CI/SfB
(32.5) Ro8 (K2)

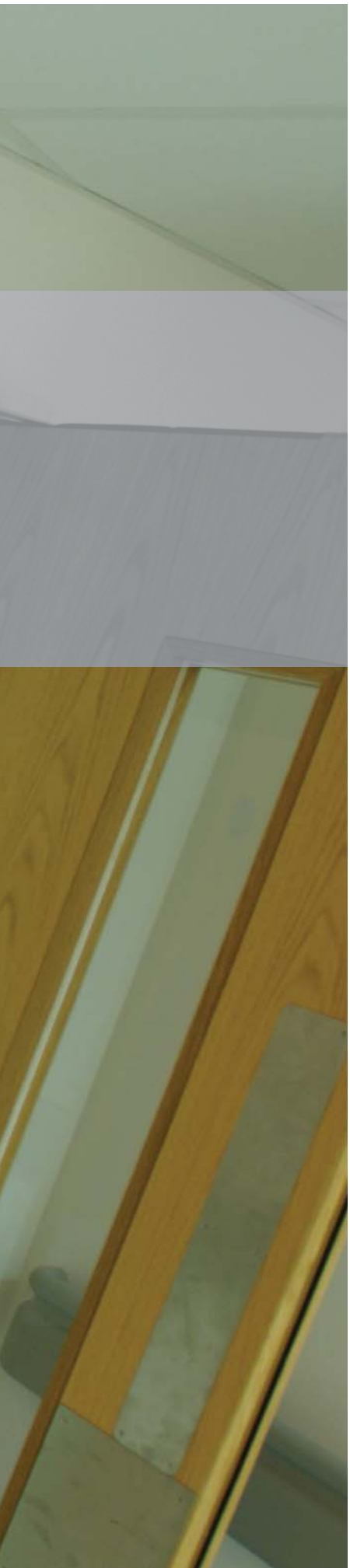
LORIENT

FIRE RESISTANT GLAZING SYSTEMS

FIRE
RESIST
GLAZI
SYSTE

LORIENT

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 pioneering 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 almost 40 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 state-of-the-art acoustic transmission suite, features the latest Brüel & Kjær sound measurement technology. It was designed and purpose-built to meet the requirements of BS EN ISO 10140 – Laboratory measurement of sound insulation of building elements.

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 the BBA, IFC and UL.

We embrace the highest management standards too, and hold both BS EN ISO 9001: 2015 and BS EN ISO 14001: 2015 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 and Europe head office, we have a number of operations around the world; in North America, Hong Kong, Singapore, Australia and Dubai. Furthermore, we have strong links in India, which means that we're able to deliver the right solutions locally to our customers throughout the world. By keeping abreast of technical developments and changes to codes, regulations and standards across the continents, we can ensure we're always providing the highest level of expertise. From advice to testing, new product development to manufacture – we work best in partnership with you.

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09/17

Images on facing page, 3 and 18 supplied with kind permission of Leaderflush Shapland

Fire and Smoke – Life Threatening Forces

On average **303 people are killed** and **7,661 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), Approved Document B (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 design becomes 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.

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), Approved Document B (Wales), Technical Handbook Section 2 (Scotland), and Technical Booklet E (N. Ireland).
- **Safety and Impact Resistance:** Approved Document K (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), Approved Document E (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 476-22: 1987: Methods for determination of the fire resistance of non-loadbearing elements of construction.
- BS 9999: 2017: Code of practice for fire safety in the design, management and use of buildings.

European Standard

- BS EN 1363-1: 2012: Fire resistance tests. General requirements.
- BS EN 1364-1: 1999: Fire resistance tests for non-loadbearing elements. Walls.
- BS EN 1634-1: 2008: Fire resistance and smoke control tests for door, shutter and, openable window assemblies and elements of building hardware. Fire resistance tests for doors, shutters and openable windows in the design, management and use of buildings.

**Source: Communities and Local Government Website 2017*

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 – 16 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 without a significant loss of acoustic performance and in some cases can improve the sound insulating properties, provided that the area of glass in relation to the area of door and thickness of glass being used is considered. Conventional Georgian wired glass has been tested in conjunction with our System-36/6 PLUS glazing gasket and provides optimum acoustic performance for most types of door construction, including

FD30 / FD30S. By this method, up to 0.16m^2 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.

