
CERTIFICATE OF APPROVAL

No CF 137

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

Pyrocet, Pyrocet XP (T & S)
and, Pyrocet R Fire
Resisting Glass

TECHNICAL SCHEDULE

TS 25 Fire Resistant
Glass, Glazing Systems
and Materials

Signed and sealed for and on behalf of CERTIFIRE



Sir Ken Knight
Chairman - Management Council

Issued: 30th May 2000
Revised: 21st October 2013
Valid to: 13th February 2018

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CERTIFICATE No CF 137 PROMAT UK LIMITED

PYROCET, PYROCET XP (T &S), PYROCET R, 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	
Pyrocet	Timber doorsets	30	-	6
Pyrocet	Timber screens	30	-	7-8
Pyrocet	Steel screens	30	-	9-10
Pyrocet	Steel doorsets	30	-	11-12
Pyrocet	Steel screens	60	-	13
Pyrocet	Steel doorsets	60	-	14-15
Pyrocet	Steel screens	90	-	16
Pyrocet XP (T)	Timber doorsets	30	-	17
Pyrocet XP (T)	Timber screens	30	-	18-19
Pyrocet XP (S)	Steel screens	30	-	20-21
Pyrocet XP (S)	Steel doorsets	30	-	22
Pyrocet XP (S)	Steel screens	60	-	23-24
Pyrocet XP (S)	Steel doorsets	60	-	25-26
Pyrocet XP (S)	Steel screens	90	-	27
Pyrocet R	Steel screens	30	-	28
Pyrocet R	Steel screens	60	-	29
Pyrocet R	Steel screen (IGU)	30	-	30-31

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PYROCET, PYROCET XP (T & S), PYROCET R, FIRE RESISTING GLASS (continued)

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 the Pyrocet, and Pyrocet XP glass. However, the Pyrocet R glass has a coating on one surface and this surface should be glazing facing the direction of fire. Orientation may, however, be restricted by the requirements of a non-symmetrical framing system. 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.

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PYROCET, PYROCET XP (T and S), PYROCET R, FIRE RESISTING GLASS

Pyrocet, Pyrocet XP and Pyrocet R, glass shall not be fitted into partitioning systems where any part of the glass is higher than 4000mm from finished floor level.

The edge cover for Pyrocet R, Pyrocet XP, Pyrocet R panes shall be restricted as follows:

- a) steel systems 15mm maximum and 10mm minimum (unless stated otherwise in individual applications)
- b) timber systems 10mm maximum and 8mm minimum

Glass Details and Alternatives

Pyrocet is approved in 6, 15 and 19 mm thickness but only supplied as a 'clear' glass.

Pyrocet XP (S and T) are approved in nominal thicknesses of 6, 8, 10, 12, 15 and 19 mm and supplied as a 'clear' glass. The glass should not be sandblasted but if an obscure finish is required this can be achieved by acid etching the surface prior to toughening. Additionally the glass may be body tinted in bronze, blue, green and grey.

Pyrocet R is approved in nominal thicknesses of 6, 8, 10 and 12 mm but can only be supplied as a 'clear' glass.

Insulating Glass Units are approved when constructed with one pane of **Pyrocet or Pyrocet XP (S and T)** glass and one pane of float, toughened or laminated glass.

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PYROCET, PYROCET XP (T and S), PYROCET R, FIRE RESISTING GLASS

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 Pyrocet, Pyrocet XP (S), Pyrocet (T) and Pyrocet R 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

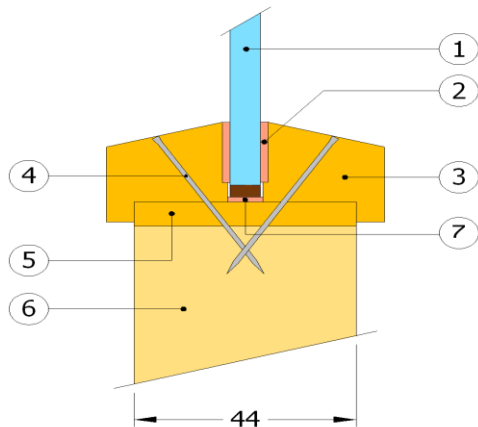
The applications in this CERTIFIRE certificate describe generic framing systems that have achieved the relevant period of integrity when tested in conjunction with Pyrocet XP (S), Pyrocet (T) and Pyrocet R glass. There are a number of alternative framing systems available which are also suitable for use with Pyrocet XP (S), Pyrocet (T) and Pyrocet R glass, which may not have specific test evidence in conjunction with these Pyrocet 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.

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Pyrozet Glass in timber framed doors for periods of 30 minutes integrity

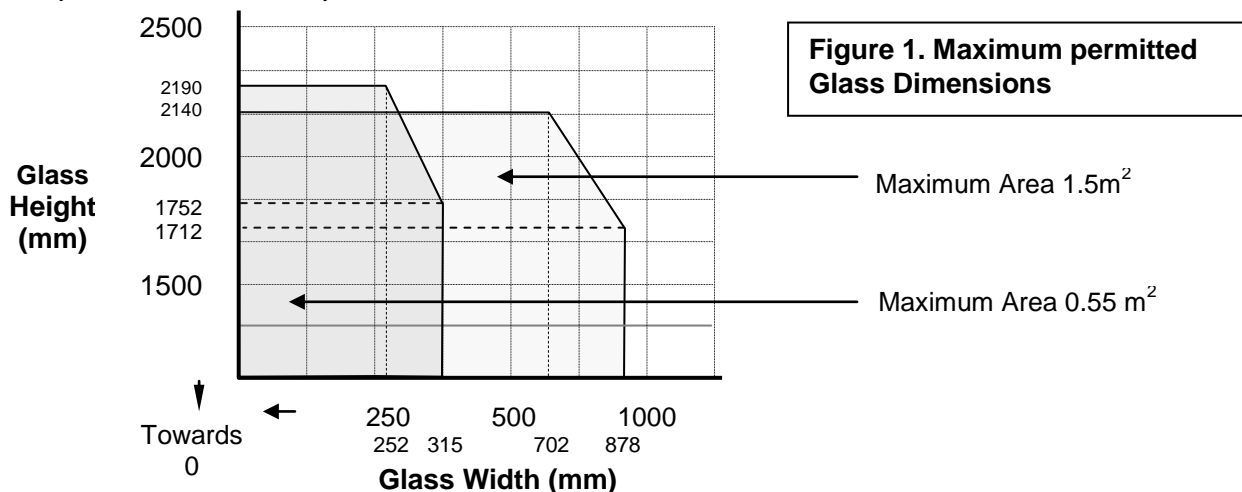


1. 6 mm Pyrozet, single or IGU with toughened, float or laminated glass and an 8 mm cavity
2. 10 mm by 3 mm ceramic fibre tape or closed cell foam glazing tape
3. 26 mm high by 22 mm wide including a 5x5 mm bolection return (chamfered by 18°) hardwood glazing beads, minimum density 640 kg/m³
4. Hardwood or MDF beads can be pin or screw fixed with 50 mm long, at least 2 mm diameter steel **pins** or screws at 150 mm centres (35° to glass)
5. Hardwood liner, 6 mm thick and 640 kg/m³ density
6. Nominally 44 mm thick FD30 timber based door leaf (thicker leaf may be required to accommodate laminated glass with required bead dimensions)
7. Non-combustible setting blocks and 10 x 1 mm Interdens liner (to all edges). If an approved intumescent liner is used instead of a hardwood liner at position 5, then the Interdens liner is not required

The doorset shall be CERTIFIRE approved and have test evidence for the inclusion of apertures of the proposed dimensions. Specifically, the following door blanks may incorporate this glazing system (aperture dimensions subject to CERTIFIRE approval or test evidence):

Halspan Prima 30	Pacific Rim Flamebreak 30	Falcon Panel Products Strebord 44	Baillargeon Blankfort 30
All CERTIFIRE approved doors			

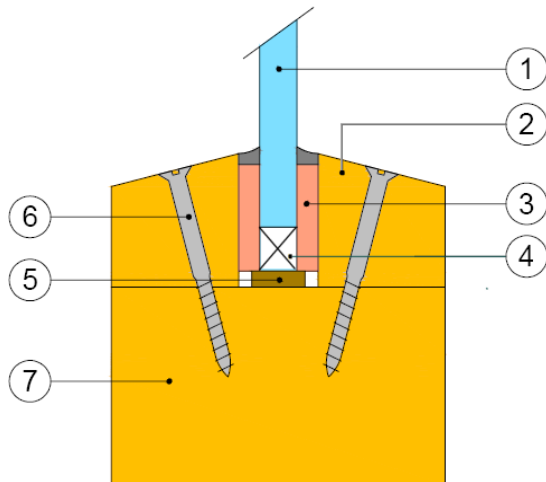
This Certificate of Approval relates to the sizes of Pyrozet Glass shown in Figure 1 below, when used in conjunction with the above system.



The aspect ratio of the glass may be unlimited within these aperture dimensions.

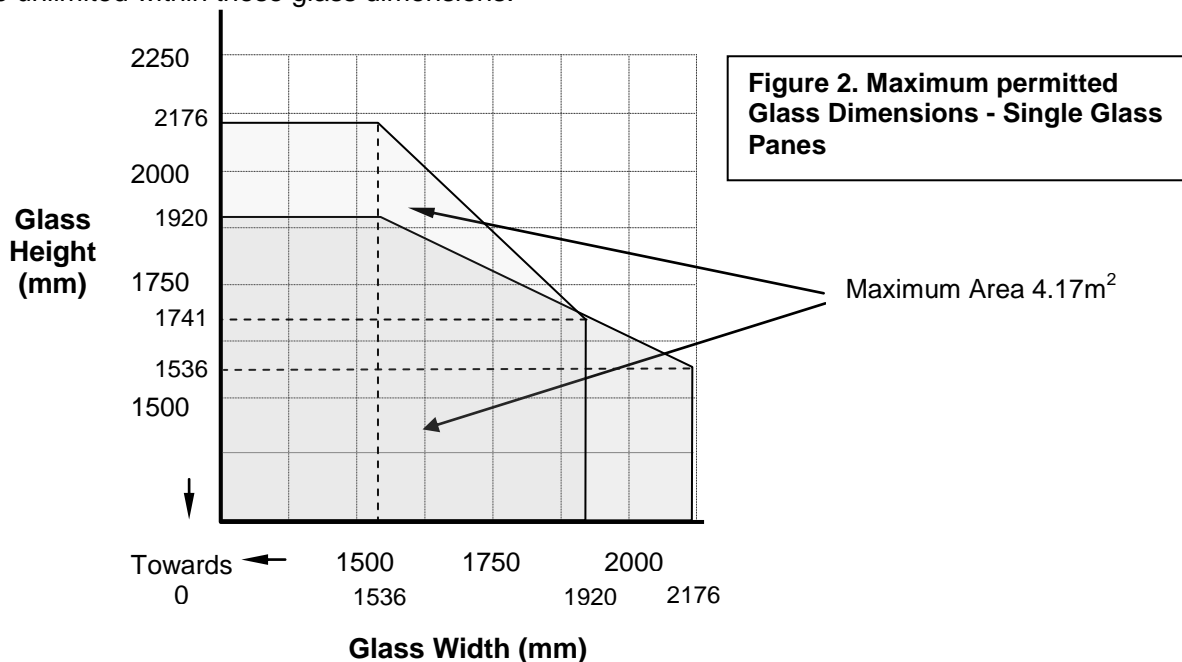
CERTIFICATE No CF 137 PROMAT UK LIMITED

Pyroacet Glass in timber framed screens for periods of 30 minutes integrity



1. 6 mm Pyroacet, single or IGU with toughened, float or laminated glass and an 8 mm cavity
2. 25 mm by 25 mm hardwood beads (min. 650 kg/m³) with 15° chamfer
3. 10 mm by 3 mm ceramic fibre tape or closed cell foam glazing tape
4. Setting blocks (hardwood or non-combustible board)
5. Interden, 10 mm by 2 mm
6. Hardwood beads can be pin or screw fixed with 50 mm long, 2 mm diameter steel **pins** (35° to glass) or no. 8 wood screws (30° to glass)
7. Hardwood frame, 640 kg/m³ minimum section size of 70 mm by 30 mm for mullions and transoms and 70 mm by 40 mm for perimeter sections

