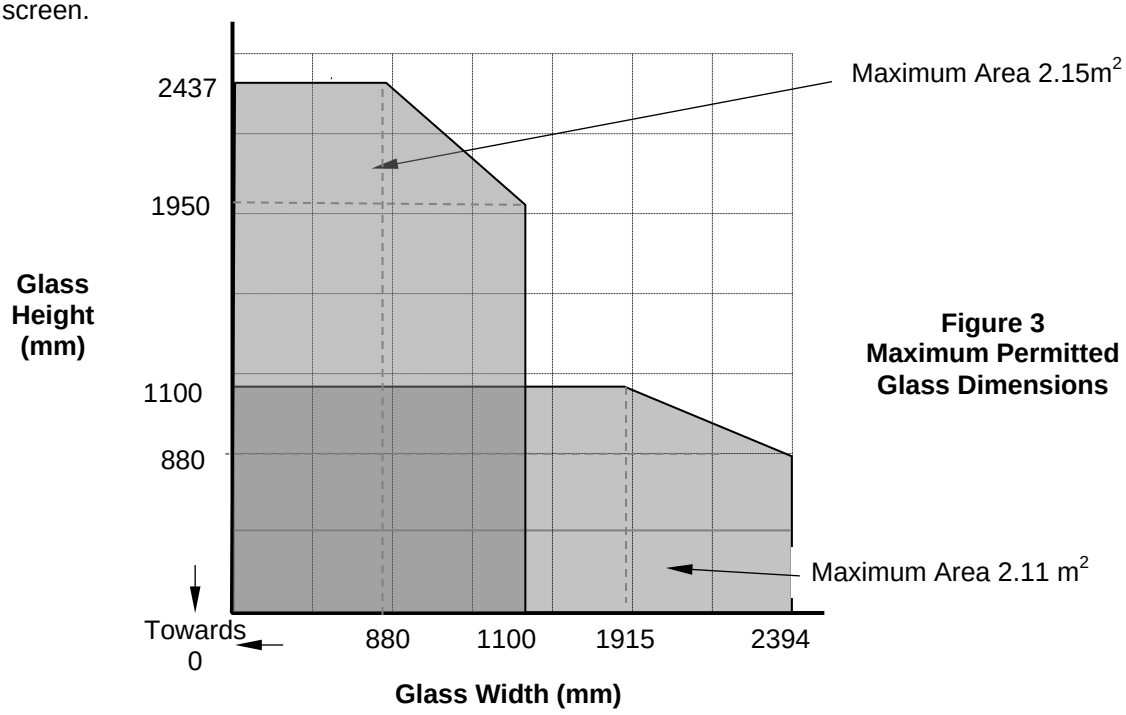


Figure 3 Maximum Permitted Glass Dimensions

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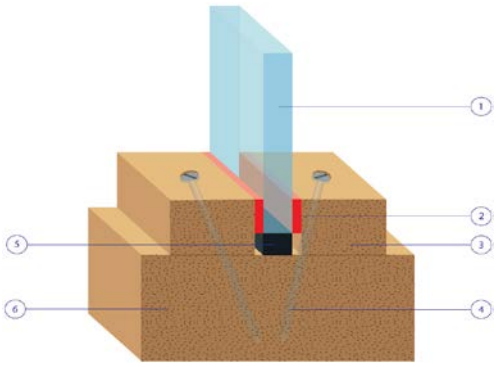
PYRANOVA® S2.1.11 glass (including IGU construction) in timber framed screens for periods of 30 minutes integrity

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.1.11 glass
2 20 mm by 4 mm ceramic fibre based tape
3 Minimum 20 mm high by 30 mm wide square or chamfered softwood glazing beads, flush or bolection glazed, minimum density 420 kg/m^3 or FORMline MDF E1 square or chamfered glazing beads, minimum density 600 kg/m^3
4 60 mm long steel screws or pins at 450 mm centres (30^o to glass)
5 Non-combustible setting blocks
6 75 mm by 40 mm softwood framing sections, minimum density 420 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.1.11 glass shown in Figure 4 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

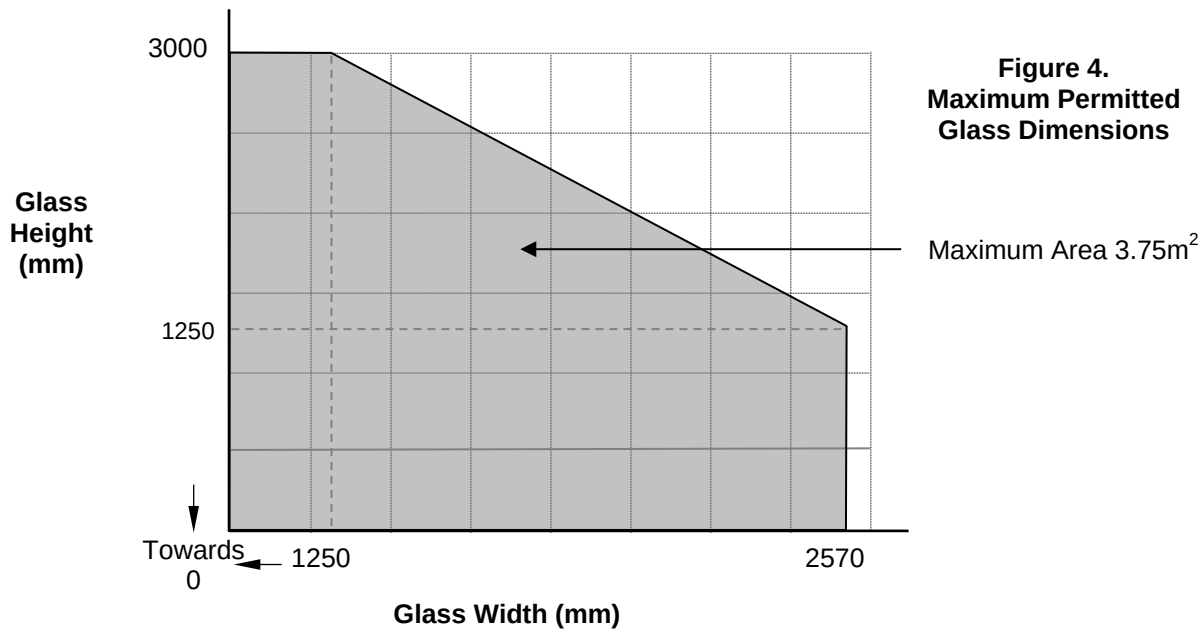


Figure 4. Maximum Permitted Glass Dimensions

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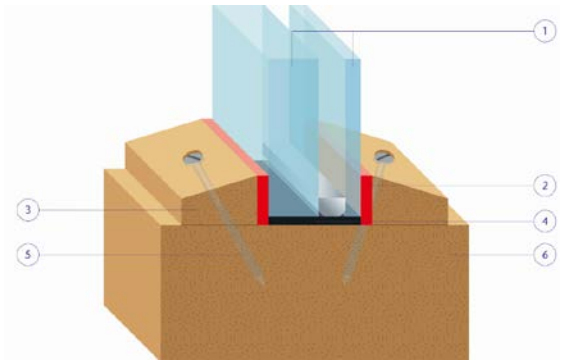
PYRANOVA® S2.1.11 ISO glass in timber screens for periods of 30 minutes integrity



1. IGU comprising PYRANOVA® S2.1.11 ISO, a 10 mm wide air cavity and 6 mm thick float glass
2. Kerafix 2000 ceramic glazing tape, 17 mm by 4 mm
3. Softwood beads, 420 kg/m^3 min. density, min. 20 mm high by 20 mm wide with a 20^o chamfer.
4. 60 mm long, 4.5 mm diameter screws or nails , 350 mm centres, fixed at 45^o.
5. Non-combustible setting blocks
6. Softwood, 420 kg/m^3 min. density, min. 75 mm by 40 mm

Note: non-combustible setting blocks may be used

This Certificate of Approval relates to the sizes of PYRANOVA® S2.1.11 ISO glass shown in Figure 7 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these glass dimensions.

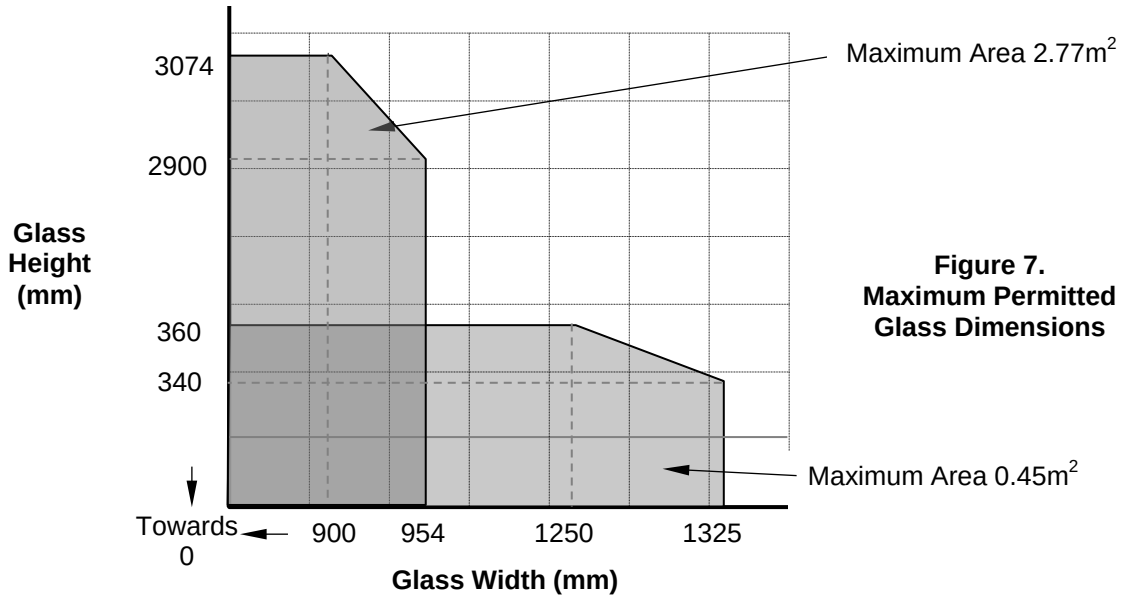


Figure 7. Maximum Permitted Glass Dimensions

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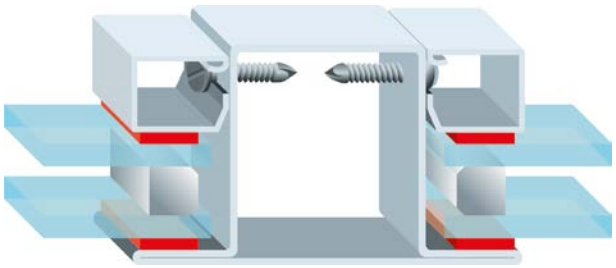
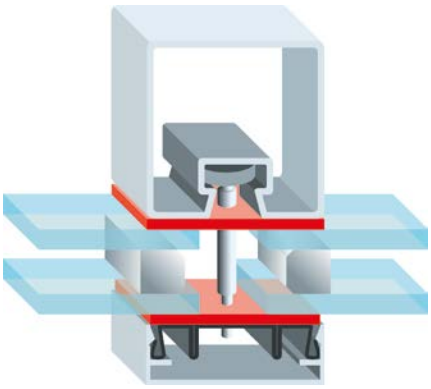
PYRANOVA® S2.0.7 and S2.1.11 ISO glass in steel screens for periods of 30 minutes integrity

The glass shall be glazed within a previously fire tested, such as Forster Thermfix Vario or CERTIFIRE approved steel framing system (pressure glazed systems only) utilising the following basic specification. The edge cover to each pane shall be no less than 12 mm minimum.





This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.7 and S2.1.11 ISO glass (comprising 10mm thick laminated glass, a 15 mm air cavity and 7 or 11 mm thick PYRANOVA® S2.0.7 and S2.1.) shown in Figure 8 below, when used in conjunction with the above system. Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. The aspect ratio of the glass may be unlimited within these glass dimensions.