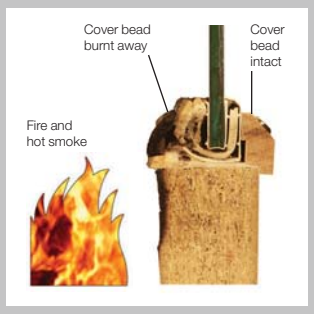
System-36 PLUS and **System-63Ø**

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

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

System-90 PLUS

System-90 PLUS operating in 'cold' condition



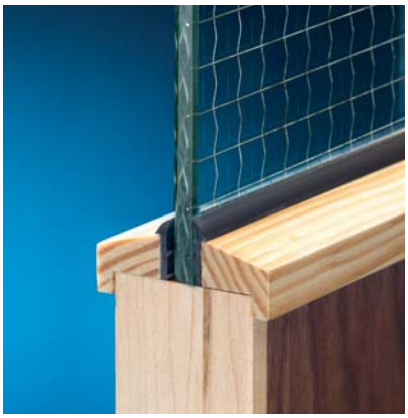
System-90 PLUS operating in 'hot' condition

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 11-16.

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 6-9.



System-36 PLUS

System-36 PLUS is a flexible U-shaped glazing gasket designed for 30 minute fire resistant doors and screens. When using approved glass types (please refer to CF5060 for the full range of glass types) it provides up to 60 minute fire resistance for doors and screens.

- Each size variant features a unique colour on the spine for easier identification.
- Available to suit different thicknesses of glass from 5mm to 23mm.
- Supplied coiled in a box so it's easily dispensed and cut to length, avoiding wastage in off-cuts.
- Suitable for use with a range of standard fixing beads.
- Flexible enough to be fitted to curved corners and circular vision panels.

certifire

CF5060

FF1

FF1 (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.

certifire

CF327

RF1™

RF1™ is a versatile new bead-applied glazing system for 60 minute fire resistant doors and screens.

- Comprises a pair of bead applied intumescent glazing seals and an intumescent liner.
- Premium aesthetics – the caps are the only visible elements when fitted – and are available in a variety of colours to harmonise with the door.
- For use with pins which are discreet and quick to fix or alternatively secure with screws.
- Unique design which enables tolerances between door, bead and glass thicknesses to be accommodated.

certifire

CF5033

System-90 PLUS

System-90 PLUS is designed for 60 minute fire resistant doors and screens. 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 only when a suitable door 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.

certifire

CF185

System-63Ø

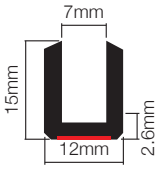
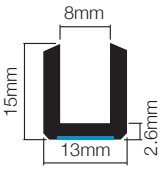
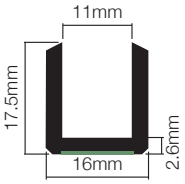
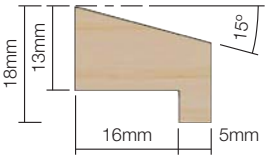
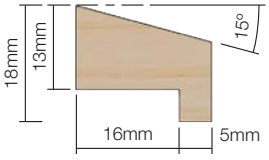
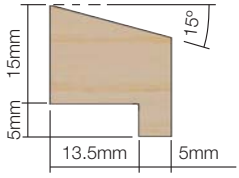
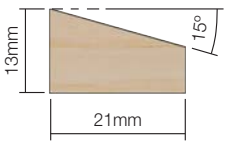
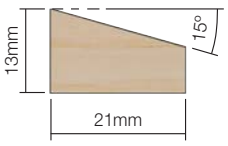
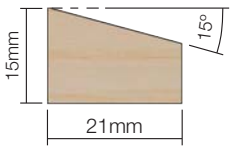
System-63Ø is a variant of System-36 PLUS which has been designed for use in circular apertures in 60 minute fire resistant doors.

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

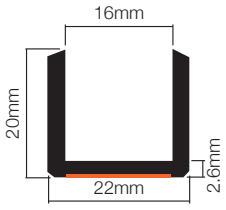
certifire

CF201

Product Range – Standard Profiles

Dimensions and Comments	System-36/6 PLUS	System-36/7 PLUS	System-36/10 PLUS
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.			
	LG1512 PLUS suitable for use with 6mm - 7mm fire rated glass	LG1513 PLUS suitable for use with 7mm - 8mm fire rated glass	LG1717 PLUS suitable for use with 9mm - 11mm fire rated glass
Sodium silicate intumescent liner	Liner is required for flaxboard substrates below 500kg/m³	Liner is required for flaxboard substrates below 500kg/m³	Liner is required for flaxboard substrates below 500kg/m³
Standard lengths	60m coils	60m coils	30m coils
Finish	black with red spine	black with blue spine	black with green spine
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.			
Hardwood finishes: Oak, Beech, Sapele, Maple.	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
Note: Hardwood beads are available for System-36/6 PLUS and System-36/7 PLUS (min density 600 kg/m³ for door beading and min 640 kg/m³ for screen beading). Hardwood or softwood beads are available for System-36/10 PLUS and System-36/15 PLUS (min density 550 kg/m³). Hardwood beads are available for System-36/23 PLUS (min density 550kg/m³).			
	LG1320 for unrebated screen frames	LG1320 for unrebated screen frames	LG1520 for unrebated screen frames
Fixing of beads:	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 PLUS