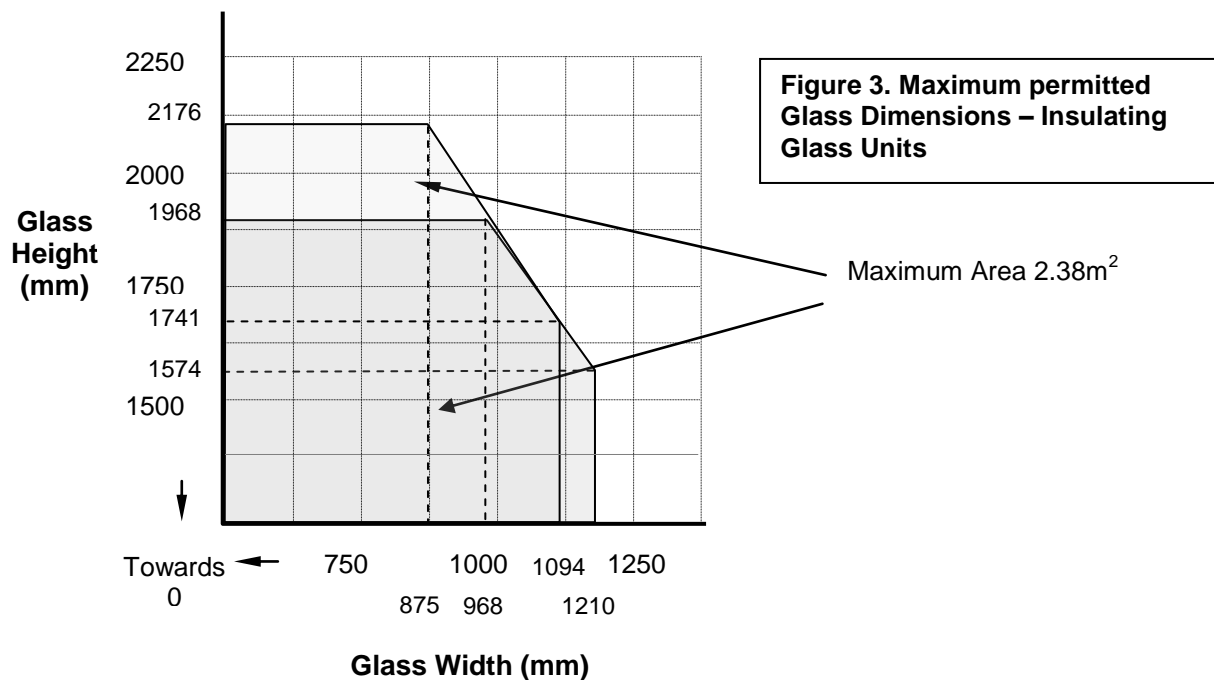
This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet glass shown in Figure 2 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyroacet Glass in timber framed screens for periods of 30 minutes integrity (continued)

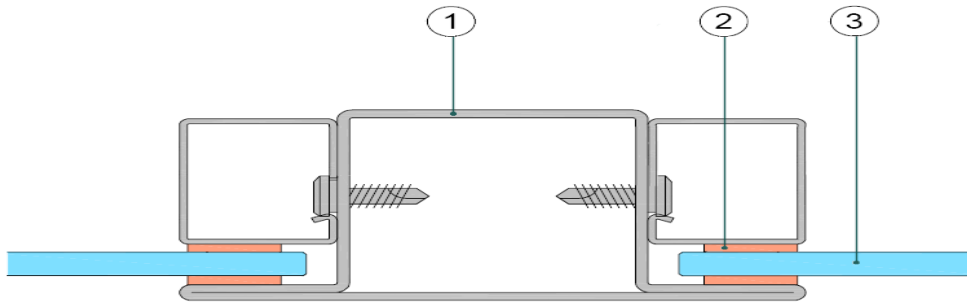
This Certificate of Approval relates to the sizes of IGU panes of Pyroacet glass shown in Figure 3 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



* The frame section size must be increased to accommodate the additional width of the IGU. Where the IGU includes laminated glass, this must be positioned on the known fire risk side only. If a known fire exposure direction cannot be established then IGUs may not incorporate laminated glass.

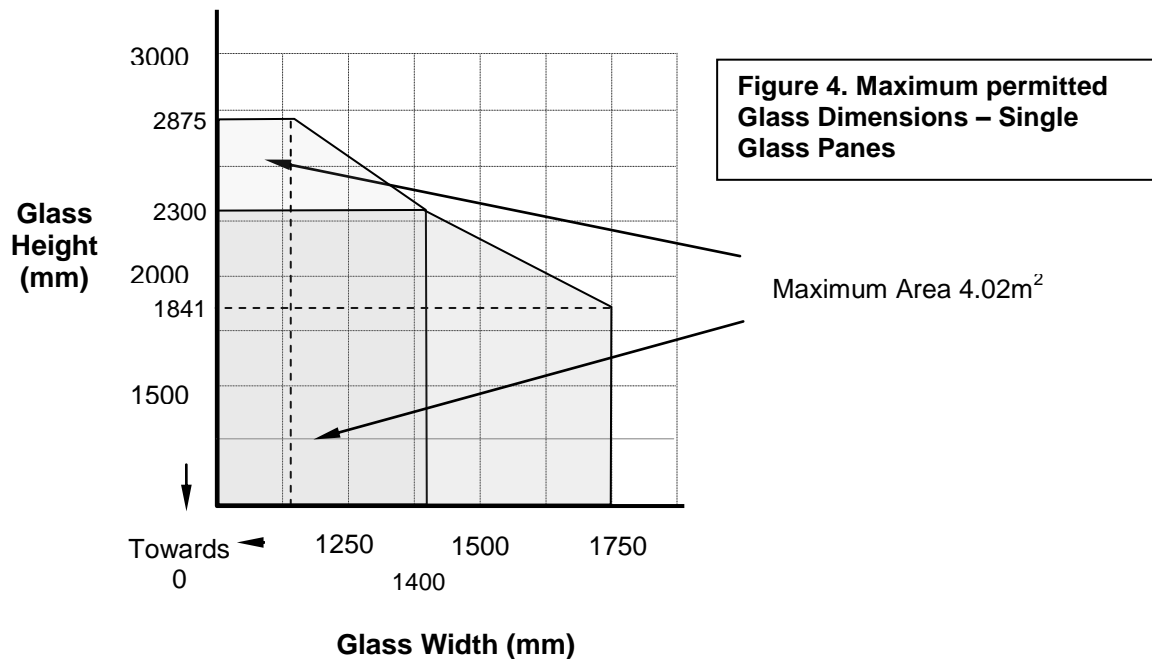
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Pyroacet Glass in steel framed screens for periods of 30 minutes integrity



1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 20 mm by 3 mm
3. 6 mm Pyroacet, single or IGU with toughened, float or laminated glass and 8 mm cavity and set on calcium silicate setting blocks to determine correct edge cover.

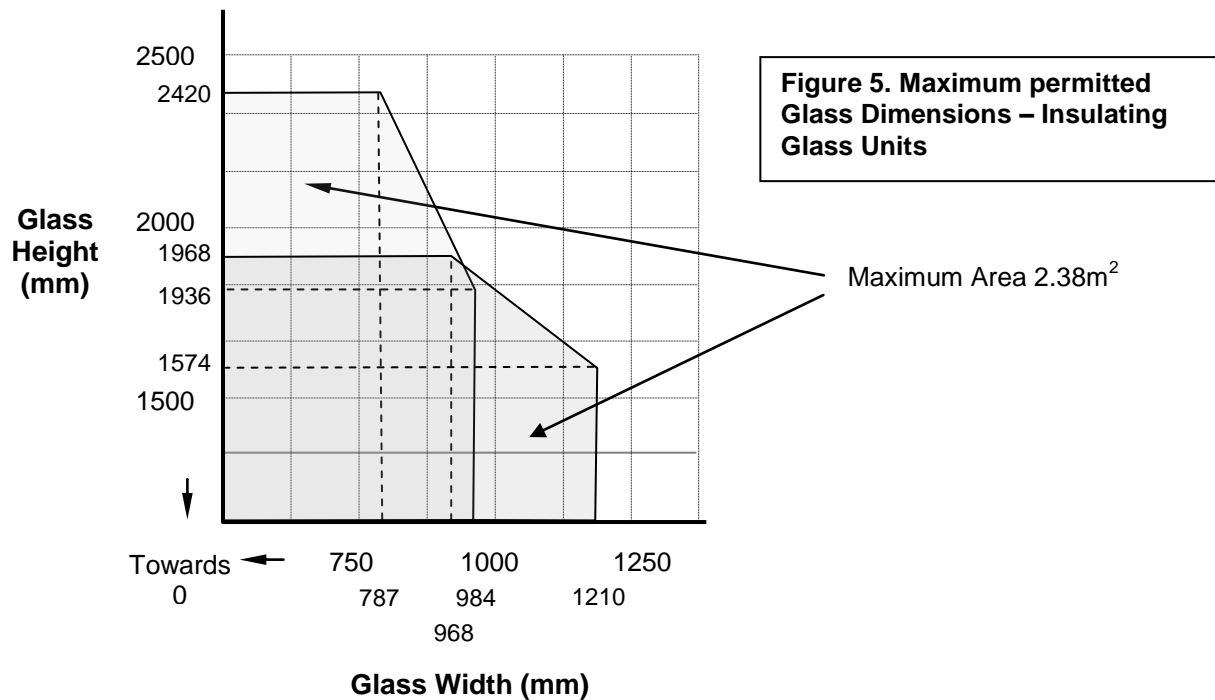
This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet glass shown in Figure 4 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyroacet Glass in steel framed screens for periods of 30 minutes integrity (continued)

