Pyroguard
A Saverto Company

Guidelines for installers

All Pyroguard products

2026 EDITION

Contents

1 Introduction 2

1.1 Introduction 2

1.2 Abbreviations used in this document 2

2 Before installation 3

3 Glazing media 4

3.1 Silicone 4

3.2 Glazing tape and intumescent 4

4 Setting blocks 4

4.1 Introduction 4

4.2 Type and size 4

4.3 Positioning 6

5 Edge cover 7

6 Expansion gap 7

7 Positioning the pane 8

7.1 Handling Glass 8

7.2 Manual Handling 8

7.2.1 Working on Sites 8

7.3 Framing considerations 9

8 Fire direction 10

9 Orientation 10

9.1 Which way up? 10

9.2 Which way around? 12

9.2.1 Internal 12

9.2.2 External 12

10 Storage and Handling 15

1 Introduction

1.1 Introduction

This document functions as a generalised guide to the glazing of Pyroguard products to ensure good fire performance and to ensure compliance with warranty conditions. Key parameters are edge cover and expansion gap. Each are determined by the depth of the rebate in the framing system and the glass pane dimension.

Extensive fire testing has been conducted on Pyroguard products to fire resistance standards including but not limited to; EN 1364-1; EN 1634-1; EN 1364-3; BS 476; and NEN 6069. All Pyroguard products are CE Marked to the appropriate product standard following Initial Type Testing (ITT).

1.2 Abbreviations used in this document

AoC	Attestation of Conformity
BS	British Standard
CE	Conformitè Europèenne
CPR	Construction Products Regulation
DGU	Double Glazing Unit
DoP	Declaration of Performance
EN	Euro Norm
FPC	Factory Production Control
GGF	Glass & Glazing Federation
IGU	Insulating Glass Unit
ITT	Initial Type Testing
PPE	Personal Protective Equipment
TVI	Triple Glazed Unit (TGU)
UKCA	United Kingdom Conformity Assessed
UL	Underwriters Laboratories
VF	Laminated Glass
VI	Insulated Glazed Unit (IGU, DGU)

2 Before installation

Before installation check the edges of the panes for damage that might have occurred during shipment. Cracks are likely to propagate during the installation.

Please note, for Pyroguard Advance and Pyroguard Rapide the edge barrier tape *within the laminate* must be removed by trimming 10 mm from the edge of the laminate prior to installation (see Figure 1 and Pyroguard Licence Holder Manual available on request). Do not install glazing should this tape remain; it is not fire resistant.



Figure 1 Remove edge tape by cutting the laminate

Pyroguard Advance and Pyroguard Rapide Plus should be installed with Aluminium (PAL type) protective edge tape in place (See Operating Procedure Edge taping available from https://www.pyroguard.eu/downloads/our-guidance-documentation/). Please ensure this tape is not damaged during installation.

Familiarise yourself with the glass composition prior to installing. If the glazing to be installed is asymmetrical, which is often the case for VI (IGU) and VF (laminated) versions there may be a glass face that is designated as the fire risk side (see section 8). Functionality in the event of fire may be compromised if the orientation is not respected.

3 Glazing media

3.1 Silicone

A wet seal (e.g. silicone) should not be used at the edges of the glass without verification. Consult Pyroguard for a list of compatible seals. Wet seals may be used for capping the bead if approved by Certification.

3.2 Glazing tape and intumescent

Consult Pyroguard's approvals and system guides for the tested glazing tapes and rebate liners. This data is available via the Pyroguard TechLibrary: https://techlibrary.pyroguard.eu:5443/index.php/login.

When glazing into the frame of a metal system house, refer to the system supplier's documentation. Often the glazing tape and intumescent are defined and supplied alongside the frame.

The system will not be signed off by building control without respecting the precise materials as tested or approved by assessment.

4 Setting blocks

4.1 Introduction

Setting blocks should be used to position the glass centrally within the aperture, ensuring adequate edge cover and sufficient clearance for thermal expansion. They also help maintain stable positioning, improve fire performance, raise the glass within the rebate to protect it from moisture run-off, and conceal any visible edge sealant.

4.2 Type and size

Unless stated otherwise in an approval, setting blocks should be made from hardwood or non-combustible materials (e.g. Flammi 12 [KuhnOdice], Vermiculite, Promatect H, Supalux).

