

PYROPANE®
flame-retardant glass

RULES GOVERNING USE AND INSTALLATION



The relevant authorities in every country establish rules on fire protection. These rules apply to buildings accessible to the general public and, in some cases, to residential buildings.

Local rules determine the level of protection required for each situation. They must be known in order to choose the right flame-retardant or fire-retardant glazing.

These rules may be accompanied by restrictions required by law or by the owner (such as measures to protect people from falling, etc.).

INSTALLATION

Pyropane glasses are mounted either in suitable fire-resistant frames (single and double glazing), or using specially designed metal fittings (smoke barriers).

The frames and fittings are defined by tests carried out with Pyropane glasses for their class and described in detail in the corresponding classification report. Pyropane may not be installed solely with these specific fittings.



GLAZING INSTRUCTIONS

Pyropane flame-retardant glasses are delivered, ready to install. They cannot be cut or processed.

They must be handled with care during transportation and installation.

Prior to installation, Pyropane must be checked to ensure that it is not damaged, especially along the edges. The flame-retardant properties of Pyropane can be altered if it has been scratched, chipped or otherwise damaged. In such cases, it must not be used.

The detailed user manuals and glazing recommendations can be found in the relevant information sheets. AGC cannot, under any circumstances, be held liable for consequences of using Pyropane in structures that do not comply with national fire safety rules.



Good Morning February 2009



FLAME-RETARDANT GLASS



PYROPANE®



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Natural light is a source of well-being, stability, openness and visibility. Using natural light helps us all save energy and protect the environment.

The increasingly prevalent use of glass in contemporary architecture – in both façades and interior walls – allows maximum light into buildings.

Of course, user safety remains the main concern. Fire protection regulations set out standards for glass and walls, the aim being to slow the spread of fire and give occupants enough time to safely evacuate a building.

Pyropane offers multiple applications while respecting specific requirements. For instance, depending on the product in question, stability and integrity are guaranteed for 30 minutes (class E30) and heat radiation limited for 60 minutes (class EW60).

PYROPANE



Pyropane is AGC’s range of toughened flame-retardant glass.

The Pyropane range includes heat-treated glasses, with or without a metal coating.

Pyropane glasses comply with relevant European standards, and have been tested and classified within appropriate frames. They can be used in multiple applications:

- Insulating fire-retardant double glazing E/EW 30 and E/EW 60 for façades;
- Indoor glazing for walls and doors (E30);
- Smoke barrier (DH30).

In terms of preventing accidents and injury, Pyropane offers all the benefits of toughened glass.

BENEFITS

Façades: solar and thermal protection.

In double glazing (EW60 version), Pyropane, with its anti-UV coating, offers unparalleled performance for fire protection glazings in terms of thermal transmittance (Ug) and solar factor (SF). Please see the relevant information sheet.



Smoke barrier.

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Safety

- Pyropane flame-retardant single and double glazings are manufactured from toughened glass. This glass presents little risk of injury if broken since it shatters into tiny, blunt pieces. Pyropane is a toughened safety glass (standard EN 12600, class 1C1).

Vision

- Pyropane flame-retardant glass provides perfect vision. It remains transparent under all circumstances and are neither wired nor fibre-reinforced. It also provides a high level of light transmission.

APPLICATIONS



Pyropane can be installed in buildings subject to fire protection regulations, including:

- Stores and shopping centres
- Schools
- Hotels and restaurants
- Hospitals, nursing homes, retirement homes
- Offices and administrative/commercial premises
- Factories and laboratories
- Train stations, metro stations and airports
- Residential buildings

The Pyropane range complements the Pyrobel® range of fire-retardant glass, which we also recommend checking in order to find the product that is ideal for your needs.

CLASSIFICATION, CERTIFICATION AND QUALITY

The fire resistance of the materials used is checked in accordance with general European standards for the entire structural unit (window or door + glazing + fittings). These tests are carried out in notified laboratories and the test reports can then be used by the relevant authorities to classify products. The classification reports for Pyropane are available upon request.