This Certificate of Approval relates to the sizes of IGU panes of 6 mm Pyroacet glass shown in Figure 5 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



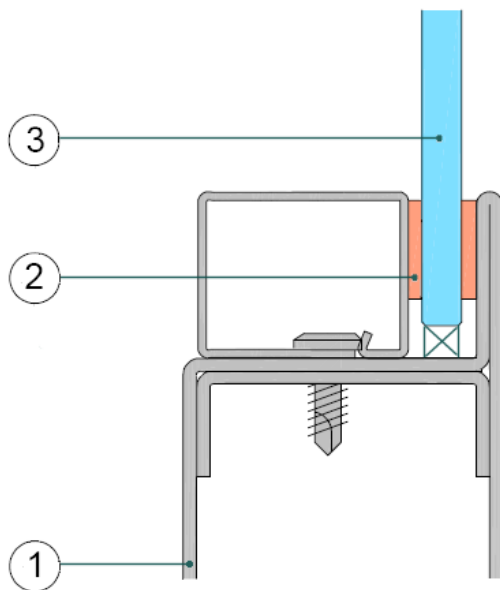
* The frame section size must be increased to accommodate the additional width of the IGU. Where the IGU includes laminated glass, this must be positioned on the known fire risk side only. If a known fire exposure direction cannot be established then IGUs may not incorporate laminated glass.



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PYROCET FIRE RESISTING GLASS

Pyrocet Glass in steel door leaves for periods of 30 minutes integrity



1. CERTIFIRE approved steel doorset
2. Ceramic fibre gasket, 15 mm by 3 mm
3. 6 mm Pyrocet Glass to be set on calcium silicate setting blocks to determine the correct edge cover.

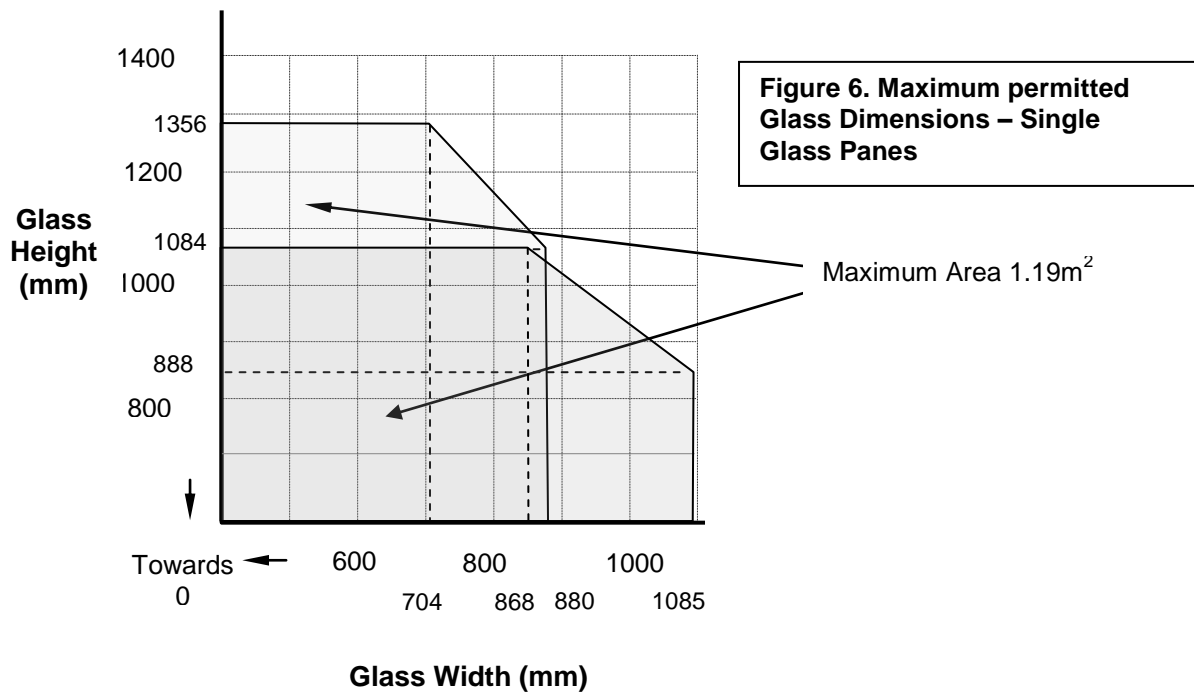
For this application the following conditions shall apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 30 minutes integrity when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.
2. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
3. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
4. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
5. 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.

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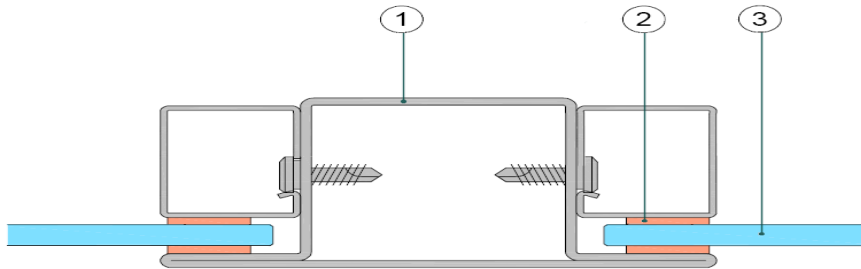
Pyroacet Glass in steel door leaves for periods of 30 minutes integrity (continued)

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet glass shown in Figure 6 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



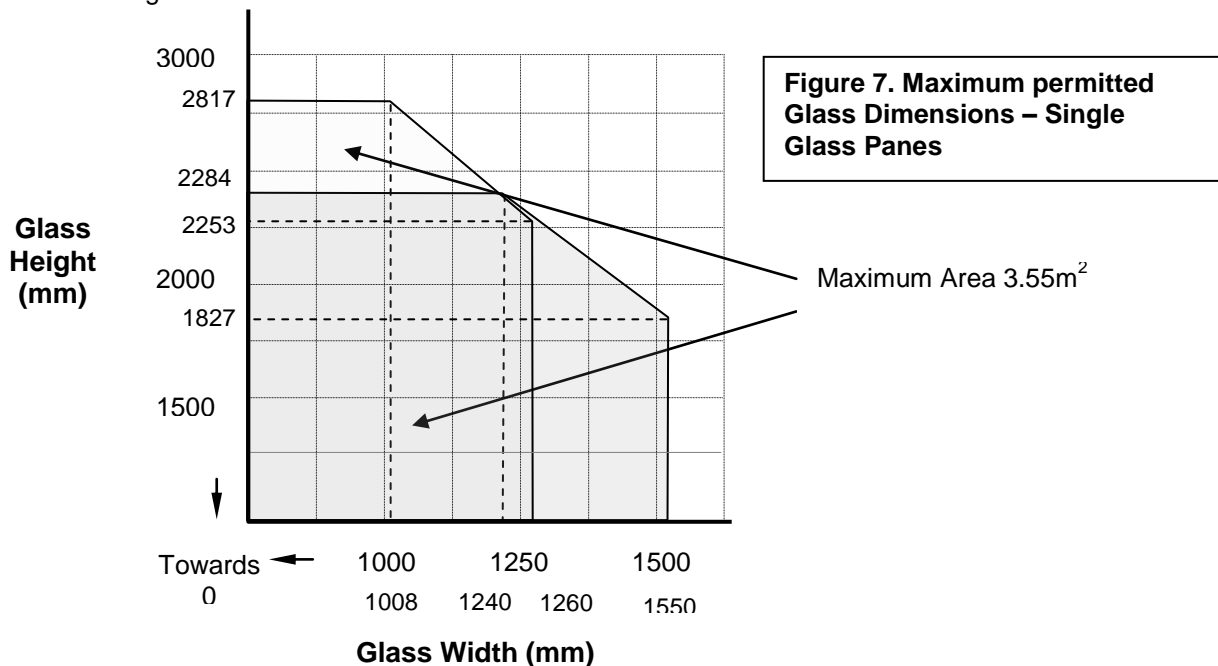
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Pyrozet Glass in steel framed screens for periods of 60 minutes integrity



1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 15 mm by 4 mm.
3. 6 mm Pyrozet glass to be set on calcium silicate setting blocks to determine the correct edge cover. Glass shall be bonded to the glazing gasket (on both faces of each gasket) with Autostic ceramic adhesive along the top edge and upper half of the vertical edges.

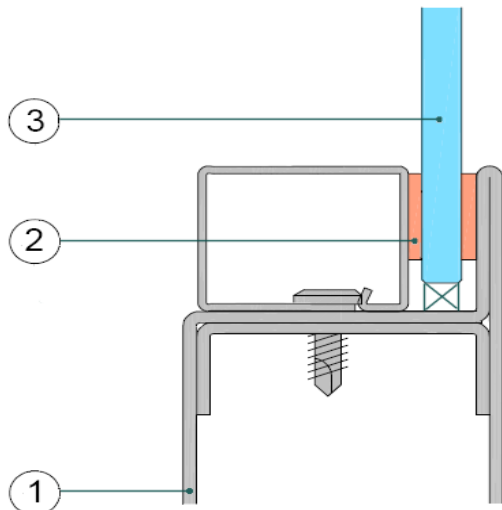
This Certificate of Approval relates to the sizes of single panes of 6 mm Pyrozet glass shown in Figure 7 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyroacet Glass in steel door leaves for periods of 60 minutes integrity



1. CERTIFIRE approved steel doorset
2. Ceramic fibre gasket, 15 mm by 3 mm
3. 6 mm Pyroacet glass to be set on calcium silicate setting blocks to determine the correct edge cover