Blocks should be sized to span the width of the glass without interfering with the glazing tape, gasket or glazing bead (see Figure 2 and Figure 3). They should not be adhered in place using sealant without first referring to a list of compatible sealants. They should be nominally 80-100 mm wide.

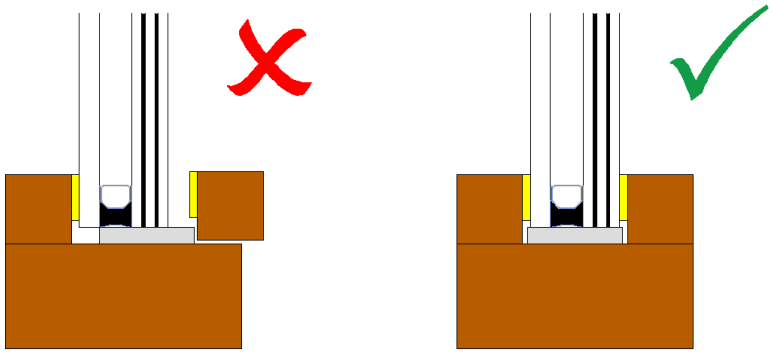


Figure 2 Example of incorrect and correct installation in timber frame. Setting block should cover the full depth of the pane and the setting block should not interfer with the bead.

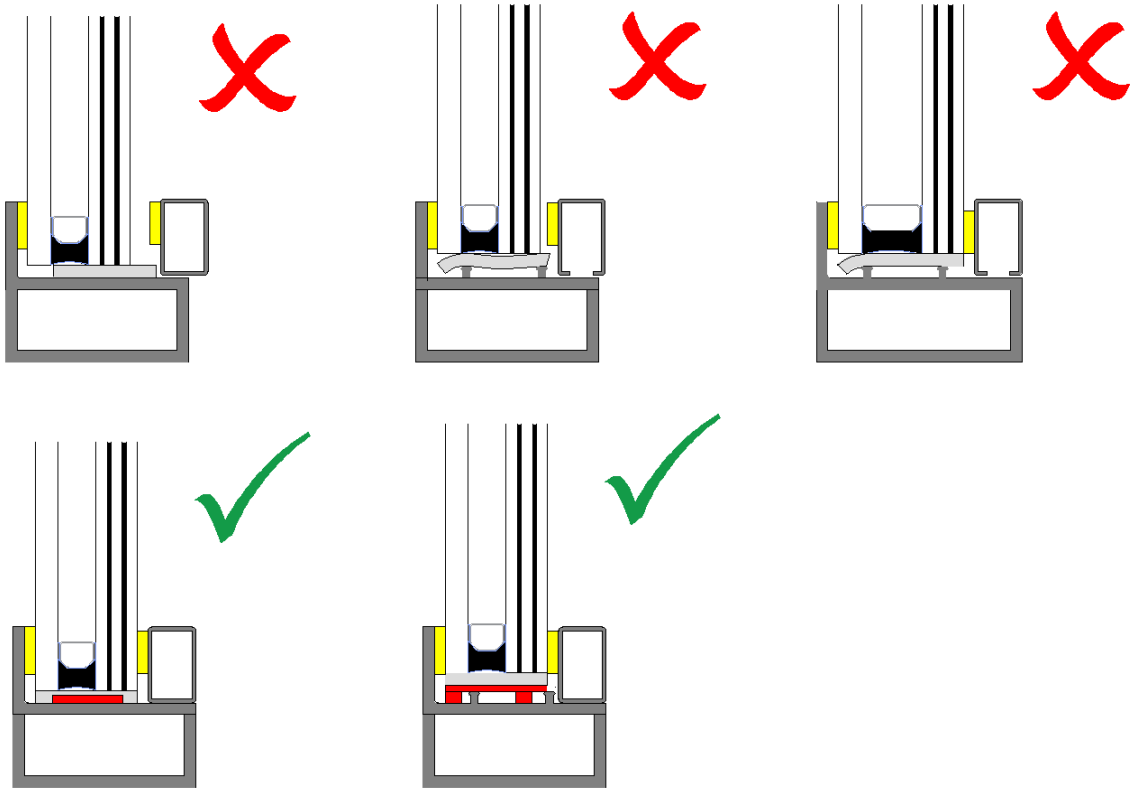


Figure 3 Example of incorrect and correct installation in a metal frame. Setting block should cover the full depth of the pane and the setting block should not interfer with the bead and should be supported level by shims if required.

