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## CERTIFICATE OF APPROVAL

### No CF 316

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

## MANN MCGOWAN FABRICATIONS LIMITED

**Intumescent House, 4 Brook Trading Estate, Deadbrook Lane,  
 Aldershot, Hampshire, GU12 4XB  
 Tel: 01252 333601 Fax: 01252 322724**

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

**Pyroglaze 30, Pyroglaze 60,  
 Pyroglaze Channel &  
 Pyrostrip 300 and Pyrostrip  
 500PSA Glazing Systems**

### TECHNICAL SCHEDULE

**TS25 Fire Resistant Glass,  
 Glazing Systems and  
 Materials**

**Signed and sealed for and on behalf of CERTIFIRE**



Sir Ken Knight  
 Chairman  
**WCL Impartiality Committee**



Paul Duggan  
 Certification Manager  
**Warrington Certification Ltd**



Issued: 26<sup>th</sup> October 2004  
 Reissued: 11<sup>th</sup> September 2015  
 Valid to: 10<sup>th</sup> September 2020

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## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

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### MANN MCGOWAN PYROGLAZE 30, PYROGLAZE 60, PYROGLAZE CHANNEL & PYROSTRIP 300 and PYROSTRIP 500PSA GLAZING SYSTEMS

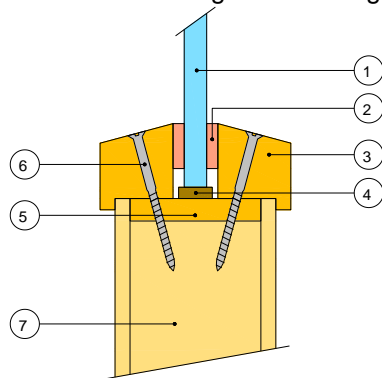
- 1) This Certificate of Approval relates to the contribution to fire resistance of the Mann MCGowan 'Pyroglaze 30, Pyroglaze 60, Pyroglaze Channel, Pyrostrip 300 and Pyrostrip 500PSA' Glazing Systems when used in timber frames or timber door leaves, for periods of 30 or 60 minutes integrity (dependent on system), as defined in BS 476: Part 22: 1987 subject to the undermentioned conditions.
  
- 2) This product is approved on the basis of:
  - i) A design appraisal against TS21
  - ii) Initial type testing
  - iii) Manufacturing frequency checks
  - iv) Clear and unambiguous labeling of seals
  - v) Certification of Quality Management System to ISO9001 : 2008
  - vi) Inspection and surveillance of factory production control.
  
- 3) This Certificate of Approval must be read in conjunction with CERTIFIRE Technical Schedule TS25, Fire Resistant Glass, Glazing Systems and materials.
  
- 4) The Glazing Systems may be fitted in the manner described in this Certificate of Approval, where it is intended to fit the glazing system into previously tested door leaves, particular aspects of the door assembly shall be maintained. These are described below but are not exhaustive:
  - a) The doorset, including door frame and associated building hardware, should have achieved at least 30 or 60 minutes integrity (dependent on glazing system) when tested or subsequently assessed by one of the laboratories approved by CERTIFIRE as acceptable for this purpose to BS 476: Part 22: 1987.
  - b) If the proposed doorset is to be used in double-leaf configuration, the test or assessment evidence should be applicable to double-leaf configurations.
  - c) Likewise, if the proposed doorset is to be used in the unlatched configuration the available evidence should be applicable to unlatched doorsets.
  - d) The proposed doorset should also have included a glazed aperture or apertures of the intended size, shape, area and number.
  - e) 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.
  
- 5) If glazed in this way the proposed installation of the Pyroglaze 30, Pyroglaze 60, Pyroglaze Channel Pyrostrip 300 & Pyrostrip 500PSA' Glazing Systems is not expected to affect the fire resistance performance of the leaf.

# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

### Mann McGowan Pyroglaze 30 in timber based doorsets for periods of 30 minutes integrity

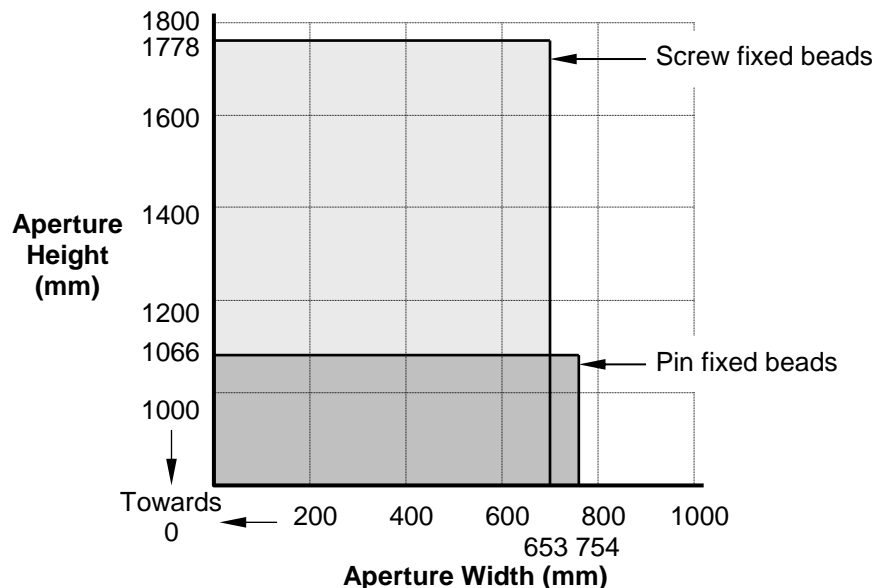
The glazing system shall be installed within a previously fire tested or CERTIFIRE approved timber based doorsets utilising the following basic specification:



- 1 6 mm thick Pyroshield glass
- 2 Pyroglaze 30 glazing seal
- 3 21 mm high by 22 mm wide with 15° chamfer (including 6 mm high by 6 mm wide bolection) hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- 4 Non-combustible / hardwood setting blocks
- 5 6 mm thick hardwood aperture liner
- 6 38 mm long steel screws at 150 mm centres (40° to glass)
- 7 Nominally 44 mm thick FD30 door leaf