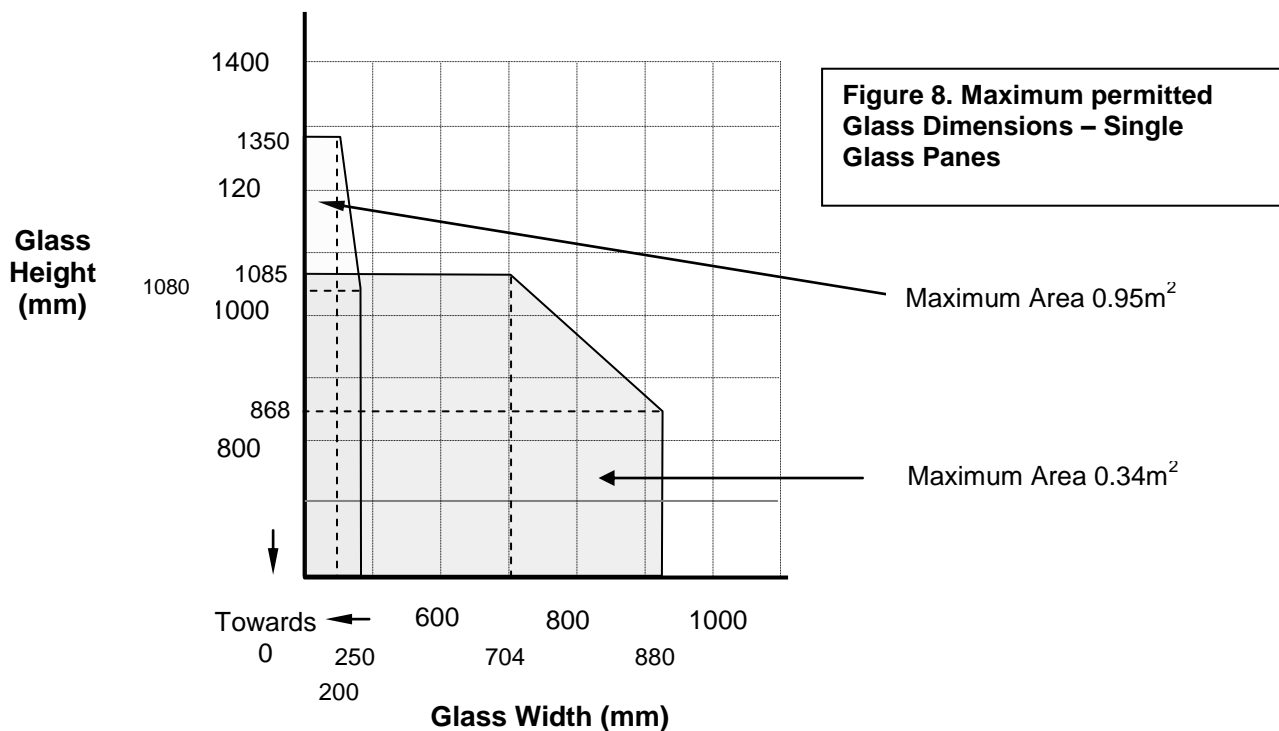
For this application the following conditions shall apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 60 minutes integrity when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.
2. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
3. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
4. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
5. 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.

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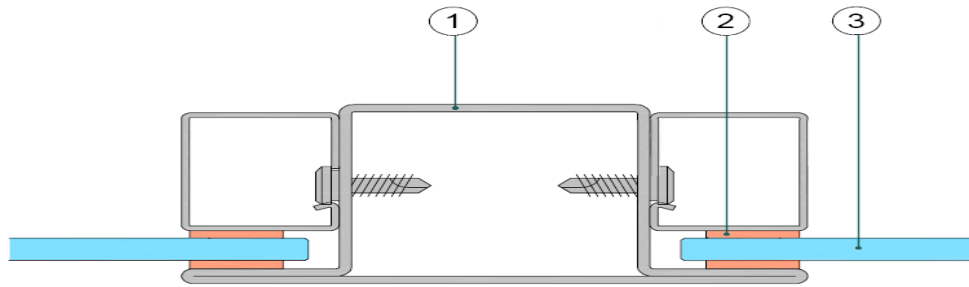
Pyroacet Glass in steel door leaves for periods of 60 minutes integrity (continued)

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet glass shown in Figure 8 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



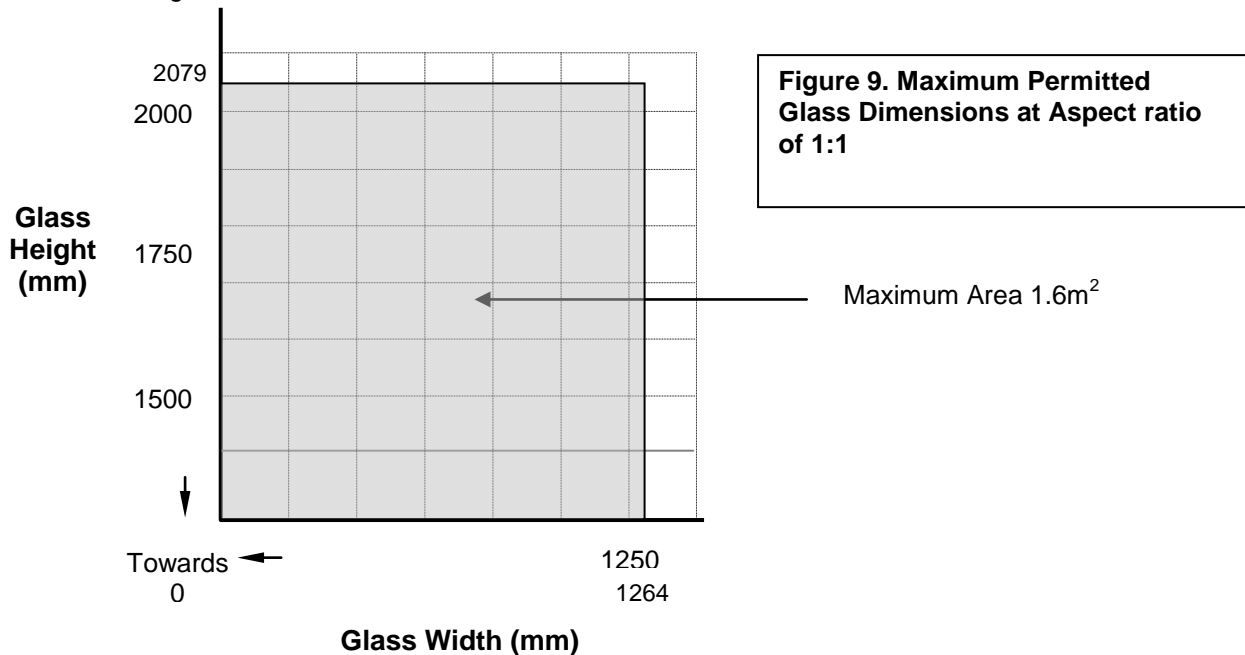
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Pyroacet Glass in steel framed screens for periods of 90 minutes integrity



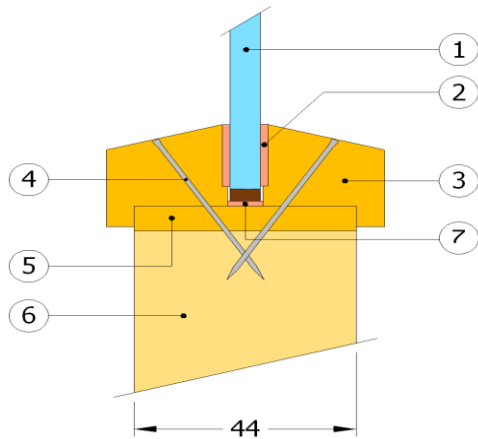
1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 15 mm by 3 mm
3. 6 mm Pyroacet glass to be set on calcium silicate setting blocks to determine the correct edge cover. Glass shall be bonded to the glazing gasket (on both faces of each gasket) with Autostic ceramic adhesive along the top edge and upper half of the vertical edges.

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet glass shown in Figure 9 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyrocet XP (T) Glass in timber framed doors for periods of 30 minutes integrity

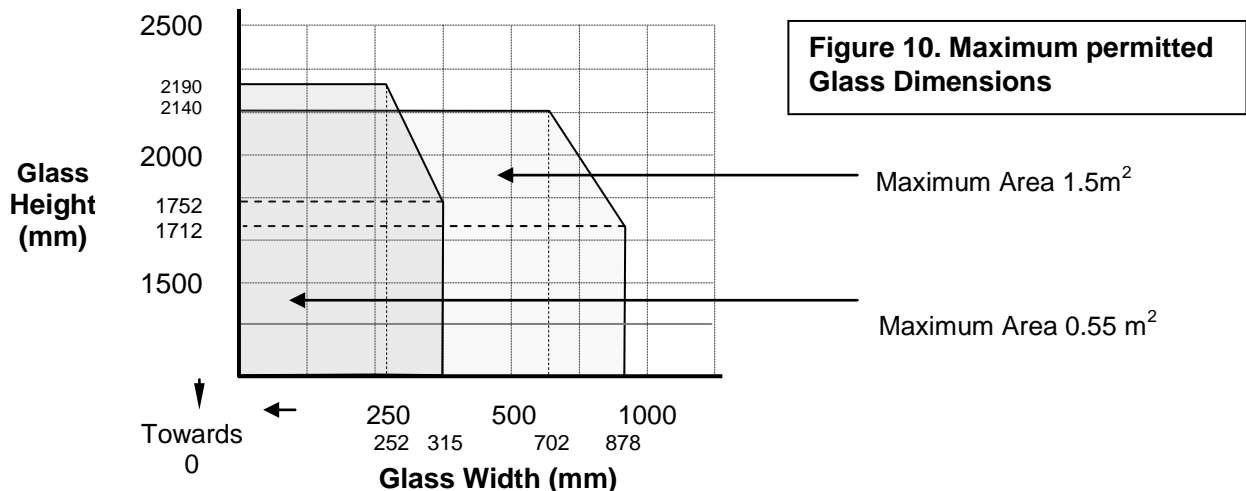


1. 6 mm Pyrocet XP (T), single or IGU with toughened, float or laminated glass and an 8 mm cavity
2. 10 mm by 3 mm ceramic fibre tape or closed cell foam glazing tape
3. 26 mm high by 22 mm wide including a 5x5 mm bolection return (chamfered by 18°) hardwood glazing beads, minimum density 640 kg/m³
4. Hardwood or MDF beads can be pin or screw fixed with 50 mm long, at least 2 mm diameter steel **pins** or screws at 150 mm centres (35° to glass)
5. Hardwood liner, 6 mm thick and 640 kg/m³ density
6. Nominally 44 mm thick FD30 timber based door leaf (thicker leaf may be required to accommodate laminated glass with required bead dimensions)
7. Non-combustible setting blocks and 10 x 1 mm Interdens liner (to all edges). The hardwood liner (item 5) can be replaced with an approved intumescent liner. In this case the 10 x 1 mm Interdens liner is not required

The doorset shall be CERTIFIRE approved and have test evidence for the inclusion of apertures of the proposed dimensions. Specifically, the following door blanks may incorporate this glazing system (aperture dimensions subject to CERTIFIRE approval or test evidence):

Halspan Prima 30	Pacific Rim Flamebreak 30	Falcon Panel Products Strebord 44	Baillargeon Blankfort 30
All CERTIFIRE approved doors			

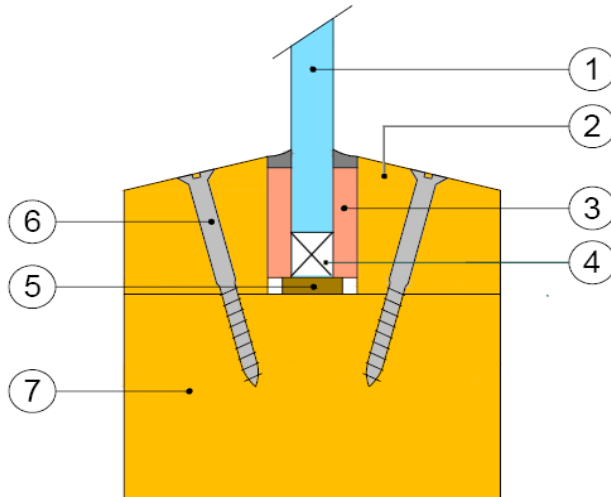
This Certificate of Approval relates to the sizes of Pyrocet Glass shown in Figure 10 below, when used in conjunction with the above system.



