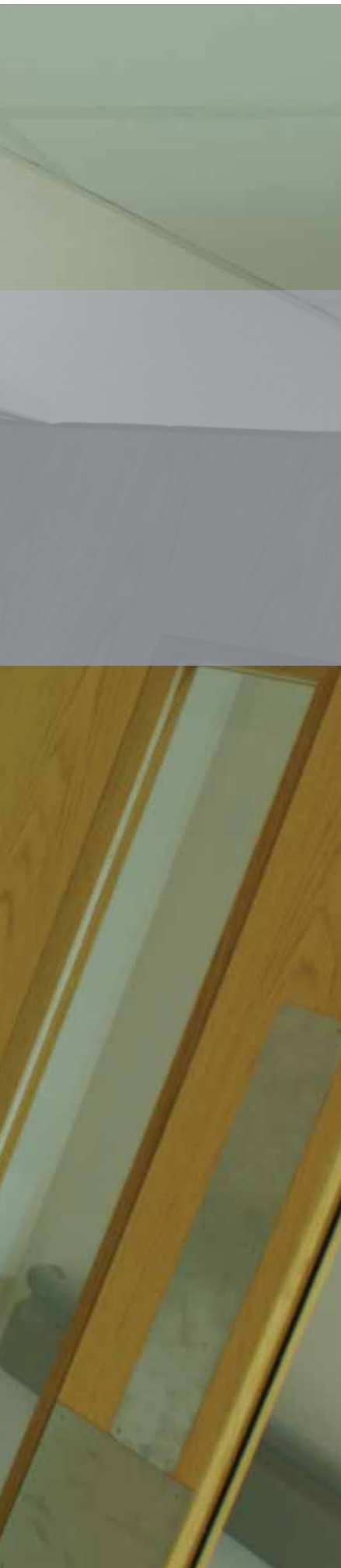




# Fire Resistant Glazing Systems

A photograph of a modern hospital hallway with light-colored walls, a blue carpet, and wooden doors. The hallway is brightly lit by recessed ceiling lights. In the foreground, a door is slightly ajar, revealing a glimpse of the hallway beyond. The text "protecting against smoke and fire" is overlaid in white on a semi-transparent dark band across the middle of the image.

protecting against  
smoke and fire



Fire and smoke protection measures are essential, life-saving precautions in a building. What’s more, they protect the property from the devastating consequences of the fire itself, and the damaging effects of hot and cold smoke. So it’s essential to get the product selection right, every time.

Lorient is a company with a respected reputation for designing and manufacturing a wide range of products for fire and smoke containment. Products are also designed with acoustic, thermal and weather containment in mind, as well as accessibility – so you can be assured that a Lorient system provides an integrated, cost-effective solution.

With more than 30 years’ experience and accumulated knowledge, we pride ourselves on offering ground-breaking innovations, underpinned by technical excellence and exceptional quality. Our dedicated R&D centre not only generates successful product developments for Lorient; it also allows us to work in partnership with customers to develop and test their own products too. Our indicative fire test furnace is particularly popular, giving customers real insight into their own products’ performance and helping to save substantial testing costs.

Always keen to keep raising the bar, we are committed to gaining third party certification for our products wherever a suitable scheme exists. Many products hold CERTIFIRE certification, and we also hold approvals from both the BBA and IFC.

We embrace the highest management standards too, and hold both BS EN ISO 9001:2008 and BS EN ISO 14001:2004 certificates for our quality and environmental management systems. Achieving ISO 14001 is just one part of our ongoing commitment to operate in a sustainable way: many initiatives are planned and already underway to reduce materials and energy usage, as well as waste.

In addition to our UK operation, we have sister companies in Australia, Hong Kong, North America and the Middle East – which means we’re always up to date with the latest product developments and industry thinking from around the world. We can also provide support for clients with their projects, from start to finish, wherever they are in the world.

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## Fire and Smoke – Life Threatening Forces

On average **430 people are killed** and **12,100 are injured\*** in fires each year in the UK alone. Many of the casualties are attributable to breathing the toxic products of combustion from a remote fire.

Fire and smoke also cause extensive damage to building fabric and contents. **£2.52 billion\*** per annum is the estimated total of fire-related losses. The majority of these deaths, injuries and losses occur in buildings where fire and smoke protection measures have been inadequate.

### Design Needs

When fire breaks out in a building the threat is twofold. Firstly, there is the fire itself and the hot smoke generated in the immediate vicinity. Secondly, there is cold smoke which will spread rapidly through the building, threatening people and property some distance from the fire. The Building Regulations take both these threats into account, and supporting documents give criteria for how they can be managed. Details can be found in Approved Document B (England & Wales), Technical Booklet E (N Ireland), and Technical Handbook Section 2 (Scotland).

The Regulations require large buildings to be divided into smaller fire and smoke resistant 'compartments', to reduce the risk of damage to the building as a whole and also to save lives in the case of a fire. Building a fire resistant wall or floor to make a compartment is relatively simple. However, building design becomes much more complex when the compartments need to be linked in some way – essential to make the building usable. Every time an aperture is cut into one of the compartment boundaries (for example, to install a door in a fire resistant wall, or to pass ductwork through a wall or ceiling) the aperture must be filled with something that will preserve the fire and smoke integrity of the compartment. That's the role of Lorient's products – to work with the surrounding elements of the building to ensure the fire and smoke resistant compartments are maintained. Our fire and smoke seals can be fitted into fire rated doors; our glazing products can be fitted into doors, screens or fire rated partitions; our air transfer grilles can be installed into doors, walls and ducts.