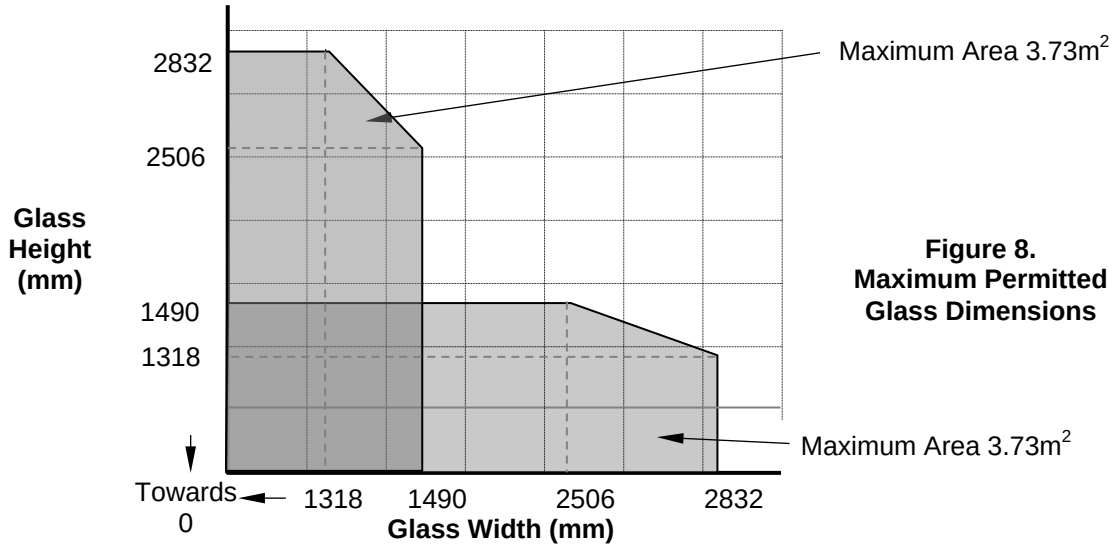


Figure 8. Maximum Permitted Glass Dimensions

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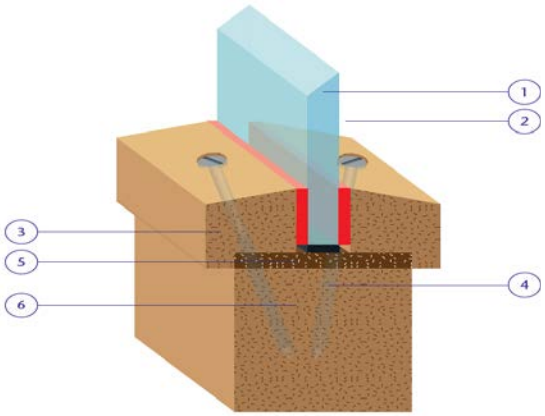
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass (including IGU construction) in timber door leaves for periods of 30 minutes integrity and 30 or 15 minutes insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



1 PYRANOVA® S2.0.11/S2.1.15 glass
2 12 mm by 3 mm Hodgson Sealants Firestrip 30
3 Hardwood glazing beads 25 mm high by 20 mm wide (minimum) including 9 mm high by 6 mm wide bolection, either square or up to 15° chamfer, minimum density 640 kg/m^3
4 45 mm long steel screws at 150 mm centres (30 - 45° to glass)
5 Non-combustible setting blocks
6 Minimum 6 mm thick hardwood aperture liner (not required on door leaves with a softwood / hardwood timber core of density > 550 kg/m^3)

- The doorset, including door frame and associated building hardware, should have achieved at least 30 minutes integrity (and up to 30 minutes insulation) when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987 or BS EN 1634-1: 2000.
- The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
- When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.
- The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 44 mm.
- When an alternative CERTIFIRE approved glazing system is used, the system shall have been shown to be capable of including PYRANOVA® glass. The maximum permitted aperture dimensions shall be as detailed below or included within the relevant CERTIFIRE certificate for the glazing system, whichever is the lesser.
- Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. This Certificate of Approval relates to the sizes of PYRANOVA® glass shown in Figures 1 and 2, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.
- **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

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CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass in timber door leaves for periods of 30 minutes integrity and 30 or 15 minutes insulation

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figures 9 and 10 below, when used in conjunction with the system detailed within the preceding figures:

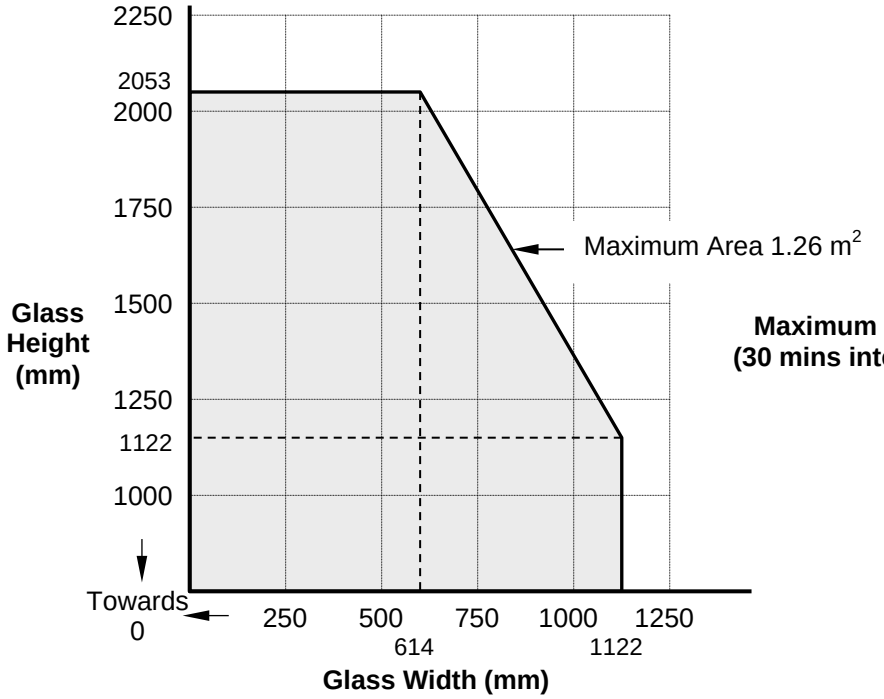

Figure 9.
Maximum Permitted Pane Dimensions
(30 mins integrity and 15 mins insulation)

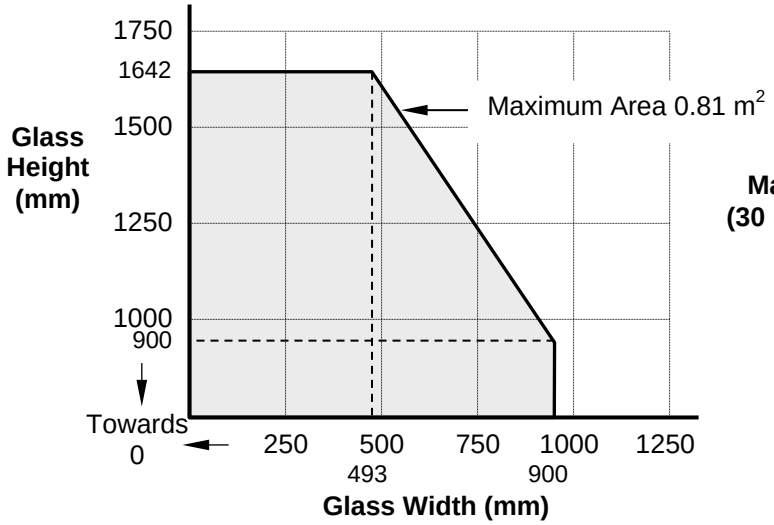

Figure 10.
Maximum Permitted Pane Dimensions
(30 mins integrity and 30 mins insulation)

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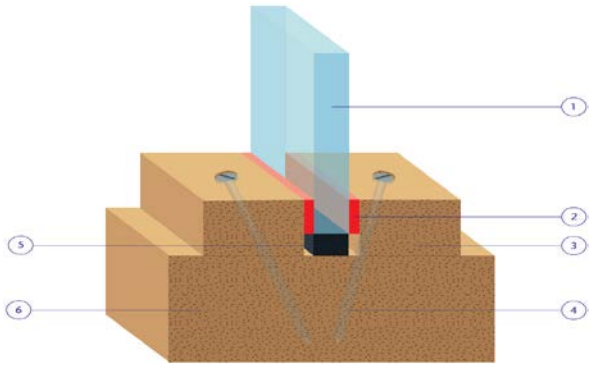
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass (including IGU construction) in timber framed fixed lights for periods of 30 minutes integrity and 30 or 15 minutes insulation

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.0.11/S2.1.15 glass
2 12 mm by 3 mm Hodgson Sealants Firestrip 30
3 21 mm high by 23 mm wide square or up to 15° chamfered hardwood glazing beads, minimum density 640 kg/m^3
4 51 mm long steel oval nails or screws at 150 mm centres (45° to glass)
5 Non-combustible setting blocks
6 79 mm by 45 mm (minimum) softwood framing sections, minimum density 450 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figure 11 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **This system shall only be used for single fixed lights, i.e transoms and mullions are not permitted. Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

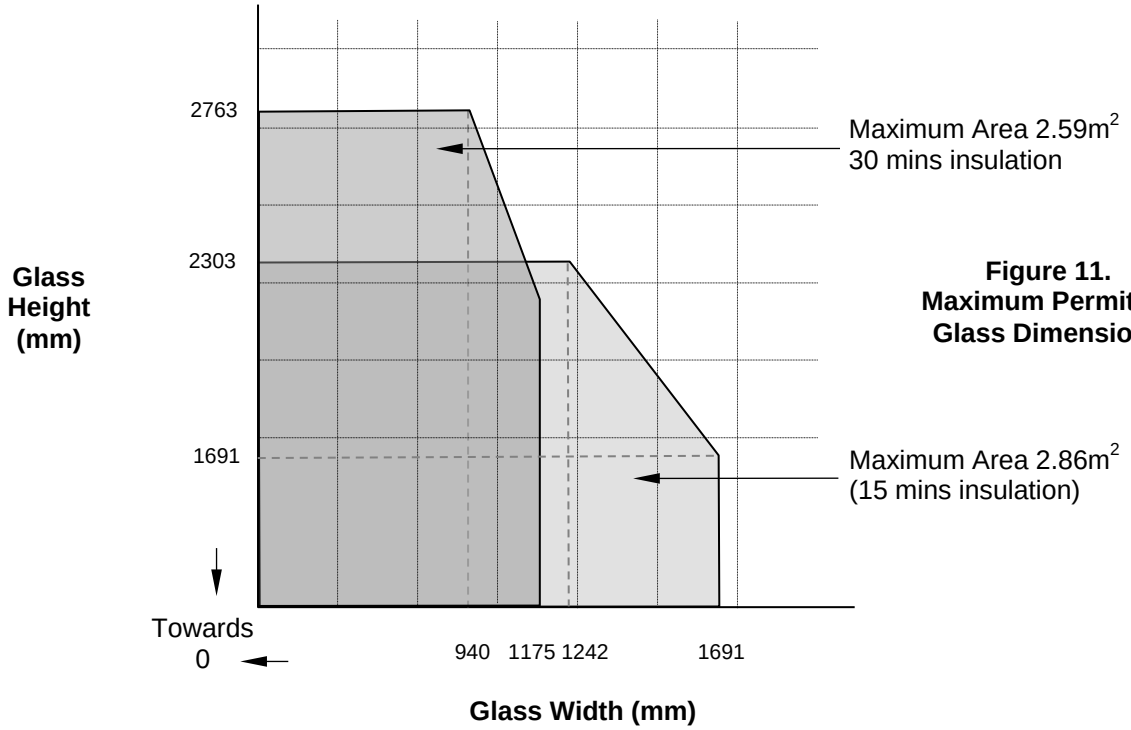


Figure 11. Maximum Permitted Glass Dimensions

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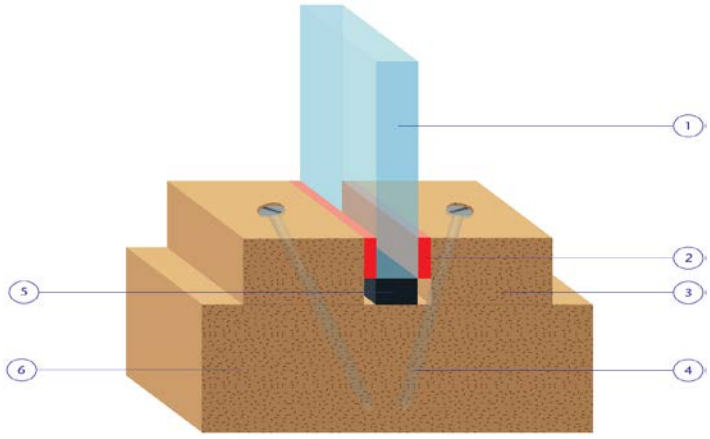
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass (including IGU construction) in timber multipaned screens for periods of 30 minutes integrity and 30 minutes insulation

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.0.11/S2.1.15 glass
2 12 mm by 3 mm Hodgson Sealants Firestrip 30
3 21 mm high by 23 mm wide square or up to 15° chamfered hardwood glazing beads, minimum density 640 kg/m^3
4 51 mm long steel oval nails or screws at 150 mm centres (45° to glass)
5 Non-combustible setting blocks
6 79 mm by 45 mm (minimum) softwood framing sections, minimum density 450 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figure 12 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

