
CERTIFICATE OF APPROVAL

No CF 5155

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

PROMAT UK LIMITED

The Sterling Centre, Eastern Road, Bracknell, Berkshire RG12 2TD
Tel: 01344 381300 Fax: 01344 381301

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

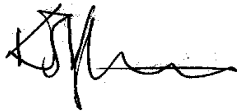
CERTIFIED PRODUCT

Pyrosec Fire Resisting
Glass

TECHNICAL SCHEDULE

TS 25 Fire Resistant
Glass, Glazing Systems
and Glazing Materials

Signed and sealed for and on behalf of CERTIFIRE



Sir Ken Knight
Chairman - Management Council

Issued: 21st October 2013
Valid to: 20th October 2018

Page 1 of 40



CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

This Certificate of Approval relates to the fire resistance of the glass products described below when used in the following applications, as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.

Glass Specification	Application	Fire Resistance Performance (mins)		Page No.
		Integrity	Insulation	
Pyrosec 7/30	Timber doorsets	30	-	5-6
Pyrosec 7/30	Timber doorsets (IGU)	30	-	7
Pyrosec 7/30	Timber screens	30	-	8
Pyrosec 7/30	Timber screens (IGU)	30	-	9
Pyrosec 7/60	Timber doorsets	60	-	10
Pyrosec 12/60	Timber doorsets	60	-	11
Pyrosec 7/90	Timber doorsets	90	-	12
Pyrosec 12	Timber doorsets	60	-	13
Pyrosec 12	Timber Screen	60	-	14
Pyrosec 12	Steel screens	30	-	15
Pyrosec 12	Steel screens	60	-	16
Pyrosec 16 & 16 Ext	Timber doorsets	60	30	17
Pyrosec 16 & 16 Ext	Timber doorsets	30	30	18
Pyrosec 16 & 16 Ext	Timber screens	60	30	19
Pyrosec 16 & 16 Ext	Timber screens	30	30	20
Pyrosec 16 & 16 Ext (IGU's)	Timber screens	30	30	21
Pyrosec 16 & 16 Ext (IGU's)	Steel screens	30	30	22
Pyrosec 16 & 16 DGU	Steel doorsets	30	30	23
Pyrosec 16	Steel screens	60	-	24
Pyrosec 16	Steel screens	60	30	25
Pyrosec 16 & 16 Ext	Steel screens	30	30	26
Pyrosec 25 & 25 Ext	Timber doorsets	60	60	27
Pyrosec 25 & 25 Ext	Timber screens	60	60	28
Pyrosec 25 & 25 Ext (IGU's)	Timber screens	60	60	29
Pyrosec 25 & 25 Ext	Steel screens	60	60	30
Pyrosec 25 & 25 Ext	Steel doorsets	60	60	31
Pyrosec 25 & 25 Ext (IGU's)	Steel doorsets	60	60	32
Pyrosec 25 & 25 Ext (IGU's)	Steel screens	60	60	33
Pyrosec ClearRun (16 mm)	Butt Jointed Steel System (with angled panes)	30	30	34-36
Pyrosec ClearRun (53 mm)	Butt Jointed Steel System	120	120	37-38
Pyrosec 7/30, 7/60, 7/90, Pyrosec 12/16/25	Glazing bars	30-60-90 30-60	0 0-60	39-40

CERTIFICATE No CF 5155

PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account. This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and materials.

This product is approved on the basis of:

- i) Initial type testing.
- ii) A design appraisal against TS25.
- iii) Certification of quality management system to ISO 9001: 2008.
- iv) Inspection and surveillance of factory production control.
- v) Audit testing.

General Requirements

Where the glass is installed in a timber or steel framed screen, the orientation of the screen shall be no more than $\pm 10^\circ$ from the vertical. There is no restriction to the direction of exposure for Pyrosec glass. Where the glass is used in insulating glass units there may be restriction to the direction of exposure, as detailed in the relevant sections of this approval.

When using a thicker glass pane, the bead section size and thickness must not be reduced. If the bead has a bolection return the width will need to be increased to maintain its location against the frame or door face.

Where IGUs are approved, the non fire resistant pane can be float, toughened or laminated glass.

Where a timber liner is specified in the test information, this may be substituted with an intumescent liner.

Pyrosec glass shall not be fitted into partitioning systems where any part of the glass is higher than 4000mm from finished floor level.

Glass Details and Alternatives

Pyrosec is approved in nominal thicknesses of 7, 12, 16 and 25 mm and can be supplied as a 'clear' glass or with Matelux® acid etched or sandblasted glass. However, the thickness of the **Pyrosec** glass range may be increased by laminating a 7.5mm anti bandit or anti bullet glass pane to one or both sides using a single PVB interlayer.

Insulating Glass Units are approved when constructed with one pane of **Pyrosec** glass and one pane of float, toughened or laminated glass.

CERTIFICATE No CF 5155

PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

In the case of **Pyrosec** laminated to a 7.5mm anti bandit or anti bullet glass pane to one or both sides using a single PVB interlayer, this construction can also be used to form one side of an Insulating Glass Unit (IGU) and it can be glazed either way around provided the second pane is a float or toughened glass. However, If the second pane is constructed with a non fire resistant laminated glass, then the IGU must be glazed with this pane to the fire side and the laminated **Pyrosec** pane to the non fire side.

Alternatively, there may be no need to laminate an anti bandit or anti bullet glass pane to the **Pyrosec** pane to achieve the required security performance as this can be achieved by manufacturing the IGU with **Pyrosec** and a separate non fire resistant laminated glass pane of the required thickness.

Glazing System /Materials - alternatives

The applications in this CERTIFIRE certificate describe generic glazing systems that have achieved the relevant period of integrity when tested in conjunction with Pyrosec glass. There are a number of alternative glazing systems available listed in the CERTIFIRE Product Register which may be suitable for use with these glass products up to the maximum sizes listed for the specific glazing system but may not have specific test evidence. When the glazing system is determined as suitable using this method, and the system shows sizes smaller than allowable by this certificate, the aperture sizes specified in the system certificate shall take precedence. When both ceramic fibre based glazing tape and closed cell foam glazing tape are detailed in the table under the application heading, these tapes are interchangeable without any detrimental effect on the performance.

Framing Systems - alternatives

The applications in this CERTIFIRE certificate describe generic framing systems that have achieved the relevant period of integrity when tested in conjunction with Pyrosec glass. There are a number of alternative framing systems available in CF 137 which may not have specific test evidence in conjunction with these Pyrosec glass types.

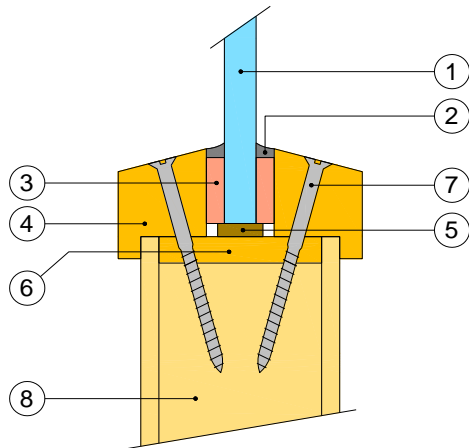
These systems are those listed in the CERTIFIRE Product Register as suitable for use with modified toughened glass and up to the maximum sizes listed for the specific system. When the framing system is determined as suitable using this method, and the system shows sizes smaller than allowable by this certificate, the glass sizes specified in the framing system certificate shall take precedence.

This approval relates to on going production. The product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application when appropriate.

CERTIFICATE No CF 5155 PROMAT UK LIMITED

Pyrosec 7/30 Glass in timber based doorsets for periods of 30 minutes integrity

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



- 1 Pyrosec 7/30 or 7/30 Ext with clear or Matelux® acid etched or sandblasted glass
- 2 Neutral silicone capping
- 3 12 mm wide by 5 mm thick ceramic fibre based glazing tape or closed cell foam glazing tape
- 4 20 mm high by 19.5 mm wide (including 5 mm high by 5 mm wide bolection with 15° chamfer) hardwood or MDF glazing beads, minimum density 640 kg/m³
- 5 Non-combustible / hardwood setting blocks
- 6 6 mm thick hardwood aperture liner
- 7 **Hardwood beads** can be screw fixed with 50 mm long steel screws at 150 mm centres (30° to glass) – see fig 22 or pin fixed with 40 mm long steel pins at 150 mm centres (45° to glass) – see fig 23. **MDF beads** can be pin fixed with 40 mm long steel pins at 150 mm centres (45° to glass) – fig 22.
- 8 Nominally 44 mm thick FD30 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. This Certificate of Approval relates to the sizes of Pyrosec 7/30 or 7/30 Ext glass shown in Figure 1 and 2 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

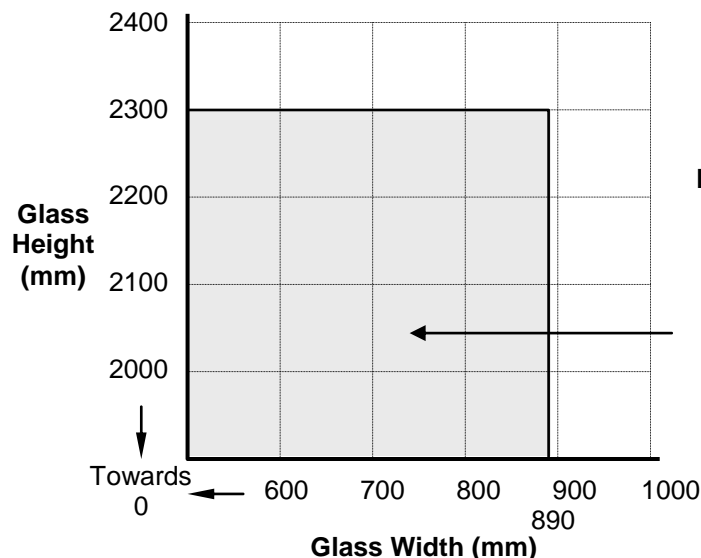
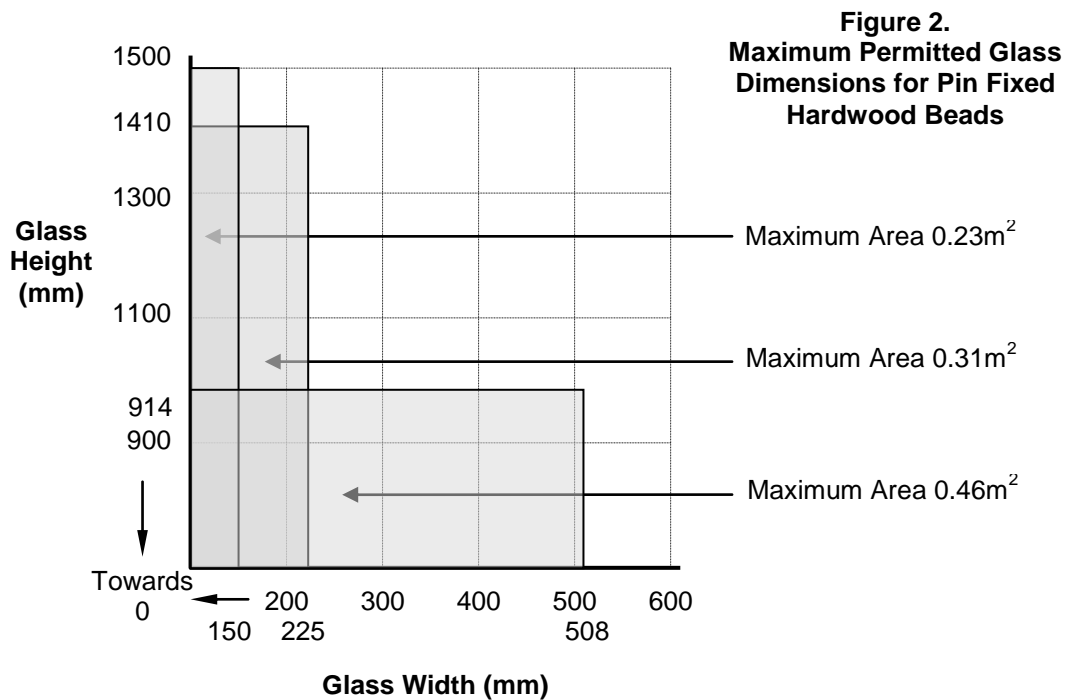


Figure 1.
Maximum Permitted Glass Dimensions for Screw fixed Hardwood Beads or Pin Fixed MDF Beads

CERTIFICATE No CF 5155
PROMAT UK LIMITED

Pyrosec 7/30 Glass in timber based doorsets for periods of 30 minutes integrity (continued)



CERTIFICATE No CF 5155
PROMAT UK LIMITED

Pyrosec 7/30 Glass (IGU's) in timber based composite doorsets for periods of 30 minutes integrity

Approval of Pyrosec 7/30 or 7/30 Ext IGU's is approved, at the dimensions given in Figure 3 below, for use in certain specific designs of composite doorset. There is no limit regarding glass orientation. PROMAT UK LIMITED should be contacted for further information on suitable applications.

