



CERTIFICATE OF APPROVAL

No CF 5227

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

PYROGUARD UK LIMITED

International House, Millfield Lane, Haydock, WA11 9GA
Tel: 01942 710720 Fax: 01942 710730

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

'Pyroguard T EW/13-1',
'Pyroguard T EW/15-1' and
'Pyroguard T EW/19-1' Range
of Integrity and Radiation
Control Fire Resisting Glass

TECHNICAL SCHEDULE

TS 25 Fire Resistant Glass,
Glazing Systems and Materials

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager



Issued: 29th August 2014
Revised: 8th December 2021
Valid to: 26th August 2024

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CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

'Pyroguard T EW' Fire Resisting Glass

This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose. This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and Materials.

This Certificate of Approval relates to the fire resistance of Pyroguard UK Limited's 'Pyroguard T' laminated glass products when used in the following applications, as defined in BS 476: Part 22: 1987 but using test results achieved against the following Standards - BS EN 1363-1 Fire Resistance Tests, BS EN 1364-1 Fire Resistance Tests on Doors, Shutters and Openable Windows or BS 1364-3 Fire Resistance Tests for Non Loadbearing Elements – Curtain Walling

This product is approved on the basis of:

- Initial type testing
- A design appraisal against TS25
- Product surveillance under BS EN ISO 9001: 2008
- Audit testing,
- Inspection and surveillance of factory production control

Glass Specification	Application	Integrity	Page No.
Pyroguard T EW30/13-1	Softwood framed screens	30	6
Pyroguard T EW30/13-1	Hardwood framed screens	30	7-8
Pyroguard T EW60/13-1	Hardwood framed screens	60	9
Pyroguard T EW90/13-1	Hardwood framed screens	90	10
Pyroguard T EW30/13-1 VI	Hardwood framed screens with IGUs*	30	11
Pyroguard T EW30/13-1	Steel framed screens	30	12-16
Pyroguard T EW60/13-1	Steel framed screens	60	17-21
Pyroguard T EW90/13-1	Steel framed screens	90	22-27
Pyroguard T EW120/13-1	Steel framed screens	120	28-33
Pyroguard T EW180/13-1	Steel framed screens	180	34
Pyroguard T EW30/13-1 VI	Steel framed screens with IGUs*	30	35-38
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Pyroguard T EW90/13-1 VI	Steel framed screens with IGUs*	90	42-43
Pyroguard T EW120/13-1 VI	Steel framed screens with IGUs*	120	44

Note* The fire resistant pane of the IGU construction can be used as a single glazed pane in any previously fire tested or CERTIFIRE approved system. In this case the product code will change.

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D/007 – E/441

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'Pyroguard T EW' Fire Resisting Glass (continued)

Glass Specification	Application	Integrity	Page No.
Pyroguard T EW30/13-1	Steel framed doors	30	45-46
Pyroguard T EW60/13-1	Steel framed doors	60	47-51
Pyroguard T EW90/13-1	Steel framed doors	90	52-53
Pyroguard T EW120/13-1	Steel framed doors	120	54-55
Pyroguard T EW30/13-1 VI	Steel framed doors with IGUs*	30	56
Pyroguard T EW60/13-1 VI	Steel framed doors with IGUs*	60	57
Pyroguard T EW90/13-1 VI	Steel framed doors with IGUs*	90	58
Pyroguard T EW120/13-1 VI	Steel framed doors with IGUs*	120	59
Pyroguard T EW30/13-1	Aluminium glazed doorsets Aluprof MB-45	30	60-61
Pyroguard T EW30/13-1	Aluminium glazed screens Aluprof MB-45	30	62
Pyroguard T EW60/13-1	Aluminium glazed screens Aluprof MB-45	60	63
Pyroguard T EW60/13-1 VI	Aluminium glazed screens with IGUs* Aluprof MB-78EI	60	64
Pyroguard T EW30/13-1 TVI	Aluminium glazed Doorsets with TGUs Kawneer RT72HI+FR	30	65
Pyroguard T EW30/13-1 TVI	Aluminium glazed screens with TGUs Kawneer RT72HI+FR	30	66
Pyroguard T EW30/13-1	Aluminium glazed screens with IGUs Reynaers CS77-FP30	30	67
Pyroguard T EW60/13-1	Aluminium glazed screens with IGUs Reynaers CS77-FP30	60	68

Note* The fire resistant pane of the IGU construction can be used as a single glazed pane in any previously fire tested or CERTIFIRE approved system. In this case the product code will change.



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'Pyroguard T EW' Fire Resisting Glass

This product is approved on the basis of:

- a) Initial type testing
- b) A design appraisal against TS25
- c) Product surveillance under BS EN ISO 9001: 2008
- d) Audit testing

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

General Requirements

Where the glass is installed in a timber or steel framed screen, the orientation of the screen shall be no more than $\pm 10^\circ$ from the vertical.

The edge cover to each pane shall be no less than 10 mm minimum. See test reports for exact dimensions.

Options

The fire side of all glasses may have decorative self-adhesive leading, paint, stickers or self-adhesive timber/plastic/metallic slats as a grid or ladder pattern applied. The non-fire side is limited to the application of self-adhesive metallic materials only.

The glass may be frosted, acid etched or patterned on one face.

The glass may have 3M – Ultra 400 clear or Llumiar Window Film SCL SR PS4 applied to either face or an alternative film applied to the known fire risk side only. If the fire risk may be from either side or it cannot be determined which side of the glass will be on the fire risk side, then films other than 3M – Ultra 400 clear or Llumiar Window Film SCL SR PS4 shall not be applied.

Pyroguard glass may be acid etched, bevelled or incorporate grooves subject to the minimum glass thickness being maintained i.e. by utilising thicker glass sheets bevelled at the edge or grooved to standard thickness.

The systems approved in this report glazed with Pyroguard T EW/13-1 may be substituted with thicker Pyroguard T EW/15-1 or Pyroguard T EW/19-1 subject to maintaining the glazing and bead arrangement.

For doors described in this Certificate the glazed element can also be used in any previously fire tested or CERTIFIRE approved glazed insulated steel or timber framed door



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'Pyroguard T EW' Fire Resisting Glass

IGUs

Where IGUs are approved and the fire resistant pane is glazed to the non-fire side, the non-fire resistant glass on the fire side can be float, toughened or laminated glass. For applications of 30 minutes integrity when the fire resistant pane is glazed to the fire side the non-fire resistant glass on the non-fire side can be float, toughened or laminated glass. For applications of 60 minutes integrity or more when the fire resistant pane is glazed to the fire side the non-fire resistant glass can be any pane that does not contain a flammable organic material i.e. float glass or toughened glass but not a laminated or painted glass unless supported by test evidence not contained in this CF.

When the non-fire glass is laminated, whether it is on the exposed or non-exposed face, the product name becomes "VF".

The non-fire glass counterpane within the IGU's options considered in this document can be of any thickness (subject to the conditions above and also subject to bead sizes being maintained).

Where a fire resistant IGU is required it can be manufactured from any single size glass listed in this certificate for a given fire performance. In this case, the IGU non fire glass must be glazed on the fire side and the IGU glazed into any previously fire tested or CERTIFIRE approved system.

Within this certification IGU airspace widths vary from 6mm to 29mm unless otherwise specified in this document. The airspace widths are interchangeable for any product within this range. For larger airspace width contact the owner of this Certification.

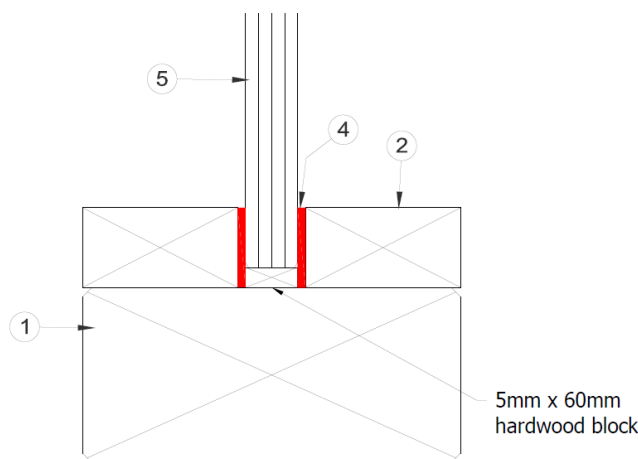
Approved insulating Glass Units (IGUs) may incorporate Georgian bars or integrated blinds within the cavity between inner and outer glass layers.

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Pyroguard T EW30/13-1 glass in Softwood framed screens for periods of 30 minutes integrity

For this application the following conditions shall apply:

- 1. Framework from softwood with a density of 470 kg/m³ and 95 mm x 45 mm section
- 2. Softwood beads 40 mm x 20 mm with a density of 470 kg/m³ fixed to frame with 1mm x 40mm steel pins at 300mm centres
- 4. Interdens intumescent glazing tape 20mm x 2mm
- **5. Pyroguard T EW30/13-1**
- Hardwood setting blocks 13mm x 60mm x 5mm
- Glazing and frame details as describe in **WF394053** and **WF394055**



This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

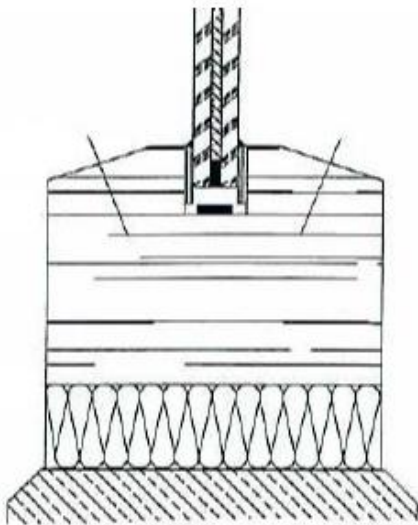
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1250mm wide (at 2500mm high)	3125mm high (at 1000mm wide)	3.12m ²
688mm wide (at 2740mm high)	3425mm high (at 550mm wide)	1.88m ²
1580mm wide (at 1580mm high)	1580mm high (at 1580mm wide)	2.50m ²

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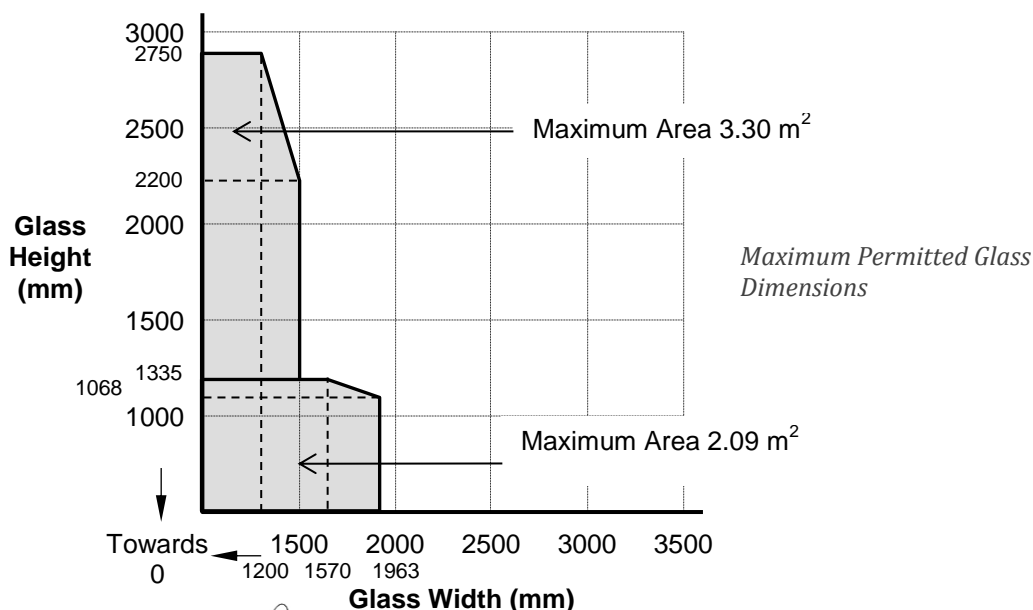
Pyroguard T EW30/13-1 glass in Hardwood framed screens for periods of 30 minutes integrity

For this application the following conditions shall apply:



- 13mm thick fire glass **Pyroguard T EW30/13-1** glass symmetrical glazed with one free edge.
- Framework from Hardwood with a density of 550 kg/m^3 and 98 mm x 50 mm section. Transoms and mullions assembled by steel screws 04 x 40 mm every 200 mm. Hardwood beads 40 mm x 20 mm with a density of 550 kg/m^3 .
- 15 mm x 3 mm Kerafix FT- paper (GLUSKE) Insulating glazing Tape on the fire side and capped off with Kerafix Silicone Sealant (GLUSKE), A 10 x 2.5 mm INTUMEX LSK swelling seal was fitted at the bottom of the fillister of the glazing.
- 80 x 13 mm by Flammi 12 (GLUSKE) setting blocks and Bottom edge clearance at fillister 7.5 mm, fillister hold of the glazing 7.5 mm.
- Glazing and frame details as describe in **Efectis test report No 04-V-235**

This Certificate of Approval relates to the sizes of 13 mm thick fire glass Pyroguard T EW30/13-1 shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

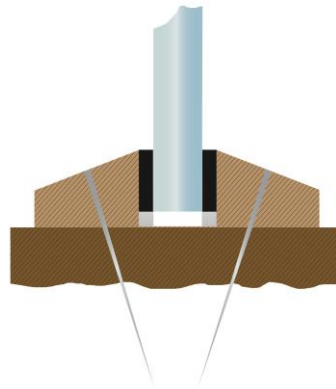


CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 glass in Hardwood framed screens for periods of 30 minutes integrity

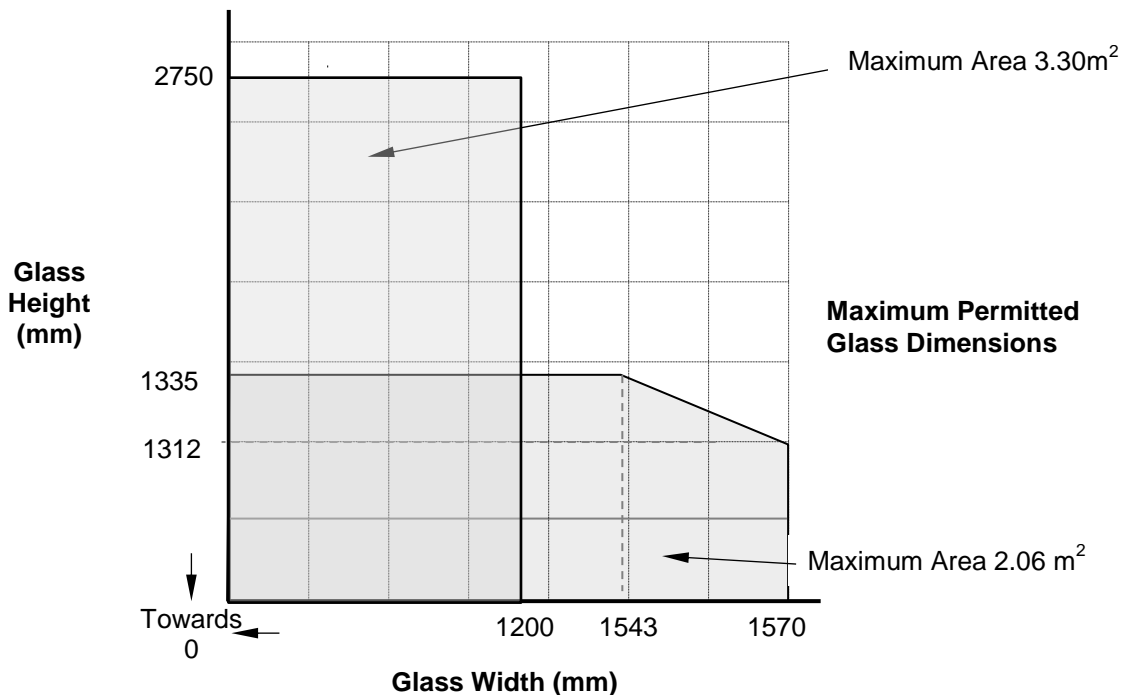
For this application the following conditions shall apply:

- Glass (see diagram below for allowable dimensions)
- Sealmaster Intumescent Foam Glazing Tape- 15x5mm uncompressed
- Bead fixings to be 50 mm screws fixed at 45°. Fixings at 150 mm centres, 50 mm from corners
- Hardwood framing members, 90 mm x 50 mm, 510kg/m³ min. density
- Glazing Bead, 20 mm x 40 mm, with a 20° chamfer from Hardwood with a min. density 510kg/m³



System may be used with and without non-combustible setting blocks

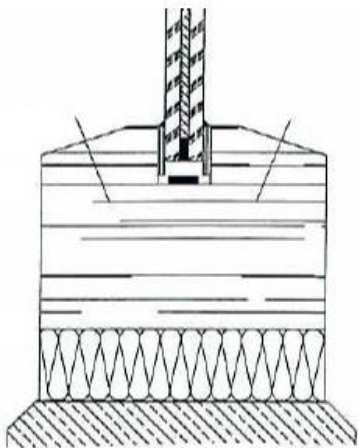
This Certificate of Approval relates to the sizes of 13 mm thick fire glass **Pyroguard T EW30/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



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Pyroguard T EW60/13-1 glass in Hardwood framed screens for periods of 60 minutes integrity

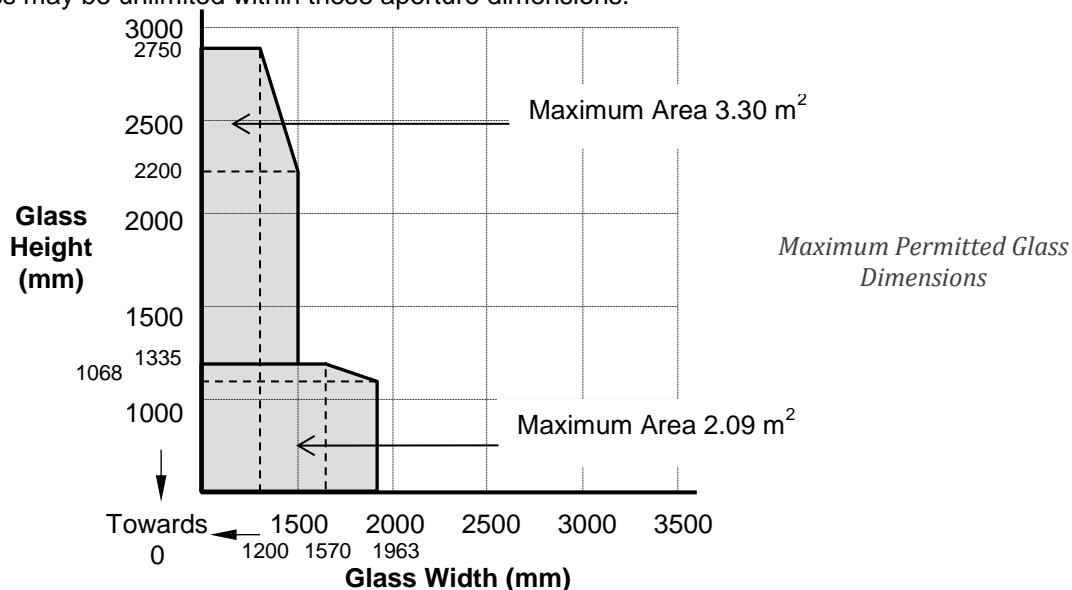
For this application the following conditions shall apply:



- 13 mm thick fire glass **Pyroguard T EW60/13-1** glass symmetrical glazed with one free edge.