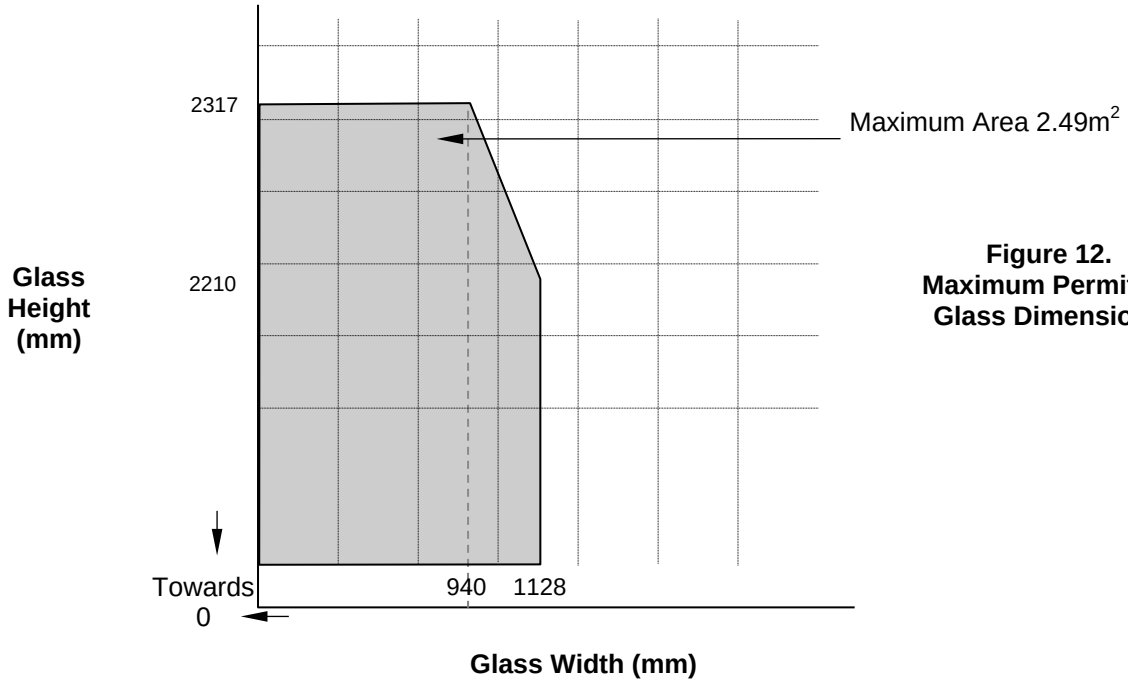


Figure 12. Maximum Permitted Glass Dimensions

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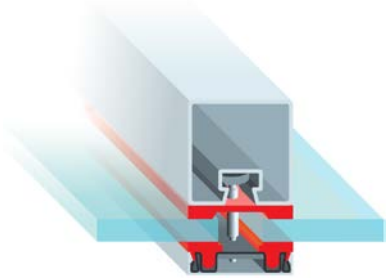
CERTIFICATE No CF 386
SCHOTT UK LIMITED

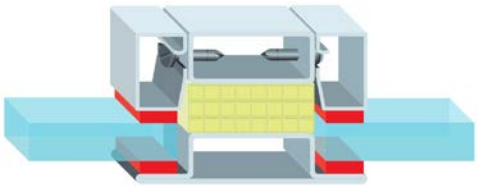
PYRANOVA® S2.0.11/S2.1.15 Glass in steel framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated steel framing system utilising the following basic specification:

- PYRANOVA® S2.0.11/S2.1.15 glass
- 15 mm by 6 mm ceramic fibre based glazing tape

The insulated steel framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. An example of a typical framing system is shown below.





This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figure 13 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

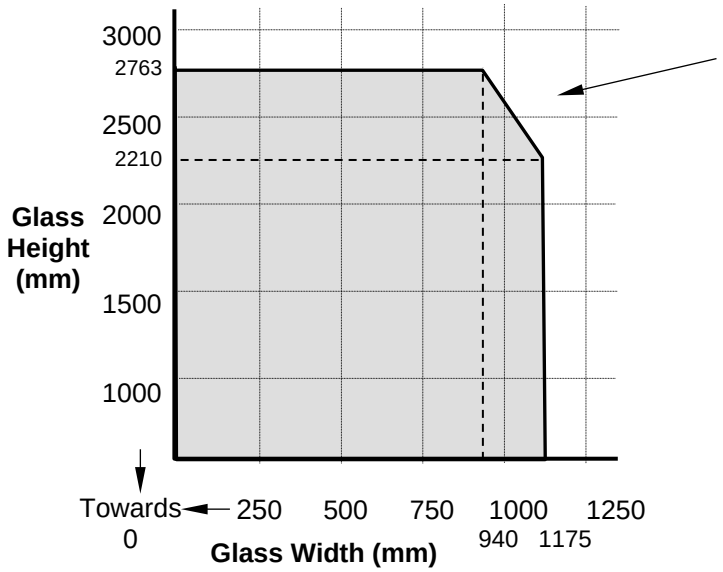


Figure 13. Maximum Permitted Glass Dimensions

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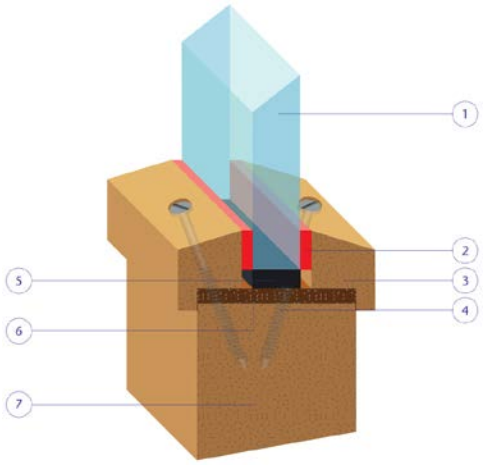
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass in timber door leaves for periods of 60 minutes integrity

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



1 PYRANOVA® S2.0.11/S2.1.15 glass
2 Lorient Rigid Figure 1, 25 mm by 4 mm
3 Hardwood glazing beads 25 mm high by 20 mm wide (minimum) including 6 mm high by 4.5 mm wide bolection, either square or up to 15° chamfer, minimum density 640 kg/m^3
4 60 mm long steel screws at 150 mm centres (30 - 45° to glass)
5 Palusol liner, 54 mm wide by 2 mm thick
6 FD60 Door Leaf

- The doorset, including door frame and associated building hardware, should have achieved at least 60 minutes integrity (and up to 60 minutes insulation) when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987 or BS EN 1634-1: 2000.
- The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
- When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.
- The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 54 mm.
- When an alternative CERTIFIRE approved glazing system is used, the system shall have been shown to be capable of including PYRANOVA® glass. The maximum permitted aperture dimensions shall be as detailed below or included within the relevant CERTIFIRE certificate for the glazing system, whichever is the lesser.
- Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. This Certificate of Approval relates to the sizes of PYRANOVA® glass shown in Figures 1 and 2, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.
- **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

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CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass in timber door leaves for periods of 60 minutes integrity

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figures 14 below, when used in conjunction with the system detailed within the preceding figures:

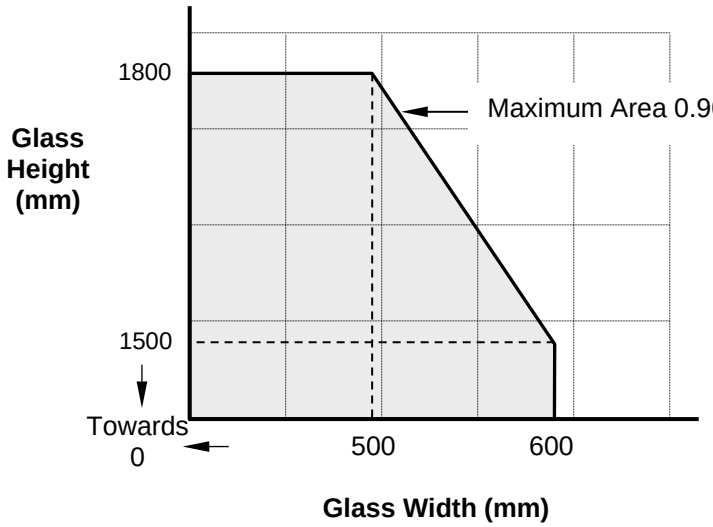

Figure 14.
Maximum Permitted Pane Dimensions (60 mins integrity)

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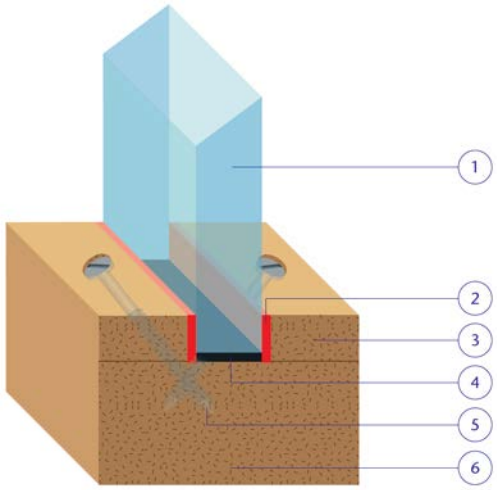
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass in timber screen for periods of 60 minutes integrity

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® S2.0.11/S2.1.15 glass
2 20 mm wide by 4 mm thick ceramic fibre based glazing tape
3 20 mm high by 30 mm wide square hardwood glazing beads, minimum density 600 kg/m^3
4 Non-combustible setting blocks
5 70 mm long steel screws at 200 mm centres (30^o to glass)
6 100 mm by 40 mm (minimum) hardwood framing sections, minimum density 600 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figure 15 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.

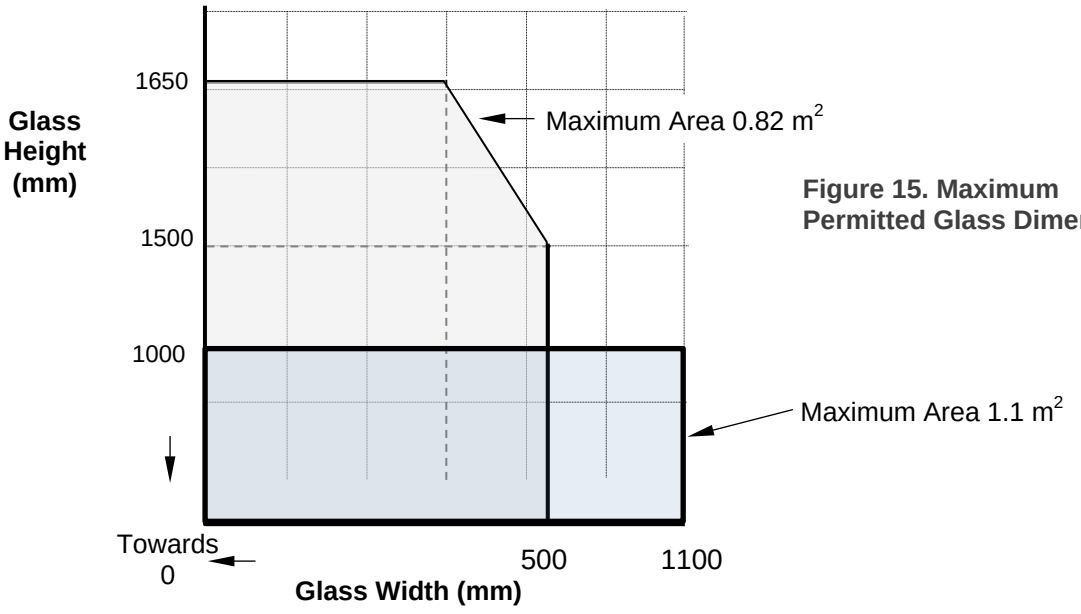


Figure 15. Maximum Permitted Glass Dimensions

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Valid to: 17th August 2020

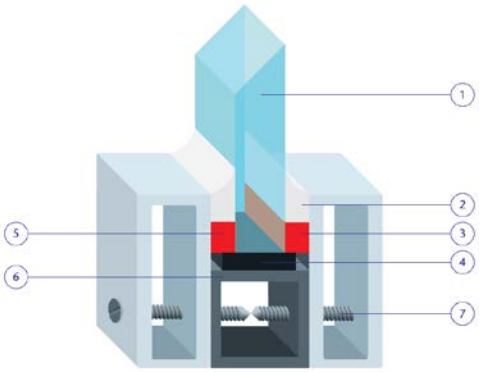
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® S2.0.11/S2.1.15 Glass in steel fixed light screen for periods of 60 minutes integrity

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated steel framing system utilising the following basic specification:

- PYRANOVA® S2.0.11/S2.1.15 glass
- 15 mm by 3 mm ceramic fibre based glazing tape

The insulated steel framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.
This Certificate of Approval relates to the sizes of PYRANOVA® S2.0.11/S2.1.15 glass shown in Figure 16 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note**: the glass in this application may be utilised as an IGU but in this case the non-fire rated glass component MUST be orientated to the fire exposed face of the screen.