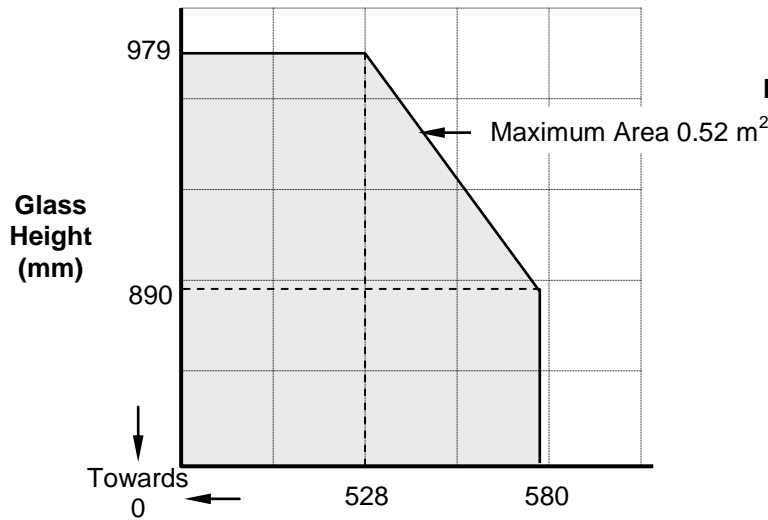
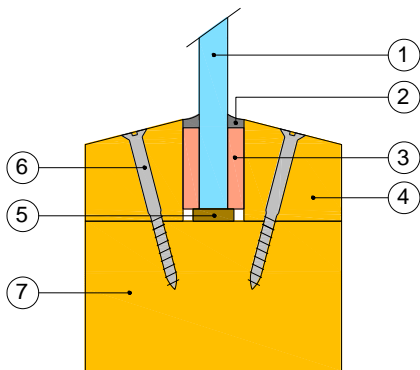


Figure 3.
Maximum Permitted Glass Dimensions

CERTIFICATE No CF 5155 PROMAT UK LIMITED

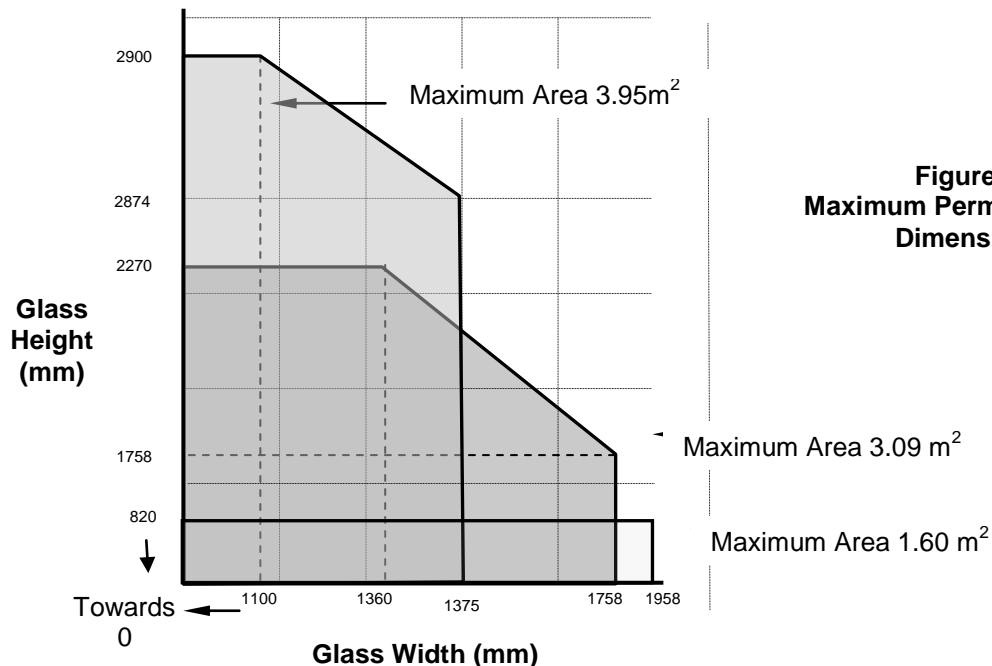
Pyrosec 7/30 Glass in timber framed screens for periods of 30 minutes integrity

The glass shall be glazed utilising the following basic specification:



- 1 Pyrosec 7/30 or 7/30 Ext with clear or Matelux® acid etched or sandblasted glass
- 2 Neutral silicone capping
- 3 15 mm wide by 5 mm thick ceramic fibre based glazing tape or 12 mm wide by 5 mm thick closed cell foam glazing tape
- 4 25 mm wide by 23 mm high (with 15° chamfer) hardwood or softwood glazing beads, minimum density 550 kg/m³
- 5 Non-combustible setting blocks
- 6 Hardwood or softwood beads can be pinned or screw fixed with 38 mm long steel screws at 270 mm centres (30° to glass) or 40 mm long steel **pins** at a maximum of 150 mm centres and angled at 45°
- 7 68 mm by 33 mm (minimum) hardwood or softwood frame, minimum density 471 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 7/30 or 7/30 Ext glass shown in Figure 4 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions and may be utilised in multi-paned screen systems with shared transoms and mullions.

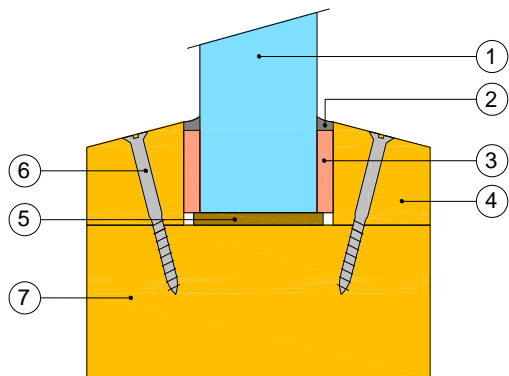


**Figure 4.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

Insulating Glass Units (IGU's) including Pyrosec 7/30 Glass in timber framed screens for periods of 30 minutes integrity

The IGU shall be glazed utilising one of the following specifications:



- 1 IGU comprising Pyrosec 7/30 or 7/30 Ext glass Pyrosec 7/30 or 7/30 Ext with clear or Matelux® acid etched or sandblasted glass, minimum 12 mm wide cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*
- 2 Neutral silicone capping
- 3 15 mm wide by 5 mm thick ceramic fibre based glazing tape or 12 mm wide by 5 mm thick closed cell foam glazing tape
- 4 25 mm wide by 23 mm high (with 15° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible setting blocks
- 6 Hardwood beads can be pinned or screw fixed with 40 mm long steel screws at 270 mm centres (30° to glass) or 40 mm long steel **pins** at a maximum of 150 mm centres, angled at 45°
- 7 86 mm by 33 mm (minimum) hardwood frame, minimum density 471 kg/m³

* A minimum 6.8 mm laminated glass must be used as the external pane for IGU's incorporating internal grade Pyrosec 7/30.

This Certificate of Approval relates to the sizes of IGU's including Pyrosec 7/30 or 7/30 Ext glass shown in Figure 5 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

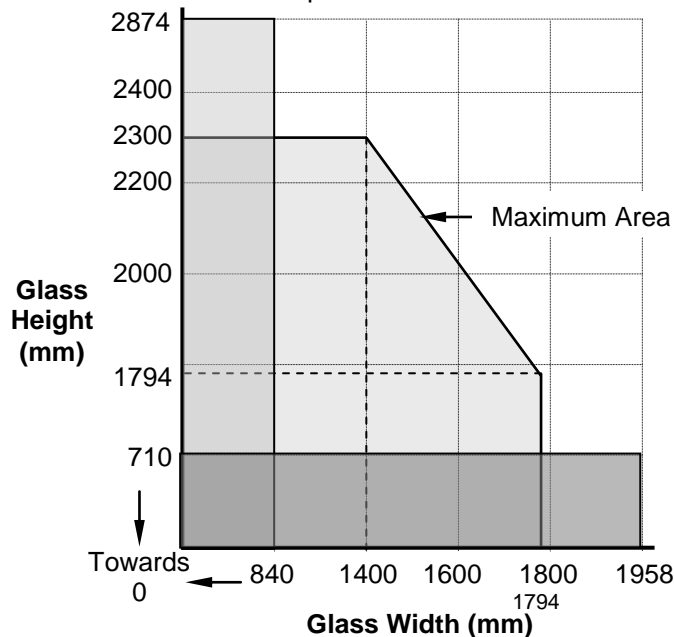
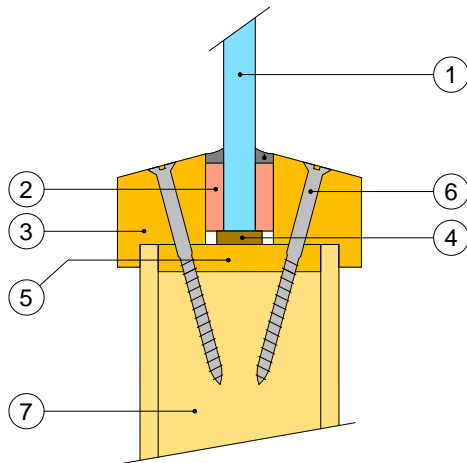


Figure 5.
Maximum Permitted Glass Dimensions

CERTIFICATE No CF 5155 PROMAT UK LIMITED

Pyrosec 7/60 Glass in timber based doorsets for periods of 60 minutes integrity

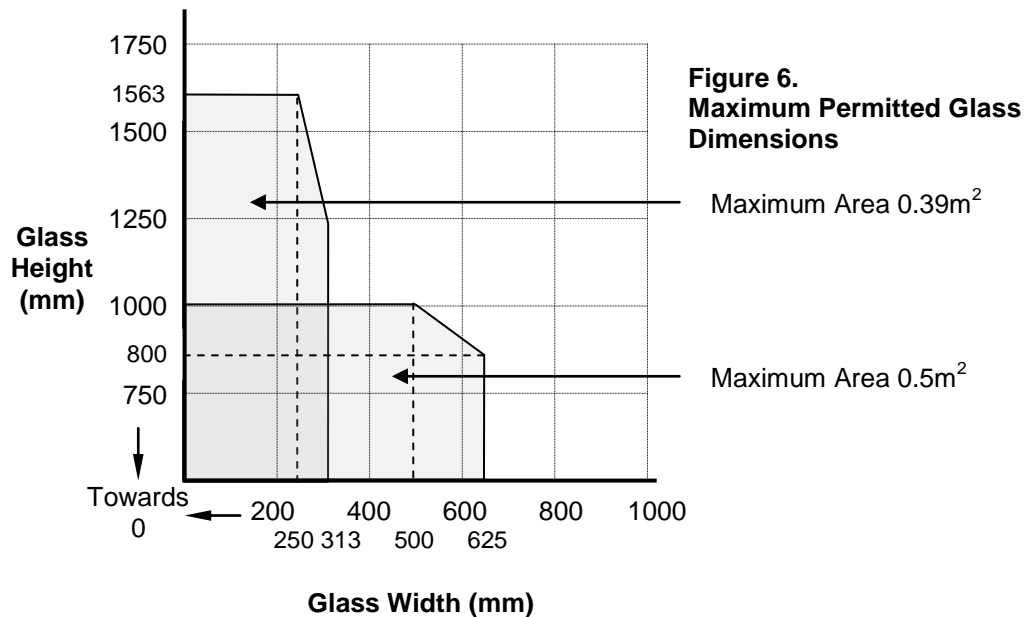
The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Pyrosec 7/60 with clear or Matelux® acid etched or sandblasted glass.
- 2 4 mm wide by 25 mm thick Therm-A-Bead glazing tape or 12 mm wide by 4 mm thick closed cell foam glazing tape or 5 mm thick ceramic fibre tape capped of with neutral silicone
- 3 30 mm high by 25 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 4 Non-combustible / hardwood setting blocks
- 5 2 mm thick by 54 mm wide Therm-A-Line aperture liner
- 6 Hardwood beads can be screw fixed with 60 mm long steel screws at 150 mm centres (30° to glass) or 40 mm long steel **pins** at a maximum of 150 mm centres, 50 mm from corners, angled at 45°
- 7 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

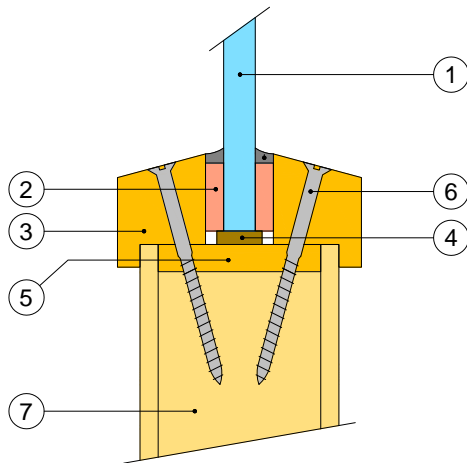
This Certificate of Approval relates to the sizes of Pyrosec 7/60 glass shown in Figure 6 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



CERTIFICATE No CF 5155 PROMAT UK LIMITED

Pyrosec 12/60 Glass in timber based doorsets for periods of 60 minutes integrity

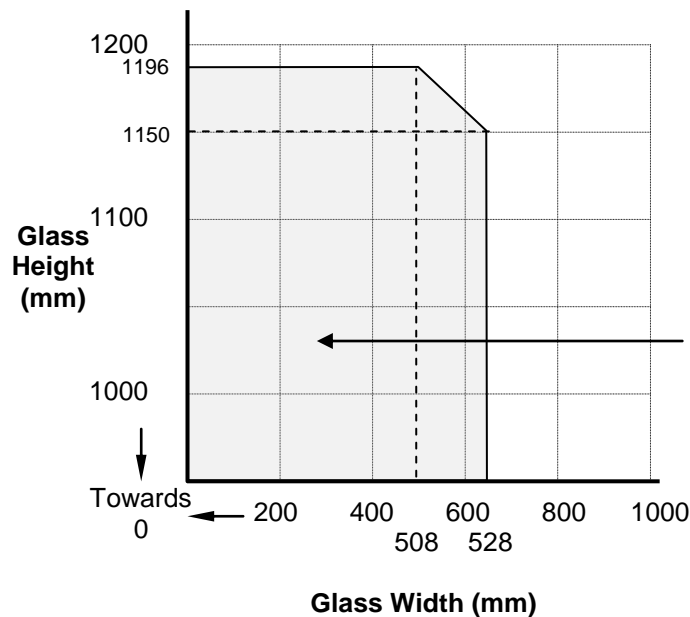
The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Single Pyrosec 12/60 with clear or Matelux® acid etched or sandblasted glass.
- 2 4 mm wide by 25 mm thick Therm-A-Bead glazing tape or 12 mm wide by 4 mm thick closed cell foam glazing tape or 5 mm thick ceramic fibre tape capped of with neutral silicone
- 3 30 mm high by 25 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 4 Non-combustible / hardwood setting blocks
- 5 2 mm thick by 54 mm wide Therm-A-Line aperture liner
- 6 Hardwood beads can be screw fixed with 60 mm long steel screws at 150 mm centres (30° to glass) or 40 mm long steel **pins** at a maximum of 150 mm centres, 50 mm from corners, angled at 45°
- 7 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 12/60 glass shown in Figure 7 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