The aspect ratio of the glass may be unlimited within these aperture dimensions.

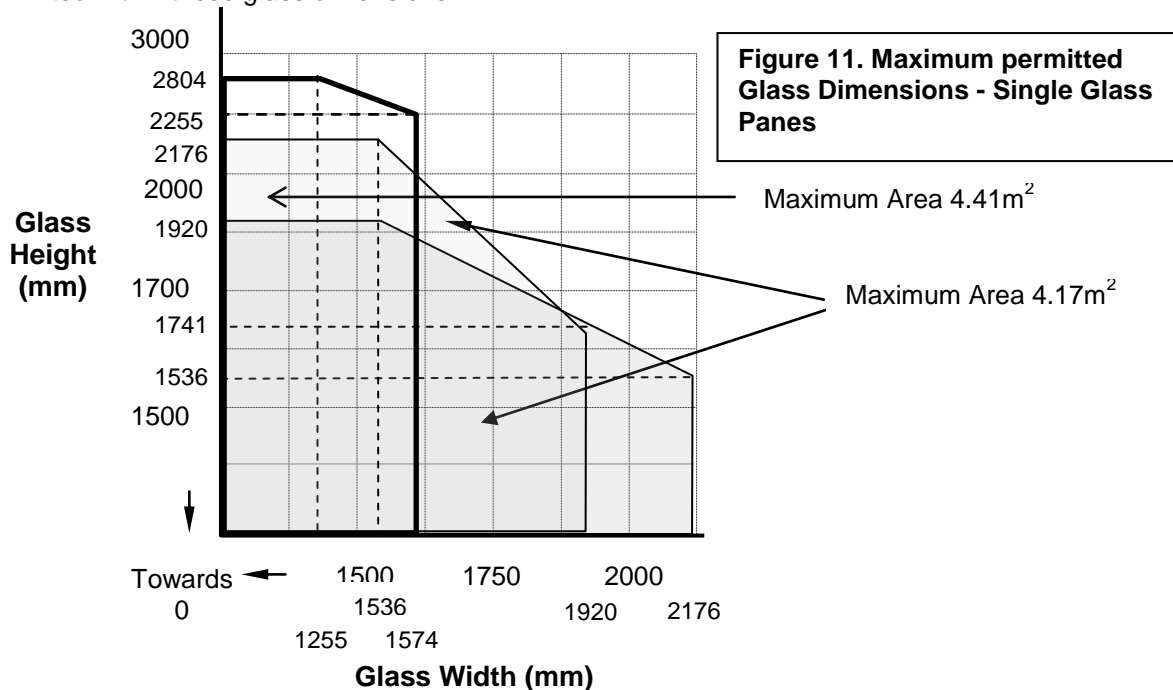
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Pyrocet XP (T) Glass in timber framed screens for periods of 30 minutes integrity



1. 6 mm Pyrocet XP (T), single or IGU with toughened, float or laminated glass and an 8 mm cavity
2. 25 mm by 25 mm hardwood beads (min. 650 kg/m³) with 15° chamfer
3. 10 mm by 3 mm ceramic fibre tape or closed cell foam glazing tape
4. Setting blocks (hardwood or non-combustible board)
5. Interdens or non combustible setting blocks, 10 mm by 2 mm
6. Hardwood beads can be pin or screw fixed with 50 mm long, 2 mm diameter steel **pins** (35° to glass) or no. 8 wood screws (30° to glass)
7. Hardwood frame, 640 kg/m³ minimum section size of 70 mm by 30 mm for mullions and transoms and 70 mm by 40 mm for perimeter sections

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyrocet XP (T) glass shown in Figure 11 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.

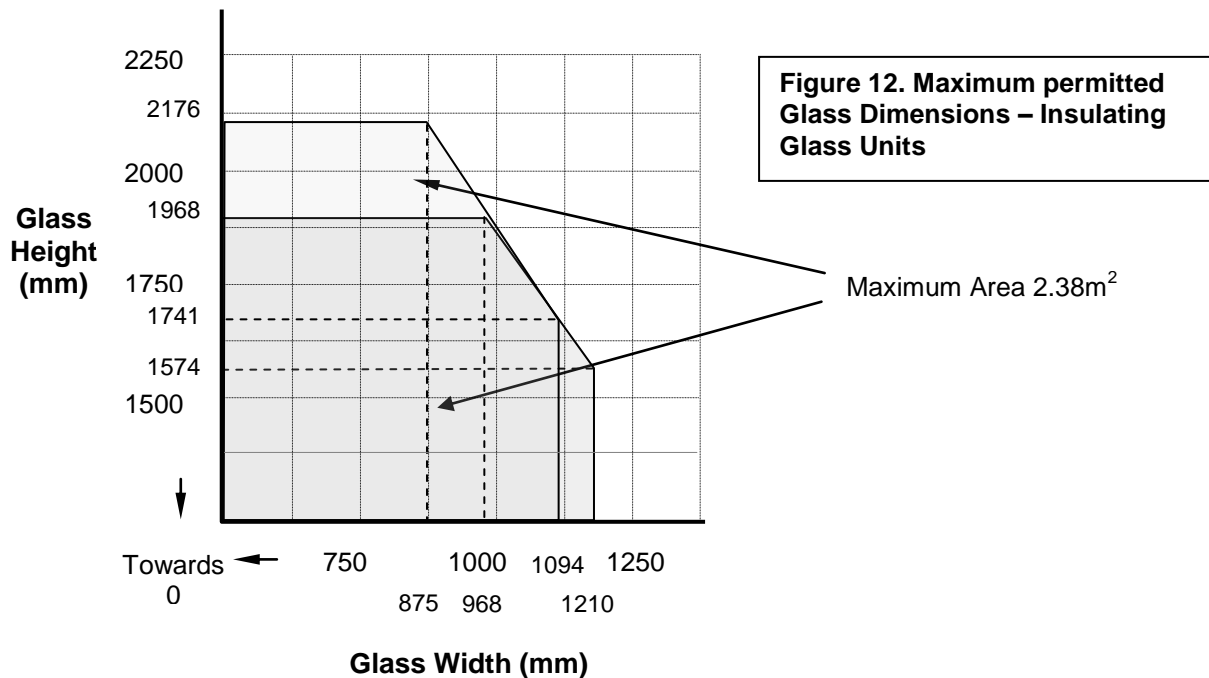


Radiation performance of 37 minutes to 15 kW/m² up to a maximum screen area of 2.92m².

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Pyroacet XP (T) Glass in timber framed screens for periods of 30 minutes integrity continued)

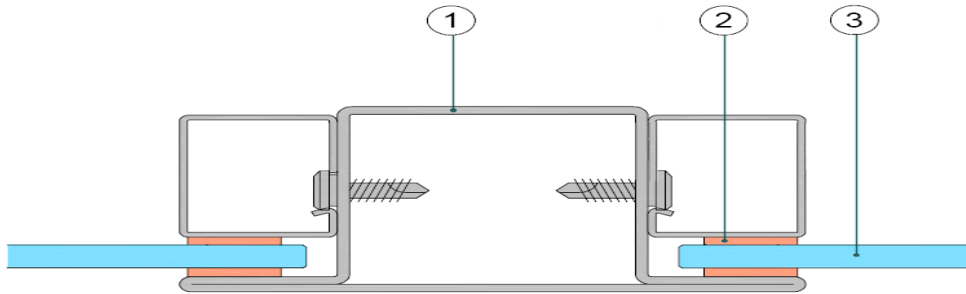
This Certificate of Approval relates to the sizes of IGU panes of 6 mm Pyroacet XP (T) glass shown in Figure 12 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



* The frame section size must be increased to accommodate the additional width of the IGU. Where the IGU includes laminated glass, this must be positioned on the known fire risk side only. If a known fire exposure direction cannot be established then IGUs may not incorporate laminated glass.

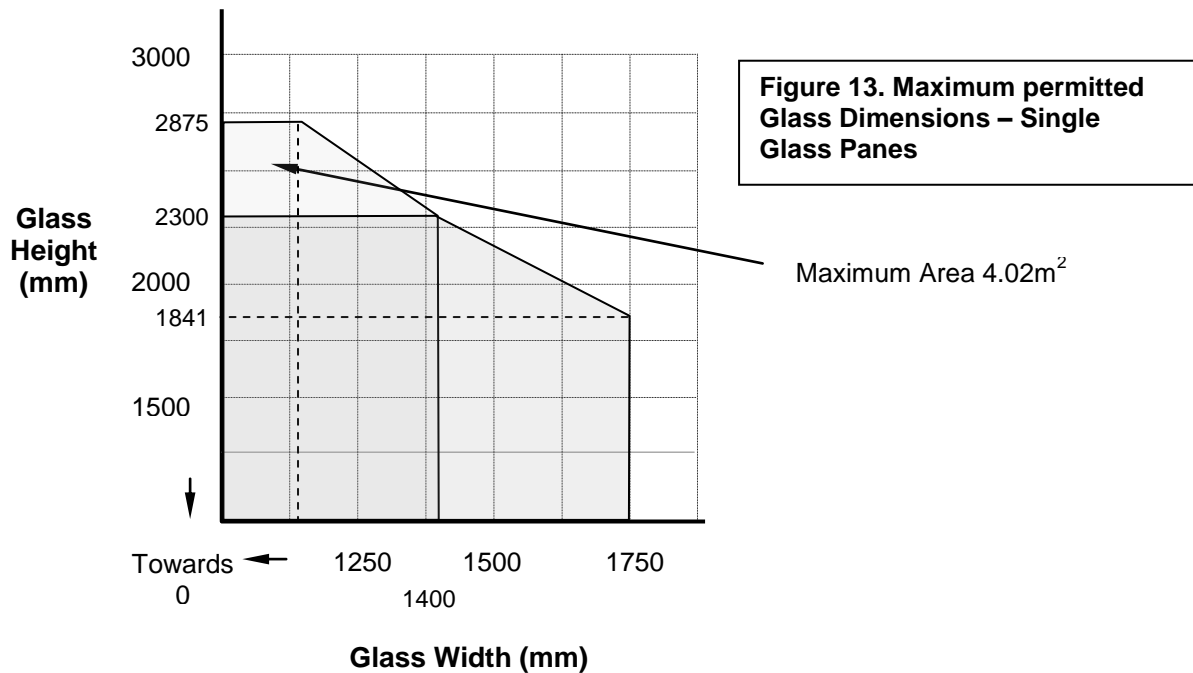
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Pyroacet XP (S) Glass in steel framed screens for periods of 30 minutes integrity



1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 20 mm by 3 mm
3. 6 mm Pyroacet XP (S), single or IGU with toughened, float or laminated glass and 8 mm cavity and set on calcium silicate setting blocks to determine correct edge cover.