### Glazing Systems

Glazed panels or complete glazed screens are often required to allow vision and natural light through fire-rated internal walls and doors. Gaps, joints and interfaces between dissimilar materials invariably form points of weakness. Provision needs to be made to seal these effectively.

The Lorient solution is to fit fire resistant glass secured using one of our fire resistant glazing systems. These hold the glass firmly in place during normal use, but in the event of fire the intumescent material expands, securing and insulating the glass and protecting the surrounding timber.

There are no specific test procedures to determine the performance of a glazed aperture or multi-paned construction in relation to smoke.

Our glazing systems are designed to minimise smoke transfer, yet fit tightly on the perimeter of the glass and eliminate undesirable rattle at the same time.

### Relevant Requirements

There are several aspects of the Building Regulations that must be considered in conjunction with each other when specifying and installing fire resistant glazing systems.

- **Fire and Smoke:** The requirements for fire and smoke containment with respect to 'means of escape' are presented in Approved Document B (England and Wales), Technical Handbook Section 2 (Scotland), and Technical Booklet E (N. Ireland).
- **Safety and Impact Resistance:** Approved Document N (England & Wales) and Technical Booklet V (Northern Ireland) give guidance and requirements affecting safety in use, particularly impact resistance. A distinction is drawn between glass which is fixed and that which moves (as in doors).

- **Sound:** Guidance and requirements are found in Approved Document E (England and Wales), Technical Booklet G (N. Ireland) and Technical Handbook Section 5 (Scotland). Document E gives specific acoustic performance requirements for door assemblies in a number of situations. In 'dwelling-houses, flats and rooms for residential purposes' (Requirement E1), a minimum acoustic performance of 29dB Rw is stated. For schools (Requirement E4), a minimum of 30dB Rw is required – 35dB Rw for music rooms. Please refer to page 3 for further details.
- **Accessibility:** Approved Document M (England and Wales), Technical Booklet R (N. Ireland) and Technical Handbook Section 4 (Scotland) specify accessibility requirements for the benefit of everyone using buildings. They detail the size and location of glazed panels in doors in various situations, in order to promote safety and accessibility. Visual contrast on the leading edge of doors is also included, as are opening and closing forces for ease of door operation, threshold height and door width requirements.

### Relevant Standards

There are several British Standards which relate to the products and solutions featured in this brochure. They include:

- BS 476: Pt. 22: 1987: Methods for determination of the fire resistance of non-loadbearing elements of construction.
- BS 9999: Code of practice for fire safety in the design, management and use of buildings.

\*Source: Communities and Local Government Website 2009

## Fire Protecting Glazed Apertures

Glazed panels are often required in fire resistant walls and doors. In door assemblies, especially those on circulation routes, glazed apertures allow people to see others approaching from the opposite direction: they also allow fire and smoke to be seen without opening the door, thereby making a real contribution to safety.

When forming a glazed aperture in a fire resistant door or wall it's essential that fire resistant glass is used. The most commonly specified is Georgian wired glass. Our glazing systems may also be used with most other types of fire rated glass: details are shown on pages 11 – 14 of this brochure, or contact our Technical Services team for further information.

Our glazing systems are designed to prevent or delay possible modes of failure in either the glass or its surroundings.

### Acoustic Implications

Following the 2003 amendments to Approved Document E to the Building Regulations (England & Wales), door assemblies in many situations are now

required to provide acoustic performance. To achieve the specified performance requirement (a minimum of 29dB Rw), it's essential to ensure the door assembly is fitted with an appropriate sealing system at the perimeter and threshold. Further information on acoustic sealing can be found in our Acoustic Sealing Systems for Door Assemblies brochure.

Glazed panels may be incorporated in doors without a major loss of acoustic performance, provided that thick enough glass is used, the size of the aperture is limited and an appropriate sealing system is utilised. Conventional Georgian wired glass has been tested in conjunction with our System-36/6 glazing gasket and provides optimum acoustic performance for most



types of door construction, including FD30 / FD30S. By this method, up to 0.16m<sup>2</sup> eg: 800mm x 200mm or 650mm x 250mm can be incorporated in a door assembly, without any significant loss of acoustic performance. Please call our Technical Services team on **01626 834252**.

## Operation

In every day use our fire resistant glazing systems offer firm support with a degree of flexibility which absorbs shocks and minimises glass rattle. When exposed to fire the intumescent material expands forming a stable insulating seal which holds the glass firmly so it does not slump as it progressively softens.