1	PYRANOVA® S2.0.11/S2.1.15 glass
2	Neutral silicone capping
3&5	15 mm wide by 3-6 mm thick ceramic fibre based glazing tape
4	Non-combustible setting blocks
6	Steel Section 30 mm by 30 mm by 3 mm & 55 mm by 19 mm hollow steel box section
7	35 mm long steel screws at 250 mm centres

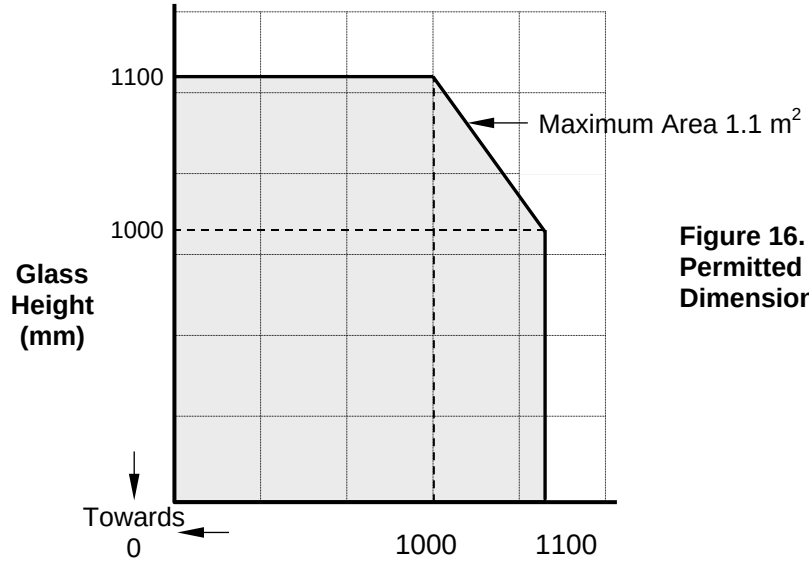


Figure 16. Maximum Permitted Glass Dimensions

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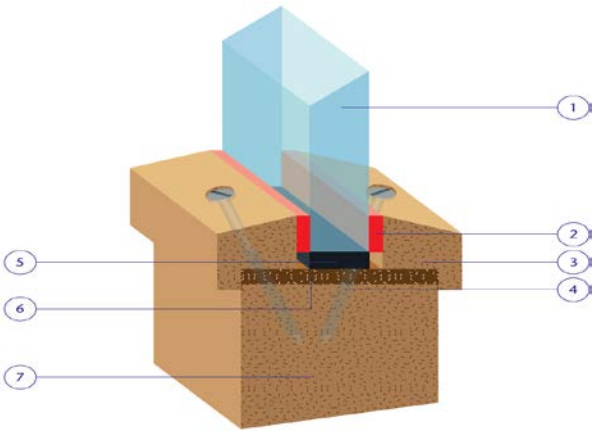
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Glass in timber door leaves for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



1 PYRANOVA® 30-S2.0/2.1 glass
2 9 x 3mm close cell tape
3 Softwood glazing beads 18 mm wide by 21.5 mm
4 60 mm x 4mm screws at ≤ 400 mm centres high (minimum)
5 Promatect H Non-combustible setting blocks
6 6 mm thick hardwood aperture liner
7 Nominally 44 mm thick FD30 door leaf

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 17 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

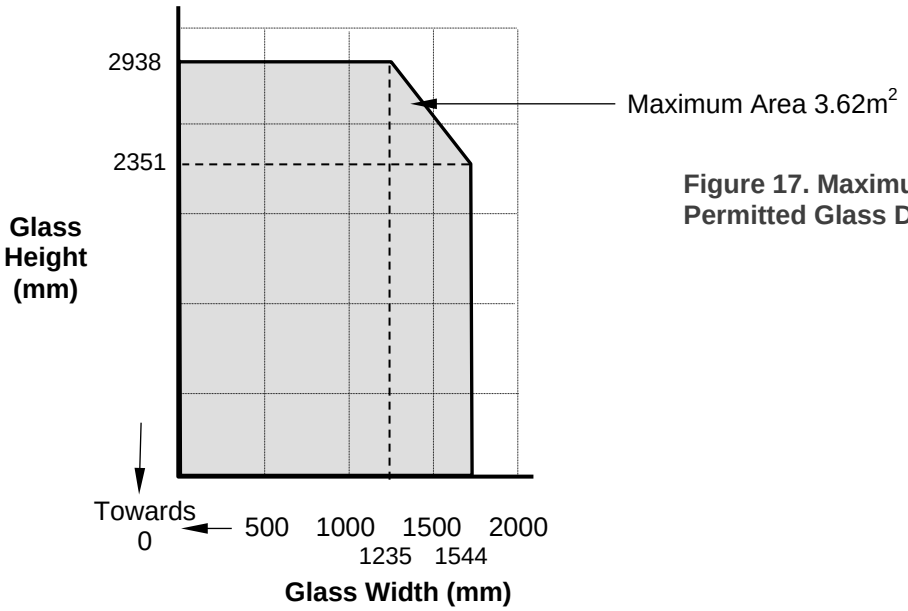


Figure 17. Maximum Permitted Glass Dimensions

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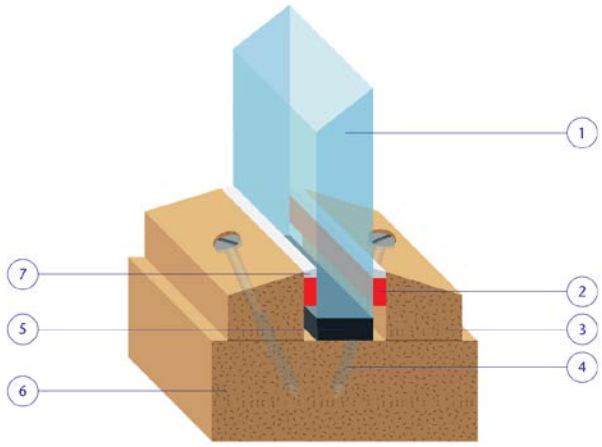
CERTIFICATE No CF 386
SCHOTT UK LIMITED

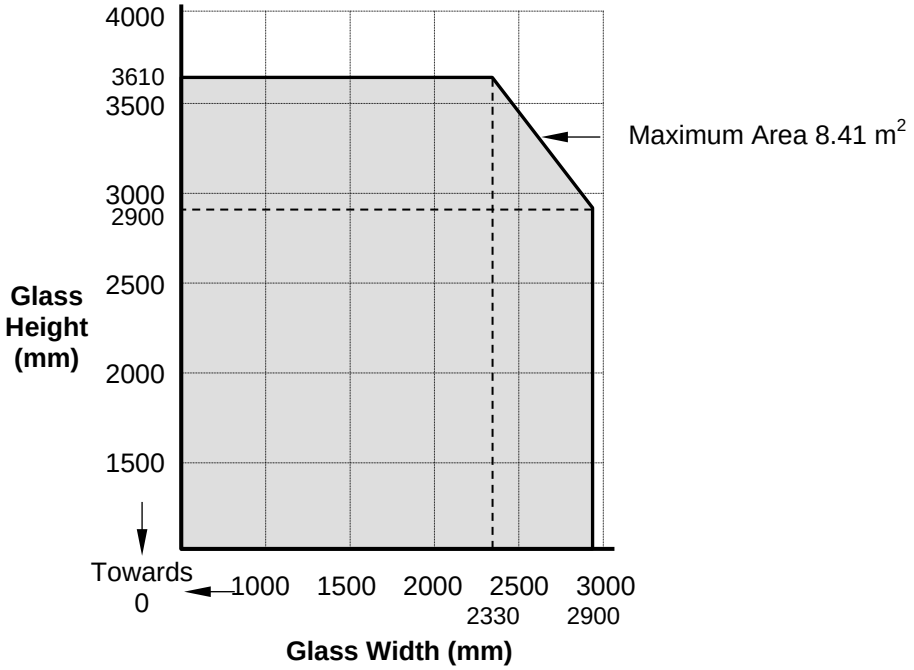
PYRANOVA® 30-S2.0/2.1 Glass in timber framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® 30-S2.0/2.1 glass
2 8 mm wide by 3 mm thick closed cell foam tape
3 18 mm high by 20 mm wide square or up to 10° chamfered softwood glazing beads, minimum density 450 kg/m^3
4 40 mm long steel screws at 400 mm centres (30° to glass) or 51 mm long steel oval nails at 150 mm centres
5 Non-combustible setting blocks
6 68 mm by 20 mm (minimum) softwood framing sections, minimum density 450 kg/m^3
7 Neutral silicone capping

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 18 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



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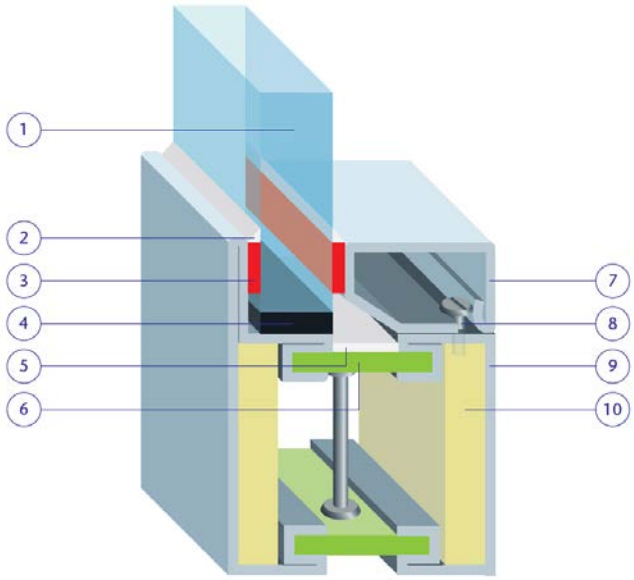
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Glass in steel door leaves for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel profiled door leaf framing system.

Note: glass used in this application may be laminated, acid etched, tinted, patterned or screen printed subject to the conditions specified on Page 3 of this document.

A typical door section is shown below.



1. PYRANOVA® 30-S2.0/2.1 glass
2. Neutral silicone capping
3. Ceramic fibre based glazing tape, 20 mm x 5 mm
4. Setting block
5. Fire resistant laminate, 14 mm x 1.5 mm
6. Fibre reinforced strip, 31 mm x 5 mm
7. Glazing bead, 30 mm x 20 mm x 1.3 mm
8. Screw, 15 mm long
9. Steel section, 73 mm x 59 mm x 50 mm x 1.6 mm
10. Fire resistant ceramic filling

The steel profiled door framing system shall have test evidence (such as JANSEN JANISOL 2 or ECONOMY 50) or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets. When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.

This Certificate of Approval relates to the sizes of PYRANOVA® 30 – S2.0/2.1 glass shown in Figure 19 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

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SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 in steel door leaves for periods of 30 minutes integrity and insulation (continued)

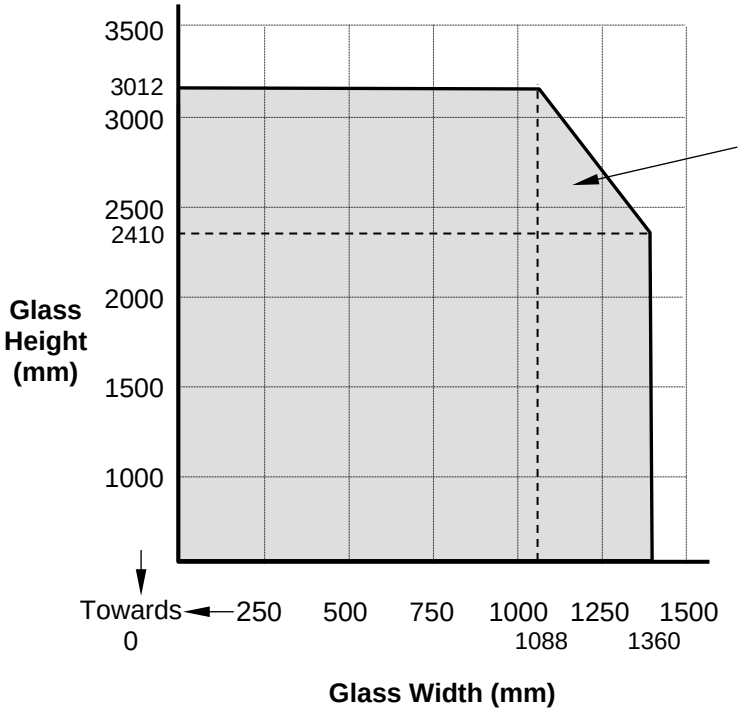

Figure 19. Maximum Permitted Glass Dimensions

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Valid to: 17th August 2020

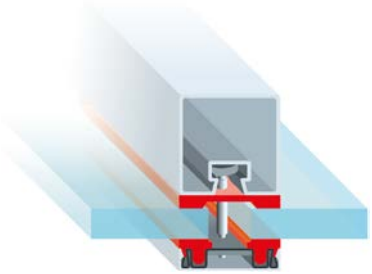
CERTIFICATE No CF 386
SCHOTT UK LIMITED

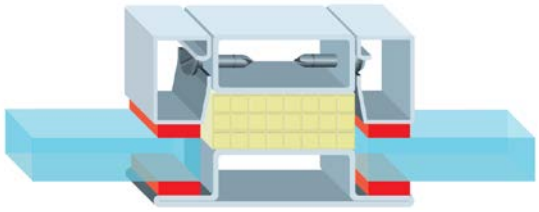
PYRANOVA® 30-S2.0/2.1 Glass in steel framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated steel framing system utilising the following basic specification:

- PYRANOVA® 30-S2.0/2.1 glass
- 15 mm by 6 mm ceramic fibre based glazing tape

The insulated steel framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. Examples of framing systems are shown below.





