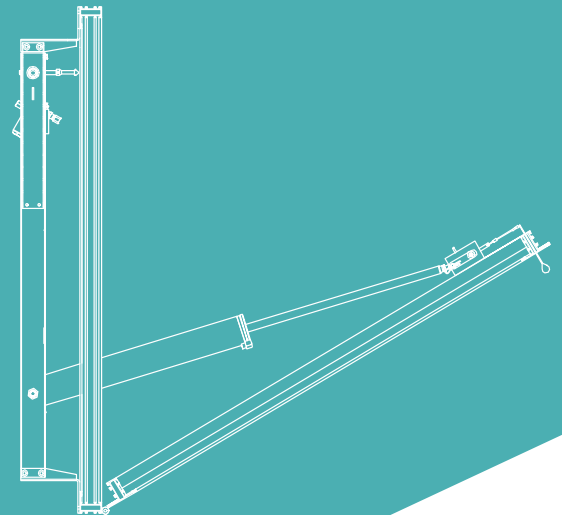


Poly Pac

Smoke extraction Openings

Connectable
Interlocking



Controlled Light

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Les éléments graphiques reproduits dans ce document sont des schémas de principes à adapter aux spécifications de chaque projet et aux réglementations en vigueur.

Veuillez respecter les règlements de sécurité de la construction en vigueur. Nous excluons toute responsabilité à ce sujet.

Pour des informations plus détaillées consultez notre site internet : <https://www.poly-pac.fr/>

NOTE : LA DERNIERE VERSION DE CE DOCUMENT EST DISPONIBLE SUR NOTRE SITE INTERNET : <https://www.poly-pac.fr/>

Interlocking

1 - System definition

Smoke extraction openings with interlocking filling are used to evacuate smoke and hot gases to the outside of the building in case of fire. It is also a ventilation solution.

They can be integrated directly into polycarbonate facades with interlocking panels, which facilitates integration and aesthetic consistency:

- Lacquering of the window frames identical to the profiles of the polycarbonate cladding
- Visual aspect and screening identical to polycarbonate cladding
- Simplified integration
- Perfect seal between the frame and polycarbonate cladding

On the other hand, the components with thermal breakers allow to meet the needs of energy performance.

2 - Field of application

The smoke system is integrated into the interlocking polycarbonate facades. The field of application is similar to that of the façade in which the smoke system is integrated (see the corresponding technical booklet).

3 - Technical assistance

The technical assistance and the distribution in France are carried out by the company Poly-Pac, ZA La Porte de Ker Lann in Bruz (Rennes). The company Poly-Pac defines the most suitable design for the project by listing a precise list of panels, profiles and accessories necessary for its realization. Poly-Pac does not install itself, but can, at the request of the user, provide technical assistance to start the installation.

4 - Technical specifications

4.1. Smoke systems

Maximum sizes

- Height between 600 and 1200 mm
- Width between 800 and 2500 mm

Opening system

The opening system is pneumatic.



Finishes

Two types of finishes are available for aluminium profiles:

- Lacquering (SFPI range)
- Natural anodizing

Filling

The filling is done in interlocking polycarbonate sheets 40 mm thick. Other filling solutions can be studied on request.

Number of hinges

The number of hinges will be established according to the dimensions and filling of the opening.

Useful evacuation surface as a function of the geometric opening surface

Smoke system sizes (Width*height) mm	Geometric opening area or A_v (m^2)	Useful extraction surface or A_a (m^2)
800 mm*600 mm	0.48	0.34
1650 mm*900 mm	1.48	0.89
2500 mm*1200 mm	3	1.73

$$A_a = 0.5509 * A_v + 0.0808 (m^2)$$

Exterior hopper



4.2. Pneumatic system

CE Certification according to the EN 12101.2 :

- RE 300
- WL 1500
- B 300
- T 00

5 - Optional features

Rain / wind sensor, detects the presence of rain or strong wind

CO₂ / VOC sensor, detects the quantity of CO₂ / VOC contained in the indoor air

Pulse mode, allows an opening / closing by a simple pulse

6 - Installation

6.1. Opening windows

The opening windows are delivered pre-assembled.