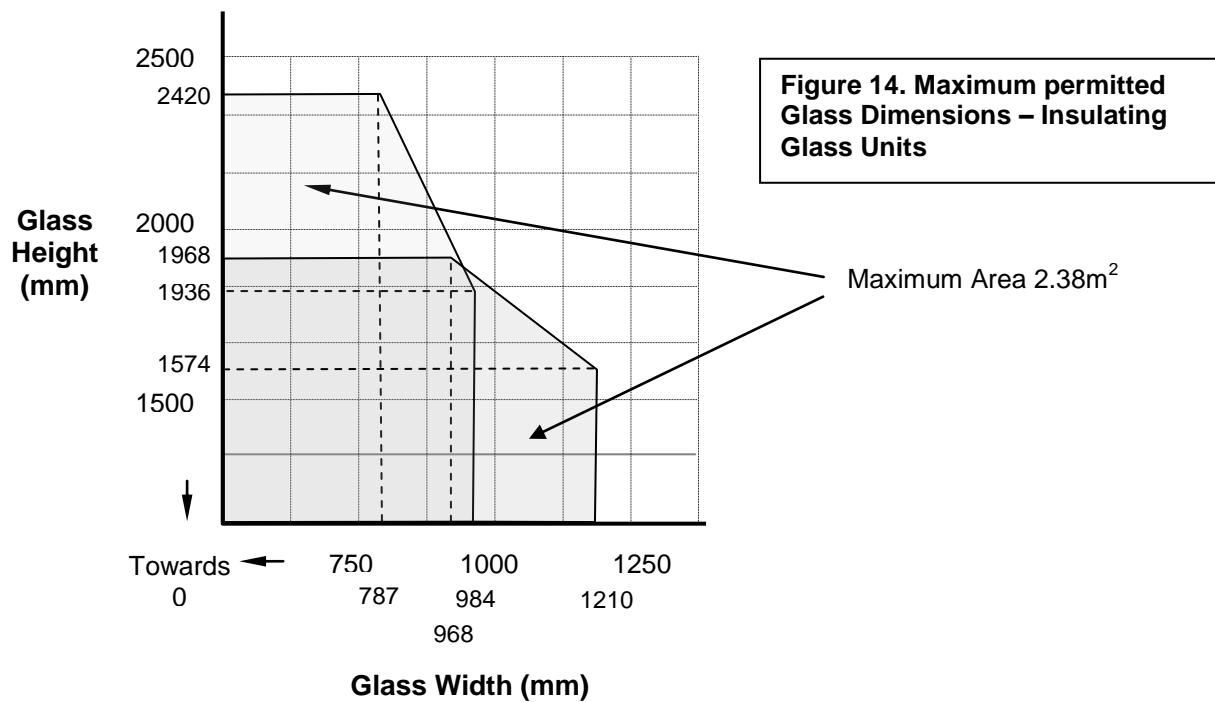
This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet XP (S) glass shown in Figure 13 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyrocet XP (S) Glass in steel framed screens for periods of 30 minutes integrity (continued)

This Certificate of Approval relates to the sizes of IGU panes of 6 mm Pyrocet XP (S) glass shown in Figure 14 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

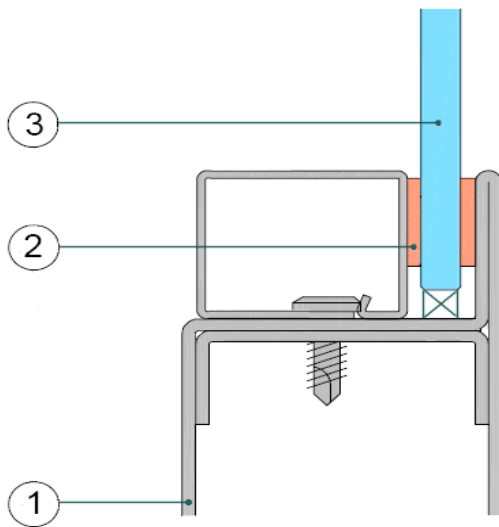


* The frame section size must be increased to accommodate the additional width of the IGU. Where the IGU includes laminated glass, this must be positioned on the known fire risk side only. If a known fire exposure direction cannot be established then IGUs may not incorporate laminated glass.

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PYROCET XP (S) FIRE RESISTING GLASS

Pyrocet XP (S) Glass in steel door leaves for periods of 30 minutes integrity



1. CERTIFIRE approved steel doorset
2. Ceramic fibre gasket, 15 mm by 3 mm
3. 6 mm Pyrocet XP (S) glass to be set on calcium silicate setting blocks to determine the correct edge cover

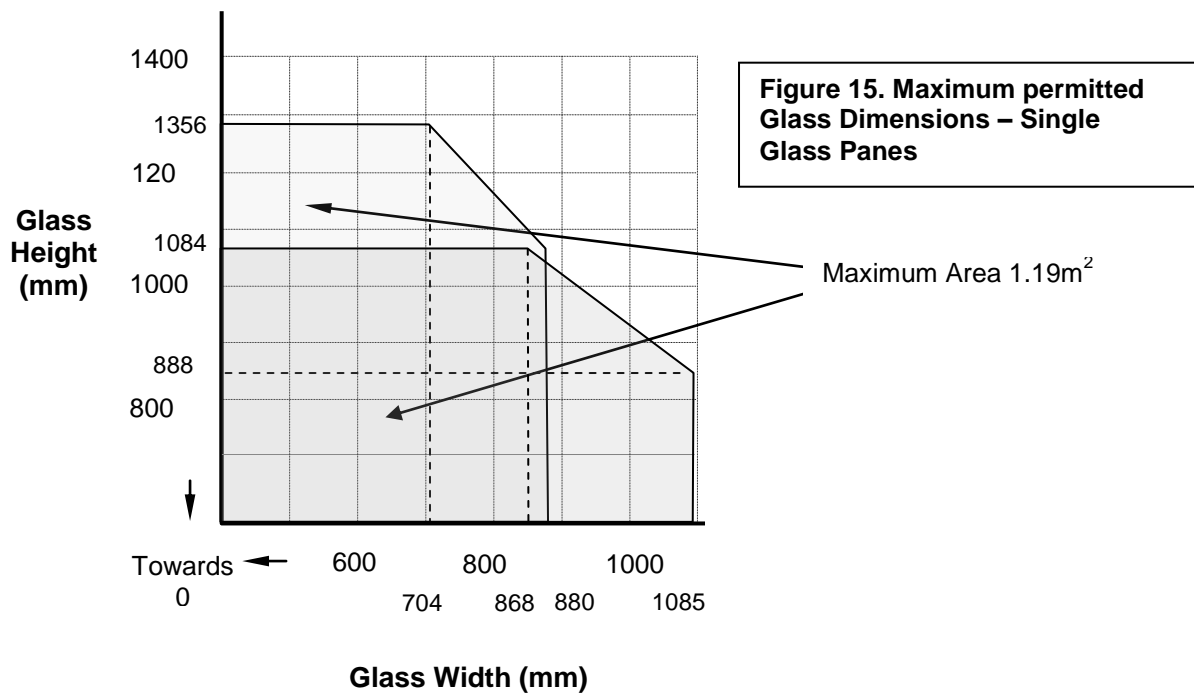
For this application the following conditions shall apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 30 minutes integrity when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.
2. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
3. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
4. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
5. 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.

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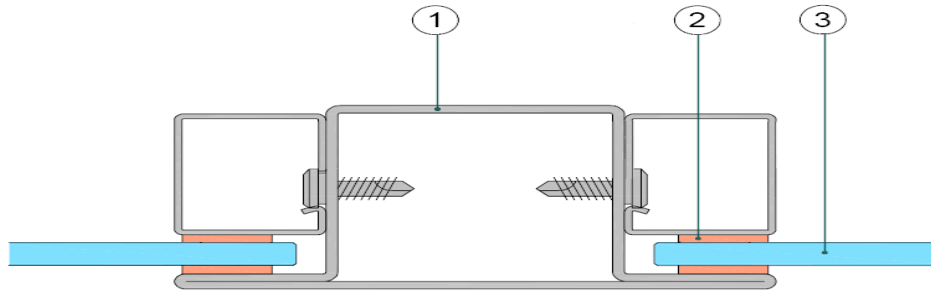
Pyrozet XP (S) Glass in steel door leaves for periods of 30 minutes integrity (continued)

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyrozet XP (S) glass shown in Figure 15 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



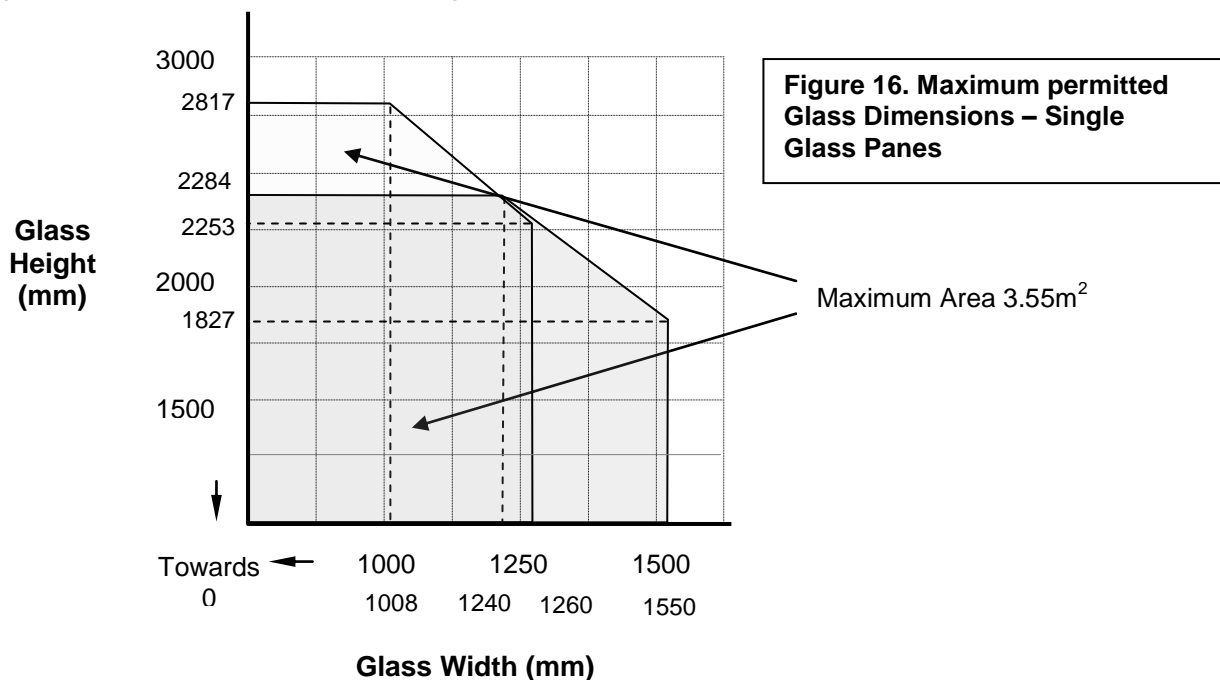
**CERTIFICATE No CF 137
PROMAT UK LIMITED**