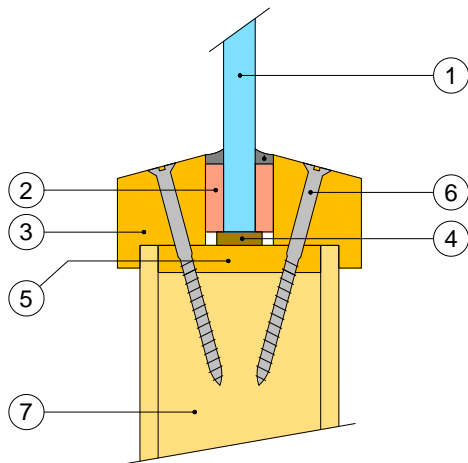


**Figure 7.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

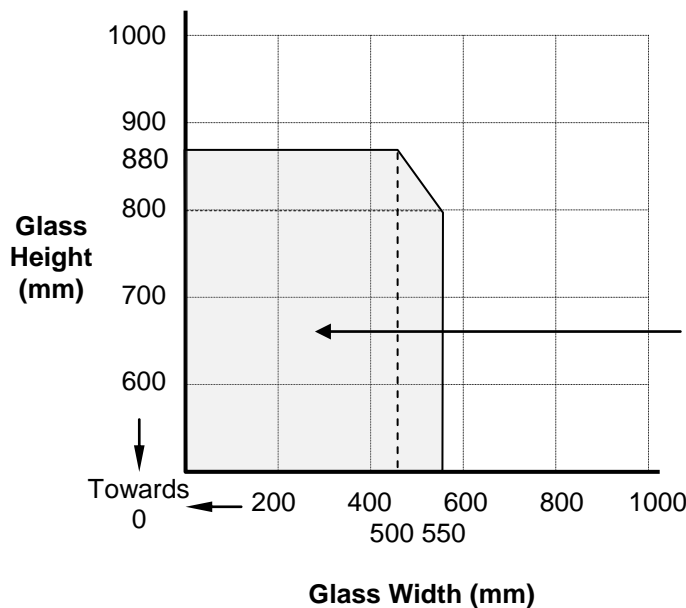
Pyrosec 7/90 Glass in timber based doorsets for periods of 90 minutes integrity

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



- 1 Pyrosec 7/90 with clear or Matelux® acid etched or sandblasted glass.
- 2 4 mm wide by 25 mm thick Therm-A-Bead glazing tape.
- 3 30 mm high by 25 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 4 Non-combustible / hardwood setting blocks
- 5 2 mm thick by 54 mm wide Therm-A-Line aperture liner
- 6 Hardwood beads can be screw fixed with 60 mm long steel screws at 150 mm centres (30° to glass)
- 7 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. This Certificate of Approval relates to the sizes of Pyrosec 7/90 glass shown in Figure 8 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



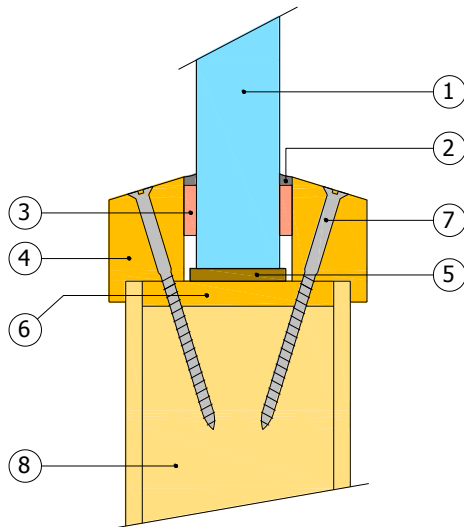
**Figure 8.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 12 Glass in timber based doorsets 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 Pyrosec 12
- 2 Neutral silicone capping
- 3 12 mm wide by 4 mm thick closed cell foam tape
- 4 30 mm high by 22 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible/hardwood setting blocks
- 6 6 mm thick hardwood aperture liner (not required for hardwood cored door leaves)
- 7 60 mm long steel screws at 150 mm centres (30° to glass)
- 8 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 12 glass shown in Figure 9 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

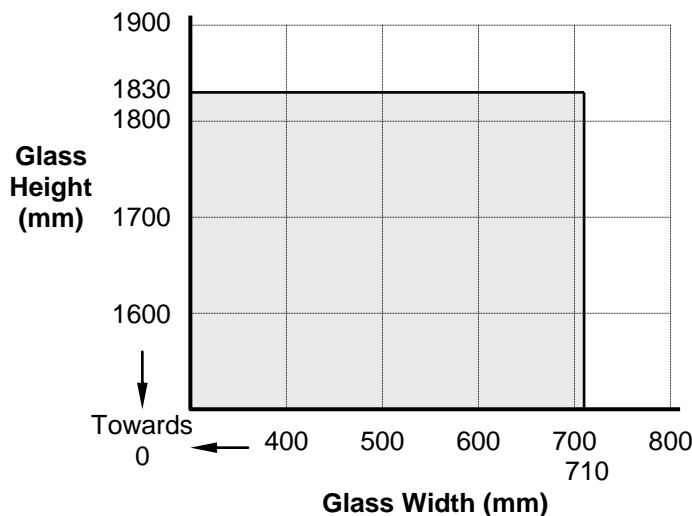


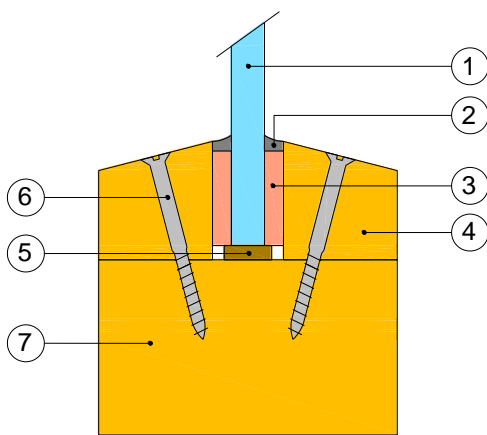
Figure 9.
Maximum Permitted Glass Dimensions

**CERTIFICATE No CF 5155
PROMAT UK LIMITED**

PYROSEC FIRE RESISTING GLASS

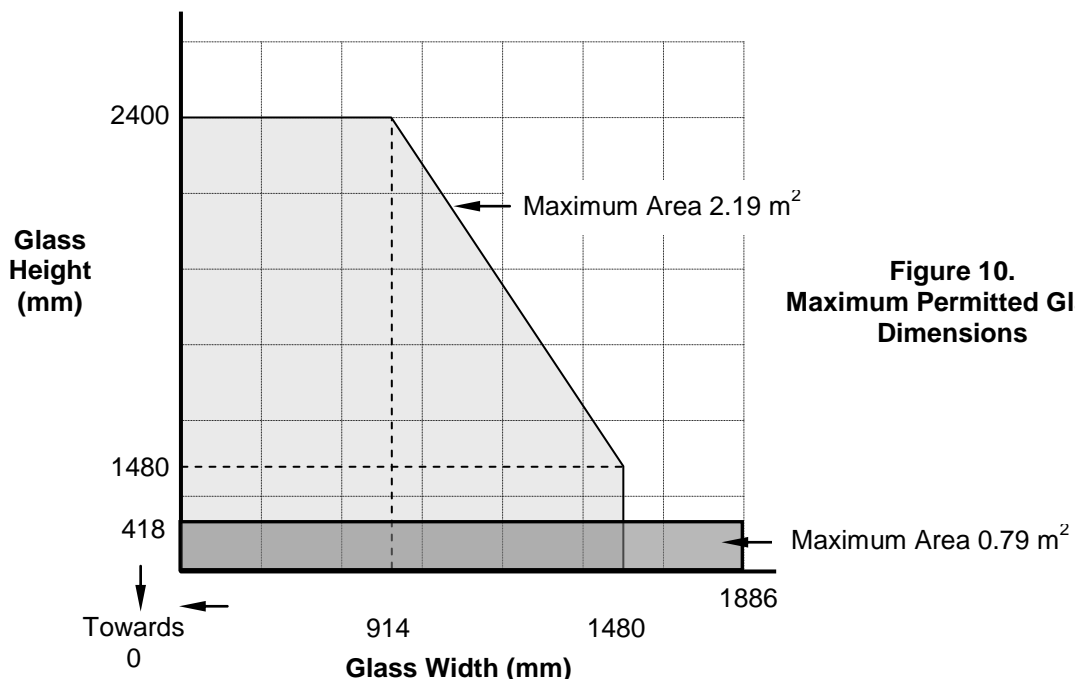
Pyrosec 12 Glass in timber framed screens for periods of 60 minutes integrity

The glass shall be glazed utilising the following basic specification:



- 1 Pyrosec 12
- 2 Neutral silicone capping
- 3 20 mm wide by 5 mm thick ceramic fibre based glazing tape or closed cell foam tape
- 4 30 mm wide by 27 mm high (with 10 - 15° chamfer) hardwood glazing beads, minimum density 550 kg/m³
- 5 Non-combustible setting blocks
- 6 60 mm long steel screws at 200 mm centres (30° to glass)
- 7 82 mm by 33 mm (minimum) hardwood frame, minimum density 550 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 12 glass shown in Figure 10 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



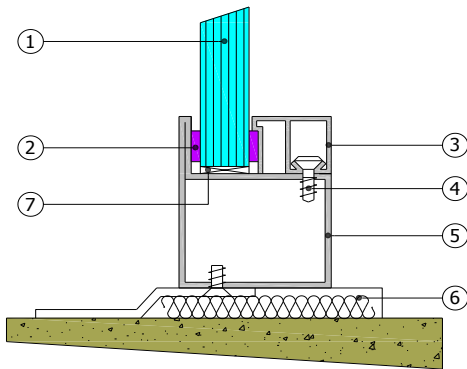
**Figure 10.
Maximum Permitted Glass
Dimensions**

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PYROSEC FIRE RESISTING GLASS

Pyrosec 12 Glass in steel framed screens for periods of 30 minutes integrity

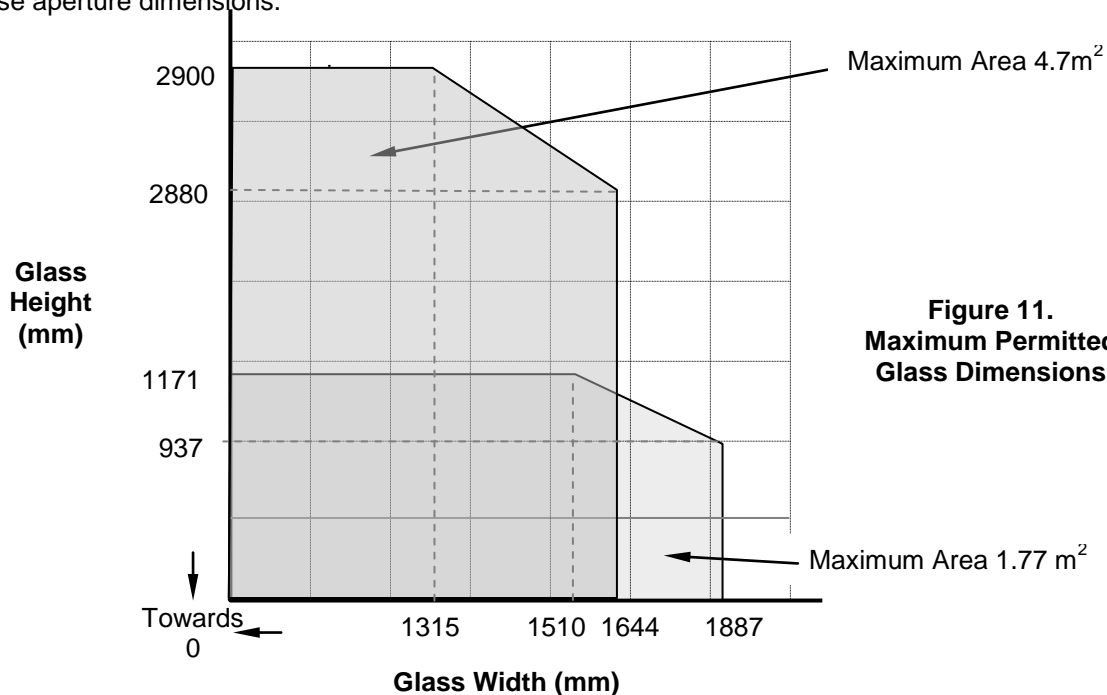
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1. Pyrosec 12
2. Ceramic fibre based glazing tape, 20 mm x 3 mm
3. Glazing bead 25 mm x 20 mm
4. Screw, 15 mm long
5. Steel section, 60 mm x 50 mm x 1.5 mm
6. Mineral wool insulation
7. Setting Block

The framing system shall have test evidence, such as Jansen Economy 50 or R P Profiles, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 12 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.