### System-36 and System-63Ø



System-36 and System-63Ø in normal 'cold' condition

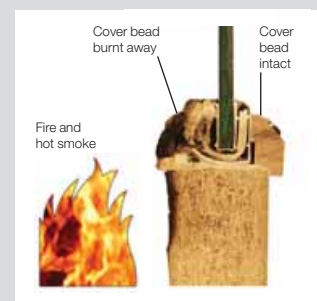


System-36 and System-63Ø operating in 'hot' condition

### System-90 PLUS



System-90 PLUS operating in 'cold' condition

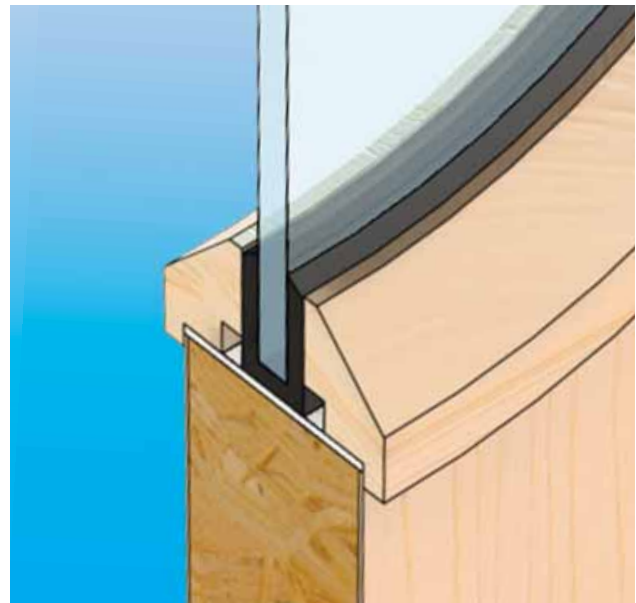


System-90 PLUS operating in 'hot' condition

## Product Range

Our range of fire resistant glazing systems can be used to specify and manufacture glazed doors and screens which provide fire resistance from 30 minutes up to 120 minutes. A wide range of applications and designs have been tested and approved: for further information see pages 11-14.

The features and attributes of the various Lorient systems are described in this section, but further information – including sizes, shapes and finishes – can be found on pages 7-9.



### System-36

System-36 consists of a flexible U-shaped intumescent gasket used with a range of standard fixing beads, for use in 30 minute fire resistant doors and screens.

- Available in sizes to suit different thicknesses of glass from 4mm to 23mm.
- Supplied on a reel so it's easily dispensed and cut to length without wastage in off-cuts.
- Flexible enough to be fitted to curved corners and circular vision panels.

### System-63Ø

System-63Ø is a variant of System-36 which has been designed for use in circular apertures in 60 minute fire resistant doors.

- A cost-effective solution to the problem of incorporating circular glazed apertures.
- Use with an intumescent liner.
- Easy to fit.



## Flexible Figure 1

Flexible Figure 1 is designed for use with glazed apertures in 30 minute fire resistant doors.

- Comprises a pair of bead applied intumescent strips.
- Flexible, quick and easy to install.
- Available in a choice of colours.
- Suitable for use with a variety of fire resistant glass types.
- Unique design which enables tolerances between door, bead and glass thicknesses to be accommodated.

## System-321

System-321 is the complete glazing solution for 30 minute fire resistant doors.

- A unique clip-together glazing system.
- Supplied as a complete pack of product, it contains everything required to glaze one aperture in a FD30 door leaf simply, safely and efficiently.
- A choice of sizes, bead finishes and glass types is offered.

## System-321

Three steps, two minutes, one system



## System-90 PLUS

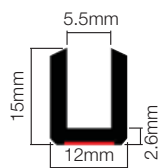
System-90 PLUS is designed for 60 minute fire resistant doors and screens. Contact our Technical Services team for more information. When using a suitable door and screen construction (such as Georgia-Pacific system for high performance fire door assemblies) it provides 90 minute fire resistance. 120 minute fire resistance can be attained when a suitable door only construction is used.

- Comprises a U-shaped PVC profile containing an intumescent core and an intumescent liner, and beads of wood or metal.
- Tested with a range of glass types.

**Dimensions and Comments**

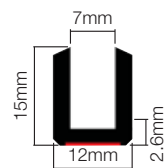
Detailed fitting instructions for all systems are supplied with the products, and are available on request or from our website. Please refer to fitting instructions before commencing installation.

**System-36/5**



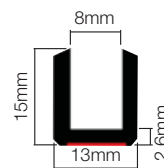
LG1510  
suitable for use with 4mm - 5mm fire rated glass

**System-36/6**



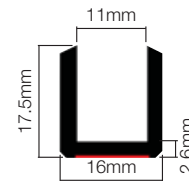
LG1512  
suitable for use with 6mm - 7mm fire rated glass

**System-36/7**



LG1513  
suitable for use with 7mm - 8mm fire rated glass

**System-36/10**



LG1717  
suitable for use with 9mm - 11mm fire rated glass

**Sodium silicate intumescent liner**

Liner not required except on substrates of less than 500kg/m<sup>3</sup> density

Liner not required except on substrates of less than 500kg/m<sup>3</sup> density

Liner not required except on substrates of less than 500kg/m<sup>3</sup> density

Liner not required except on substrates of less than 500kg/m<sup>3</sup> density

**Standard lengths**

60m coils

60m coils

60m coils

30m coils

**Finish**

black

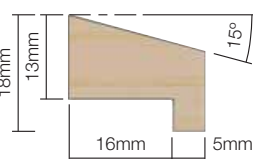
black

black

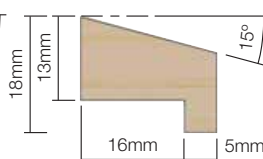
black

**Glazing beads**

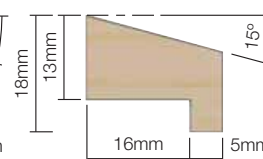
Glazing beads are required on both sides of the glass. All beads are available in the following finishes although other species can be supplied.



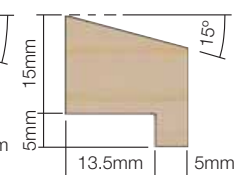
LG1321  
for 44mm thick doors or rebated screen frames



LG1321  
for 44mm thick doors or rebated screen frames



LG1321  
for 44mm thick doors or rebated screen frames

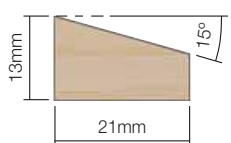


LG1521  
for 44mm thick doors or rebated screen frames

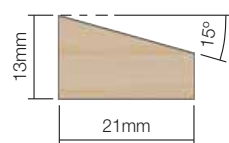
**Hardwood finishes:**  
Oak, Beech, Utile

**Softwood finishes:**  
Columbian Pine

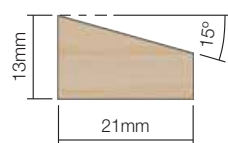
All timber beads are supplied in the white ready for finishing as required. Steel beads are supplied unpainted.