- Framework from Hardwood with a density of 650 kg/m³ and 98 mm x 50 mm section. Transoms and mullions assembled by steel screws 04 x 40 mm every 200 mm. Hardwood beads 40 mm x 20 mm with a density of 650 kg/m³.
- 15 mm x 3 mm Kerafix FT- paper (GLUSKE) Insulating glazing Tape on the fire side and capped off with Kerafix Silicone Sealant (GLUSKE), A 10 x 2.5 mm INTUMEX LSK swelling seal was fitted at the bottom of the fillister of the glazing.
- 80 x 13 mm by Flammi 12 (GLUSKE) setting blocks and Bottom edge clearance at fillister 7.5 mm, fillister hold of the glazing 7.5 mm.
- Glazing and frame details as describe in **Efectis test report No 04-V-235**

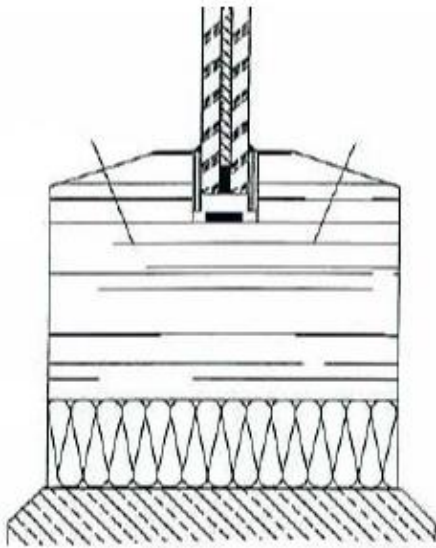
This Certificate of Approval relates to the sizes of 13 mm thick fire glass **Pyroguard T EW60/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



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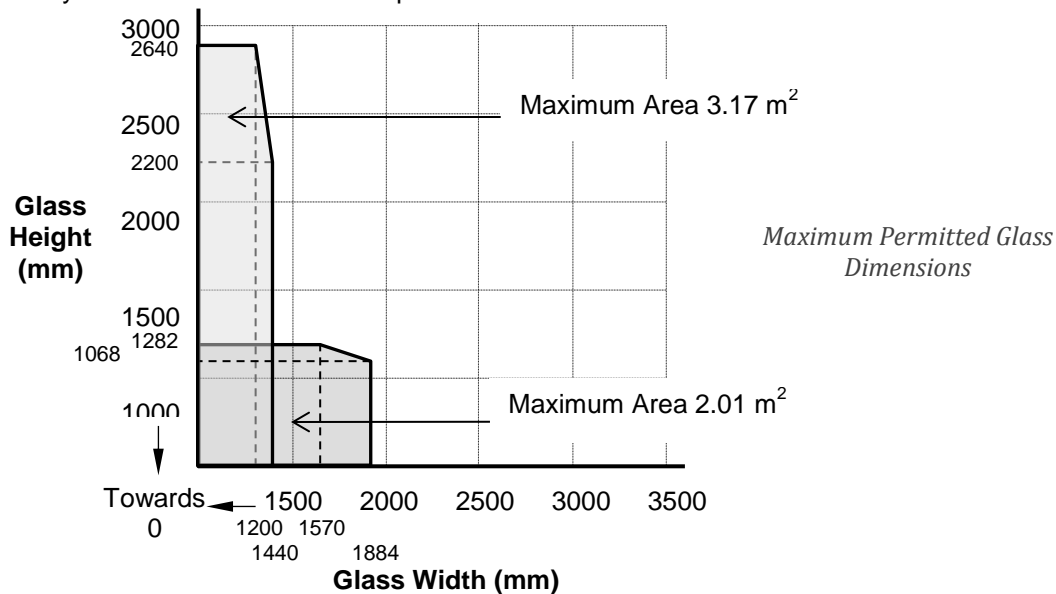
Pyroguard T EW90/13-1 glass in Hardwood framed screens for periods of 90 minutes integrity

For this application the following conditions shall apply:



- 13 mm thick fire glass **Pyroguard T EW90/13-1** glass symmetrical glazed with one free edge.
- Framework from Hardwood with a density of 550 kg/m^3 and 98 mm x 50 mm section. Transoms and mullions assembled by steel screws 04 x 40 mm every 200 mm. Hardwood beads 40 mm x 20 mm with a density of 550 kg/m^3 .
- 15 mm x 3 mm Kerafix FT- paper (GLUSKE) Insulating glazing Tape on the fire side and capped off with Kerafix Silicone Sealant (GLUSKE), A 10 x 2.5 mm INTUMEX LSK swelling seal was fitted at the bottom of the fillister of the glazing.
- 80 x 13 mm by Flammi 12(GLUSKE) setting blocks and Bottom edge clearance at fillister 7.5 mm, fillister hold of the glazing 7.5 mm.
- Glazing and frame details as describe in **Efectis test report No 04-V-235**

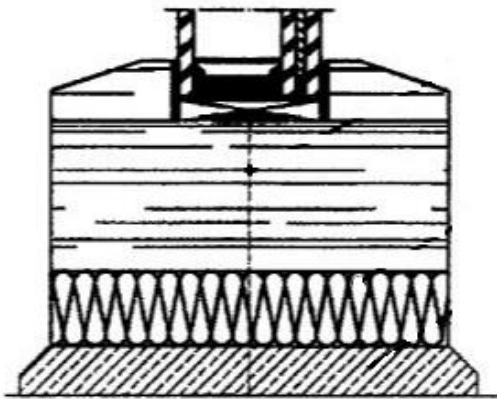
This Certificate of Approval relates to the sizes of 13 mm thick fire glass **Pyroguard T EW90/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



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Pyroguard T EW30/13-1 VI (IGU) glass with blinds in Hardwood framed screens for periods of 30 minutes integrity

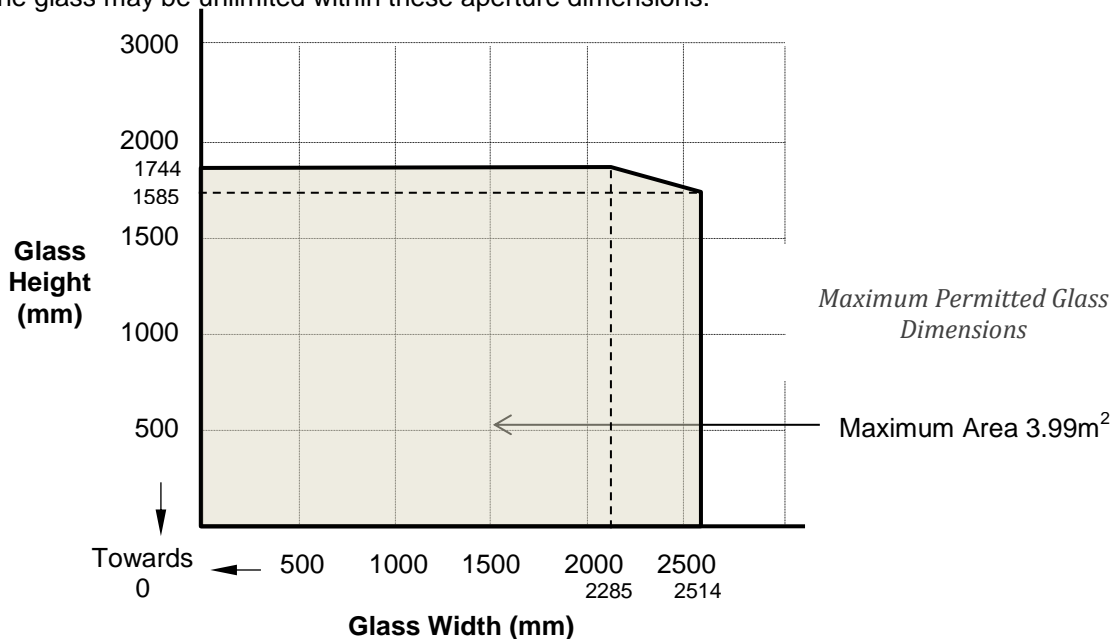
For this application the following conditions shall apply:



- Framework from Hardwood with a density of 650 kg/m^3 and 132 mm x 50 mm section. Transoms and mullions assembled by steel screws 4 x 40 mm every 200 mm. Hardwood beads 40 mm x 20 mm with a density of 650 kg/m^3 .
- 15 mm x 3 mm Kerafix FT- paper (GLUSKE) Insulating glazing Tape on the fire side and capped off with Kerafix Silicone Sealant (GLUSKE), A 10 x 2.5 mm INTUMEX LSK swelling seal was fitted at the bottom of the fillister of the glazing.
- 80 x 13 mm by Flammi 12 (GLUSKE) setting blocks and Bottom edge clearance at fillister 7.5 mm, fillister hold of the glazing 7.5 mm.
- Glazing and frame details as describe in **Efectis test report No 09-V-233**

- 13 mm thick **Pyroguard T EW30/13-1 VI (IGU)** and 5 mm toughed glass, with 29 mm spacer with blinds in cavity.

This Certificate of Approval relates to the sizes of 47 mm thick fire glass **Pyroguard T EW30/13-1 VI (IGU)** shown in the diagram 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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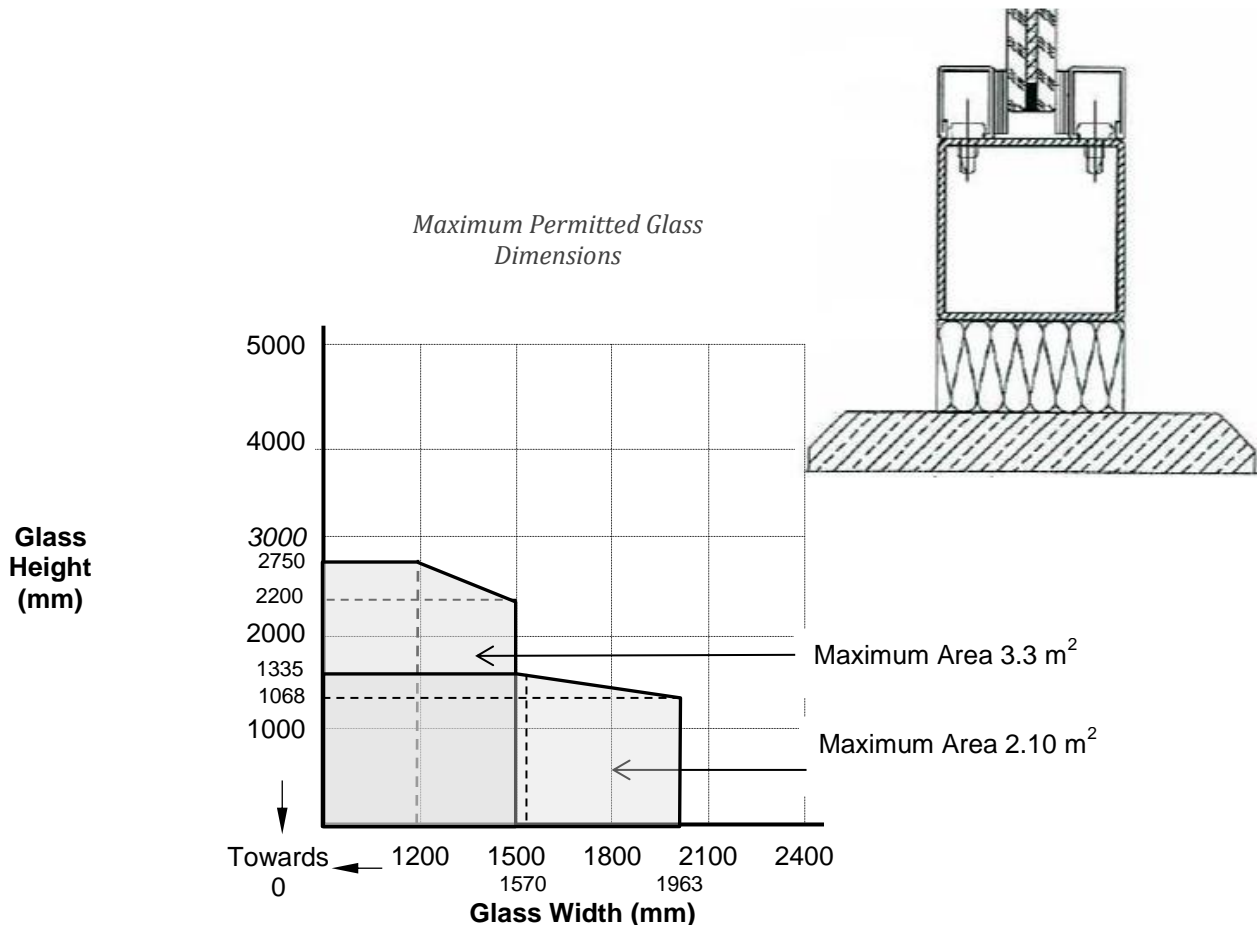
Pyroguard T EW30/13-1 glass in steel framed Forster screens for periods of 30 minutes integrity

For this application the following conditions shall apply:

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, see example below. The glass shall be glazed into the screen with 20 x 5 mm Kerafix Flexlit (Gluske) insulating tapes on both faces and set on non-combustible setting blocks to determine the correct edge cover.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

- Glazing and frame details as described in **CTICM Test Report Number 04-V-234**



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Pyroguard T EW30/13-1 glass in Voestalpine VA Form 50 steel framed systems for periods of 30 minutes integrity

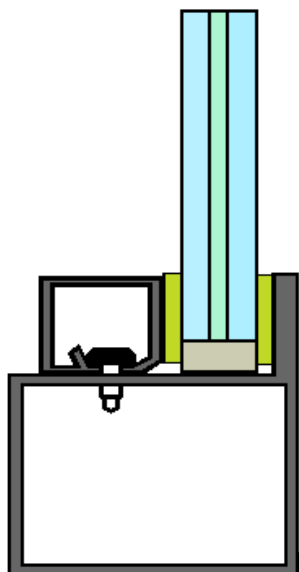
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/13-1**
- 20mm x 6mm Kerafix 2000 glazing tape capped with Kerafix Fire Silicone
- Glazing and frame details as describe in **Efectis report EFR-17-V-004769**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2133mm wide (at 2800mm high)	2986mm high (at 2000mm wide)	5.97m ²

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Pyroguard T EW30/13-1 glass in Jansen ECO 50 steel framed systems for periods of 30 minutes integrity

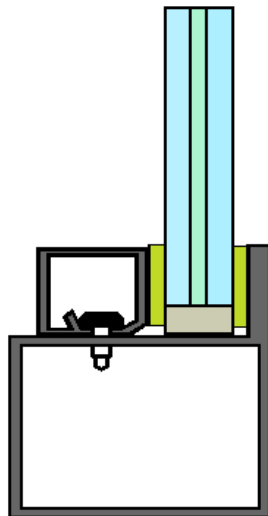
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/13-1**
- 20mm x 6mm Gluske 2000 glazing tape
- Glazing and frame details as describe in **WF 405086**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1500mm wide (at 2200mm high)	2750mm high (at 1200mm wide)	3.30m ²
1963mm wide (at 1065mm high)	1335mm high (at 1570mm wide)	2.10m ²

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Pyroguard T EW30/13-1 glass in RP-hermetic 55N FP steel framed systems for periods of 30 minutes integrity

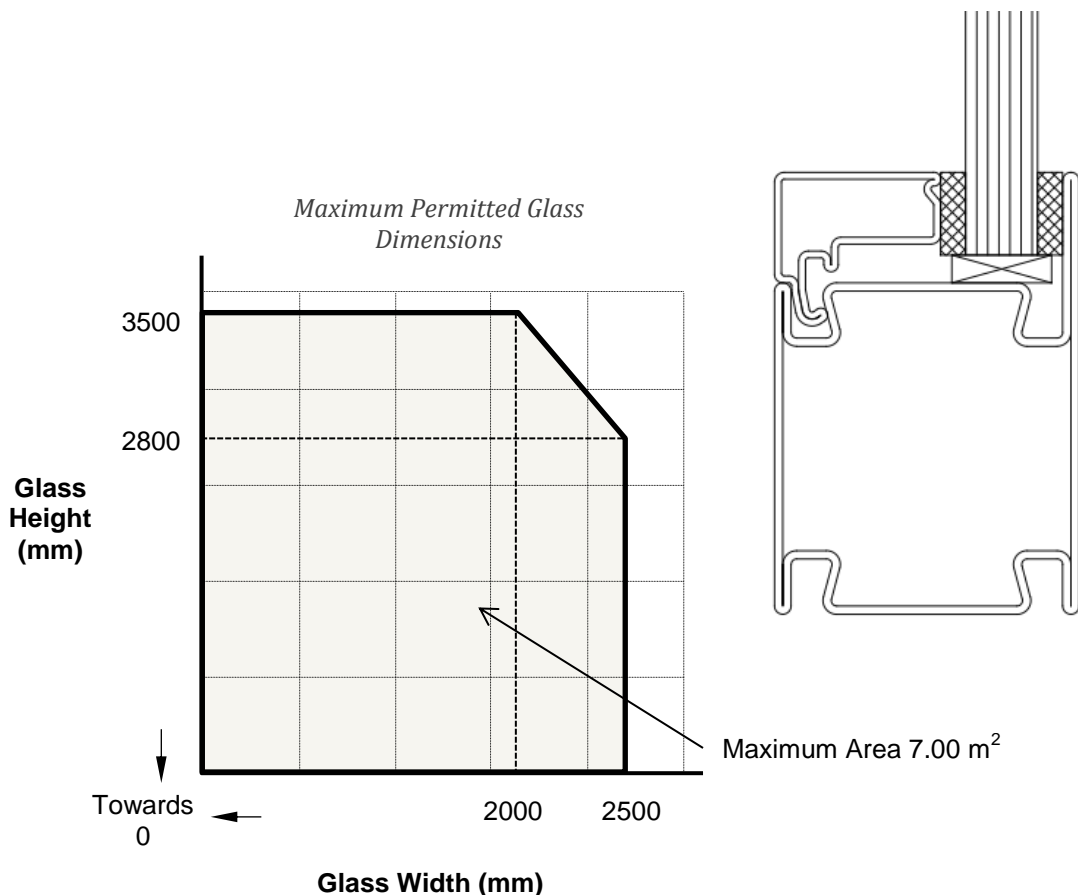
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/13-1**
- 15 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis report No EFR 16-V-002496**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1** shown in the diagram 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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Pyroguard T EW30/15-1 glass in Jansen Economy 50 steel framed systems for periods of 30 minutes integrity

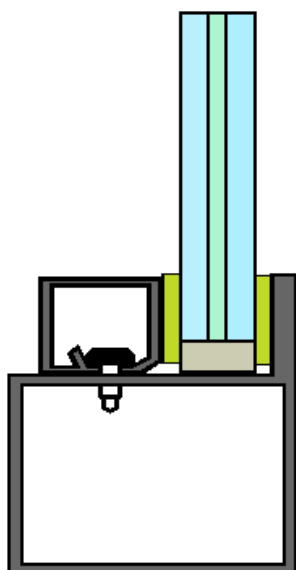
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/15-1** glass
- 20 mm x 3 mm and 20 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis test report EFR-18-G-002856**

The steel frame system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/15-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2530mm wide (at 4000mm high)	4400mm high (at 2300mm wide)	10.12m ²

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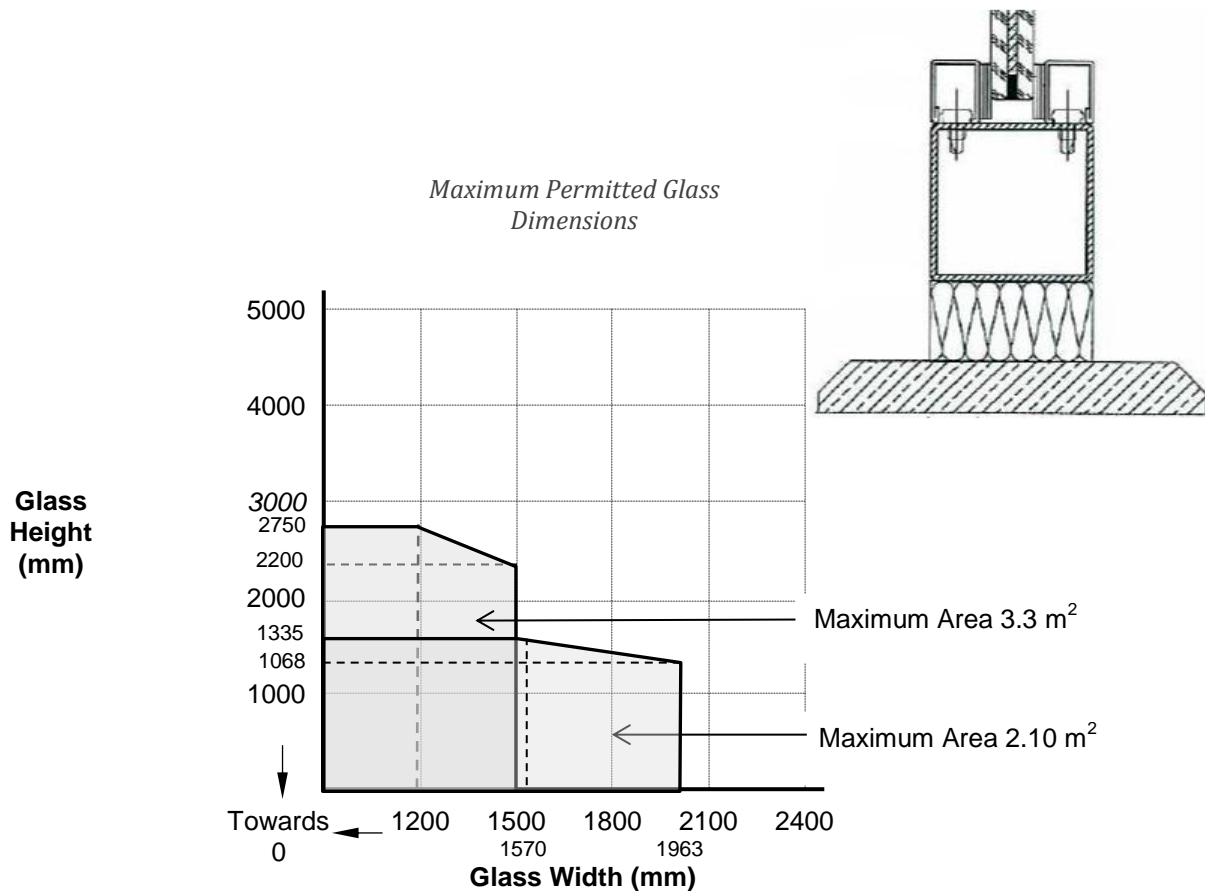
Pyroguard T EW60/13-1 glass in steel framed Forster screens for periods of 60 minutes integrity

For this application the following conditions shall apply:

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, see example below. The glass shall be glazed into the screen with 20 x 5 mm Kerafix Flexlit (Gluske) insulating tapes on both faces and set on non-combustible setting blocks to determine the correct edge cover.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

- Glazing and frame details as described in **CTICM Test Report Number 04-V-234**



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Pyroguard T EW60/13-1 glass in Forster Presto 50 steel framed systems for periods of 60 minutes integrity

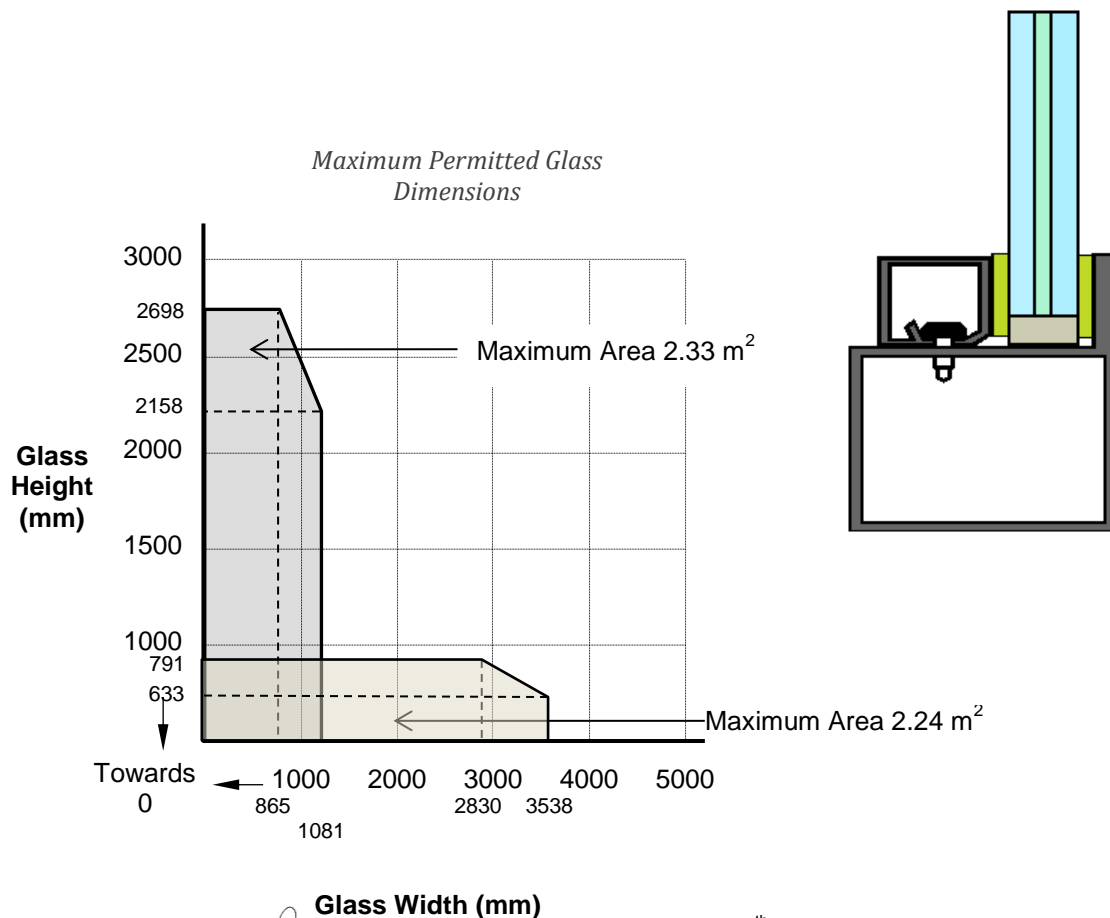
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW60/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 05-V-038a**

