CERTIFICATE OF APPROVAL No CF 5204

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

PYROGUARD UK LTD

Millfield Lane Haydock WA11 9GA United Kingdom

Tel: 01942 710720

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 Protect T-EI' 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

Rigg

Paul Duggan Certification Manager



Issued: Reissued: Valid to: 24th February 2014 26th July 2024 16th July 2029

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI Insulating 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 Ltd. 'Pyroguard T-EI' laminated glass products when used in the following applications, as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.

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
- e) Inspection and surveillance of factory production control

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Pyroguard T-EI Insulating Fire Resisting Glass

| Glass Specification | Application | Fire Resistance Performance (mins) | | Page |
|---|--|---------------------------------------|------------|-------|
| | | Integrity | Insulation | No. |
| Pyroguard T-EI30/18-2 | Multiple paned Timber framed screens | 30 | 30 | 10-15 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Timber framed screens | 30 | 30 | 16-17 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Timber framed screens | 60 | 30 | 18 |
| Pyroguard T-EI60/25-3 VI* | IGUs in multiple paned Timber framed screens | 60 | 60 | 19 |
| Pyroguard T-EI60/25-3 (inc. VI* options) | Multiple paned Single and IGU Timber framed screens | 60 | 60 | 20-26 |
| Pyroguard T-EI30/18-2 | Timber doorsets | 30 | 30 | 27-31 |
| Pyroguard T-EI60/25-3 | Timber doorsets | 60 | 60 | 32-35 |
| Pyroguard T-EI30/18-2 | Multiple paned Steel framed screens | 30 | 30 | 36-39 |
| Pyroguard T-EI30/18-2 | Multiple paned Steel framed screens | 60 | 30 | 40-42 |
| Pyroguard T-EI30/21-2 | Multiple paned Steel framed screens | 30 | 30 | 43 |
| Pyroguard T-EI30/18-2 (incl VI* option) | Steel tramed doorsets | | 30 | 44-46 |
| Pyroguard T-EI30/18-2 | Steel framed doorsets | 60 | 30 | 47 |
| Pyroguard T-EI60/25-3 | Multiple paned Steel framed screens | 60 | 60 | 48 |
| Pyroguard T-EI60/25-3 | Steel framed doorsets | 60 | 60 | 49-51 |
| Pyroguard T-EI90/38-3 | Stainless steel or mild Steel framed doorsets | 60 | 60 | 52 |
| Pyroguard T-EI90/32-2 | Multiple paned Steel framed screens | 60 | 60 | 53 |
| Pyroguard T-EI90/32-2 | Multiple paned Steel framed screens | 90 | 90 | 54-55 |
| Pyroguard T-EI90/35-3 | Steel framed doorsets | 90 | 90 | 56 |
| Pyroguard T-EI90/38-3 | Steel framed doorsets | 90 | 90 | 57 |
| Pyroguard T-EI90/40-3 | Steel framed doorsets | 90 | 90 | 58-59 |
| Pyroguard T-EI90/40-3 | Multiple paned Steel framed screens | 90 | 90 | 60-61 |
| Pyroguard T-EI120/47-3 | Multiple paned Steel framed screens | 120 | 120 | 62 |
| Pyroguard T-EI120/52-4 | Multiple paned Steel framed screens | 120 | 120 | 63-64 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Steel framed doorsets | 30 | 30 | 65 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Steel framed doorsets | 60 | 30 | 66 |
| Pyroguard T-EW30/13-1 VI*** | IGUs in multiple paned Steel curtain walling systems | 30 | 30 | 67 |
| Pyroguard T-EW30/13-1 VI*** | IGUs in multiple paned Steel curtain walling systems | 60 | 30 | 68-69 |

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. **Note:** In this case the product code will change.

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Pyroguard T-EI Insulating Fire Resisting Glass (continued)

| | Annlingtion | | esistance Ince (mins) | Page |
|--|--|-----------|--------------------------|-------------|
| Glass Specification | Application | Integrity | Insulation | No. |
| Pyroguard T-EI60/25-3 VI* | IGUs in multiple paned Steel curtain walling systems | 60 | 60 | 70-71 |
| Pyroguard T-EW90/13-1 VI*** | IGUs in multiple paned Steel curtain walling systems | 90 | 30 | 72 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Steel framed screens | 30 | 30 | 73 |
| Pyroguard T-EI30/18-2 VI* | IGUs in multiple paned Steel framed screens | 60 | 30 | 74 |
| Pyroguard T-EI90/32-2 VI* | IGUs in multiple paned Steel framed screens | 90 | 90 | 75 |
| Pyroguard T-EI120/47-3 VI* | IGUs in multiple paned Steel curtain walling systems | 90 | 90 | 76 |
| Pyroguard T-EI120/47-3 VI* | IGUs in multiple paned Steel framed screens | 120 | 120 | 77 |
| Pyroguard T-EI120/47-3 VI* | IGUs in multiple paned Steel curtain walling systems | 120 | 120 | 78 |
| Pyroguard T-EI30/24-2 SWS | Butt jointed panes in Timber framed screens | 30 | 30 | 79 |
| Pyroguard T-EI30/24-2 SWS | Butt jointed panes in Timber framed screens | 60 | 30 | 80 |
| Pyroguard T-EI30/32-2 VF SWS | Butt jointed panes in Timber framed screens | 30 | 30 | 81-82 |
| Pyroguard T-EI60/40-2 VF SWS and T-EI60/36-2 VF SWS | Butt jointed panes in Timber framed screens | 60 | 60 | 83-84 |
| Pyroguard T-EI30/24-2 SWS | Butt jointed panes in Steel framed screens | 30 | 30 | 85-86 |
| Pyroguard T-EI30/24-2 | Single paned steel framed screens | 30 | 30 | 87-88 |
| Pyroguard T-EI30/24-2 SWS | Butt jointed panes in Steel framed screens | 30 | 30 | 89-90 |
| Pyroguard T-EI30/36-3 SWS | Butt jointed panes in Steel framed screens | 30 | 30 | 91-92 |
| Pyroguard T-EI30/32-2 SWS | Butt jointed 45° & 90° corner panes in Steel framed screens | 30 | 30 | 93-95 |
| Pyroguard T-EI60/36-3 SWS | Butt jointed panes in Steel framed screens | 60 | 60 | 96-97 |
| Pyroguard T-EI60/32-2 SWS | Butt jointed 90° corner panes in Steel framed screens | 60 | 60 | 98-99 |
| Pyroguard T-EI90/36-3 SWS | Butt jointed panes in Steel framed screens | 90 | 90 | 100- 101 |
| Pyroguard T-EI90/47-3 SWS | Butt jointed panes in Steel framed screens | 90 | 90 | 102- 103 |
| Pyroguard T-EI30/18-2 (inc. VI* and VF variants) | Aluprof MB 78 EI Aluminium Screens | 30 | 30 | 104- 105 |
| Pyroguard T-EI30/18-2 (inc. VI* variant) | Aluprof MB 78 EI Aluminium Doorsets | 30 | 30 | 106 |

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. Note: In this case the product code will change .***NB: PyroguardT-EW30/13-1 VI, EW60/13-1 VI and EW90/13-1 VI listed in this certificate are only approved in IGUs with

the fire rated glass facing the fire risk and are not approved as a single glass pane.

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Pyroguard T-EI Insulating Fire Resisting Glass (continued)

| Glass Specification | Application | Fire Resistance Performance (mins) | | Page |
|---|---|---------------------------------------|------------|---------|
| | · · P P · · · · · · · | Integrity | Insulation | No. |
| Pyroguard T-EI30/18-2 VI* | IGUs in Aluprof Aluminium MB-SR50N EI curtain walling system | 30 | 30 | 107 |
| Pyroguard T-EI30/18-2 VI | IGUs in Aluprof Aluminium MB-SR50N El curtain walling system | 60 | 30 | 108 |
| Pyroguard T-EW30/13-1 VI*** | Aluprof MB 78 EI Aluminium Screens | 30 | 30 | 109 |
| Pyroguard T-EW30/13-1 VI*** | Aluprof MB 78 EI Aluminium Doorsets | 30 | 30 | 110 |
| Pyroguard T-El60/25-3 (inc. VI* variant) | Aluprof MB 78 EI Aluminium Screens | 30 | 30 | 111 |
| Pyroguard T-El60/25-3 (inc. VI* variant) | Aluprof MB 78 EI Aluminium Screens | 60 | 30 | 112 |
| Pyroguard T-EI60/25-3 and 25-3 VI* | Aluprof MB 78 EI Aluminium Screens | 60 | 60 | 113-114 |
| Pyroguard T-EI60/25-3 | Aluprof MB 78 EI Aluminium Doorsets | 60 | 60 | 115 |
| Pyroguard T-EI60/25-3 VI* | IGUs in Aluprof MB 78 EI Aluminium Doorsets | 60 | 60 | 116 |
| Pyroguard T-EI60/25-3 VI* | IGUs in Aluprof MB-SR50N EI Aluminium curtain walling system | 60 | 60 | 117 |
| Pyroguard T-EW30/13-1 VI*** | IGUs in Reynaers CS 77 FP EI30 Aluminium windows | 30 | 30 | 118 |
| Pyroguard T-EW30/13-1 VI*** | IGUs in Reynaers CS 77 FP EI30 Aluminium screens | 30 | 30 | 119 |
| Pyroguard T-EI30/18-2 VI* | IGUs in Reynaers CS 77 FP EI30 Aluminium doorsets | 30 | 30 | 120 |
| Pyroguard T-EI30/18-2 TVI | TGUs in Reynaers CS 77 FP EI30 Aluminium screens | 30 | 30 | 121 |
| Pyroguard T-EI30/18-2 | Reynaers CS 77 FP EI30 Aluminium screens | 30 | 30 | 122 |
| Pyroguard T-EI30/18-2 | Reynaers CS 77 FP EI30 Aluminium doorsets | 30 | 30 | 123 |
| Pyroguard T-EI60/25-3 VI* | IGUs in Reynaers CS 77 FP EI60 Aluminium screens | 60 | 60 | 124 |
| Pyroguard T-EI60/25-3 | Reynaers CS 77 FP EI60 Aluminium screens | 60 | 60 | 125 |
| Pyroguard T-EI60/25-3 | Reynaers CS 77 FP EI60 Aluminium doorsets | 60 | 60 | 126 |
| Pyroguard T-EI30/18-2 VI* | Reynaers CW 50-FP aluminium curtain walling system | 30 | 30 | 127 |
| Pyroguard T-EI30/18-2 VI* | Reynaers CW 50-FP aluminium curtain walling system | 60 | 60 | 128 |

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. **Note**: In this case the product code will change. ***NB: PyroguardT-EW30/13-1 VI, EW60/13-1 VI and EW90/13-1 VI listed in this certificate are only approved in IGUs with the fire rated glass facing the fire risk and are not approved as a single glass pane.

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| Pyroguard T-EI30/18-2 | Schüco ADS 80 FR 30 Aluminium Glazed Screen | 30 | 30 | 129 |
|--------------------------|--|----|----|-----|
| Pyroguard T-EI30/18-2 VI | Schüco ADS 80 FR 30 Aluminium Glazed Screen | 30 | 30 | 130 |
| Pyroguard T-EI60/25-3 | Schüco ADS 80 FR 60 Aluminium Glazed Screen | 60 | 60 | 131 |
| Pyroguard T-EI60/25-3 VI | Schüco ADS 80 FR 60 Aluminium Glazed Screen | 60 | 60 | 132 |
| Pyroguard T-EI60/25-3 | Schüco ADS 80 FR 60 Aluminium Glazed Screen | 60 | 60 | 133 |
| Pyroguard T-EI60/25-3 VI | Schüco ADS 80 FR 60 Aluminium Glazed Screen | 60 | 60 | 134 |
| Pyroguard T-EI30/18-2 | Schüco ADS 80 FR 30 Aluminium Doorsets | 30 | 30 | 135 |
| Pyroguard T-EI30/18-2 VI | Schüco ADS 80 FR 30 Aluminium Doorsets | 30 | 30 | 136 |
| Pyroguard T-EI60/25-3 | Schüco ADS 80 FR 60 Aluminium Doorsets | 60 | 60 | 137 |
| Pyroguard T-EI60/25-3 VI | Schüco ADS 80 FR 60 Aluminium Doorsets | 60 | 60 | 138 |
| Pyroguard T-EI30/18-2 | Schüco FW 50+ BF FR 30 Curtain Walling System | 30 | 30 | 139 |
| Pyroguard T-EI30/18-2 VI | Schüco FW 50+ BF FR 30 Curtain Walling System | 30 | 30 | 140 |
| Pyroguard T-EI30/18-2 VI | Schüco FW 50+ BF FR 30 Curtain Walling System | 60 | 30 | 141 |
| Pyroguard T-EI60/25-3 | Schüco FW 50+ FR 60 Curtain Walling System | 60 | 60 | 142 |
| Pyroguard T-EI60/25-3 VI | Schüco FW 50+ FR 60 Curtain Walling System | 60 | 60 | 143 |

Definition of Pyroguard terms:

VI – Double Glazed Unit "Vitrage Isolant" TVI – Triple Glazed Unit "Triple Vitrage Isolant" VF – Laminated "Vitrage Feuillete" RV – Double Sided "Recto Verso" SWS – Structural Wall System

General Requirements

The building substructures to which the glazed screen and doorset assemblies are fixed will have been the subject of a previous fire test and found to be capable of providing the required level of fire performance to effectively support the assemblies without detrimental effect for the required periods of fire performance.

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

The edge cover to each pane is normally a minimum of 15mm, however, some applications require only 12mm minimum – the relevant test report shall be consulted for exact specifications.

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Pyroguard T-EI Insulating Fire Resisting Glass

For timber doorset applications, in addition to any relevant requirements for timber framed screens the following conditions shall apply:

- The doorset, including door frame and associated building hardware, should have achieved at least 30 or 60 minutes (whichever is applicable) 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.
- If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
- Likewise, if the proposed doorset is to be used in the unlatched configuration, the available evidence should be applicable to unlatched doorsets.
- The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
- When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence.
- The door leaves shall consist of timber faces coupled with timber or other cellulosic cores of minimum overall leaf thickness, 44 mm for 30 minutes performance and 54 mm for 60 minutes performance.
- When an alternative CERTIFIRE approved glazing system is used, the system shall have been shown to be capable of including Pyroguard T-EI glass. The maximum permitted aperture dimensions shall be as detailed below or included within the relevant CERTIFIRE certificate for the glazing system, whichever is the lesser.
- Other CERTIFIRE approved glazing seals may be acceptable subject to the limitations within the relevant certificate. This Certificate of Approval relates to the sizes of Pyroguard T-EI glass shown when used in conjunction with the systems in the appropriate timber doorset sections below. The aspect ratio of the glass may be unlimited within these aperture dimensions.

Options

1. Glass Options:

1.1 Approved glasses may be made thicker by the substitution of panes of the same composition for thicker panes while retaining the thickness of the interlayers and within the constraints of the rebate of the approved or previously tested framing system, e.g. T-EI30/18-2 to T-EI30/24-2. This shall not confer an increase in fire resistance performance.

1.2 VF (Vitrage Feuilleté: laminated version of base product):

In installation types detailed in this document, VF versions of all T-EI products listed are approved. These glasses are prepared by substitution of one of the two external panes of the fire glass with a laminate pane. This laminate pane can be composed of additional non-fire-resistant glass panes added to the tested glass using one or several non-fire protection interlayers such as cold pour, EVA or PVB. The maximum thickness of the non-fire-resistant interlayer added and that of each non-fire resistance glass are only limited within the proven capability of the glazing system, e.g. the glazing rebate size, the available bead size limit and the capacity of the system to support the weight of the units. Types of approved glass: float glass, toughened glass, laminated glazing, one-way mirror, decorative glazing, self-cleaning glass, reflective glazing, low emissivity glazing, solar control glazing. In addition, the VF can be situated on either of, and both of, the fire and the non-fire risk, sides. Where the laminate is to be on the unexposed face, this rule can only be applied to those glasses where the insulation rating matches the integrity rating. It cannot, for example, be used on a glass that has 60 minutes integrity but only 30 minutes insulation.

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1.3 Decorative: All systems may include decorative self-adhesive leading on either or both faces Timber or metallic glazing beads or other trims may be adhered to the glass on either or both faces of the glass. The bars must not be fixed to the perimeter beads.

1.4 Application of films: Self – adhesive films/foils may be applied to either or both glass surfaces.

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

2. System options:

2.1 In glazing installation types detailed in this document steel profile doors, screen and facade framing systems may be exchanged in manufacturer when suitable test evidence for the inclusion of apertures of the proposed dimensions exists for the same fire rating. For example, Forster, Jansen, RP Technik and Voestalpine may be exchanged with reference to previous testing or CERTIFIRE approvals.

2.2 Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

2.3 Where approval states "previously tested or Certifire approved" steel system this includes curtain walling pressure plate systems.

2.4 For butt jointed systems: The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.

2.5 Where a glass has been tested and CERTIFIRE approved (within this certificate) for use in an insulating steel door, the glass may alternatively, be used in a different insulating steel door subject to the conditions and requirements of the doors own CERTIFIRE approval.

Where a glass has been tested and CERTIFIRE approved (within this certificate) for use in an insulating timber door, the glass may alternatively, be used in a different insulating timber door subject to the conditions and requirements of the doors own CERTIFIRE approval.

2.6 Setting blocks: Hardwood and other non-combustible materials may be used. The dimensions may vary in order to centralise and stabilize the glazing within the aperture. Sufficient edge cover shall be provided on all four sides of the glazing.

2.7 Beads: In cases where flush or square timber beads are tested in doors or partition; flush timber beads may be converted to chamfered or bolection while maintaining at least the overall tested bead dimension and approved fixing method. Chamfered and bolection beads may only be increased in dimension but only where this does not impact on the edge cover requirements.

In cases where the steel or aluminium beads need modifying to accommodate thinner or thicker panes this is permitted provided that the bead dimension has been previously tested.

2.8 In installation types detailed in this document, the tested framing sections may be increased but not decreased in dimension.

2.9 A silicone capping may be added to all glazing systems. Refer to manufacturer's datasheet for details.

2.10 Where a glass is approved in a butt jointed application, the same glass may be utilised at the same dimensions, in a single pane or multi-pane (fully framed) fixed light application. In these instances, transoms may not be incorporated in the design.

2.11 Closed cell foam tapes: The closed cell foam glazing tapes listed below, may be used in 30 minute integrity & insulation applications for timber screens and timber doorsets as a replacement for approved glazing tapes: Arbo F42, Compriband e TP601, Fire & Acoustic Seals Closed Cell Foam Tape, Scapa 3259 & Technibond Closed Cell Foam Tape.