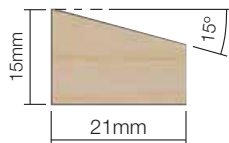
LG1320  
for unrebrated screen frames



LG1320  
for unrebrated screen frames



LG1320  
for unrebrated screen frames



LG1520  
for unrebrated screen frames

**Fixing of beads:**

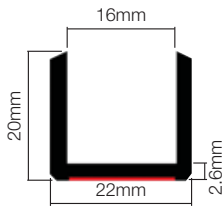
pinned using 40mm panel pins at 200mm nom. centres

pinned using 40mm panel pins at 200mm nom. centres

pinned using 40mm panel pins at 200mm nom. centres

screwed using No. 8 x 45mm countersunk screws at 200mm nom. centres

### System-36/15

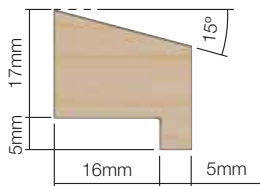


LG2022  
suitable for use with 14mm - 16mm fire rated glass

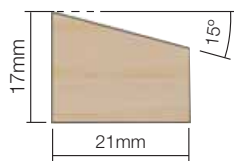
Liner not required except on substrates of less than 500kg/m<sup>3</sup> density

30m coils

black



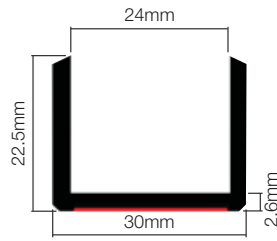
LG1721  
for 54mm thick doors or rebated screen frames



LG1720  
for unrebated screen frames  
timber bead for 44mm thick FD30 doors also available

screwed using No. 8 x 45mm countersunk screws at 200mm nom. centres

### System-36/23

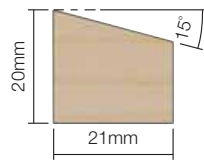


LG2229  
suitable for use with 23mm Pyrostop®, 23mm Pyranova® and 23mm Fireswiss Foam glass types. System for screens only

Liner not required

30m coils

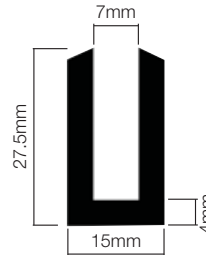
black



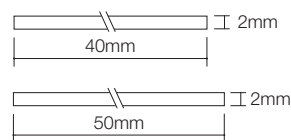
LG2020  
for unrebated screen frames

screwed using No. 8 x 45mm countersunk screws at 200mm nom. centres

### System-63Ø



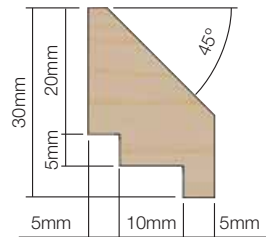
LG2715  
suitable for door application use only with 6mm Georgian wired glass or Pyran-S®



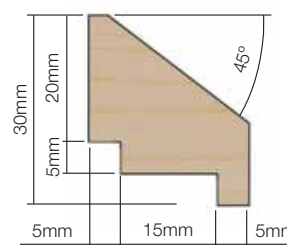
LX4002 & LX5002

50m coils

black



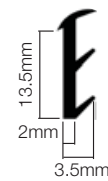
LGC2520 for 44mm thick doors or rebated screen frames



LGC2525 for 54mm thick doors or rebated screen frames

pinned using 40mm panel pins at 200mm nom. centres

### Flexible Figure 1

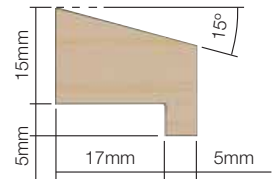


GP1702  
suitable for use with a variety of 5mm – 7.2mm fire rated glass types. FF1 is a two-strip system for doors only. A strip must be fitted on both sides of the glass

For flaxcore doors, use with a 6mm hardwood liner (min density 640 kg/m<sup>3</sup>), intumescent liner LX4402, or saddle bead (min density 640 kg/m<sup>3</sup>)

50m coils. 5 coils per box – minimum quantity 1 box

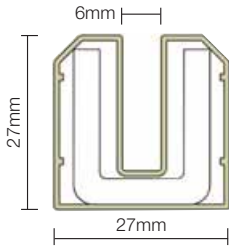
black as standard: white and light brown to special order



LG1522  
for 44mm thick doors. NB: Bead dimension could vary depending on glass type and door thickness

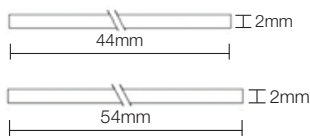
pinned using 40mm long steel pins at 150mm nom. centres; or steel screws 40mm long (No. 8) at 150mm nom. centres

## System-90 PLUS



LG2727

suitable for use only with 6mm Georgian wired glass, Pyran-S® or 5mm Firelite®

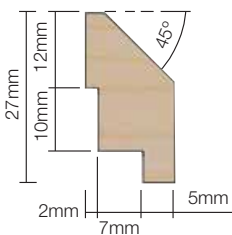


B24402 & B25402

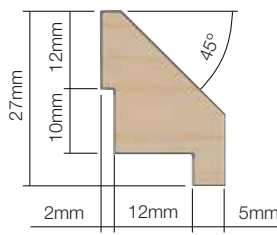
Must be used with liner and beading to prevent erosion from under the system