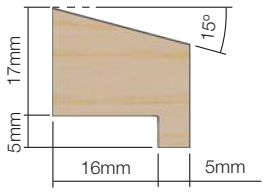


LG2022 PLUS
suitable for use with 14mm - 16mm fire rated glass

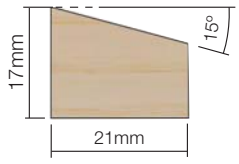
Liner is required for flaxboard substrates below 500kg/m³

30m coils

black with orange spine



LG1721
for 54mm thick doors or rebated screen frames

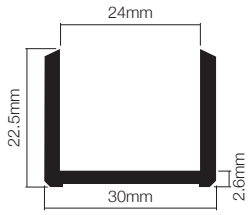


LG1720
for unrebated screen frames

timber bead for 44mm thick FD30 doors also available

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

System-36/23 PLUS

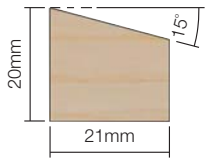


LG2229 PLUS
suitable for use with 23mm Pyrostop®, 23mm Pyranova® and 23mm Fireswiss Foam glass types. System for screens only

No liner is required

25m coils

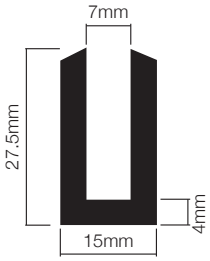
black with white spine



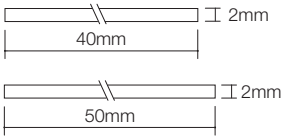
LG2020
for unrebated screen frames

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

System-63Ø



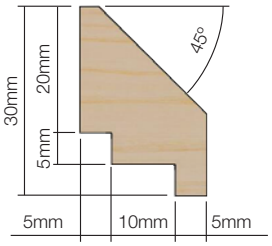
LG2715
suitable for door application use only with 6mm Georgian wired glass or Pyran-S®



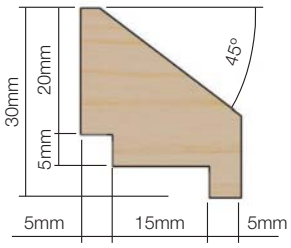
LX4002 & LX5002

25m coils

black



LGC2520
for 44mm thick doors or rebated screen frames

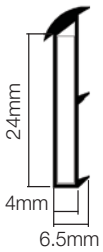
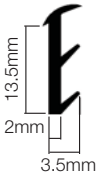
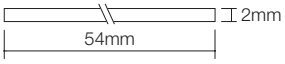
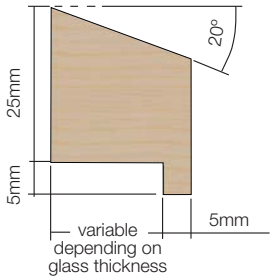
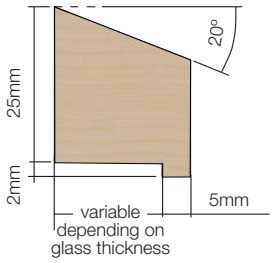
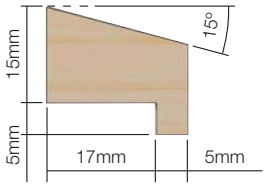


LGC2525 for 54mm thick doors or rebated screen frames

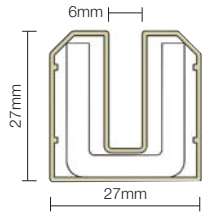
pinned using 40mm panel pins at 200mm nom. centres

Note:
Timber beads for System-630 must be hardwood only (min density 615 kg/m³)

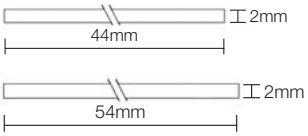
Note:
All dimensions are subject to manufacturing tolerances.