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Pyroguard T-EI Insulating Fire Resisting Glass

3. Insulated glass units options (IGU, DGU, TGU, VI and TVI):

The approved insulated glass units may be modified in the following ways:

3.1 Counterpanes may be selected from the following list: Annealed glass, Laminated glass, Low E glass, Obscured glass, Patterned glass, Solar Control glass, Toughened glass.

3.2 Spacers may be reduced in depth without limitation or may be increased in depth, from that tested, by a factor of two, as a maximum.

Spacers materials may be selected from the listed types: Aluminium, Stainless steel, Steel, Technoform Mww SP14 [Warm Edge].

3.3 Seal materials may be selected from types: Hot-melt butyl, Polyurethane, Polysulphide, Silicone.3.4 Exchange of IGU details:

In installation types detailed in this document;

counterpanes can be optionally positioned on the exposed or the non-exposed face unless specified otherwise;

the non-fire glass within IGUs may be of any thickness subject maintaining of bead size and frame suitability;

where a single glass is approved it may be optionally exchanged for an IGU using the same single glass and for the same fire rating;

the fire resistant pane of the IGU construction can be optionally exchanged for a single glazed pane of the same fire rating and product family (except where stated otherwise in this document);

those glasses listed in this document as single glasses or Double Glazed Units (DGUs) may be converted to Triple Glazed Units (TGUs) provided it can be accommodated in the systems glazing

3.5 Blinds:

Glazings may incorporate aluminium blinds or Georgian bars within the cavity between the inner and outer glass layers. Where IGUs have been tested with internal blinds fitted they may be omitted .

4. Shapes:

4.1 It is acceptable to include Pyroguard T-EI in shaped apertures, i.e. circles, ovals, arches, quadrants, etc – provided they can be cut from within the tested glass dimensions.

4.2 Within timber door leaves or screens (subject to limitations in the framing systems). For rectilinear apertures angles between adjoining perimeter beads should not be less than 45°. Where shaped apertures are included, only finger jointed glazing beads are acceptable.

4.3 Maximum linear dimensions or areas as approved should not be exceeded.

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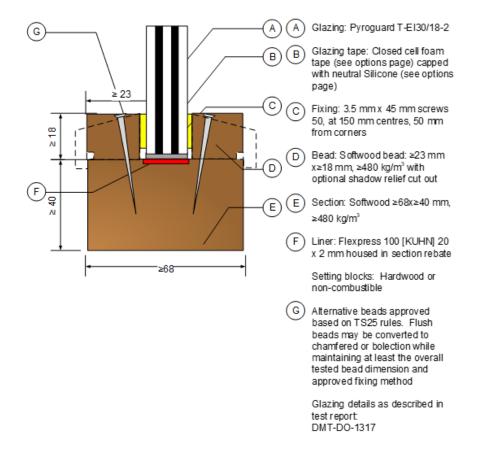
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Pyroguard T-EI30/18-2 glass in Softwood framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|-----------|----------------|----------------|--------------|
| Landscape | 3156 | 1121 | 2.97 |
| | (at 941 high) | (at 2649 wide) | |
| Portrait | 1121 | 3306 | 3.11 |
| | (at 2775 high) | (at 941 high) | |

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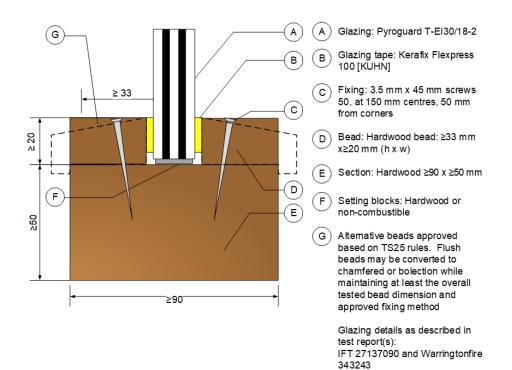
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Pyroguard T-EI30/18-2 glass in Hardwood framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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

- Framework from Hardwood (e.g. Oak) 90mm by 50mm section (minimum). Transoms and mullions assembled by steel screws 10 x 135mm.
- Hardwood beads 20mm by 33mm wide (minimum) fixed with 3.5 x 45mm screws.



This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1869mm wide (at 2495mm high) | 3119mm high (at 1495mm wide) | 4.66m ² |

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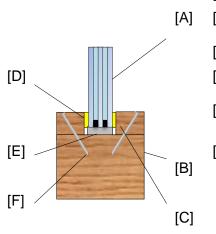
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Pyroguard T-EI30/18-2 glass in timber framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



- [A] Pyroguard T-EI30/18-2
- [B] Timber partition section: Hardwood ≥84x≥44mm section (minimum)
- [C] Beads: Hardwood ≥25x≥30mm
- [D] Glazing tape: ISL Therma-A-Glaze 45 (15x2mm)
- [E] Setting blocks: Hardwood or non-combustible setting blocks
- [F] Fixings: 50mm long steel screws at 145mm centres (30° to glass)

Glazing and frame details as described in test reports 27137090 and WF343243

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 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.

| Maximum Width | Maximum Height | Maximum Area |
|-----------------|-----------------|--------------------|
| 2049mm wide | 2188mm high | 2.16m ² |
| (at 988mm high) | (at 858mm wide) | 2.1011- |

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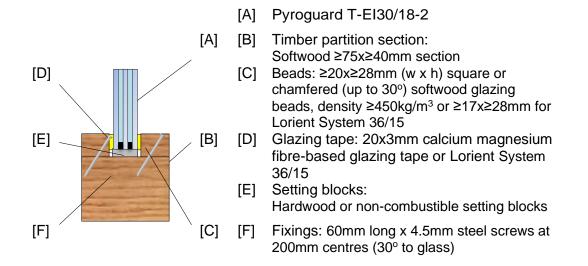
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Pyroguard T-EI30/18-2 glass in timber framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2glass 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 Width | Maximum Height | Maximum Area |
|---------------------|---------------------------------|---------------------------------|--------------------|
| Calcium magnesium | 1837mm wide | 1632mm high | 2.56m ² |
| fibre based glazing | (at 1395mm high) | (at 1570mm wide) | |
| tape | 1378mm wide (at 2840mm high) | 3100mm high (at 1250mm wide) | 3.90m ² |
| Lorient System | 1378mm wide | 2000mm high | 1.30m ² |
| 36/15 | (at 943mm) high | (at 650mm wide) | |

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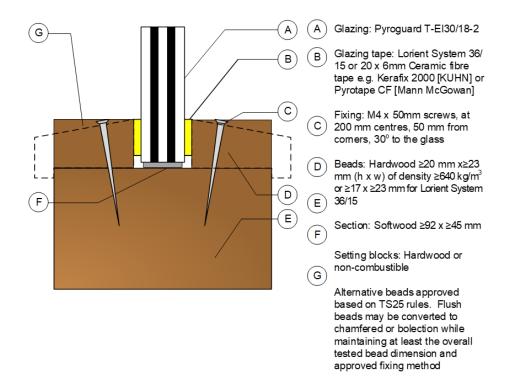
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in timber framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 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.

| | Maximum Width | Maximum Height | Maximum Area |
|-------------------------|--------------------------------|--------------------------------|--------------------|
| Kerafix 2000 tape | 2400mm wide (at 400mm high) | 2600mm high (at 500mm wide) | 1.30m ² |
| Lorient System 36/15 | 1378mm wide (at 943mm) high | 2000mm high (at 650mm wide) | 1.30m ² |

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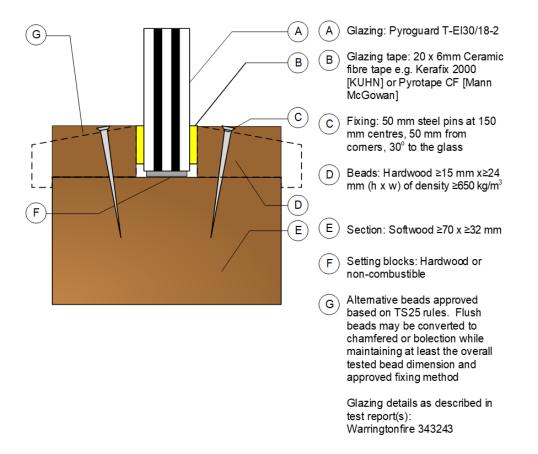
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in Softwood framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1943mm wide | 3237mm high | 5.03m ² |
| (at 2590mm high) | (at 1555mm wide) | 5.0511- |

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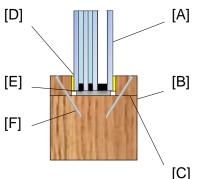
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in hardwood frame for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



[A] Pyroguard T-EI30/18-2 VI;

IGU comprising 18mm Pyroguard T-EI30/18-2 VI glass, 6-20mm cavity and a 4-16mm non-fire rated counterpane adjust section accordingly to maintain minimum bead dimensions

- [B] Section: ≥106x≥40mm hardwood section, minimum density ≥630kg/m³
- [C] Beads: \geq 20x \geq 35mm (h x w) square, hardwood density \geq 630kg/m³
- [D] Glazing tape: Choice of 25x1.5mm Intumex (Odice); 25x1.5mm Flexpress 100 (Kuhn); 20x3mm Fibrefrax FT paper (Kuhn); 20x3mm Superwool (Odice); 20x3mm Flexlit (Kuhn)
- [E] Non-combustible or hardwood setting blocks 30x7.5x80mm
- [F] Fixings: 4x40mm steel screws at 150mm

Glazing and frame details as described in Efectis test report No 09-V-481 and WF343243

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

This Certificate of Approval relates to the sizes of IGU of 35mm thick Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 3231mm wide | 1856mm high | 4.80m ² |
| (at 1485mm high) | (at 2585mm wide) | 4.6011- |

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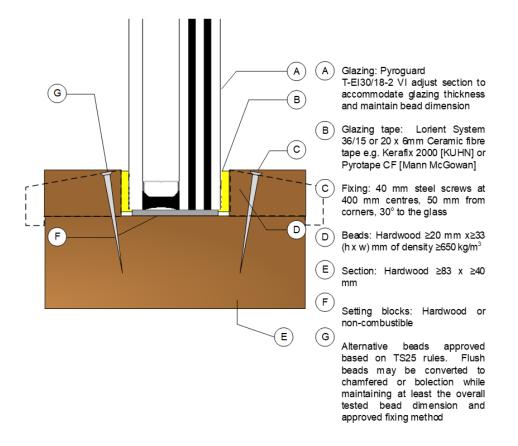
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI Insulated Glazed Units in timber framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|-------------------------|---------------------------------|---------------------------------|--------------------|
| Ceramic Fibre Tape | 3120mm wide (at 1500mm high) | 3120mm high (at 1500mm wide) | 4.68m ² |
| Lorient System 36/15 | 1378mm wide (at 1378mm high) | 2000mm high (at 950mm wide) | 1.90m ² |

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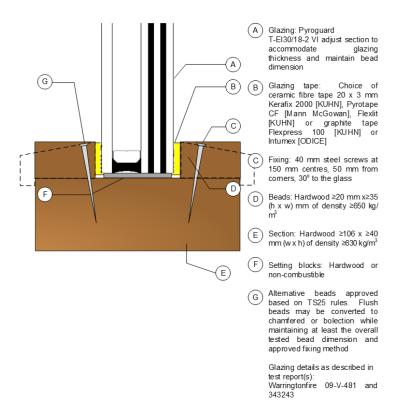
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El30/18-2 VI glass in hardwood frame for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

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



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

This Certificate of Approval relates to the sizes of IGU of 30mm thick Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2628mm wide (at 1485mm high) | 1510mm high (at 2585mm wide) | 3.90m ² |

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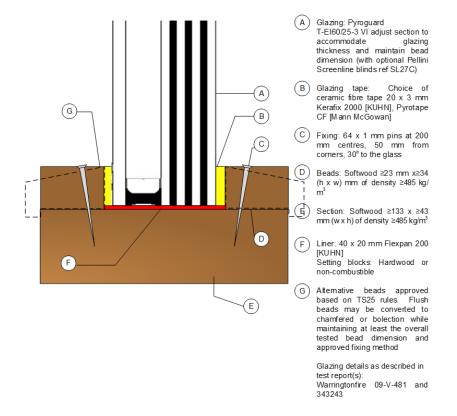
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 VI glass in softwood frame for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

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



The orientation of the IGU can be either way with respect to the fire risk.

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

This Certificate of Approval relates to the sizes of IGU of 47mm thick Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2773mm wide (at 1350mm high) | 1440mm high (at 2600mm wide) | 3.74m ² |

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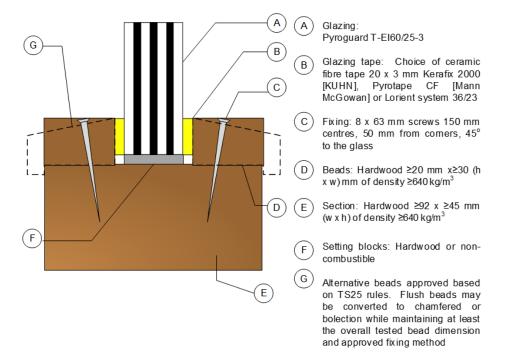
24th February 2014 Issued: Reissued: 26th July 2024 16th July 2029 Valid to:

CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in timber framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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.

| | Maximum Width | Maximum Height | Maximum Area |
|-------------------------|---------------------------------|--------------------------------|--------------------|
| Coromio tono | 1871mm wide (at 1871mm high) | 2500mm high (at1400mm wide) | 3.50m ² |
| Ceramic tape | 1378mm wide (at 943mm high) | 2000mm high (at 650mm wide) | 3.00m ² |
| Lorient System 36/23 | 1342mm wide (at 1342mm high) | 2000mm high (at 900mm wide) | 1.80m ² |

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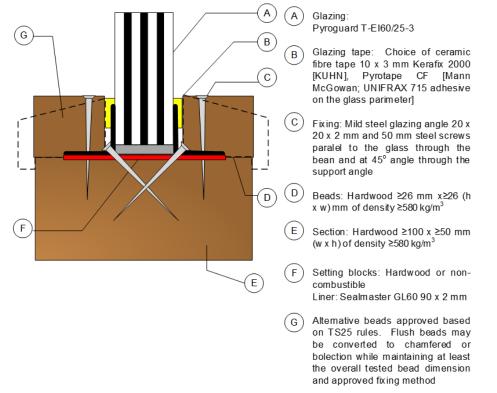
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 glass in timber framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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.

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1750mm wide (at 2500mm high) | 3125mm high (at1400mm wide) | 4.37m ² |
| 2000mm wide (at 1500mm high) | 1500mm high (at 2000mm wide) | 3.00m ² |

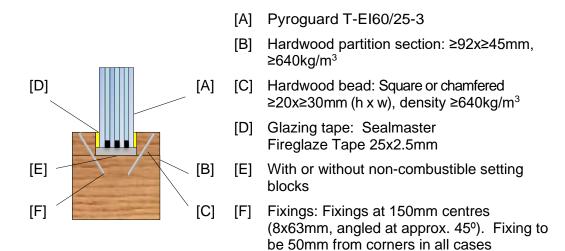
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 glass in hardwood framed screens for periods of 60 minutes integrity and 60 minutes insulation

For this application the following conditions shall apply:



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

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1000mm wide | 2000mm high | 2.00m ² |
| (at 2000mm high) | (at1000mm wide) | 2.0011- |

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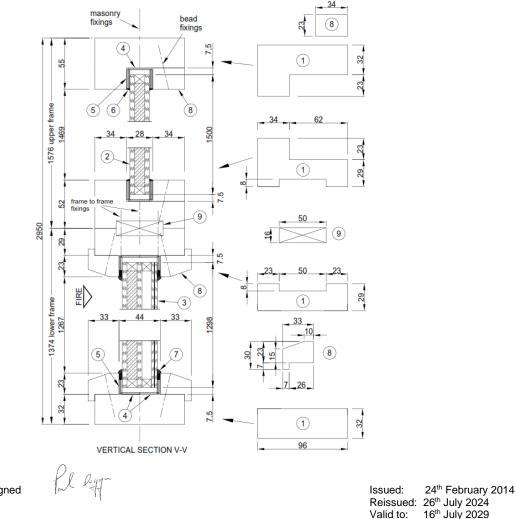
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Pyroguard T-El60/25-3 glass (inc. VI variants) in hardwood frame for periods of 60 minutes integrity and 60 minutes insulation

For this application the following conditions shall apply:

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

- Frame: from softwood with minimum density 530kg/m³ (see below and test report for dimensions)
- Beads: from softwood with minimum density 530kg/m³, (see below and test report for dimensions)
- Glass edge intumescent seal: Kerafix ceramic tape: 20x4mm thick capped with Firestop 700 for single glazed option. 15x3mm capped with Flexilodice BS for VI option.
- Aperture liner: Odice Flexilodice. 20x3mm thick for single glazed option. 40x2mm for VI option.
- Glazing and frame details as described in WF379049



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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass (inc. VI variants) in hardwood frame for periods of 60 minutes integrity and 60 minutes insulation (Continued)

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 or Pyroguard T-EI60/25-3 VI shown in the diagrams below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 3146mm wide (at 1500mm high) | 1815mm high (at 2600mm wide) | 4.72m ² |
| 3250mm wide (at 1298mm high) | 1622mm high (at 2600mm wide) | 4.21m ² |

Maximum Permitted Glass Dimensions

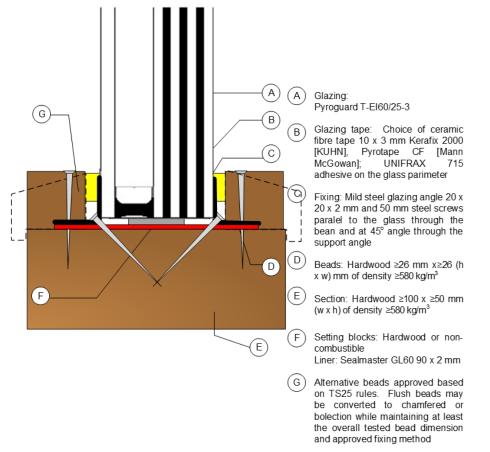
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 VI IGUs in timber framed screens for periods of 60 minutes integrity and insulation

For this application the glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI IGUs 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1652mm wide | 2950mm high | 4.13m ² |
| (at 2500mm high) | (at1400mm wide) | 4.1511- |

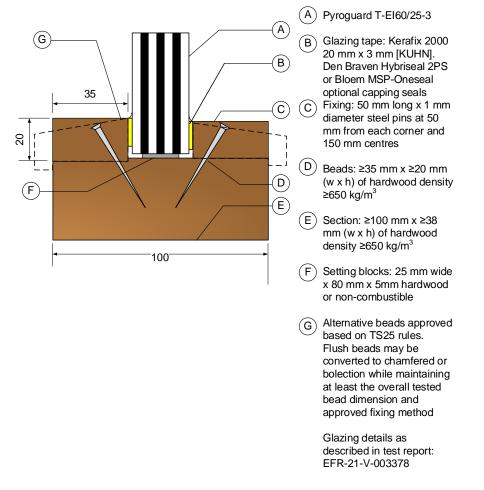
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 in timber framed screens for periods of 60 minutes integrity and insulation

For this application the glass shall be glazed utilising the following basic specification:



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1600mm wide | 3210mm high | 5 14m ² |
| (at 3210mm high) | (at1600mm wide) | 5.14111- |

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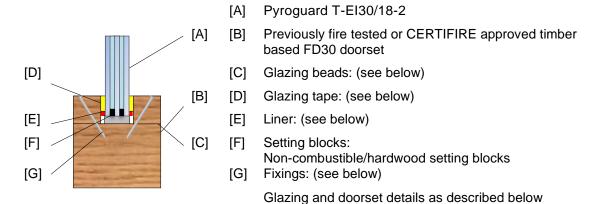
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in timber based doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



The doorset shall be CERTIFIRE approved or have test evidence for the inclusion of apertures of the proposed dimensions. See "General Requirements" for timber doorsets, above.

