

STOPLINE FIRE RATED GLAZED

Fire Resistant Glazing System Reinvented • Complete & Guaranteed



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For Full Lifecycle Service

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FIRE RATED GLAZING



WE KNOW FIRE



**FIRE RESISTANT
GLAZING SYSTEMS
REINVENTED**



GENERAL

With the demand for Green Buildings increasing there has never been more reason to use Smoke Control's systems. Our systems assist designers, developers and building owners achieve the green building goals whilst maintaining a high level of life safety through the use of Alternative Solutions.

Once, fire resistant glazing was thought to be expensive and cumbersome. Smoke Control introduces a complete range of fire resistant glazing systems which provide cost effective solutions to all budgets and applications.

To do this we have partnered with Vetrotech Saint-Gobain. Saint-Gobain has been making glass since 1665, and today is Europe's largest glass manufacturer, producing an unrivalled range of glass types used in building, transportation and specialty applications. Operating in more than 50 countries, Saint-Gobain is one of the world's "Top 100" industrial corporations. As part of this group Vetrotech Saint-Gobain is the world's leading manufacturer of fire resistant glass for the building and marine sectors. With over 25 years of specialised experience, they have built a solid reputation for delivering glass of exceptional quality and effectiveness.

Smoke Control's commitment to provide complete solutions is reflected in the trust our clients place in us. This commitment is underlined by extensive system development, testing and approvals and supported by Vetrotech Saint-Gobain with quality-driven production processes.

Saint-Gobain's glasses combine absolute form and function, accommodating life safety and property protection as well as multi-functionality and maximum transparency - and therefore able to integrate perfectly alongside non-fire glass types.

KEY FEATURES

- Cost effective framed glazing systems
- Fire ratings up to 2 hours
- Fire tested to AS1530 Part 4
- Maximum transparency to integrate perfectly alongside non-fire glass
- All systems incorporate safety rated glass
- Complete range to suit a myriad of applications including; (refer to specific data sheets)
 - ◆ Vertical frameless systems
 - ◆ Horizontal structural floors
 - ◆ Sliding glazed doors
 - ◆ Operable windows
 - ◆ Suspended smoke curtains (no sprinklers required !)
 - ◆ Curtain wall systems
- Local design support

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Description

The wide range of Vetrotech Saint-Gobain is based on various technologies and production processes, which have been developed with a high level of commitment and innovation.

The glass technology ranges from specialty glass and films to intumescent interlayer products.

In addition to the fire performance, these glasses have inherent light transmission, sound reduction and U values. This data is of course dependant on the glazing system and is available on request.

Our fire resistant glass systems are also available etched, printed and coloured.

Installation

In line with Smoke Control's mission to provide customers with reliable solutions, our glazing systems are installed by our fully trained and approved national installer network.

Verification of performance

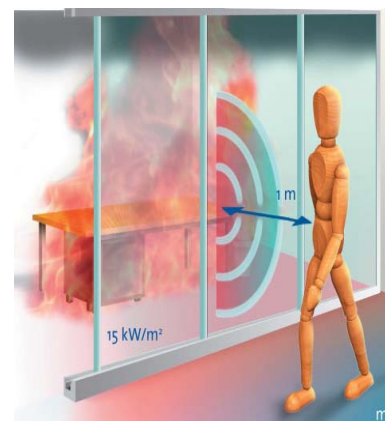
Simply, Smoke Control offers Deemed-to-Satisfy fire resistant glazing systems fire tested in accordance with AS1530.4. This includes 30 and 60 minute integrity only systems (-/30/- and -/60/-) and fully insulated systems (-/30/30, -/60/60, -/90/90 and -/120/120).

In addition, we offer significant cost savings through the use of full integrity and radiant heat shielding glazed systems. Akin to our fire and smoke curtain systems, the various available fire ratings of these systems are assessed by the fire engineer on a project specific basis. We refer to these as **R-systems**. It is therefore essential that Smoke Control is invited to provide design assistance from an early stage in the project's design to ensure the system will be accepted by both the Fire Engineer and Building Certifier.

An effective explanation of the various fire performance levels available is achieved using a corridor application as follows....



Integrity only glass contains fire and hot toxic gases but the corridor gets hot quick !



A reflective coating or intumescent interlayer reduces the radiant heat that penetrates the glass providing a cost effective solution for corridor and other applications



Full integrity and insulation glass fully contains the heat in addition to fire and smoke.

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Maintenance

Annual maintenance and verification of system operation should be conducted by trained personnel in strict accordance with our document procedures.

The glass requires no special maintenance procedures. Once installed the glass should be cleaned regularly using warm water and a liquid detergent, washed down with clean water. Damaged or broken panels should be replaced, as this could affect the fire performance capabilities of the product.