Dimensions and Comments	RF1™	FF1
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.	 RG2704 suitable for use with a variety of fire rated glass types for both doors and screens	 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
Sodium silicate intumescent liner	A sodium silicate liner (B25402) is required. 	For flaxcore doors, use with a 6mm hardwood liner (min density 640 kg/m³), intumescent liner LX4402, or saddle bead (min density 640 kg/m³)
Standard lengths	1 pack comprises 2 No. x RG2704 in 2.1m and 2 No. x B25402 in 1.050m – minimum order quantity 10 packs	50m coils. 5 coils per box – minimum quantity 1 box
Finish	black profile with white, cream, grey, light brown, dark brown and black caps	black as standard: white, light brown and cream to special order
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. Hardwood finishes: Oak, Maple, Sapele.	 RG2704 The bead should be hardwood excluding Ash and Beech (min density 610 kg/m³)  RG2704	 LG1522 for 44mm thick doors. NB: Hardwood or softwood beads are available (min density 550 kg/m³). Bead dimension could vary depending on glass type and door thickness
Fixing of beads:	pin or screw into place using 50mm long steel pins at 150mm nom. centres, or steel screws 50mm long (No.8) at 150mm nom. centres	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®

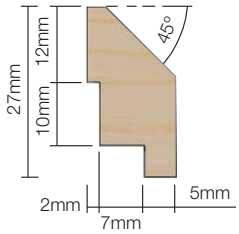


Must be used with liner and beading to prevent erosion from under the system

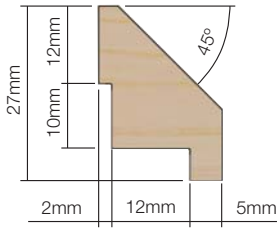
B24402 & B25402

1m & 2.1m

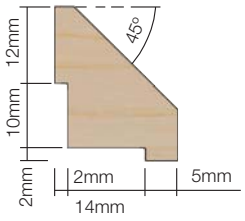
cream, white, grey, black, light brown, red, dark brown, silver, gold, bronze, maple as standard: colour matching to special order



LG2213 for 44mm thick doors



LG2218 for 54mm thick doors



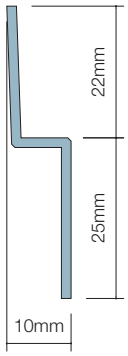
LG2220 for unrebated screen frames

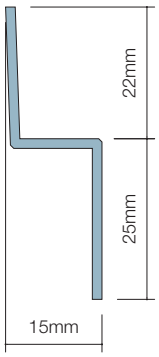
Timber beads must be hardwood only (min density 650 kg/m³) excluding Ash

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.
CF185
CF201
CF325 / CF327
CF5033 / CF5060

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
- 60 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		System-36/6 PLUS	page 11	page 11	page 12	page 11	page 15	page 15
		System-36/7 PLUS	page 11	page 11	page 12	page 11	page 15	page 15
		System-36/10 PLUS	page 11	page 11	page 12	page 11	page 15	page 15
		System-36/15 PLUS	page 11	page 11	page 12	page 11	page 15	page 15
		FF1	page 11	page 11	-	page 11	-	-
60		System-36/15 PLUS	page 13	-	page 14	page 13	page 15	page 15
		System-90 PLUS	page 13	-	-	page 13	page 15	page 15
		System-63Ø	-	-	page 14	-	-	-
		System-36/23 PLUS	-	-	-	-	page 15	page 15
		RF1™	page 13	-	-	page 13	page 16	page 16
90		System-90 PLUS	-	-	-	page 14	-	-
120		System-90 PLUS	page 14	-	-	-	-	-

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

system	glass types	max. pane height	max. pane width	max. pane area
System-36/6 PLUS	6mm Pyrotuf®	1300mm	506mm	0.598m²
System-36/6 PLUS	5mm Firelite® 6mm Pyroshield® 2 6mm Pyran-S® 6mm Pyrocet®	1482mm	580mm	0.688m²
System-36/7 PLUS	Pyroguard® C/W 7mm 7.5mm Pyrodur® Plus	875mm	750mm	0.66m²
System-36/7 PLUS	7mm Pyrostem® 8mm Pyran-S®	1482mm	580mm	0.688m²
System-36/7 PLUS	Pyranova® S3.0.7	1550mm	517mm	0.775m²
System-36/7 PLUS	7mm Pyrobelite®	1800mm	600mm	1.08m²
System-36/10 PLUS	Pyroguard® C/W 11mm	1353mm	870mm	0.95m²
System-36/10 PLUS	10mm Pyran-S®	1482mm	580mm	0.688m²
System-36/10 PLUS	10mm Pyrodur® 11mm Pyranova® 15 S2.0	1800mm	600mm	1.08m²
System-36/15 PLUS	15mm Pyrostop®	1790mm	630mm	1.11m²
System-36/15 PLUS	16mm Pyrobel® Pyranova® 30 S2.0 Pyroguard® Insulation 30-15	1800mm	600mm	1.08m²
System-36/15 PLUS	Pyranova® 30 S3.0	1875mm	625mm	0.94m²
FF1	5mm Firelite® 6mm Pyran-S® 6mm Pyroshield® Safety 7mm Pyrostem® 7mm Pyrobelite® 7mm Pyrodur® Plus	875mm	750mm	0.66m²
FF1	7.2mm Pyroguard® C/W	1236mm	750mm	0.71m²
FF1	6mm Pyrotech™ 630	1750mm (at 450mm width)	560mm (at 1400mm height)	0.78m²