The steel frame system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/13-1** shown in the diagram 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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Pyroguard T EW60/13-1 glass in Jansen ECO 50 steel framed systems for periods of 60 minutes integrity

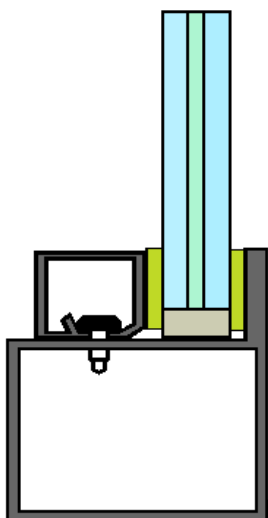
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW60/13-1**
- 20mm x 6mm Gluske 2000 glazing tape
- Glazing and frame details as describe in **WF 405086**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1500mm wide (at 2200mm high)	2750mm high (at 1200mm wide)	3.30m ²
1963mm wide (at 1065mm high)	1335mm high (at 1570mm wide)	2.10m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in RP-hermetic 55N FP steel framed systems for periods of 60 minutes integrity

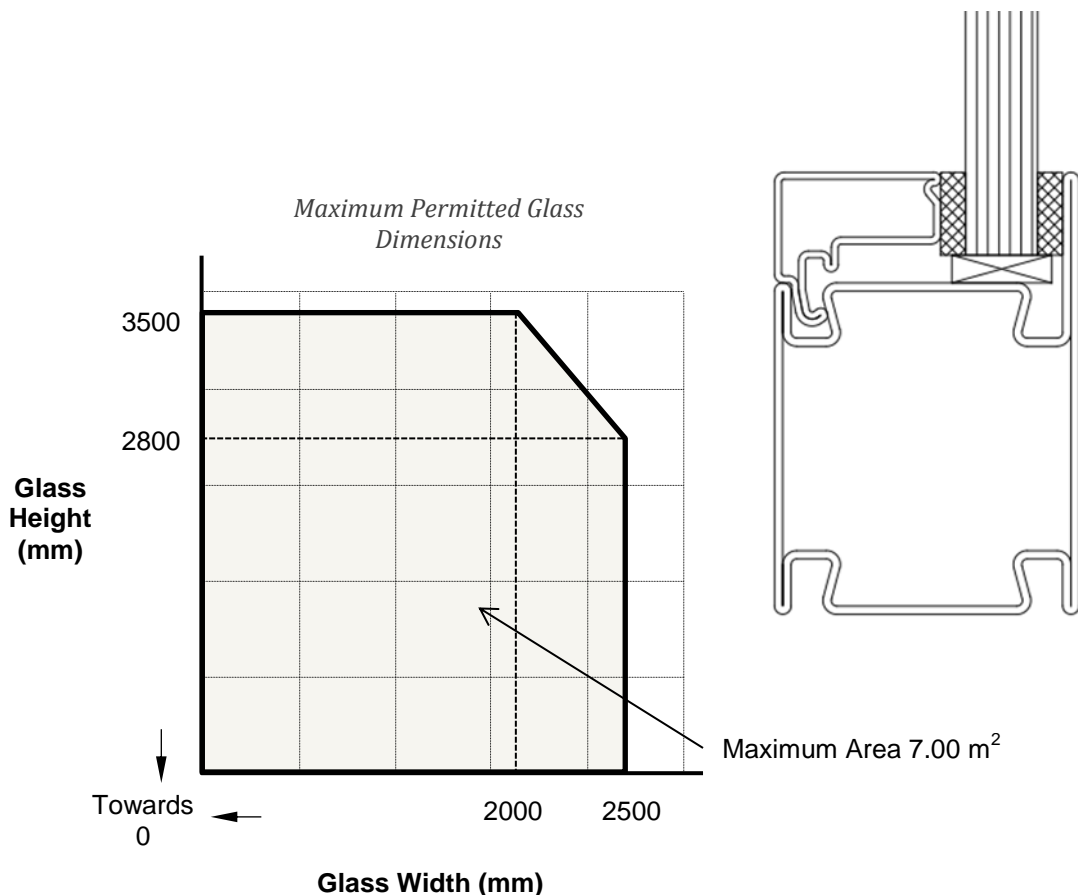
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW60/13-1**
- 15 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis report No EFR 16-V-002496**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/13-1** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/15-1 glass in Jansen Economy 50 steel framed systems for periods of 60 minutes integrity

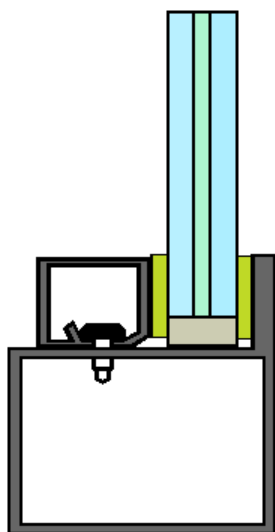
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW60/15-1** glass
- 20 mm x 3 mm and 20 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis test report EFR-18-G-002856**

The steel frame system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/15-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2875mm wide (at 800mm high)	1000mm high (at 2300mm wide)	2.3m ²
625mm wide (at 1973mm high)	2466mm high (at 500mm wide)	1.23m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

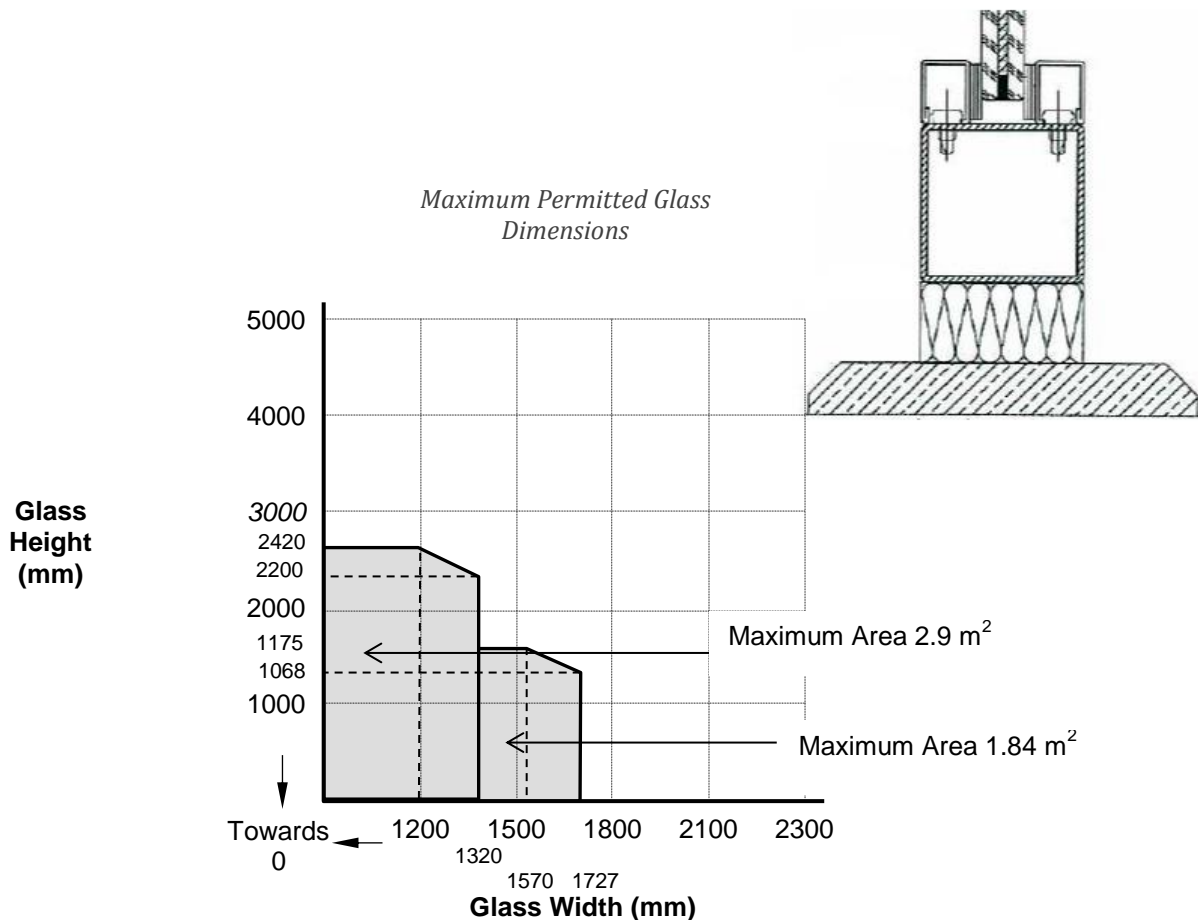
Pyroguard T EW90/13-1 glass in steel framed Forster screens for periods of 90 minutes integrity

For this application the following conditions shall apply:

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, see example below. The glass shall be glazed into the screen with 20 x 5 mm Kerafix Flexlit (Gluske) insulating tapes on both faces and set on non-combustible setting blocks to determine the correct edge cover.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

- Glazing and frame details as described in **CTICM Test Report Number 04-V-234**



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

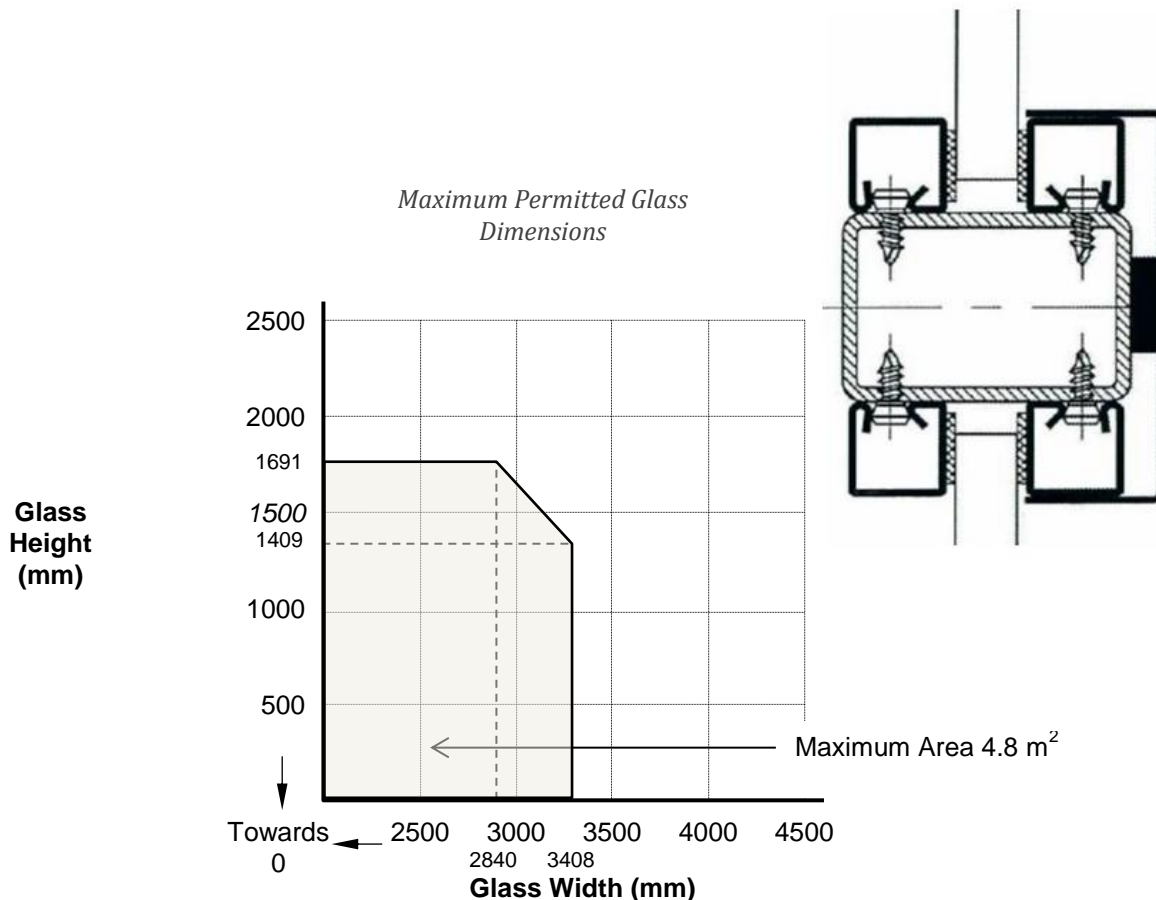
Pyroguard T EW90/13-1 glass in steel framed Presta metal screens with Jansen beads for 90 minutes integrity

For this application the following conditions shall apply:

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, see example below. The glass shall be glazed into the screen with 20 x 20 x 1.2 mm Jansen 9402.120.Z glazing bead and Interseal 20 x 2mm glazing strips on both faces and set on Superlux non-combustible setting blocks to determine the correct edge cover.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

- Glazing and frame details as described in **CTICM Test Report Number 05-V-158a**



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 glass in Forster steel framed systems for periods of 90 minutes integrity

For this application the following conditions shall apply:

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, see example below.

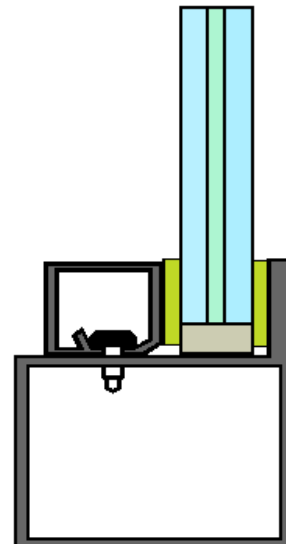
- **Pyroguard T EW90/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis report No 08-V-101**
-

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
3231mm wide (at 2835mm high)	3544mm high (at 2585mm wide)	9.16m ²



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 glass in Jansen ECO 50 steel framed systems for periods of 90 minutes integrity

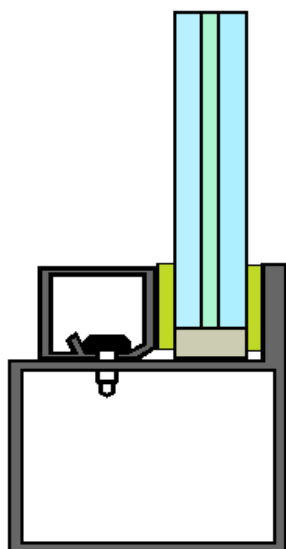
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW90/13-1**
- 20mm x 6mm Gluske 2000 glazing tape
- Glazing and frame details as describe in **WF 405086**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1500mm wide (at 2200mm high)	2750mm high (at 1200mm wide)	3.30m ²
1963mm wide (at 1065mm high)	1335mm high (at 1570mm wide)	2.10m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 glass in RP-hermetic 55N FP steel framed systems for periods of 90 minutes integrity

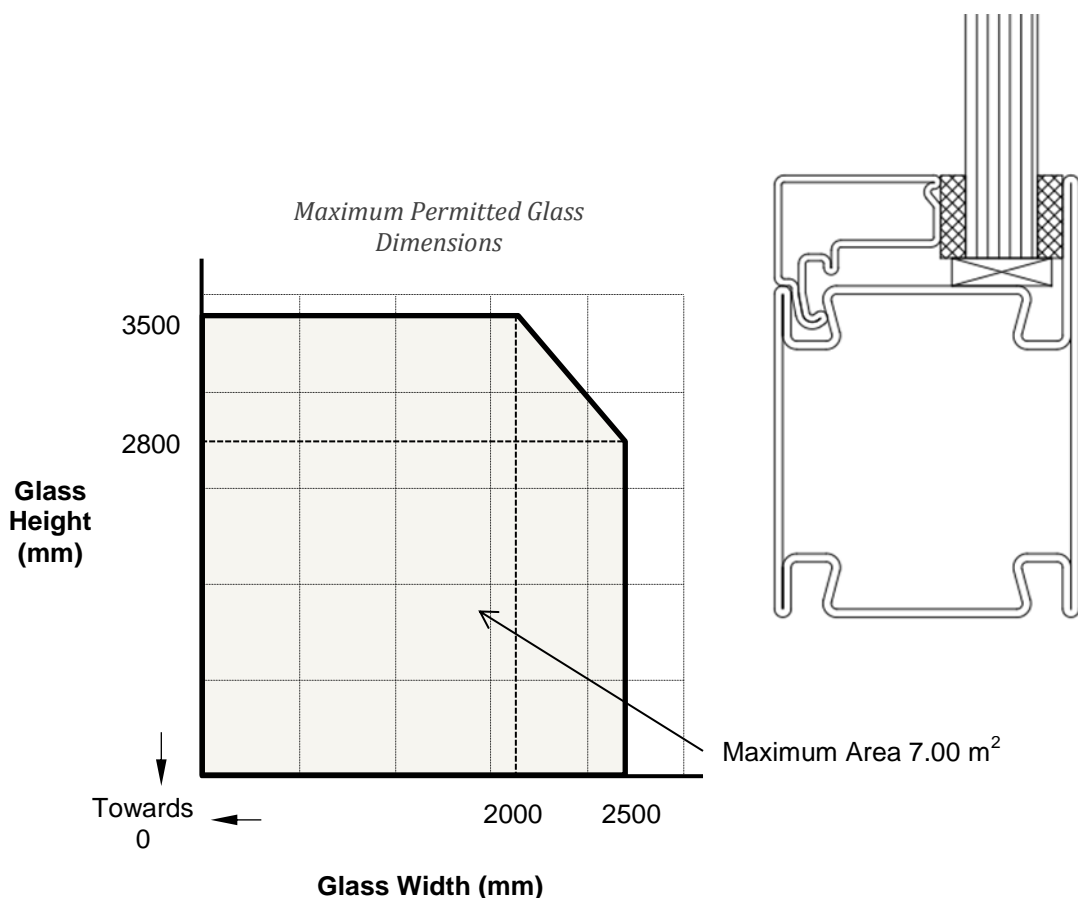
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW90/13-1**
- 15 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis report No EFR 16-V-002496**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/15-1 glass in Jansen Economy 50 steel framed systems for periods of 90 minutes integrity

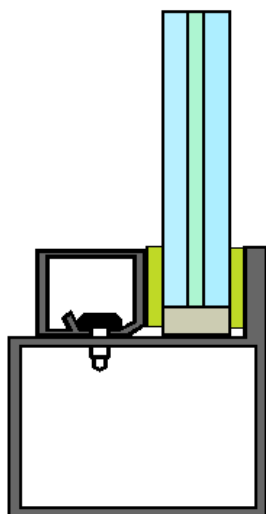
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW90/15-1** glass
- 20 mm x 3 mm and 20 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis test report EFR-18-G-002856**

The steel frame system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/15-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2875mm wide (at 800mm high)	1000mm high (at 2300mm wide)	2.3m ²
625mm wide (at 1973mm high)	2466mm high (at 500mm wide)	1.23m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

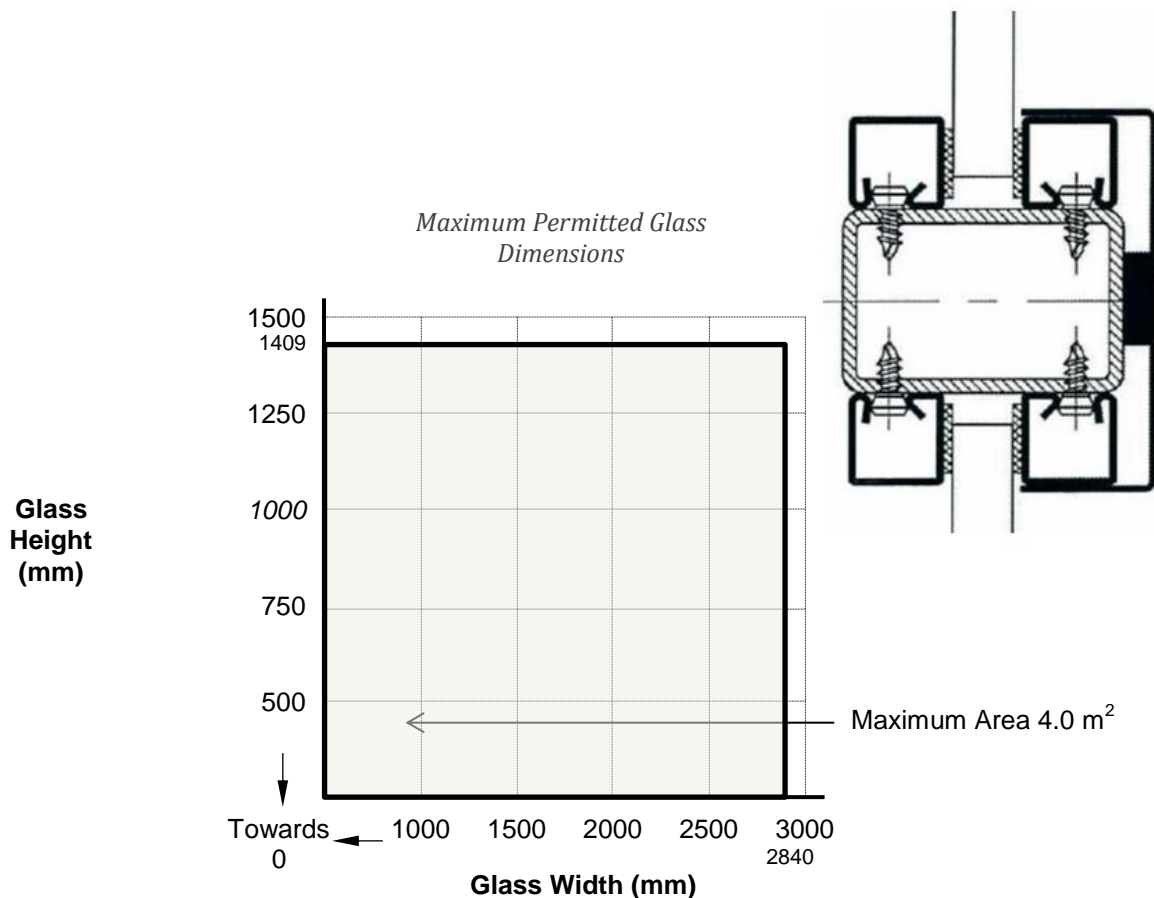
Pyroguard T EW120/13-1 glass in steel framed Presta metal screens with Jansen beads for periods of 120 minutes integrity

For this application the following conditions shall apply:

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, see example below. The glass shall be glazed into the screen with 20 x 20 x 1.2 mm Jansen 9402.120.Z glazing bead and Interseal 20 x 2mm glazing strips on both faces and set on Superlux non-combustible setting blocks to determine the correct edge cover.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

- Glazing and frame details as described in **CTICM Test Report Number 05-V-158a**



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in Forster steel framed systems for periods of 120 minutes integrity

For this application the following conditions shall apply:

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, see example below.