Pyropane flame-retardant glasses are subject to stringent quality controls during various stages of production. The production workshops are certified for level 1 in connection with the CE marking.



PYROPANE 211-44 EW 30/60
FLAME-RETARDANT GLAZING (E30/60)
AS PER EN 13501-2

DESCRIPTION

Pyropane 211-44 is an insulating glazing that combines a coated glass subject to special heat treatment and a clear or coloured glass, toughened or annealed. The entire unit has flameproof and gasproof properties and can limit radiation for 30 or 60 minutes (EW 30/60). Pyropane 211-44 is designed for use in façades.



SPECIFICATIONS

Product and dimensions	Type of glazing	Double glazing
	Use	Exterior, façades
	Fire protection	1 direction (Pyrostar component on the side opposite the fire)
	Glass thickness	24 mm in 6/12/6, space filled with air or Argon 27 mm in 6/15/6, space filled with air or Argon
	Weight	30 kg/m ²
	Tolerance (thickness)	-0,8 /+1 mm
	Tolerance (dimensions)	+2 /- 2 mm
	Maximum dimensions of the glass (l x h)	1200 x 2300 mm
	Minimum dimensions	350 x 100 mm
Performance	Light transmission - LT % (EN 410)	73
	Light reflection - LR % (EN 410)	12
	Solar factor - SF % (EN 410)	44
	Thermal transmittance - U _g (EN 673)	1,1 W/(m ² K) with Argon 15 mm
	Acoustic insulation R _w (C, C _{tr}) (EN ISO 717-1)	31 (-1, -4) dB
	Impact resistance (EN 12600)	1C1/1C2
	Resistance to UV radiation	Yes
	Transparent	Yes. No mesh. Remains clear in case of fire
	CE marking	Conforms to standard EN 1279 -5

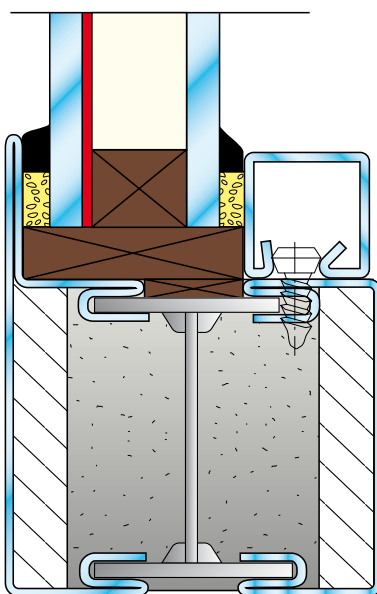
CLASSIFICATION REPORT

Laboratory	CTICM - EFECTIS
Report number and validity	08-A-226 - 18/10/2010
Frame	JANSSEN Janisol II
Maximum frame dimensions	1290 x 2390 mm

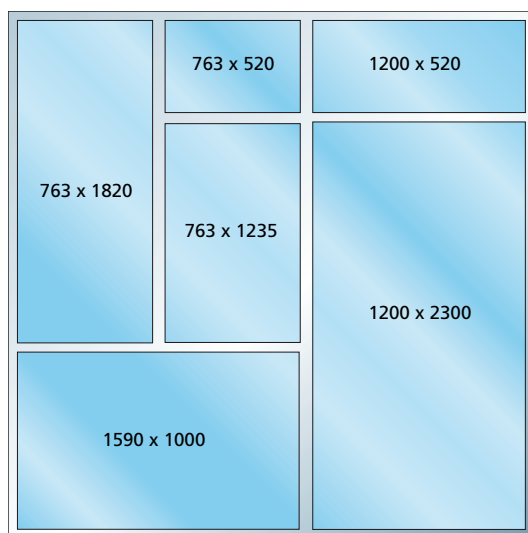
APPLICATION AND IMPLEMENTATION

Pyropane 211-44 is designed for applications in façades with a view to preventing fire from spreading from one level to another, or from one building to another. National regulations set out the requisite conditions.