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 glass shown in the table below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Glazing System | Maximum Pane dimension – height (mm) | Maximum Pane dimension – width (mm) | Maximum Pane Area (m²) |
|--|--|---|------------------------------|
| Hodgsons Sealants Firestrip 30 ⁽¹⁾ | 875 | 758 | 0.57 |
| Lorient Flexible Figure 1 glazing system (2) | 1236 | 750 | 0.72 |
| Lorient Flexible Figure 1 glazing system ⁽³⁾ | 1353 | 800 | 0.95 |
| Lorient System 36/15 ⁽⁴⁾ | 1800 | 600 | 1.08 |
| Pyroplex 8193 glazing system ⁽⁵⁾ | 600 | 600 | 0.36 |
| Pyroplex 30049 glazing system ⁽⁶⁾ | 750 | 750 | 0.56 |
| Pyroplex 30054 glazing system ⁽⁷⁾ | 750 | 750 | 0.56 |
| Pyroplex 8492 glazing system ⁽⁸⁾ | 403 | 626 | 0.25 |
| Sealmaster Therm-A-Strip 10mm x 2mm ⁽⁹⁾ | 2125 | 800 | 0.64 |
| Sealmaster G30 glazing gasket between beads and glass ⁽⁹⁾ | 2125 | 610 | 0.64 |
| Lorient LP1502 or 2mm thick x 15mm Pyrostrip Interdens (Mann McGowan) ⁽¹⁰⁾ | 2794 | 1051 | 2.35 |
| Sealmaster Intumescent Foam Glazing Tape, 20x5mm uncompressed ⁽¹¹⁾ | 1800 | 600 | 1.08 |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in timber based doorsets for periods of 30 minutes integrity and insulation (continued)

- The glazing beads shall be of Sapele, or equivalent or higher density (minimum 610kg/m³), sections, 22mm wide (minimum) by 21mm high, chamfered by approximately 13^o and fixed using 1.5mm diameter, 50mm long steel pins at a maximum of 100mm centres and angled to pass under the face of the glass.
- 2) The glazing beads shall be of minimum density 550kg/m³, sections, 22mm wide minimum by 15mm high with a 5mm by 5mm bolection return, chamfered by approximately 15^o and fixed using 1.5mm diameter, 40mm long steel pins or screws at a maximum of 150mm centres and angled to pass under the face of the glass. A secondary hardwood liner (integral or separate) or a LX4402 intumescent liner shall be used to line apertures cut within flaxboard substrates.
- 3) The glazing beads shall be of minimum density 650kg/m³ hardwood or 750kg/m³ MDF, sections, 25mm wide minimum by 20mm high with a 10mm by 6mm bolection return, chamfered by approximately 30° and fixed using 40mm long steel screws at a maximum of 150mm centres and angled at 45°. A secondary 38mm x 6mm thick hardwood liner (min. density 650kg/m³) shall be used to line apertures cut within all substrates.
- 4) The glazing beads shall be of minimum density 550kg/m³, sections, 18.5mm wide minimum by 15mm high with a 5mm by 5mm bolection return, chamfered by approximately 15^o and fixed using 1.5mm diameter, 45mm long steel screws at a maximum of 200mm centres and angled to pass under the face of the glass. A secondary hardwood liner (integral or separate) or a LX4402 intumescent liner shall be used to line apertures cut within flaxboard substrates.
- 5) The glazing beads shall be of minimum density 630kg/m³, sections, 20mm wide minimum by 14.5mm high with a 5mm by 5mm bolection return, chamfered by approximately 20° and fixed using, 50mm long steel screws at a maximum of150mm centres and angled at 30-45°. A secondary 6mm thick hardwood liner (min. density 630kg/m³) shall be used to line apertures cut within all substrates.
- 6) The glazing beads shall be of minimum density 630kg/m³, sections, 20mm wide minimum by 14.5mm high with a 5mm by 5mm bolection return, chamfered by approximately 20° and fixed using, 36mm long steel screws at a maximum of 150mm centres and angled at 30-45°. A secondary 6mm thick hardwood liner (min. density 630kg/m³) shall be used to line apertures cut within all substrates.
- 7) The glazing beads shall be of minimum density 630kg/m³, sections, 20mm wide minimum by 14.5mm high with a 5mm by 5mm bolection return, chamfered by approximately 20° and fixed using, 50mm long steel screws at a maximum of 150mm centres and angled at 30-45°. A secondary 6mm thick hardwood liner (min. density 630kg/m³) shall be used to line apertures cut within all substrates.

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in timber based doorsets for periods of 30 minutes integrity and insulation (continued)

- 8) The glazing beads shall be of minimum density 630kg/m³, sections, 20mm wide minimum by 14.5mm high with a 5mm by 5mm bolection return, chamfered by approximately 20° and fixed using, 45mm long steel screws at a maximum of 150mm centres and angled at 30-45°.
- 9) The glazing beads shall be hardwood of minimum density 500kg/m³, sections, 25mm wide minimum by 23mm high with a 5mm by 5mm bolection return, chamfered by approximately 15^o and fixed using, 38mm long steel pins or screws at a maximum of 150mm vertical and 100mm horizontal centres and angled at 15^o. A secondary 6mm thick hardwood liner (min. density 500kg/m³) shall be used to line apertures cut within all substrates.
- 10) The glazing beads shall be of minimum density 477kg/m³, sections, 25mm wide minimum by 33mm high with a 5mm by 5mm bolection return, square and fixed using, 50mm long by 1.7mm diameter nails at a maximum of 150mm centres and angled at 45°.
- 11) Sealmaster Foam Glazing Tape at 20x5mm dimension. Hardwood glazing beads, min. density 620kg/m³, 20° chamfer, 20mm high with a 5x5mm minimum bolection fixed using Ø2mm x 50mm long steel pins or No. 8 x 50mm long screws at 150mm maximum centres and 50mm from corners fixed at 45° to glass.

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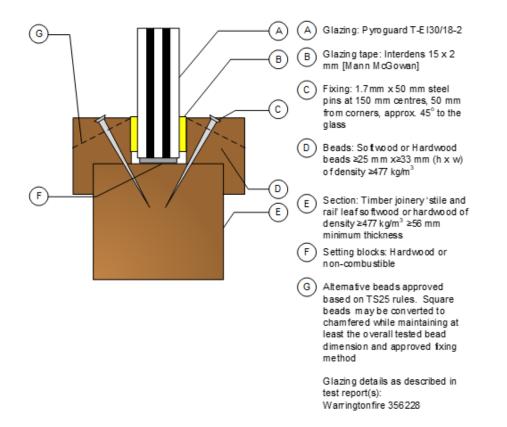
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El30/18-2 glass in timber joinery doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 shown in the diagram below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1051mm wide | 2793mm high | 2.34m ² |
| (at 2235mm high) | (at 841mm wide) | 2.34111- |

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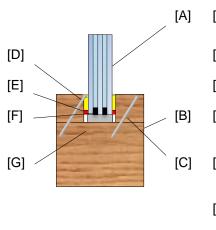
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El30/18-2 glass in timber joinery doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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



- [A] Pyroguard T-EI30/18-2
- [B] Timber joinery door leaf (softwood or hardwood of density of ≥450kg/m³) ≥58mm thickness
- [C] Softwood or hardwood beads ≥20x≥18mm with a minimum density of 450kg/m³
- [D] Glazing tape: Flexible glazing gasket Odice Flexilodice BS fitted between bead and glass
 [E] Glazing aperture liner: 20x2mm Odice Flexilodice SA
- [F] Setting blocks: Heel-toe set with hardwood or non-combustible setting blocks[G] Fixings:
 - Ø1mm x 50mm pins at 100mm centres fixed at 45°

Glazing and doorset details as described in Efectis Test Report EFR-16-V-002718

30mm by 15mm glazing bars may be applied to the either surface of the glass and pinned to the surrounding frame with Ø0.8mm by 30mm nails.

This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 shown in the table below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1213mm wide | 2610mm high | 2.53m ² |
| (at 2088mm high) | (at 970mm wide) | 2.3311- |

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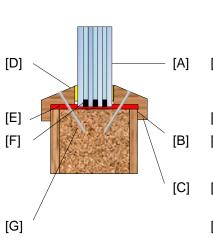
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in timber based doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested doorsets, as specified below (with test evidence for the inclusion of apertures of the proposed dimensions) utilising the following basic specification:



- [A] Pyroguard T-EI60/25-3
- [B] A ≥54mm thick FD60 door leaf incorporating a flaxboard core and 10mm thick Anti-Flam Chipboard faces (or thicker if required to accommodate glazing beads)
- [C] Hardwood glazing bead: ≥25x≥17mm (h x w) including 5mm high by 5mm wide bolection return. Density ≥650kg/m3
- [D] Lorient System 36/23 glazing seal
- [E] Aperture liner: 2mm thick mono ammonium phosphate liner (M.A.P.), full width
- [F] Heel-toe hardwood or non-combustible setting blocks
- [G] Fixings: 8x45mm screws at 45° and minimum 200mm centres. Maximum distance from corners 50mm.

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 glass shown in diagram below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 495mm wide | 1320mm high | 0.59m ² |
| (at 1200mm high) | (at 450mm wide) | 0.5911- |

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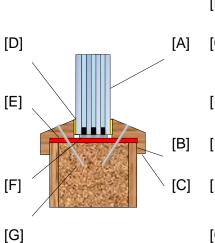
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in timber based doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested doorsets, as specified below (with test evidence for the inclusion of apertures of the proposed dimensions) utilising the following basic specification:



- [A] Pyroguard T-EI60/25-3
- [B] Previously fire tested or Certifire approved 54mm FD60 door leaf
- [C] Hardwood bead: ≥30x≥26mm (h x w) wide minimum (dimension includes a ≥5x≥5mm bolection)
- [D] Glazing tape: Sealmaster Fireglaze Tape 25x2.5mm thick
- [E] Aperture liner: Sealmaster Fireglaze Tape 54x2.5mm thick
- [F] Heel-toe hardwood or non-combustible setting blocks
- [G] Fixings: 8x63mm long screws at 150mm maximum centres and 50mm from corners (fixed at 45° to glass)

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 glass shown in diagram below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 495mm wide | 1320mm high | 0.59m ² |
| (at 1200mm high) | (at 450mm wide) | |

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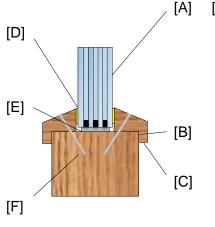
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in solid timber joinery doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested doorsets, as specified below (with test evidence for the inclusion of apertures of the proposed dimensions) utilising the following basic specification:



- [A] Pyroguard T-EI60/25-3
- [B] Door: Joinery type door leaf comprising hardwood stiles and rails of minimum density ≥640kg/m³, stiles and rails minimum ≥75mm thick by ≥70mm wide. Stiles and top rail including ≥20mm wide by ≥30mm deep rebate.

Note: If substituted for a GDC doorset, the doorset, including door frame and associated building hardware, should have achieved at least 60 minutes integrity when tested, or subsequently assessed as acceptable for this purpose, to BS 476: Part 22: 1987. The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number. When used to glaze CERTIFIRE approved doorsets which have smaller apertures than allowed in this certificate, the aperture sizes specified in the doorset certificate shall take precedence

- [C] Hardwood glazing beads: ≥25x≥30mm (h x w) including bolection return. Minimum density ≥640kg/m3
- [D] Glazing tape: 15mm by 2mm Pyrostrip Interdens (Mann McGowan)
- [E] Hardwood packer: 5mm thick by 23mm wide by 40mm long
- [F] Fixings: 8 x 50mm screws at 45° and minimum 150mm centres. Maximum distance from corners 50mm

This Certificate of Approval relates to the sizes of Pyroguard T-El60/25-3 glass shown in the table below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|---------------|----------------|--------------------|
| 950mm | 2250mm | 2.14m ² |

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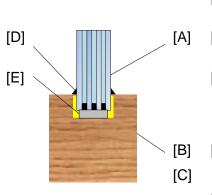
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in solid timber joinery doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a previously fire tested doorsets, as specified below (with test evidence for the inclusion of apertures of the proposed dimensions) utilising the following basic specification:



- [A] Pyroguard T-EI60/25-3
- [B] Door leaf of ≥81mm thick of glued laminated eucalyptus ≥650kg/m³
- [C] Bead: Non-removable beads to give 25mm rebate -glass slides into the rebate
- [D] Glazing tape: Flexilodice 20x2mm layered with Odice Papier Superwool 15mm x 2mm to surround the glass in the rebate and capped with Feraub Parasilico AM85-AT
- [E] Promatect H setting blocks 25mm x 5mm x 80mm
- [F] Fixings: 20mm x 20mm steel angles 50mm long on both sides of the glass at 250mm centres (not shown)

Glazing and frame details as described in Efectis report EFR-18-V-2858 A

This Certificate of Approval relates to the sizes of Pyroguard T-El60/25-3 glass shown in the table below, when used in conjunction with the above system. See "General Requirements" for timber doorsets, above. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|---------------|----------------|--------------------|
| 937mm | 2251mm | 2.10m ² |

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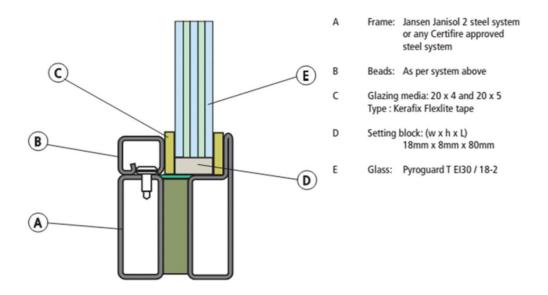
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in IFT test report No 11-000423



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 3243mm wide (at 1284mm high) | 1605mm high (at 2594mm wide) | 4.16m ² |
| 1580mm wide (at 1494mm high) | 1868mm high (at 1264mm wide) | 2.36m ² |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

A. Frame: Jansen Janisol 2 steel system or any Certifire approved С E steel system B. Beads: As per system above C. Glazing media:15mm x 6mm R and 20mm x 6mm Kerafix 2000 D D. Setting blocks: (w x h x l) 18mm x 5mm x 52mm E. Glass: Pyroguard T-EI30/18-2

Glazing and frame details as described in Warringtonfire test WF426766

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2500mm wide | 3625mm high | 7.25m ² |
| (at 2900mm high) | (at 2000mm wide) | 7.23111- |

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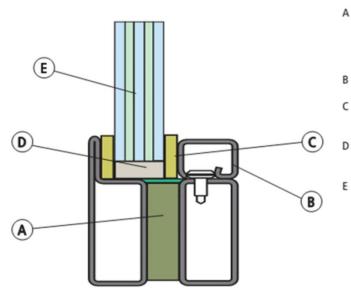
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

 Glazing and frame details as described in Efectis test report No 271-44217 and EFR-13-V-131496



- Frame: Forsters Fuego light 30 steel system or any Certifire approved steel system
- B Beads: As Per system above
 - Glazing media: 20 x 5 and 20 x 4 Type : Kerafix 2000 tape
 - Setting block: (w x h x L) 18mm x 5mm x 40mm
 - Glass: Pyroguard T EI30 / 18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 3243mm wide (at 1284mm high) | 1605mm high (at 2594mm wide) | 4.16m ² |
| 1586mm wide (at 1494mm high) | 1868mm high (at 1269mm wide) | 2.37m ² |

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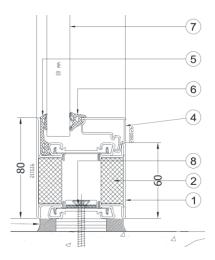
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in Warringtonfire test report 405085



- 1. RP Technik Hermetic 70FP EI30 RPF 915112
- 2. RP Technik RA 954023 insulation
- 4. RP Technik Hermetic 70FP EI30 RPF 920082
- 5. RP Technik RA 930096 5mm EPDM gasket
- 6. RP Technik RA 930106 4mm EPDM gasket
- 7. Pyroguard T-EI30/ 18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1605mm wide (at 2284mm high) | 2855mm high (at 1284mm wide) | 3.66m ² |
| Landscape | 1855mm wide (at 1122mm high) | 1402mm high (at 1484mm wide) | 2.08m ² |

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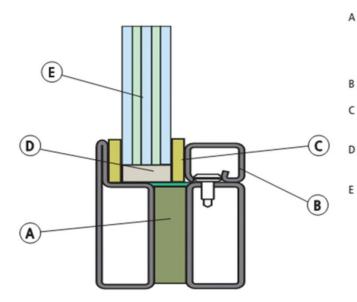
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report No 271-44217



- Frame: Forsters Fuego light 30 steel system or any Certifire approved steel system
- Beads: As Per system above
- Glazing media: 20 x 5 and 20 x 4 Type : Kerafix 2000 tape
 - Setting block: (w x h x L) 18mm x 5mm x 40mm
 - Glass: Pyroguard T EI30 / 18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2680mm wide (at 1284mm high) | 1326mm high (at 2594mm wide) | 3.44m ² |
| 1311mm wide (at 1494mm high) | 1543mm high (at 1269mm wide) | 1.96m ² |