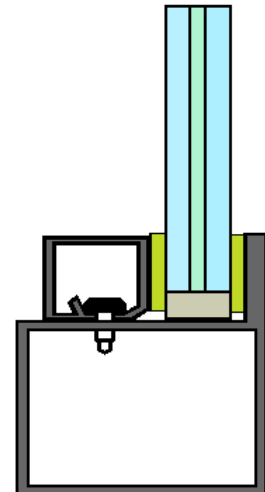
- **Pyroguard T EW120/13-1**
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis report No 08-V-101**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
3016mm wide (at 2835mm high)	3307mm high (at 2585mm wide)	8.55m ²



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in Jansen ECO 50 steel framed systems for periods of 120 minutes integrity

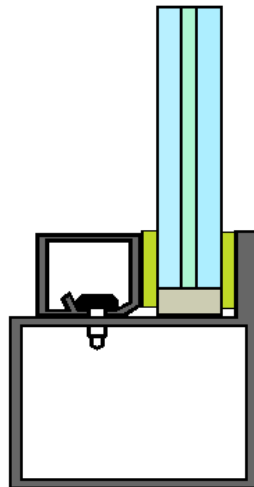
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW120/13-1**
- 20mm x 6mm Gluske 2000 glazing tape
- Glazing and frame details as describe in **WF 405086**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** at the maximum sizes shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1330mm wide (at 2200mm high)	2438mm high (at 1200mm wide)	2.92m ²
1740mm wide (at 1065mm high)	1184mm high (at 1570mm wide)	1.86m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in RP-hermetic 55N FP steel framed systems for periods of 120 minutes integrity

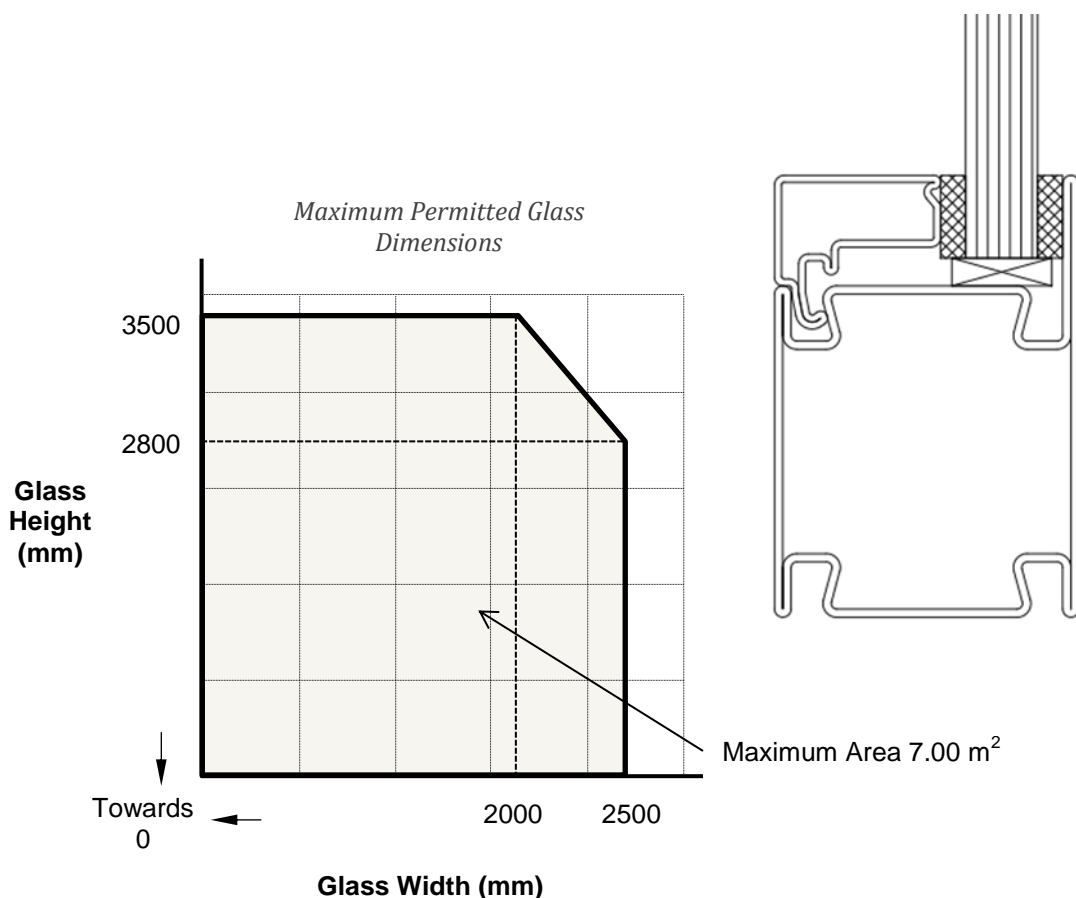
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW120/13-1**
- 15 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis report No EFR 16-V-002496**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in Voestalpine VA Form50 steel framed systems for periods of 120 minutes integrity

For this application the following conditions shall apply:

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, see example below.

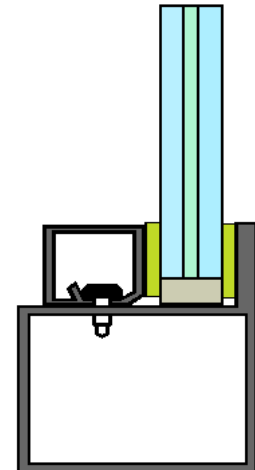
- **Pyroguard T EW120/13-1**
- 15 mm x 5 mm Kerafix 2000 ceramic glazing tape
- Glazing and frame details as describe in **Thomas Bell-Wright TG106-B**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1274mm wide (at 2878mm high)	3166mm high (at 1158mm wide)	3.66m ²



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/15-1 glass in Jansen Economy 50 steel framed systems for periods of 120 minutes integrity

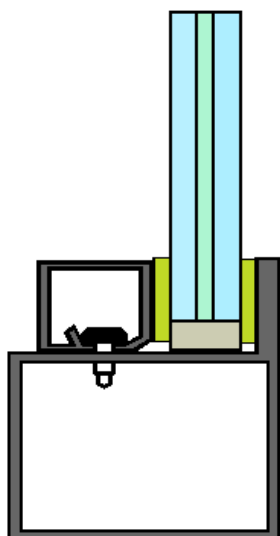
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW120/15-1** glass
- 20 mm x 3 mm and 20 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis test report EFR-18-G-002856**

The steel frame system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/15-1** shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2300mm wide	800mm high	1.84m ²
500mm wide	1973mm high	0.98m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in RP-hermetic 55N FP steel framed systems for periods of 180 minutes integrity

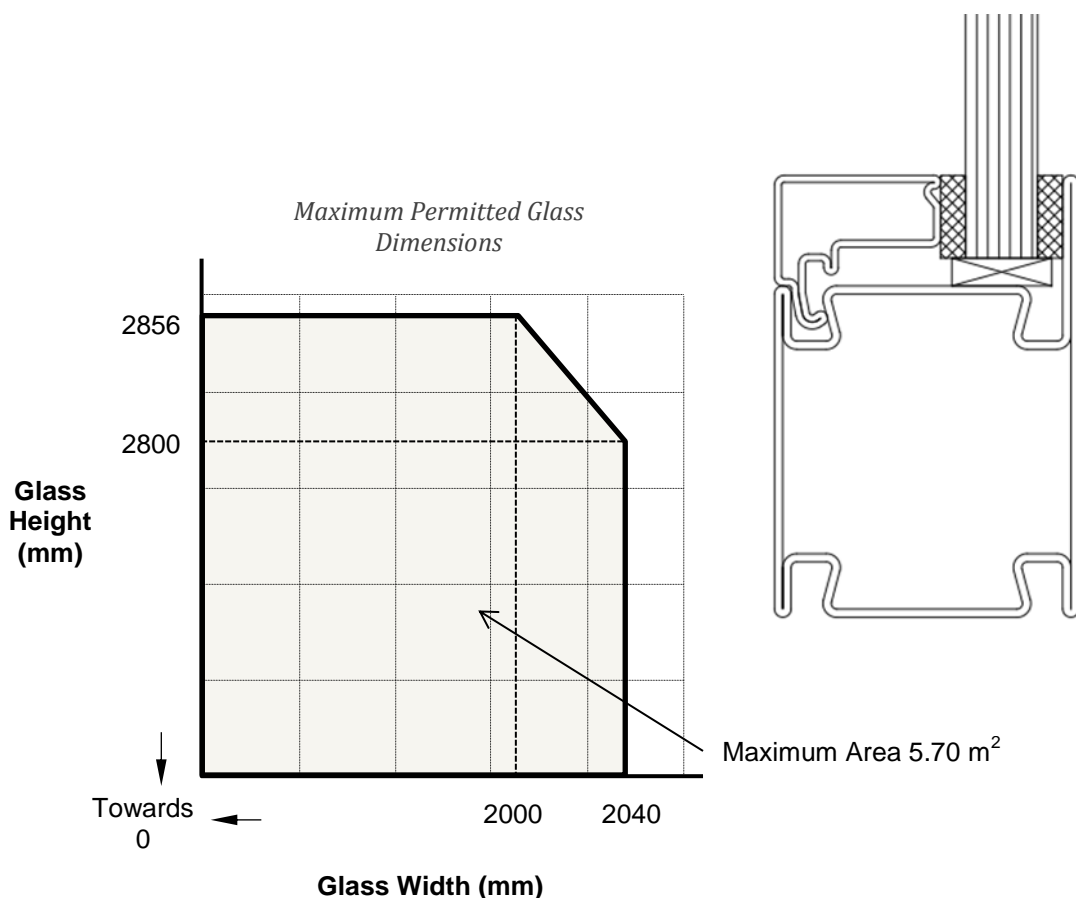
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW120/13-1**
- 15 mm x 5 mm Kerafix Flexlit glazing tape
- Glazing and frame details as describe in **Efectis report No EFR 16-V-002496**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW120/13-1** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 VI (IGU) in Forster Thermix Vario steel framed systems for periods of 30 minutes integrity

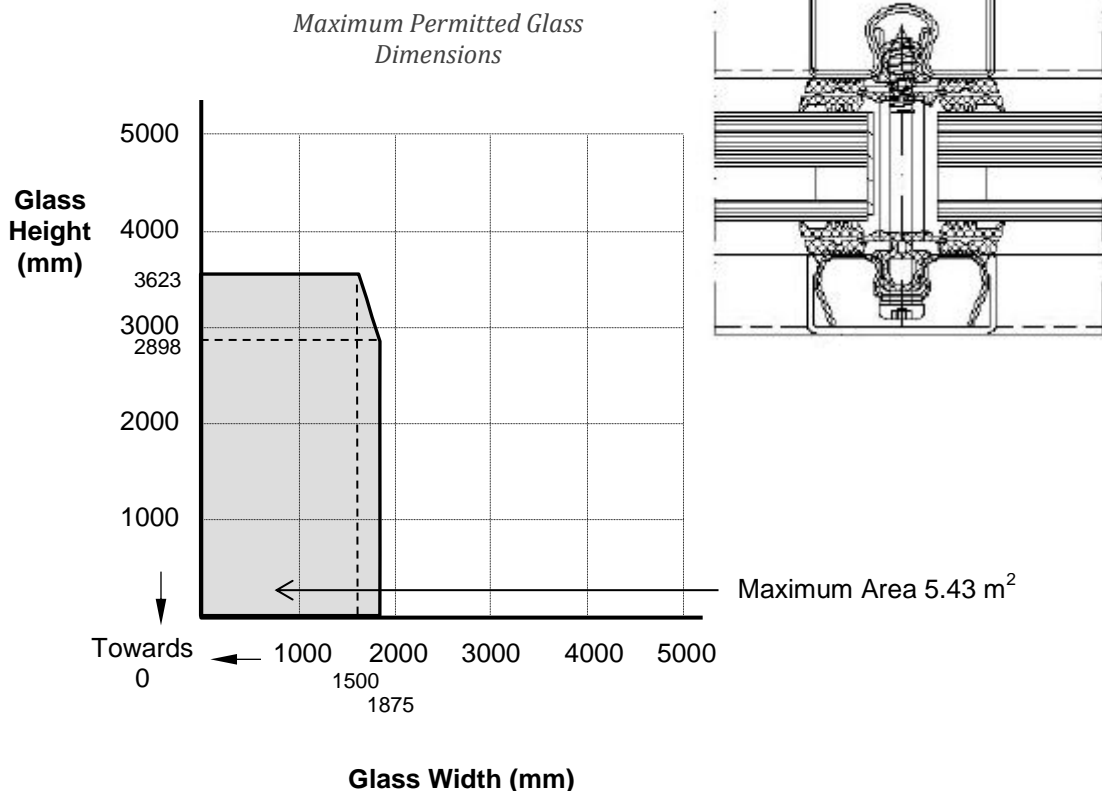
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/13-1 VI (IGU) glass**
- 45 x 8 mm and 60 mm x 8 mm weather-stripping
- Intumescent material Gluske Kerafix 2000, 24.5 x 2.2 mm
- Glazing and frame details as describe in **Efectis test report 2009-RO162**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1 VI (IGU)** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 VI (IGU) glass in ISO Hermetic 45 N RP Technik steel framed system or Isofire 45 system for periods of 30 minutes integrity

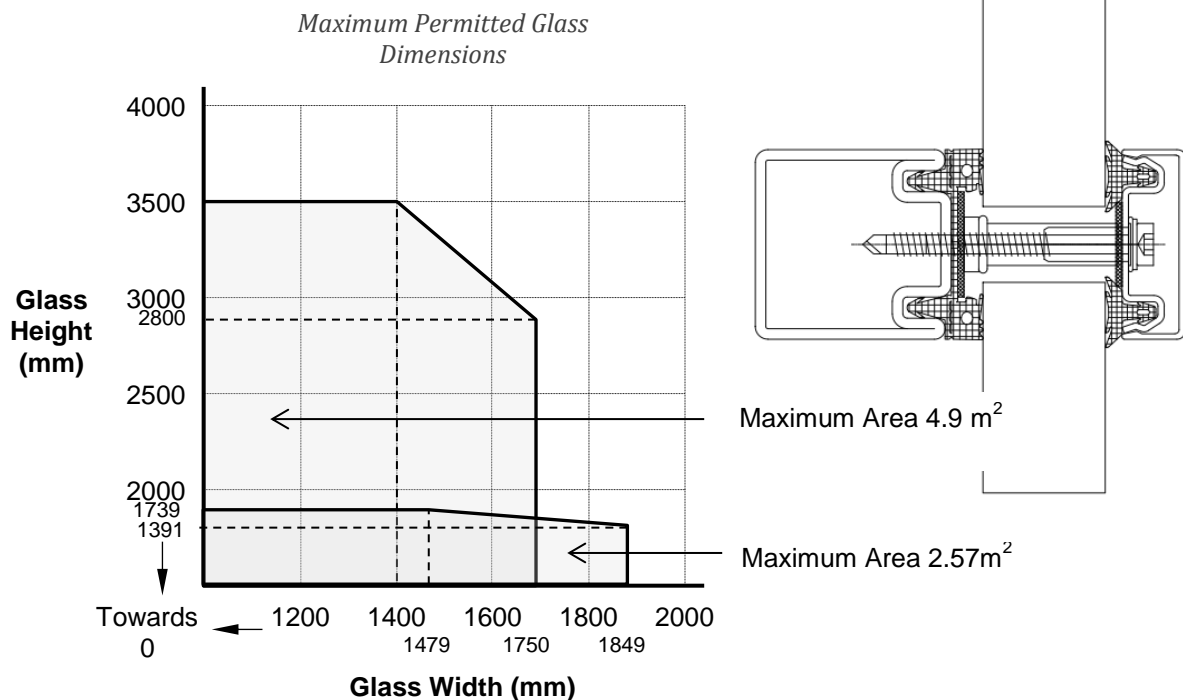
For this application the following conditions shall apply:

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, see example below.

- Glazing and frame details as describe in **Efectis test report No 12-V-207**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to the sizes of IGU with 26 mm thick **Pyroguard T EW30/13-1 VI (IGU)** shown in the diagram below. The aspect ratio of the glass may be unlimited within these aperture dimensions



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 30 minutes integrity

For this application the following conditions shall apply:

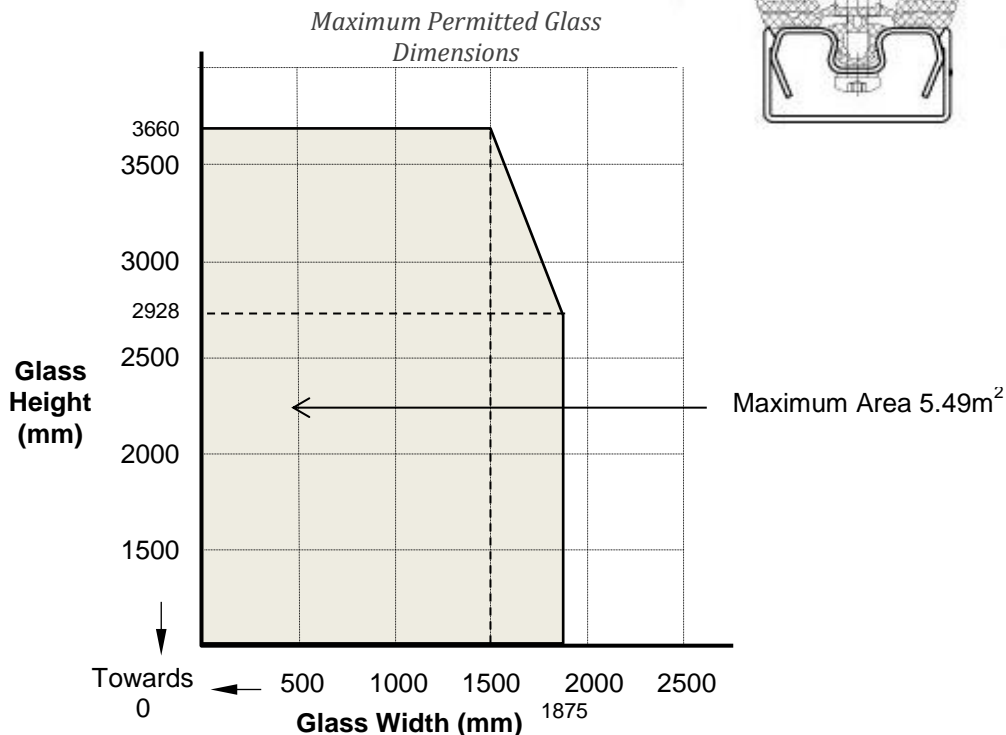
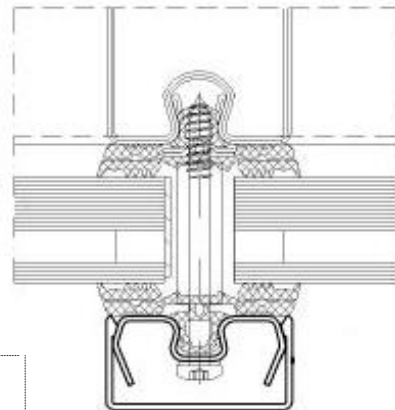
The glass shall be installed into a previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW30/13-1VI (IGU)** with 8mm steel spacer and 5mm toughened glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 2007-R0749**

The steel framing system shall have test evidence or be CERTIFIRE approved.

Pyroguard T EW30/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 30 minutes integrity

This Certificate of Approval relates to the sizes of **and Pyroguard T EW30/13-1VI (IGU)** shown in the diagram below, when used in conjunction with the above sy



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 VI (IGU) in Forster Unico steel framed systems for periods of 30 minutes integrity

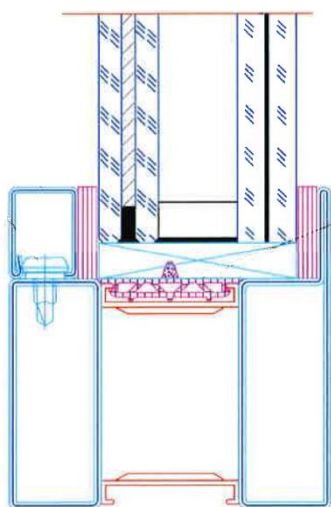
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW30/13-1 VI (IGU) glass**
- Intumescent glazing tape Kerafix Flexlit, 20 x 5 mm
- Glazing and frame details as describe in **Efectis test report EFR-19-V-000091**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW30/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions

	Maximum Width	Maximum Height	Maximum Area
Using warm edge spacer	1431mm wide (at 1585mm high)	1638mm high (at 1385mm wide)	2.27m ²
Using steel spacer	1731mm wide (at 1585mm high)	1981mm high (at 1385mm wide)	2.74m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 VI (IGU) in Forster Thermix Vario steel framed systems for periods of 60 minutes integrity

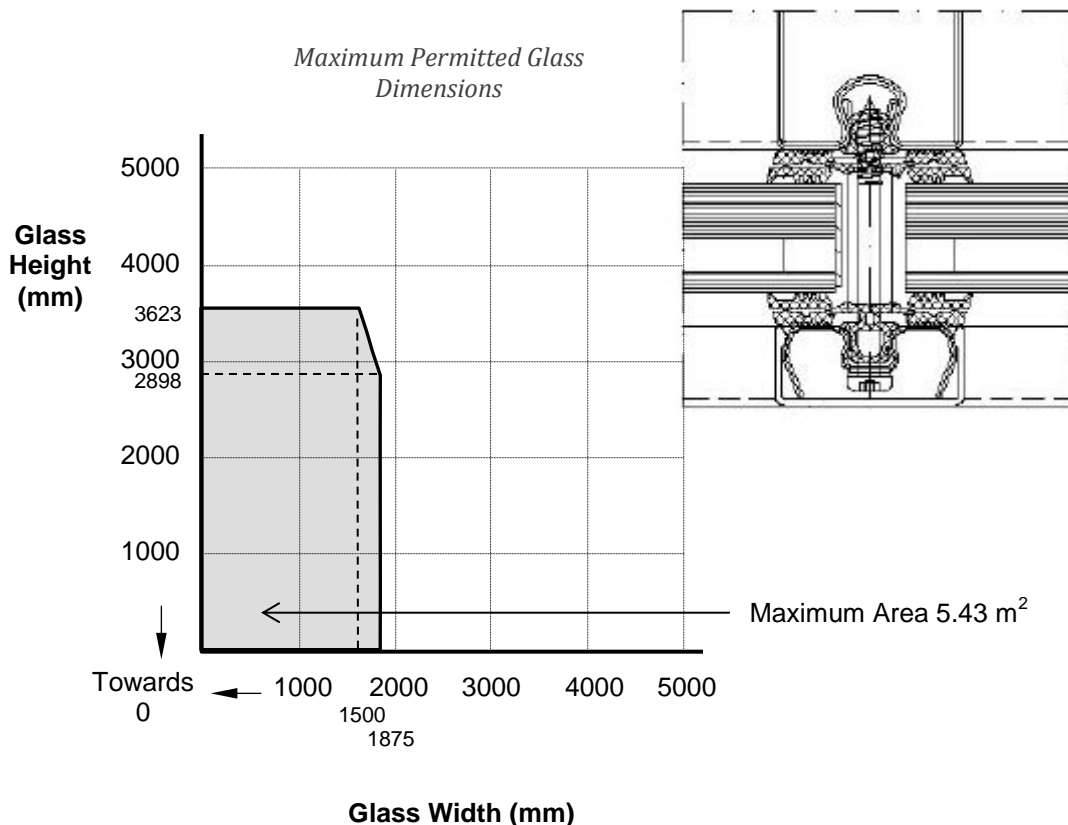
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW60/13-1 VI (IGU) glass**
- 45 x 8 mm and 60 mm x 8 mm weather-stripping
- Intumescent material Gluske Kerafix 2000, 24.5 x 2.2 mm
- Glazing and frame details as describe in **Efectis test report 2009-RO162**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW60/13-1 VI (IGU)** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 VI (IGU) glass in ISO Hermetic 45 N RP Technik steel framed system or Isofire 45 system for periods of 60 minutes integrity

For this application the following conditions shall apply:

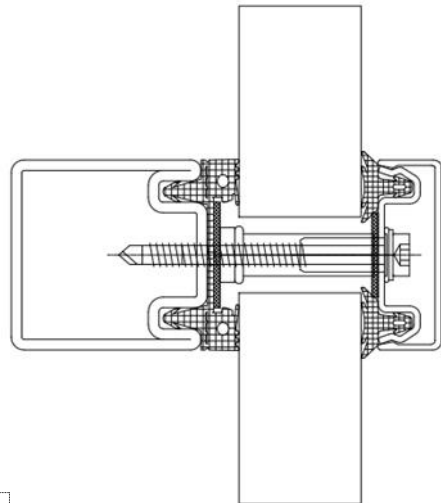
The glass shall be installed into a previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads, see example below.