Pyroacet XP (S) Glass in steel framed screens for periods of 60 minutes integrity



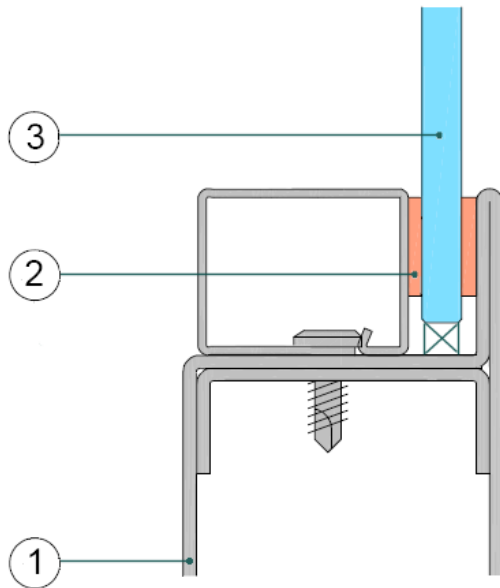
1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 15 mm by 4 mm.
3. 6 mm Pyroacet XP (S) glass to be set on calcium silicate setting blocks to determine the correct edge cover. Glass shall be bonded to the glazing gasket (on both faces of each gasket) with Autostic ceramic adhesive along the top edge and upper half of the vertical edges.

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyroacet XP (S) glass shown in Figure 16 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



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Pyroacet XP (S) Glass in steel door leaves for periods of 60 minutes integrity



1. CERTIFIRE approved steel doorset
2. Ceramic fibre gasket, 15 mm by 3 mm
3. 6 mm Pyroacet XP (S) glass to be set on calcium silicate setting blocks to determine the correct edge cover

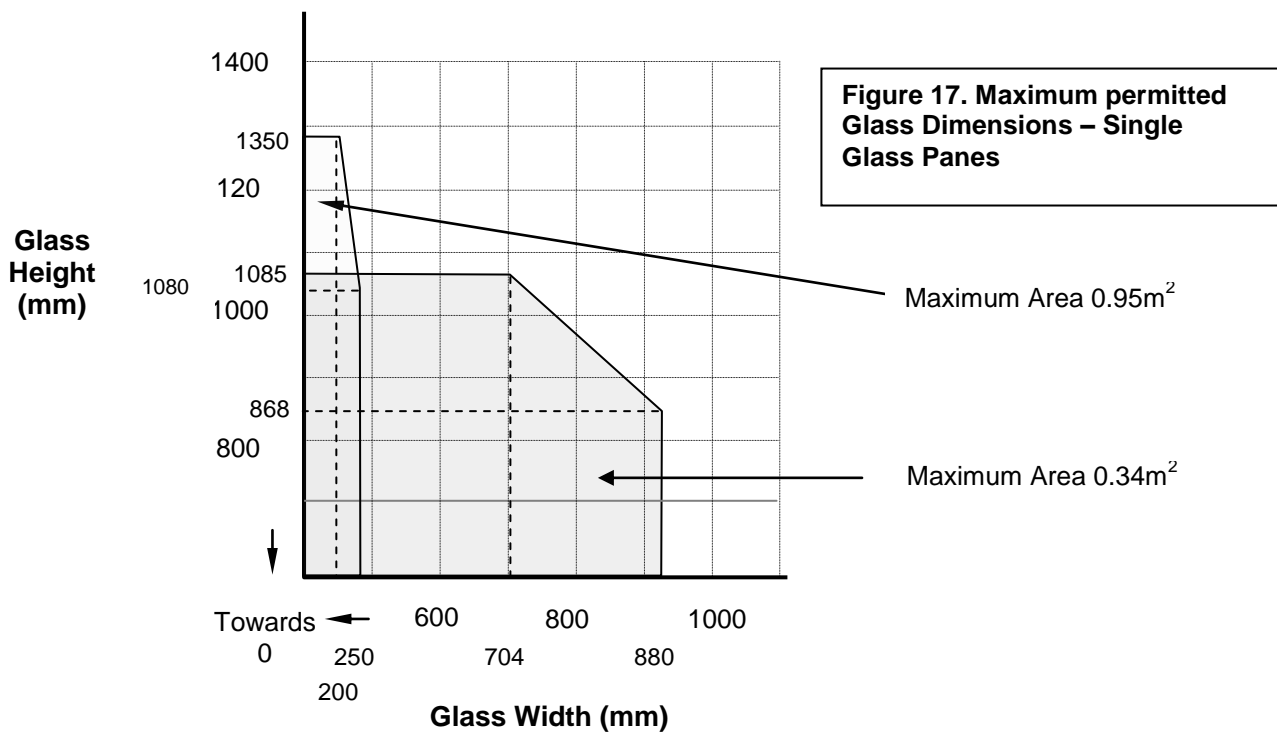
For this application the following conditions shall apply:

1. The doorset, including door frame and associated building hardware, should have achieved at least 60 minutes integrity when tested, or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose, to BS 476: Part 22: 1987.
2. If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
3. Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
4. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
5. 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.

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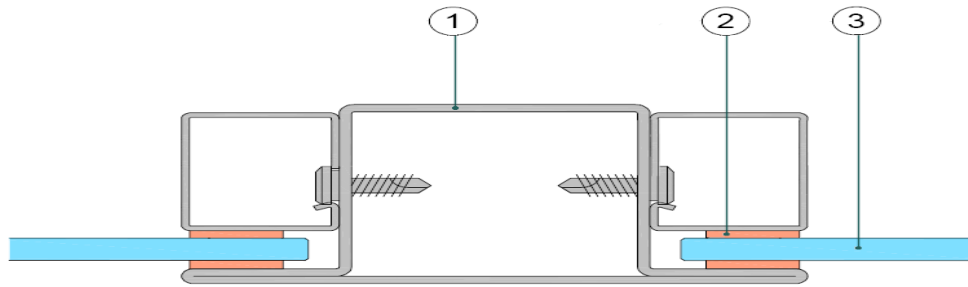
Pyrozet XP (S) Glass in steel door leaves for periods of 60 minutes integrity (continued)

This Certificate of Approval relates to the sizes of single panes of 6 mm Pyrozet XP (S) glass shown in Figure 17 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



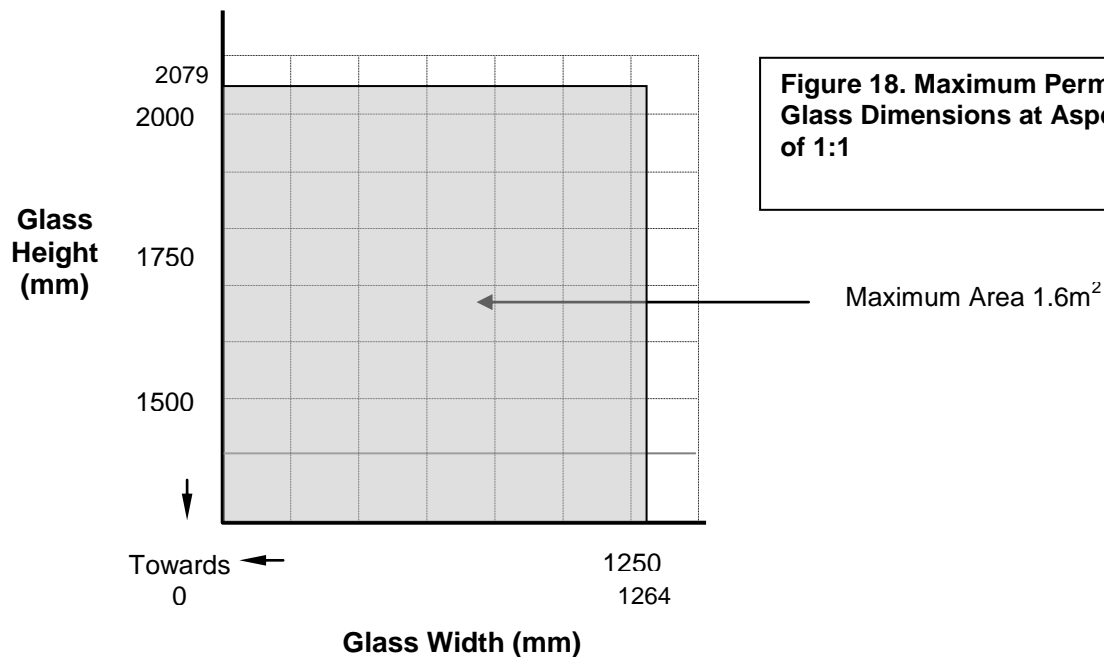
CERTIFICATE No CF 137 PROMAT UK LIMITED

Pyrocet XP (S) Glass in steel framed screens for periods of 90 minutes integrity



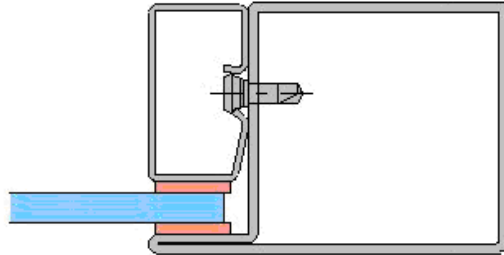
1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads.
2. Ceramic fibre gasket, 15 mm by 3 mm.
3. 6 mm Pyrocet XP (S) to be set on calcium silicate setting blocks to determine the correct edge cover. Glass shall be bonded to the glazing gasket (on both faces of each gasket) with Autostic ceramic adhesive along the top edge and upper half of the vertical edges.

This Certificate of Approval relates to the sizes of single panes of Pyrocet XP (S) glass shown in Figure 18 below, when used in conjunction with above system. The aspect ratio of the glass may be unlimited within these glass dimensions.