Cross section (in mm)



Example of installation (in mm)



All of the installation given in the report must be respected.
The only authorised modifications are those mentioned in the report.

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PYROPANE 100 E30
FLAME-RETARDANT GLAZING E30
AS PER EN 13501-2

DESCRIPTION

Pyropane 100 E30 is a clear glass which, due to its special heat treatment, is flame and gas-retardant for 30 minutes (E30). It is mainly designed for indoor applications and provides fire resistance in both directions.



SPECIFICATIONS

Product and dimensions	Type of glazing	Clear single glazing
	Use	Interior / exterior
	Fire protection	In both directions
	Glass thickness	6 mm
	Weight	15 kg/m ²
	Tolerance (thickness)	± 0,2 mm
	Tolerance (dimensions)	± 2 mm
	Tested fill dimensions: Maximum dimensions of the glass (l x h) Minimum dimensions of the glass Circular glass Opaque panel (l x h)	1200 x 2200 mm 100 x 350 mm diam. 800 mm 1930 x 1504 mm
Performance	Light transmission - LT % (EN 410)	89
	Light reflection - LR % (EN 410)	8
	Solar factor - SF % (EN 410)	84
	U _g coefficient (EN 673)	5,7 W/(m ² K)
	Acoustic insulation Rw (C, Ctr) (EN ISO 717-1)	31 (-2, -3) dB
	Impact resistance - class EN 12600	1C1
	Reaction to fire - class EN 13501	A1
	Resistance to UV radiation	Oui
	Transparent	Yes. No mesh. Remains clear in case of fire
	CE marking	Conforms to standard EN 14179-2

CLASSIFICATION REPORT

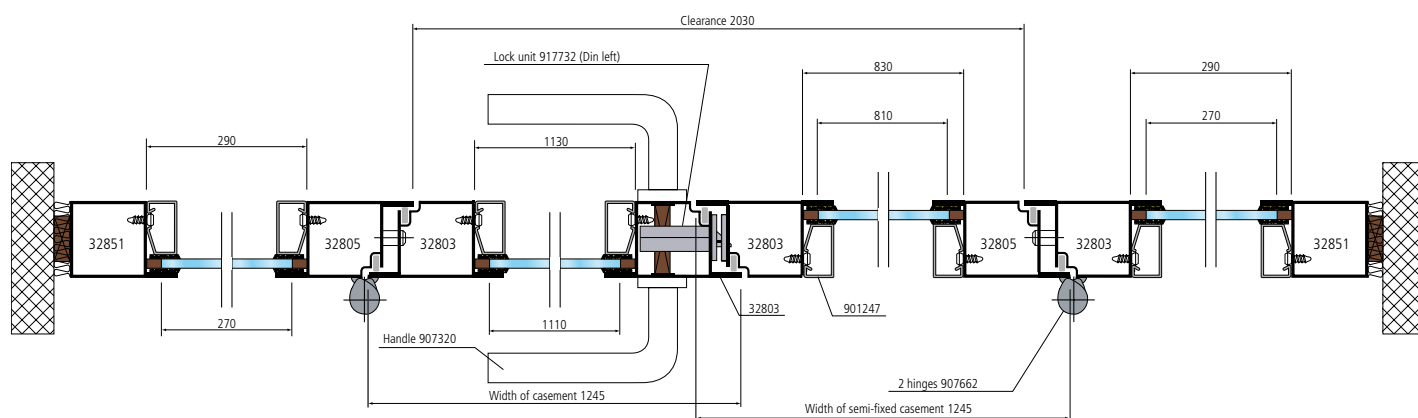
Laboratory		CTICM - EFECTIS
Frame		Forster Presto 50
Fire resistance		E30 as per EN 13501-2
Report number and validity	Maximum dimension of the frame:	
08 A 369 - 05/07/2009	Fixed wall (l x h)	1320 x 2340 mm
08 A 370 - 11/08/2010	Door unit 1 casement (l x h)	1140 x 2210 mm
08 A 374 - 21/07/2011	Door unit 2 equal casements (l x h)	2540 x 2360 mm
08 A 381 - 28/11/2012	Door unit 2 unequal casements (l x h)	2290 x 2360 mm

APPLICATION AND IMPLEMENTATION

Pyropane 100 glazings can be used as indoor walls, in fixed glazings, door glazings, single casements, double casements (equal and unequal).