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

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



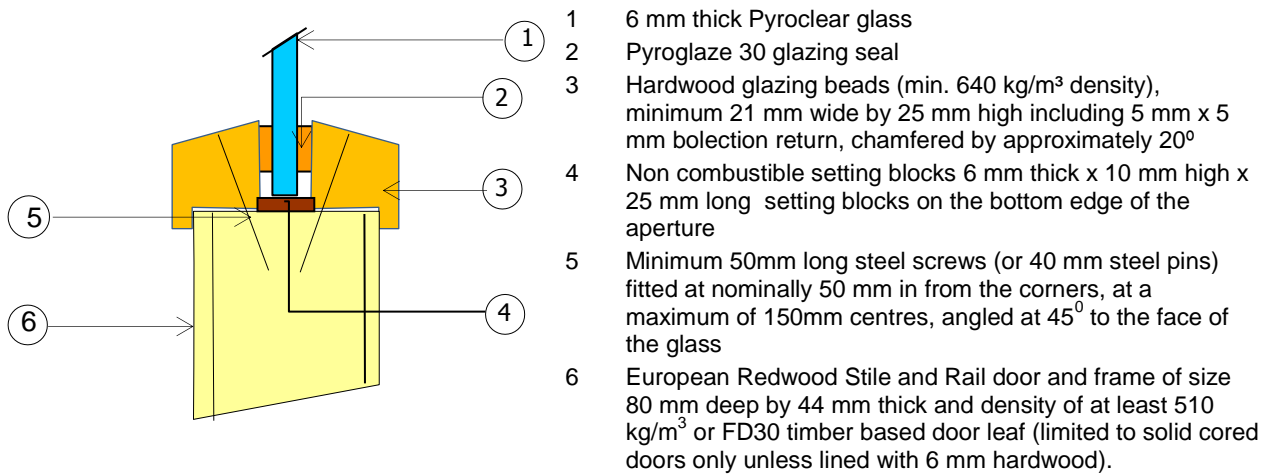
**Maximum Permitted Glazed Aperture Dimensions**

# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

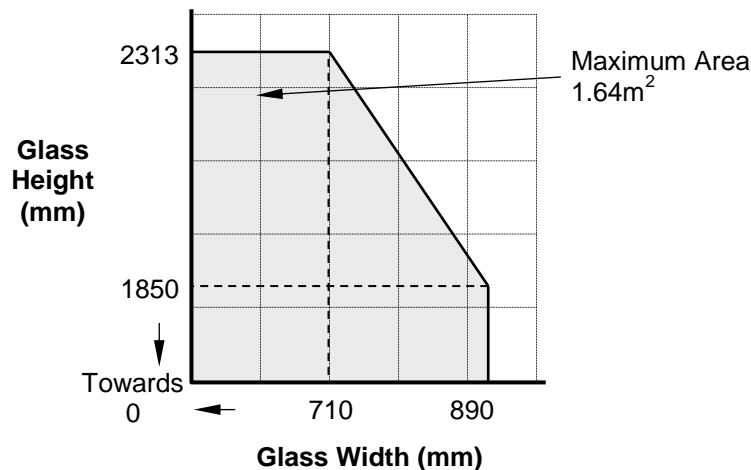
### Mann McGowan Pyroglaze 30 in timber based doorsets for periods of 30 minutes integrity

The glazing system shall be installed within a previously fire tested or CERTIFIRE approved timber based doorsets utilising the following basic specification:



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

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



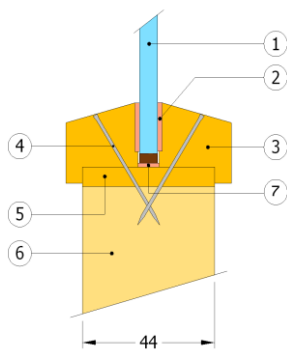
## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 or Pyroglaze Channel in timber based doorsets for periods of 30 minutes integrity**

For this application the following conditions shall apply:

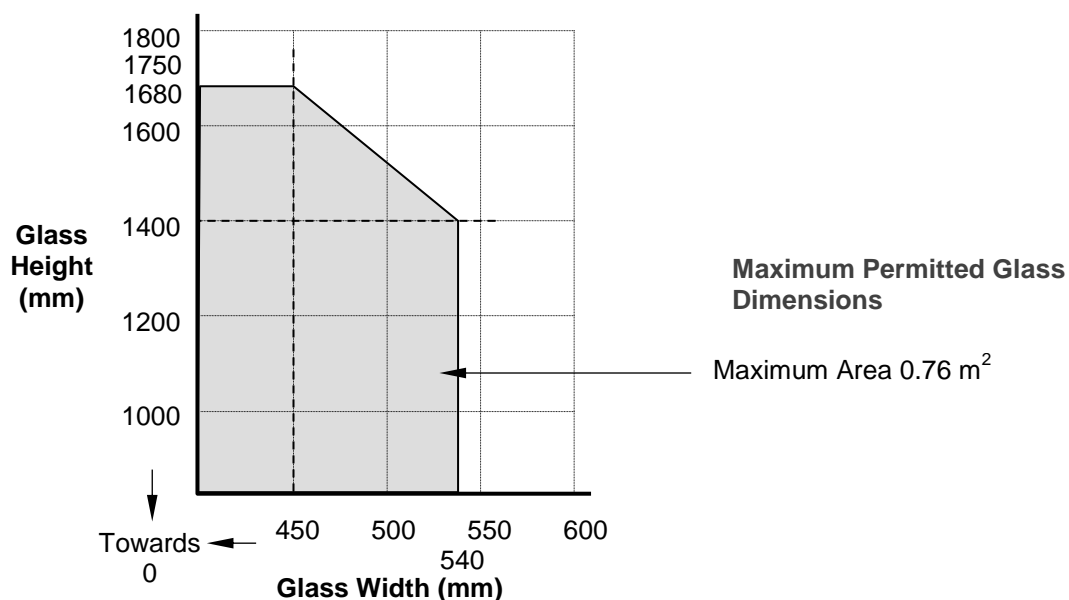
The glass shall be glazed utilising the following basic specification:



- 1 ESG PYROTECH™ 630 glass including laminated options
- 2 Mann McGowan Pyroglaze 30 or Mann McGowan Pyroglaze Channel
- 3 20 mm high by 22 mm wide including a 5x5 mm bolection return (chamfered by 15°) softwood, MDF or hardwood glazing beads, minimum density 510 kg/m<sup>3</sup>.
- 4 40 mm long Ø1.5 mm steel pins at 150 mm centres and 50 mm from corners (35° to glass).
- 5 No liner required (except where specifically required in the door certificate).
- 6 Nominally 44 mm thick FD30 timber based door leaf (thicker leaf may be required to accommodate laminated glass with required bead dimensions).
- 7 Optional non-combustible setting blocks (not required).