- Glazing and frame details as describe in **Efectis test report No 12-V-207**

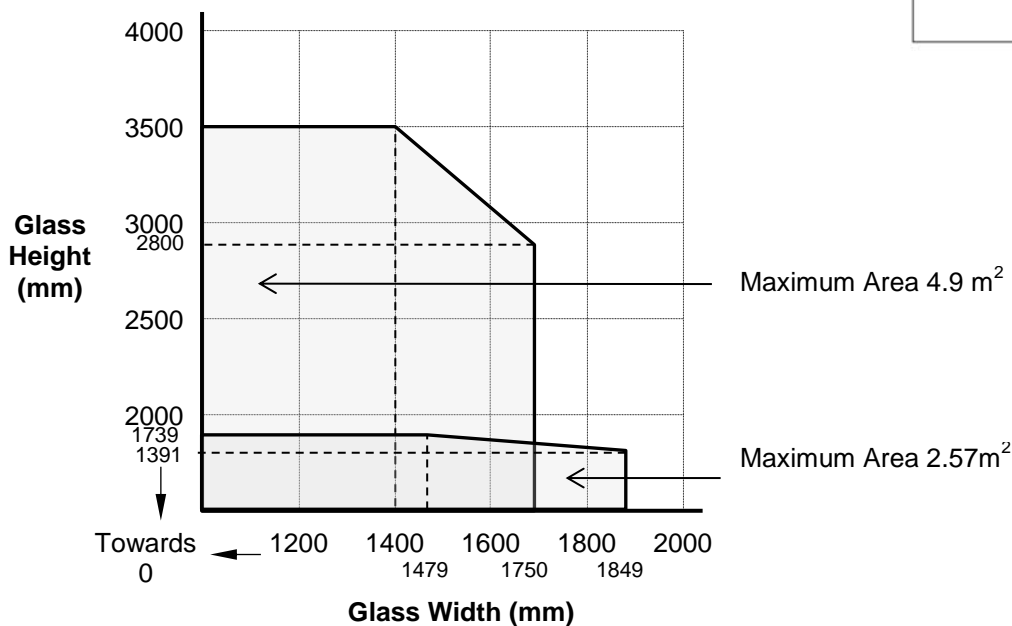
The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to the sizes of IGU with 26 mm thick

Pyroguard T EW60/13-1 VI (IGU) shown in the diagram below. The aspect ratio of the glass may be unlimited within these aperture dimensions.



Maximum Permitted Glass Dimensions



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 60 minutes integrity

For this application the following conditions shall apply:

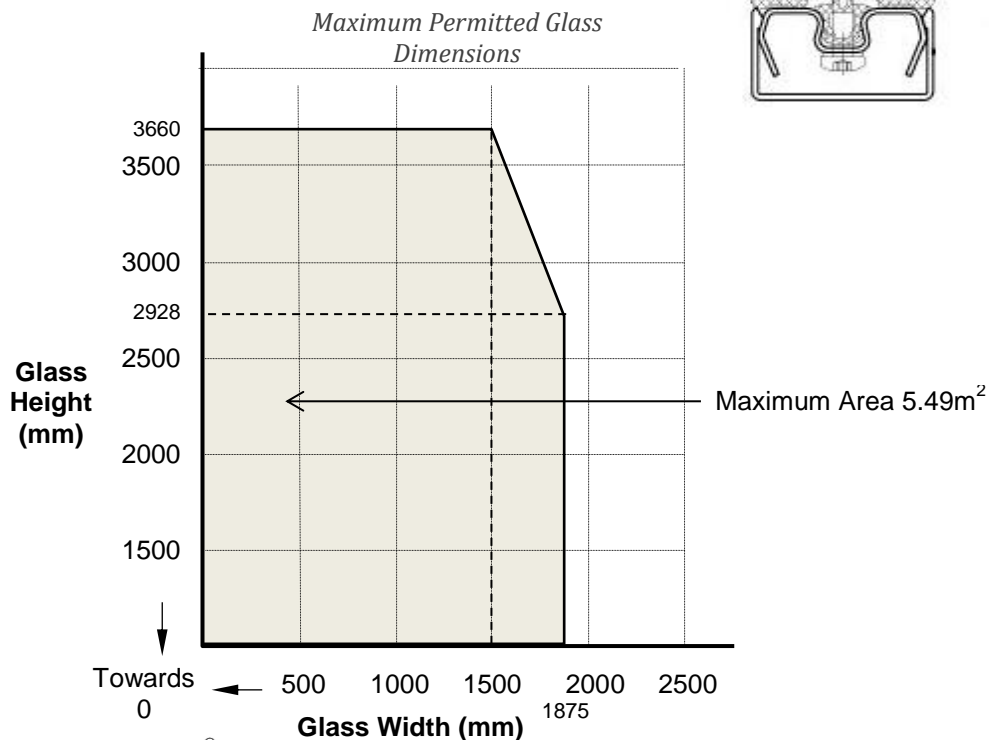
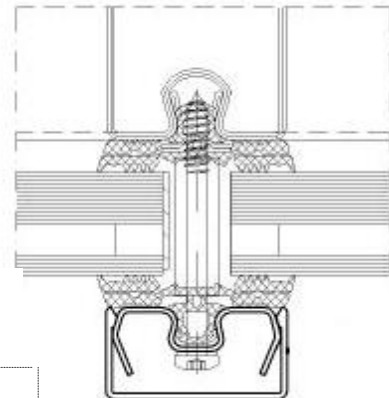
The glass shall be installed into a previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1 VI (IGU)** with 8mm steel spacer and 5mm toughened glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 2007-R0749**

The steel framing system shall have test evidence or be CERTIFIRE approved.

Pyroguard T EW60/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 60 minutes integrity

This Certificate of Approval relates to the sizes of **and Pyroguard T EW60/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 VI (IGU) in Forster Thermix Vario steel framed systems for periods of 90 minutes integrity

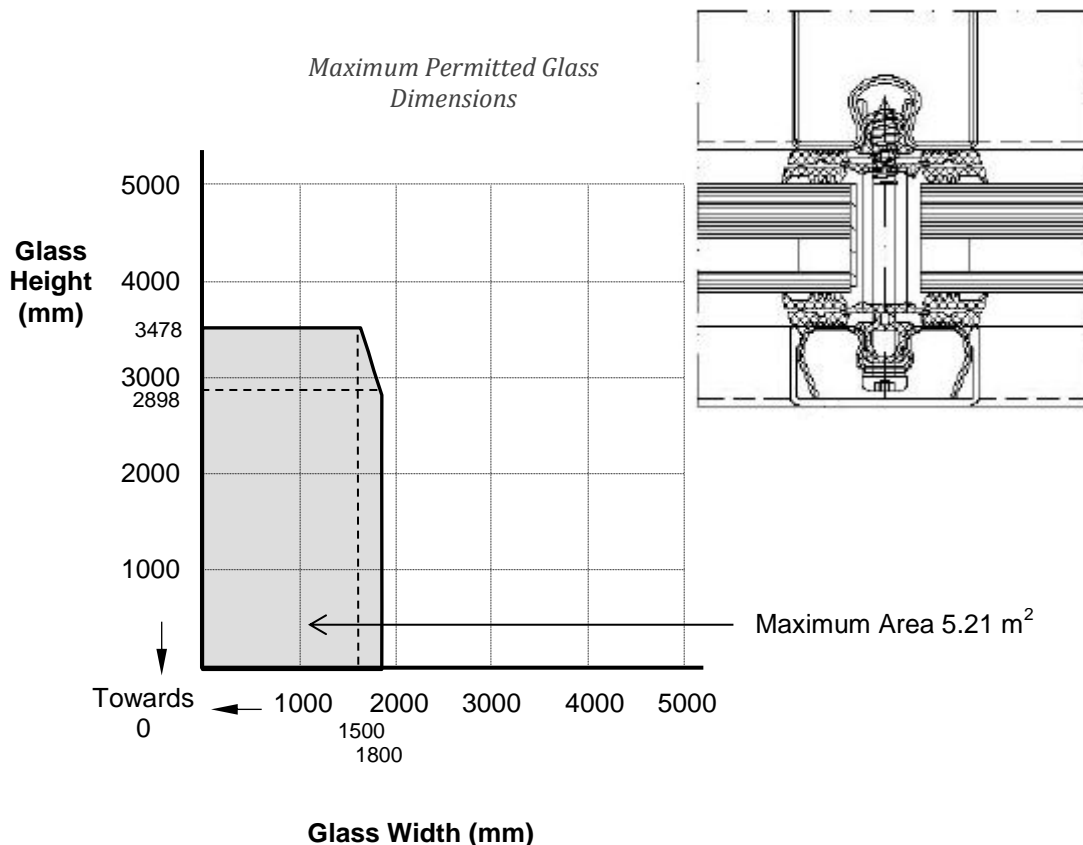
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW90/13-1 VI (IGU) glass**
- 45 x 8 mm and 60 mm x 8 mm weather-stripping
- Intumescent material Gluske Kerafix 2000, 24.5 x 2.2 mm
- Glazing and frame details as describe in **Efectis test report 2009-RO162**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to fire glass **Pyroguard T EW90/13-1 VI (IGU)** shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 90 minutes integrity

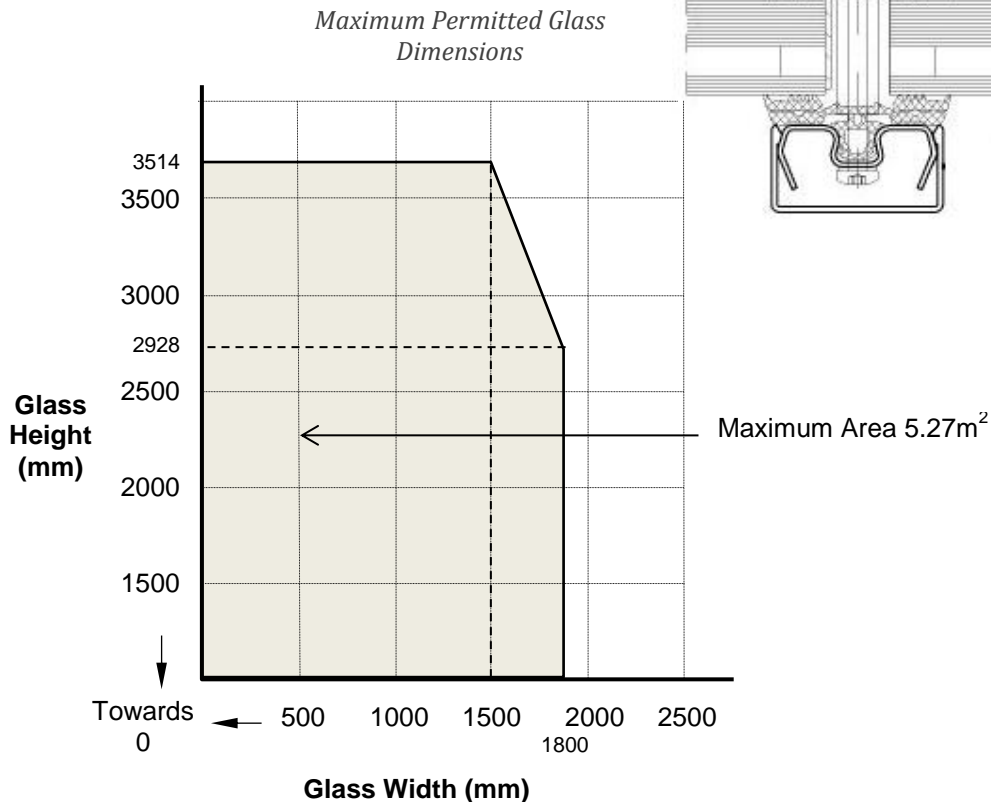
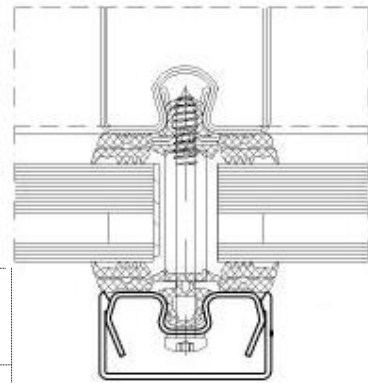
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW90/13-1 VI (IGU)** with 8mm steel spacer and 5mm toughened glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 2007-R0749**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to the sizes of **and Pyroguard T EW90/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 VI (IGU) in Thermix Vario steel framed systems for periods of 120 minutes integrity

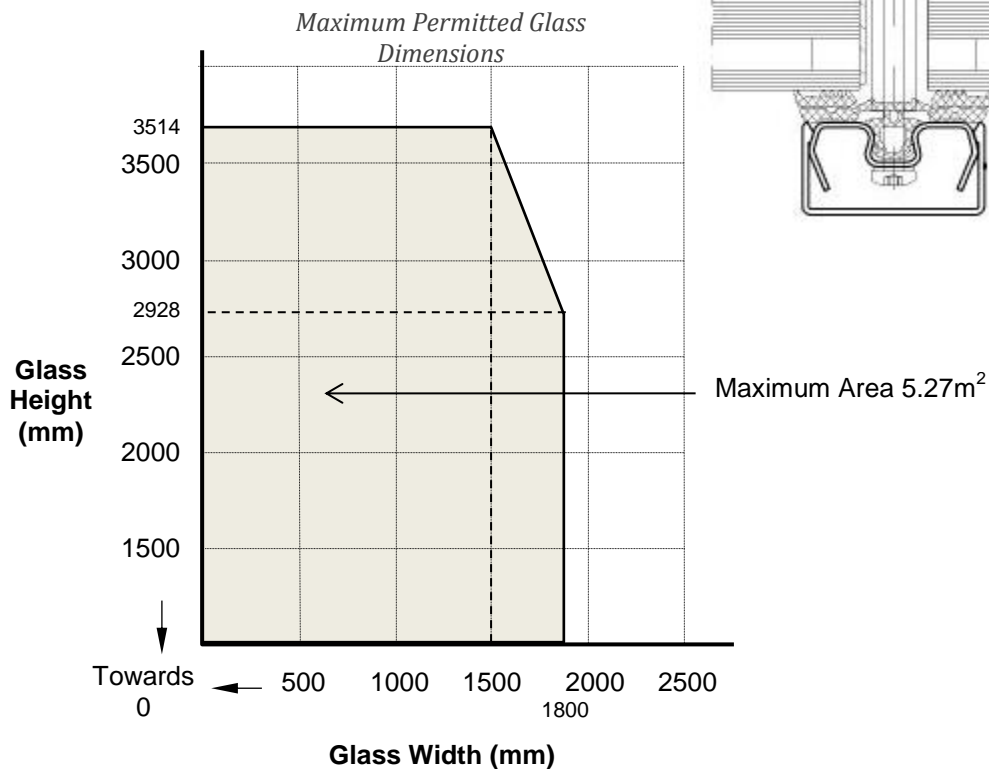
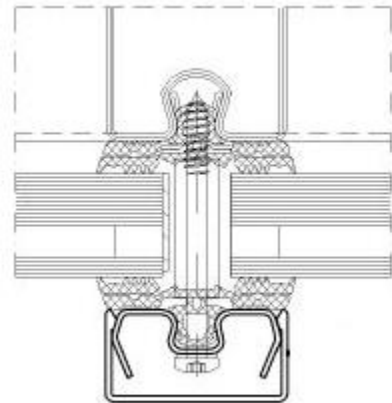
For this application the following conditions shall apply:

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, see example below.

- **Pyroguard T EW120/13-1 VI (IGU)** with 8mm steel spacer and 5mm toughened glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 2007-R0749**

The steel framing system shall have test evidence or be CERTIFIRE approved.

This Certificate of Approval relates to the sizes of **and Pyroguard T EW120/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 in Forster Presto 50 steel framed doors for periods of 30 minutes integrity

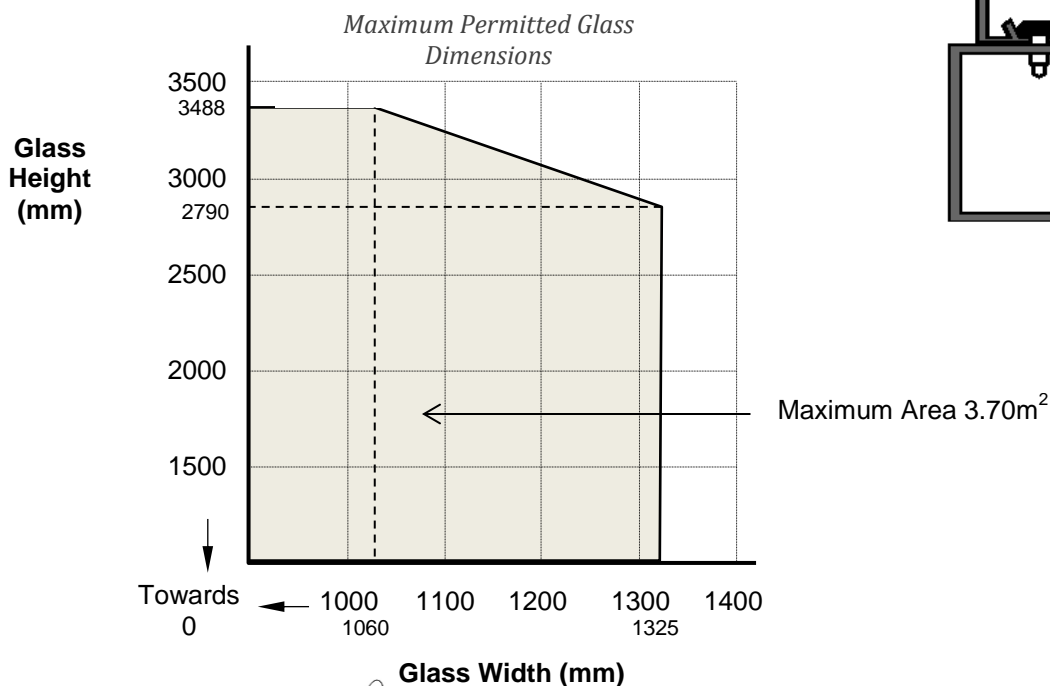
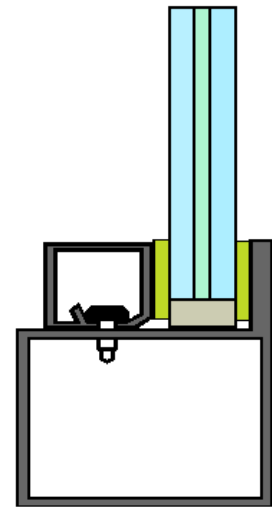
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW30/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW30/13-1** glass 13 mm thickness shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 glass in Forster Presto 50 steel framed doors for periods of 30 minutes integrity

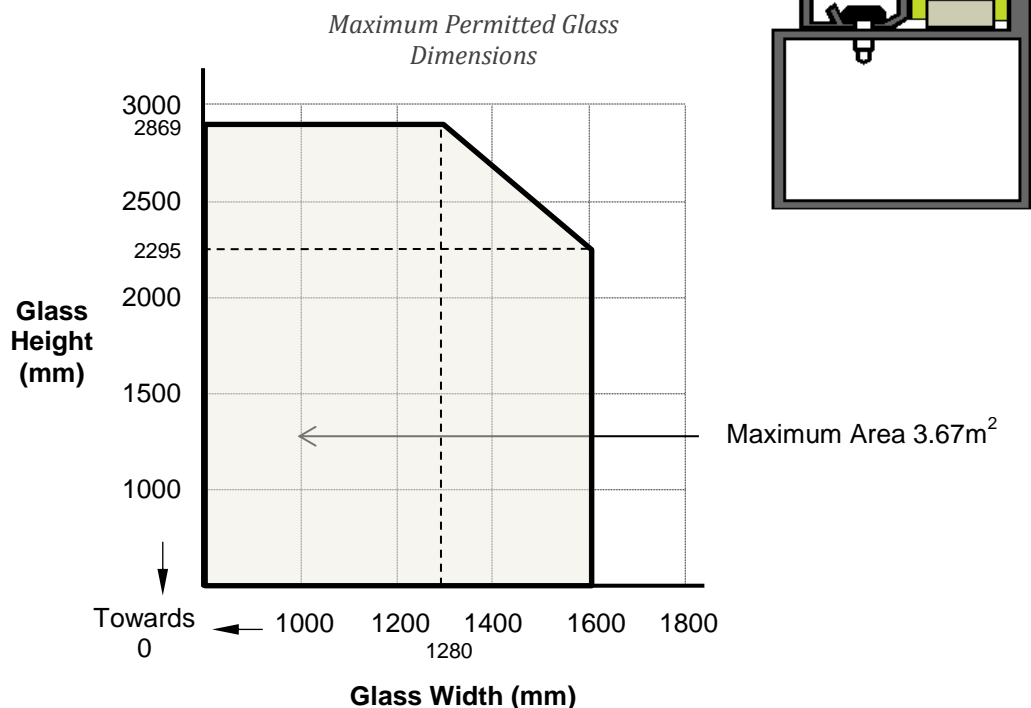
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW30/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 07-V-186**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW30/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Forster Presto 50 steel framed doors for periods of 60 minutes integrity