Contact us for details.

Technical Data

Safety Glass

All of Smoke Control's glass comply with AS2208 requirements for Safety Glass and are classified as Grade A.

Maximum fire tested size

St Gobain has conducted a myriad of fire tests on many different combinations of pane sizes and configurations. So much testing in fact that the Testing Laboratories have sufficient data on worse case scenarios to enable them to produce Field of Application Assessments for each system. This provides the Designer with flexibility of system design to suit their architectural requirements while also giving the Certifier confidence in the acceptance of the system at certification time.

These field of application approvals derive the maximum allowable pane sizes for the system. The system can then be expanded in a modular form in height and width. The following system data sheets summaries our approvals and illustrates this flexibility.

Freedom of design

Integration along side non-fire resistant glass systems can be easily achieved due to the glass' high transparency qualities. Systems are always being developed so if you don't see exactly what you need here, please contact us to discuss your requirements.



CE Mark

All of Vetrotech/Saint-Gobain's fire resistant glasses are CE Marked. This means that stringent in-plant production control in addition to third party monitoring and certification is required. In-plant production control includes regular, random sample tests in accordance with a predefined plan; initial inspection of the factory and in-plant production control (documented procedures); and, ongoing monitoring of such control, (auditing).

Our customers can be assured of consistent and high quality products.

Information given in this publication is given to the best of our knowledge and in good faith. Smoke Control is not responsible if recipients of test reports, assessments or literature misinterpret the contents and wrongly use products based on those misinterpretations. No liability is accepted for error omissions in this document. Smoke Control reserves the right to change specification without notice.

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System options



Stopline integrity only glazing systems



Stopline - R low radiation systems



Stopline 120 fully insulated systems

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FIRE RESISTANCE



STOPLINE UNINSULATED GLAZED SCREENS, DOORS AND WINDOWS



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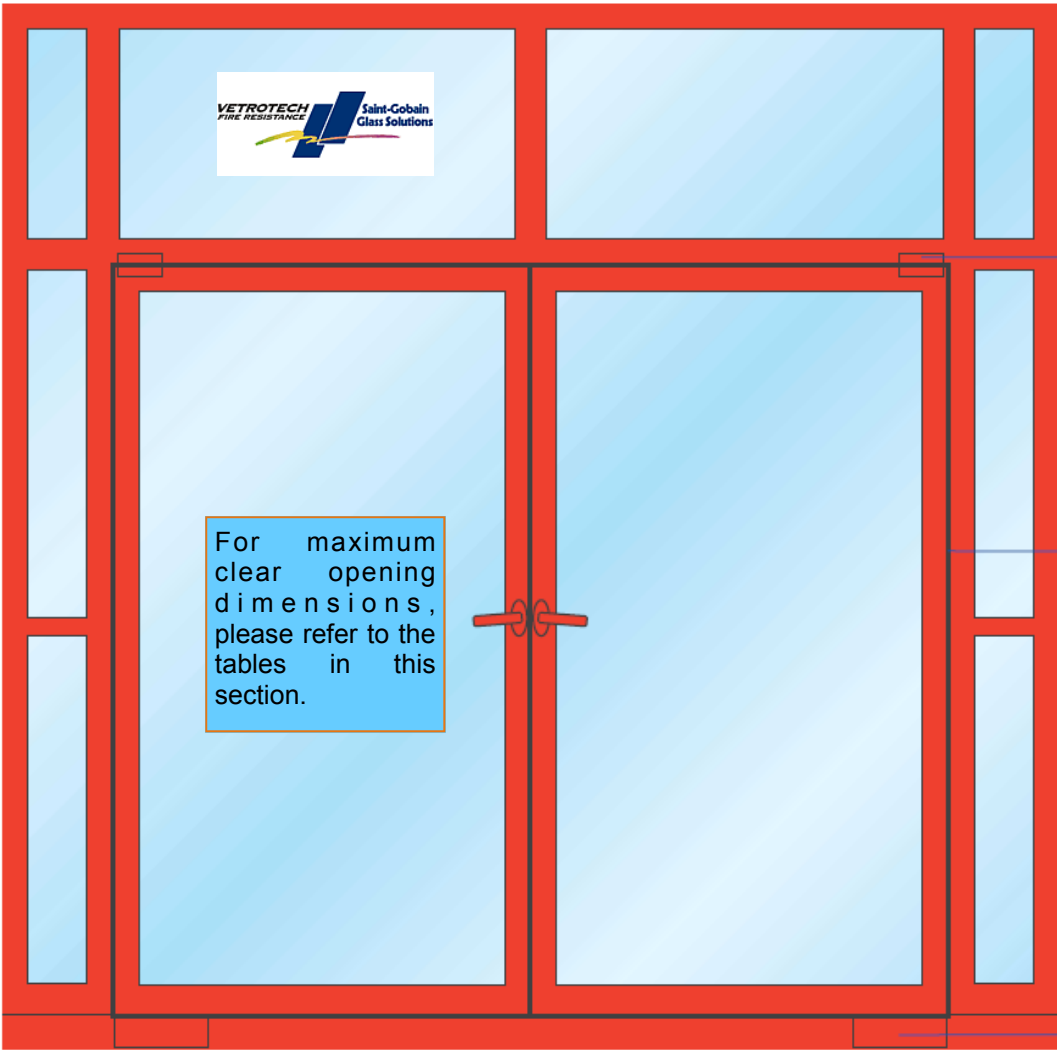
Integrity only glass systems