1000, 1250 and 2100mm

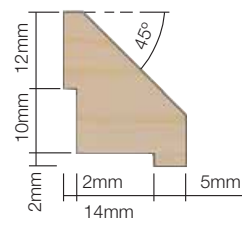
cream, white, grey, black, light brown, red, dark brown, silver, gold, bronze, maple as standard: colour matching to special order



LG2213 for 44mm thick doors



LG2218 for 54mm thick doors



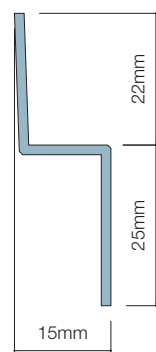
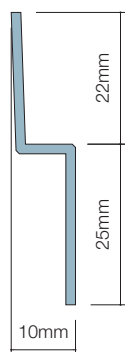
LG2220 for unrebeated screen frames

Timber beads must be hardwood only

Non-combustible beads for doors (90 and 120 minute applications).

LG4710 for 44mm thick doors

LG4715 for 54mm thick doors



screwed using No.8 x 45mm countersunk screws at 150mm nom. centres or metal beading through-bolted. Metal beading is not supplied with pre-drilled holes.

## Third Party Accreditation

### CERTIFIRE

Certificate Nos.  
CF184 / CF185  
CF201 / CF202  
CF325 / CF327



CERTIFIRE is an accredited independent product conformity scheme operated by Exova Warringtonfire. The purpose of the scheme is to set benchmark quality and performance requirements which go beyond simply passing a single fire test.

CERTIFIRE quality and performance assessment schedules for fire resistant glazing systems require:

- proven performance when tested in accordance with appropriate British Standards;
- consistent quality achieved under the disciplines of a recognised quality assurance scheme, for example BS EN ISO 9001:2008;
- accountability – all products or packaging must be permanently marked so they can be easily identified;
- proven performance and compatibility with a range of glass types;
- proven performance in conjunction not only with rigid framing systems but also with door leaves which are relatively flexible under fire exposure;
- proven performance in either single or multi-pane systems.

In addition, the manufacturing process is subject to random, unannounced audits and, periodically, products are removed for re-testing and performance verification.

Note: All dimensions are subject to manufacturing tolerances.

## Application Details











The following pages show the levels of protection provided by our fire resistant glazing systems when used in doors and screens, and with different shaped and sized glazed apertures.

Please note that the maximum glass sizes shown on the following pages relate to our test evidence. However, the test evidence for the door leaf being used will show the maximum glass size possible, and this may be smaller than the dimensions given in this brochure. Please always refer to the test evidence for the door leaf being used, and in case of any query please contact our Technical Services team on **01626 834252**.

### Use of symbols

-  signifies a door leaf with a single rectilinear glazed aperture
-  signifies a door leaf with two rectilinear apertures including 2XGG joinery doors
-  signifies a door leaf with a single circular aperture
-  signifies a door leaf with a long vision panel
-  signifies a glazed screen or partition
-  signifies a glazed screen with mullions and transoms
-  indicates that the application detail shown provides protection against fire and hot smoke
-  indicates in minutes the fire protection provided by the door or screen

## Product Selector Table for Fire Resistant Glazing Systems

Level of Protection	Type of Protection	System	Doors				Screens	
								
30		<b>System-36/5</b>	page 11	page 11	page 11	-	page 14	page 14
		<b>System-36/6</b>	page 11	page 11	page 11	page 11	page 14	page 14
		<b>System-36/7</b>	page 11	page 11	page 11	-	page 14	page 14
		<b>System-36/10</b>	page 11	page 11	page 11	page 11	page 14	page 14
		<b>System-36/15</b>	page 11	page 11	page 11	page 11	page 14	page 14
		<b>Flexible Figure 1</b>	page 11	page 11	-	page 11	-	-
60		<b>System-36/15</b>	page 12	-	page 12	page 12	page 14	page 14
		<b>System-90 PLUS</b>	page 12	-	-	page 12	page 14	page 14
		<b>System-63Ø</b>	-	-	page 12	-	-	-
		<b>System-36/23</b>	-	-	-	-	page 14	page 14
90		<b>System-90 PLUS</b>	-	-	-	page 13	-	-
120		<b>System-90 PLUS</b>	page 13	-	-	-	-	-

## Doors min. 40mm (2xGG joinery door) and 44mm (single pane door)



system	glass types	max. glass size
System-36/5	5mm Firelite®	1100mm x 700mm or max 0.65m <sup>2</sup>
System-36/6	6mm GWPP, 6mm Pyran-S®, 6mm Pyroacet®, 6mm Pyroshield® 6mm Pyrotech™ 630	1100mm x 700mm or max 0.65m <sup>2</sup>  1680mm x 540mm or max 0.76m <sup>2</sup>
System-36/7	7.5mm Pyrodur Plus™, 7.2mm Pyroguard®, 7mm Pyrobelite®	875mm x 750mm or max 0.66m <sup>2</sup>
System-36/7	7mm Pyrostem®	1100mm x 700mm or max 0.65m <sup>2</sup>
System-36/10	10mm Pyrodur®, 11mm Pyrobelite®	1800mm x 600mm or max 1.08m <sup>2</sup>
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	1800mm x 600mm or max 1.08m <sup>2</sup>
Flexible Figure 1	6mm Georgian wired glass, 6mm Pyroshield®, 6mm Pyran-S®, 5mm Firelite®, 7mm Pyrodur Plus®, 7.2mm Pyroguard®, 7mm Pyrostem®, 7mm Pyrobelite® 6mm Pyrotech™ 630	875mm high x 750mm wide or max 0.66m <sup>2</sup>  1750mm x 560mm or max 0.78m <sup>2</sup>