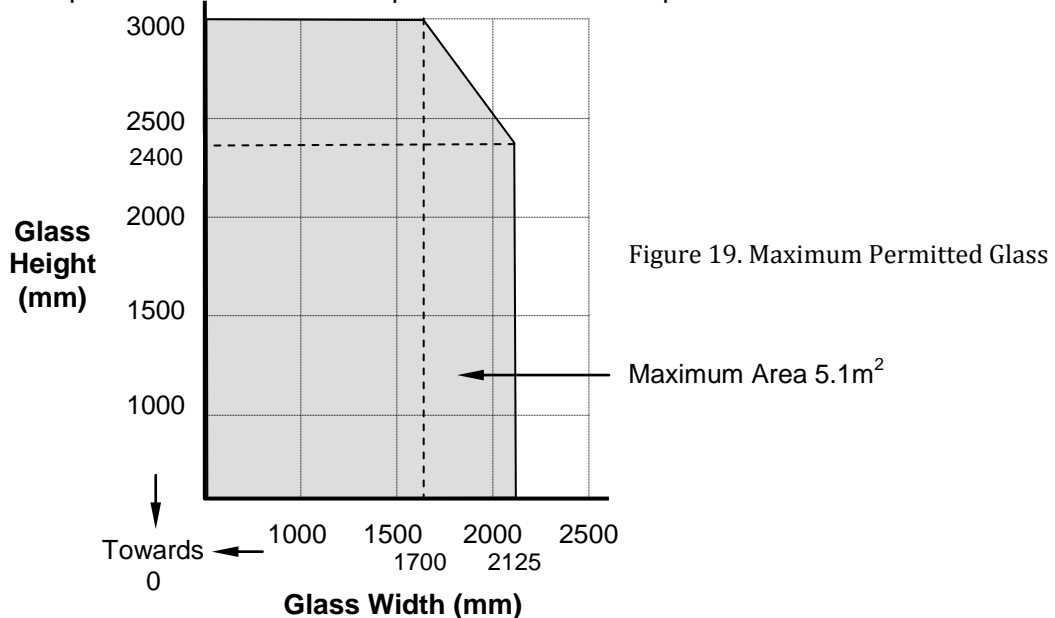
CERTIFICATE No CF 137 PROMAT UK LIMITED

Pyrocet R Glass in steel framed screens for periods of 30 minutes integrity



1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, edge cover for single pane restricted to 10 ± 1 mm on any edge
2. Ceramic fibre tape with adhesive on one side, 10 mm by 2 mm on flange face and 10 x 4 mm on beading face.
3. 6 mm Pyrocet R, single or IGU with toughened, float or laminated glass and 8 mm cavity and set on calcium silicate setting blocks to determine correct edge cover and provide at least 5mm/m edge gap to allow for differential expansion. Single panes of Pyrocet R to be positioned with coating facing towards the fire side,

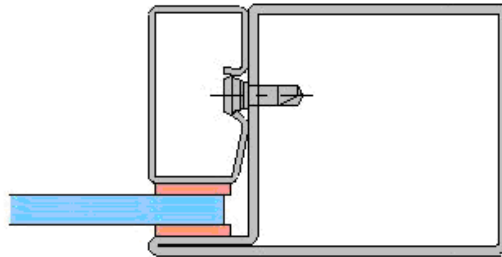
This Certificate of Approval relates to the sizes of Pyrocet R glass shown in Figure 19 below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions. Multi-pane screens are not permitted.



Radiation performance of 32 minutes to 15 kW/m² up to a maximum screen area of 4.56 m².

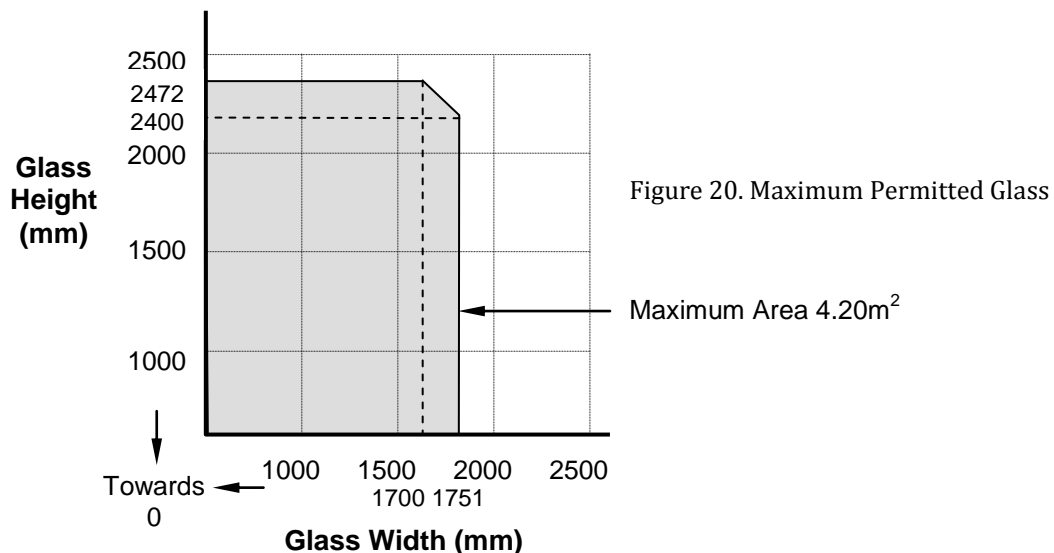
CERTIFICATE No CF 137 PROMAT UK LIMITED

Pyroacet R Glass in steel framed screens for periods of 60 minutes integrity



1. Steel framing system based upon Forster, Vorst Alpine, R P Profiles, Jansen or Mannesmann sections (which are covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, edge cover for single pane restricted to 10 ± 1 mm on any edge
2. Ceramic fibre tape with adhesive on one side, 10 mm by 2 mm on flange face and 10 x 4 mm on beading face.
3. 6 mm Pyroacet R, single or IGU with toughened, float or laminated glass and 8 mm cavity and set on calcium silicate or timber setting blocks to determine correct edge cover and provide at least 5mm/m edge gap to allow for differential expansion. Single panes of Pyroacet R to be positioned with coating facing towards the fire side,

This Certificate of Approval relates to the sizes of Pyroacet R 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. Multi-pane screens are not permitted.



Radiation performance of 15 kW/m² not reached at test termination at maximum screen area of 1.28 m².

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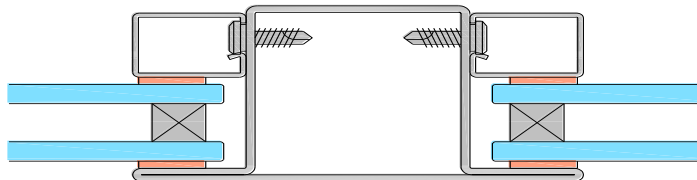
Pyrocet R Insulating Glass Unit (IGU) in steel framed screens for periods of 30 minutes

For this application the following conditions shall apply:

The 'IGU' shall comprise a single layer of 6 mm Pyrocet R glass, an 6 mm to 12 mm airspace with steel spacer bar and a single layer of 4 mm or greater toughened, laminated or float glass, to give an overall thickness of at least 22 mm thickness.

The glass shall be installed into a previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads. The glass shall be glazed into the screen with ceramic fibre tape of size 10 mm by 2 mm on flange face and 10 x 4 mm on beading face with self adhesive on one side adhered to both the internal face of the frame flange and to the beading

. The tape is also adjacent to the glass on both faces. The IGU is set on hardwood or non-combustible setting blocks to determine the correct edge cover on any edge restricted to 12 ± 1 mm for IGUs. **and provide at least 5mm/m edge gap to allow for differential expansion. Single panes of Pyrocet R to be positioned with coating facing towards the fire side, IGUs may be constructed with Pyrocet R on both sides hence fire resistance performance is valid for both directions of fire exposure.**

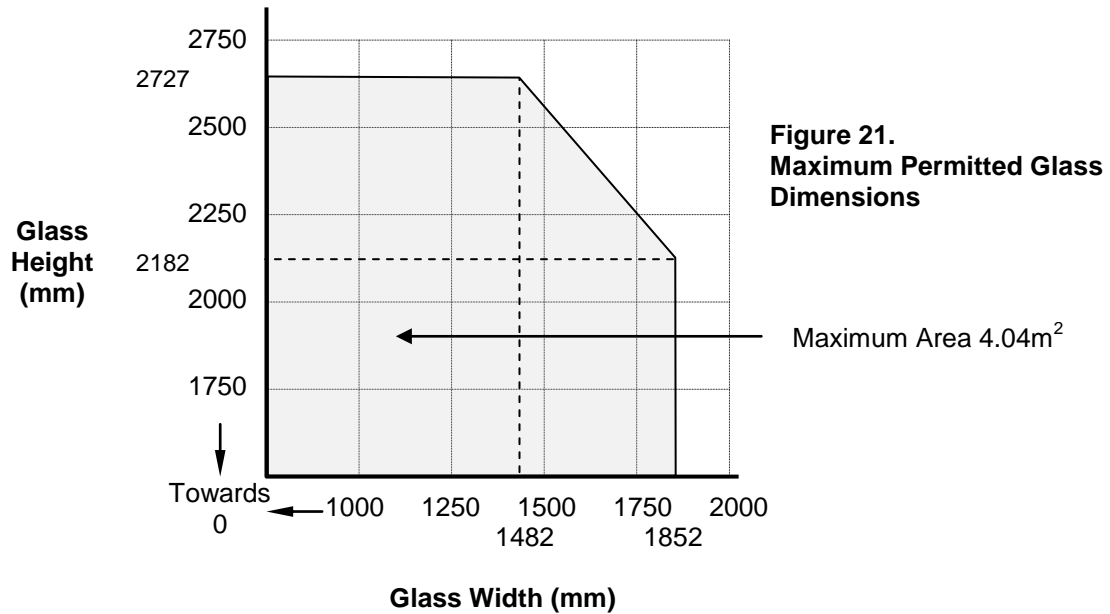


Maximum Permitted Pane Dimensions

This Certificate of Approval relates to the sizes of Pyrocet R glass within an IGU shown in Figure 21 when used in conjunction with the above system. The glass may only be installed within single paned screens. The aspect ratio of the glass may be unlimited within these aperture dimensions.

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Pyroacet R Insulating Glass Unit (IGU) in steel framed screens for periods of 30 minutes integrity (continued)



* The IGU must be oriented such that the toughened, laminated or float glass is on the fire risk side and the Pyroacet R coated surface faces the fire. If the fire risk side cannot be identified or may be from either direction, then this system shall not be used.

Radiation performance of 40 minutes to 15 kW/m² up to a maximum screen area of 3.68 m².