This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 20 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

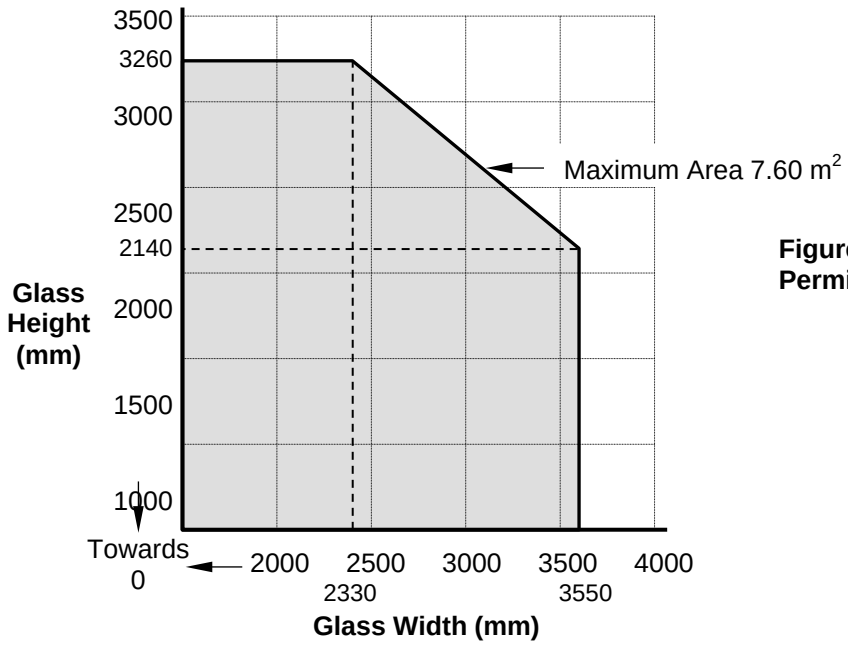


Figure 20. Maximum Permitted Glass Dimensions

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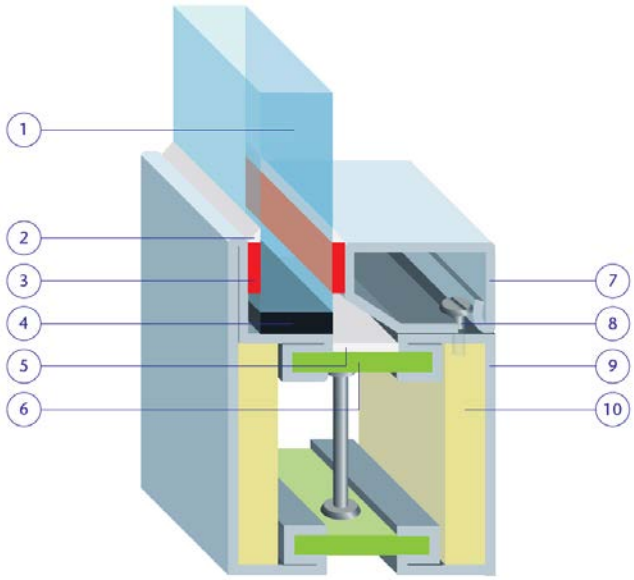
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Insulating Glass Units in steel door leaves for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel profiled door leaf framing system.

Note: glass used in this application may be laminated, acid etched, tinted, patterned or screen printed subject to the conditions specified on Page 3 of this document.

A typical door section is shown below.



1. PYRANOVA® 30-S2.0/2.1 glass in IGU
2. Neutral silicone capping
3. Ceramic fibre based glazing tape, 20 mm x 5 mm
4. Setting block
5. Fire resistant laminate, 14 mm x 1.5 mm
6. Fibre reinforced strip, 31 mm x 5 mm
7. Glazing bead, 30 mm x 20 mm x 1.3 mm
8. Screw, 15 mm long
9. Steel section, 73 mm x 59 mm x 50 mm x 1.6 mm
10. Fire resistant ceramic filling

The steel profiled door framing system shall have test evidence (such as JANSEN JANISOL 2 or ECONOMY 50) or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets. When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.

This Certificate of Approval relates to the sizes of PYRANOVA® 30 – S2.0/2.1 glass shown in Figure 22 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

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CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Insulating Glass Units in steel door leaves for periods of 30 minutes integrity and insulation (continued)

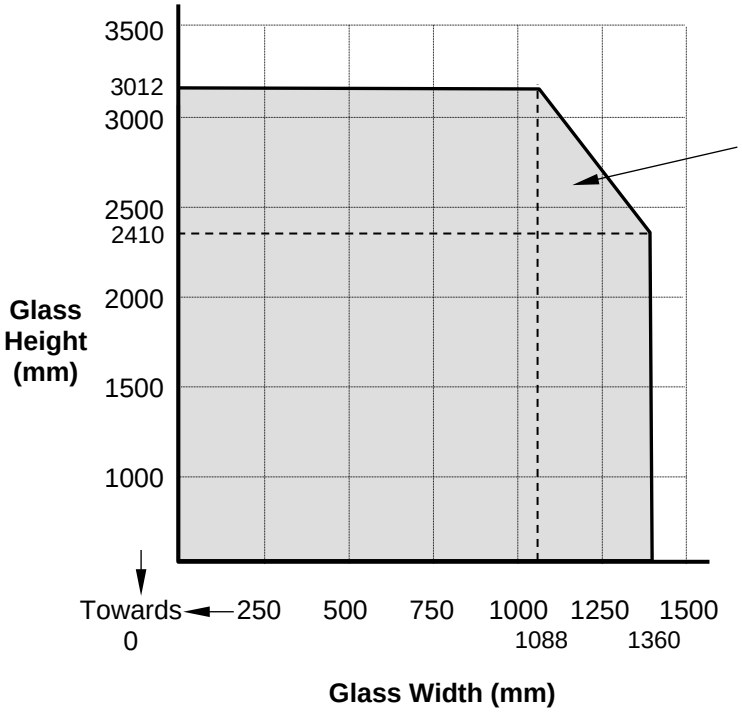

Figure 22. Maximum Permitted Glass Dimensions

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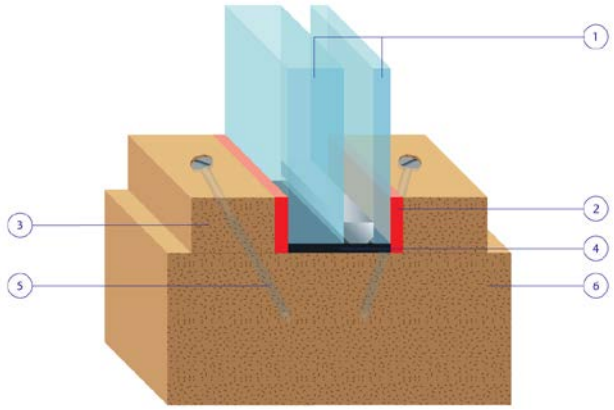
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Insulating Glass Units in timber framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber framing system utilising the following basic specification:

- An integral blind can be contained in the airspace
- Insulating Glass units may be installed with PYRANOVA® to either face.



1 PYRANOVA® 30-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass

2 20 mm wide by 4 mm thick ceramic fibre based glazing tape

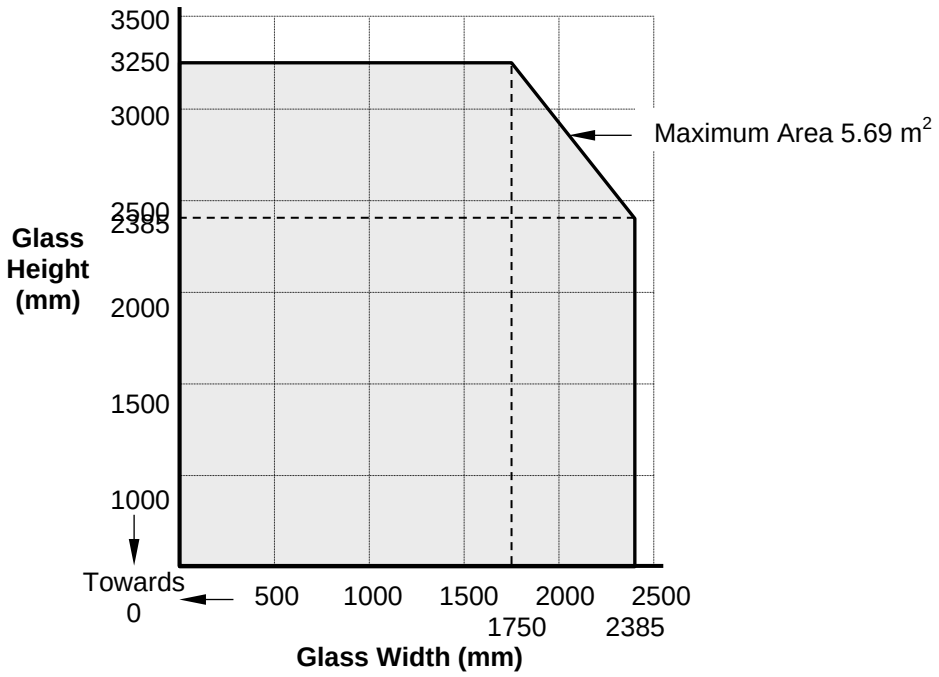
3 20 mm high by 30 mm wide square hardwood glazing beads, minimum density 600 kg/m^3

4 Non-combustible setting blocks

5 70 mm long steel screws at 200 mm centres (30^o to glass)

6 100 mm by 40 mm (minimum) hardwood framing sections, minimum density 600 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 21 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



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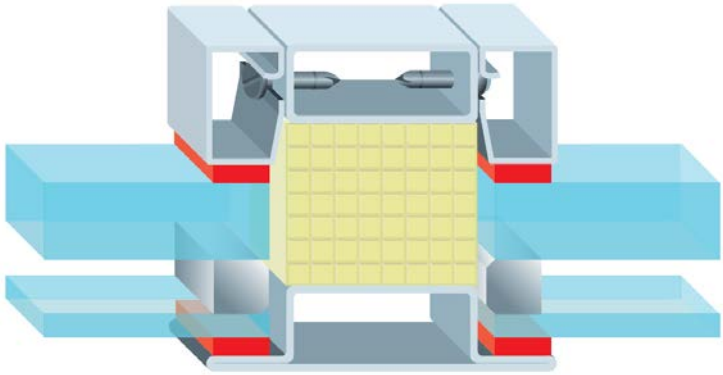
CERTIFICATE No CF 386
SCHOTT UK LIMITED

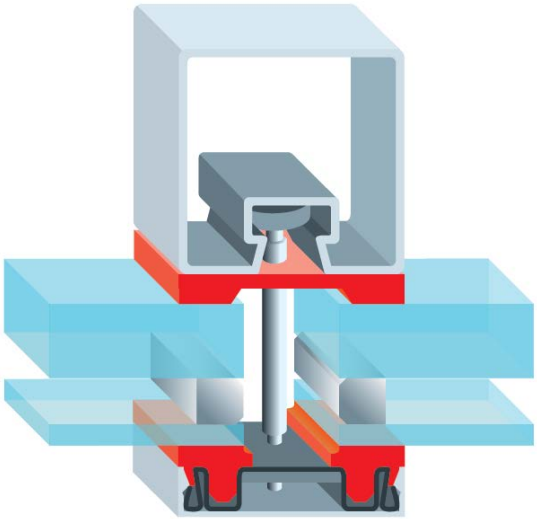
PYRANOVA® 30-S2.0/2.1 Glass within Insulated Glass Units in metallic (steel or aluminium) framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated metallic (steel or aluminium) framing system utilising the following basic specification:

- PYRANOVA® 30-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass
- 15 mm by 6 mm ceramic fibre based glazing tape
- Insulating Glass units may be installed with PYRANOVA® to either face.
- Venetian Blinds may be included within the units.

The insulated metallic (steel or aluminium) framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. Examples of framing systems are shown below:





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PYRANOVA® 30-S2.0/2.1 Glass within Insulated Glass Units in metallic (steel or aluminium) framed screens for periods of 30 minutes integrity and insulation (continued)

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 23 below, when used in conjunction with the above system. The aspect ratio of the glass may be

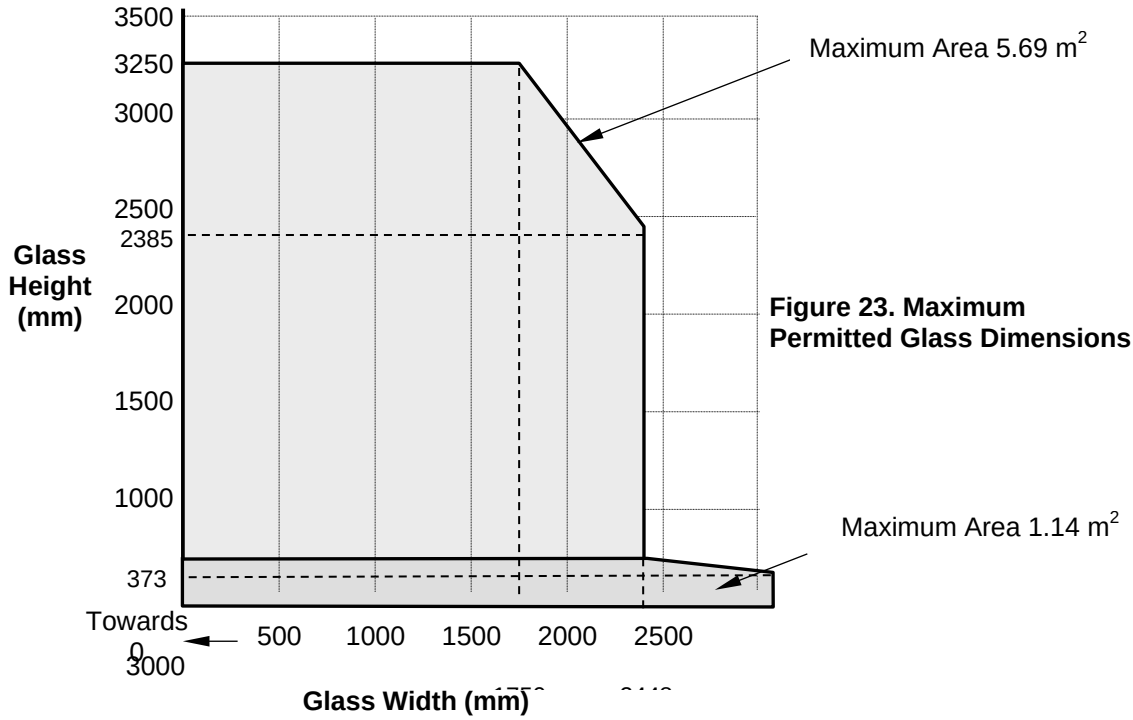

Figure 23. Maximum Permitted Glass Dimensions

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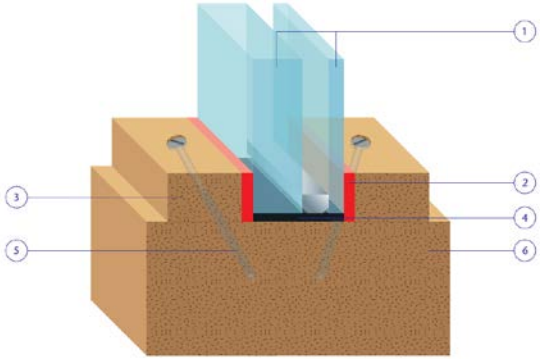
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 30-S2.0/2.1 Insulating Glass Units in timber framed screens for periods of 60 minutes integrity and 30 minutes insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber framing system utilising the following basic specification:

- An integral blind can be contained in the airspace
- Insulating Glass units may be installed with PYRANOVA® to either face.