4.3 Positioning

Setting blocks should be positioned generally towards the outer edges e.g. 2 x quarter points (or according to system guidance). When installing large landscape panes, it is desirable to move the load to the far reaches of the transom near the mullions in order to avoid overloading and sagging of the supporting transom.

Blocks should be stable and level at installation. Some systems have a dip in the surface of the profile that should be shimmed (see Figure 2 and Figure 3).

In door vision panels and fixed lights, glasses are glazed with two setting blocks at the bottom (see Figure 4a). In timber doors small panes may be glazed without setting blocks.

In fully glazed doors (side hung), glasses are often glazed heel-toe with 4 setting blocks at a diagonal to ensure that the glass does not move when the door is actioned (see Figure 4b).

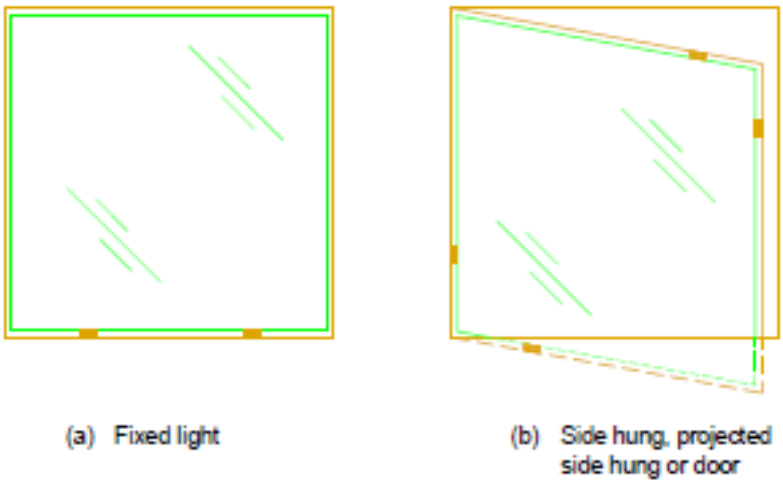


Figure 4 Positioning of setting blocks

5 Edge cover

Unless stated otherwise in an approval, the table below provides typical edge cover dimensions to ensure good fire performance in steel, aluminium and timber frames, partitions, doors and façade applications:

	Edge cover
VI, TVI (IGU, TGU)	≥13 mm
Pyroguard Protect	≥13 mm
Pyroguard Firesafe	6-10 mm
Pyroguard Rapide and Pyroguard Advance 2-EW	≥10 mm
Pyroguard Rapide Plus	≥10 mm

6 Expansion gap

Room for thermal expansion must be given for all Pyroguard glass types detailed in this document. The necessary dimension of the gap depends on the glass type, pane dimension, frame material and fire protection duration. As a starting point a minimum expansion gap of 3 mm is generally required on the sides not supported by setting blocks for a 30 or 60 minute application.

Linear thermal expansion calculations (ΔL) can be made to determine the appropriate minimum expansion gap specific to the frame material, the glazing and the fire resistance duration that is desired. $\Delta L = \alpha L \Delta T$, where ΔL is the change in length L, ΔT is the change in temperature, and α is the coefficient of linear expansion. For annealed float glass $\alpha = 9.0$ x10-6/K. The glass must be prevented from impacting the rebate throughout the intended fire performance duration.

7 Positioning the pane[1]

7.1 Handling Glass

Glass is a potentially dangerous material. Training must be given to all employees who handle it for their own safety and that of others working with them or in the vicinity of their work (public, householders, etc.). They should learn how to detect flawed glass, the correct way of lifting and setting down glass, what protective clothing should be worn and the procedures when using various lifting and carrying aids.

7.2 Manual Handling

7.2.1 Working on Sites

A risk assessment must be carried out and recorded together with a safe system of work agreed with site personnel prior to work commencing. The following criteria, over and above the normal storage conditions for glass as noted should be observed.