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

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



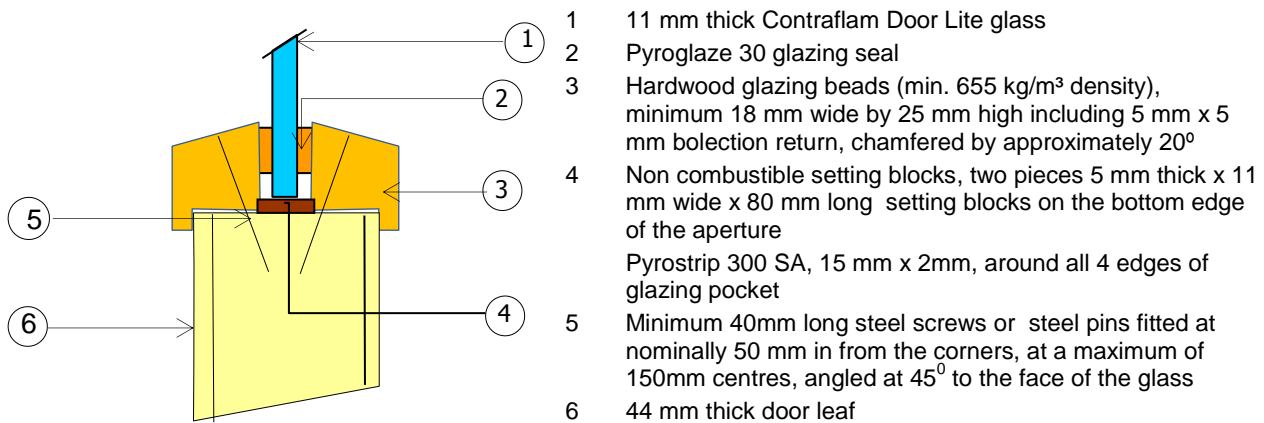
# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 in timber based doorsets for periods of 30 minutes integrity**

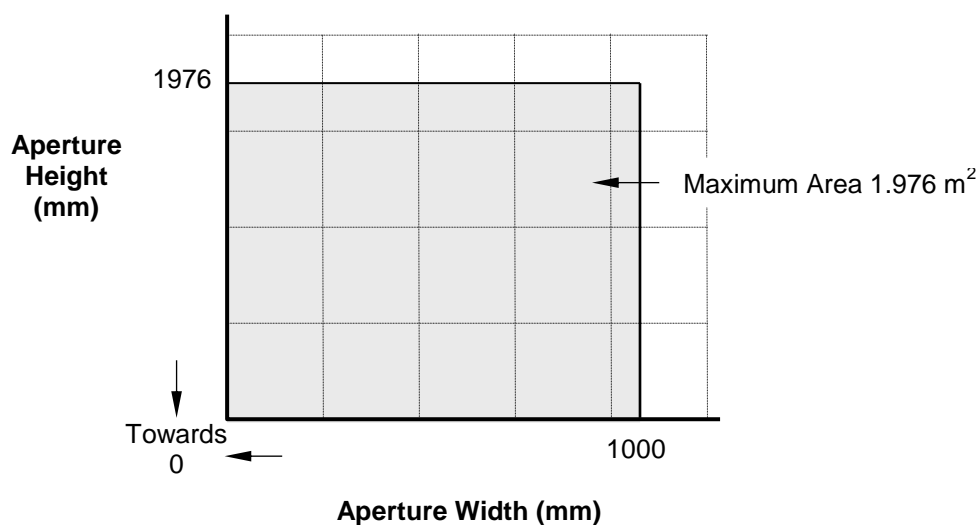
For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



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

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



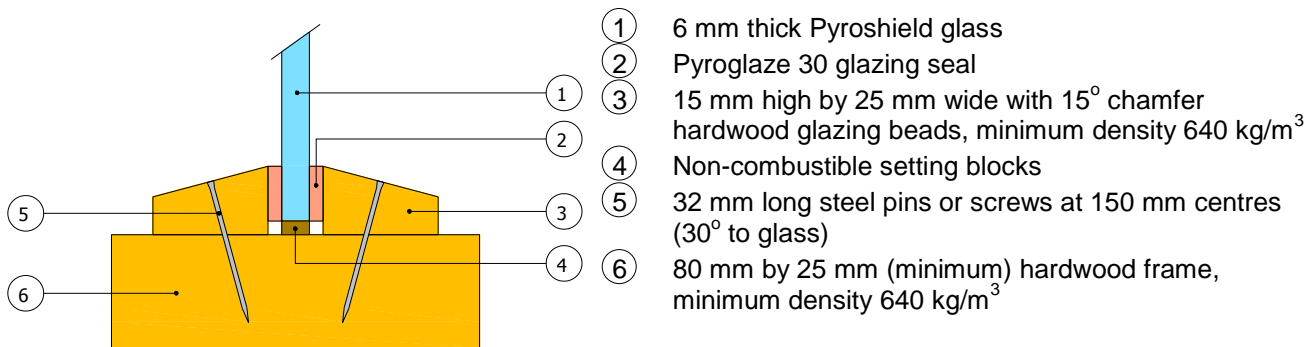
# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

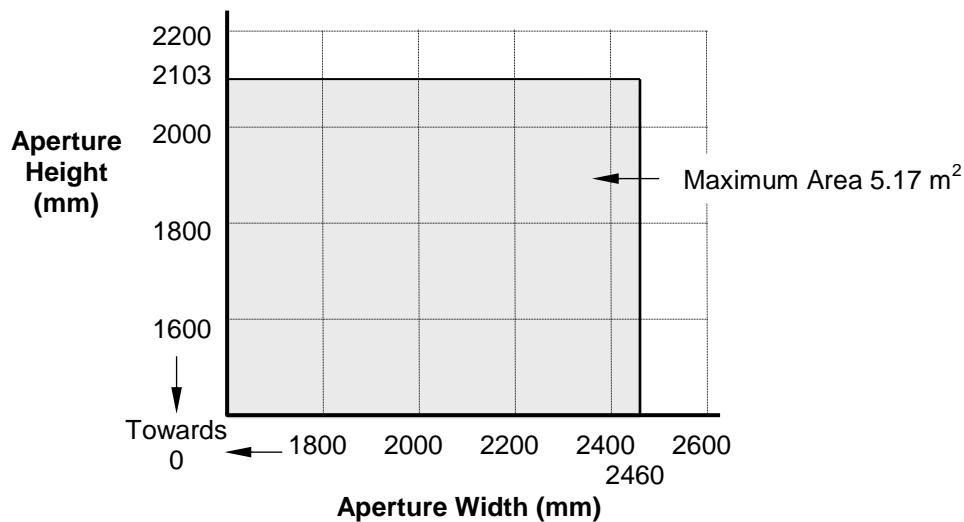
**Mann McGowan Pyroglaze 30 in timber framed screens for periods of 30 minutes integrity**

For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



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



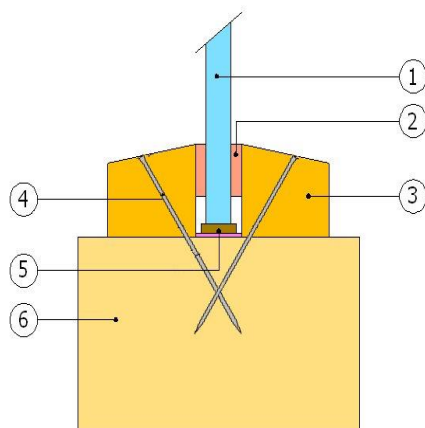
# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 in timber framed screens for periods of 30 minutes integrity**