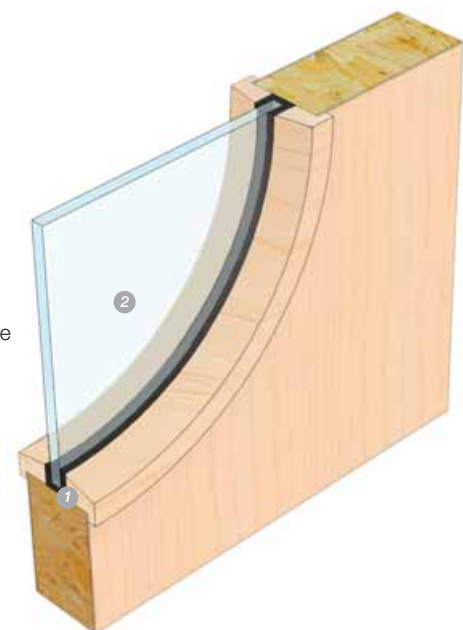
1 System-36/6 with  
2 6mm Pyroshield®

## Doors 44mm



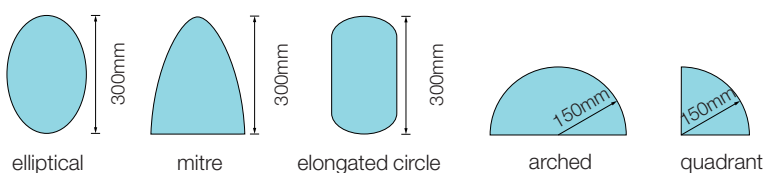
system	glass types	max. glass size
System-36/5	5mm Firelite®	300mm diameter*
System-36/6	6mm GWPP, 6mm Pyran-S®, 6mm Pyroacet®, 6mm Pyroshield®	300mm diameter*
System-36/7	7.5mm Pyrodur Plus™, 7.2mm Pyroguard®, 7mm Pyrobelite®, 7mm Pyrostem®	300mm diameter*
System-36/10	10mm Pyrodur®, 11mm Pyrobelite®	Up to 600mm diameter, subject to the max. aperture size for which test data relating to the door leaf is available.
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	

\*Larger diameter apertures are the subject of current development. Please refer to our Technical Services team.



1 System-36/6 with  
2 6mm Pyran-S®

Note: When using System-36/5, System-36/6 and System-36/7, the profiles shown here have been deemed acceptable by Exova Warringtonfire.

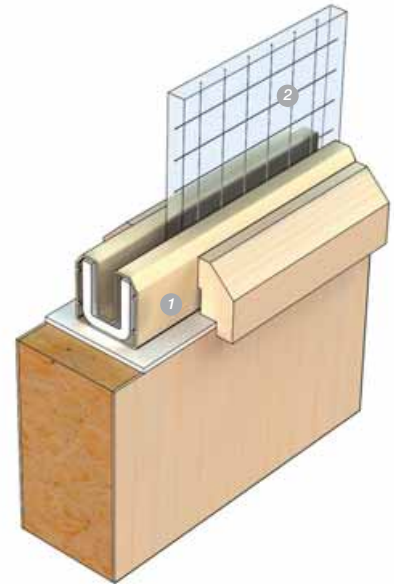


## Doors 54mm



system	glass types	max. glass size
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	1800mm x 600mm or max 1.08m <sup>2</sup>
System-90 PLUS	6mm GWPP, 6mm Pyroshield®, 6mm Pyran-S®, 5mm Firelite®	1441mm x 201mm

**Note:** For System-90 PLUS, an intumescent liner is required.



1 System-90 PLUS with  
2 6mm Pyroshield®

## Doors 54mm



system	glass types	glass sizes
System-63Ø	6mm GWPP, 6mm Pyran-S®, 6mm Pyroshield®	462mm diameter max.
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	600mm diameter max.

**Note:** For System-63Ø an intumescent liner is required.

Circular finger-jointed beads are available from Haldane UK Ltd,  
tel: 01592 775656, fax: 01592 775757 or email: sales@haldaneuk.com



1 System-63Ø with  
2 6mm Pyran-S®

## Doors 54mm

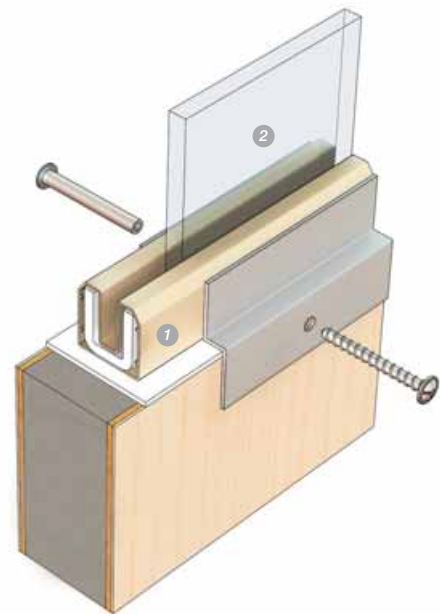


system	glass types	glass sizes
System-90 PLUS	6mm Pyran-S®	1600mm x 200mm

**Note:** For System-90 PLUS, an intumescent liner is required.

**Only valid when used with door components made from suitable high density mineral composite material together with steel glazing beads. Contact our Technical Services team on 01626 834252 for more information.**