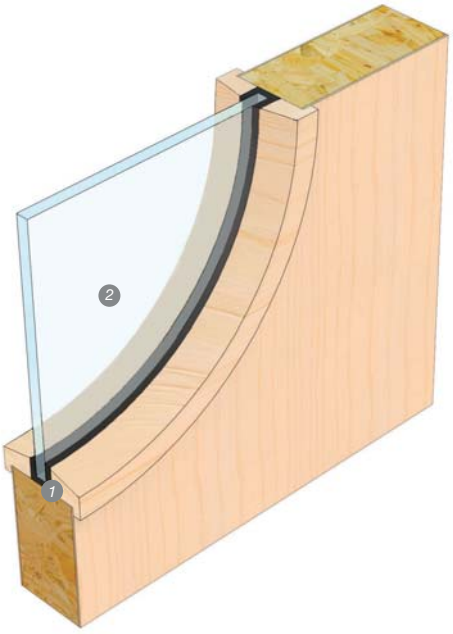
1 System-36/6 PLUS with
2 6mm Pyroshield®

Doors 44mm

30

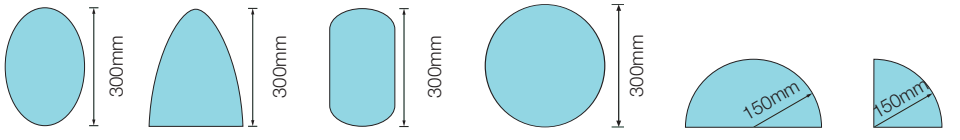
**Larger diameter apertures are the subject of current development. Please refer to our Technical Services team.*

system	glass types	max. pane height	max. pane width	max. pane area
System-36/6 PLUS	6mm Pyrotuf®	1300mm	506mm	0.598m²
System-36/6 PLUS	5mm Firelite® 6mm Pyroshield® 2 6mm Pyran-S® 6mm Pyrocet®	1482mm	580mm	0.688m²
System-36/7 PLUS	Pyroguard® C/W 7mm 7.5mm Pyrodur® Plus	875mm	750mm	0.66m²
System-36/7 PLUS	7mm Pyrostem® 8mm Pyran-S®	1482mm	580mm	0.688m²
System-36/7 PLUS	Pyranova® S3.0.7	1550mm	517mm	0.775m²
System-36/7 PLUS	7mm Pyrobelite®	1800mm	600mm	1.08m²
System-36/10 PLUS	Pyroguard® C/W 11mm	1353mm	870mm	0.95m²
System-36/10 PLUS	10mm Pyran-S®	1482mm	580mm	0.688m²
System-36/10 PLUS	10mm Pyrodur® 11mm Pyranova® 15 S2.0	1800mm	600mm	1.08m²
System-36/15 PLUS	15mm Pyrostop®	1790mm	630mm	1.11m²
System-36/15 PLUS	16mm Pyrobel® Pyranova® 30 S2.0 Pyroguard® Insulation 30-15	1800mm	600mm	1.08m²
System-36/15 PLUS	Pyranova® 30 S3.0	1875mm	625mm	0.94m²



1 System-36/6 PLUS with
2 6mm Pyran-S®

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

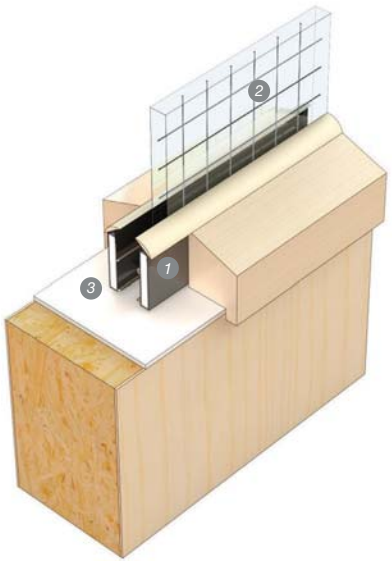


elliptical mitre elongated circle circular arched quadrant

Doors 54mm

system	glass types	max. pane height	max. pane width	max. pane area
RF1™	Pyroguard® C/W 11.4mm	1400mm	460mm	0.575m²
RF1™	Pyroguard® Insulation 30-15	1440mm	540mm	0.65m²
RF1™	5mm Firelite® 6mm Pyroshield® 2 6mm, 8mm, 10mm, 12mm Pyran-S® 7mm Pyrostem® 12mm Pyrobelite® 13mm Pyrodur® 60-20 15mm Pyrostop® 30-10 16mm Pyrobel®	1488mm	620mm	0.75m²
RF1™	Pyranova® 15-S2.0/S2.1 Pyranova® 30 – S3.0	1770mm	590mm	0.885m²

Note: For RF1™, an intumescent liner is required.