SYSTEM
Stopline

FRL's
Up to -/180/-

Approvals
WFRC166796
WFRC180305
WFRC103798

Elevation



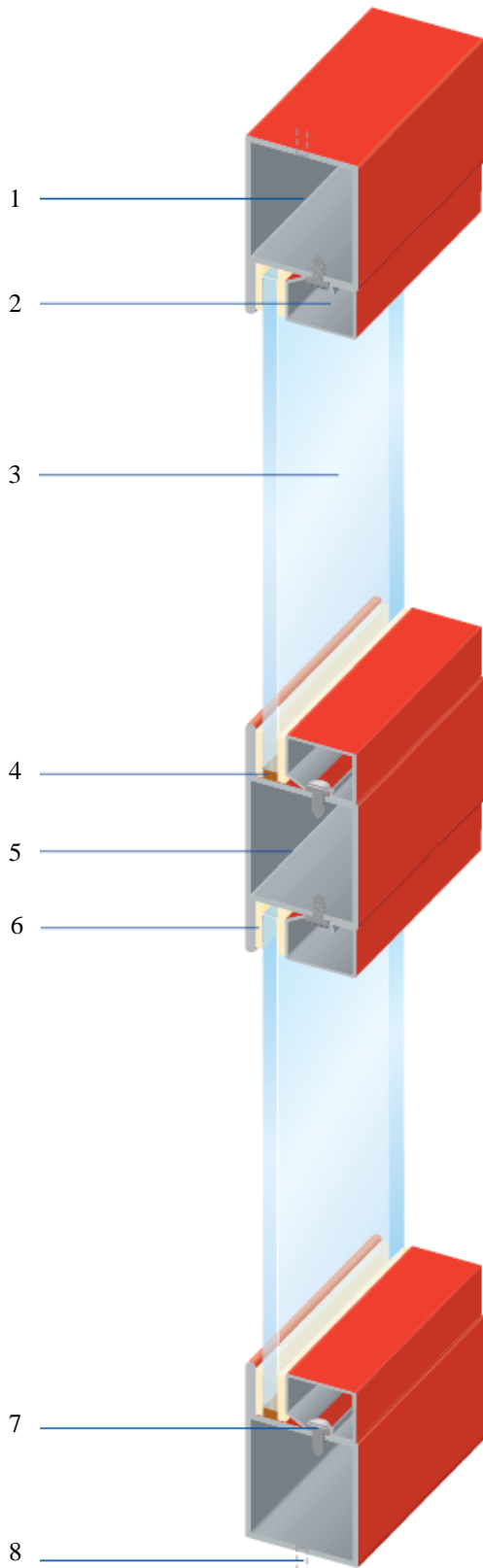
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STOPLINE UNINSULATED GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Section



Parts list

1. 50 x 50mm galvanised steel stop bar
2. Galvanised steel snap-on glazing beads
3. SGG Pyroswiss glass –see table next page for specifications
4. Setting blocks 80 x 10 x 6mm
5. 50 x 50 mm galvanised steel mullion (or transom)
6. Glazing tape
7. Glazing bead studs
8. Expanding anchor bolts M8 x 100mm @ 460mm centres (nominal)
9. Hinges or Dorma top pivot – type 7421
10. Intumescent smoke seals to frame and door leaves
11. Dorma floor springs—Type BTS80, size 3 (for double acting doors only)

Attention:

Glazing systems are made up of a range of proprietary components, each important to the performance under fire test. Drawings in this documentation are NOT provided as installation instructions and ad-hoc installations cannot possibly be certified. Ensure your glazing system is installed and certified by Smoke Control.