**Note:** We can provide stainless steel beads, or drawings for a fabricator.



1 System-90 PLUS with  
2 6mm Pyran-S®

## Doors 44mm and 54mm

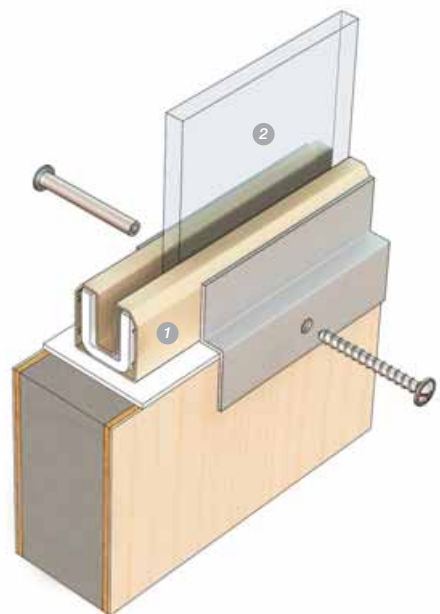


system	glass types	max. glass size
System-90 PLUS	5mm Firelite®, 6mm Pyran-S®	500mm x 400mm

**Note:** For System-90 PLUS, an intumescent liner is required.

**Only valid when used with door components made from suitable high density mineral composite material together with steel glazing beads. Contact our Technical Services team on 01626 834252 for more information.**

**Note:** We can provide stainless steel beads, or drawings for a fabricator.



1 System-90 PLUS with  
2 6mm Pyran-S®

## Screens or Partitions



system	glass types	max. glass size
System-36/5	5mm Firelite®*	2.3m x 1.08m or max. 2.5m <sup>2</sup>
System-36/6	6mm GWPP, 6mm Pyran-S®, 6mm Pyrocet®, 6mm Pyroshield® 6mm Pyrotech™ 630	2.3m x 1.08m or max. 2.5m <sup>2</sup> 1.437m x 0.75m or max 0.86m <sup>2</sup>
System-36/7	7.5mm Pyrodur Plus™, 7mm Pyrostem® , 7mm Pyrobelite®	2.3m x 1.05m or max. 2.5m <sup>2</sup>
System-36/7	7.2mm Pyroguard®	2.0m x 1.2m or max. 2.4m <sup>2</sup>
System-36/10	10mm Pyrodur®, 11mm Pyrobelite®	2.0m x 1.37m or max. 1.90m <sup>2</sup>
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	2.0m x 1.37m or max. 1.90m <sup>2</sup>

**Note:** The aspect ratio is unrestricted and the glass may be fitted in either landscape or portrait style. Frame members to be of minimum cross-section 44mm x 70mm in either hardwood or softwood of not less than 550 kg/m<sup>3</sup>. Softwood beads are permitted except in conjunction with Firelite® glass.

\*Refer to Document N concerning impact requirements.



1 System-36/6 with  
2 6mm Pyran-S®

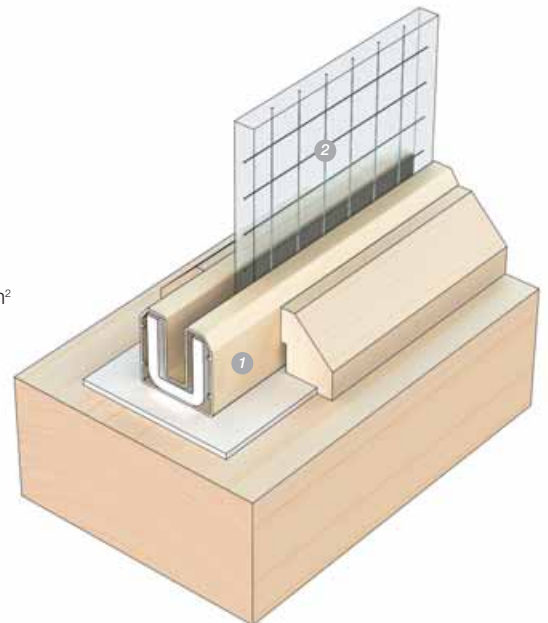
## Screens or Partitions



system	glass types	max. glass size
System-36/15	15mm Pyrostop®, 16mm Pyrobel®	2.0m x 1.34m or max. 1.9m <sup>2</sup>
System-36/23	23mm Pyrostop®, 23mm Pyranova®, 23mm Fireswiss Foam	2.0m x 1.34m or max. 1.80m <sup>2</sup>
System-90 PLUS	6mm Pyran-S®, 5mm Firelite®*	2.0m x 1.0m or max. 2.15m <sup>2</sup>
System-90 PLUS	6mm GWPP, 6mm Pyroshield®	1.0m x 1.0m or max. 1.0m <sup>2</sup>

**Note:** Frame members to be of minimum cross-section 44mm x 70mm in hardwood (except Ash) of not less than 650 kg/m<sup>3</sup>. For System-90 PLUS, an intumescent liner is required.

\*Refer to Document N concerning impact requirements.



1 System-90 PLUS with  
2 6mm Pyroshield®

## Fitting Instructions

### System-36 and System-63Ø

Fitting is completely clean and dry – no sealant, adhesive tape or wet adhesive is required. Corners are formed by simply notching the gasket with secateurs and stretching the elastomeric channel around the pane.

The beadings are pinned or screw fixed as required. Refer to pages 7 – 9. There is no need to apply an intumescent finish coating to the timber beads.

### System-90 PLUS

The PVC channel with mitred corners is fitted to the glass. Any gaps must be filled with Lorient intumescent sealant. The beads are screw fixed or through-bolted as required. Refer to pages 7 – 9.