(i) Site access is adequate to permit vehicles to approach.
(ii) Storage position is accessible for delivery and distribution of materials.
(iii) Bulk glass is safely distributed within premises or on scaffolding within the particular Safe Loading Capacity.
(iv) Suitable storage arrangements are made so that the glass is safely positioned and cannot be damaged by others working on site.
(v) Storage conditions are dry wherever practicable.
(vi) There should be room to manoeuvre the glass safely.
(vii) If glass breaks during handling, it should be allowed to fall. No attempt should be made to intercept it.
(viii) In windy conditions the glass should be tied to prevent it blowing over.
(ix) A safe lifting posture must be used as per good manual handling techniques.
(x) When lifting, the glass should be kept upright and the movement smooth to avoid undue flexing.
(xi) The floor should be cleared of obstacles, and slippery areas avoided.
(xii) The correct protective clothing for the job as determined by company policies and/or risk assessments must be worn.
(xiii) Loads must be kept within the manageable capacity of those handling them.

[1] Information in this section is mostly from Glass and Glazing Federation code of Practice; Window Installation Safety

7.2.1.1 Straps or Slings

Usually made of leather or plastic with timber handles at each end. They are used for handling large sizes of glass, with the slings passed under the bottom edge of the glass so that operators can share the weight of the load. Special care must be taken to support the top of tall plates.

7.2.1.2 Webbing lifts

Usually cut to suitable length from 75 – 100 mm wide woven webbing. Used as slings when glazing shopfront plates. The flatness of the webbing allows it to be withdrawn from beneath the plate supported on its setting blocks.

7.2.1.3 Suction Pads (Josters)

Two or three rubber pads per frame are placed on the surface of the glass and fixed by operating a small lever. When these are used in a lengthy operation it is recommended that they be released and refixed at frequent intervals. The surface of the glass must be clean and dry.

7.2.1.4 Suction Lifter

Mechanical suction lifter can be very useful. Consider the glass weight and load capacity of the equipment and only operate the machinery when fully trained to do so.

Where possible, for safety reasons, suckers should only be applied to the fire glass side of an IGU and not the counterpane. Some counterpanes, in particular, float counterpanes, may not be strong enough to support the fire rated glass and the IGU may also not be strong enough.

7.3 Framing considerations

When installing into the framing, great care should be taken to avoid hitting the pre-installed glazing studs on the framing system. This can break, chip the glass or if rested on the edge, can puncture the gel seal – causing failure of the unit. System installation guidance should always be followed, but if in doubt remove the lower studs before installation.

8 Fire direction

For asymmetrical fire rated products such as IGUs, installers should respect the approved fire direction in the classification report or national approval. Note that some approvals have limitations on allowed sizes or possible counterpanes depending on the direction of fire risk. See section 9 for more information on orientation.

9 Orientation

9.1 Which way up?

By convention the Pyroguard CE stamp should always be glazed at the bottom of the frame. It doesn't matter if it is left or right.

This is especially important for Pyroguard T glasses such as Pyroguard Balustrades, Pyroguard Infinity and Pyroguard Protect where the warranty is invalidated if the pane is installed upside down.

Figure 5 shows the label that will be found on the supplied glazing. It indicates that the Pyroguard CE stamp should always be glazed at the bottom of the frame.