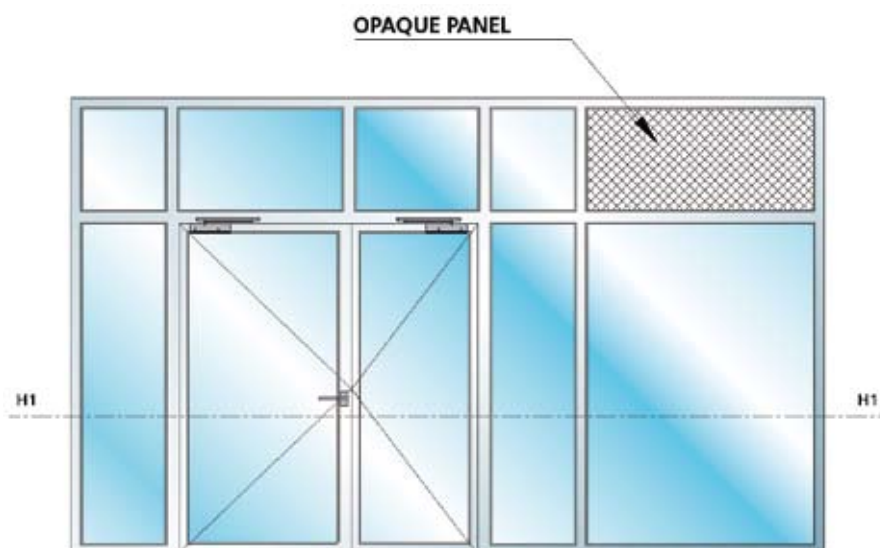
Environment: reinforced concrete, lightweight **concrete, reinforced plasterboard**.
Validated for large sizes with dilatation system.

Cross section (in mm)



Forster Presto profile

Assembly example (in mm)



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PYROPANE 100 SB30
SMOKE BARRIER DH30
AS PER EN 12101-1

DESCRIPTION

Pyropane 100 SB30 is a complete system supplied with special fittings. The barrier is suspended using cross-fittings (diameter: 40 mm) positioned no further than 800 mm apart. The result is a look reminiscent of point-fixed structural glazing. This reduces the time needed for mounting on the support structure.



SPECIFICATIONS

Product and dimensions	Type of glazing	Single glazing, clear or with silk-screen printing*
	Use	Interior
	Fire protection	In both directions
	Glass thickness	6 mm
	Weight	15 kg/m ²
	Tolerance (thickness)	± 0,2 mm
	Tolerance (dimensions)	+0 /-2 mm
	Minimum dimensions	300 x 350 mm
	Maximum dimensions of the glass(l x h)	1500 x 1040 mm (rounded corner or bevelled)
	Performance	
	Light transmission - LT % (EN 410)	89 (depending on silk-screening and cover)
	Light reflection - LR % (EN 410)	8 (depending on silk-screening and cover)
	Impact resistance, class EN 12600	1C1
	Reaction to fire, class EN 13501	A1
	Resistance to UV radiation	Yes
	Transparent	Yes. No mesh Remains clear in case of fire
	CE marking	Conforms to EN 12101-1 and EN 14179-2