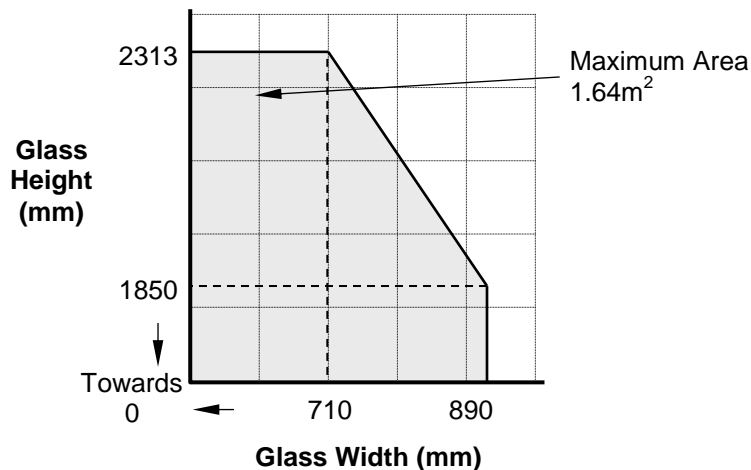
For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



- 1 6 mm thick Pyroclear glass
- 2 Pyroglaze 30 glazing seal
- 3 Hardwood glazing beads (min. 640 kg/m<sup>3</sup> density), minimum 25mm wide by 20mm high, chamfered by approximately 20°
- 4 Minimum 50mm long steel screws fitted at nominally 50 mm in from the corners, at a maximum of 150mm centres, angled at 45° to the face of the glass
- 5 Non Combustible, 6 mm thick x 10 mm high x 40 mm long setting blocks fitted along the bottom edge of the glass
- 6 European Redwood frame of size 80 mm deep by 44 mm thick and density of at least 510 kg/m<sup>3</sup>

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



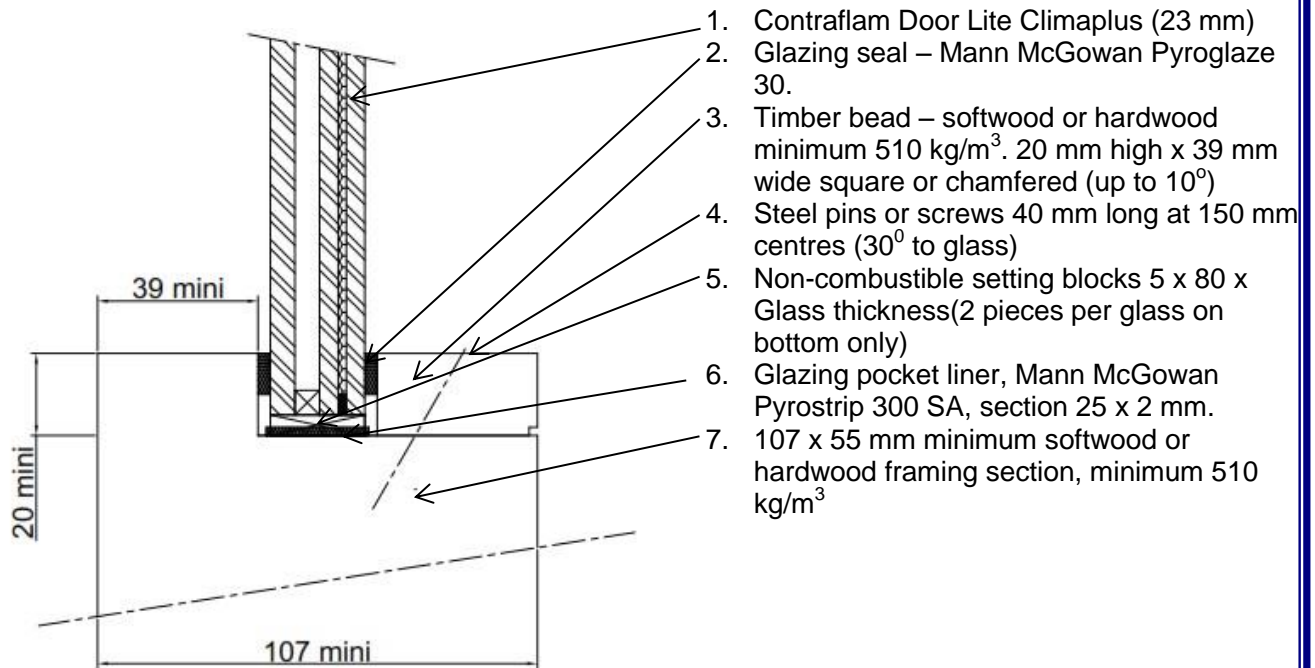


## CERTIFICATE No CF 316

### MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 in timber based screens for periods of 30 minutes integrity**

The glass shall be glazed utilising the following basic specification:



The screens shall be no greater than 4000 mm high unless suitable tie backs and/or fire protected structural supports are provided.

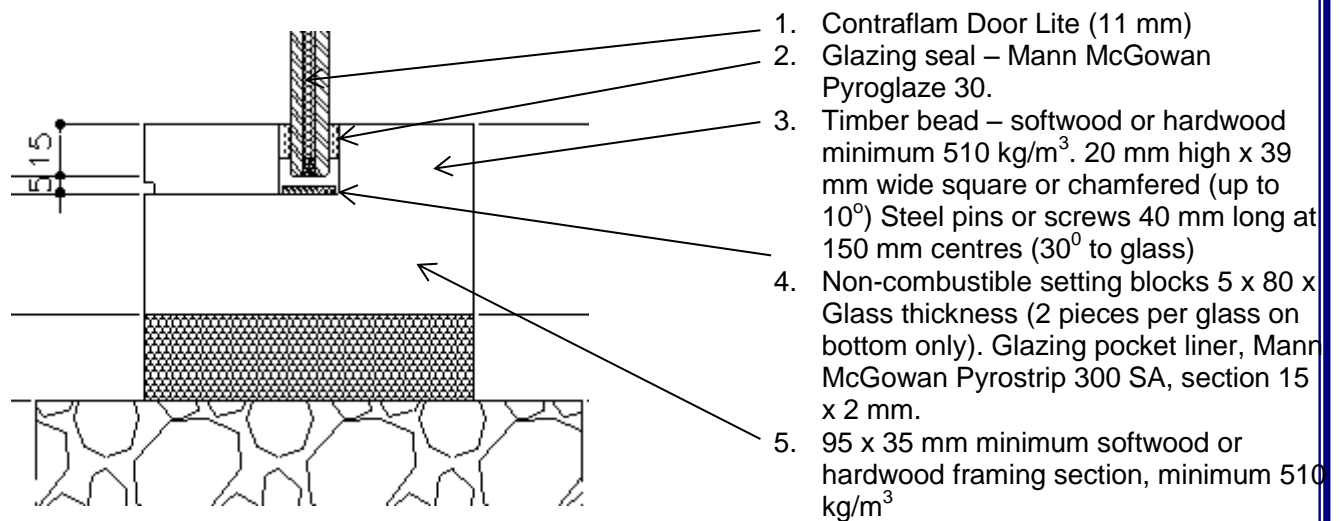
Table 2 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	Max. Height (mm)	Max. Area (m <sup>2</sup> )
1100 (at 2200 high)	2200 (at 1100 wide)	2.42

## CERTIFICATE No CF 316

### MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 in timber based screens for periods of 30 minutes integrity**

The glass shall be glazed utilising the following basic specification:



The screens shall be no greater than 4000 mm high unless suitable tie backs and/or fire protected structural supports are provided.