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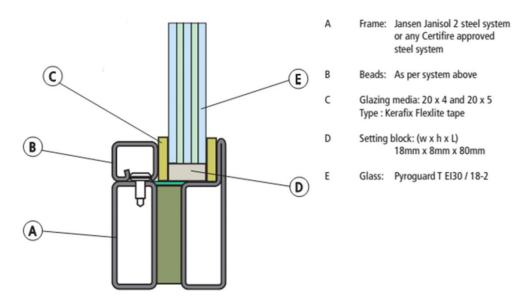
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in IFT test report No 11-000423



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2983mm wide (at 1284mm high) | 1477mm high (at 2594mm wide) | 3.83m ² |
| 1454mm wide (at 1494mm high) | 1718mm high (at 1264mm wide) | 2.17m ² |

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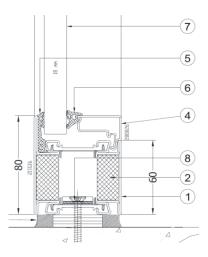
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed screens for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Warringtonfire test report 405085



- 3. RP Technik Hermetic 70FP EI30 RPF 915112
- 4. RP Technik RA 954023 insulation
- 4. RP Technik Hermetic 70FP EI30 RPF 920082
- 5. RP Technik RA 930096 5mm EPDM gasket
- 6. RP Technik RA 930106 4mm EPDM gasket
- 7. Pyroguard T-EI30/ 18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1305mm wide (at 2284mm high) | 2322mm high (at 1284mm wide) | 2.98m ² |
| Landscape | 1509mm wide (at 1122mm high) | 1140mm high (at 1484mm wide) | 1.69m ² |

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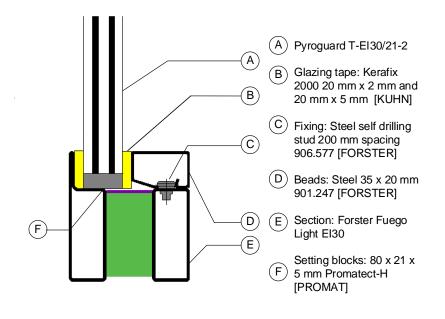
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El30/21-2 glass in steel framed screens for periods of 30 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-21-V-001011



Glazing details as described in test report: EFR-21-V-001011

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 21mm thick Pyroguard T-EI30/21-2 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2877mm wide (at 3204mm high) | 3813mm high (at 2418mm wide) | 9.22m ² |

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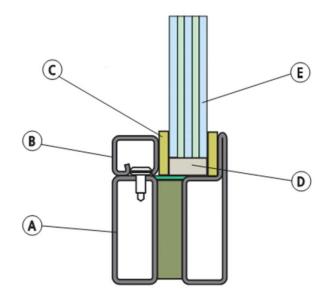
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-17-V-003939



- A. Jansen Janisol 2 frame
- B. Jansen 451.008 30mm by 20mm steel bead
- C. 17mm by 5mm Jansen glazing tape
- D. Diagonally set on 18mm by 6mm by 80mm Promatect H setting blocks
- E. Pyroguard T-EI30/ 18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 1149mm wide | 2899mm high | 2.85m ² |
| (at 2485mm high) | (at 985mm wide) | 2.0011 |

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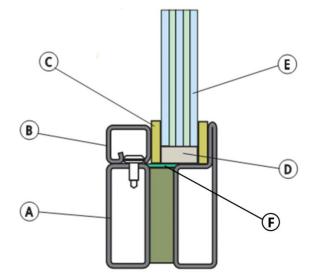
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in Efectis test report EFR-19-V-001826



- A. Forster Fuego Light 30 frame
- B. Forster 901247 35mm by 20mm steel bead
- C. Forster EPDM gaskets
- D. Diagonally set on 18mm by 5mm by 80mm Promatect H setting blocks
- E. Pyroguard T-EI30/ 18-2
- F. Forster intumescent lining tape 24mm by 1.5mm

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1642mm wide | 3567mm high | 4.68m ² |
| (at 2854mm high) | (at 1314mm wide) | 4.00111- |

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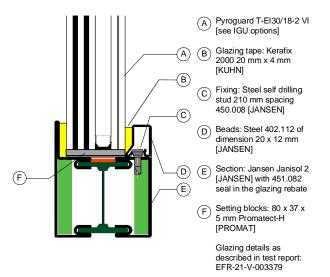
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in steel framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glass and glazing details as described in Efectis test report EFR-21-V-003379



This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of the Pyroguard T-EI30/18-2 VI (IGU) 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1397mm wide | 2546mm high | 3.23m ² |
| (at 2312mm high) | (at 1268mm wide) | 5.25111- |

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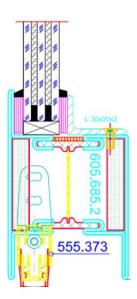
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 glass in steel framed doorsets for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-18-V-000966



- Jansen Janisol 2 frame
- 30x20mm angle steel bead fixed with M4 by 15mm screws at 185mm centres
- 17x5mm Jansen glazing tape
- Diagonally set on 18x6x80mm Promatect H setting blocks
- Pyroguard T-EI30/18-2

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 18mm thick Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1516mm wide | 2764mm high | 3.35m ² |
| (at 2211mm high) | (at 1213mm wide) | 5.5511 |

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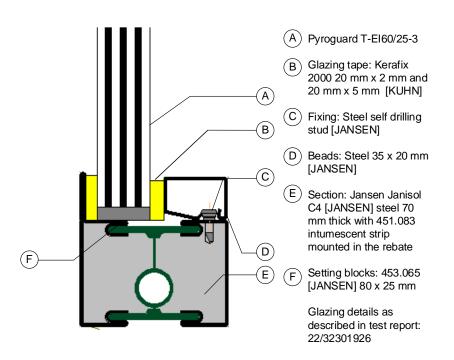
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in steel framed screen for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Applus test report No 22/32301926



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 25mm thick Pyroguard T-EI60/25-3 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.

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| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2172mm wide | 3780mm high | 6.90m ² |
| (at 3176mm high) | (at 1825mm wide) | 0.90112 |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

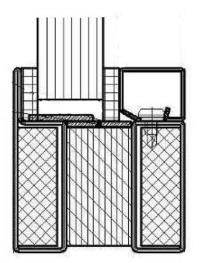
Pyroguard T-El60/25-3 glass in steel framed doors for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in IFT test report No 271-41119

Pyroguard T-EI60/25-3 in Forster Fuego Light 60 Steel Framed Door



- Glass: Pyroguard T-EI60/25-3
- Frame: Forster Fuego Light 60
- Beads: As per system
- Setting blocks: Hardwood 80x25x8mm with 80x25x5mm in frame recess
- Glazing Media: 20x6mm Kerafix 2000
- Intumescent Liner: 24.5x2.2mm Palstop "P"

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

The insulated steel framing doors 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 single glazed 25mm thick Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 913mm wide | 2795mm high | 2.13m ² |
| (at 2329mm high) | (at 761mm wide) | 2.1311- |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

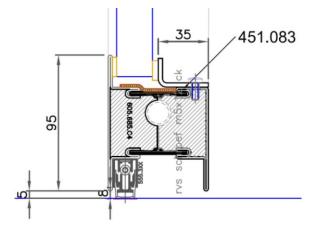
Pyroguard T-El60/25-3 glass in steel framed doors for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis report EFR-19-V-000114

Pyroguard T-EI60/25-3 in Jansen Janisol C4 Steel Framed Door



- Glass: Pyroguard T-EI60/25-3
- Jansen Janisol C4
- Beads: 20x35mmx3mm screw fixed steel angle
- Setting blocks: Promatect H 80mmx25x5mm
- Glazing Media: Jansen mineral fibre tape 17x3mm
- Intumescent Liner: Jansen graphite 40x1.8mm

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

The insulated steel framing doors 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 single glazed 25mm thick Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1319mm wide | 2445mm high | 3.17m ² |
| (at 2405mm high) | (at 1298mm wide) | 3.171112 |

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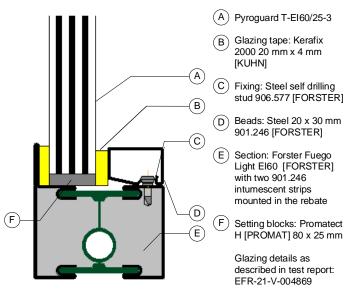
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 glass in steel framed doors for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glass and glazing details as described in Efectis test report No EFR-21-V-004869



This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

The insulated steel framing doors 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 single glazed 25mm thick Pyroguard T-EI60/25-3 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.

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| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1564mm wide | 2727mm high | 3.87m ² |
| (at 2474mm high) | (at 1419mm wide) | 3.07111- |

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| Issued: | 24 th Febru |
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| Reissued: | 26 th July 20 |
| Valid to: | 16 th July 20 |

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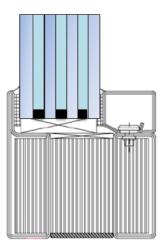
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/38-3 glass in stainless steel framed doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved stainless steel or mild steel framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in 21/25068-941



- Frame: Forster Fuego Light 90 stainless steel system
- Beads: As per system above
- Glazing media:15x3mm and 15x5mm Kerafix 2000
- Intumescent liner: Palstop P 29.5mm x 2.2mm
- Glass: Pyroguard T-EI90/38-3

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 38mm thick Pyroguard T-EI90/38-3 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 906mm wide | 3075mm high | 2.23m ² |
| (at 2460mm high) | (at 725mm wide) | 2.23111- |

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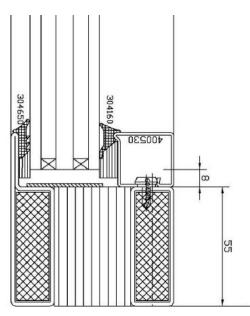
Pyroguard T-EI90/32-2 glass in steel framed screen for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in **IFT test report No 271-35263.**

RP Technik 'RP-ISO-hermetic' steel system using 15x5mm Kerafix 2000 ceramic tape and with glass on non-flammable setting blocks



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 32mm thick Pyroguard T-EI90/32-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1875mm wide | 3542mm high | 5.31m ² |
| (at 2834mm high) | (at 1500mm wide) | 5.5111- |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

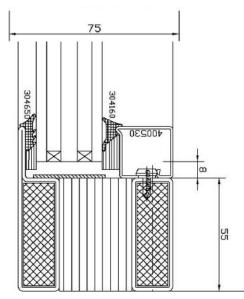
Pyroguard T-EI90/32-2 glass in steel framed screen for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in IFT test report No 271-35924

RP Technik 'RP-ISO-hermetic' steel system using 10x5mm Kerafix 2000 ceramic tape and EPDM gasket and with glass on non-flammable setting blocks



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 32mm thick Pyroguard T-EI90/32-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2824mm wide | 1500mm high | 4 24m ² |
| (at 1500mm high) | (at 2824mm wide) | 4.24111- |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

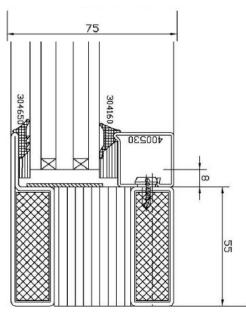
Pyroguard T-EI90/32-2 glass in steel framed screen for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in **IFT test report No 271-35263.**

RP Technik 'RP-ISO-hermetic' steel system using 15x5mm Kerafix 2000 ceramic tape and with glass on non-flammable setting blocks



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of 32mm thick Pyroguard T-EI90/32-2 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1800mm wide | 3401mm high | 5.10m ² |
| (at 2834mm high) | (at 1500mm wide) | 5.1011- |

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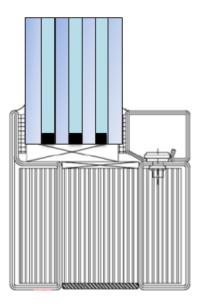
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/35-3 glass in steel framed doorsets for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-19-V-001828



- Frame: Forster Fuego Light 90 frame
- Beads: Forster 901227 20x20mm steel bead
- Glazing media: Kerafix Flexlit tape 20x5mm
- Intumescent liner: Forster intumescent lining tape 29mm by 1.5mm
- Diagonally set on 35x5x80mm Promatect H setting blocks
- Glass: Pyroguard T-EI90/35-3

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 35mm thick Pyroguard T-EI90/35-3 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.

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| Maximum Width | Maximum Height | Maximum Area |
|---------------|----------------|--------------------|
| 1360mm wide | 2355mm high | 3.20m ² |

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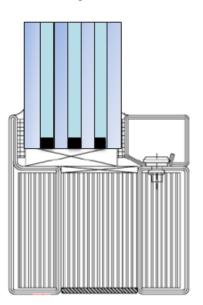
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/38-3 glass in stainless steel framed doorsets for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved stainless steel or mild steel framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in 21/25068-941



- Frame: Forster Fuego Light 90 stainless steel system
- Beads: As per system above
- Glazing media:15x3mm and 15x5mm Kerafix 2000
- Intumescent liner: Palstop P 29.5mm x 2.2mm
- Glass: Pyroguard T-EI90/38-3

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 38mm thick Pyroguard T-EI90/38-3 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 Width | Maximum Height | Maximum Area |
|------------------|-----------------|--------------------|
| 725mm wide | 2460mm high | 1.78m ² |
| (at 2460mm high) | (at 725mm wide) | 1.7011- |

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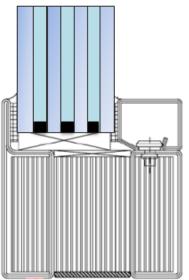
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/40-3 glass in steel framed doorsets for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in EFR-20-V-01112



- Frame: Forster Fuego Light 70
- Bead: Forster 901227 20mm by 20mm steel
- Glazing media: Kerafix Flexlit tape 20x5mm and 20x2mm
- Liner: Forster intumescent lining tape 29.5x1.5mm
- Glass: Pyroguard T-EI90/40-3
- Diagonally set on 40x5mm by 80mm Promatect H setting blocks

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 40mm thick Pyroguard T-EI90/40-3 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1526mm wide | 2642mm high | 3.59m ² |
| (at 2355mm high) | (at 1360mm wide) | 3.5911- |

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Issued: 24th February 2014 Reissued: 26th July 2024 Valid to: 16th July 2029

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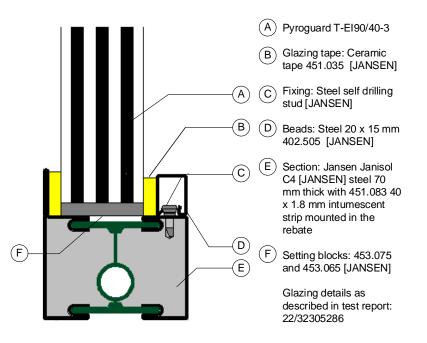
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/40-3 glass in steel framed doorsets for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

Glass and glazing details as described in Applus test report 22/32305286



This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 40mm thick Pyroguard T-EI90/40-3 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1495mm wide | 2753mm high | 3.73m ² |
| (at 2494mm high) | (at 1354mm wide) | 5.7511- |

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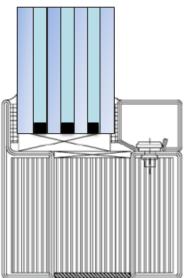
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/40-3 glass in steel multi-pane framed screens for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in EFR-20-V-01112



- Frame: Forster Fuego Light 70
- Bead: Forster 901227 20mm by 20mm steel
- Glazing Media: Kerafix Flexlit tape 20mm by 5mm and 20mm by 2mm
- Liner: Forster intumescent lining tape 29.5mm by 1.5mm

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Glass: Pyroguard T-EI90/40-3 on 40mm by 5mm by 80mm Promatect H blocks

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 40mm thick Pyroguard T-EI90/40-3 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1470mm wide (at 2445mm high) | 2743mm high (at 1310mm wide) | 3.59m ² |
| 3198mm wide (at 755mm high) | 847mm high (at 2850mm wide) | 2.41m ² |

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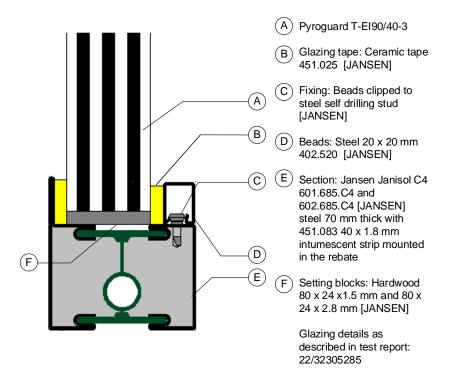
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/40-3 glass in steel multi-pane framed screens for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Applus test report 22/32305285



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 40mm thick Pyroguard T-EI90/40-3 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.