1 PYRANOVA® 30-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass

2 20 mm wide by 4 mm thick ceramic fibre based glazing tape

3 20 mm high by 30 mm wide square hardwood glazing beads, minimum density 600 kg/m^3

4 Non-combustible setting blocks

5 70 mm long steel screws at 200 mm centres (30^o to glass)

6 100 mm by 40 mm (minimum) hardwood framing sections, minimum density 600 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA 30-S2.0/2.1 glass shown in Figure 24 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

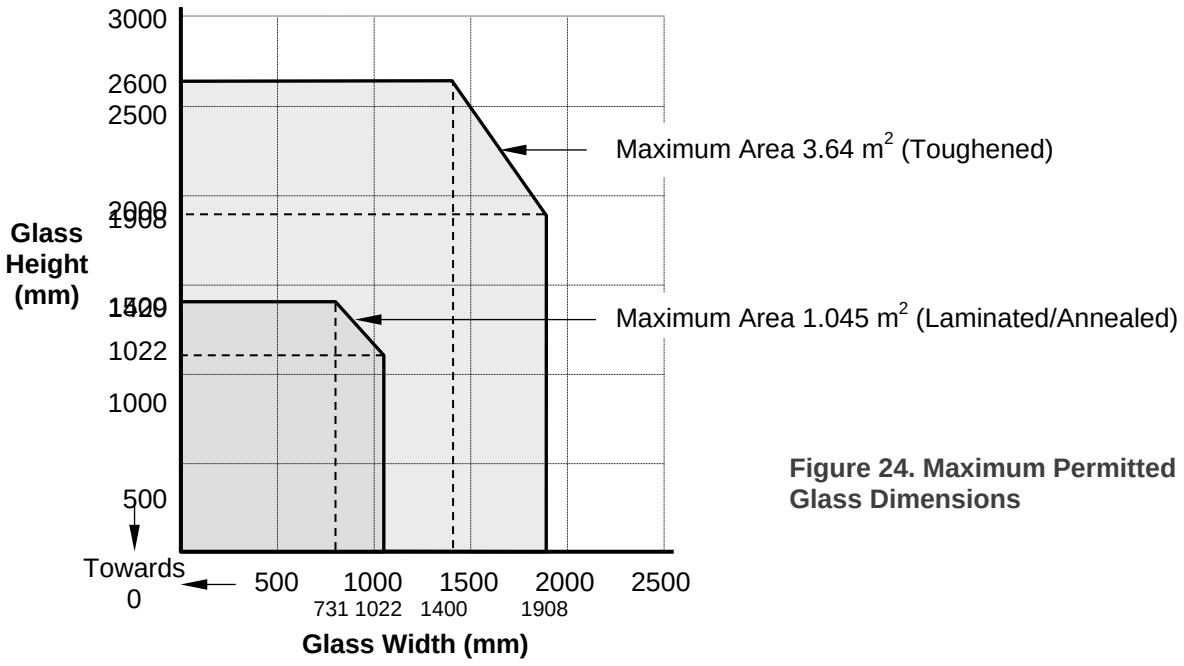


Figure 24. Maximum Permitted Glass Dimensions

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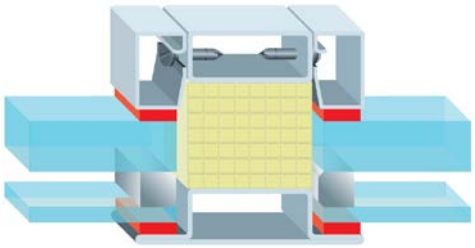
CERTIFICATE No CF 386
SCHOTT UK LIMITED

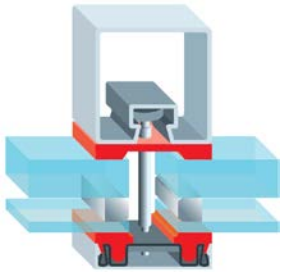
PYRANOVA® 30-S2.0/2.1 Glass within Insulating Glass Units in metallic (steel or aluminium) framed Screens for periods of 60 minutes integrity and 30 minutes insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated metallic (steel or aluminium) framing system utilising the following basic specification:

- PYRANOVA® 30-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass
- 15 mm by 6 mm ceramic fibre based glazing tape
- Insulating Glass Units glazed units may be installed with PYRANOVA® to either face.

The insulated metallic (steel or aluminium) framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. Examples of framing systems are shown below:





This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in Figure 25 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

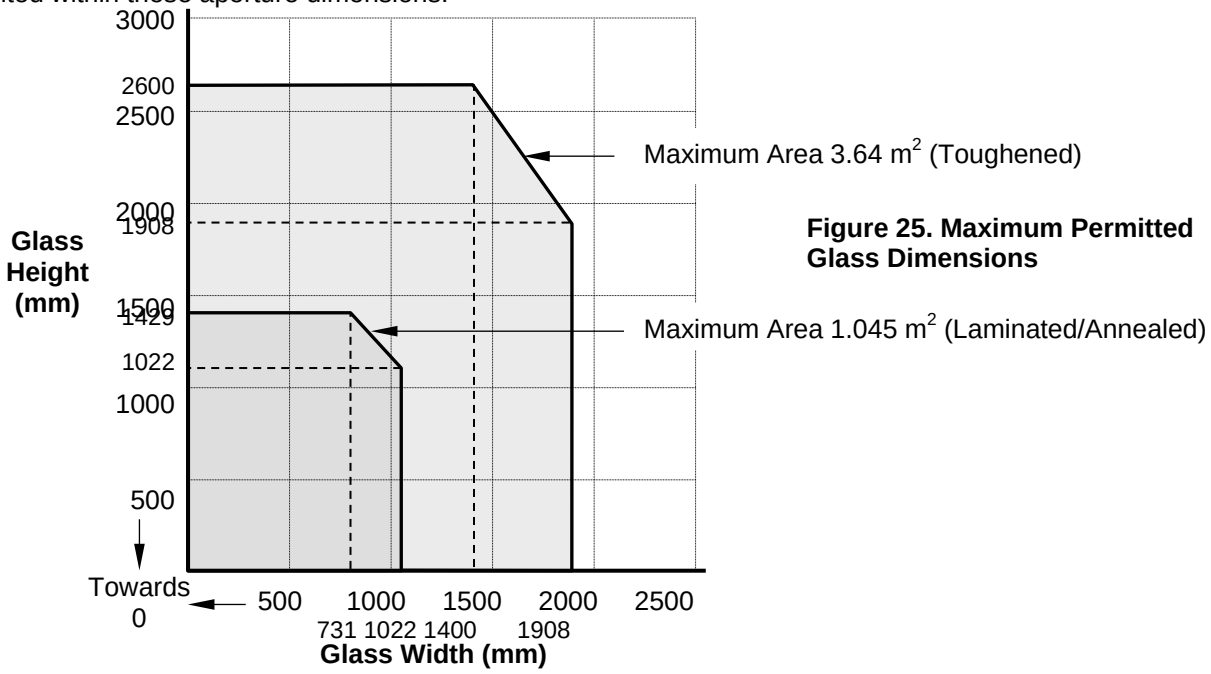


Figure 25. Maximum Permitted Glass Dimensions

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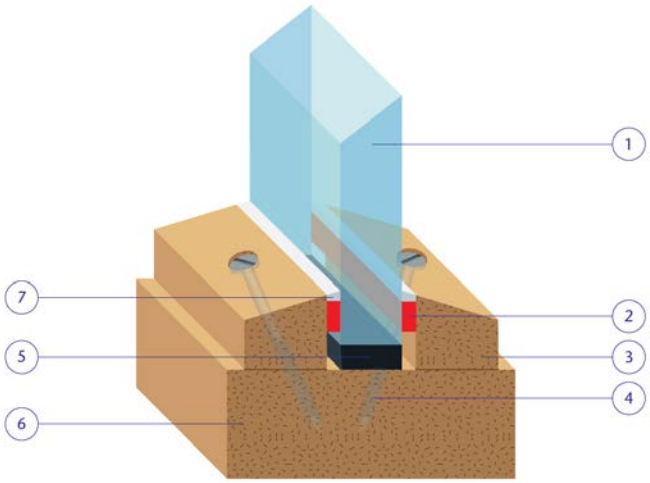
CERTIFICATE No CF 386
SCHOTT UK LIMITED

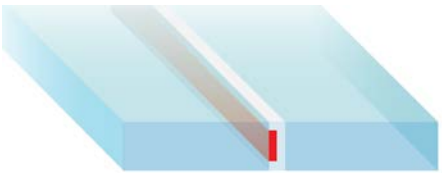
Butt-Jointed PYRANOVA® 30-S2.0/2.1 Glass in timber framed screens for periods of 30 minutes integrity and insulation

The glass shall be glazed utilising the following basic specification:

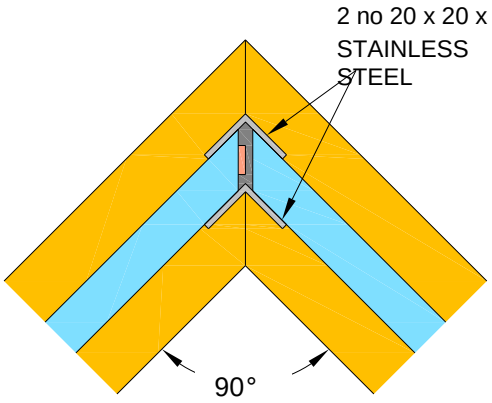


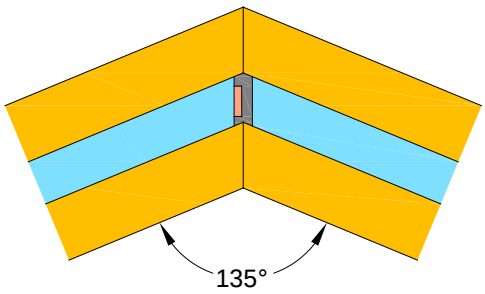
1 PYRANOVA® 30-S2.0/2.1 glass
2 8 mm wide by 3 mm thick closed cell foam tape
3 28 mm high by 20 mm wide square or up to 10° chamfered hardwood glazing beads, minimum density 550 kg/m^3
4 60 mm long steel screws at 300 mm centres (30° to glass)
5 Non-combustible setting blocks
6 70 mm by 40 mm (minimum) hardwood framing sections, minimum density 550 kg/m^3
7 Neutral silicone capping

The system may include vertically orientated butt joints in a range of angles. In order to ensure the correct specification is utilised for such specialist glazing, further information should be sought from the manufacturer.



Nominal 5mm wide joint





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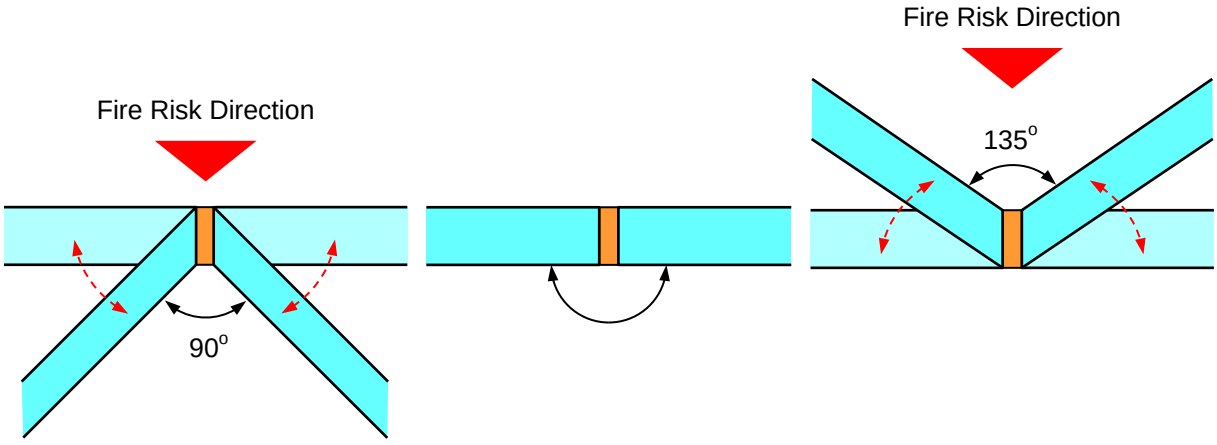
CERTIFICATE No CF 386
SCHOTT UK LIMITED

Butt-Jointed PYRANOVA® 30-S2.0/2.1 Glass in timber framed screens for periods of 30 minutes integrity and insulation (continued)

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.0/2.1 glass shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. The maximum permitted pane dimensions depend on the butt-joint specification and also requires the fire risk side to be identified for angled butt-joints.