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STOPLINE UNINSULATED GLAZED SCREENS, DOORS AND WINDOWS



Glass Specifications - Screens and windows

WE KNOW FIRE

| Glass | Thickness | FRL/ FRR | Max clear opening dimension* (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------------------|-----------|-------------|-----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Pyroswiss | 6mm | -/30/- | 3000 x 1200 | 15 | 89% | 32 dB | 5.8 |
| Pyroswiss Extra | 6mm | -/60/- | 3000 x 1200 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/90/- | 3000 x 1200 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/120/- | 3000 x 1200 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra (Laminated) | 12.76mm | -/120/- | 3000 x 1200 | 31 | 87% | 38 dB | 5.4 |
| Pyroswiss Extra | 6mm | -/180/- | 2340 x 965 | 16 | 89% | 32 dB | 5.7 |

* Max clear opening dimensions OR maximum m² apply based on the max dimensions for screens and windows only
[^] Weight is dead weight of glass only. Weight for framing, hardware and any structural supports must be added

Glass Specifications - Single leaf doors, single acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------------------|-----------|-------------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Pyroswiss | 6mm | -/30/- | 2630 x 1315 | 15 | 89% | 32 dB | 5.8 |
| Pyroswiss Extra | 6mm | -/60/- | 2550 x 1200 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/90/- | 2100 x 1100 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/120/- | 2100 x 1000 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra (Laminated) | 12.76mm | -/120/- | 2100 x 1000 | 31 | 87% | 38 dB | 5.4 |
| Pyroswiss Extra (Laminated) | 12mm | -/180/- | 2100 x 950 | 16 | 89% | 32 dB | 5.7 |

Glass Specifications - Double leaf doors, single acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------------------|-----------|-------------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Pyroswiss | 6mm | -/30/- | 2630 x 2630 | 15 | 89% | 32 dB | 5.8 |
| Pyroswiss Extra | 6mm | -/60/- | 2400 x 2400 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/90/- | 2450 x 2025 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/120/- | 2450 x 2025 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra (Laminated) | 12.76mm | -/120/- | 2450 x 2025 | 31 | 87% | 38 dB | 5.4 |
| Pyroswiss Extra (Laminated) | 12mm | -/180/- | 2340 x 1930 | 16 | 89% | 32 dB | 5.7 |

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STOPLINE UNINSULATED GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Glass Specifications - Single leaf doors, double acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|-----------|-------------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Pyroswiss Extra | 6mm | -/30/- | 2100 x 900 | 16 | 89% | 32 dB | 5.7 |

Glass Specifications - Double leaf doors, double acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------------------|-----------|-------------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Pyroswiss Extra | 6mm | -/30/- | 2185 x 1187 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra | 6mm | -/60/- | 2185 x 1187 | 16 | 89% | 32 dB | 5.7 |
| Pyroswiss Extra (Laminated) | 12.76mm | -/60/- | 2185 x 1187 | 31 | 87% | 38 dB | 5.7 |

Notes:

- ◆ Pyroswiss glazing systems are suitable for internal and external use
- ◆ Specific data for laminated safety glass, UV stability and double glazed unit make-ups on request
- ◆ Available etched, printed and coloured



Pyroswiss



Pyroswiss Extra (Laminated) is UV Stable in accordance with ENISO12543-4 Pt6.