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| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1680mm wide (at 2863mm high) | 3408mm high (at 1411mm wide) | 4.81m ² |
| (at 2003hin high) | | |

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| Issued: | 24th February 2014 |
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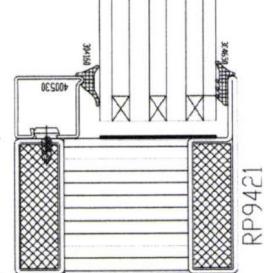
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI120/47-3 glass in steel framed screen for periods of 120 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report No 08-V-437



- Frame: RP Technik RP ISOFEU 120 [RP9421] steel partition system
- Beads:28x25mm steel beads clipped onto screws
- Liner: 50x1.5mm Kerafix Flexpress 100
- Glazing tape: EPDM gasket 304160 and 304650
- Setting blocks: 80x47x7 Promatect H (PROMAT)

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Glazing: Pyroguard T-EI120/47-3 with 18mm edge cover

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes with 47mm thick Pyroguard T-EI120/47-3 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1300mm wide | 2825mm high | 3.67m ² |
| (at 2825mm high) | (at 1300mm wide) | 3.07111- |

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| Issued: | 24 th February 2014 |
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| Reissued: | 26 th July 2024 |
| Valid to: | 16 th July 2029 |

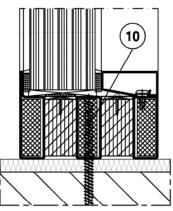
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI120/52-4 glass in steel multi-pane framed screens for periods of 120 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in IFT 21-001341



- Forster Fuego Light 110 frame
- Forster 901249 45mm by 20mm steel bead
- Kerafix 2000 tape 15x5mm
- 80x54mm by 5mm hardwood setting blocks
- Pyroguard T-EI120/52-4
- Forster intumescent lining tape 24.5x2.2mm

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 52mm thick Pyroguard T-EI120/52-4 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1521mm wide (at 2850mm high) | 3063mm high (at 1415mm wide) | 4.33m ² |
| 2541mm wide (at 1206mm high) | 1296mm high (at 2364mm wide) | 3.06m ² |

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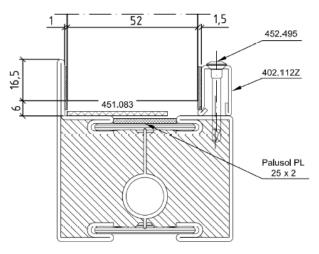
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El120/52-4 glass in steel multi-pane framed screens for periods of 120 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in EFR 20-V-003506 A



- Jansen Janisol C4 frame
- Jansen 12mm by 20mm steel bead
- Odice Superwool glazing tape 17mm by 1mm and 17mm by 2mm
- 80mm by 52mm by 6mm Promatect H setting blocks
- Pyroguard T-EI120/52-4
- Jansen intumescent lining tape 24.4mm by 2.5mm

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of 52mm thick Pyroguard T-EI120/52-4 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1290mm wide (at 2839mm high) | 3052mm high (at 1200mm wide) | 3.66m ² |
| 1694mm wide (at 1389mm high) | 1493mm high (at 1576mm wide) | 2.35m ² |

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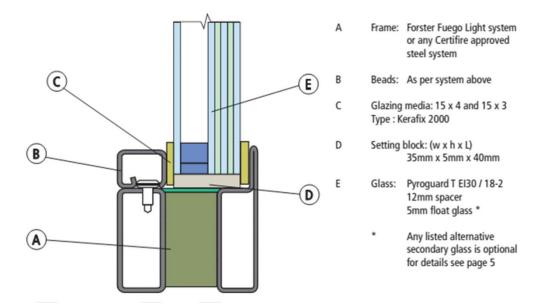
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in steel framed doors for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in Efectis test report No 11-V-693



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

The insulated steel framing doors 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 IGU of 35mm thick Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1286mm wide | 3355mm high | 3.45m ² |
| (at 2684mm high) | (at 1029mm wide) | 5.45111- |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in steel framed doors for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using screw-fixed or clip-on retaining beads utilising the following basic specification:

A Frame: Forster Fuego Light system or any Certifire approved steel system С В Beads: As per system above E С Glazing media: 15 x 4 and 15 x 3 Type : Kerafix 2000 D Setting block: (w x h x L) B 35mm x 5mm x 40mm Ε Glass: Pyroguard T EI30 / 18-2 D 12mm spacer 5mm float glass * Any listed alternative secondary glass is optional for details see page 5

Glazing and frame details as described in Efectis test report No 11-V-693

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 35mm thick Pyroguard T-EI30/18-2 VI shown in the diagram below, when used in conjunction with the above system.

Counterpanes of laminated glass must only be used when on the exposed face of the door.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1029mm wide | 2684mm high | 2.76m ² |
| (at 2684mm high) | (at 1029mm wide) | 2.7011- |

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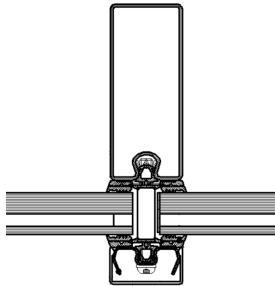
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI glass in steel framed Curtain Walling System with glazed panels for periods of 30 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report No 2007-CVB-RO495



- Frame: Thermafix Vario steel system or any Certifire approved steel system
- Beads: A per system above
- Glazing media: EPDM
- Type: System gasket
- Setting block: (w x h x L) 26mm x 5mm x 80mm
- Glass: Pyroguard T-EW30/13-1, 8mm steel spacer, 5mm tempered*

*Any listed alternative glass is optional. For details see page 6

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

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

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1875mm wide | 3660mm high | 5.49m ² |
| (at 2928mm high) | (at 1500mm wide) | orioni |

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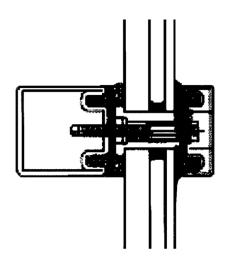
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI glass in steel framed curtain walling system for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

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



- Frame: ISO Hermetic 45 N RP Technik steel system or any Certifire approved steel system
- Beads: A per system above
- Glazing media: 20mm x 1.5mm
- Type: Ceramic tape + system gaskets
- Setting block: (w x h x L) 26mm x 5mm x 80mm
- Glass: Pyroguard T-EW30/13-1, 8mm steel spacer, 5mm tempered*

*Any listed alternative glass is optional except for laminated. For details see page 6

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

Counterpanes of laminated glass are not permitted.

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

This Certificate of Approval relates to the sizes of IGU with 26mm thick Pyroguard T-EW30/13-1 VI 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1492mm wide (at 2800mm high) | 2988mm high (at 1400mm wide) | 4.18m ² |
| 1578mm wide (at 1391mm high) | 1484mm high (at 1494mm wide) | 2.19m ² |

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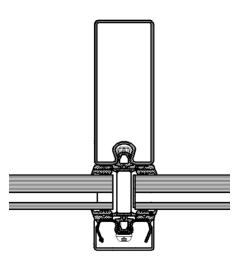
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI or T-EW60/13-1 glass in steel framed Curtain Walling system with glazed panels for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report No 007-CVB-RO495



- Frame: Forster Thermafix Vario steel system or any Certifire approved steel system
- Beads: A per system above
- Glazing media: EPDM Type: System gasket
- Setting blocks: 26mm x 5mm x 80mm
- Glass: Pyroguard T-EW30/13-1, 8mm steel spacer, 5mm tempered*

*Any listed alternative glass is optional except for laminated. For details see page 6

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

Counterpanes of laminated glass are not permitted.

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

This Certificate of Approval relates to the sizes of IGU with 13mm thick Pyroguard T-EW30/13-1 VI or 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.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1875mm wide | 3660mm high | 5.49m ² |
| (at 2928mm high) | (at 1500mm wide) | 0.4611 |

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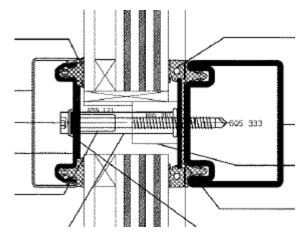
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 VI glass in a stainless-steel curtain walling system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:



Glazing and frame details as described in Efectis test report No 09-V-234

- RP Hermetic 60N steel curtain walling system
- Stainless steel profiles reference 430 060 (RP TECHNIK).
- The glazing plates are associated with an intumescent seal reference KERAFIX FLEXPRESS, with a section of 30 x 1,5 mm.
- Sealing reference 305 170 (RP TECHNIK) between the glass and the frame,
- Sealing reference 300 381 (RP TECHNIK), between the glass and the plates.
- The glazings are packed in the lower part with 4 x 100 x 40 mm supporting blocks, which are placed on block supports, reference 525 251 (RP TECHNIK)

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 40mm thick Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1769mm wide | 3525mm high | 4.99m ² |
| (at 2820mm high) | (at 1415mm wide) | |

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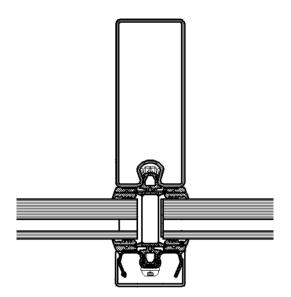
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 VI glass in steel framed curtain walling systems for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-19-V-4362 A



- Frame: Forster Thermafix Vario steel system or any Certifire approved steel system
- Beads: A per system above
- Glazing media: Forster EPDM
- Setting block: Promatect H (w x h x L) 52mm x 3mm x 80mm
- Glass: Pyroguard T-EI60/25-3 VI
- The periphery of the IGUs wrapped with Kerafix Flexpan 200 24.5mm x 1.5mm

The orientation of the IGU can be either way with respect to the fire risk.

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 52mm thick Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1575mm wide | 3780mm high | 5.67m ² |
| (at 3600mm high) | (at 1500mm wide) | |

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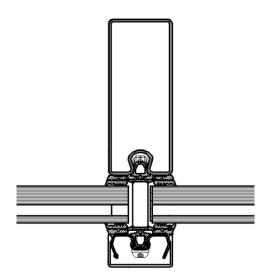
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW90/13-1 VI glass in steel framed Curtain Walling Systems with glazed for periods of 90 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report No 007-CVB-RO495



Frame: Thermafix Vario steel system or any Certifire approved steel system

Beads: As per system above

Glazing media: EPDM system gaskets

Setting blocks: 26mm (w) x 5mm (h) x 80mm (l)

Glass: Pyroguard T EW30/13-1 8mm, steel spacer, 5mm tempered glass*

* Any listed alternative secondary glass is optional except for laminated

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This configuration is only approved as an IGU and only with the Pyroguard T-EW90/13-1 on the exposed side.

Counterpanes of laminated glass are not permitted.

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

This Certificate of Approval relates to the sizes of IGU with 13mm thick Pyroguard T-EW90/13-1 VI 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 Width | Maximum Height | Maximum Area |
|---|------------------|------------------|--------------------|
| ſ | 1500mm wide | 2928mm high | 4.39m ² |
| | (at 2928mm high) | (at 1500mm wide) | |

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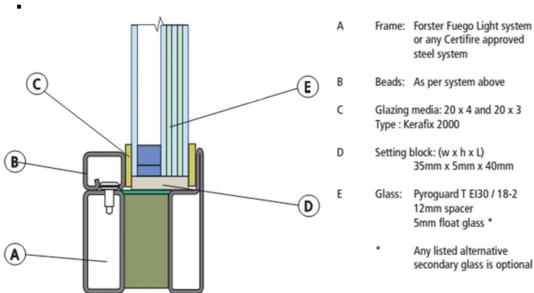
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in steel framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:



• Glazing and frame details as described in **IFT test report No10-000976**

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 35mm thick Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1618mm wide (at 2284mm high) | 2855mm high (at 1294mm wide) | 3.70m ² |
| 1855mm wide (at 1097mm high) | 1372mm high (at 1484mm wide) | 2.04m ² |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI glass in steel framed screens for periods of 60 minutes integrity and 30 Minutes insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- C Glazing m Type : Kera D Setting bla B C Glass: P 1 S C A C Setting bla B C Setting bla C C Setting Setting bla C Setting Bla C Setting Setting Setti
- Glazing and frame details as described in **IFT test report No10-000976**
 - Frame: Forster Fuego Light system or any Certifire approved steel system
 - Beads: As per system above
 - Glazing media: 20 x 4 and 20 x 3 Type : Kerafix 2000
 - Setting block: (w x h x L) 35mm x 5mm x 40mm
 - Glass: Pyroguard T EI30 / 18-2 12mm spacer 5mm float glass *
 - Any listed alternative secondary glass is optional

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 35mm thick Pyroguard T-EI30/18-2 VI shown in the diagram below, when used in conjunction with the above system.

Counterpanes of laminated glass must only be used when on the exposed face of the screen.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1316mm wide (at 2284mm high) | 2323mm high (at 1294mm wide) | 3.01m ² |
| 1509mm wide (at 1097mm high) | 1116mm high (at 1484mm wide) | 1.66m ² |

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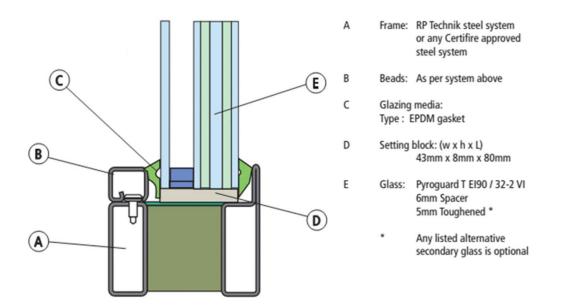
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI90/32-2 VI glass in steel framed screens for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

• Glazing and frame details as described in **IFC test report No576**



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of IGU of 43mm thick Pyroguard T-EI90/32-2 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1804mm wide | 1295mm high | 1.95m ² |
| (at 1079mm high) | (at 1503mm wide) | 1.9511- |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI120/47-3 VI glass in steel curtain walling systems for periods of 90 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing and frame details as described in Efectis test report EFR-16-G-004298

- RP Technik RP-ISO Hermetic 60N
- Pyroguard T-EI120/47-3 VI

This Certificate of Approval relates to the sizes of Pyroguard T-EI120/47-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2000mm wide | 3000mm high | 4.80m ² |
| (at 2400mm high) | (at 1600mm wide) | 4.60111- |

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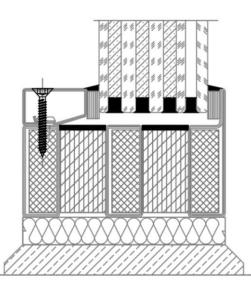
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI120/47-3 VI glass in steel framed screens for periods of 120 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

Glazing and frame details as described in Efectis test report EFR-16-G-004086



- Forster Fuego Light El120
- Pyroguard T-EI120/47-3 VI
- Forster 35mm by 20mm steel bead fixed with 3.9mm by 32mm screw
- Gluske Kerafix Flexlit glazing tape capped with silicone

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

This Certificate of Approval relates to the sizes of Pyroguard T-EI120/47-3 VI shown in the table below, when used in conjunction with the above system.

| | Maximum Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1488mm wide (at 2285mm high) | 2647mm high (at 1285mm wide) | 3.40m ² |
| Landscape | 1720mm wide (at 1110mm high) | 1286mm high (at 1485mm wide) | 1.91m ² |

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

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI120/47-3 VI glass in steel curtain walling systems for periods of 120 minutes integrity and insulation

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing and frame details as described in Efectis test report EFR-16-G-004298

- RP Technik RP-ISO Hermetic 60N
- Pyroguard T-EI120/47-3 VI

This Certificate of Approval relates to the sizes of Pyroguard T-EI120/47-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1613mm wide | 2420mm high | 3.87m ² |
| (at 2400mm high) | (at 1600mm wide) | 5.8711- |

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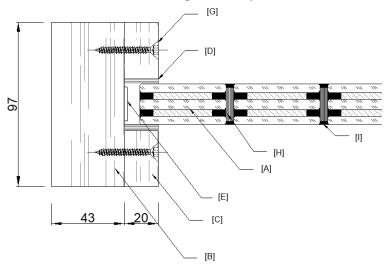
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/24-2 SWS Butt Jointed Glass in softwood frame for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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

Glazing and frame details as described in Warringtonfire report WF426403



- [A] Pyroguard T-EI30/24-2 SWS
- [B] Section: Softwood frame with a density of 573kg/m3 and 97.4x43mm
- [C] Beads: Softwood beads 20mm high by 33mm wide minimum
- [D] Glazing media: Kerafix 2000 mineral fibre 20mm x 3mm
- [E] Liner: Kerafix Flexpan 200 20mm x 2mm
- [F] Setting blocks: Hardwood setting blocks 15mm x 24mm x 6mm
- [G] Fixings: Pins 1mm x 50mm every 200mm or screws
- [H] Glass-glass joint intumescent: Two layers of 20 x 2 Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan)
- [I] Glass-glass joint silicone DOWSIL 895

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

This Certificate of Approval relates to the sizes of 24mm thick Pyroguard T-EI30/24-2 SWS 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1625mm wide | 3622mm high | 4 71m ² |
| (at 2898mm high) | (at 1300mm wide) | 4.7 1111- |

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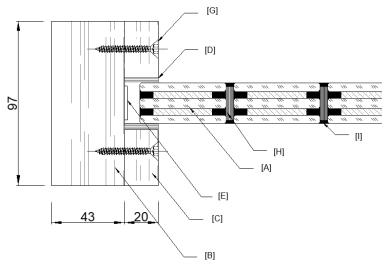
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El30/24-2 SWS Butt Jointed Glass in softwood frame for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

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

Glazing and frame details as described in Warringtonfire report WF426403



- [A] Pyroguard T-EI30/24-2 SWS
- [B] Section: Softwood frame with a density of 573kg/m3 and 97.4x43mm
- [C] Beads: Softwood beads 20mm high by 33mm wide minimum
- [D] Glazing media: Kerafix 2000 mineral fibre 20mm x 3mm
- [E] Liner: Kerafix Flexpan 200 20mm x 2mm
- [F] Setting blocks: Hardwood setting blocks 15mm x 24mm x 6mm
- [G] Fixings: Pins 1mm x 50mm every 200mm or screws

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- [H] Glass-glass joint intumescent: Two layers of 20 x 2 Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan)
- [I] Glass-glass joint silicone DOWSIL 895

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

This Certificate of Approval relates to the sizes of 24mm thick Pyroguard T-EI30/24-2 SWS 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1625mm wide | 3622mm high | 4 71m ² |
| (at 2898mm high) | (at 1300mm wide) | 4.7 1111- |

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| Issued: | 24th February 2014 |
|-----------|----------------------------|
| Reissued: | 26 th July 2024 |
| Valid to: | 16 th July 2029 |

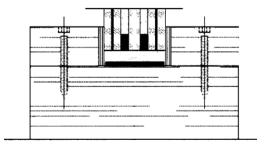
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/32-2 VF SWS Butt Jointed Glass in hardwood frame for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

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

- Hardwood frame with a density of 650kg/m³ and 107mm by 38mm section minimum. Assembled in the construction with dowels and screws 10 x 160mm every 900mm. Double hardwood beads 20mm high by 35mm wide minimum fixed by screws 4 x 60mm every 170mm at angle of 30^o degrees around the framework 30 x 2mm Flexpress intumescent strip.
- Glazing material Kerafix 2000 mineral fibre 20 x 3mm at glazed edges. Fire Resistant Sealant at butt joint between glass junction 30mm wide.
- 80 by 6mm Promatect H or Flammi 12 (GLUSKE) setting blocks and Bottom edge clearance 6mm, edge cover 14mm
- Intumecent seal between non fire glass and bead, 25 by 1.5mm Intumex (Odice) or (Flexpress 100 (Gluske) or 20 by 3mm Fibrefrax FT paper (GLUSKE) or superwool (Odice)
- Glazing and frame details as described in Efectis test report No 09-V-241
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



- Frame: Hardwood 107mm by 38mm, density 650kg/m³
- Beads: Hardwood 35mm by 20mm, density 650kg/m³
- Glazing media: 20mm by 3mm
- Type: Kerafix 2000 mineral fibre
- Fixing: 4mm by 60mm steel screws
- Setting blocks: (w x h x L) 32mm by 6mm by 40mm
- Glazing: Pyroguard T EI30/32-2 VF SWS