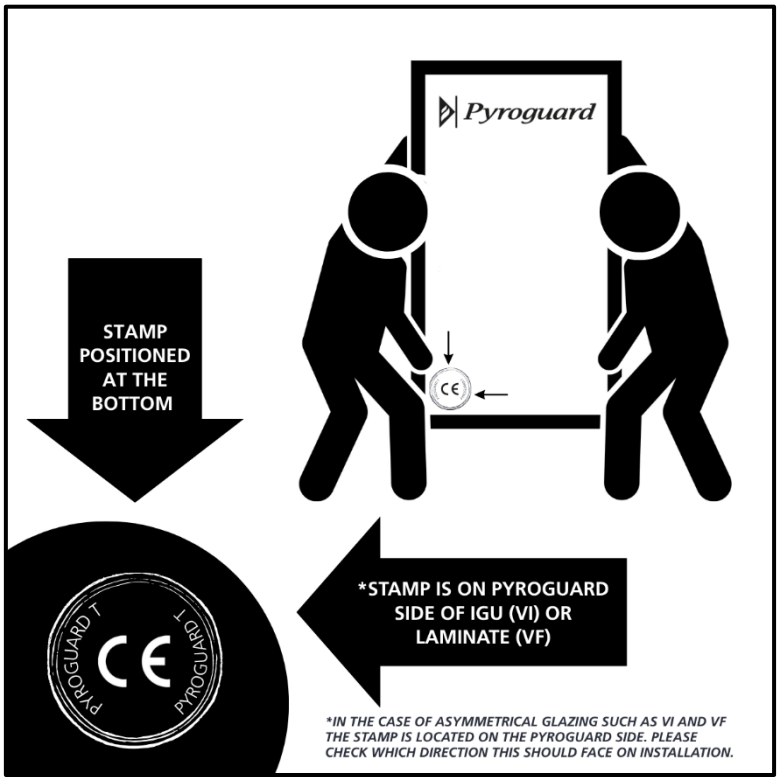


Figure 5 Pyroguard T is supplied with this label adhered to the pane. It indicates that the Pyroguard CE stamp should always be glazed at the bottom of the frame and that the Pyroguard CE stamp will be placed on the surface of the fire rated pane and not on the surface of a counterpane of any IGU (marked VI) or laminated pane (marked VF)

9.2 Which way around?

9.2.1 Internal

The orientation of the pane affects the fire performance, especially if it is a VF, a DGU (VI) or TGU (TVI). If the product is asymmetrical, consult the certification to ascertain the required fire direction.

9.2.2 External

Pyroguard products with reactive interlayers (Advance, Protect, Rapide and Rapide Plus) must always be glazed as an IGU and the Pyroguard fire rated pane of the unit must always be orientated towards the internal side of the building (see Figure 6) in order to protect the panes from excess heat build-up.

To ascertain the fire rated glass side, look at the stamp; this is applied to the fire rated glass not the counterpane. If you are not sure look at the edge of the unit to determine the unit construction or knock on each side of the unit; the more dull sound will be from the thicker fire rated laminate.

In the case of Pyroguard Firesafe the fire rated pane of an IGU is *usually* required to be orientated to the external of the building.

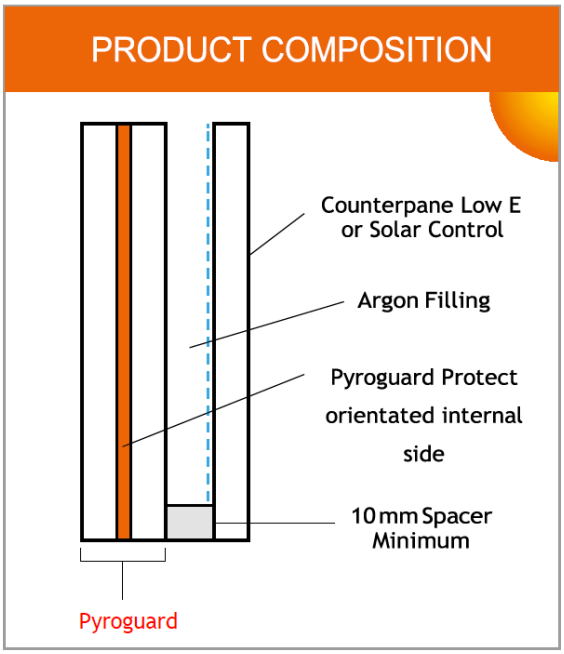


Figure 6

In the case of external glazed application where panes are not exposed to direct sunlight, and heat build-up is not expected, such as in underground garage entrances, it is not necessary to install as an IGU.

The following table summarises considerations for glazing each range:

Product	Installation orientation
VI, TVI (IGU, TGU)	Counterpane to the external with a low E or solar control coating in position 2.
Pyroguard Protect	Stamp orientated to the bottom of the aperture. In the case of VI, counterpane to the external and always glazed with Low E or Solar Control when external.
Pyroguard Firesafe	In the case of T-EW/6 code glasses the fire glass should be orientated on the non-fire risk side with the coating facing the fire risk. In the case of T-E code glasses, these are symmetrical, however they function in a fire as VI when positioned on the non-fire risk side of an IGU.
Pyroguard Rapide	In the case of IGU, counterpane to the external and always glazed with Low E or Solar Control when external.
Pyroguard Advance 2-EW	In the case of IGU, counterpane to the external and always glazed with a laminated glass counterpane to protect from UV light.
Pyroguard Rapide Plus	EXT version glasses are external grade, they are asymmetric and the PVB layer should be orientated towards the external. In the case of IGU, counterpane to the external and in the case of the EXT version; always glazed with a laminated glass counterpane to protect from UV light.

10 Storage and Handling

Consult the Pyroguard storage and handling guidelines

https://www.pyroguard.eu/downloads/our-guidance-documentation/

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