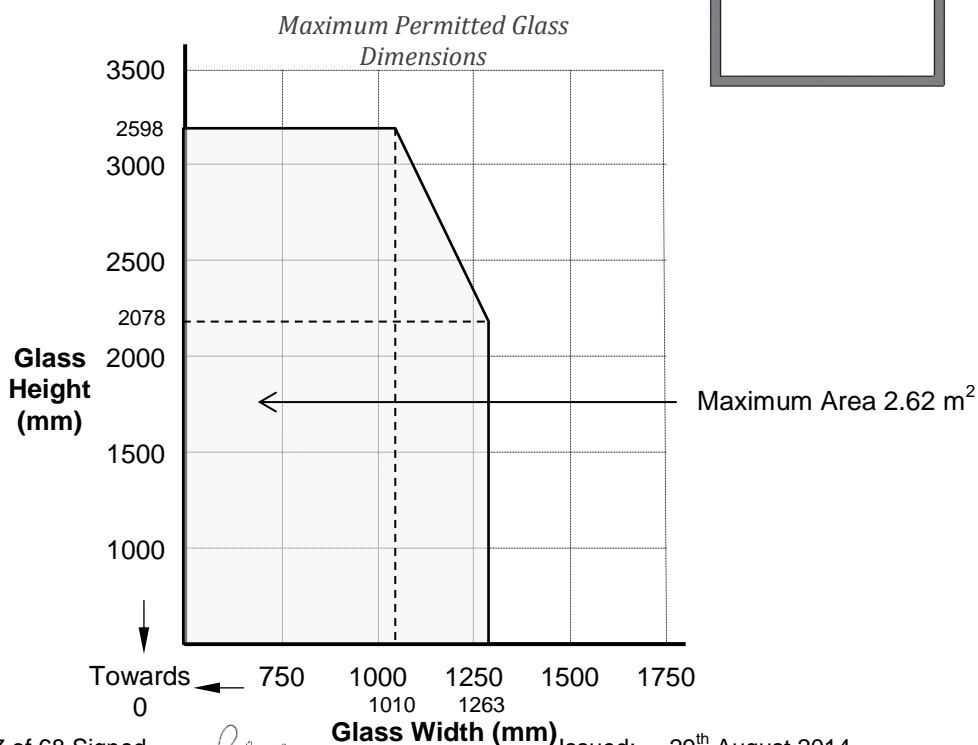
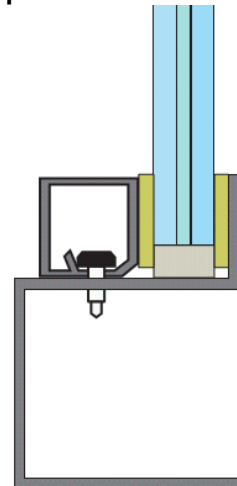
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1 glass**
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 05-V-038a**

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

This Certificate of Approval relates to the sizes of **Pyroguard T EW60/13-1** glass shown in the diagram 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 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Forster Presto 50 steel framed doors for periods of 60 minutes integrity

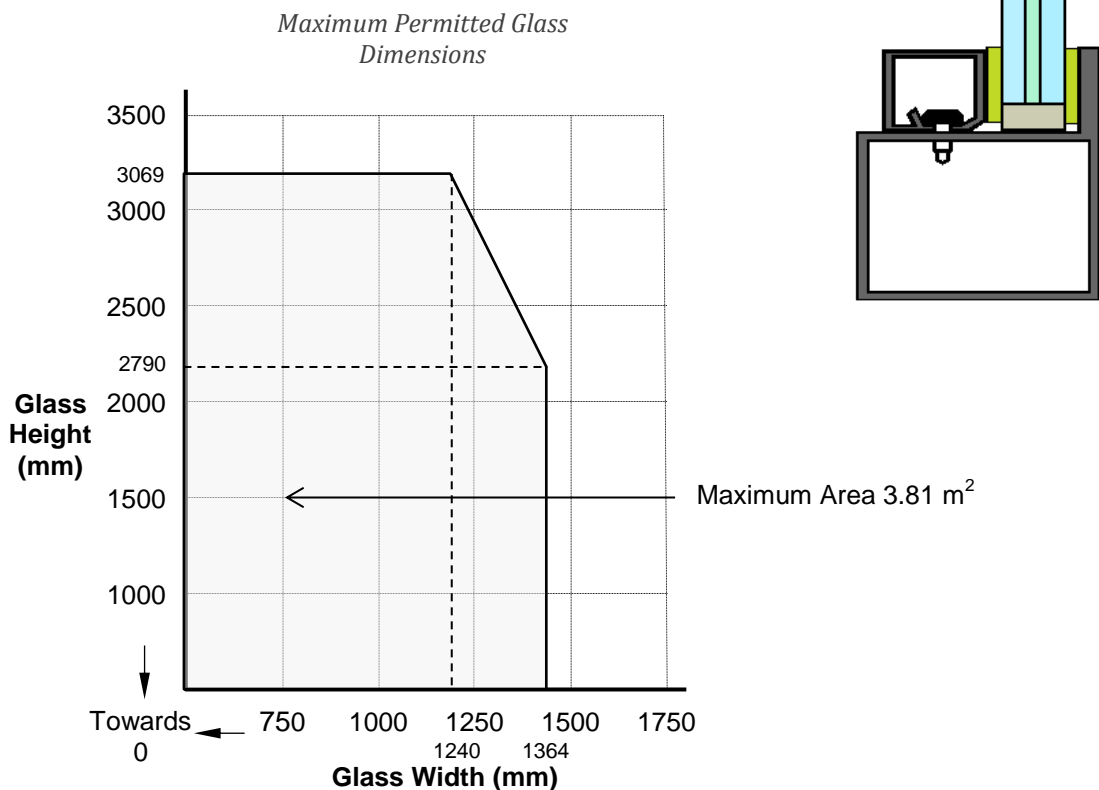
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-137a**

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

This Certificate of Approval relates to the sizes of **Pyroguard T EW60/13-1 glass** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Forster Presto 50 steel framed doors for periods of 60 minutes integrity

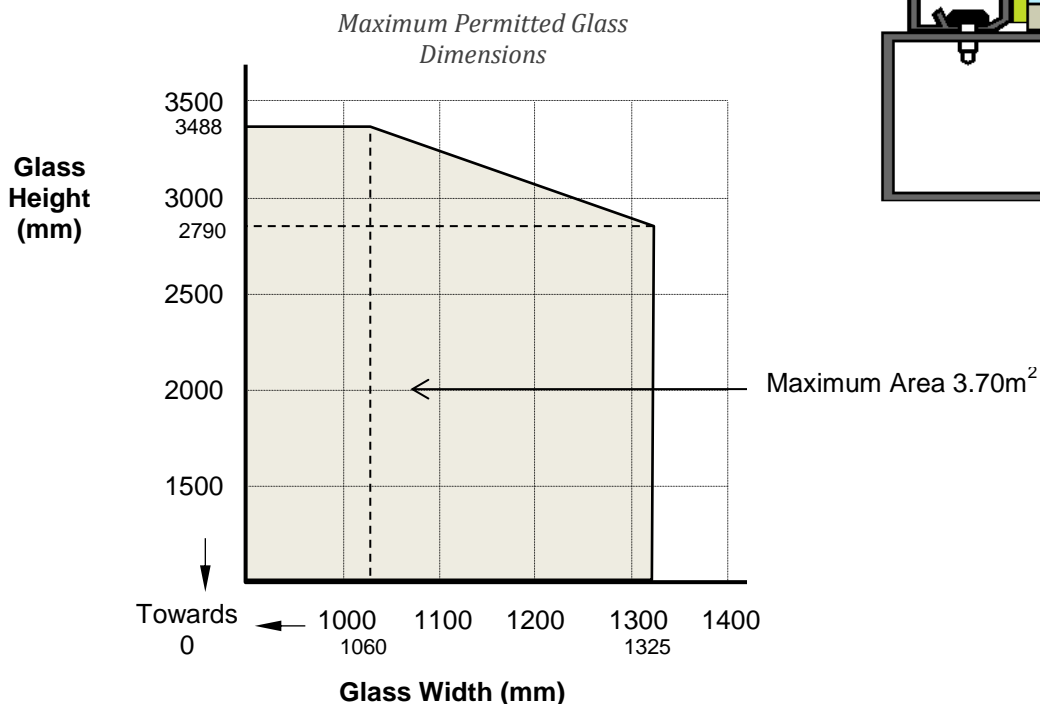
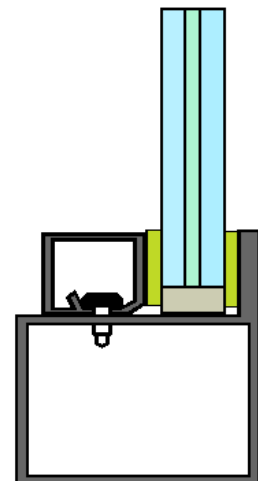
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW60/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Forster Presto 50 steel framed doors for periods of 60 minutes integrity

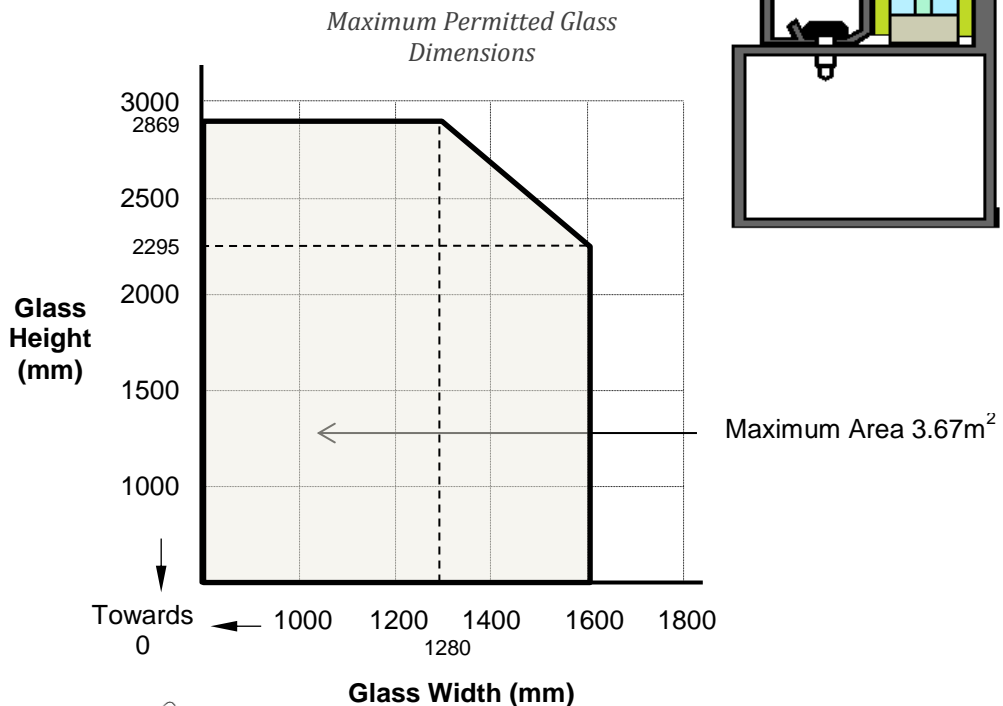
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 07-V-186**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW60/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Voestalpine VA Form50 steel framed doors for periods of 60 minutes integrity

For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW60/13-1** glass
- 15 mm x 5 mm Kerafix 2000 ceramic glazing tape
- Glazing and frame details as describe in **Thomas Bell-Wright TG106-B**

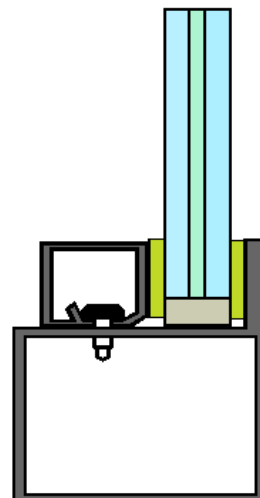
The steel door system shall have test evidence or be CERTIFIRE approved for the inclusion of apertures of the proposed dimensions.

This Certificate of Approval relates to the sizes of **and Pyroguard T EW60/13-1** glass shown in the diagram below, when used in conjunction with the above system.

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

Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1510mm wide (at 2293mm high)	2866mm high (at 1208mm wide)	3.46m ²



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 glass in Forster Presto 50 steel framed doors for periods of 90 minutes integrity

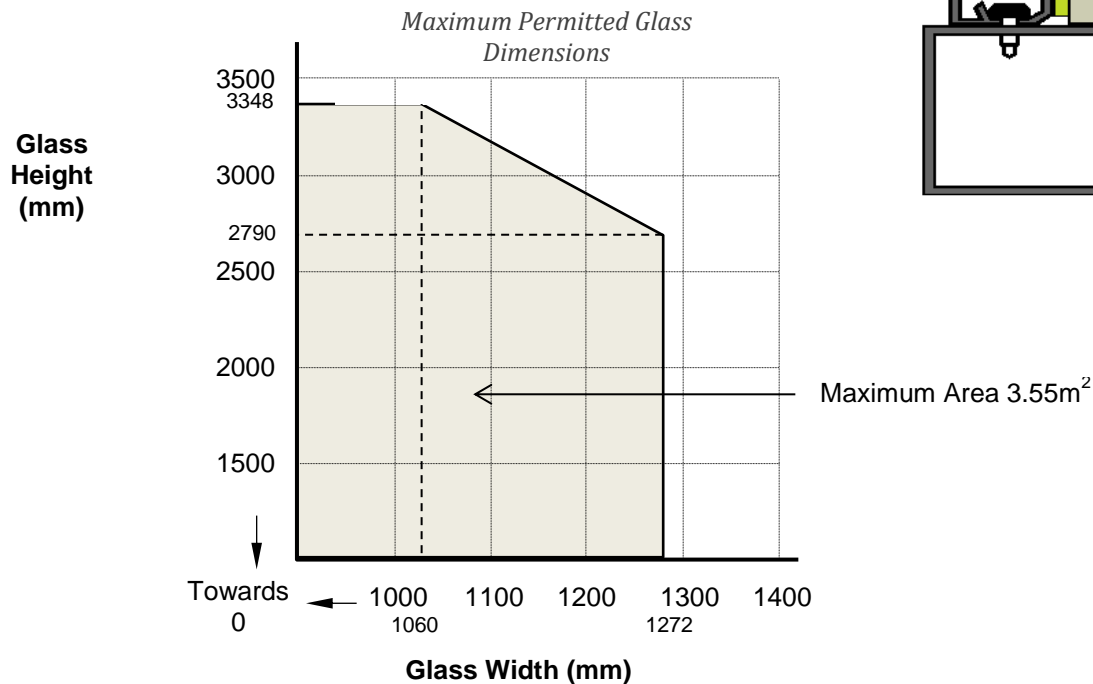
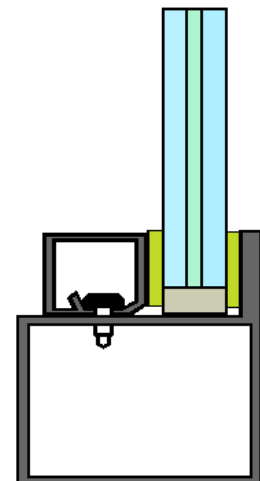
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW90/13-1 glass**
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW90/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 glass in Forster Presto 50 steel framed doors for periods of 90 minutes integrity

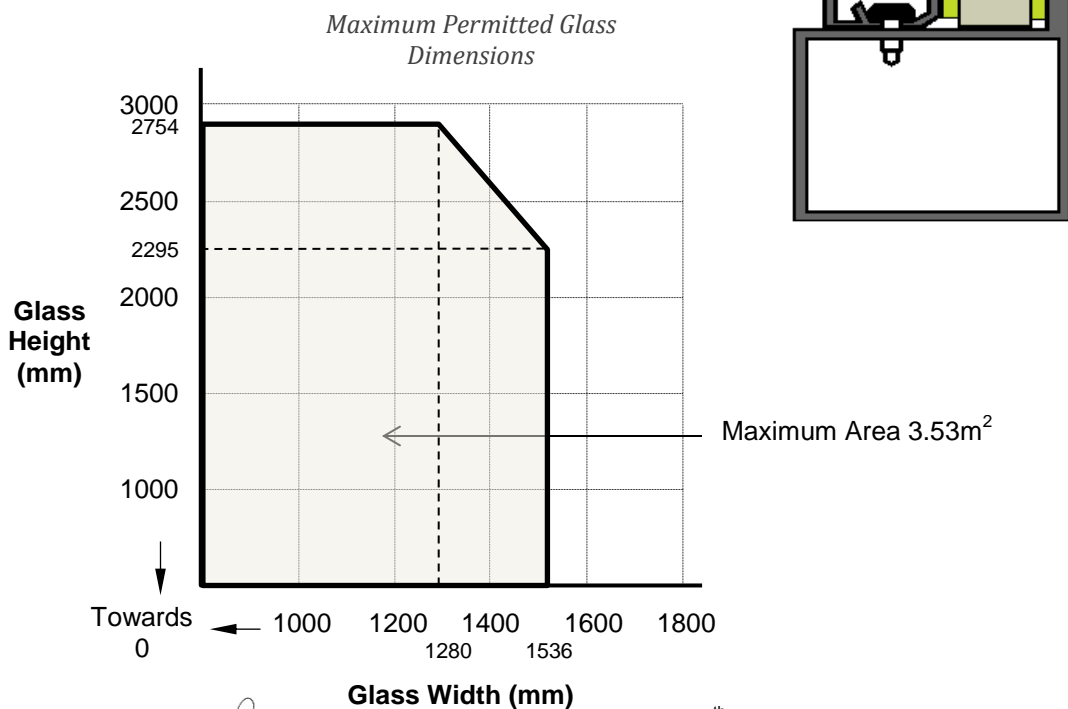
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see examples below.

- **Pyroguard T EW90/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 07-V-186**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW90/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in Forster Presto 50 steel framed doors for periods 120 minutes integrity

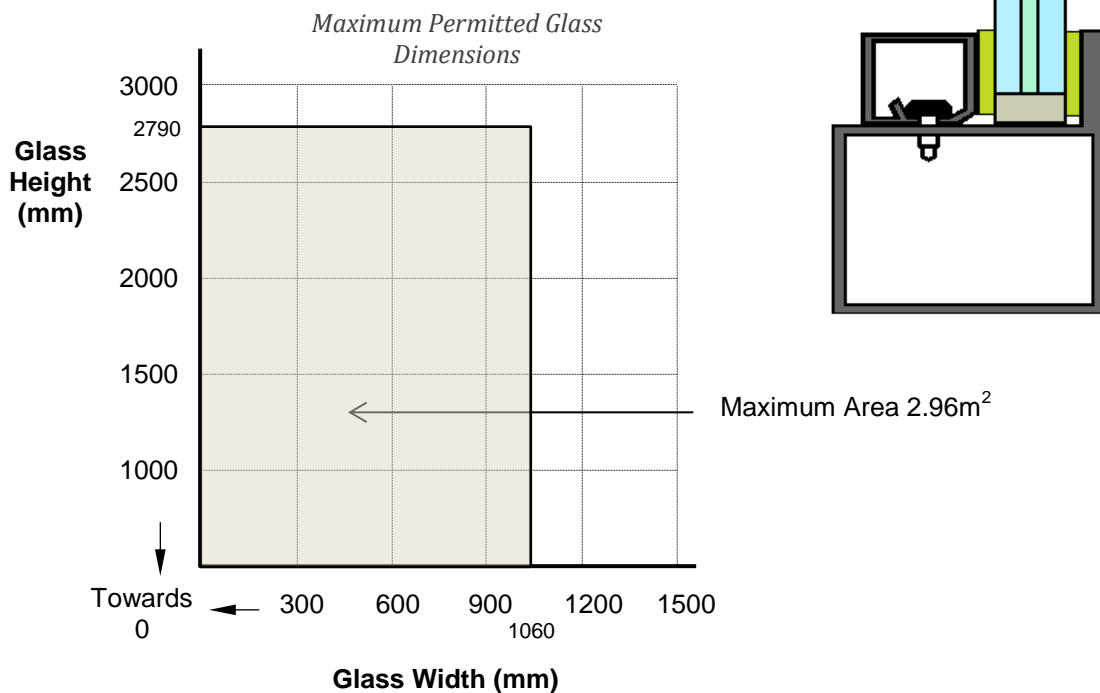
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW120/13-1** glass
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW120/13-1** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 glass in Forster Presto 50 steel framed doors for periods of 120 minutes integrity

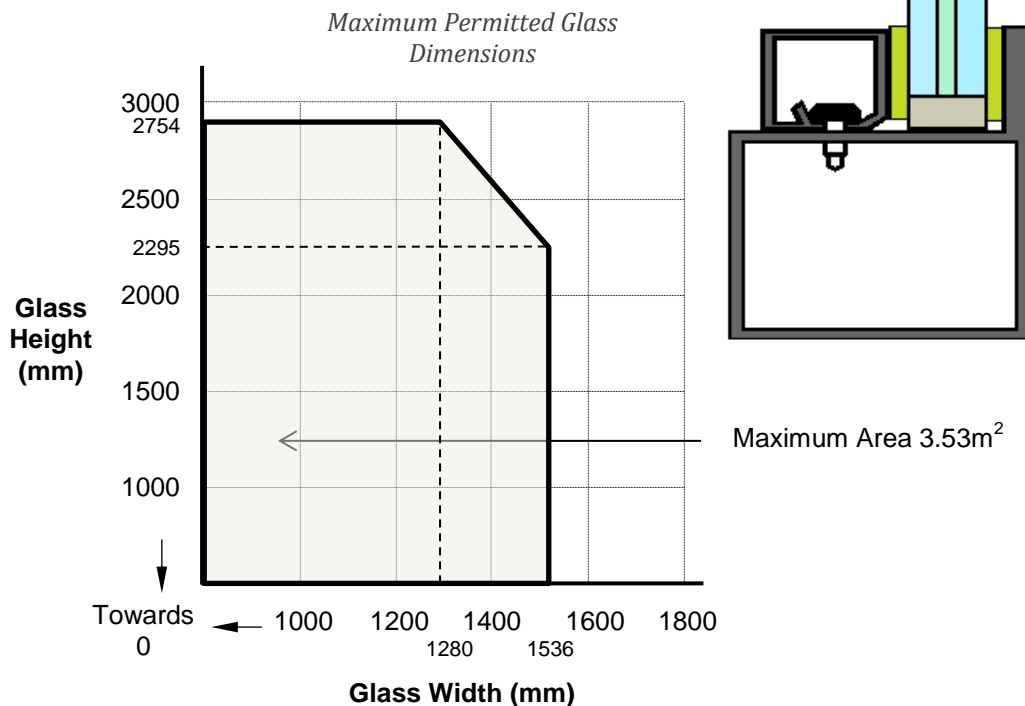
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below.