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/32-2 VF SWS Butt Jointed Glass in hardwood frame for periods of 30 minutes integrity and insulation (Continued)

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

This Certificate of Approval relates to the sizes of 32mm thick Pyroguard T-EI30/32-2 VF SWS 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2288mm wide | 3625mm high | 6.63m ² |
| (at 2900mm high) | (at 1830mm wide) | 0.0311- |

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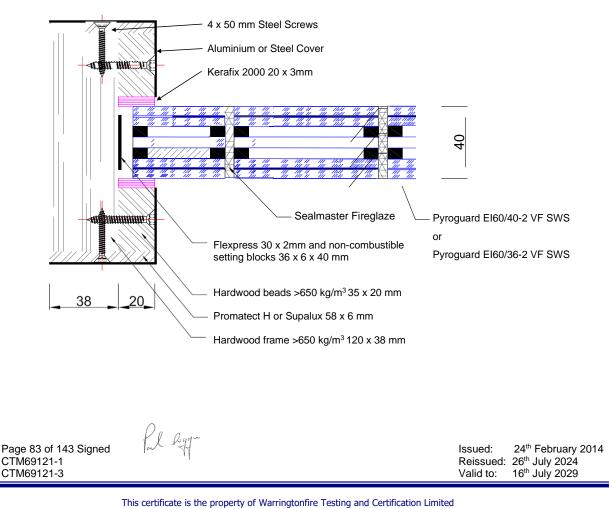
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/40-2 VF SWS and T-EI60/36-2 VF SWS Butt Jointed Glass in hardwood frame for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

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

- 40mm thick fire glass Pyroguard T-El60/40-2 VF SWS with 2 x 10.8mm safety glass with 55.2 construction/2 x 6mm intumescent interlayer/6mm float glass, symmetrical glass construction with glazing beads on both sides.
- Alternatively constructed with 44.2 safety glass construction to give 36mm thick fire glass Pyroguard T-EI60/36-2 VF SWS.
- Glazing and frame details as described in Efectis test report No 08-V-295
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



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Pyroguard T-EI60/40-2 VF SWS and T-EI60/36-2 VF SWS Butt Jointed Glass in hardwood frame for periods of 60 minutes integrity and insulation (Continued)

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

This Certificate of Approval relates to the sizes of 40mm or 36mm thick Pyroguard T-EI60/40-2 VF SWS or Pyroguard T-EI60/36-2 VF SWS 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1952mm wide | 3093mm high | 5.66m ² |
| (at 2900mm high) | (at 1830mm wide) | 5.00112 |

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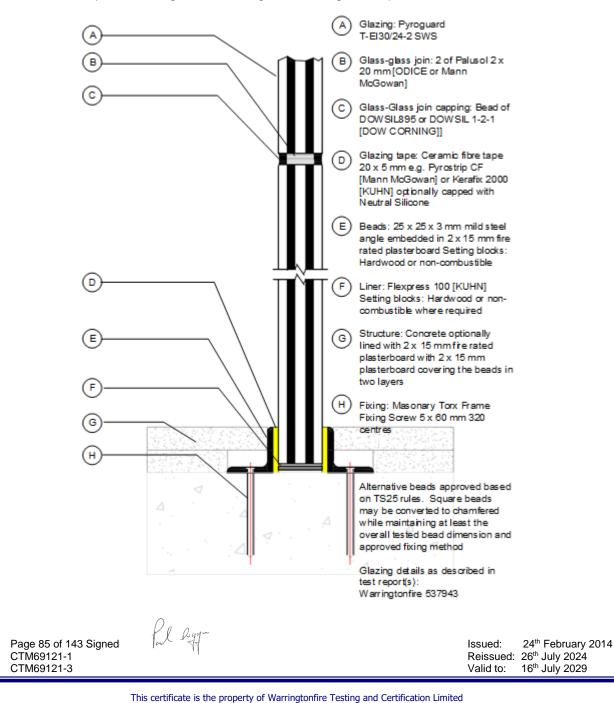
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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/24-2 SWS Butt Jointed Glass in steel partition system for periods of 30 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:



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Pyroguard T-EI30/24-2 SWS Butt Jointed Glass in steel partition system for periods of 30 minutes integrity and insulation (Continued).

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/24-2 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1800 | 3612 | 5.46m ² |
| (at 3033mm wide) | (at 1511mm high) | 5.4011- |

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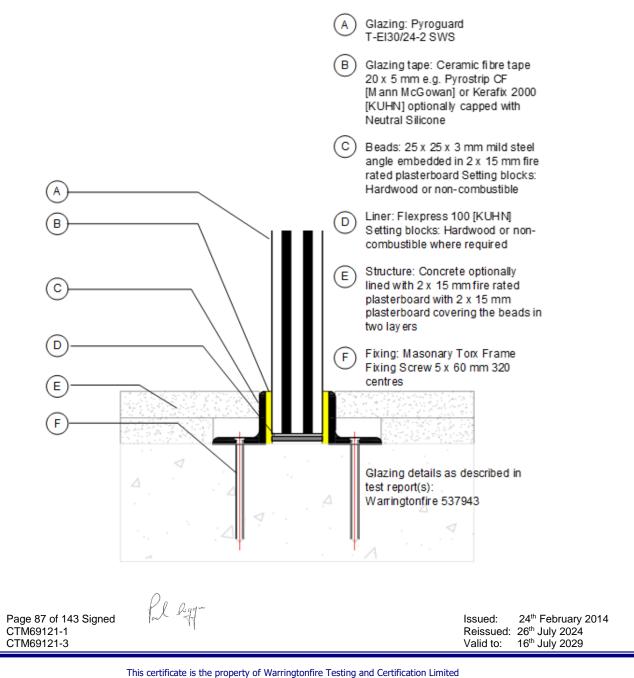
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Pyroguard T-EI30/24-2 Glass in steel partition system for periods of 30 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:



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Pyroguard T-El30/24-2 Glass in steel partition system for periods of 30 minutes integrity and insulation (Continued).

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/24-2 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area | |
|------------------|------------------|--------------------|--|
| 1800 | 3612 | 5.46m ² | |
| (at 3033mm wide) | (at 1511mm high) | 5.4011- | |

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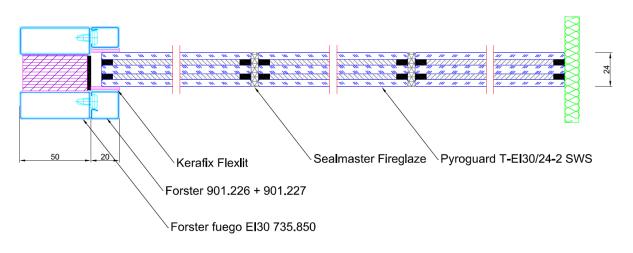
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Pyroguard T-EI30/24-2 SWS Butt Jointed Glass in steel partition system for periods of 30 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a double bead system 15 x 20mm on the fire side and 20 x 20mm non fire side, screw fixed every 300mm with 20mm by 3mm Flexlit Kerafix ceramic glazing (Gluske) tape. Thinnest beads on fire side.
- The butt joints of the glazing were assembled side by side with 24mm by 5mm fire
 resistant silicone, Sealmaster Fireglaze. Alternatively the butt joints of the glazing may be
 assembled side by side with a layer of 25mm by 2mm Palusol PL100 ODICE (aka
 Pyrostrip 100EC Palusol Mann McGowan), on each pane and capped DOWSIL 121 /
 DOWSIL 895. Along the top of all glazing, Kerafix Silicone (GLUSKE) was applied on the
 unexposed side.
- Clearance between glass and frame was 7.5mm. Edge Cover was 12.5mm.
- Glazing and frame details as described in Efectis test report No 12-V-236
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/24-2 SWS Butt Jointed Glass in steel partition system for periods of 30 minutes integrity and insulation. (Continued)

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/24-2 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1560mm wide | 3918mm high | 5.09m ² |
| (at 3265mm high) | (at 1300mm wide) | 9.00m |

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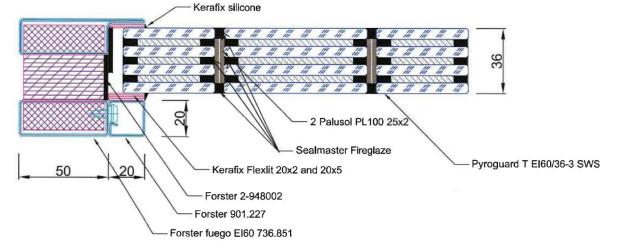
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Pyroguard T-EI30/36-3 SWS butt jointed glass in steel partition system for periods of 30 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a single clip-on bead system of 20mm x 20mm fixed every 400mm maximum and 75mm from corners maximum. The beads with 20mm by 5mm Kerafix Flexit and 20mm by 2mm on the fin both capped with Kerafix Silicone.
- The butt joints of the glazing assembled side by side with a layer of 25mm by 2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) on each pane and capped with Sealmaster Fireglaze or Dow Corning Dowsil 895.
- Each pane was supported on 80mm by 36mm by 5mm Promatect H setting blocks.
- Clearance between glass and frame was 5mm. Edge Cover was 15mm.
- Glazing and frame details as described in Efectis test report No EFR-18-V-003243
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

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Pyroguard T-EI30/36-3 SWS butt jointed glass in steel partition system for periods of 30 minutes integrity and insulation. (Continued)

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/36-3 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|-------------------------------|--------------------|
| 2100mm wide (at 3265mm high) | 3809mm high (at 1800 wide) | 6.85m ² |

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/32-2 SWS butt jointed glass in steel partition system with 45° or 90° corners for periods of 30 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

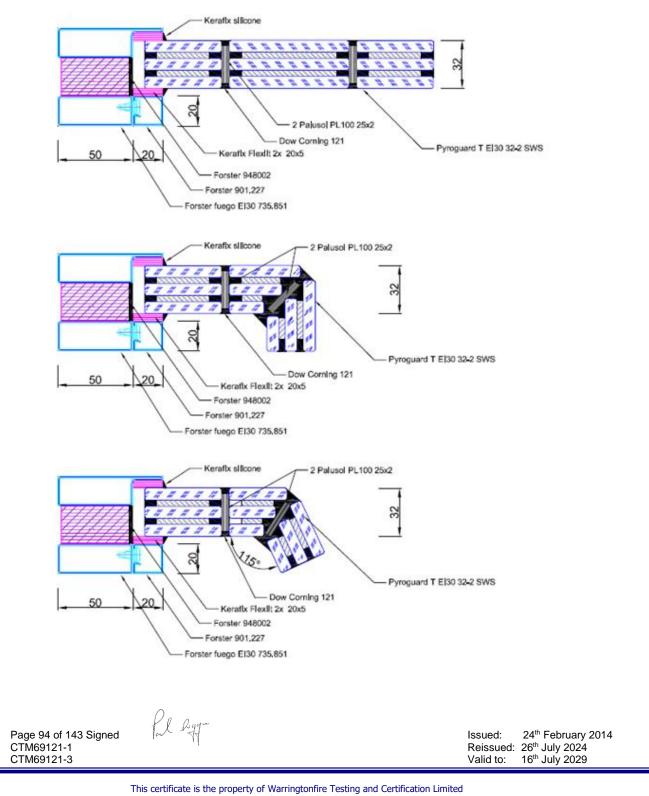
- Glazing with a double clip-on bead system of 20mm x 15mm fixed every 200mm maximum and 75mm from corners maximum. The beads with 15mm by 2mm Kerafix Flexit and capped with Kerafix Silicone.
- The butt joints of the glazing assembled with two layers of 25mm by 2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) and filled with Dow Corning DOWSIL 121 or DOWSIL 895.
- The each pane was support on 80mm by 32mm by 5mm Promatect H setting blocks.
- Clearance between glass and frame was 5mm. Edge Cover was 15mm.
- Glazing and frame details as described in Efectis test report No EFR-19-V-000119
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.

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CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/32-2 SWS butt jointed glass in steel partition system with 45° or 90° corners for periods of 30 minutes integrity and insulation. (Continued)



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Pyroguard T-EI30/32-2 SWS butt jointed glass in steel partition system with 45° or 90° corners for periods of 30 minutes integrity and insulation. (Continued)

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/32-2 SWS shown in the table below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1875mm wide (at 3270mm high) | 4087mm high (at 1500mm wide) | 6.13m ² |

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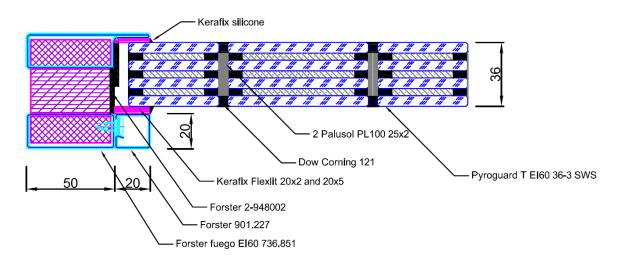
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Pyroguard T-EI60/36-3 SWS butt jointed glass in steel partition system for periods of 60 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a single clip-on bead system of 20mm x 20mm fixed every 400mm maximum and 60mm from corners maximum. The beads with 20mm by 5mm Kerafix Flexit and 20mm by 2mm on the fin both capped with Kerafix Silicone.
- The butt joints of the glazing assembled side by side with a layer of 25mm by 2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) on each pane and capped DOWSIL 121 or DOWSIL 895.
- Each pane was supported on 80mm by 36mm by 7.5mm Promatect H setting blocks.
- Clearance between glass and frame was 8mm. Edge Cover was 12mm.
- Glazing and frame details as described in Efectis test report No EFR-19-V-000117
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

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Pyroguard T-EI60/36-3 SWS butt jointed glass in steel partition system for periods of 60 minutes integrity and insulation. (Continued)

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/36-3 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 2100mm wide (at 3265mm high) | 3809mm high (at 1800mm wide) | 6.85m ² |

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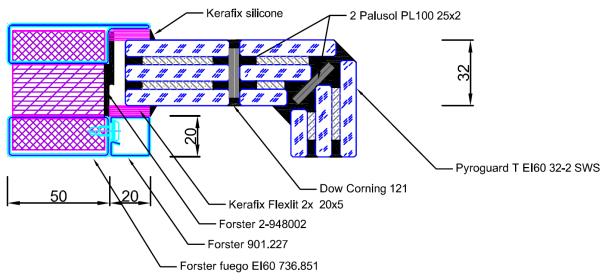
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Pyroguard T-El60/32-2 SWS butt jointed glass in steel partition system with 90° corners for periods of 60 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a double clip-on bead system of 20mm x 15mm fixed every 200mm maximum and 75mm from corners maximum. The beads with 15mm by 2mm Kerafix Flexit and capped with Kerafix Silicone.
- The butt joints of the glazing assembled with two layers of 25mm by 2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) and filled with DOWSIL 121. Straight and 90° angled joints may alternatively be filled with DOWSIL 895.
- Each pane was supported on 80mm by 32mm by 5mm Promatect H setting blocks.
- Clearance between glass and frame was 5mm. Edge Cover was 15mm.
- Glazing and frame details as described in Efectis test report No EFR-19-V-000119
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

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Pyroguard T-El60/32-2 SWS butt jointed glass in steel partition system with 90° corners for periods of 60 minutes integrity and insulation. (Continued)

This Certificate of Approval relates to the sizes of Pyroguard T-EI60/32-2 SWS when used in conjunction with the above system. The two panes making the 90° corner are limited to one of maximum size Pane A and one maximum size Pane B, see below.

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

| | Maximum Width | Maximum Height | Maximum Area |
|--------|---------------------------------|---------------------------------|--------------------|
| Pane A | 456mm wide (at 3270mm high) | 3542mm high (at 421mm wide) | 1.49m ² |
| Pane B | 1625mm wide (at 3270mm high) | 3542mm high (at 1500mm wide) | 5.13m ² |

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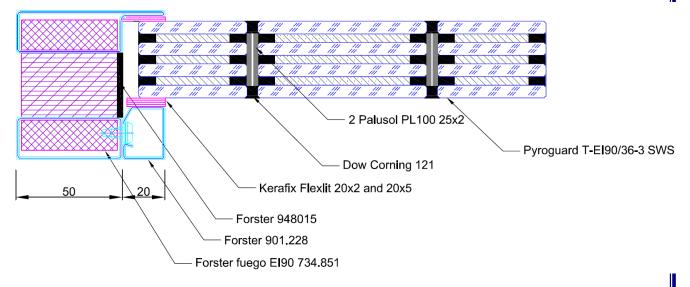
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Pyroguard T-EI90/36-3 SWS butt jointed glass in steel partition system for periods of 90 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a single clip-on bead system of 20x20mm fixed every 400mm maximum and 60mm from corners maximum. The beads with 20x5mm Kerafix Flexit and 20x2mm on the fin both capped with Kerafix Silicone.
- The butt joints of the glazing assembled side by side with a layer of 25x2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) on each pane and capped DOWSIL 121.
- Each pane was supported on 80x36x7.5mm Promatect H setting blocks.
- Clearance between glass and frame of minimum 5mm. Edge Cover of maximum 15mm.
- Glazing and frame details as described in Efectis test report No EFR-19-V-000117
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

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Pyroguard T-EI90/36-3 SWS butt jointed glass in steel partition system for periods of 90 minutes integrity and insulation. (Continued)

This Certificate of Approval relates to the sizes of Pyroguard T-EI90/36-3 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1880mm wide (at 3265mm high) | 3410mm high (at 1800mm wide) | 6.14m ² |

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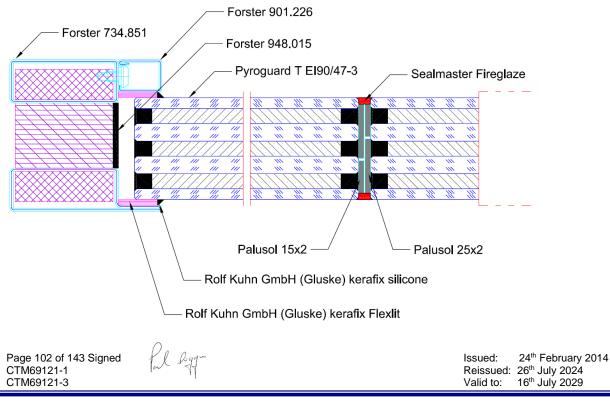
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Pyroguard T-EI90/47-3 SWS butt jointed glass in steel partition system for periods of 90 minutes integrity and insulation.