CLASSIFICATION REPORTS

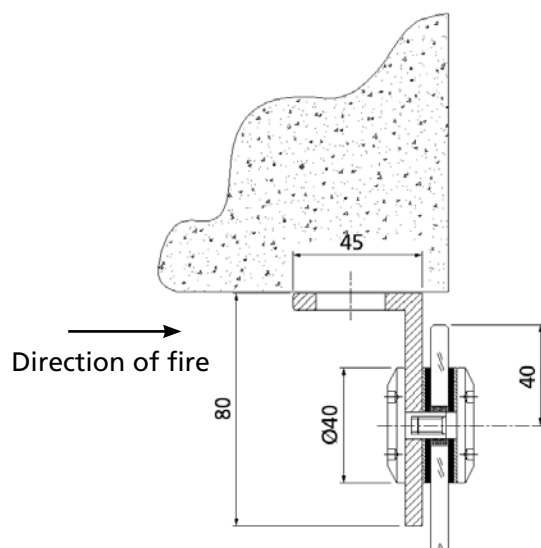
Laboratory	CTICM - EFECTIS
Report number and report validity	EFECTIS No. 06-V-336 16/10/2011 and extension 08/01
Fittings	Special steel or stainless steel parts
Support structure	Concrete or reinforced plaster board
Maximum tested dimensions (glass) L x H	1500 x 1040 mm
Fire resistance	DH 30 as per EN 12101-1

* Artlite standard range or design of choice. Can be applied to both sides of the glass.

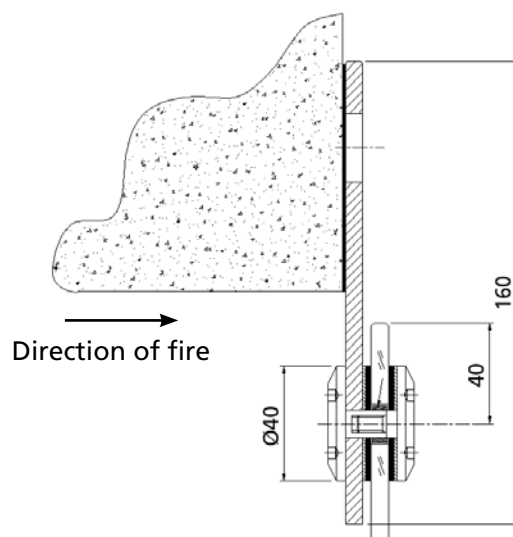
APPLICATION AND INSTALLATION

Pyropane 100 SB30 is a complete system supplied with special fittings. The barrier is suspended using cross-fittings positioned no further than 800 mm apart. The result is a look reminiscent of point-fixed structural glazing and ease of installation.

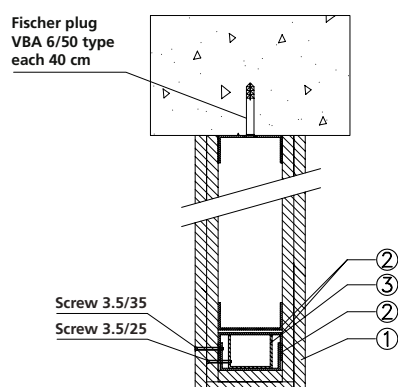
Cross section with right angle plate (in mm)



Cross section with flat plate (in mm)

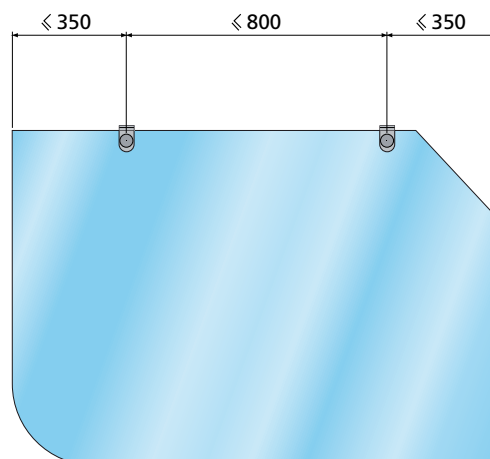


Light wall in reinforced plasterboard



- ① BA13 Lafarge fire retardant
- ② rail 68/30, thickness: 2 mm
- ③ profile 50/35, thickness: 2 mm

Example of installation (in mm)



It is up to the company to comply with the installation and to check planned usage with national regulations. Rounded corners and bevelling are authorised.

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