- **Pyroguard T EW120/13-1 glass**
- 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 07-V-186**

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

This Certificate of Approval relates to the sizes of **and Pyroguard T EW120/13-1 glass** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 VI (IGU) in Forster Presto 50 steel framed doors for periods of 30 minutes integrity

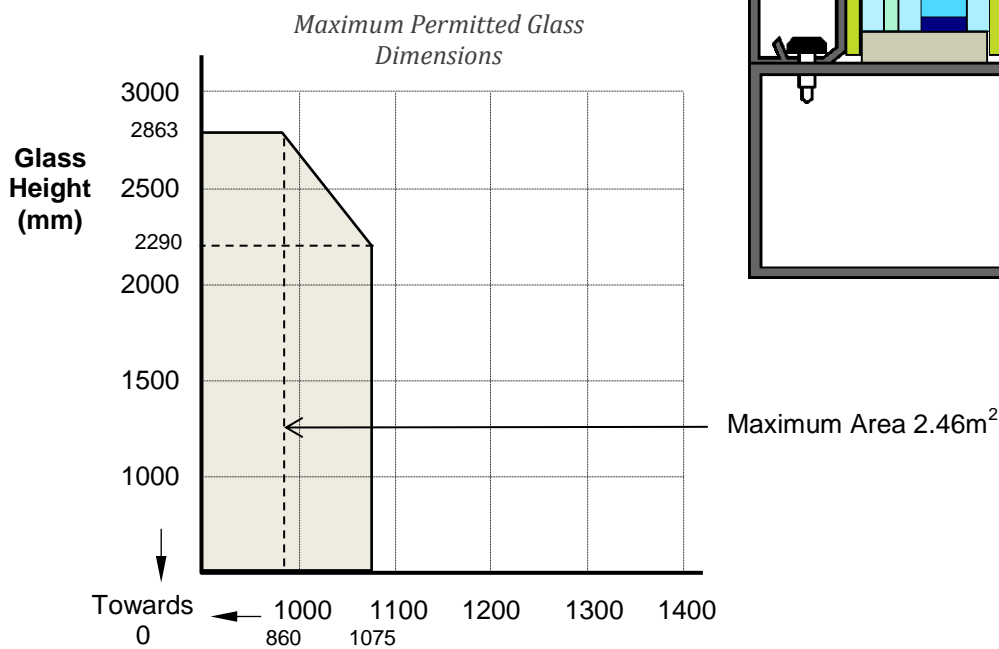
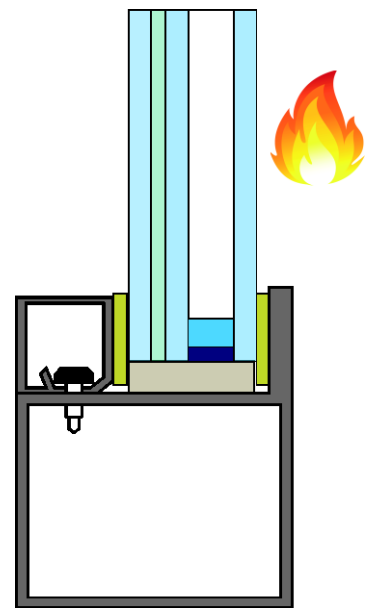
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below. **Orientation of IGU and beads with respect to the fire risk side to be as shown in the diagram below.**

- **Pyroguard T EW30/13-1 VI (IGU)** 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **Pyroguard T EW30/13-1 VI (IGU)** glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 (IGU) VI in Forster Presto 50 steel framed doors for periods of 60 minutes integrity

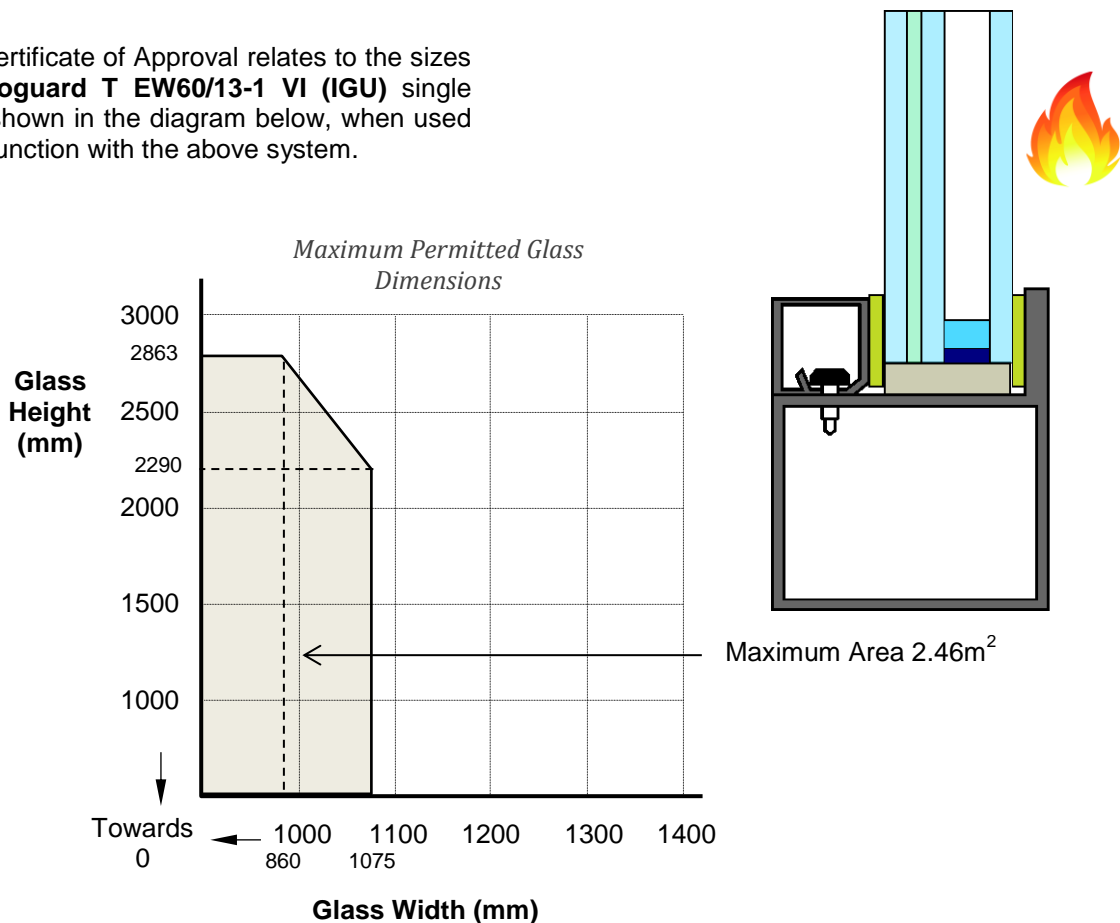
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below. **Orientation of IGU and beads with respect to the fire risk side to be as shown in the diagram below.**

- **Pyroguard T EW60/13-1 VI (IGU)** glass 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **Pyroguard T EW60/13-1 VI (IGU)** single glass shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW90/13-1 VI (IGU) in Forster Presto 50 steel framed doors for periods of 90 minutes integrity

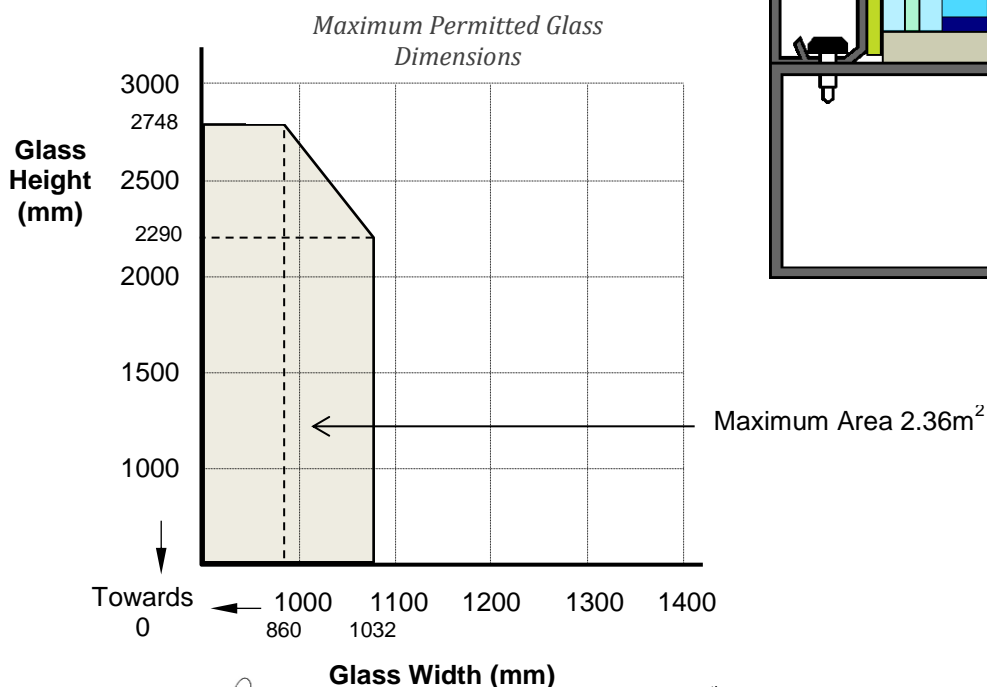
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below. **Orientation of IGU and beads with respect to the fire risk side to be as shown in the diagram below.**

- **Pyroguard T EW90/13-1 VI (IGU)** 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

This Certificate of Approval relates to the sizes of **Pyroguard T EW90/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW120/13-1 VI (IGU) in Forster Presto 50 steel framed doors for periods of 120 minutes integrity

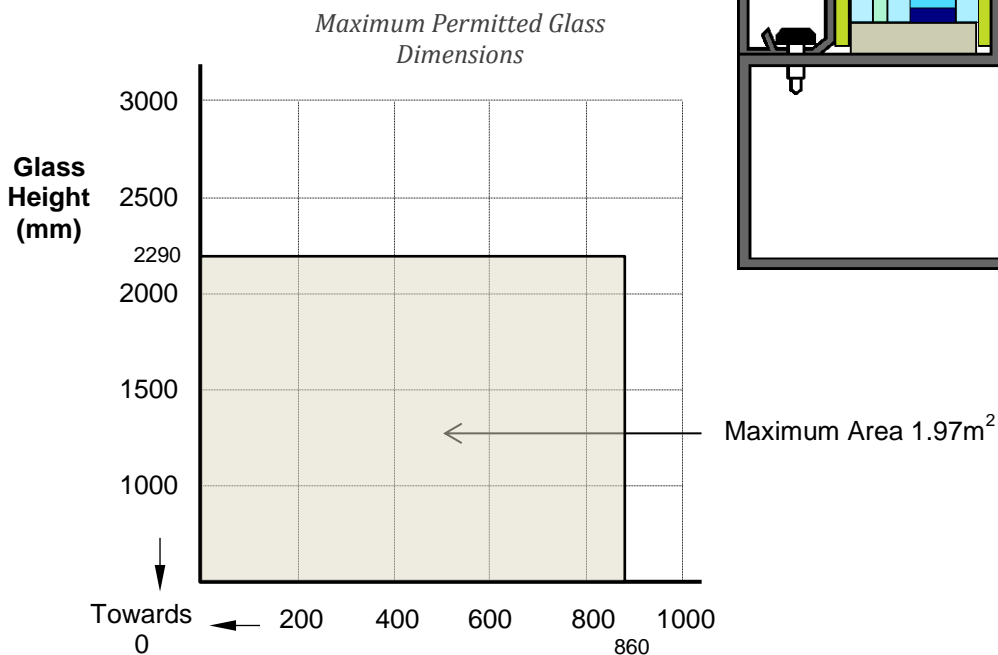
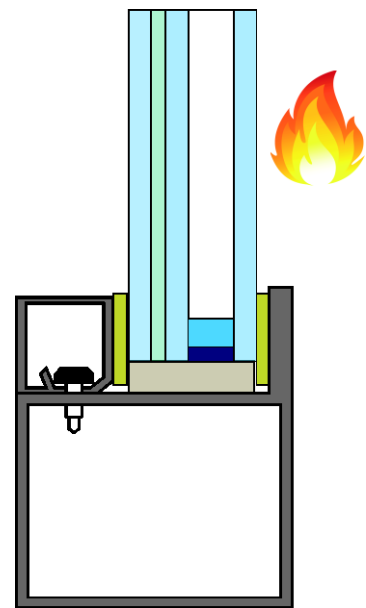
For this application the following conditions shall apply:

The glass shall be installed into a previously tested or CERTIFIRE approved steel framing doors system (which is covered appropriately by test or assessment evidence) using screw-fixed or clip-on retaining beads, see example below. **Orientation of IGU and beads with respect to the fire risk side to be as shown in the diagram below.**

- **Pyroguard T EW120/13-1 VI (IGU)** 20 mm x 4 mm and 20 mm x 5 mm Kerafix 2000 glazing tape
- Glazing and frame details as describe in **Efectis test report No 06-V-236**

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

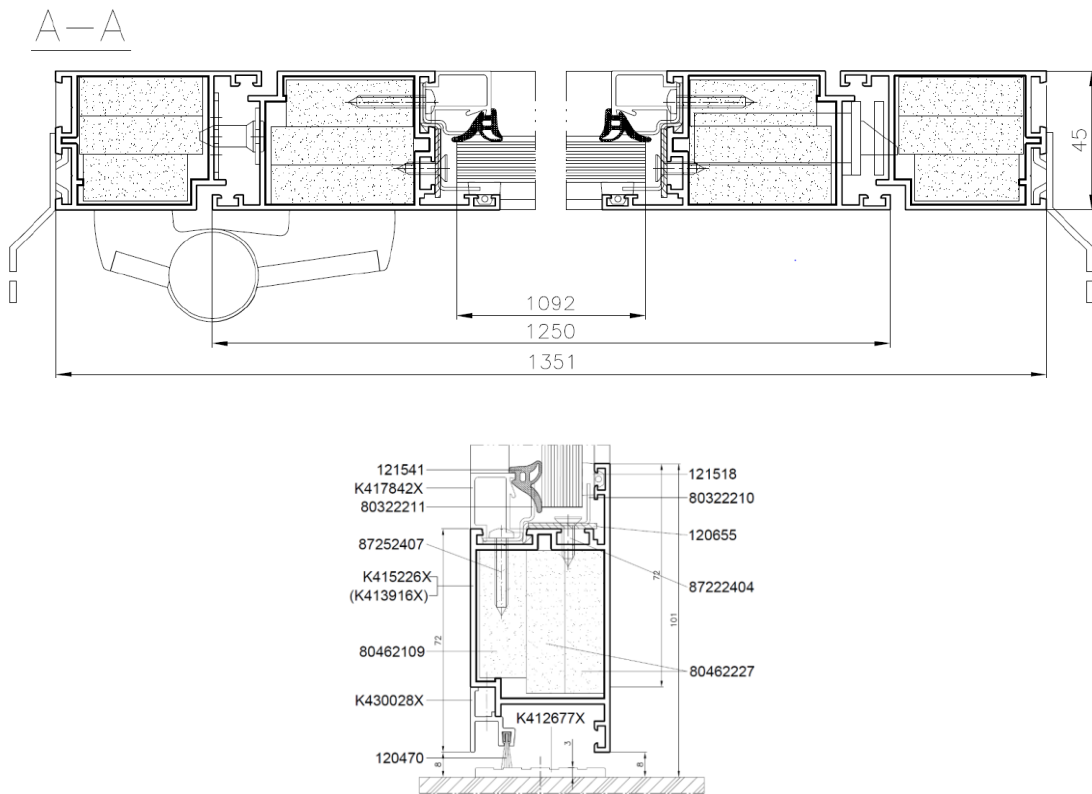
This Certificate of Approval relates to the sizes of **Pyroguard T EW120/13-1 VI (IGU)** shown in the diagram below, when used in conjunction with the above system.



CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 glass in Aluprof MB-45 aluminium doorsets for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1, shall be glazed within an 'Aluprof MB-45' aluminium doorset. Glazing and doorset details as describe in **Efectis test report No EFR-16-V-001814**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 glass shown in the table below, when used in conjunction with the Aluprof MB-45 aluminium doorsets. The aspect ratio of the glass may be unlimited within these aperture dimensions.

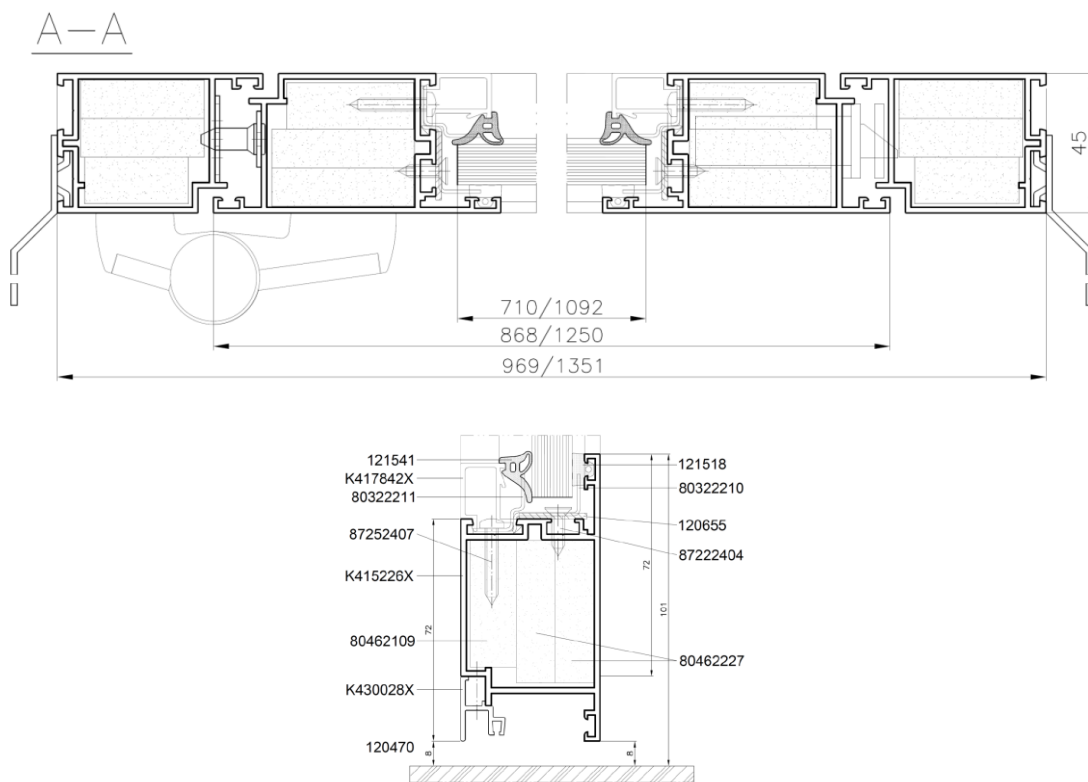
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1365mm wide (at 2242mm high)	2802mm high (at 1092mm wide)	3.06m ²

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 glass in Aluprof MB-45 aluminium doorsets for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1, shall be glazed within an 'Aluprof MB-45' aluminium doorset. Glazing and doorset details as describe in **Efectis test report No EFR-17-V-000279**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 glass shown in the table below, when used in conjunction with the Aluprof MB-45 aluminium doorsets. The aspect ratio of the glass may be unlimited within these aperture dimensions.