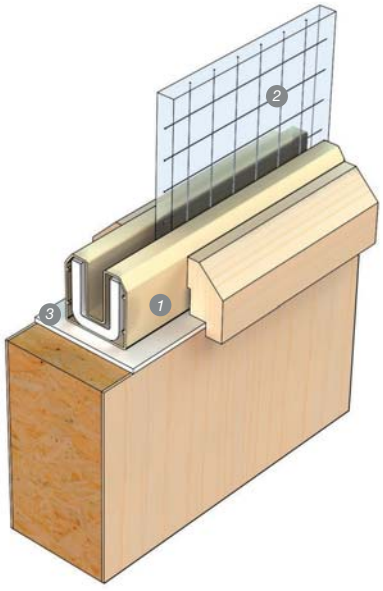


1 RF1™ with
2 6mm Pyroshield® 2
3 B25402 liner

Doors 54mm

system	glass types	max. pane height	max. pane width	max. pane area
System-36/15 PLUS	15mm Pyrostop®	1790mm	630mm	1.11m²
System-36/15 PLUS	Pyranova® 30 S3.0	1830mm	610mm	0.92m²
System-36/15 PLUS	16mm Pyrobel®	1800mm	600mm	1.08m²
System-90 PLUS	5mm Firelite® 6mm Pyroshield® Safety 6mm Pyran-S®	720mm	720mm	0.43m²
System-90 PLUS	5mm Firelite® 6mm Pyroshield® Safety 6mm Pyran-S®	1600mm	200mm	0.32m²

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



1 System-90 PLUS with
2 6mm Pyroshield®
3 B25402 liner

Doors 54mm

system	glass types	max. pane height	max. pane width	max. pane area
System-63Ø	5mm Firelite® 6mm Pyroshield® 6mm Pyran-S®	462mm diameter max.		
System-36/15 PLUS	15mm Pyrostop®	1790mm	630mm	1.11m²
System-36/15 PLUS	16mm Pyrobel®	1800mm	600mm	1.08m²
System-36/15 PLUS	Pyranova® 30 S3.0	1830mm	610mm	0.92m²

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®

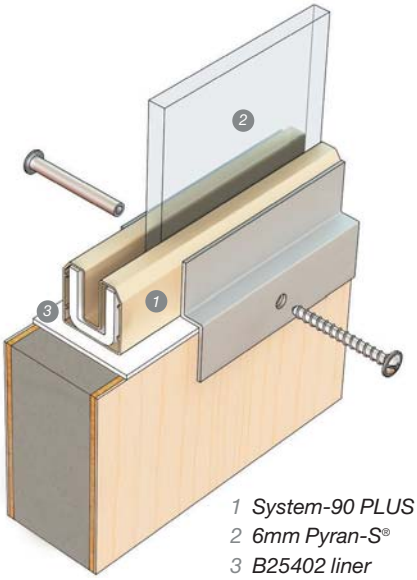
Doors 54mm

system	glass types	max. pane height	max. pane width	max. pane area
System-90 PLUS	5mm Firelite® 6mm Pyran-S®	500mm	400mm	0.2m²
System-90 PLUS	5mm Firelite® 6mm Pyran-S®	1600mm	200mm	0.32m²

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®
3 B25402 liner

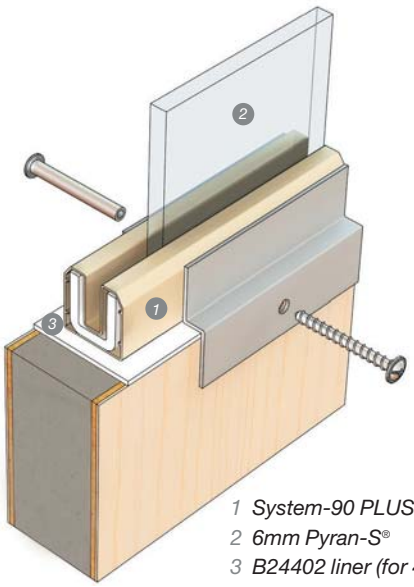
Doors 44mm and 54mm

system	glass types	max. pane height	max. pane width	max. pane area
System-90 PLUS	5mm Firelite® 6mm Pyran-S®	500mm	400mm	0.2m²

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®
3 B24402 liner (for 44mm) /
B25402 liner (for 54mm)