90° to 180° Butt-Joint **180° Butt-Joint** **135° to 180° Butt-Joint**

Glass Type	Angle	Max Height (mm)	Max Width (mm)	Max Area (m^2)
PYRANOVA® 30-S2.0/2.1	180°	2750	1080	2.97
PYRANOVA® 30-S2.0/2.1	135° to180°	1875	705	1.32
PYRANOVA® 30-S2.0/2.1	90° to 180°	1875	619	1.16
PYRANOVA® 30-S2.1	180°	3625	1806	5.23

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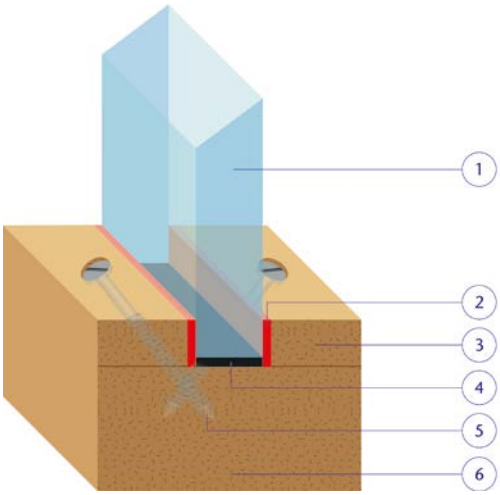
CERTIFICATE No CF 386
SCHOTT UK LIMITED

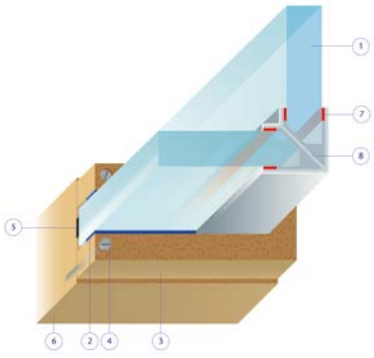
Butt-Jointed PYRANOVA® 30-S2.1 Glass in timber framed screens for periods of 30 minutes integrity and insulation – alternative detail

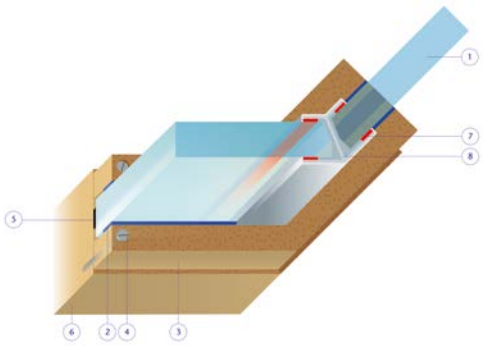
The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® 30-S2.1 glass
2 9 x 4mm thick close cell tape
3 20 mm high x 21 mm wide square hardwood glazing beads, minimum density 670 kg/m^3
4 Non-combustible setting blocks
5 45 mm long steel screws at 300 mm centres
6 68 mm x 30 mm (minimum) hardwood framing sections, minimum density 670 kg/m^3
7 Neutral silicone capping to beads and Kerafix FR silicone to corner profiles
8 Stainless Steel corner profile

The system may include vertically orientated butt joints in a range of angles. In order to ensure the correct specification is utilised for such specialist glazing, further information should be sought from the manufacturer.





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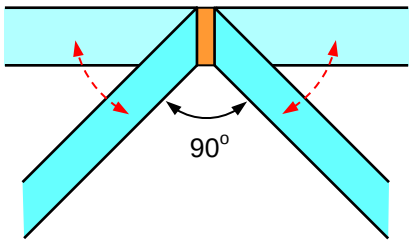
CERTIFICATE No CF 386
SCHOTT UK LIMITED

Butt-Jointed PYRANOVA® 30-S2.1 Glass in timber framed screens for periods of 30 minutes integrity and insulation – alternative detail (continued)

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.1 glass shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. The maximum permitted pane dimensions depend on the butt-joint specification.



90° to 180° Butt-Joint

Glass Type	Angle	Max Height (mm)	Max Width (mm)	Max Area (m^2)
PYRANOVA® 30-S2.1	180° - 90°	3562	1437	4.09

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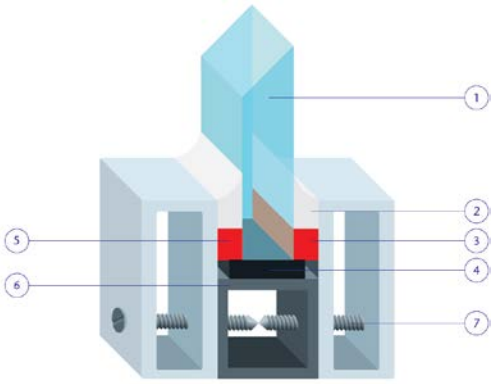
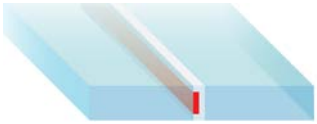
Butt-Jointed PYRANOVA® 30- S2.0/2.1 Glass in Steel framed screens for periods of 30 minutes integrity and insulation

The system may include vertically orientated butt joints in a range of angles. In order to ensure the correct specification is utilised for such specialist glazing, further information should be sought from the manufacturer.

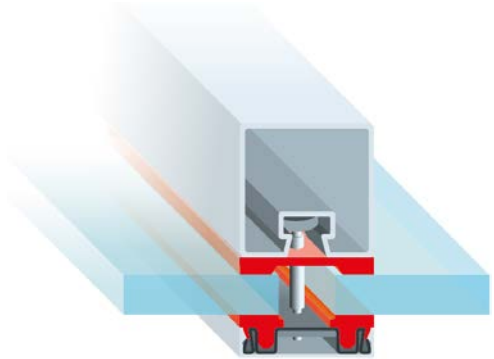
The glass shall be glazed utilising the following basic specification:

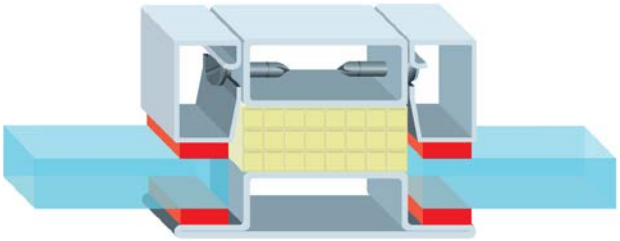


1	PYRANOVA® 30-S2.0/2.1 glass
2	Neutral silicone capping
3&5	15 mm wide by 3-5 mm thick ceramic fibre based glazing tape
4	Non-combustible setting blocks
6	Steel Section 30 mm by 30 mm by 3 mm & 55 mm by 19 mm hollow steel box section
7	35 mm long steel screws at 250 mm centres



Nominal 5mm wide joint





In order to ensure the correct specification is utilised for such specialist glazing, further information should be sought from the manufacturer.

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Butt-Jointed PYRANOVA® 30- S2.0/2.1 Glass in Steel framed screens for periods of 30 minutes integrity and insulation (continued)

This Certificate of Approval relates to the sizes of PYRANOVA® 30-S2.1 glass shown in Figure 26 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

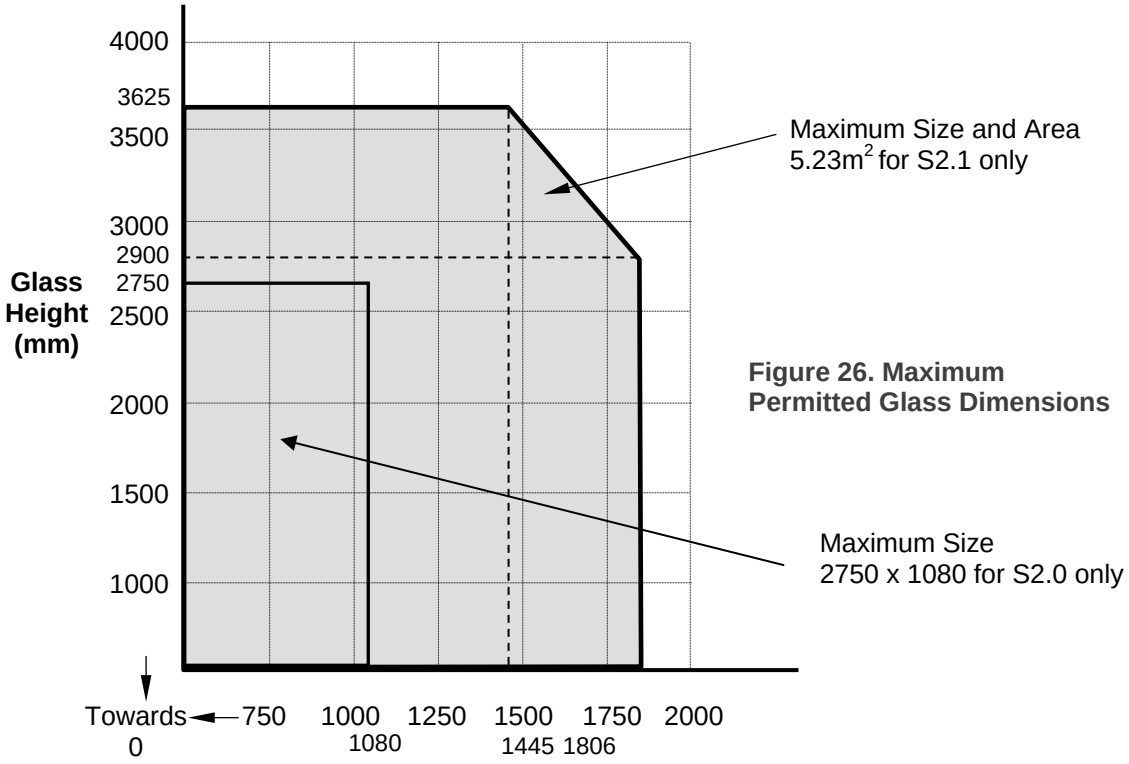

Figure 26. Maximum Permitted Glass Dimensions

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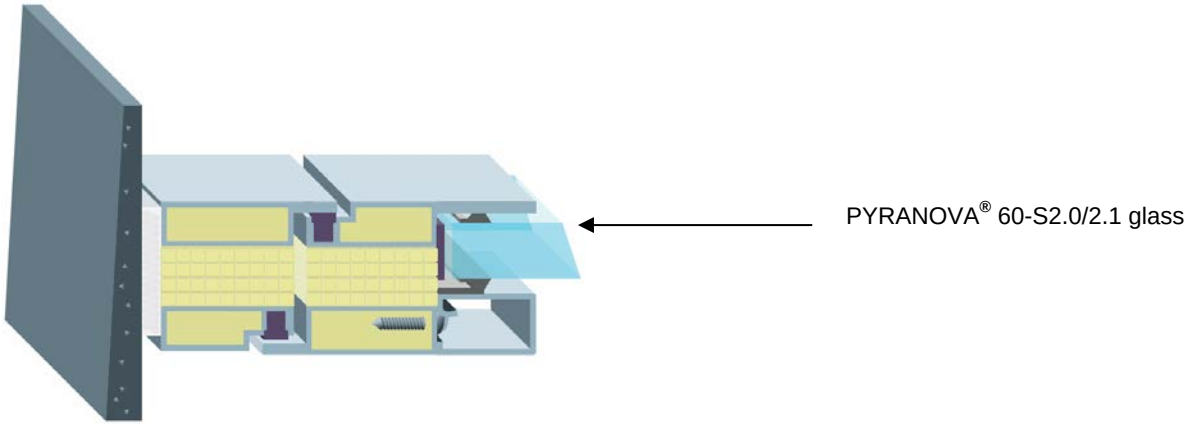
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 60-S2.0/2.1 Glass in steel door leaves for periods of 60 minutes integrity and insulation

The glass shall be glazed utilising the following basic steel profiled doorleaf framing system specification:



This Certificate of Approval relates to the sizes of PYRANOVA® 60-S2.0/2.1 glass shown in Figure 27 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