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STOPLINE - R LOW RADIATION GLAZED SCREENS, DOORS AND WINDOWS



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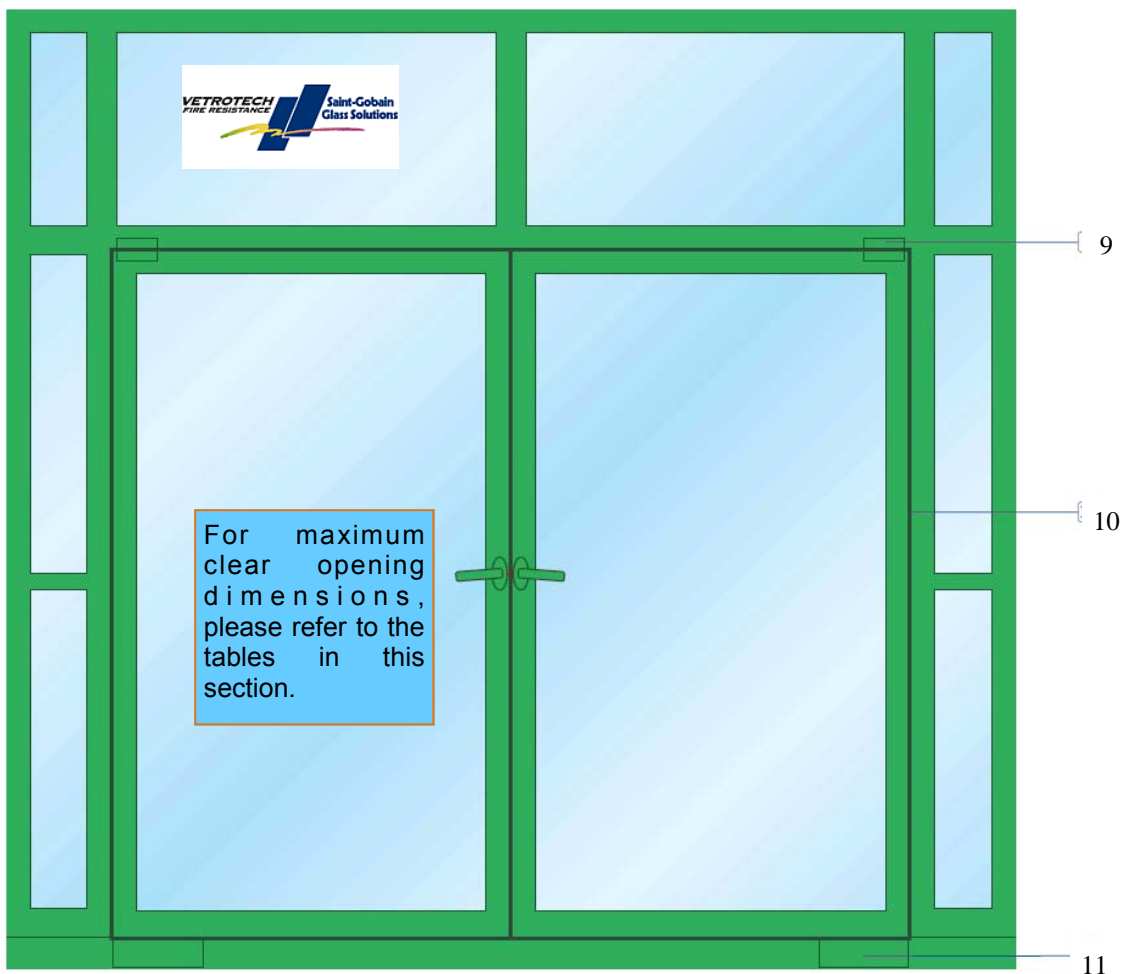


SYSTEM
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FRL
Up to -/120/- with
low radiation
properties

Approvals
IFCI537A
WFRC109918
IBS04120208

Elevation



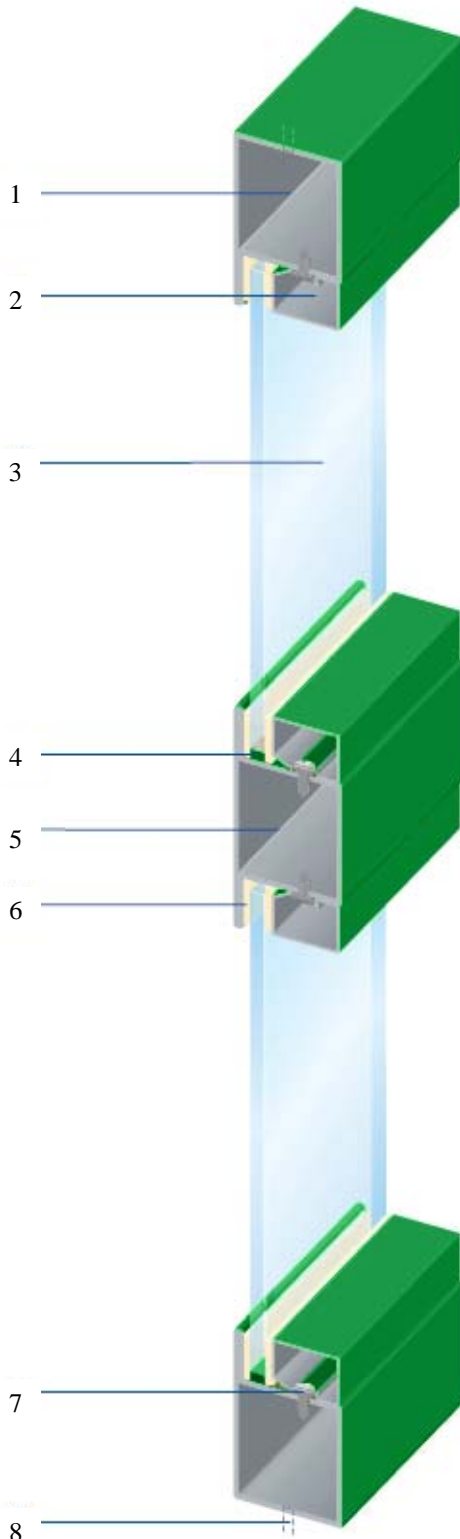
STOPLINE - R

STOPLINE - R LOW RADIATION GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Section