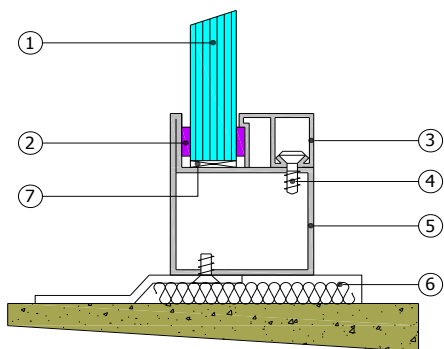
**Figure 11.
Maximum Permitted
Glass Dimensions**

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PYROSEC FIRE RESISTING GLASS

Pyrosec 12 Glass in steel framed screens for periods of 60 minutes integrity

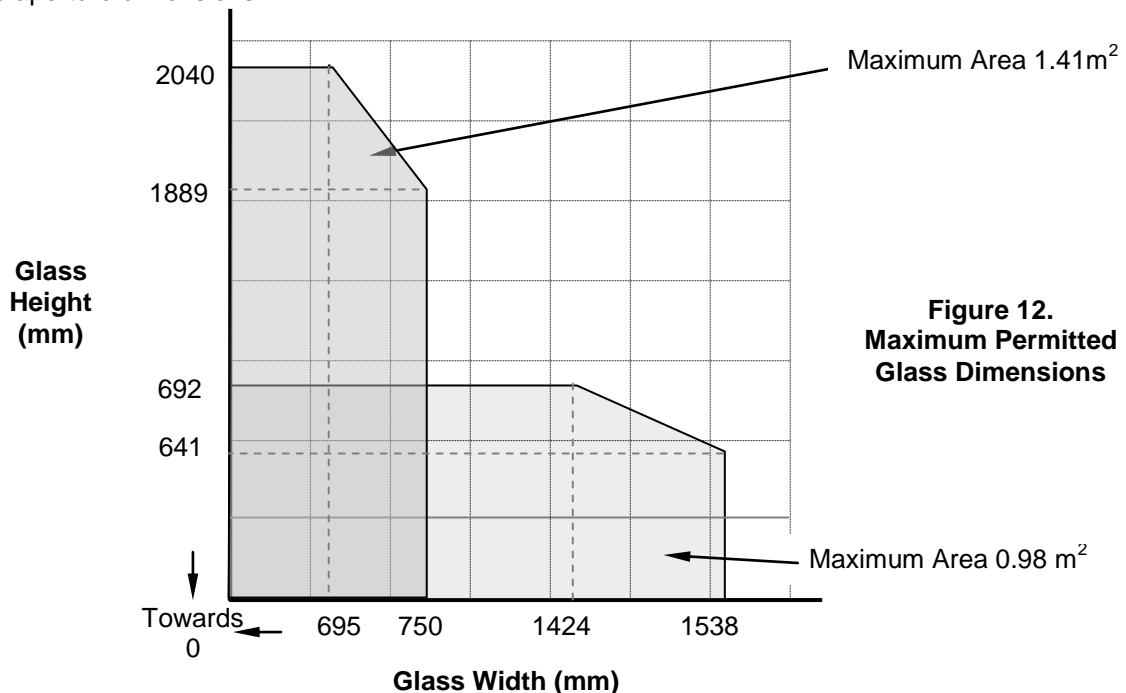
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1. Pyrosec 12
2. Ceramic fibre based glazing tape, 20 mm x 3 mm
3. Glazing bead 25 mm x 20 mm
4. Screw, 15 mm long
5. Steel section, 60 mm x 50 mm x 1.5 mm
6. Mineral wool insulation
7. Setting Block

The framing system shall have test evidence, such as Jansen Economy 50 or R P Profiles, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 12 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.



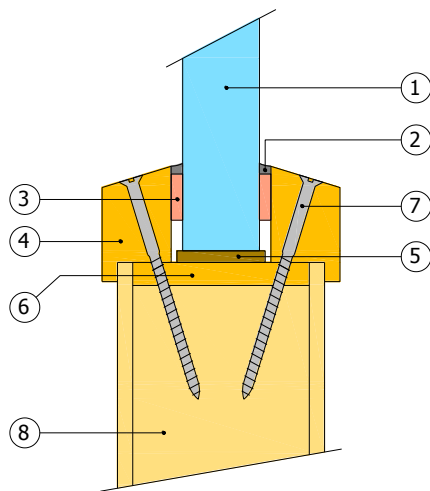
**Figure 12.
Maximum Permitted
Glass Dimensions**

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PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass in timber based doorsets for periods of 60 minutes integrity and 30 minutes insulation

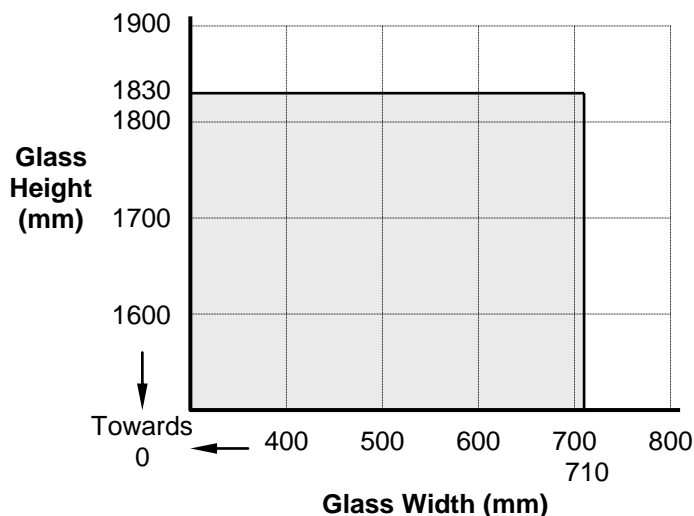
The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Pyrosec 16 or Pyrosec 16 Ext
- 2 Neutral silicone capping
- 3 12 mm wide by 4 mm thick closed cell foam tape
- 4 30 mm high by 20 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible/hardwood setting blocks
- 6 6 mm thick hardwood aperture liner (not required for hardwood cored door leaves)
- 7 60 mm long steel screws at 150 mm centres (30° to glass)
- 8 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of (Pyrosec 16 and Pyrosec 16 Ext) Pyrosec 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.



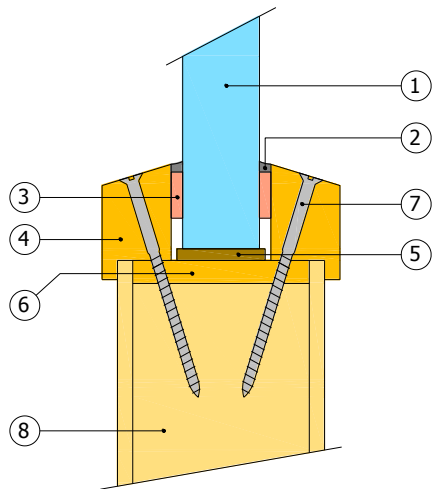
**Figure 13.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass in timber based doorsets for periods of 30 minutes integrity and 30 minutes insulation

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



- 1 Pyrosec 16 or Pyrosec 16 Ext
- 2 Neutral silicone capping
- 3 12 mm wide by 4 mm thick closed cell foam tape
- 4 30 mm high by 20 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible/hardwood setting blocks
- 6 6 mm thick hardwood aperture liner (not required for hardwood cored door leaves)
- 7 60 mm long steel screws at 150 mm centres (30° to glass)
- 8 Nominally 44 mm thick FD30 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of (Pyrosec 16 and Pyrosec 16 Ext) Pyrosec glass shown in Figure 14 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

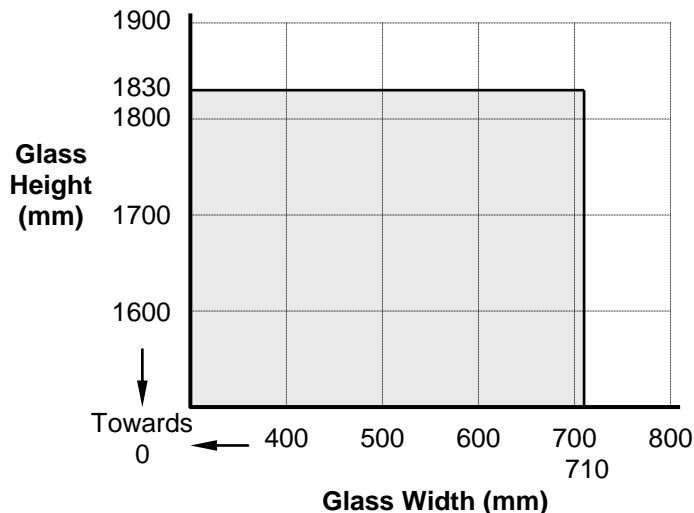


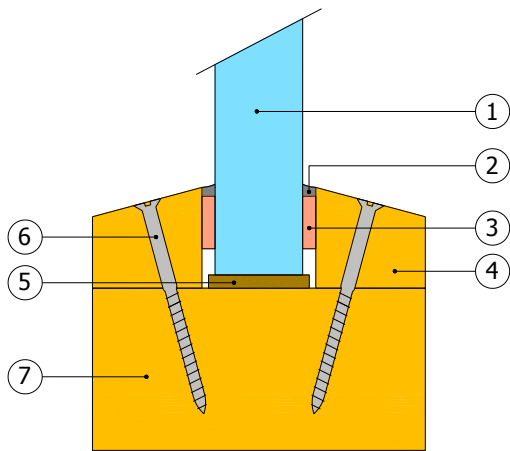
Figure 14.
Maximum Permitted Glass Dimensions

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

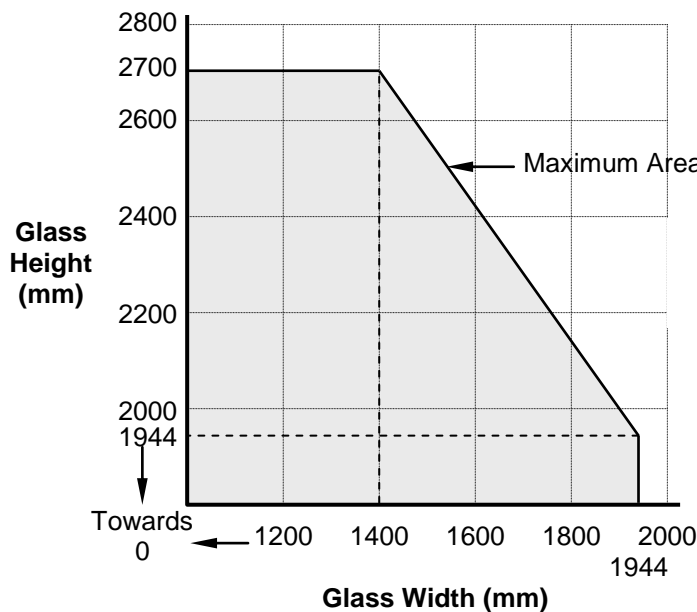
Pyrosec 16 Glass in timber framed screens for periods of 60 minutes integrity and 30 minutes insulation

The glass shall be glazed utilising the following basic specification:



- 1 Pyrosec 16 and Pyrosec 16 Ext
- 2 Neutral silicone capping
- 3 12 mm wide by 4 mm thick closed cell foam tape
- 4 23 mm high by 25 mm wide (with 15° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible setting blocks
- 6 50 mm long steel screws at 250 mm centres (30° to glass)
- 7 75 mm by 37 mm (minimum) hardwood perimeter framing sections, 75 mm by 54 mm (minimum) hardwood internal transom/mullion framing sections, minimum density 640 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 16 and Pyrosec 16 Ext 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.



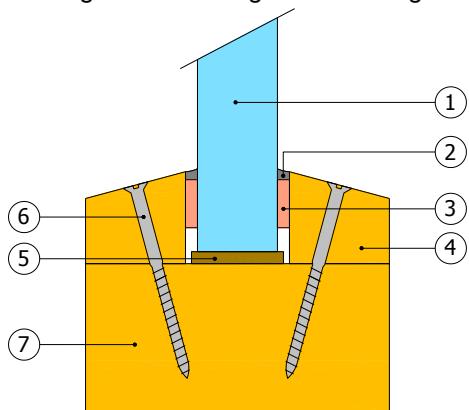
**Figure 15.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

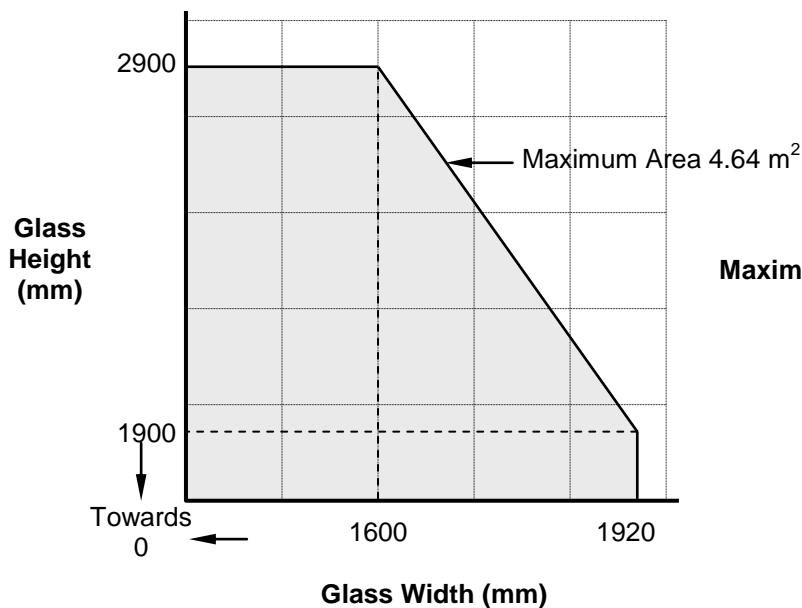
Pyrosec 16 Glass in timber framed screens for periods of 30 minutes integrity and 30 minutes insulation

The glass shall be glazed utilising the following basic specification:



- 1 Pyrosec 16 and Pyrosec 16 Ext
- 2 Neutral silicone capping
- 3 10 mm wide by 5 mm ceramic fibre based glazing tape
- 4 27 mm high by 25 mm wide (with 15° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible setting blocks
- 6 50 mm long steel screws at 250 mm centres (30° to glass)
- 7 75 mm by 33 mm (minimum) hardwood perimeter framing sections, 75 mm by 46 mm (minimum) hardwood internal transom/mullion framing sections, minimum density 640 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 16 and Pyrosec 16 Ext 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.