For this application the following conditions shall apply:

The glass may be installed into any previously tested or CERTIFIRE approved framing system (which is covered appropriately by test or Warringtonfire assessment evidence) using pressure plate glazing, screw-fixed or clip-on retaining beads utilising the following basic specification:

- Glazing with a single clip-on bead system of 15mm x 20mm fixed every 200mm maximum and 60mm from corners maximum. The beads and the fin with 20mm by 5mm capped with Kerafix Silicone.
- The butt joints of the glazing assembled side by side with a layer of 25mm by 2mm and 15mm by 2mm Palusol PL100 ODICE (aka Pyrostrip 100EC Palusol Mann McGowan) on each pane and capped with Sealmaster Fireglaze silicone.
- Each pane was supported on 80mm by 36mm by 8mm Promatect H setting blocks.
- Clearance between glass and frame of minimum 5mm. Edge cover of maximum 15mm.
- Glazing and frame details as described in Efectis test report No EFR-18-V-003116
- The top and bottom transoms supporting the butt jointed glazing must be fastened directly to the supporting structure.



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Pyroguard T-EI90/47-3 SWS butt jointed glass in steel partition system for periods of 90 minutes integrity and insulation. (Continued)

Where an alternative previously fire tested or CERTIFIRE approved insulated steel system is used the glazing system approved for that framing system may also be used.

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

This Certificate of Approval relates to the sizes of Pyroguard T-EI90/47-3 SWS shown in the diagram below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1900mm wide (at 3265mm high) | 3446mm high (at 1800mm wide) | 6.20m ² |

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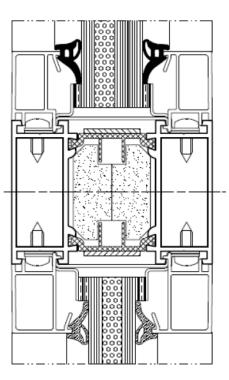
CERTIFICATE No CF 5204 PYROGUARD UK LTD

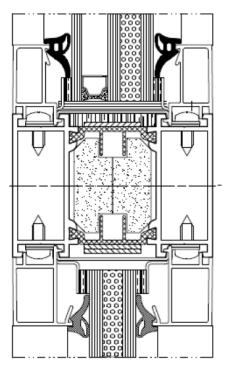
Pyroguard T-EI30/18-2 (including VI and VF Variants) within Aluprof MB-78 EI aluminium framing screen system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No's. EFR-14-V-003556A, EFR-14-V-003555 v003554 and EFR-14-V-003555





This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 (including VI and VF Variants) shown in the diagrams below, when used in conjunction with the above system.

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Pyroguard T-EI3018-2 (including VI and VF Variants) within Aluprof MB-78 EI aluminium framing screen system for periods of 30 minutes integrity and insulation

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1837mm wide (at 2800mm high) | 3500mm high (at 1470mm wide) | 5.14m ² |
| 2981mm wide (at 1500mm high) | 1875mm high (at 2385mm wide) | 4.47m ² |

| Maximum Width | Maximum Height | Maximum Area |
|-----------------|------------------|--------------------|
| 3582mm wide | 471mm high | 1.35m ² |
| (at 377mm high) | (at 2866mm wide) | 1.3511- |

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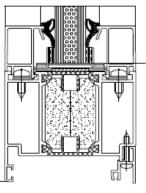
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Pyroguard T-EI30/18-2 (including VI variant) within Aluprof MB-78 EI aluminium framed door systems for periods of 30 minutes integrity and insulation

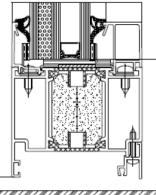
For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed doorset system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of doorset system.

Glazing and frame details are as described in Efectis test report No's. EFR-14-V-003552, EFR-14-V-003553 and EFR-15-V-003849



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Pyroguard T-EI30/18-2 (including VI variant) within Aluprof MB-78 EI aluminium framed door systems for periods of 30 minutes integrity and insulation

This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 (including VI variant) shown in the diagrams below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1297mm wide | 2594mm high | 2.90m ² |
| (at 2235mm high) | (at 1118mm wide) | 2.3011 |
| 1425mm wide | 3046mm high | 3.40m ² |
| (at 2385mm high) | (at 1118mm wide) | |

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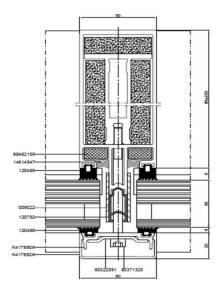
CERTIFICATE No CF 5204 PYROGUARD UK LTD

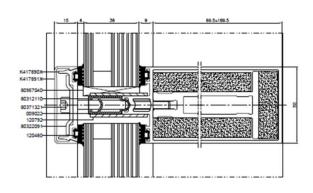
Pyroguard T-EI30/18-2 (including VI variant) within Aluprof MB-SR50N EI aluminium curtain walling systems for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-SR50N EI aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems.

Glazing and frame details are as described in Warringtonfire test report WF426341.





This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 (including VI variant) shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1875mm wide | 3407mm high | 5.11m ² |
| (at 2726mm high) | (at 1500mm wide) | |

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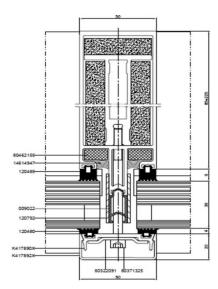
CERTIFICATE No CF 5204 PYROGUARD UK LTD

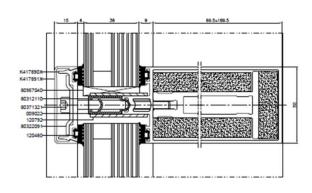
Pyroguard T-EI30/18-2 (including VI variant) within Aluprof MB-SR50N EI aluminium curtain walling systems for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-SR50N EI aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems.

Glazing and frame details are as described in Warringtonfire test report WF426341.





This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 (including VI variant) shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1550mm wide | 2817mm high | 4.22m ² |
| (at 2726mm high) | (at 1500mm wide) | |

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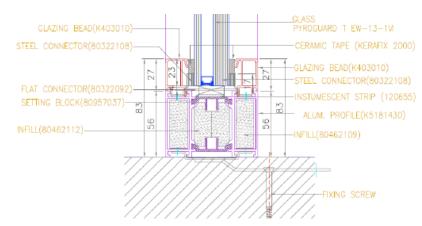
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI glass in Aluprof MB-78 El aluminium framed screen system with glazed panels for periods of 30 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium screen system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems

Glazing and frame details as described in Thomas Bell-Wright test report UE 087-1C



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

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1391mm wide | 3264mm high | 4.00m ² |
| (at 2880mm high) | (at 1228mm wide) | 4.00111- |

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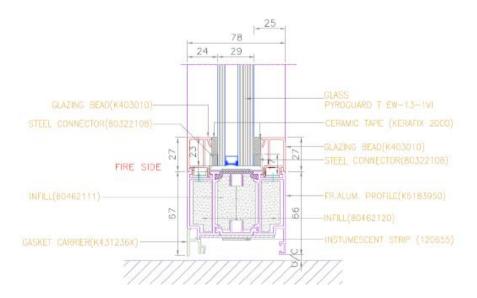
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI glass in Aluprof MB-78 EI aluminium framed door system with glazed panels for periods of 30 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium door system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems

Glazing and frame details as described in Thomas Bell-Wright test report UE 087-1C



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

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1232mm wide | 2511mm high | 2.73m ² |
| (at 2216mm high) | (at 1087mm wide) | 2.7511- |

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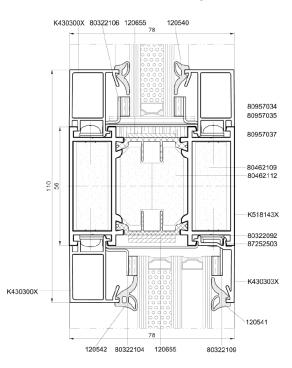
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 and 25-3 VI within Aluprof MB-78 EI aluminium framing screen system for periods of 30 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No's. EFR-16-V-002561 A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 and 25-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 3125mm wide | 1875mm high | 4.69m ² |
| (at 1500mm high) | (at 2500mm wide) | 4.0911- |

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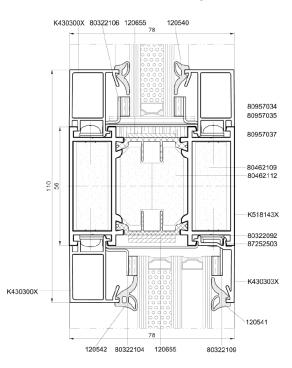
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 and 25-3 VI within Aluprof MB-78 EI aluminium framing screen system for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No's. EFR-16-V-002561 A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 and 25-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2542mm wide | 1525mm high | 3.81m ² |
| (at 1500mm high) | (at 2500mm wide) | 5.6111- |

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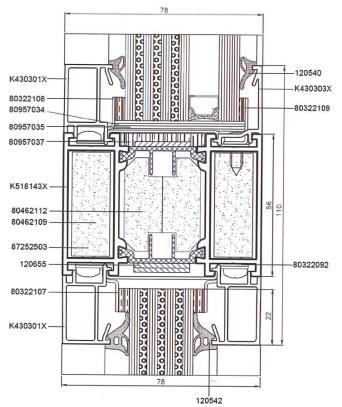
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 and 25-3 VI within Aluprof MB-78 EI aluminium framing screen system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No's. EFR-14-V-003557A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 and 25-3 VI shown in the diagrams below, when used in conjunction with the above system. The aspect ratio of the glass may be unlimited within these aperture dimensions.

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1573mm wide | 2996mm high | 4.40m ² |
| (at 2800mm high) | (at 1470mm wide) | 4.4011- |

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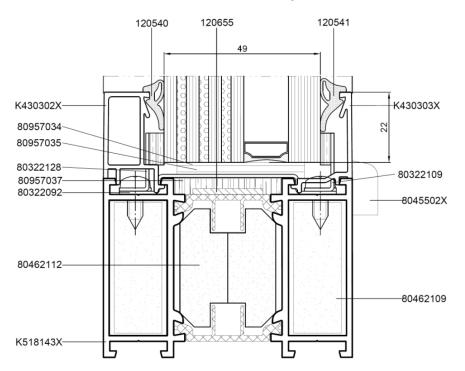
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 and 25-3 VI IGUs within Aluprof MB-78 EI aluminium framing single pane screen system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed single pane screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No's. EFR-18-V-003590 A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 and 25-3 VI 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 2751mm wide | 1722mm high | 4.06m ² |
| (at 1476mm high) | (at 2358mm wide) | 4.0611- |

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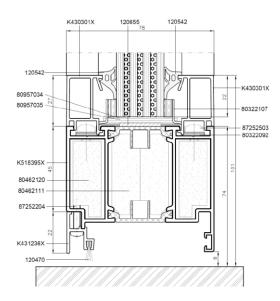
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within Aluprof MB-78 El aluminium framed doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed doorset system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of doorset system.

Glazing and frame details are as described in Efectis test report EFR-16-V-002562 A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1256mm wide | 2672mm high | 2.96m ² |
| (at 2358mm high) | (at 1108mm wide) | 2.9011- |

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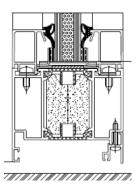
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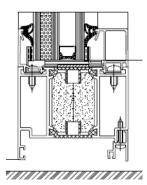
Pyroguard T-EI60/25-3 VI IGUs within Aluprof MB-78 EI aluminium framed door systems for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-78 EI aluminium framed doorset system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of doorset system.

Glazing and frame details are as described in Efectis test report No. EFR-15-V-000202





This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1118mm wide (at 2358mm high) | 2358mm high (at 1118mm wide) | 2.64m ² |

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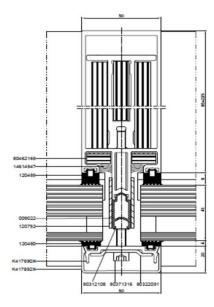
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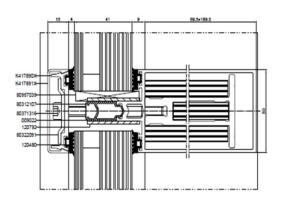
Pyroguard T-EI60/25-3 VI IGUs within Aluprof MB-SR50N EI aluminium curtain walling systems for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within an Aluprof MB-SR50N EI aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems.

Glazing and frame details are as described in Warringtonfire test report WF426340.





This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1625mm wide | 2966mm high | 4.45m ² |
| (at 2738mm high) | (at 1500mm wide) | 4.45111- |

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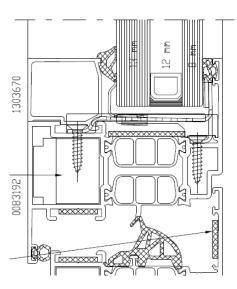
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI IGUs within Reynaers CS 77 FP EI30 aluminium framing opening window system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed window as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in DMT test report DMT-DP-50-826



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

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|-----------------|---------------------|
| 934mm wide | 1788mm high | 1.56 m ² |
| (at 1677mm high) | (at 876mm wide) | 1.50 III- |

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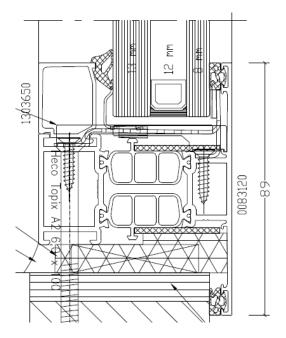
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EW30/13-1 VI IGUs within Reynaers CS 77 FP EI30 aluminium framing screen system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in DMT test report DMT-DP-50-826



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

This configuration is only approved as an IGU and only with the Pyroguard T-EW30/13-1 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1471mm wide (at 2860mm high) | 3050mm high (at 1379mm wide) | 4.20m ² |
| 1525mm wide | 432mm high | 0.61m ² |
| (at 405mm high) | (at 1430mm wide) | 0.0111 |

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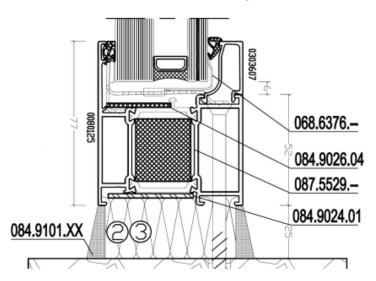
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI IGUs within Reynaers CS 77 FP EI30 aluminium framing screen system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-18-V-004086-A



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 (including VI variant) shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1544mm wide | 4012mm high | 4.95m ² |
| (at 3210mm high) | (at 1235mm wide) | 4.95111- |

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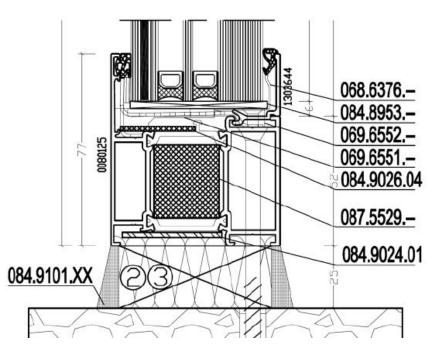
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 TVI (TGUs) within Reynaers CS 77 FP EI30 aluminium framing screen system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-18-V-004086-A



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 TVI (TGUs) only, shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area | |
|------------------|------------------|--------------------|--|
| 1900mm wide | 4012mm high | 6.10m ² | |
| (at 3210mm high) | (at 1520mm wide) | 6.1011- | |

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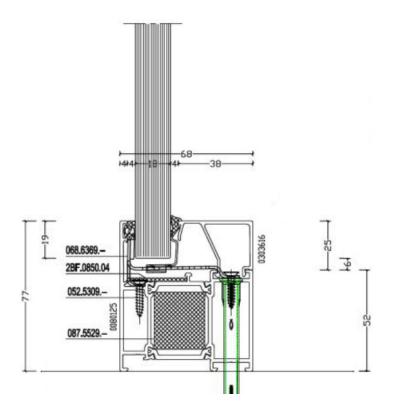
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 within Reynaers CS 77 FP EI30 aluminium framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed screens as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-20-V-000079



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1775mm wide (at 2726mm high) | 3407mm high (at 1420mm wide) | 4.84m ² |

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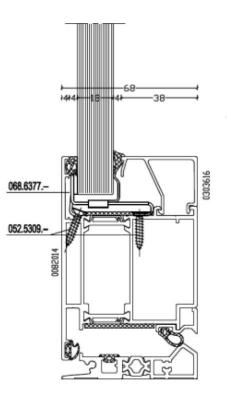
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 within Reynaers CS 77 FP EI30 aluminium framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI30 aluminium framed doorsets as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-20-V-000079



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1642mm wide | 3230mm high | 4.24m ² |
| (at 2584mm high) | (at 1314mm wide) | 4.24111- |

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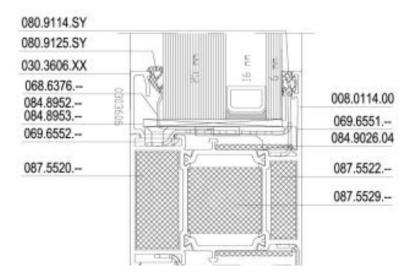
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 VI IGUs within Reynaers CS 77 FP EI60 aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI60 aluminium framed screens as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-18-V-004069-A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI IGUs shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area | |
|------------------|------------------|--------------------|--|
| 1775mm wide | 3313mm high | 4.97m ² | |
| (at 2800mm high) | (at 1500mm wide) | 4.9711- | |

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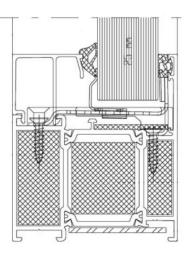
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within Reynaers CS 77 FP El60 aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP El60 aluminium framed screens as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-20-V-000080



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1514mm wide | 2907mm high | 4.13m ² |
| (at 2726mm high) | (at 1420mm wide) | |

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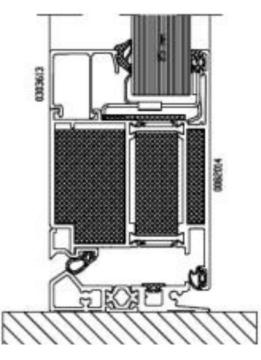
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within Reynaers CS 77 FP El60 aluminium framed doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CS 77 FP EI60 aluminium framed doorsets as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis test report No. EFR-20-V-000080



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area | |
|------------------|------------------|--------------------|--|
| 1401mm wide | 2756mm high | 3.62m ² | |
| (at 2584mm high) | (at 1314mm wide) | 3.02111- | |

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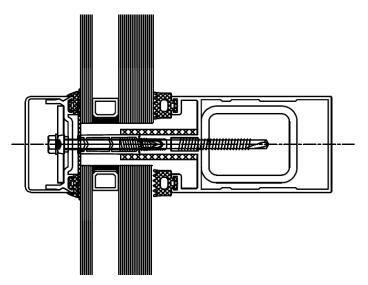
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within Reynaers CW 50-FP profile aluminium curtain wall system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CW 50-FP aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems.