Parts list

1. 50 x 50mm galvanised steel stop bar
2. Galvanised steel snap-on glazing beads
3. SGG Contraflam Lite glass –see table next page for specifications
4. Setting blocks 80 x 10 x 6mm
5. 50 x 50 mm galvanized steel mullion (or transom)
6. Glazing tape
7. Glazing bead studs
8. Expanding anchor bolts M8 x 100mm @ 460mm centres (nominal)
9. Hinges or Dorma top pivot – type 7421
10. Intumescent smoke seals to frame and door leaves
11. Dorma floor springs—Type BTS80, size 3 (for double acting doors only)

Attention:

Glazing systems are made up of a range of proprietary components, each important to the performance under fire test. Drawings in this documentation are NOT provided as installation instructions and ad-hoc installations cannot possibly be certified. Ensure your glazing system is installed and certified by Smoke Control.

STOPLINE - R

STOPLINE - R LOW RADIATION GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Glass Specifications - Screens and windows

| Glass | Thickness | FRL/ FRR | Max clear opening dimension* (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|---------------|-------------|--|---|----------------------------------|--------------------------|---|
| Contraflam Lite | 13mm/ 20mm | -/120/- | 3000 x 1800 | 33 | 87% | 37 dB | 5.1 |

* Max clear opening dimensions OR maximum m² apply based on the max dimensions for screens and windows only
[^] Weight is dead weight of glass only. Weight for framing, hardware and any structural supports must be added

Glass Specifications - Single leaf doors, single acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|-----------|-------------|---|---|----------------------------------|--------------------------|---|
| Contraflam Lite | 13mm | -/120/- | 2630 x 1315 | 33 | 87% | 37 dB | 5.1 |

Glass Specifications - Double leaf doors, single acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|-----------|-------------|---|---|----------------------------------|--------------------------|---|
| Contraflam Lite | 13mm | -/120/- | 2630 x 2700 | 33 | 87% | 37 dB | 5.8 |



STOPLINE - R

STOPLINE - R LOW RADIATION GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Glass Specifications - Single leaf doors, double acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|-----------|-------------|---|---|----------------------------------|--------------------------|---|
| Contraflam Lite | 13mm | -/30/- | 2100 x 900 | 33 | 87% | 37 dB | 5.1 |

Glass Specifications - Double leaf doors, double acting

| Glass | Thickness | FRL/ FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|-----------------|-----------|-------------|---|---|----------------------------------|--------------------------|---|
| Contraflam Lite | 13mm | -/60/- | 2185 x 1187 | 33 | 87% | 37 dB | 5.1 |

Notes:

- ◆ This system significantly restricts the radiation that penetrates the glass, providing a cost effective Alternative Solution for a myriad of applications.
- ◆ No sprinklers are required
- ◆ Vetroflam glazing systems are suitable for internal and external use
- ◆ Contraflam Lite glazing systems are suitable for internal use only
- ◆ Specific data for laminated safety glass, UV stability and double glazed unit make-ups on request
- ◆ Available etched, printed and coloured



Contraflam Lite uses intumescent interlayer technology to reduce radiation and is UV Stable in accordance with EN ISO12543-4 Pt6.