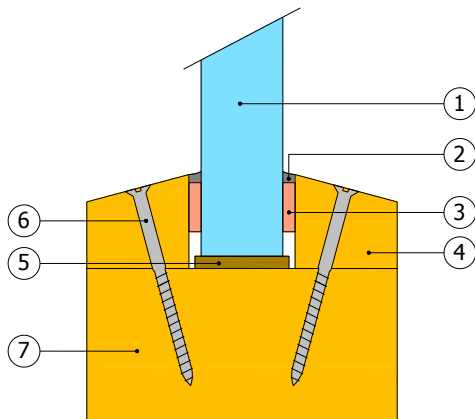


CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

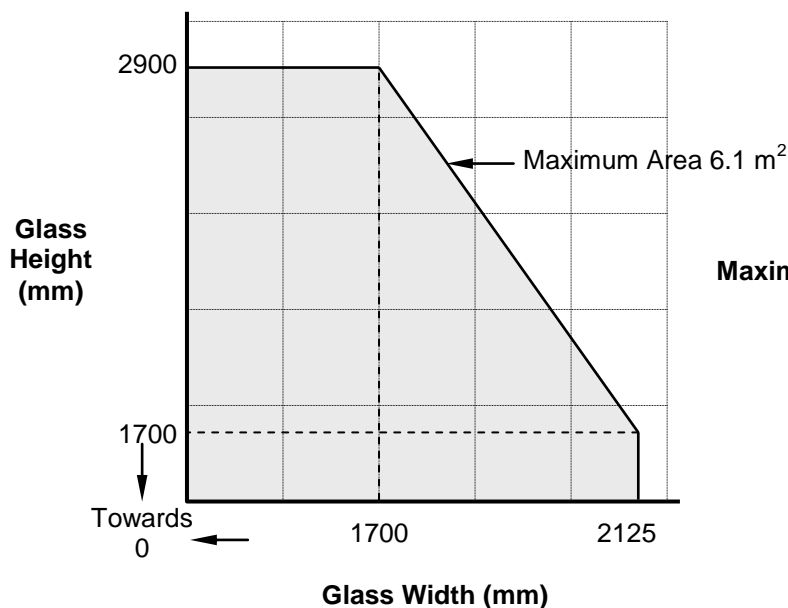
Pyrosec 16 IGU Glass in timber framed screens for periods of 30 minutes integrity and 30 minutes insulation

The glass shall be glazed utilising the following basic specification:



- 1 IGU comprising Pyrosec 16 or Pyrosec 16 Ext glass, a minimum 8 mm wide air cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*
- 2 Neutral silicone capping
- 3 20 mm wide by 5 mm ceramic fibre based glazing tape
- 4 27 mm high by 25 mm wide (with 15° chamfer) hardwood glazing beads, minimum density 520 kg/m³
- 5 Non-combustible setting blocks
- 6 60 mm long steel screws at 250 mm centres (30° to glass)
- 7 33 mm by 97 mm (minimum) hardwood perimeter framing sections, 66 mm by 97 mm (minimum) hardwood internal transom/mullion framing sections, minimum density 520 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 16 and Pyrosec 16 Ext 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**

**CERTIFICATE No CF 5155
PROMAT UK LIMITED**

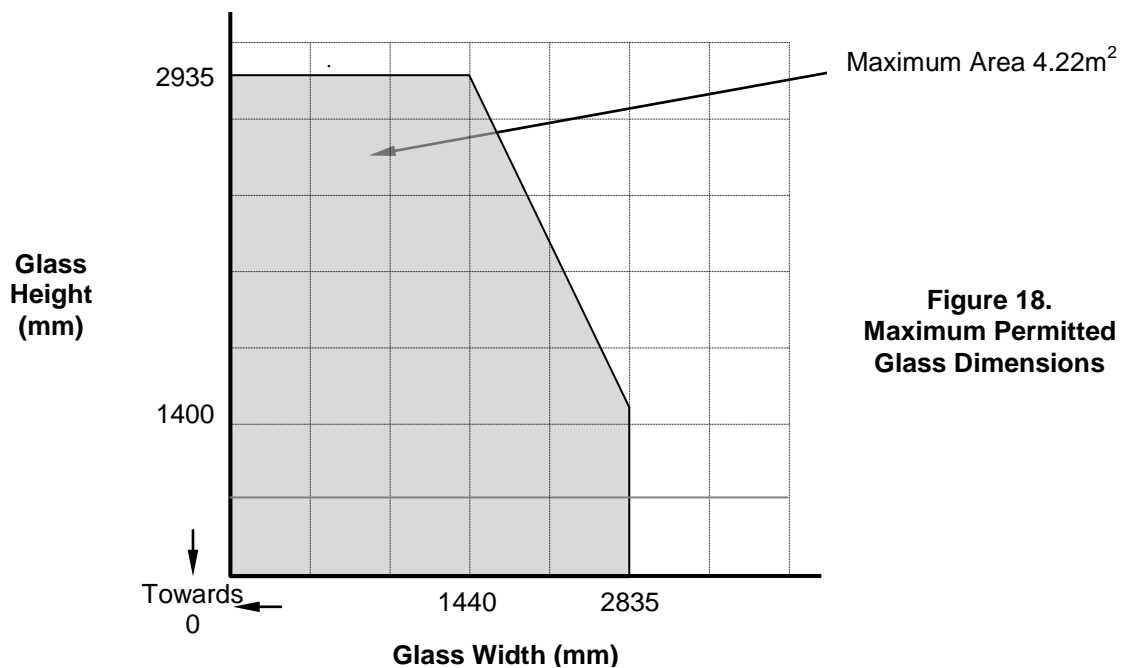
PYROSEC FIRE RESISTING GLASS

Pyrosec 16 IGU Glass in 'Jansen Janisol II' and 'Forster Fuegolight' steel framed screens for periods of 30 minutes integrity and 30 minutes insulation

The glass shall be glazed within a 'Jansen Janisol II' or 'Forster Fuegolight' framed screens. Please consult the frame manufacturer for drawings of glazing system.

This Certificate of Approval relates to the sizes of Pyrosec 16 IGU glass (comprising Pyrosec 16 or Pyrosec 16 External Grade, a minimum 12 mm wide air cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*) 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.

* A minimum 6.8 mm laminated glass must be used as the secondary pane for IGU's incorporating internal grade Pyrosec 16.

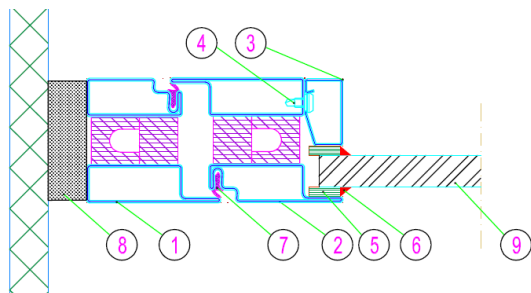


CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass (including IGU's) in steel doorsets for periods of 30 minutes integrity and insulation

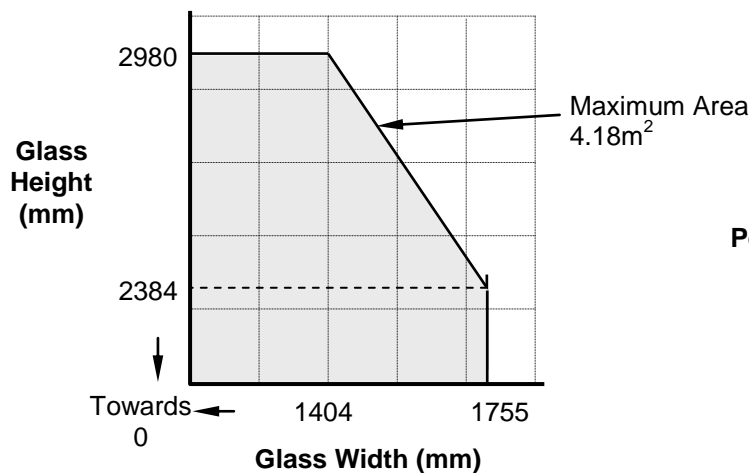
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel profiled doorleaf framing system.



1. Forster Fuego Light 30-65mm x 50mm (ref 735.800/T)
2. Forster Fuego Light 30-65mm x 50mm (ref 735.805/T)
3. Beads Forster – 35mm by 20mm (ref: 901247)
4. Screws – 4 mm diameter by 16 (ref 906377)
5. Ceramic paper 20mm by 5mm
6. Silicone Dow Corning Firestop 700
7. Weatherstripping ref 905307
8. Mineral wool insulation
9. Pyrosec 16

The steel profiled door framing system shall have test evidence, such as Forster Fuego Light, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions for the fire resistance required (i.e. 30 minutes integrity and 30 minutes insulation). 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 Pyrosec 16 glass (inc. IGU's) 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.



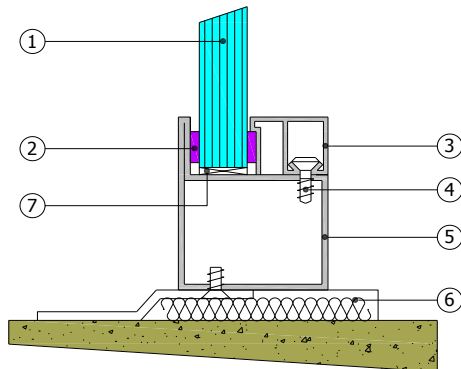
**Figure 19.
Maximum
Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass in steel framed screens for periods of 60 minutes integrity

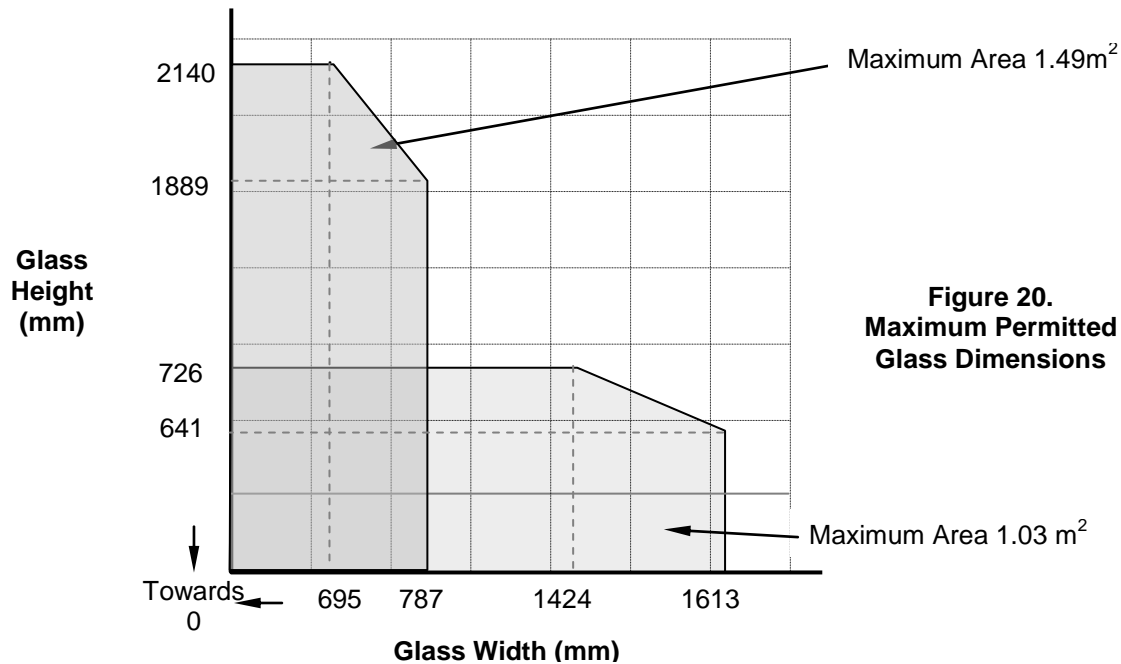
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1. Pyrosec 16
2. Ceramic fibre based glazing tape, 20 mm x 3 mm
3. Glazing bead 25 mm x 20 mm
4. Screw, 15 mm long
5. Steel section, 60 mm x 50 mm x 1.5 mm
6. Mineral wool insulation
7. Setting block

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

This Certificate of Approval relates to the sizes of Pyrosec 16 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.



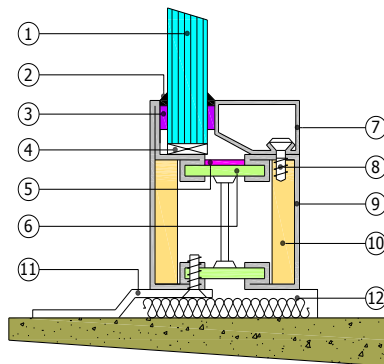
**Figure 20.
Maximum Permitted
Glass Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass in steel framed screens for periods of 60 minutes integrity and 30 minutes insulation

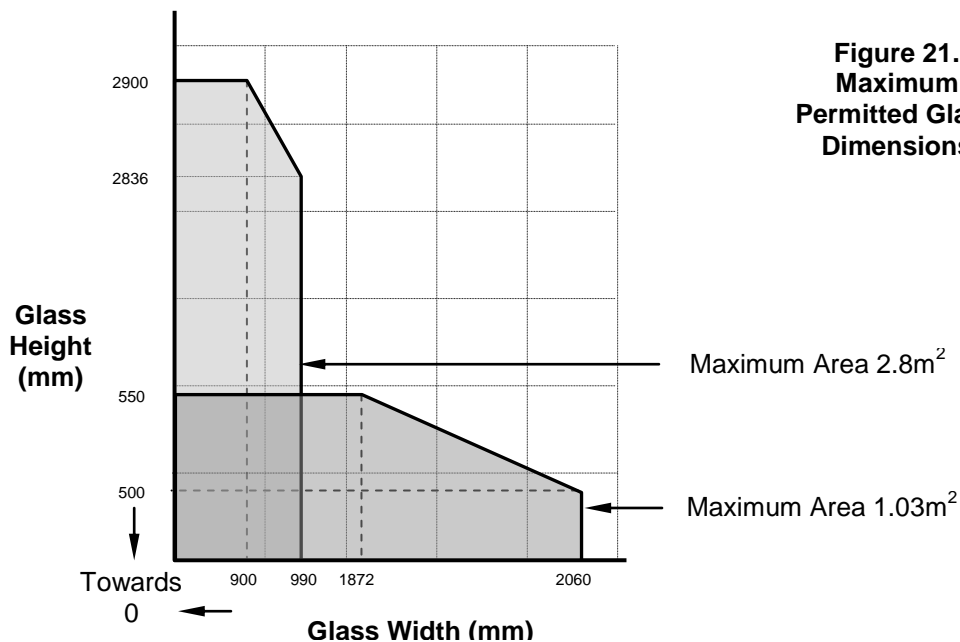
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1. Pyrosec 16
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
11. Mounting bracket
12. Mineral wool insulation

The framing system shall have test evidence, such as Jansen Janisol II, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 16 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.