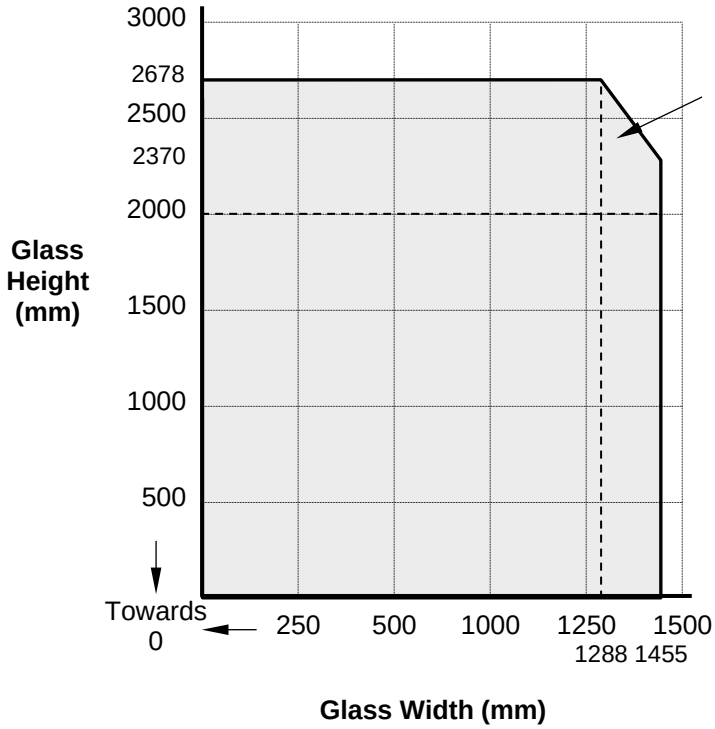


Figure 27. Maximum Permitted Glass Dimensions

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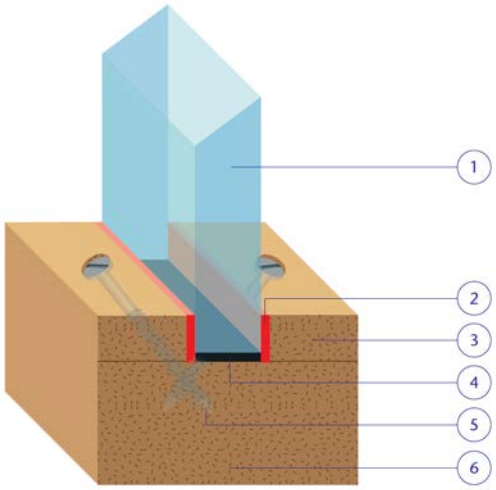
CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 60-S2.0/2.1 Glass in timber framed screens for periods of 60 minutes integrity and insulation

The glass shall be glazed utilising the following basic specification:



1 PYRANOVA® 60-S2.0/2.1 glass
2 20 mm wide by 4 mm thick ceramic fibre based glazing tape
3 20 mm high by 30 mm wide square hardwood glazing beads, minimum density 600 kg/m^3
4 Non-combustible setting blocks
5 70 mm long steel screws at 200 mm centres (30^o to glass)
6 100 mm by 40 mm (minimum) hardwood framing sections, minimum density 600 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® 60-S2.0/2.1 glass shown in Figure 28 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

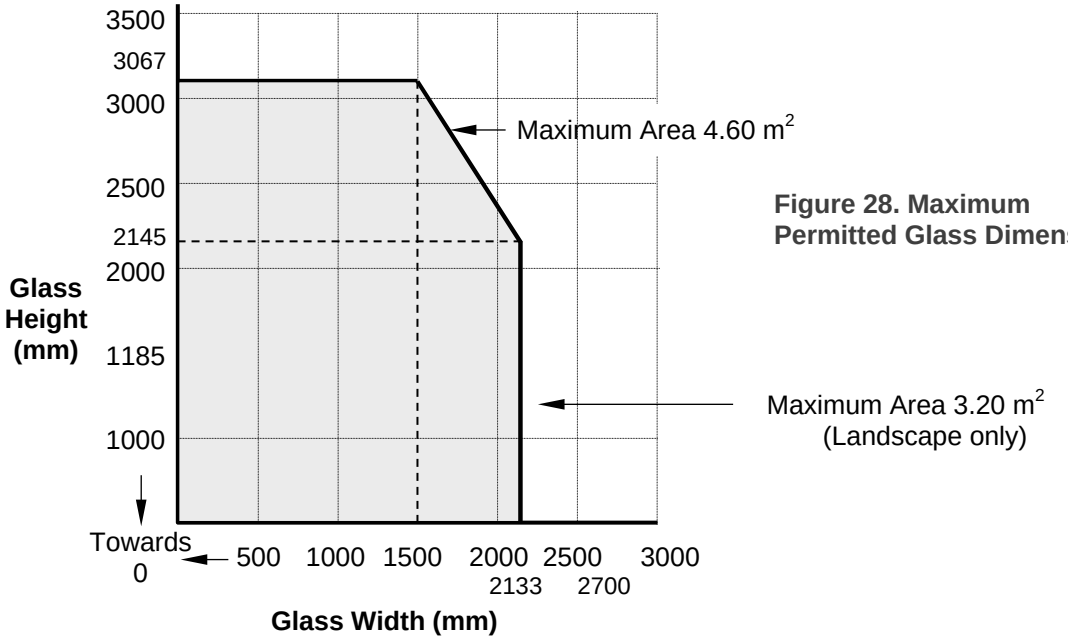


Figure 28. Maximum Permitted Glass Dimensions

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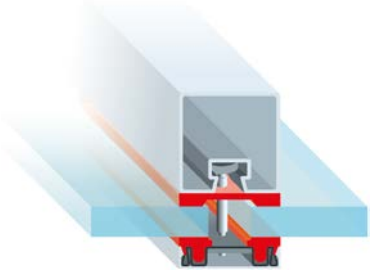
CERTIFICATE No CF 386
SCHOTT UK LIMITED

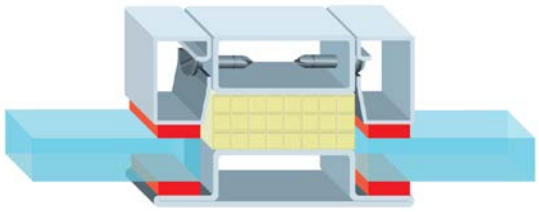
PYRANOVA® 60-S2.0/2.1 Glass in steel framed screens for periods of 60 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated steel framing system utilising the following basic specification:

- PYRANOVA® 60-S2.0/2.1 glass
- 15 mm by 6 mm ceramic fibre based glazing tape

The insulated steel framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. Examples of framing systems are shown below.





This Certificate of Approval relates to the sizes of PYRANOVA® 60-S2.0/2.1 glass shown in Figure 29 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

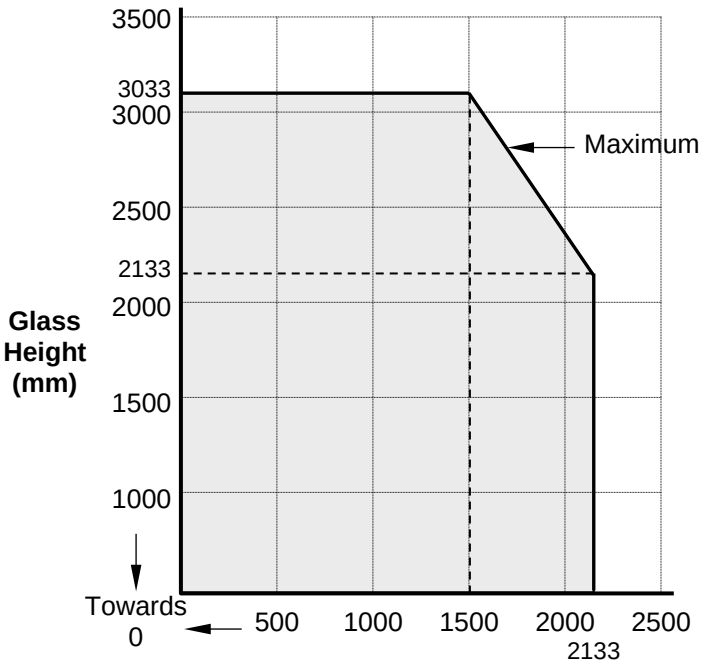


Figure 29. Maximum Permitted Glass Dimensions

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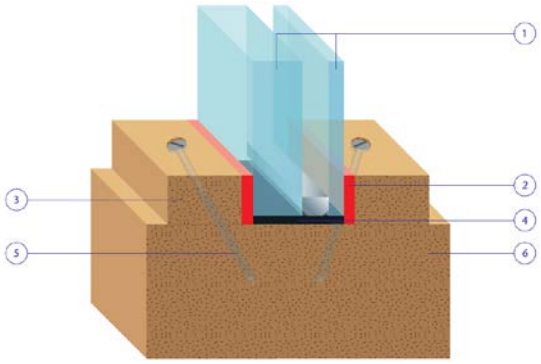
Valid to: 17th August 2020

CERTIFICATE No CF 386
SCHOTT UK LIMITED

PYRANOVA® 60-S2.0/2.1 Insulating Glass Units in timber framed screens for periods of 60 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber framing system utilising the following basic specification:

- An integral blind can be contained in the airspace
- Insulating Glass units may be installed with PYRANOVA® to either face.



1 PYRANOVA® 60-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass

2 20 mm wide by 4 mm thick ceramic fibre based glazing tape

3 20 mm high by 30 mm wide square hardwood glazing beads, minimum density 600 kg/m^3

4 Non-combustible setting blocks

5 70 mm long steel screws at 200 mm centres (30^o to glass)

6 100 mm by 40 mm (minimum) hardwood framing sections, minimum density 600 kg/m^3

This Certificate of Approval relates to the sizes of PYRANOVA® 60-S2.0/2.1 glass shown in Figure 30 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

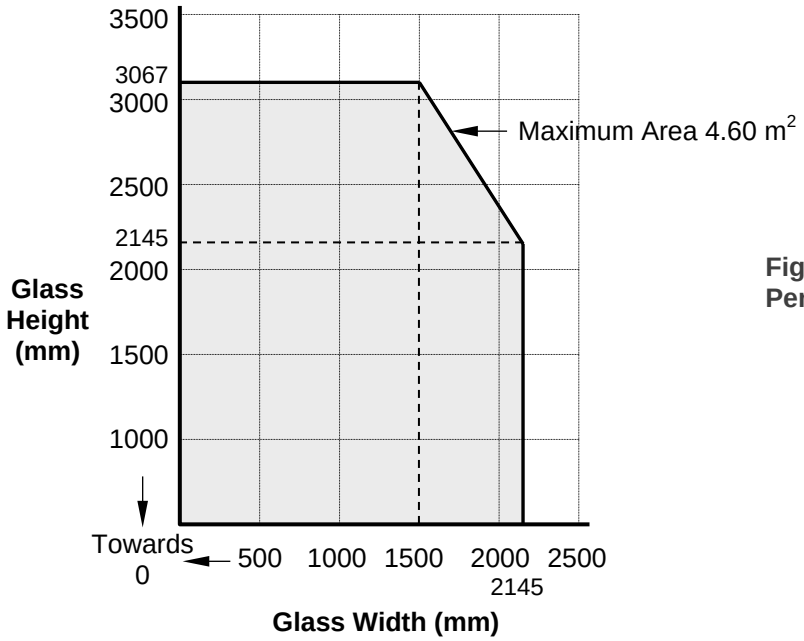


Figure 30. Maximum Permitted Glass Dimensions

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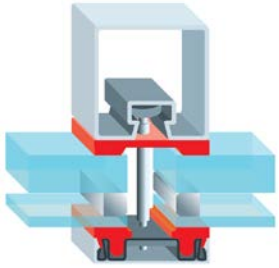
CERTIFICATE No CF 386
SCHOTT UK LIMITED

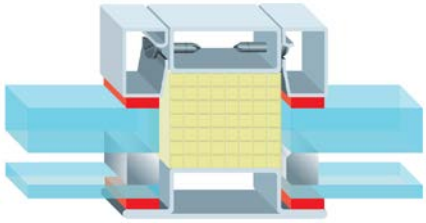
PYRANOVA® 60-S2.0/2.1 Glass within Insulating Glass Units in steel framed screens for periods of 60 minutes integrity and insulation

The glass shall be glazed within a previously fire tested or CERTIFIRE approved insulated metallic (steel or aluminium) framing system utilising the following basic specification:

- PYRANOVA® 60-S2.0/2.1 glass – aluminium spacer – minimum 4 mm thick glass of any type including toughened, laminated, annealed or Low E glass
- An integral blind can be contained in the airspace
- 15 mm by 6 mm ceramic fibre based glazing tape
- Insulating Glass units may be installed with PYRANOVA® to either face.

The insulated metallic (steel or aluminium) framing system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions. Examples of framing systems are shown below:





This Certificate of Approval relates to the sizes of PYRANOVA® 60-S2.0/2.1 glass shown in Figure 31 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

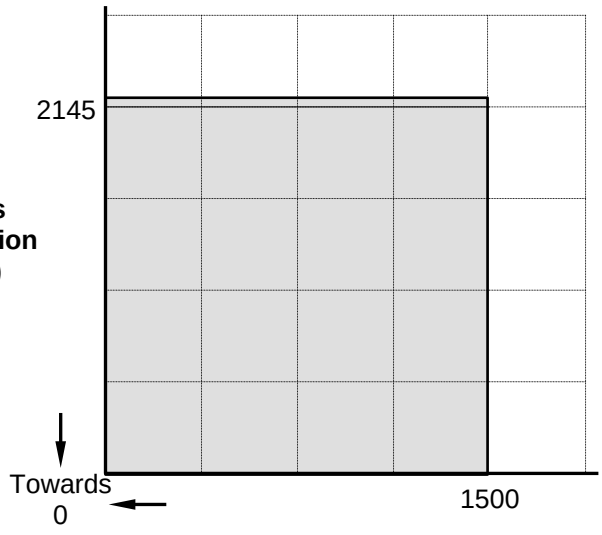


Figure 31. Maximum Permitted Glass Dimensions

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