STOPLINE - R

STOPLINE 120 FULLY INSULATED GLAZED SCREENS, DOORS AND WINDOWS

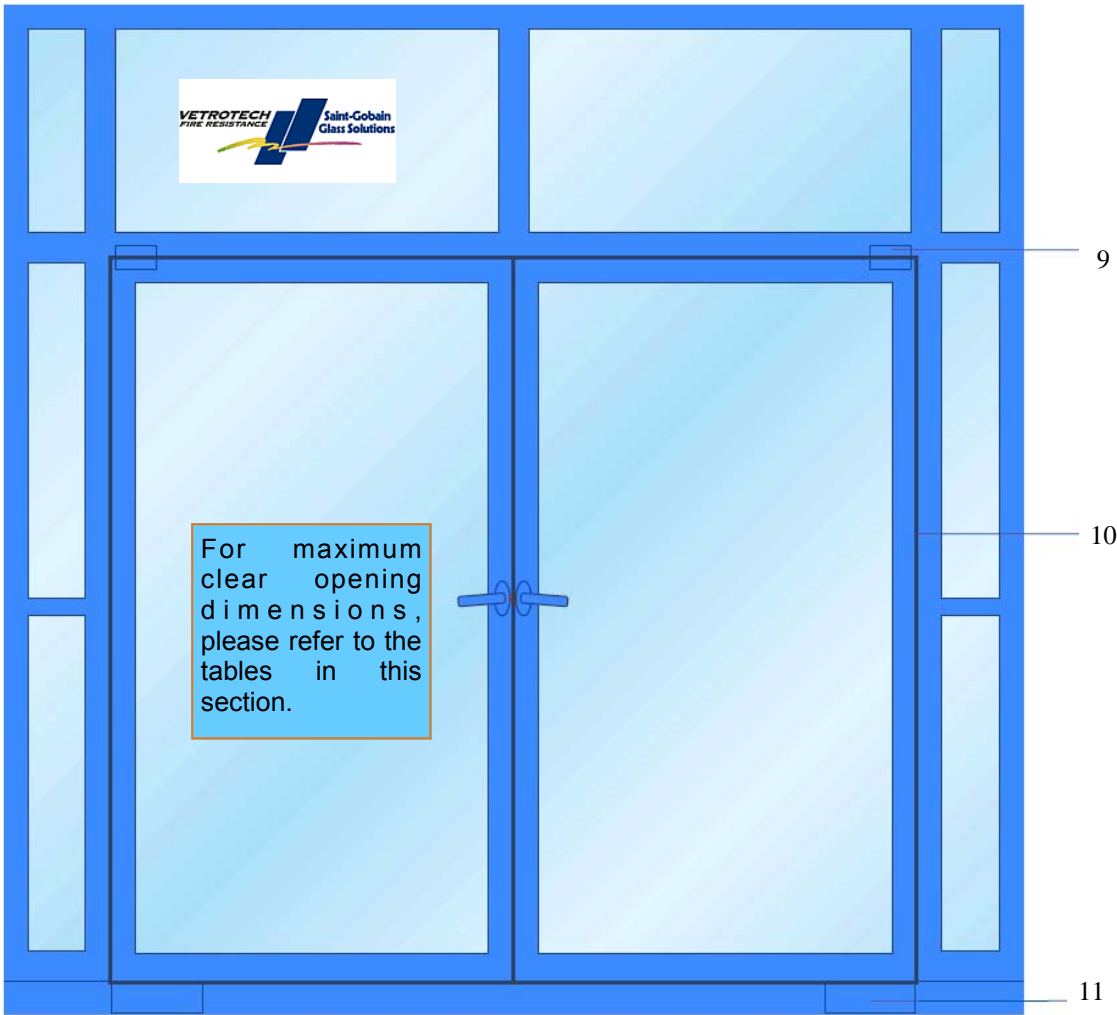


Full integrity and insulation glass fully contains the heat in addition to fire and smoke.

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| |
|---|
| <p>SYSTEM Stopline 120</p> <p>FRL Up to -/120/120</p> <p>Approvals WFRC 119930</p> |
|---|