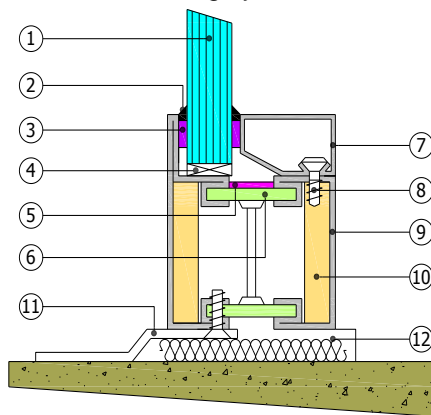


CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 16 Glass in steel framed screens for periods of 30 minutes integrity and 30 minutes insulation

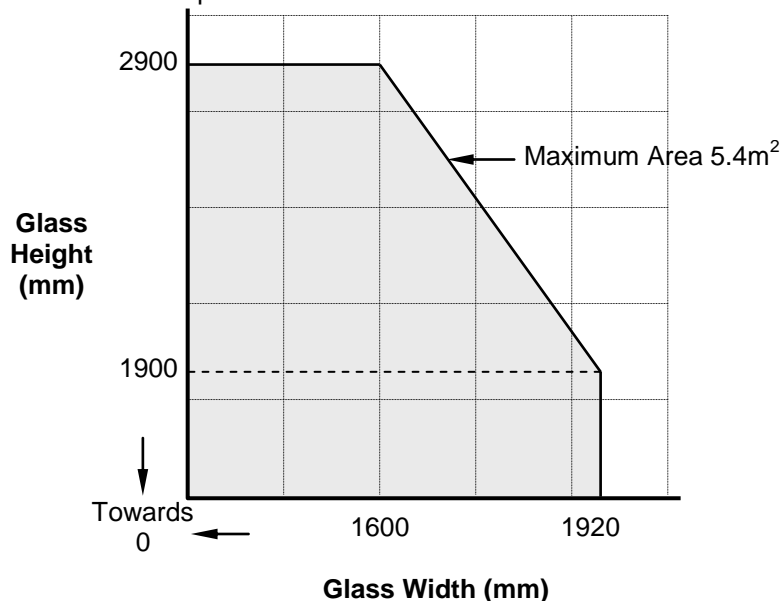
The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system.



1. Pyrosec 16 and Pyrosec 16 EG
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
11. Mounting bracket
12. Mineral wool insulation

The framing system shall have test evidence, such as Jansen Janisol II or Forster Fuegolight, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 16 and Pyrosec 16 Ext 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.



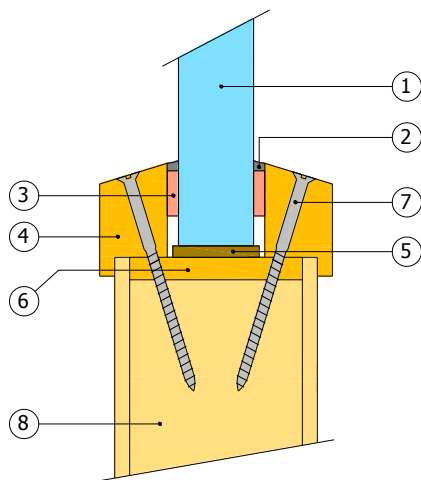
**Figure 22.
Maximum
Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 25 Glass in timber based doorsets for periods of 60 minutes integrity and insulation

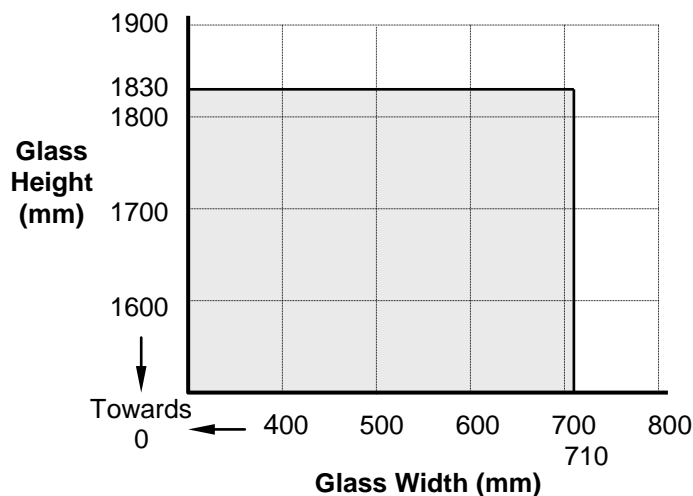
The glass shall be glazed within a previously fire tested or CERTIFIRE approved timber based doorset utilising the following basic specification:



- 1 Pyrosec 25 and Pyrosec 25 Ext
- 2 Neutral silicone capping
- 3 15 mm wide by 4 mm thick closed cell foam tape
- 4 30 mm high by 15.5 mm wide (including 5 mm high by 5 mm wide bolection with 20° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible/hardwood setting blocks
- 6 6 mm thick hardwood aperture liner (not required for hardwood cored door leaves)
- 7 60 mm long steel screws at 150 mm centres (30° to glass)
- 8 Nominally 54 mm thick FD60 door leaf

The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of Pyrosec 25 and Pyrosec 25 Ext glass shown in Figure 23 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



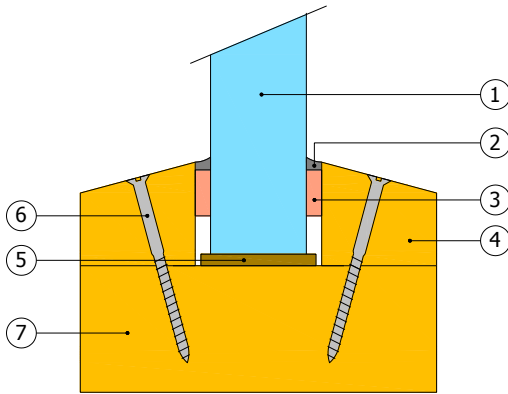
**Figure 23.
Maximum Permitted Glass
Dimensions**

CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec 25 Glass in timber framed screens for periods of 60 minutes integrity and insulation

The glass shall be glazed utilising the following basic specification:



- 1 Pyrosec 25 and Pyrosec 25 Ext
- 2 Neutral Silicone capping
- 3 15 mm wide by 4 mm thick closed cell foam tape
- 4 27 mm high by 30 mm wide (with 15° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible setting blocks
- 6 50 mm long steel screws at 250 mm centres (30° to glass)
- 7 95 mm by 33 mm (minimum) hardwood perimeter framing sections, 95 mm by 46 mm (minimum) hardwood internal transom/mullion framing sections, minimum density 640 kg/m³

This Certificate of Approval relates to the sizes of Pyrosec 25 and Pyrosec 25 Ext glass shown in Figure 24 below, when used in conjunction with the above systems. The aspect ratio of the glass may be unlimited within these aperture dimensions.

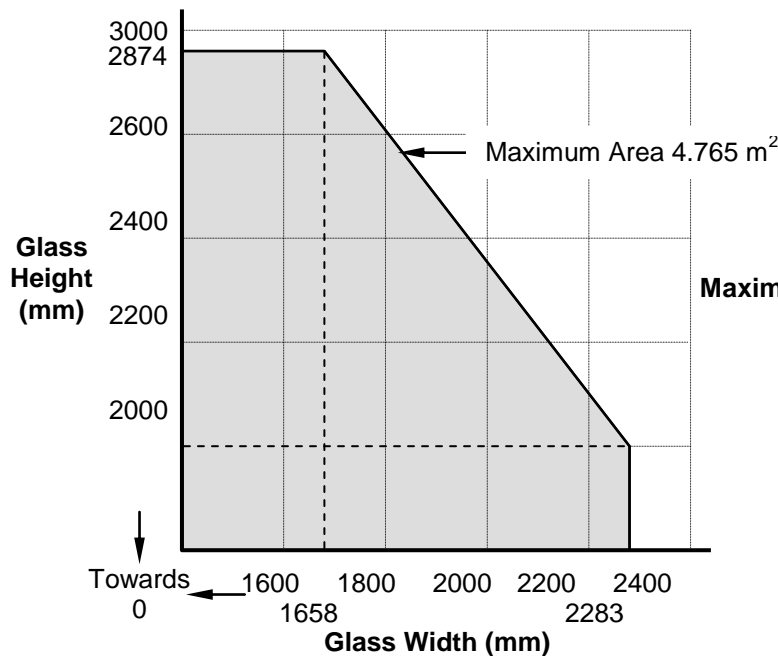


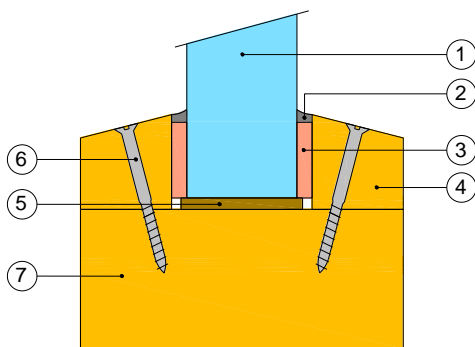
Figure 24
Maximum Permitted Glass
Dimensions

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Insulating Glass Units (IGU's) including Pyrosec 25 Glass in timber framed screens for periods of 60 minutes integrity and insulation

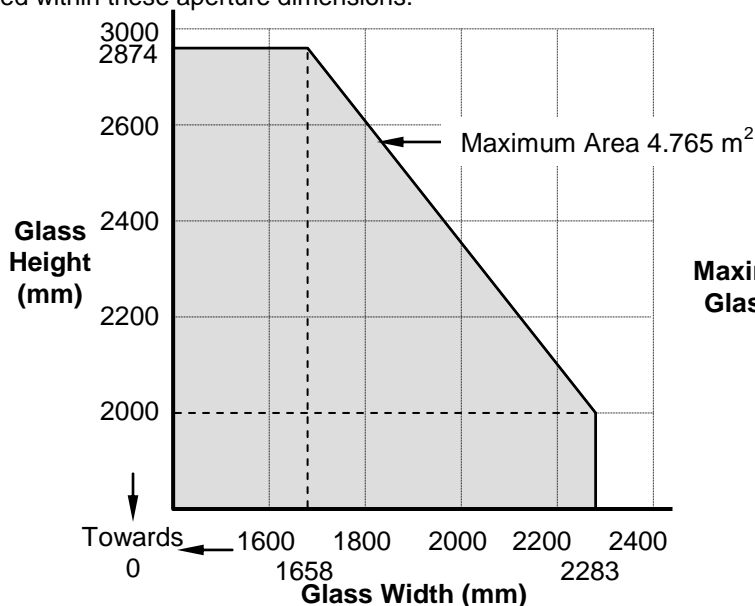
The IGU shall be glazed utilising one of the following specifications:



- 1 IGU comprising Pyrosec 25 or Pyrosec 25 External Grade, a minimum 12 mm wide air cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*. IGU's may be triple glazed to a similar specification with the Pyrosec 25 forming the central pane and a pane of non-fire rated glass positioned each side of the Pyrosec 25
- 2 Neutral Silicone capping
- 3 15 mm wide by 4 mm thick closed cell foam tape
- 4 20 mm high by 40 mm wide (either square or up to 15° chamfer) hardwood glazing beads, minimum density 640 kg/m³
- 5 Non-combustible setting blocks
- 6 50 mm long steel screws at 300 mm centres (30° to glass)
- 7 95 mm by 33 mm (minimum) hardwood perimeter framing sections, 95 mm by 46 mm (minimum) hardwood internal transom/mullion framing sections, minimum density 640 kg/m³

* A minimum 6.8 mm laminated glass must be used as the secondary pane for IGU's incorporating internal grade Pyrosec 25.

This Certificate of Approval relates to the sizes of IGU's including Pyrosec 25 and Pyrosec 25 Ext 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.



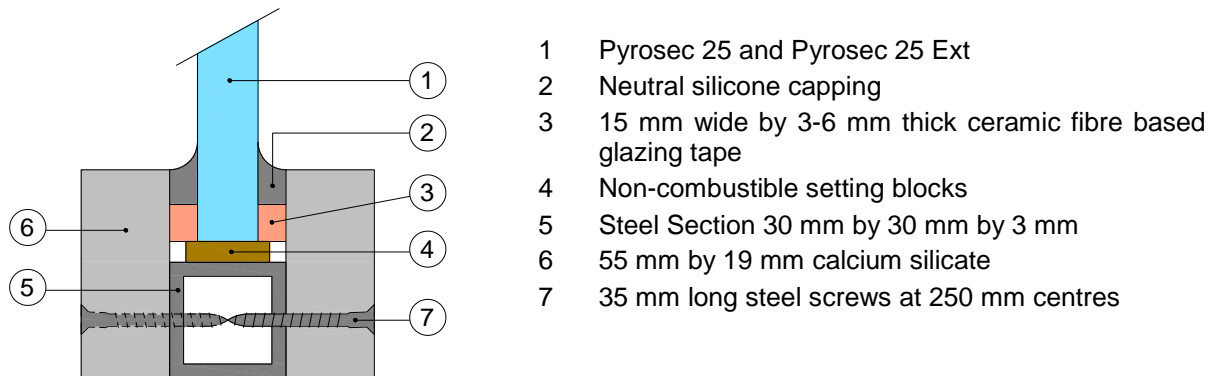
**Figure 25.
Maximum Permitted
Glass Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

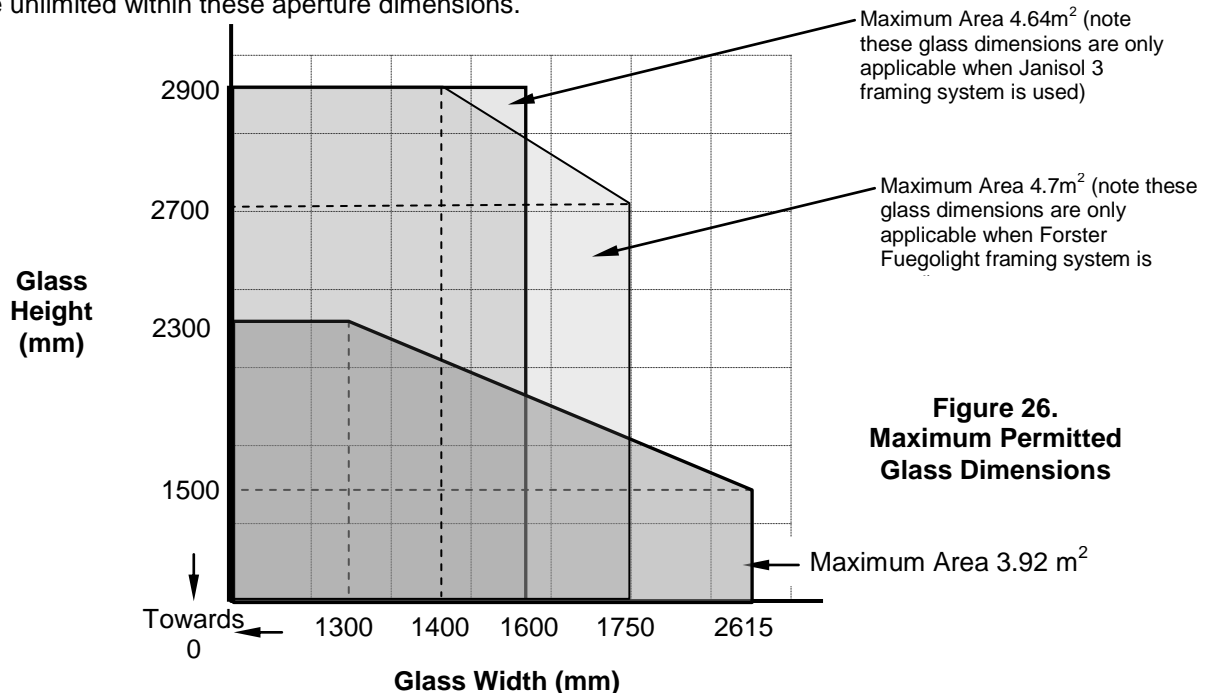
PYROSEC FIRE RESISTING GLASS

Pyrosec 25 Glass in steel framed screens for periods of 60 minutes integrity and 60 minutes insulation

The glass shall be glazed within a previously fire tested (see example below) or CERTIFIRE approved steel framing system utilising the following basic specification. The edge cover to each pane shall be no less than 15 mm minimum



This Certificate of Approval relates to the sizes of Pyrosec 25 and Pyrosec 25 Ext 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.