Table 2 – Maximum Permitted Glass Dimensions		
Max. Width (mm)	Max. Height (mm)	Max. Area (m <sup>2</sup> )
1100 (at 2200 high)	2200 (at 1100 wide)	2.42

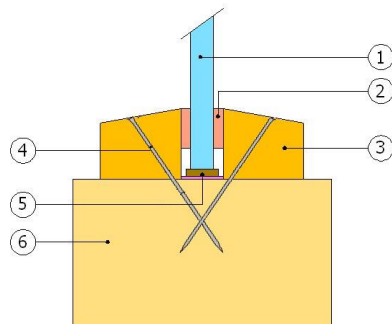
## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 30 and Pyroglaze Channel in timber based screens for periods of 30 minutes integrity**

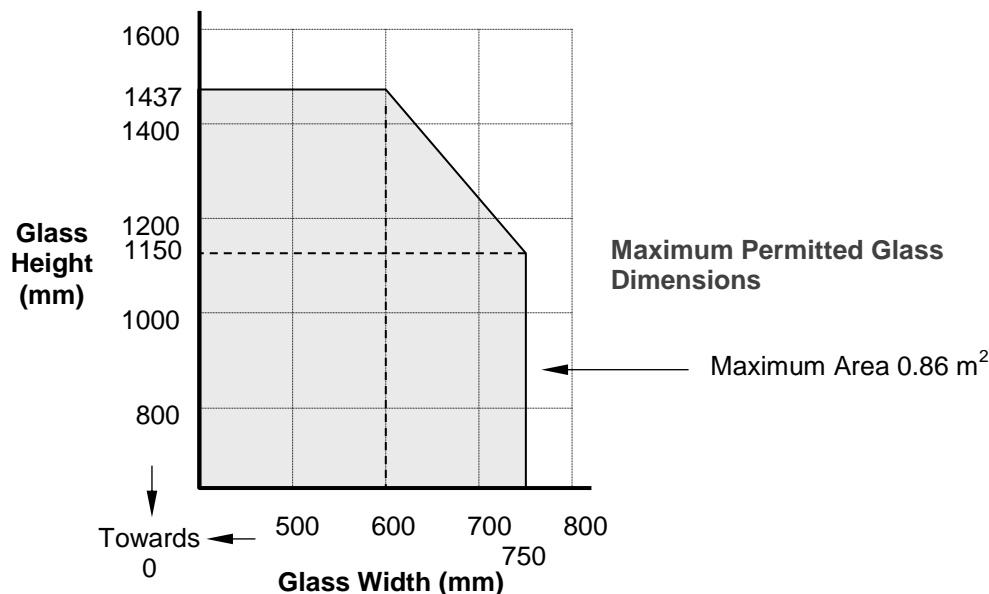
For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



- 1 ESG PYROTECH™ 630 glass (including laminated options)
- 2 Mann McGowan Pyroglaze 30 or Mann McGowan Pyroglaze Channel
- 3 15mm high, X 22mm long (chamfered by 15°) softwood, MDF or hardwood glazing beads, minimum density 510 kg/m<sup>3</sup>. The beads shown in the drawing can be extended in width to form a bolection bead.
- 4 40 mm long Ø1.5 mm steel pins at 150 mm centres and 50 mm from corners (35° to glass).
- 5 Optional non-combustible setting blocks (not required).
- 6 90 mm by 40 mm (minimum) hardwood framing sections, minimum density 640 kg/m<sup>3</sup>.

This Certificate of Approval relates to the sizes of ESG PYROTECH™ 630 glass shown below, when used in conjunction with the above system. The maximum permitted overall screen height is 4000 mm.



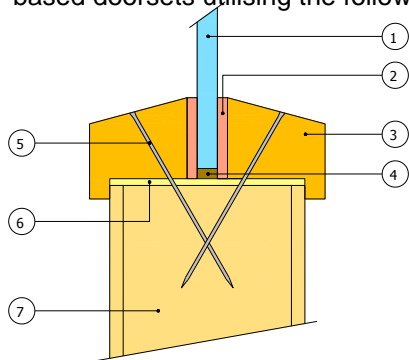
The aspect ratio of the glass may be unlimited within these aperture dimensions. This system may also be included in previously tested doorset fan and side-lights.

# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

### Mann McGowan Pyroglaze 60 in timber based doorsets for periods of 60 minutes integrity

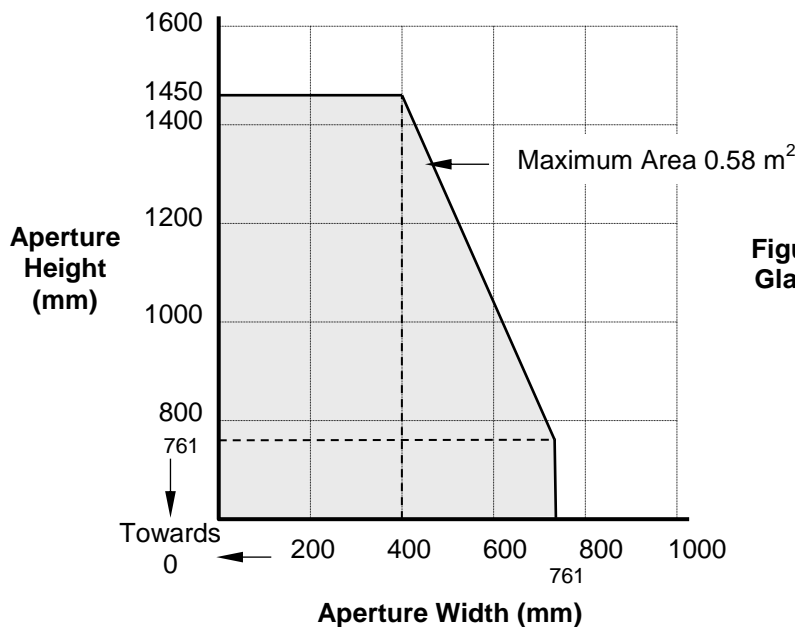
The glazing system shall be installed within a previously fire tested or CERTIFIRE approved timber based doorsets utilising the following basic specification:



- ① 6 mm thick Pyroshield glass
- ② 25 mm wide by 3 mm thick Pyroglaze 60 glazing seal
- ③ 25 mm high by 29 mm wide with 15° chamfer (plus a 5 mm high by 6 mm wide bolection) hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- ④ Non-combustible / hardwood setting blocks
- ⑤ 60 mm long steel pins or screws at 80 mm centres (40° to glass)
- ⑥ 54 mm wide by 2 mm thick Palusol aperture liner
- ⑦ Nominally 54 mm thick FD60 door leaf

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

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



**Figure 3. Maximum Permitted Glazed Aperture Dimensions**

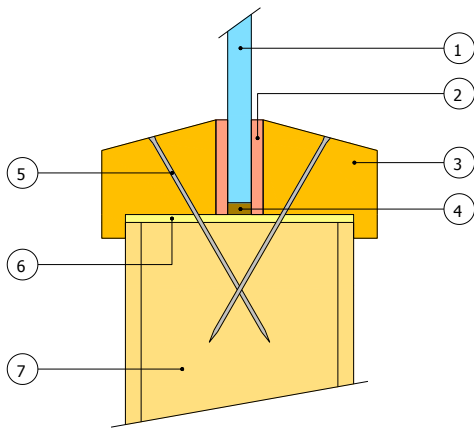
# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

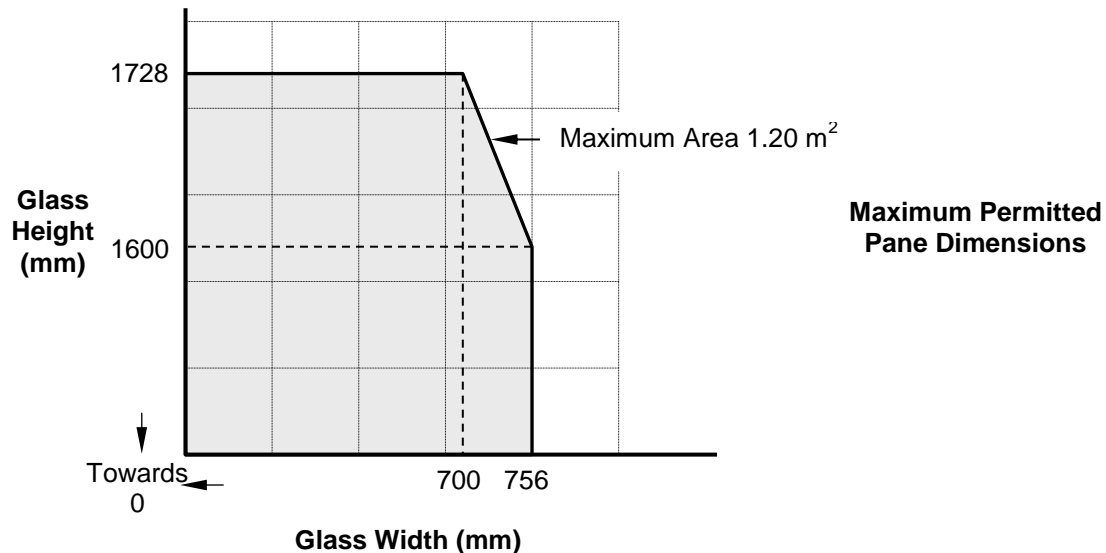
**Mann McGowan Pyroglaze 60 in timber based doorsets for periods of 60 minutes integrity**

The glass shall be glazed utilising the following basic specification:

- 1 6 mm thick PYRAN S glass
- 2 25 mm wide by 3 mm thick Pyroglaze 60 glazing seal
- 3 25 mm high by 29 mm wide with 20° chamfer (plus a 4 mm high by 4 mm wide bolection) hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- 4 Non-combustible / hardwood setting blocks
- 5 60 mm long steel pins or screws at 80 mm centres (40° to glass)
- 6 54 mm wide by 2 mm thick Pyrostrip 100 ECSA liner aperture liner
- 7 Nominally 54 mm thick FD60 door leaf



This Certificate of Approval relates to the sizes of PYRAN S glass shown below, when used in conjunction with the system detailed within the preceding figures:



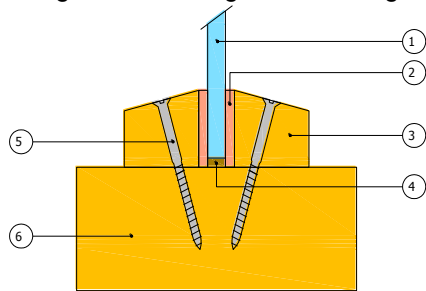
# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze 60 in timber framed fixed lights<sup>(1)</sup> for periods of 60 minutes integrity**

For this application the following conditions shall apply:

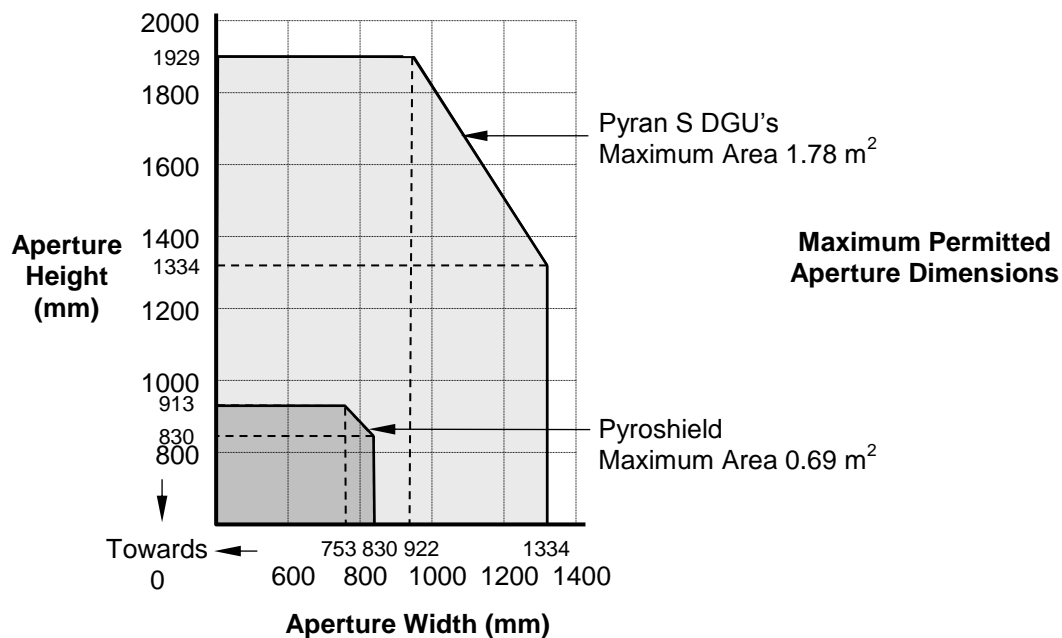
The glass shall be glazed utilising the following basic specification:



- ① 6 mm thick Pyroshield glass <sup>(2)</sup>
- ② 25 mm wide by 3 mm thick Pyroglaze 60 glazing seal
- ③ 25 mm high by 25 mm wide with 15° chamfer hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- ④ Non-combustible setting blocks
- ⑤ 50 mm long steel pins at 100 mm centres or 56 mm long steel screws at 200 mm centres (30° to glass)
- ⑥ 94 mm by 40 mm (minimum) hardwood frame, minimum density 640 kg/m<sup>3</sup>

- <sup>(1)</sup> Multi-paned glazed screen assemblies (i.e those including transoms/mullions) are not permitted.
- <sup>(2)</sup> System may also comprise a DGU comprising 6 mm thick Pyran S – air space – 4 mm float glass, where the Pyran S glass is installed to the ‘non-fire risk side’ of the assembly.

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



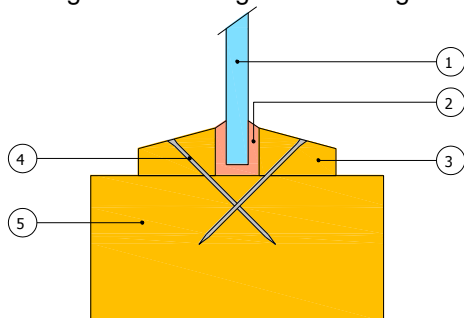
## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze Channel in timber framed fixed lights<sup>(1)</sup> for periods of 30 minutes integrity**

For this application the following conditions shall apply:

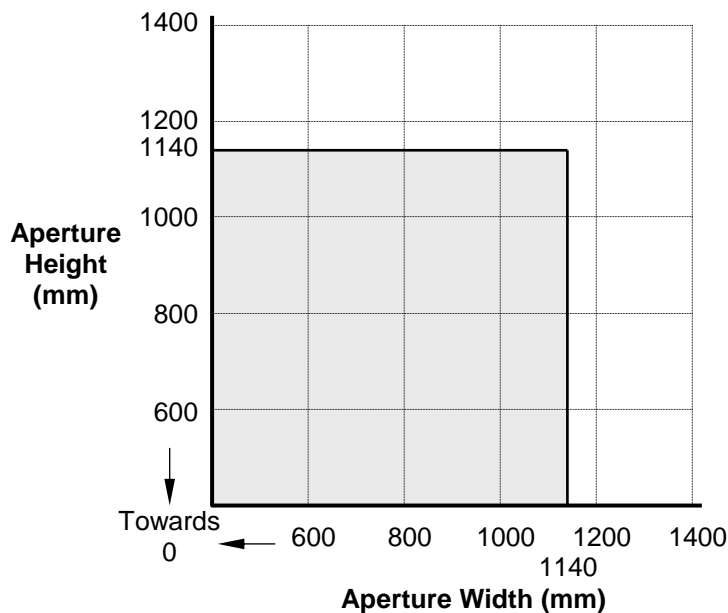
The glass shall be glazed utilising the following basic specification:



- ① 6 mm thick Pyroshield glass
- ② Pyroglaze Channel
- ③ 13 mm high by 21 mm wide with 15° chamfer hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- ④ 40 mm long steel pins or screws at 150 mm centres (45° to glass)
- ⑤ 80 mm by 40 mm (minimum) hardwood frame, minimum density 640 kg/m<sup>3</sup>

<sup>(1)</sup> Multi-paned glazed screen assemblies (i.e those including transoms/mullions) are not permitted.

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

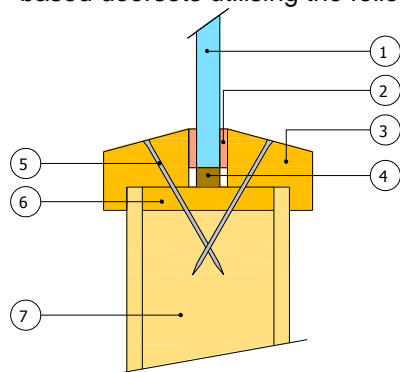


## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

### Mann McGowan Pyrostrip 300 in timber based doorsets for periods of 30 minutes integrity

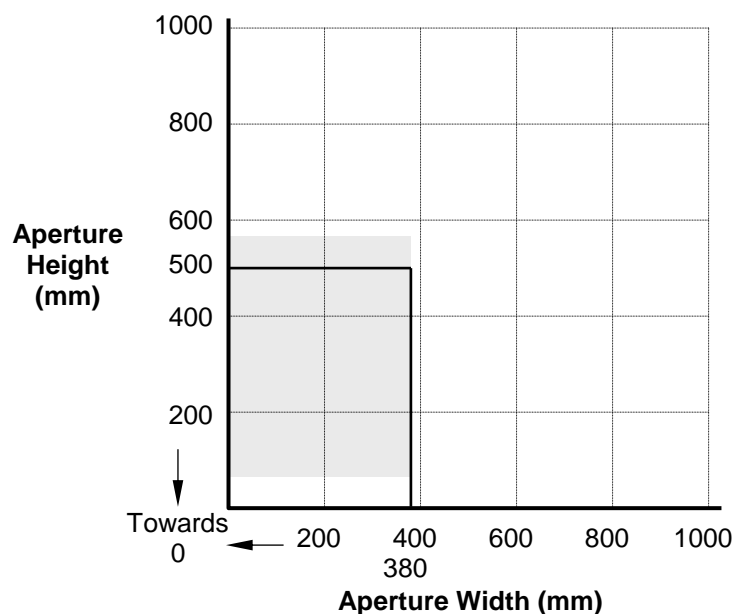
The glazing system shall be installed within a previously fire tested or CERTIFIRE approved timber based doorsets utilising the following basic specification:



- ① 6 mm thick Pyroshield glass
- ② 10 mm wide by 2 mm thick Pyrostrip 300 glazing seal
- ③ 21 mm high by 23 mm wide with 15° chamfer (including 6 mm high by 6 mm wide bolection) hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- ④ Non-combustible / hardwood setting blocks
- ⑤ 40 mm long steel pins or screws at 100 mm centres (30° to glass)
- ⑥ 6 mm thick hardwood aperture liner
- ⑦ Nominally 44 mm thick FD30 door leaf