Elevation



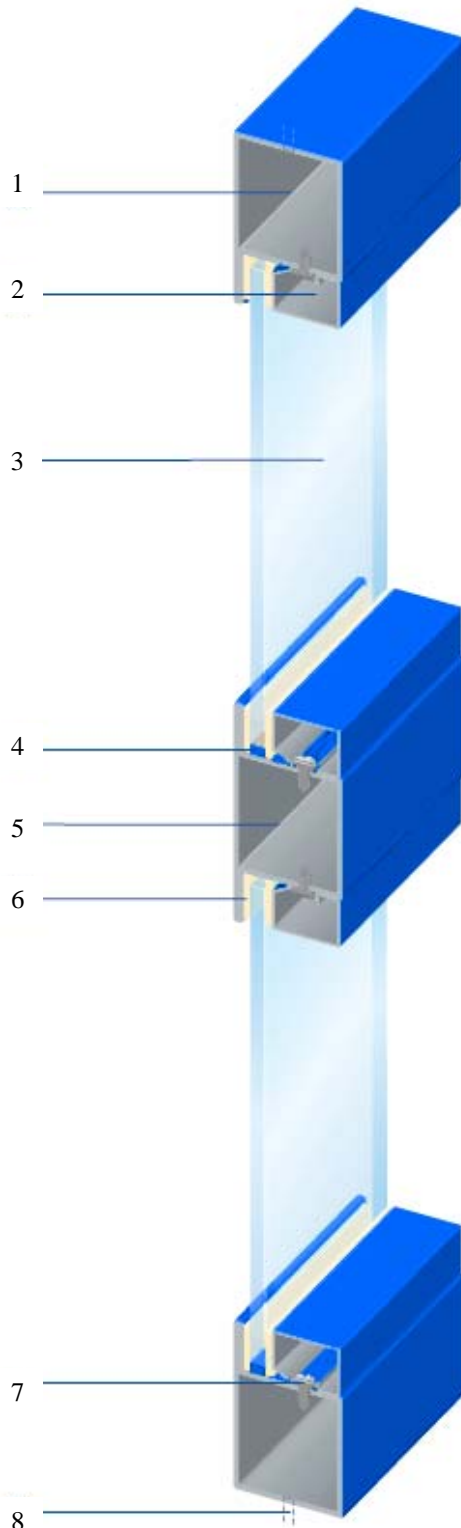
STOPLINE 120

STOPLINE 120 FULLY INSULATED GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Section



Parts list

1. 50 x 50mm galvanised steel stop bar
2. Galvanised steel snap-on glazing beads
3. SGG Contraflam glass – see table next page for specifications
4. Setting blocks 80 x 10 x 6mm
5. 50 x 50 mm galvanised steel mullion (or transom)
6. Glazing tape
7. Glazing bead studs
8. Expanding anchor bolts M8 x 100mm @ 460mm centres (nominal)
9. Hinges or Dorma top pivot – type 7421
10. Intumescent smoke seals to frame and door leaves
11. Dorma floor springs—Type BTS80, size 3 (for double acting doors only)

Attention:

Glazing systems are made up of a range of proprietary components, each important to the performance under fire test. Drawings in this documentation are NOT provided as installation instructions and ad-hoc installations cannot possibly be certified. Ensure your glazing system is installed and certified by Smoke Control.

STOPLINE 120

STOPLINE 120 FULLY INSULATED GLAZED SCREENS, DOORS AND WINDOWS



WE KNOW FIRE

Glass Specifications - Screens and windows

| Glass | Thickness [∞] | FRL/FRR | Max clear opening dimension* HxW (m2) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|------------|------------------------|-----------|---------------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Contraflam | 16mm | -/30/30 | 3350 x 1500 | 34 | 87% | 38 dB | 4.8 |
| Contraflam | 23mm | -/60/60 | 2958 x 1415 2046 x 2046 | 49 | 83% | 41 dB | 4.3 |
| Contraflam | 36mm | -/90/90 | 2220 x 1666 1666 x 1666 | 72 | 80% | 44 dB | 3.7 |
| Contraflam | 40mm min. | -/120/120 | 2220 x 1666 1666 x 1666 | 108 nom. | 70% | | 2.3 |

* Max clear opening dimensions OR maximum m² apply based on the max dimensions for screens and windows only

[^] Weight is dead weight of glass only. Weight for framing, hardware and any structural supports must be added

[∞] Framing system is different to that depicted for 90 minute and 2 hour systems

Glass Specifications - Single leaf doors, single acting

| Glass | Thickness | FRL/FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|------------|-----------|---------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Contraflam | | pending | | | | | |

Glass Specifications - Double leaf doors, single acting

| Glass | Thickness | FRL/FRR | Max clear opening dimension (mm) | Weight [^] (kg/m ²) | Light Transmission (EN410) | Sound Reduction Rw | UG Value (W/m ² K) (EN673) |
|------------|-----------|---------|----------------------------------|--|----------------------------|--------------------|---------------------------------------|
| Contraflam | | pending | | | | | |



STOPLINE 120

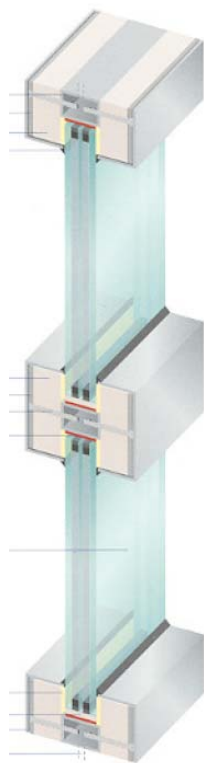
STOPLINE 120 FULLY INSULATED GLAZED SCREENS, DOORS AND WINDOWS



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Notes:

- ◆ Deemed-to-satisfy solution
- ◆ Fully insulated glazing system can be double glazed for UV, sound and thermal protection and external use
- ◆ Suitable for use on inclines up to 10° from the vertical
- ◆ Specific data for laminated safety glass, UV stability and double glazed unit make-ups on request\
- ◆ Available etched, printed and coloured
- ◆ Framing system for 90 and 120 minute systems shown below.



-/30/30 system 16mm thick



-/30/30 double glazed system



-/60/60 system 23mm thick



-/60/60 double glazed system



-/90/90 system 36mm thick



-/120/120 system 40mm thick, min

STOPLINE 120