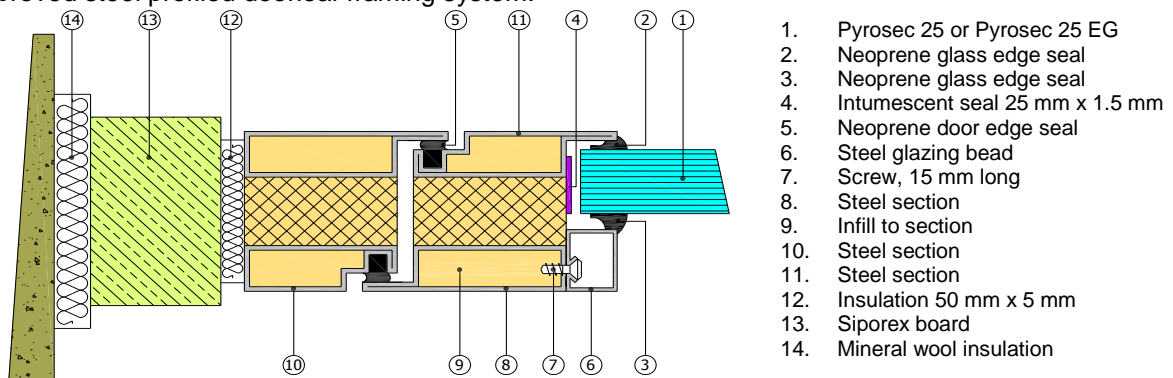


CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

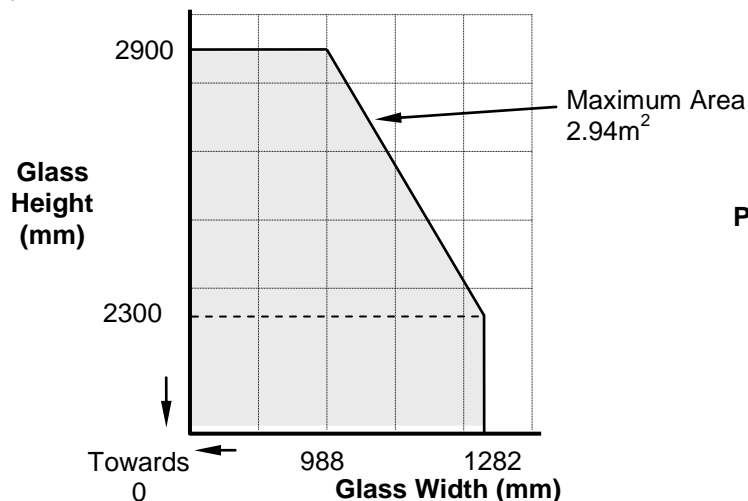
Pyrosec 25 Glass in Steel Doorsets for periods of 60 minutes integrity and 60 minutes insulation

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



The steel profiled door framing system shall have test evidence, such as RP Isofeu 60, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions for the fire resistance required (i.e. 60 minutes integrity and 60 minutes insulation). 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 Pyrosec 25 and Pyrosec 25 Ext 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.



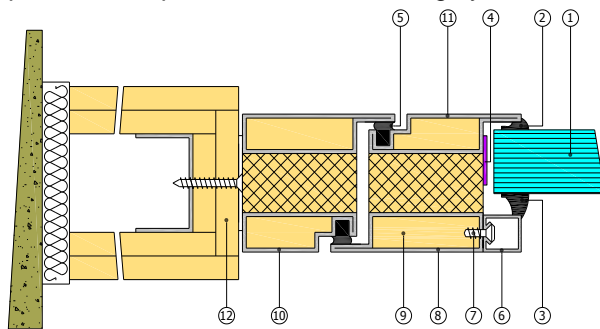
**Figure 27.
Maximum
Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Insulating Glass Units (IGU's) including Pyrosec 25 Glass in steel doorsets for periods of 60 minutes integrity and insulation

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

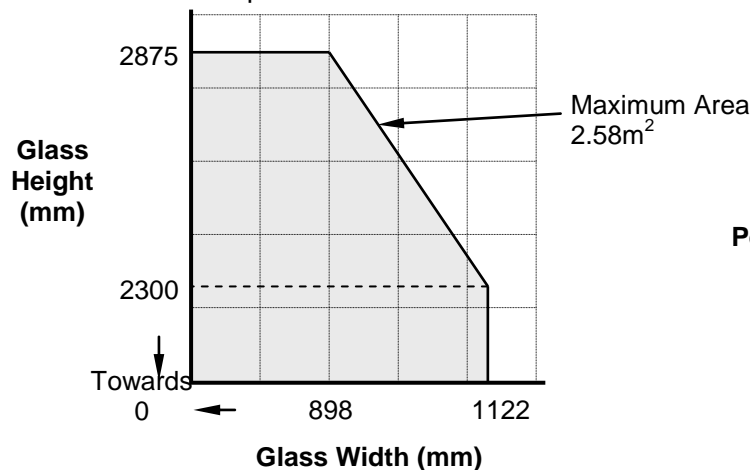


1. IGU comprising Pyrosec 25 or Pyrosec 25 EG glass, a minimum 6 mm wide air cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*
2. Neoprene glass edge seal
3. Neoprene glass edge seal
4. Intumescent seal 25 mm x 2 mm
5. Neoprene door edge seal
6. Steel glazing bead
7. Screw, 15 mm long
8. Steel section
9. Infill to section
10. Steel section
11. Steel section
12. Partition wall

*A minimum 6.8 mm laminated glass must be used as the external pane for IGU's incorporating internal grade Pyrosec 25.

The steel profiled door framing system shall have test evidence, such as RP Technik Isofeu 60, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions for the fire resistance required (i.e. 60 minutes integrity and 60 minutes insulation). 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 Pyrosec 25 or 25 Ext glass (in IGU's) 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.



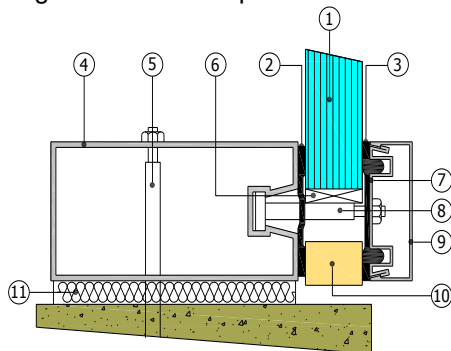
**Figure 28.
Maximum
Permitted Glass
Dimensions**

CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Insulating Glass Units (IGU's) including Pyrosec 25 Glass in steel screen for periods of 60 minutes integrity and insulation

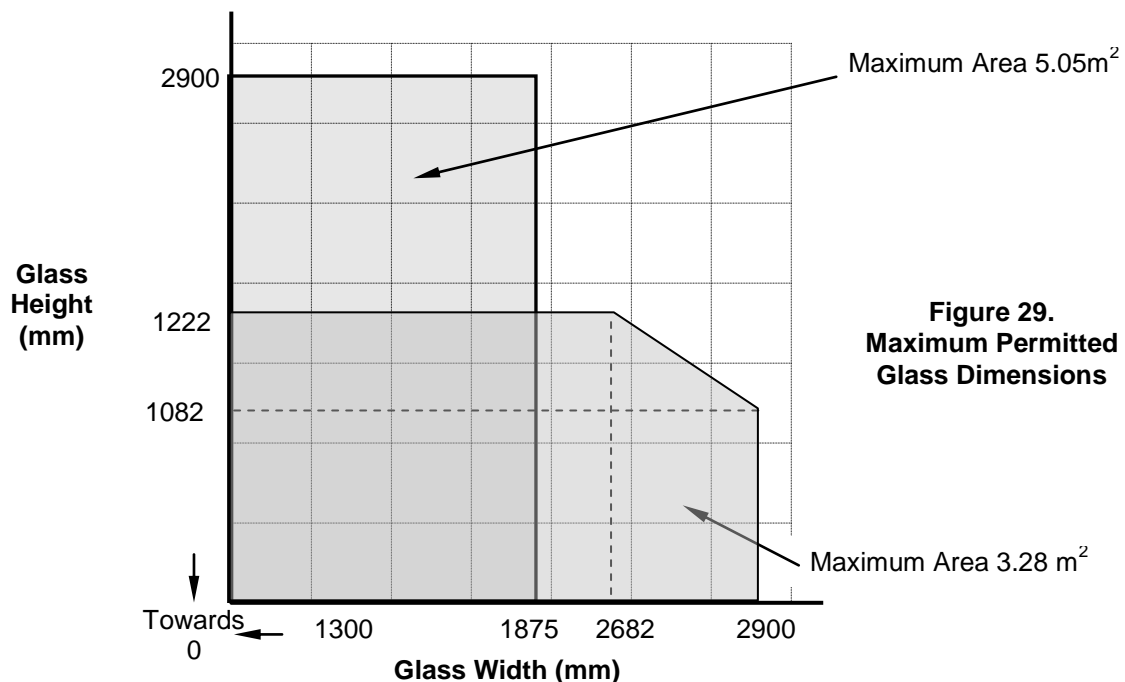
The glass shall be glazed within a previously fire tested, such as Jansen VISS or Forster Thermfix Vario or CERTIFIRE approved steel framing system utilising the following basic specification. The edge cover to each pane shall be no less than 15 mm minimum



1. IGU comprising Pyrosec 25 or Pyrosec 25 EG glass, a minimum 8 mm wide air cavity and minimum 6 mm thick non-fire rated glass (toughened, float, laminated, coated, tinted)*
2. Rubber profile, 50 mm x 7 mm
3. Rubber profile, 17 mm x 5 mm
4. Steel section, 122 mm x 50 mm x 2 mm
5. Anchor bolt
6. Setting block
7. Steel section, 48 mm x 10 mm x 2 mm
8. Steel bolt, 58 mm long
9. Aluminium section, 50 mm x 18 mm x 1.5 mm
10. Calcium silicate board
11. Mineral wool insulation

*A minimum 6.8 mm laminated glass must be used as the external pane for IGU's incorporating internal grade Pyrosec 25.

This Certificate of Approval relates to the sizes of Pyrosec 25 and Pyrosec 25 Ext glass (in IGU's) 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.



CERTIFICATE No CF 5155 PROMAT UK LIMITED

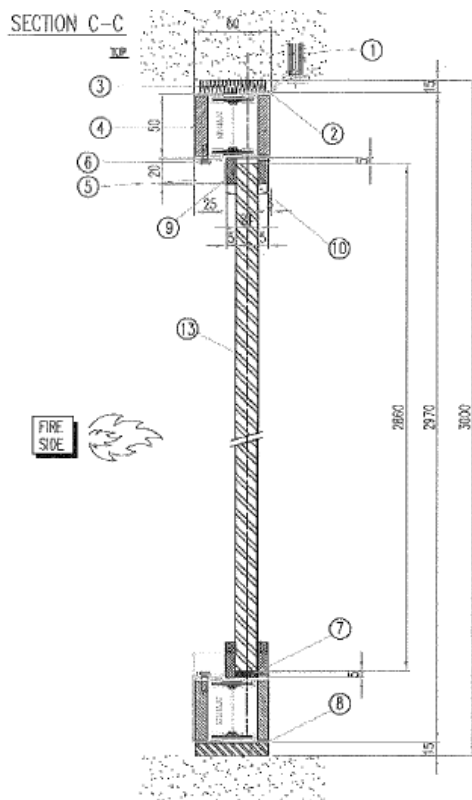
PYROSEC FIRE RESISTING GLASS

Pyrosec ClearRun Glass in a butt jointed system for periods of 30 minutes integrity and insulation

Note: Pyrosec ClearRun in a butt jointed system requires special edge processing and should be ordered as such. Please contact PROMAT UK LIMITED for further details.