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

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



**Maximum Permitted Glazed Aperture Dimensions**

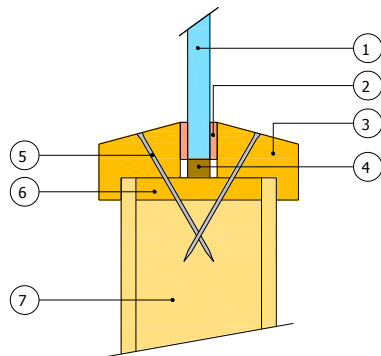


# CERTIFICATE No CF 316

## MANN MCGOWAN FABRICATIONS LIMITED

### Mann McGowan Pyroglaze 30 in timber based doorsets for periods of 30 minutes integrity

The glazing system shall be installed within a previously fire tested or CERTIFIRE approved timber based doorsets utilising the following basic specification:

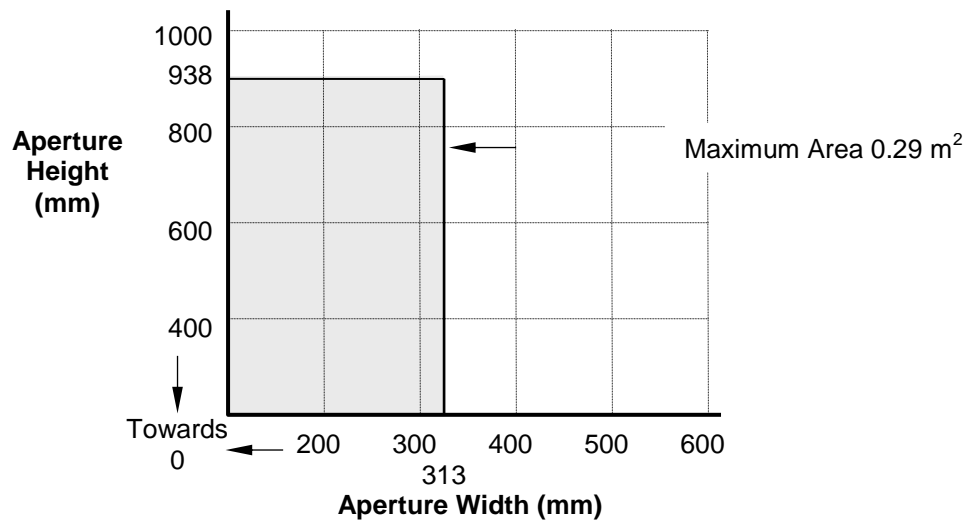


- 1 7 mm Pyrodur Plus or 10 mm Pyrodur glass
- 2 Pyroglaze 30 glazing seal
- 3 21 mm high by 21 mm wide with 15° chamfer (including a 6 mm high by 6 mm wide bolection) hardwood glazing beads, minimum density 640 kg/m<sup>3</sup>
- 4 Non-combustible / hardwood setting blocks
- 5 6 mm thick hardwood aperture liner\*
- 6 40 mm long steel pins at 150 mm centres (30° to glass)
- 7 Nominally 44 mm thick FD30 door leaf

\*Liner not required for solid core door constructions

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

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



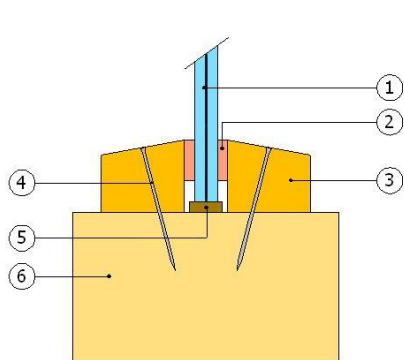
## CERTIFICATE No CF 316

# MANN MCGOWAN FABRICATIONS LIMITED

**Mann McGowan Pyroglaze P500 in timber based doorsets for periods of 30 minutes integrity**

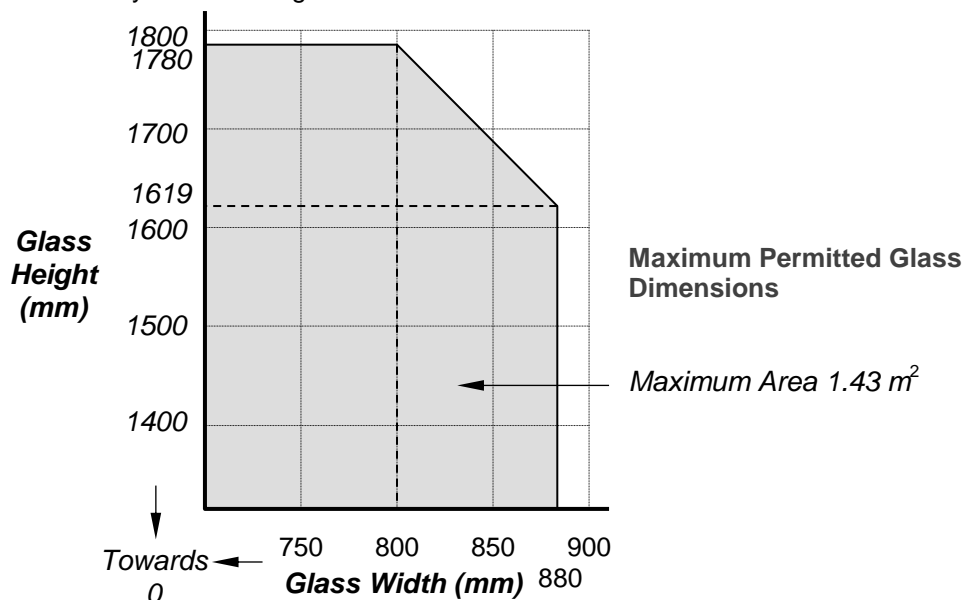
For this application the following conditions shall apply:

The glass shall be glazed utilising the following basic specification:



- ① Pyroguard EW30 Clear or Wired
- ② 15 mm by 4 mm Pyroglaze P500 intumescent seal
- ③ 15 mm high by 15 mm wide square or chamfered (up to 30°) hardwood glazing beads, minimum density 530 kg/m<sup>3</sup>.
- ④ 30 mm long No. 8 steel screws at 200 mm centres (30° to glass)
- ⑤ Hardwood or Non-combustible setting blocks
- ⑥ 66 mm by 57 mm (minimum) hardwood framing sections, minimum density 530 kg/m<sup>3</sup>

This Certificate of Approval relates to the sizes of Pyroguard EW30 Clear/Wired glass below, when used in conjunction with the above system. The maximum permitted overall screen dimensions are 1900 mm wide by 2500 mm high.






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**CERTIFICATE No CF 316**  
**MANN MCGOWAN FABRICATIONS LIMITED**

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**Further Information**

Further information regarding the details contained in this data sheet may be obtained from Mann McGowan Fabrications Limited (Tel: 01252 333601).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).