Glazing and frame details are as described in Warringtonfire test report No. 438579/R Issue 3



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI shown in the diagrams below, when used in conjunction with the above system.

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

| Maximum Width | Maximum Height | Maximum Area | |
|------------------|------------------|--------------------|--|
| 2047mm wide | 3581mm high | 5.86m ² | |
| (at 2865mm high) | (at 1638mm wide) | 5.0011- | |

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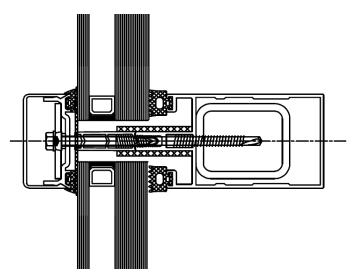
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within Reynaers CW 50-FP profile aluminium curtain wall system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Reynaers CW 50-FP aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling systems.

Glazing and frame details are as described in Warringtonfire test report No. 438579/R Issue 3



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI shown in the diagrams below, when used in conjunction with the above system.

This configuration is only approved as an IGU and only with the Pyroguard T-EI30/18-2 on the exposed side.

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

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1720mm wide | 3008mm high | 4.92m ² |
| (at 2865mm high) | (at 1638mm wide) | 4.92111- |

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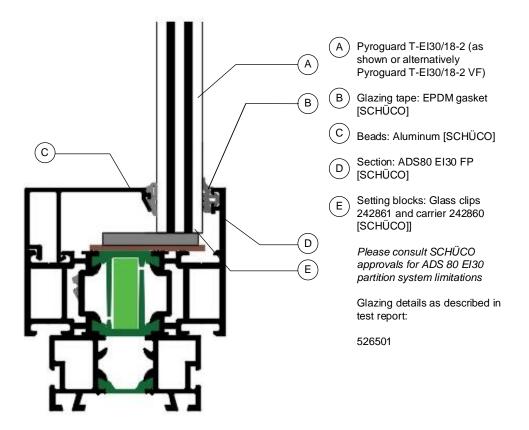
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 within Schüco aluminium framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 30 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Test Report WF No. 526501/R



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 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 Width | Maximum Height | Maximum Area |
|-----------|------------------|------------------|--------------------|
| Portrait | 2082mm wide | 3501mm high | 6.12m ² |
| | (at 2939mm high) | (at 1748mm wide) | 0.12111- |
| Landscape | 2868mm wide | 455mm high | 1.31m ² |
| | (at 455mm high) | (at 2868mm wide) | 1.31111- |

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for lagg-

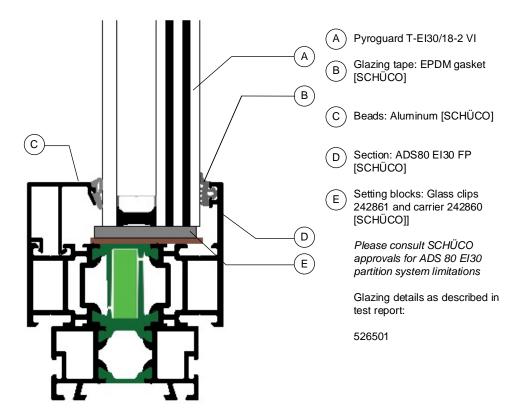
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within Schüco aluminium framed screens for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 30 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Test Report WF No. 526501/R



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI 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 Width | Maximum Height | Maximum Area |
|-----------|------------------|------------------|--------------------|
| Portrait | 2082mm wide | 3501mm high | 6.12m ² |
| | (at 2939mm high) | (at 1748mm wide) | 0.1211 |
| Landscape | 2868mm wide | 455mm high | 1.31m ² |
| | (at 455mm high) | (at 2868mm wide) | 1.3111- |

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Re ligg-

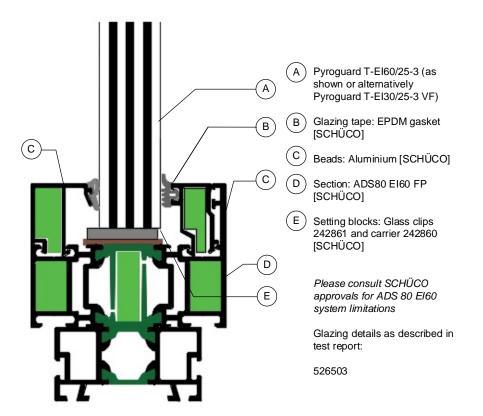
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI60/25-3 within Schüco aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 60 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Test Report WF No. 526503/R



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 2076mm wide (at 2936mm high) | 3495mm high (at 1743mm wide) | 6.09m ² |
| Landscape | 2868mm wide (at 767mm high) | 767mm high (at 2868mm wide) | 2.20m ² |

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Re ligg-

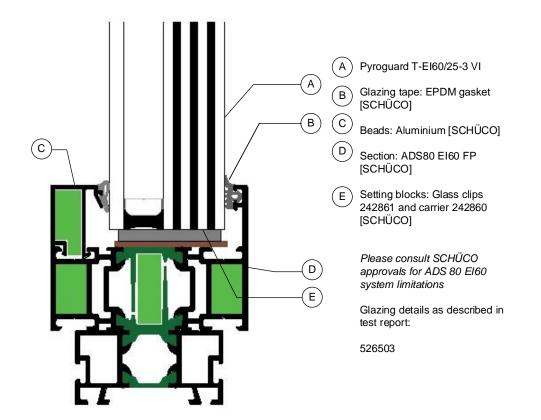
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 VI within Schüco aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 60 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Test Report WF No. 526503/R



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|-----------|------------------|------------------|--------------------|
| Portrait | 2076mm wide | 3495mm high | 6.09m ² |
| | (at 2936mm high) | (at 1743mm wide) | 6.091112 |
| Landscape | 2868mm wide | 767mm high | 2.20m ² |
| - | (at 767mm high) | (at 2868mm wide) | 2.2011- |

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Park ligg-

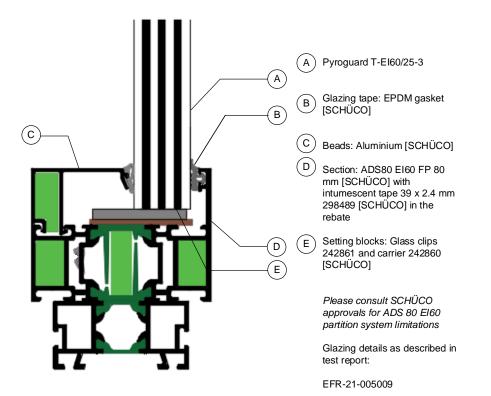
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within Schüco aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 60 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis Test Report No. EFR-21-005009



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1596mm wide (at 3290mm high) | 3915mm high (at 1341mm wide) | 5.25m ² |
| Landscape | 1764mm wide (at 1338mm high) | 1596mm high (at 1479mm wide) | 2.36m ² |

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Park ligg-

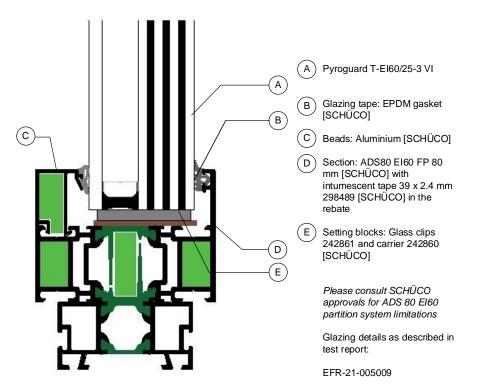
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 VI within Schüco aluminium framed screens for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco ADS 80 FR 60 aluminium framed screen as detailed diagrammatically below. Please consult the frame manufacturer for full specification of framing system.

Glazing and frame details are as described in Efectis Test Report No. EFR-21-005009



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1596mm wide (at 3290mm high) | 3915mm high (at 1341mm wide) | 5.25m ² |
| Landscape | 1764mm wide (at 1338mm high) | 1596mm high (at 1479mm wide) | 2.36m ² |

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Park ligg-

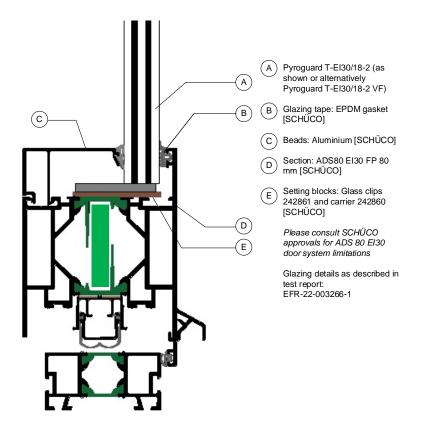
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 within Schüco aluminium framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schuco ADS 80 FR 30 aluminium framed doorset as detailed diagrammatically below. This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Glazing and frame details are as described in Efectis test report No. EFR-22-003266-C



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 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.

Park ligg-

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1298mm wide (at 2697mm high) | 2972mm high (at 1178mm wide) | 3.50m ² |

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24th February 2014 Issued: Reissued: 26th July 2024 16th July 2029 Valid to:

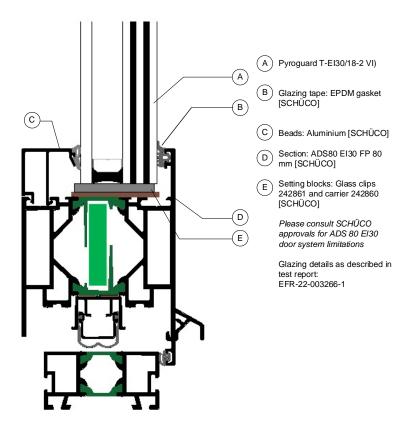
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within Schüco aluminium framed doorsets for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schuco ADS 80 FR 30 aluminium framed doorset as detailed diagrammatically below. This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Glazing and frame details are as described in Efectis test report No. EFR-22-003266-C



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI 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.

Park ligg-

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1298mm wide | 2972mm high | 3.50m ² |
| (at 2697mm high) | (at 1178mm wide) | 3.5011- |

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Issued: 24th February 2014 Reissued: 26th July 2024 Valid to: 16th July 2029

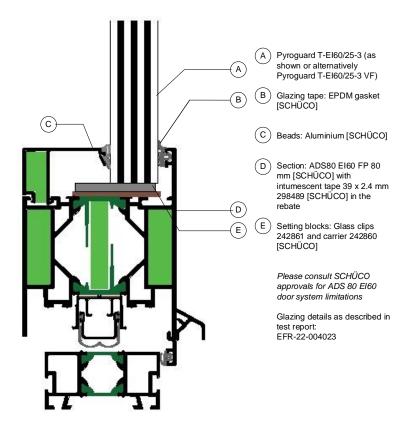
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within Schüco aluminium framed doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schuco ADS 80 FR 60 aluminium framed doorset as detailed diagrammatically below. This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Glazing and frame details are as described in Efectis test report No. EFR-22-004023



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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.

Pal ligg-

| Maximum Width | Maximum Height | Maximum Area |
|---------------------------------|---------------------------------|--------------------|
| 1298mm wide (at 2373mm high) | 2613mm high (at 1179mm wide) | 3.08m ² |

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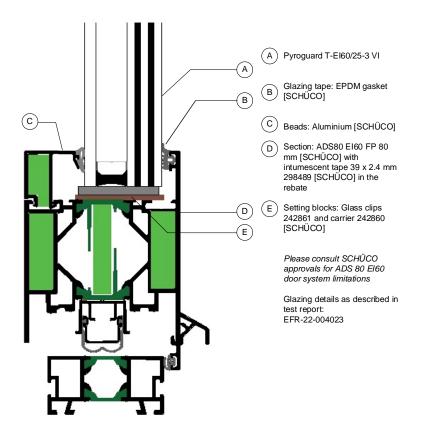
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 VI within Schüco aluminium framed doorsets for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schuco ADS 80 FR 60 aluminium framed doorset as detailed diagrammatically below. This certification is applicable to the glass and glazing only; consult the test reports and approvals of the system provider to ensure that the application is within tested or approved scope.

Glazing and frame details are as described in Efectis test report No. EFR-22-004023



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI 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.

Pul ligg-

| Maximum Width | Maximum Height | Maximum Area |
|------------------|------------------|--------------------|
| 1298mm wide | 2613mm high | 3 08m ² |
| (at 2373mm high) | (at 1179mm wide) | 3.08111- |

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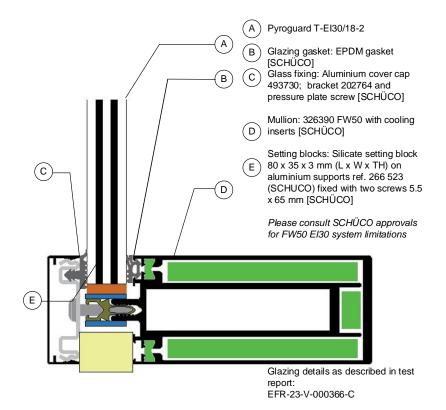
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 within a Schüco profile aluminium curtain wall system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco FW 50+ BF FR 30 aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling system.

Glazing and frame details are as described in Test Report No. EFR-23-V-000366-C



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 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.

| Portrait 1680mm wide (at 3024mm high) 3600mm high (at 1411mm wide) 5.08m ² Landscape 1742mm wide 878mm high 1.28m ² | | Maximum Width | Maximum Height | Maximum Area |
|---|-----------|---------------|----------------|--------------------|
| Landscape 1742mm wide 878mm high | Portrait | | 5 | 5.08m ² |
| (at 734mm high) (at 1458mm wide) | Landscape | | 5 | 1.28m ² |

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ful ligg-

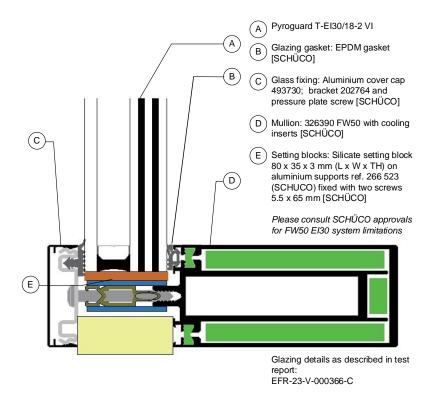
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within a Schüco profile aluminium curtain wall system for periods of 30 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco FW 50+ BF FR 30 aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling system.

Glazing and frame details are as described in Test Report No. EFR-23-V-000366-C



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI 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.

ful ligg-

| | Maximum Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1680mm wide (at 3024mm high) | 3600mm high (at 1411mm wide) | 5.08m ² |
| Landscape | 1742mm wide (at 734mm high) | 878mm high (at 1458mm wide) | 1.28m ² |

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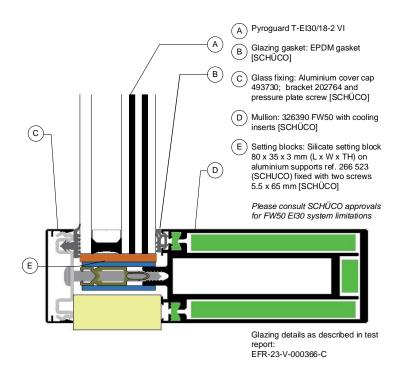
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-EI30/18-2 VI within a Schüco profile aluminium curtain wall system for periods of 60 minutes integrity and 30 minutes insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco FW 50+ BF FR 30 aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling system.

Glazing and frame details are as described in Test Report No. EFR-23-V-000366-C



This Certificate of Approval relates to the sizes of Pyroguard T-EI30/18-2 VI shown in the table below, when used in conjunction with the above system.

This configuration is only approved as an IGU and only with the Pyroguard T-EI30/18-2 on the unexposed side.

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

| | Maximum Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1680mm wide (at 3024mm high) | 3600mm high (at 1411mm wide) | 5.08m ² |
| Landscape | 1742mm wide (at 734mm high) | 878mm high (at 1458mm wide) | 1.28m ² |

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Park ligg-

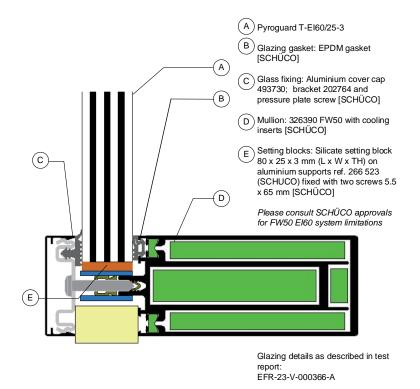
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 within a Schüco profile aluminium curtain wall system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco FW 50+ FR 60 aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling system.

Glazing and frame details are as described in Test Report No. EFR-23-V-000366-A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1680mm wide (at 3024mm high) | 3600mm high (at 1411mm wide) | 5.08m ² |
| Landscape | 1742mm wide (at 734mm high) | 878mm high (at 1458mm wide) | 1.28m ² |

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Park ligg-

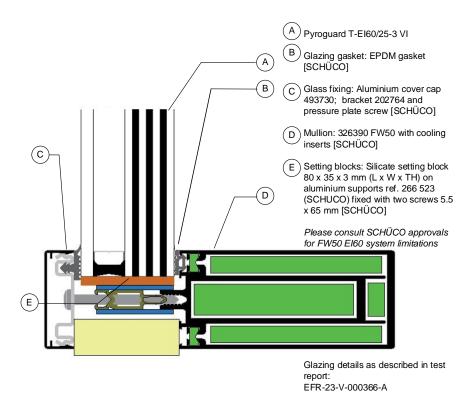
CERTIFICATE No CF 5204 PYROGUARD UK LTD

Pyroguard T-El60/25-3 VI within a Schüco profile aluminium curtain wall system for periods of 60 minutes integrity and insulation

For this application the following conditions shall apply:

The glass shall be glazed within a Schüco FW 50+ FR 60 aluminium curtain walling system as detailed diagrammatically below. Please consult the frame manufacturer for full specification and approved scope of curtain walling system.

Glazing and frame details are as described in Test Report No. EFR-23-V-000366-A



This Certificate of Approval relates to the sizes of Pyroguard T-EI60/25-3 VI 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 Width | Maximum Height | Maximum Area |
|-----------|---------------------------------|---------------------------------|--------------------|
| Portrait | 1680mm wide (at 3024mm high) | 3600mm high (at 1411mm wide) | 5.08m ² |
| Landscape | 1742mm wide (at 734mm high) | 878mm high (at 1458mm wide) | 1.28m ² |

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Park ligg-