### Flexible Figure 1

The Flexible Figure 1 gasket is supplied with strong self-adhesive tape attached. This is used to fix the gasket to the glazing beads. The beads should then be cut to length, mitred, and pinned or screw-fixed into place as required. The product should be fixed to the beads on both sides of the glazed aperture.



## Guarantee of Origin

It's important to always use a product that can be clearly identified. All our glazing systems carry identification (where possible).





### Technical References

Lorient is quality assured under the disciplines of BS EN ISO 9001:2008.



BS EN ISO 9001:2008  
Certificate No. Q6104

Accreditation to this standard is a guarantee that we conduct our business to the complete satisfaction of our customers with regard to design solutions, manufacturing consistency and management procedures.

In addition, this internationally recognised standard for quality management generates customer confidence and eliminates the risk of poor performance. Regular audits of our company procedures are undertaken by qualified BSI staff to ensure ongoing compliance with all aspects of the standard.

Lorient has attained BS EN ISO 14001:2004 accreditation for environmental management, making us the first seal manufacturer to have achieved this important award. This internationally recognised standard represents that we have demonstrated our commitment to responsible environmental behaviour, including prevention of pollution, control and reduction of waste, and ongoing monitoring and improvement of our environmental performance. Achieving ISO 14001 is just one part our ongoing commitment to operate in a sustainable way.



BS EN ISO 14001:2004  
Certificate No. EMS 541906

### Handling and Storage

No special precautions are required when handling our fire resistant glazing systems, but they should always be treated with care. Our products should be stored flat in a clean, dry, dust-free area away from heat and at a storage temperature of between 5°C and 40°C. Safety data sheets are available on request. The product does not fall within the scope of COSHH Regulations.

### Maintenance

It's recommended that all fire resistant glazing be inspected and cleaned once a month. The retaining channel or gasket should be cleaned with a damp cloth. Any cracked glass should be immediately replaced with a matching pane. The Lorient retention system will normally be re-useable.

# additional information

## Trade Associations

Lorient is a member of the Glass and Glazing Federation Fire Resistant Glazing Group (GGF) and is a founder member of the Intumescent Fire Seals Association (IFSA).

Lorient is also a member of the British Woodworking Federation (BWF) (Associate); the Architectural and Specialist Door Manufacturers Association (ASDMA); the Guild of Architectural Ironmongers (GAI); and is also an Approved Supplier to the BWF CERTIFIRE Fire Door and Doorset Scheme.



Founder Member of the Intumescent Fire Seals Association



Fire Resistant Glazing Group Glass and Glazing Federation



### Intellectual Property

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We are committed to continually enhancing and improving our product range. We reserve the right to change product specifications from time to time without prior notice. E&OE.

## Continuing Professional Development Seminars

We offer two fully-accredited CPD seminars. Impartially presented by knowledgeable speakers, the seminars are structured to be technically informative, and give practical advice.



### Performance Door Design: The Basics of Sound Reduction

Effective acoustic containment helps to improve the quality of the built environment, preserving privacy as well as excluding unwanted noise. With changing regulations, it's essential to be up to date with the relevant requirements and the implications for door assemblies.

Our acoustic CPD seminar covers:

- the nature of sound, examining airborne transmission of sound;
- regulatory requirements and British Standards that relate to acoustic performance;
- test procedures and interpretation of test reports;
- effective design of door assemblies for acoustic performance, including door construction and the influence of sealing systems;
- design conflicts between acoustic performance, durability and ease of operation of the door;
- independent accreditation.

### The Role and Performance of Fire and Smoke Resisting Door Assemblies

The importance of fire and smoke resisting door assemblies is illustrated by the **430 annual deaths** in fire tragedies in the UK alone. Apart from the human toll, property losses each year approach **£2.52 billion**.

Our fire and smoke containment CPD seminar covers:

- hard facts concerning deaths, injuries and property damage caused by fire and smoke;
- regulatory requirements for fire and smoke resisting door assemblies;
- the nature and behaviour of smoke;
- effective design of door assemblies for smoke containment, including the threshold gap;
- design conflicts between fire containment, smoke containment, durability and ease of operation of the door;
- independent accreditation.

Both Lorient seminars are certified by the Construction CPD Certification Service and each is valued at one hour. Comprehensive notes are provided and attendance certificates awarded.

If you're interested in booking either seminar, please contact our Marketing department or e-mail [cpd@lorientuk.com](mailto:cpd@lorientuk.com).

We continue to lead the way in research and development: As a company we have over 30 years' experience, so our experts are well equipped to listen, help and advise you on your acoustic, smoke and fire containment needs.

# comprehensive support

## Technical Services

We're happy to provide specialist advice on acoustic, smoke and fire protection for refurbishment and new build projects. If you need assistance, you can call our Technical Services team.

Alternatively, we can arrange a site visit to get a clearer idea of your needs and how we can help you. We also provide copies of test reports and samples where needed and can give guidance on how best to meet Building Regulations and Standards.

## Customisation

If you have a particular requirement which isn't covered by the applications in this brochure, we may be able to supply an existing non-standard item, or even develop a customised solution for you.

## Web Support

We have a comprehensive, user-friendly website which features our extensive range of products, CAD drawings and details on the services we offer. Our entire collection of brochures can be downloaded, as can copies of certification and specification texts.

Call our Technical Services team on  
**01626 834252**  
[www.lorientuk.com](http://www.lorientuk.com)



For further information about Lorient products please visit our website

**[www.lorientgroup.com](http://www.lorientgroup.com)**

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