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

The framing system shall have test evidence, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

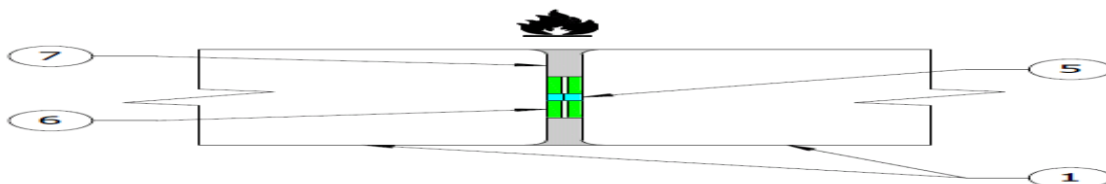


Section details

1. Hiliti 100 HT fixings 10 x 112 mm
2. Frame Fixing
3. Thermal Insulation Insulfrax 96kg/m³ or Supalux
4. Jansen Janisol 2 steel profile
5. Jansen glazing beads
6. Jansen Fastening Studs
7. Promatect H setting blocks 70 mm by 24 mm by 5 mm
8. Promatect H setting blocks 170 mm by 60 mm by 15
9. Ceramic Paper 20 mm by 5 mm Superwool X607
10. Pensil 300 Grey silicone
11. Self adhesive Gluske Kerafix FXL200
12. Flumroc FP1700 thermal insulation 120kg/m³
13. Glass – 16 mm Pyrosec ClearRun

Butt Joint details (below)

1. Glass - 16 mm Pyrosec ClearRun
5. Self adhesive Superwool paper X607 on one face
6. Kerafix FXL 200
7. Pensil 300 Grey silicone

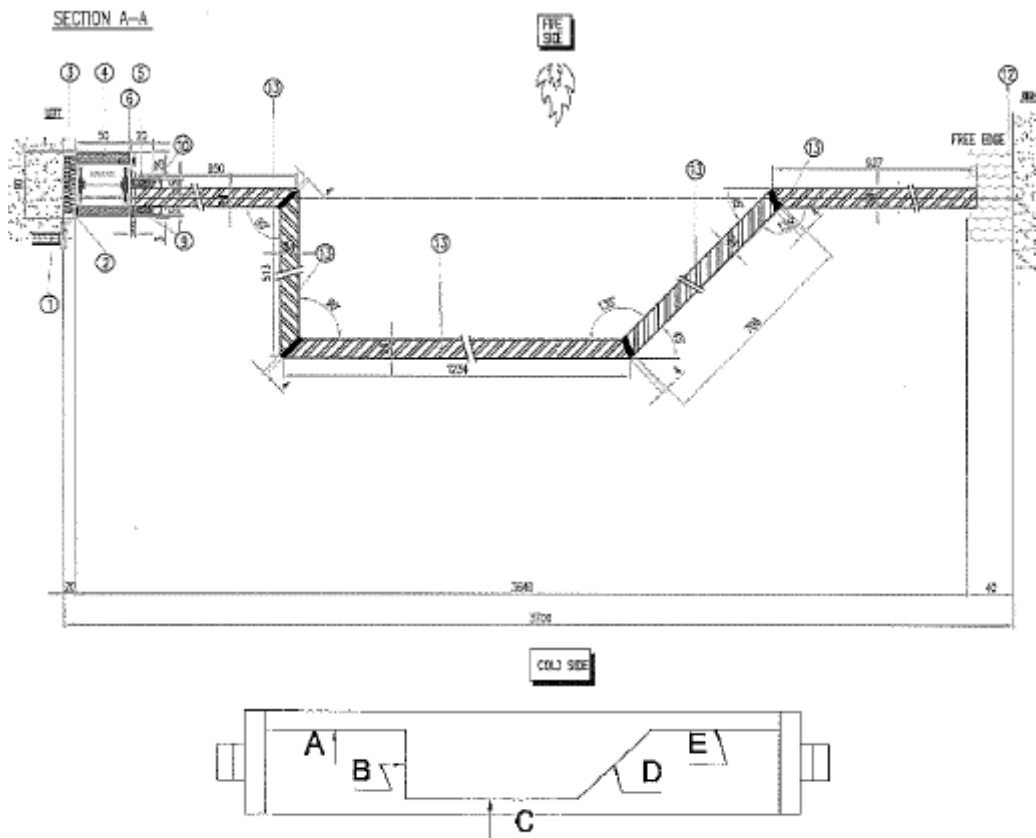


CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec ClearRun Glass in a butt jointed system for periods of 30 minutes integrity and insulation (continued)

The cross section below shows the layout of the butt jointed screen with angled panes. The inner angles for panes A, B and C are $135^{\circ}/225^{\circ}$ and $90^{\circ}/270^{\circ}$ for panes C, D and E.



CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec ClearRun Glass in a butt jointed system for periods of 30 minutes integrity and insulation (continued)

This Certificate of Approval relates to the sizes of Pyrosec ClearRun 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.

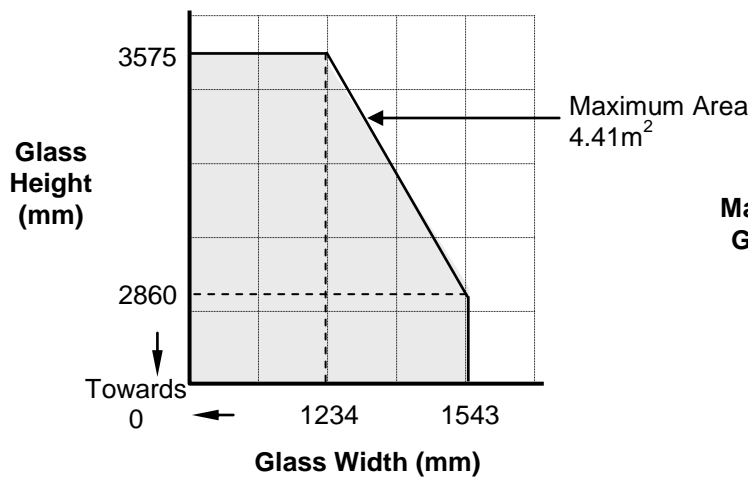


Figure 30.
Maximum Permitted
Glass Dimensions

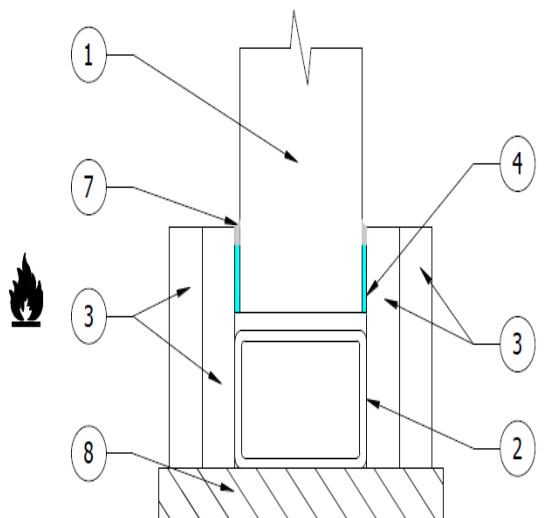
CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec ClearRun Glass in a butt jointed system for periods of 120 minutes integrity and insulation

Note: Pyrosec ClearRun in a butt jointed system requires special edge processing and should be ordered as such. Please contact PROMAT UK LIMITED for further details.

The glass shall be glazed within a previously fire tested (see example below) or a CERTIFIRE approved steel framing system. The framing system shall have test evidence, or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.



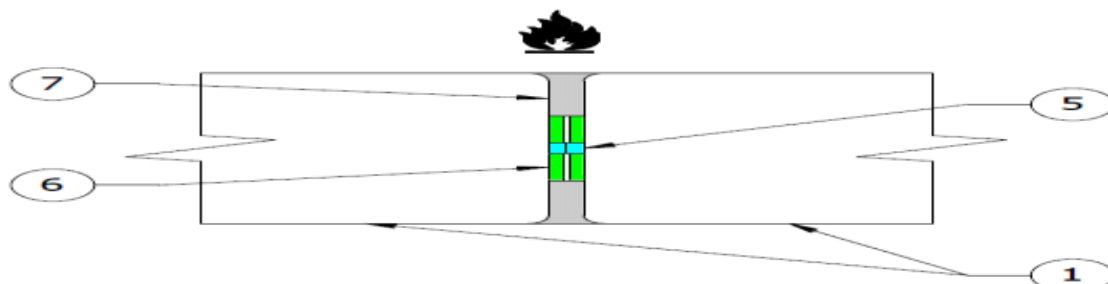
Section details

1. Glass – 53 mm Pyrosec ClearRun
2. Steel tube – 60 mm by 40 mm by 3 mm
3. Promatect-H or Supalux
4. Superwool paper X607 with self adhesive on one face
5. Superwool paper X607 with self adhesive on one face
6. Kerafix FXL 200
7. Silicone –Momentive Pensil 300 - Grey
8. Superwool X607

Note: Glass is placed on 80 by 30 mm setting blocks at 100 mm from the bottom corners of the glazing. Edge tape is present on all edges except on vertical butt joints.

Butt Joint details (below)

1. 16 mm Pyrosec ClearRun
5. Self adhesive Superwool paper X607 on one face
6. Kerafix FXL 200
7. Pensil 300 silicone



CERTIFICATE No CF 5155
PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Pyrosec ClearRun Glass in a butt jointed system for periods of 120 minutes integrity and insulation (continued)

This Certificate of Approval relates to the sizes of Pyrosec ClearRun 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.

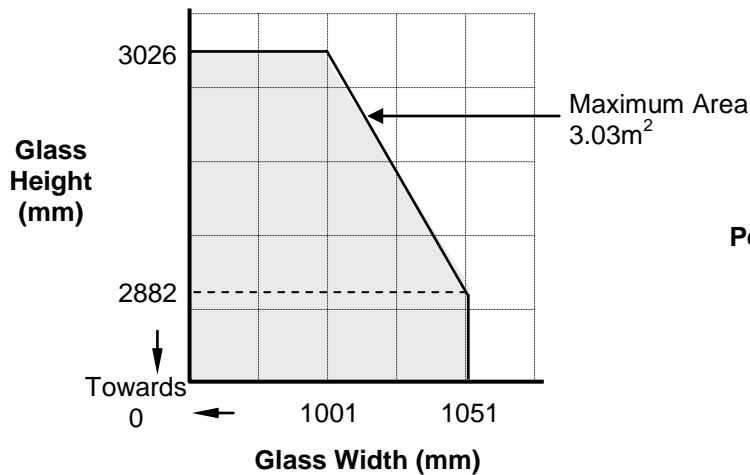


Figure 31.
Maximum Permitted Glass Dimensions

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PYROSEC FIRE RESISTING GLASS

Glazing bars in conjunction with Pyrosec glass in timber framed screens and doors for periods of 30 minutes integrity (Pyrosec 7/30, 7/60, 7/90), 60 minutes integrity (Pyrosec 12), 60/30 minutes integrity and 30 minutes insulation (Pyrosec 16) and 60 minutes integrity and insulation (Pyrosec 25)

The glass shall be glazed utilising the following basic specifications, the glass and glazing system is otherwise to be as specified within CF No. 137;

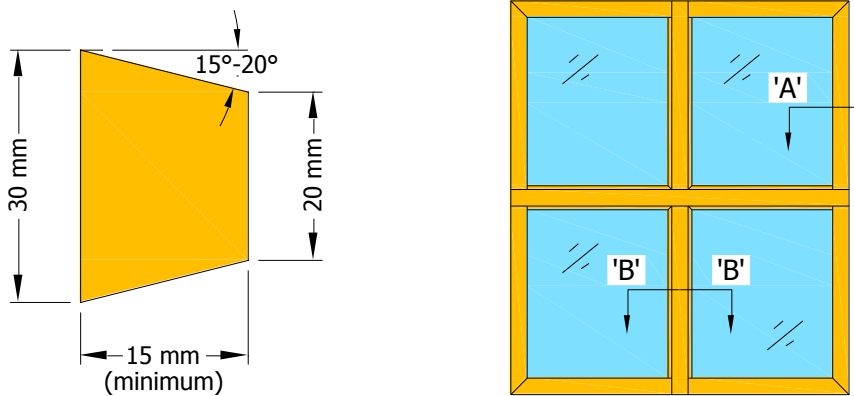
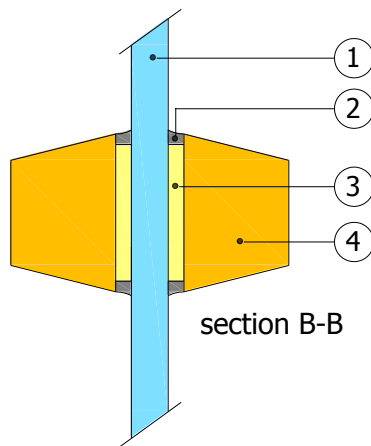


Figure 53. Glazing Bar Specification

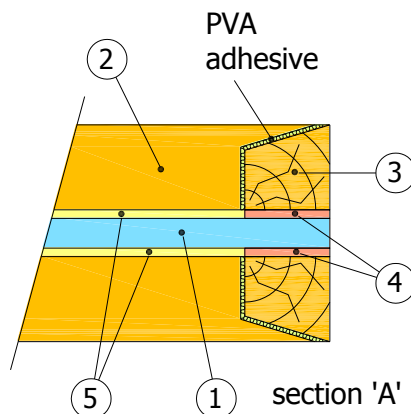
CERTIFICATE No CF 5155 PROMAT UK LIMITED

PYROSEC FIRE RESISTING GLASS

Glazing bars in conjunction with Pyrosec glass in timber framed screens and doors for periods of 30 minutes integrity (Pyrosec 7/30, 7/60, 7/90), 60 minutes integrity (Pyrosec 12), 60/30 minutes integrity and 30 minutes insulation (Pyrosec 16) and 60 minutes integrity and insulation (Pyrosec 25) ... continued



- 1 Pyrosec 7/30, 7/60, 7/90, Pyrosec 12, 16 & 25 (+ external grade products)
- 2 Neutral silicone capping
- 3 30 mm by 1 mm Sealmaster Fireglaze Compound
30 mm by 2 mm Sealmaster Fireglaze G30 Strip (2 No. 15 mm by 2 mm)
30 mm by 1.5 mm Hodgson's Sealants Firestrip 30FD (2 No. 15 mm by 1.5 mm)
30 mm by 1 mm Interdens/Lorient Mono-ammonium phosphate
- 4 30 mm by minimum 15 mm (with 15° chamfer) hardwood glazing bars, minimum density 640 kg/m³



- 1 Pyrosec 7/30, 7/60, 7/90, Pyrosec 12, 16 & 25 (+ external grade products)
- 2 Hardwood glazing bar
- 3 Hardwood perimeter glazing bead (as specified for glass within CF377)
- 4 Ceramic Fibre / Closed Cell Foam tape
- 5 30 mm by 1 mm Sealmaster Fireglaze Compound
30 mm by 2 mm Sealmaster Fireglaze G30 Strip (2 No. 15 mm by 2 mm)
30 mm by 1.5 mm Hodgson's Sealants Firestrip 30FD (2 No. 15 mm by 1.5 mm)
30 mm by 1 mm Interdens/Lorient Mono-ammonium phosphate

Figure 54. Installation Specification