Screens or Partitions

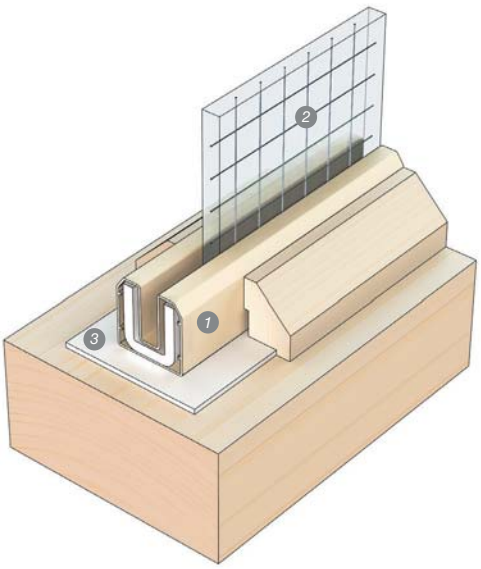
system	glass types	max. pane height	max. pane width	max. pane area
System-36/6 PLUS	5mm Pyrocet®	1732mm	829mm	1.15m²
System-36/6 PLUS	5mm Firelite® 6mm Pyroshield® 2 6mm Pyran-S®	2530mm	1019mm	2.34m²
System-36/7 PLUS	Pyroguard® C/W 7mm	2300mm	926mm	2.13m²
System-36/7 PLUS	7.5mm Pyrodur® Plus	2320mm	1082mm	2.50m²
System-36/7 PLUS	7mm Pyrostem® 8mm Pyran-S®	2530mm	1019mm	2.34m²
System-36/7 PLUS	7mm Pyrobelite®	2875mm	1157mm	2.66m²
System-36/10 PLUS	10mm Pyrodur®	2000mm	1378mm	1.90m²
System-36/10 PLUS	Pyroguard® C/W 11mm	2300mm	926mm	2.13m²
System-36/10 PLUS	10mm Pyran-S®	2530mm	1019mm	2.34m²
System-36/15 PLUS	15mm Pyrostop® 16mm Pyrobel® Pyranova® 30 S2.0 Pyroguard® Insulation 30-15	2000mm	1378mm	1.90m²

1 System-36/6 PLUS with
2 6mm Pyran-S®

Note: Frame members to be of minimum cross-section 45mm x 70mm in either hardwood or softwood of not less than 520 kg/m³. Hardwood beads to be used for System-36/6 PLUS and System-36/7 PLUS (min density 640kg/m³). Hardwood or softwood beads to be used for System-36/10 PLUS and System-36/15 PLUS with a minimum density of 550kg/m³.
* Refer to Document K concerning impact requirements.

Screens or Partitions

system	glass types	max. pane height	max. pane width	max. pane area
System-36/15 PLUS	15mm Pyrostop® 16mm Pyrobel®	2000mm	1378mm	1.90m²
System-36/23 PLUS	23mm Pyrostop® Pyranova® 60 S2.0 Pyranova® 60 S3.0 Pyroguard® Insulation 60-23	2000mm	1342mm	1.80m²
System-90 PLUS	Pyroshield® Safety	1000mm	1000mm	1.00m²
System-90 PLUS	Firelite® Pyran-S®	2420mm	1460mm	2.15m²



1 System-90 PLUS with
2 6mm Pyroshield®
3 B25402 liner

Note: Frame members to be of minimum cross-section 45mm x 90mm in hardwood (except Ash) of not less than 550 kg/m³ (for System-36/15 PLUS and System-36/23 PLUS) and 650 kg/m³ (for System-90 PLUS). For System-90 PLUS, an intumescent liner is required.
* Refer to Document K concerning impact requirements.

Screens or Partitions

system	glass types	max. pane height	max. pane width	max. pane area
RF1™	5mm Firelite® 6mm Pyroshield® 2 6mm, 8mm, 10mm, 12mm Pyran-S® 7mm Pyrostem® 13mm Pyrodur® 60-20 15mm Pyrostop® 30-10 15mm Pyrostop® 30-10 and 18mm Pyrostop® 30-20 Insulating Glass Units including 15mm Pyrostop® 30-10 and 18mm Pyrostop® 30-20 23mm Pyrostop® 60-101 Insulating Glass Units including 23mm Pyrostop® 60-101 12mm Pyrobelite® 16mm Pyrobel® 25mm Pyrobel® Insulating Glass Units including 11mm Clear or Wired Glass, 12mm steel spacer and 4mm float glass Pyroguard® Insulation 30-15 Pyroguard® Insulation 60-23 Pyranova® 15-S2.0/S2.1 Pyranova® 30-S3.0	500mm	1000mm	0.5m²
RF1™	5mm Firelite® 6mm Pyroshield® 2 6mm, 8mm, 10mm, 12mm Pyran-S® 7mm Pyrostem® 13mm Pyrodur® 60-20 15mm Pyrostop® 30-10 15mm Pyrostop® 30-10 and 18mm Pyrostop® 30-20 Insulating Glass Units including 15mm Pyrostop® 30-10 and 18mm Pyrostop® 30-20 23mm Pyrostop® 60-101 Insulating Glass Units including 23mm Pyrostop® 60-101 12mm Pyrobelite® 16mm Pyrobel® 25mm Pyrobel® Insulating Glass Units including 11mm Clear or Wired Glass, 12mm steel spacer and 4mm float glass Pyroguard® Insulation 30-15 Pyroguard® Insulation 60-23	1488mm	620mm	0.75m²
RF1™	Pyroguard® C/W 11.4mm	1400mm	460mm	0.575m²
RF1™	Pyranova® 15-S2.0/S2.1 Pyranova® 30-S3.0	1770mm	590mm	0.885m²