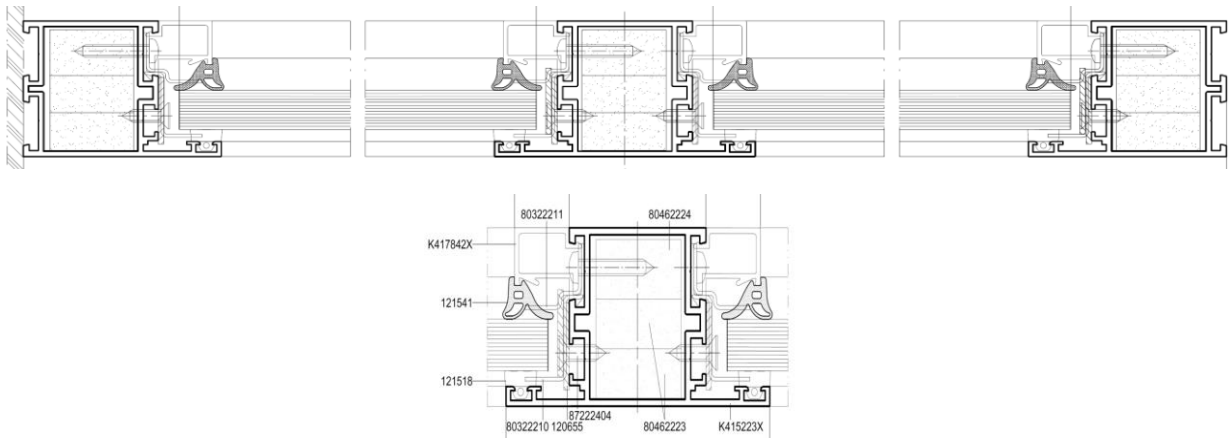
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1128mm wide (at 2242mm high)	2316mm high (at 1092mm wide)	2.53m ²
757mm wide (at 2242mm high)	2391mm high (at 710mm wide)	1.70m ²

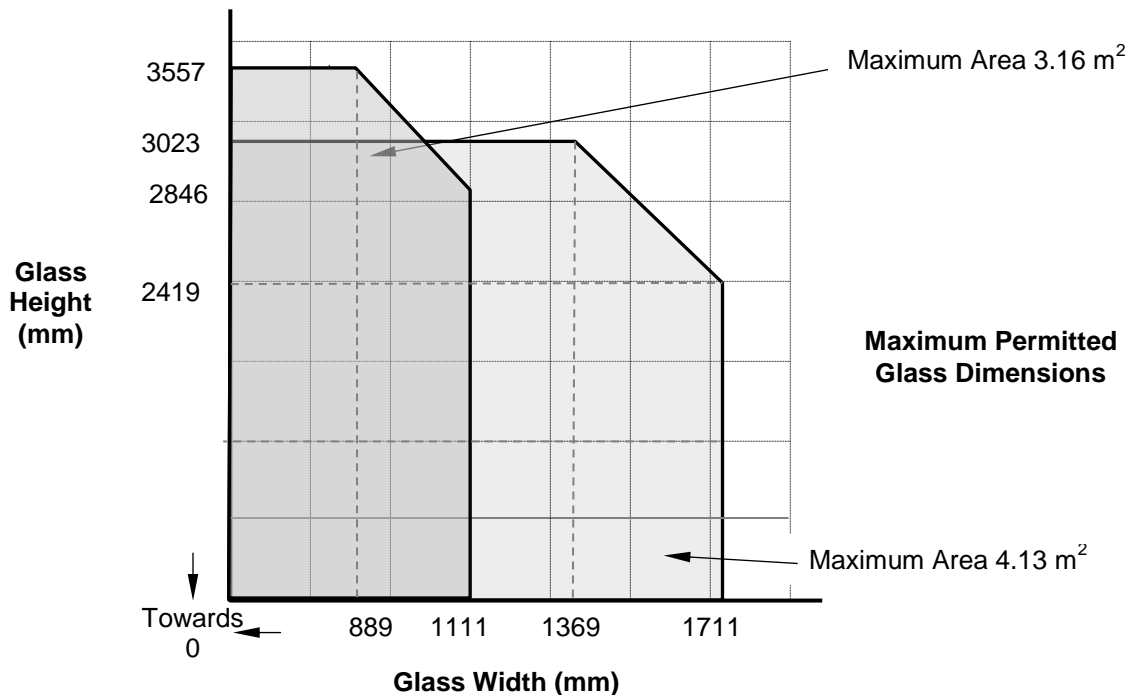
CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 glass in Aluprof MB-45 aluminium framed screens for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1, shall be glazed within an 'Aluprof MB-45' aluminium framed screen. Glazing and frame details as describe in **Efectis test report No EFR-16-V-001202**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



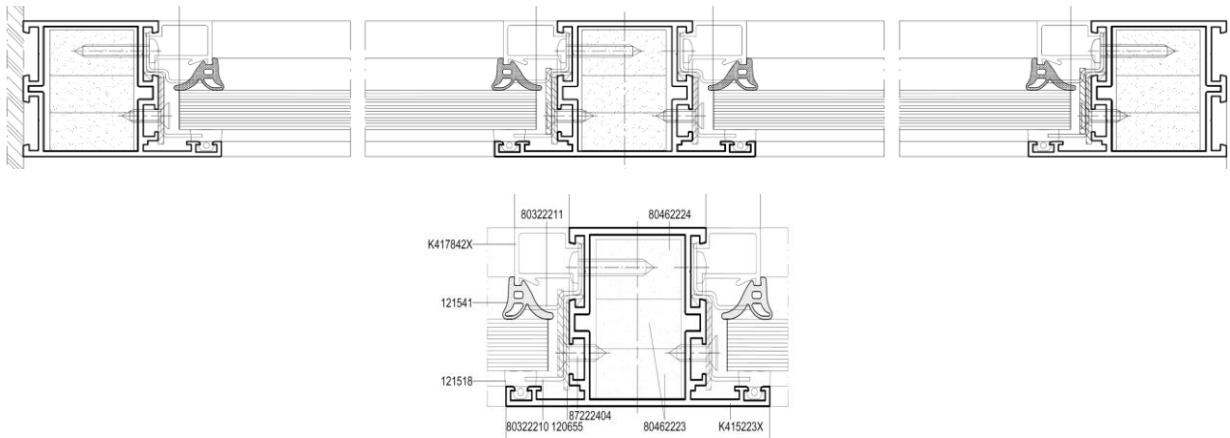
This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 glass shown in the table below, when used in conjunction with the Aluprof MB-45 aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions.



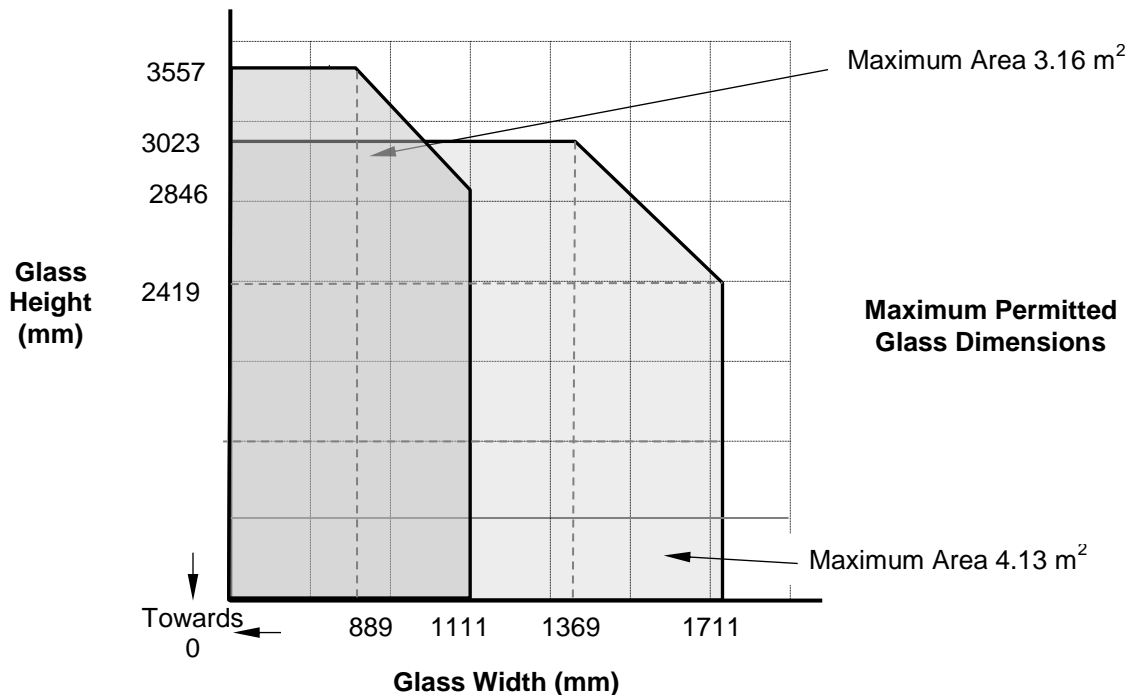
CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 glass in Aluprof MB-45 aluminium framed screens for periods of 60 minutes integrity

The glass, Pyroguard T EW60/13-1, shall be glazed within an 'Aluprof MB-45' aluminium framed screen. Glazing and frame details as describe in **Efectis test report No EFR-16-V-001202**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 glass shown in the table below, when used in conjunction with the Aluprof MB-45 aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions.

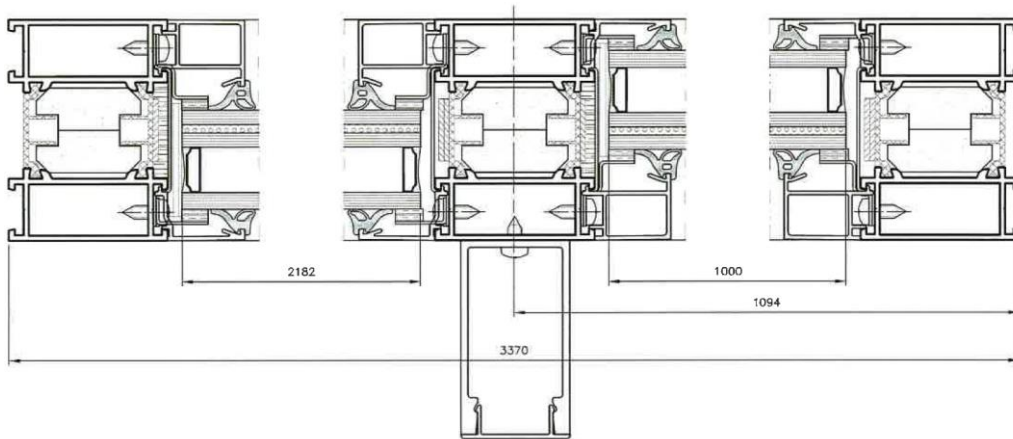


Paul Dwyer

CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 VI (IGU) glass in Aluprof MB-78EI aluminium framed screens for periods of 60 minutes integrity

The glass, Pyroguard T EW60/13-1 VI, shall be glazed within an 'Aluprof MB-78EI' aluminium framed screen. Glazing and frame details as describe in **Efectis test report No EFR-18-V-003239**. The **Pyroguard may be on the fire or non-fire risk side of the IGU but see notes on page 5 regarding the non-fire glass**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 glass shown in the table below, when used in conjunction with the Aluprof MB-45 aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions.

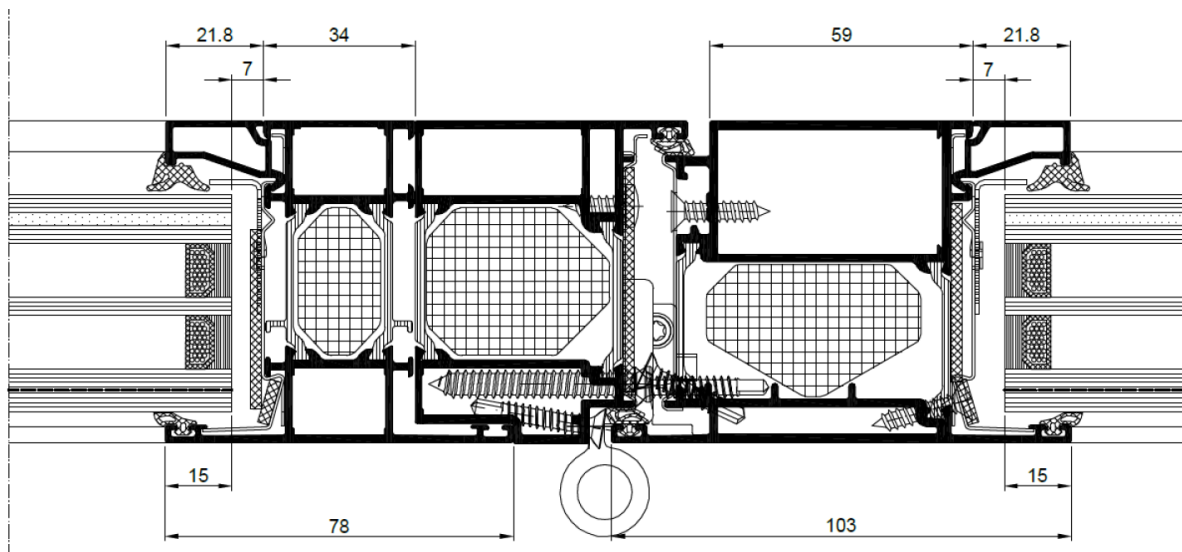
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
2995mm wide (at 1000mm high)	1067mm high (at 2808mm wide)	2.99m ²
747mm wide (at 2182mm high)	2327mm high (at 700mm wide)	1.63m ²

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Pyroguard T EW30/13-1 TVI (TGU) glass in Kawneer RT72HI aluminium doorsets for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1 TVI, shall be glazed within an 'Kawneer RT72HI' aluminium doorset. **The Pyroguard T EW30/13-1 in the TGU must always be oriented towards the fire risk.** Glazing and doorset details as describe in **Efectis test report No R001812**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 TVI glass shown in the table below, when used in conjunction with the Kawneer RT72HI aluminium doorsets. The aspect ratio of the glass may be unlimited within these aperture dimensions.

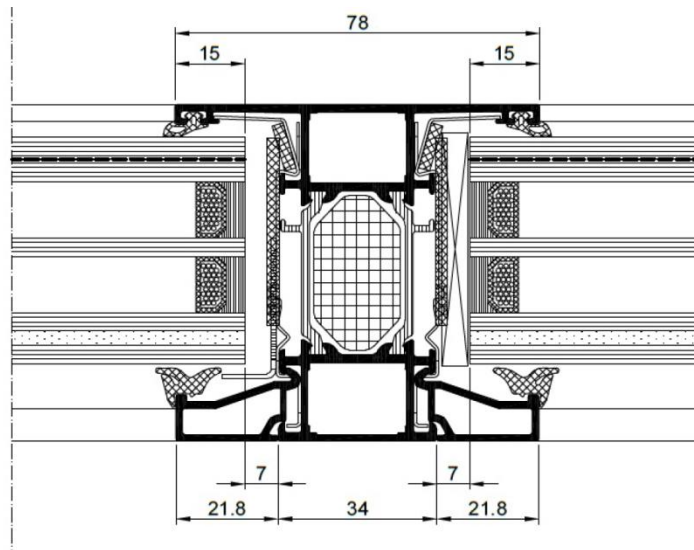
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
981mm wide (at 2224mm high)	2520mm high (at 886mm wide)	2.18m ²

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Pyroguard T EW30/13-1 TVI (TGU) glass in Kawneer RT72HI aluminium screens for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1 TVI, shall be glazed within an 'Kawneer RT72HI' aluminium screens. **The Pyroguard T EW30/13-1 in the TGU must always be oriented towards the fire risk.** Glazing and screen details as describe in **Efectis test report No R001812**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 TVI glass shown in the table below, when used in conjunction with the Kawneer RT72HI aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions.

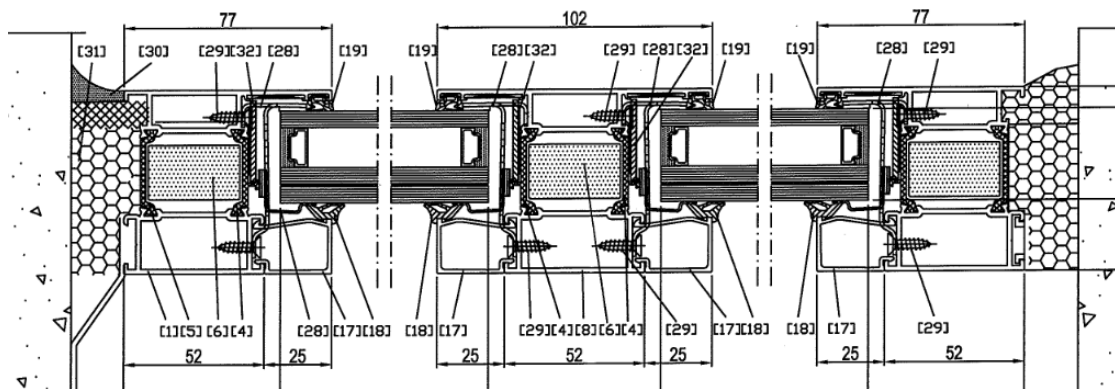
Maximum Permitted Glass Dimensions

Maximum Width	Maximum Height	Maximum Area
1133mm wide (at 2406mm high)	2727mm high (at 1000mm wide)	2.73m ²

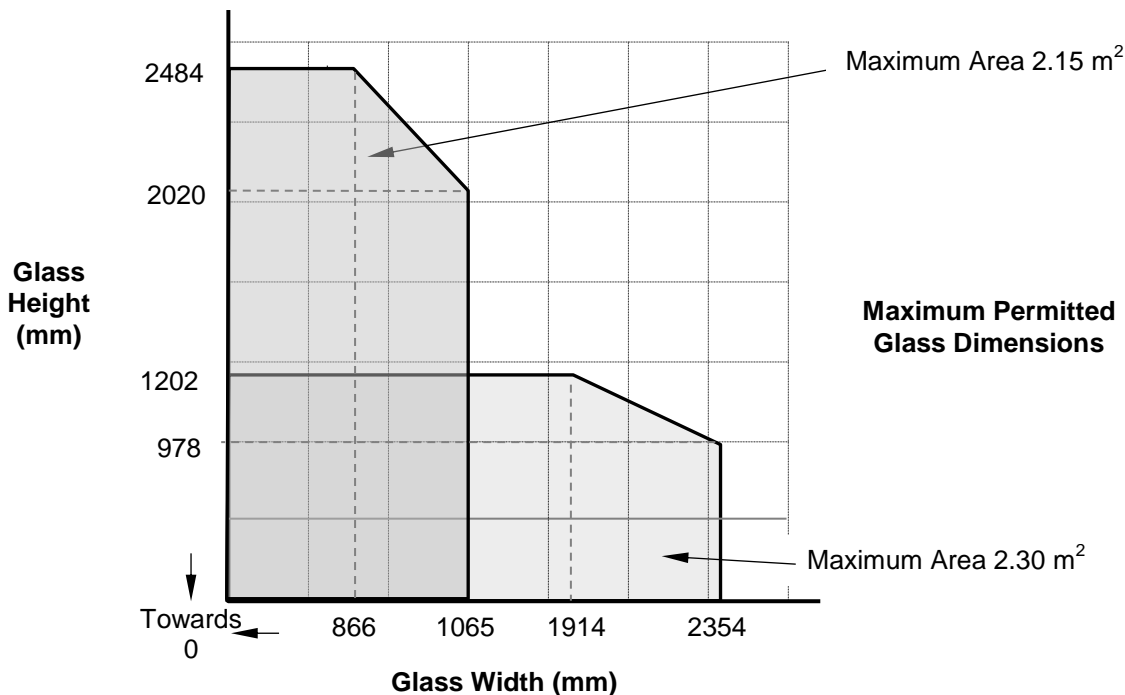
CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW30/13-1 IGU glass in Reynaers CS77-FP30 aluminium framed screens for periods of 30 minutes integrity

The glass, Pyroguard T EW30/13-1 IGU, shall be glazed within a 'Reynaers CS77-FP30' aluminium framed screen. Glazing and frame details as describe in **test report No. 13976A**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 IGU glass shown in the diagram below, when used in conjunction with the Reynaers CS77-FP30 aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note: approval is given only when the IGU is orientated such that Pyroguard T EW30/13-1 is positioned to the unexposed face of the assembly.**

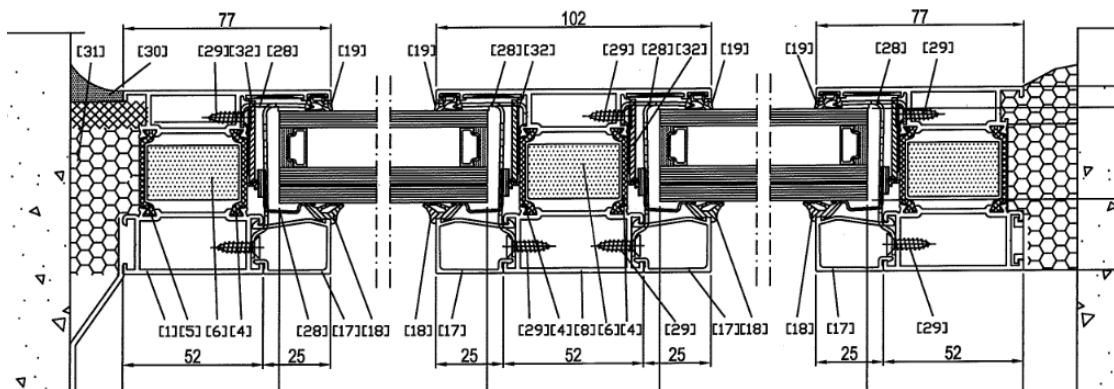


Paul Dwyer

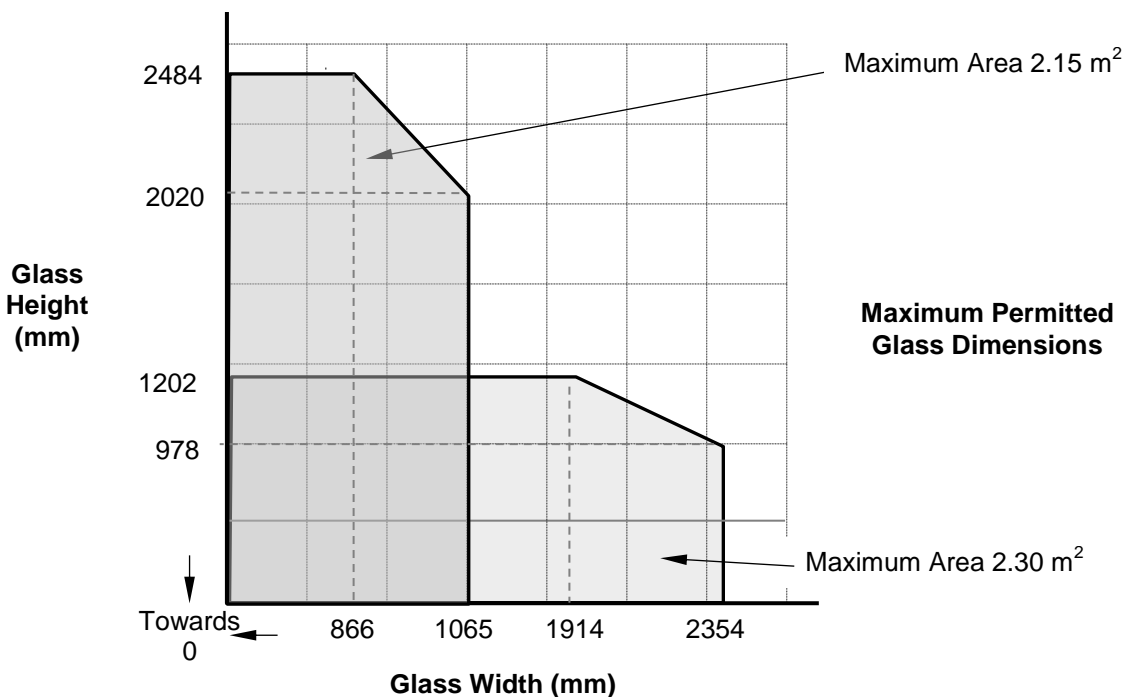
CERTIFICATE No CF 5227 PYROGUARD UK LIMITED

Pyroguard T EW60/13-1 IGU glass in Reynaers CS77-FP30 aluminium framed screens for periods of 60 minutes integrity

The glass, Pyroguard T EW60/13-1 IGU, shall be glazed within a 'Reynaers CS77-FP30' aluminium framed screen. Glazing and frame details as describe in **test report No. 13976A**. Please consult the frame manufacturer for drawings of glazing system – see below for diagrammatic details:



This Certificate of Approval relates to the sizes of Pyroguard T EW30/13-1 IGU glass shown in the diagram below, when used in conjunction with the Reynaers CS77-FP30 aluminium screens. The aspect ratio of the glass may be unlimited within these aperture dimensions. **Note: approval is given only when the IGU is orientated such that Pyroguard T EW30/13-1 is positioned to the unexposed face of the assembly.**



Paul Dwyer