1 RF1™ and
2 6mm Pyroshield® 2
3 B25402 liner

Note: Frame members to be of minimum cross-section 45mm x 94mm.
Framing and beading in hardwood (except Ash and Beech) of not less than 610 kg/m³.
* Refer to Document K concerning impact requirements.

Fitting Instructions

System 36 PLUS 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 6 – 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 6 – 9.

RF1™

Consists of a pair of bead applied intumescent glazing seals and a sodium silicate intumescent liner. To be used with appropriate hardwood beads (which Lorient can supply).

FF1

The FF1 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: 2015.

BS EN ISO 9001:2015
Certificate No. Q6104

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

As a result, this internationally recognised standard for quality management generates customer confidence. 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 14001:2015 accreditation for environmental management, making us the first seal manufacturer to have achieved this important award. This internationally recognised standard shows 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 of our ongoing commitment to operate in a sustainable way.

BS EN ISO 14001:2015
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 5ºC and 40ºC. 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 and active contributor to the following:

ASDMA
Architectural and Specialist Door Manufacturers Association

ASSOCIATION OF COMPOSITE DOOR MANUFACTURERS

bwf-certifire FIRE DOOR SCHEME

ACCREDITED MEMBER FIS

gai full member

Supporter of FIRE DOOR FDIS INSPECTION SCHEME
Qualifying Fire Door Professionals

Made in Britain

We are proud to have been granted the prestigious Made in Britain marque for our products that are designed and manufactured at our main facility in the South West of the UK.

MADE IN BRITAIN

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 three 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 **303 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 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.

The Regulatory Reform (Fire Safety) Order 2005 and its implications for fire doors

The RRO consolidated 70 pieces of legislation; shifted responsibility for fire safety management; abolished the Fire Safety Certificate; established the Fire Risk Assessment and created major change in legal liability.

Our RRO CPD seminar covers:

- an overview of the RRO;
- product solutions;
- the dangers of fire and smoke;
- the importance of fire doors – including installation and maintenance.

Our CPD materials have been independently verified and certified by the RIBA as CPD approved. A certificate for 1 hour's CPD will be provided, which contributes to Continuing Professional Development requirements.

If you're interested in booking either seminar, please contact our Marketing department or e-mail **cpd@lorientuk.com**.

We continue to lead the way in Research and Development. As a company we have almost 40 years' experience, so our experts are well equipped to listen, help and advise you on your sealing system requirements.

comprehensive support

Technical Support

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.

Fire Door Inspection Services

We also offer a professional and expert fire door inspection service. Our Certificated Fire Door Inspectors are fully qualified under the Fire Door Inspection Scheme (FDIS); and have been assessed by Exova Warringtonfire, an independent third party. Certificated to carry out the inspection of your building's fire doors and prepare a detailed survey and report on the condition and function of the fire doors on your premises.

Supporter of FIRE DOOR FDIS INSPECTION SCHEME
Qualifying Fire Door Professionals

Web Support

Our website features a comprehensive range of supporting documents covering the entire range of products, including installation guides and CAD drawings. All of our brochures and product sheets are also available for download, together with copies of certification and specification texts.

Online Acoustic Search Tool

Our acoustic search tool on our website gives you quick and easy access to a wide range of tested acoustic sealing systems on a variety of popular door constructions & configurations.

www.lorientuk.com/acousticsearch

The tool allows users to select a specific decibel rating; along with door configuration, fire door rating, doorset type etc to filter the results. The 'Acoustic Search' tool is updated frequently with Lorient's ever-expanding portfolio of test evidence. If you're looking for high performance or specialist applications – please contact us on **+44 (0) 1626 834252**, there may be some additional configurations we haven't presented.

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. Utilising in-house expertise, bespoke products are created to your requirements; from a functional or aesthetic perspective, or both.

Lorient's dedicated Technical Services team supports and works as part of your design team, offering informed product advice and guidance on regulatory requirements and standards.

Call our Technical Services team on

01626 834252

www.lorientuk.com

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