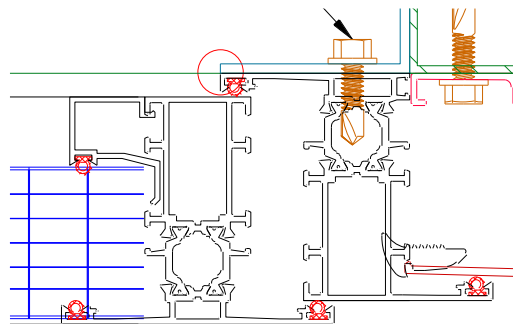
Received items:

- Pre-assembled opening windows including framing, openings and infill
- The opening system, including fixing screws between the framing and the latter and accessories
- 50*50*60*3 mm pre-drilled squares, delivered in batches of 10 (1 batch per frame)
- Fixings for squares
 - o On frames, stainless steel H-head screws A2 5.5x19 mm, 2 per square

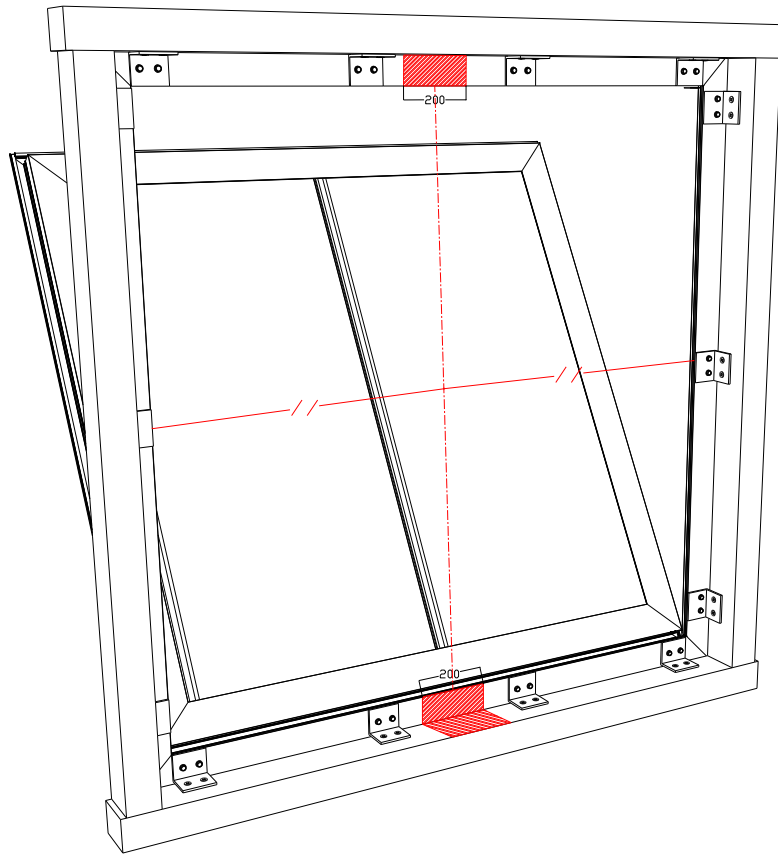
Items to be provided :

- Fixings for squares
 - o On supports, stainless steel H-head screws A2 5.5x X mm, length depending on the support, 2 per square

The squares are aligned with the inner end of the frame (red circle) :



The squares are fixed every 500 mm maximum on the perimeter of the frame except for the zone of fixing of the opening systems indicated in red on the following visual:



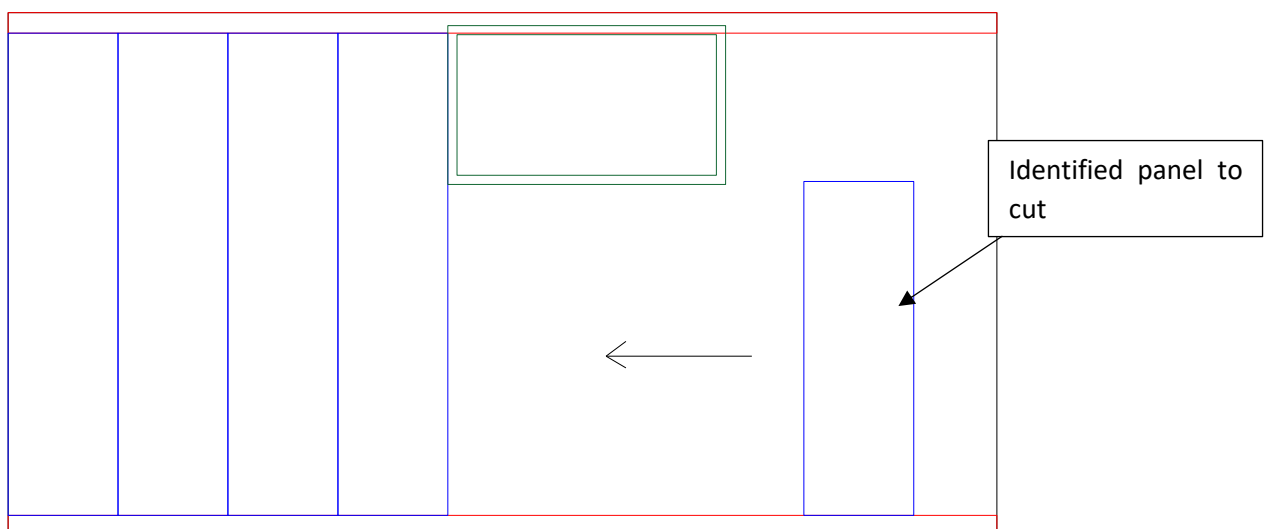
The main types of installation are illustrated in the following pages.

The installation must follow the recommendations of the NF DTU in force concerning the technology used.

Particular attention must be paid to the flatness of the support (± 2 mm) and to the squareness of the frame.

6.2. Bottom panels

The panels can be inserted from the side as shown in the following picture:



In red, the profiles, in blue the polycarbonate panels and in green the framing.

The maximum height of the panels at the bottom is 10 m.

7 - Reception and storage

- Make sure that the frame is not damaged upon receipt
- Store the frame upright, hinges down, away from weather and dirt
- Take care not to scratch the profile faces with a sharp tool
- Handle the frame with care

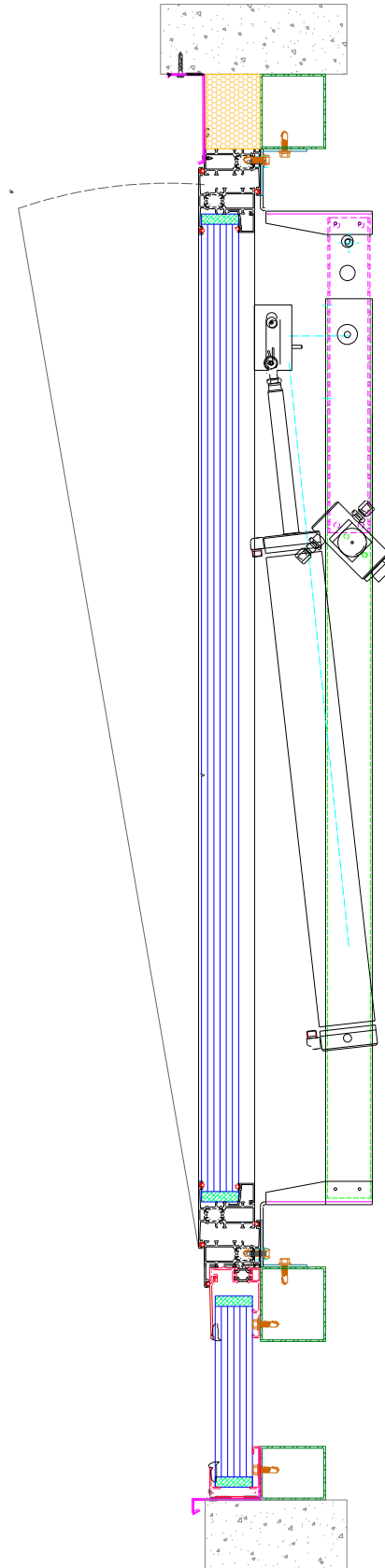
8 - Maintenance

Carry out maintenance operations. Perform the following operations annually:

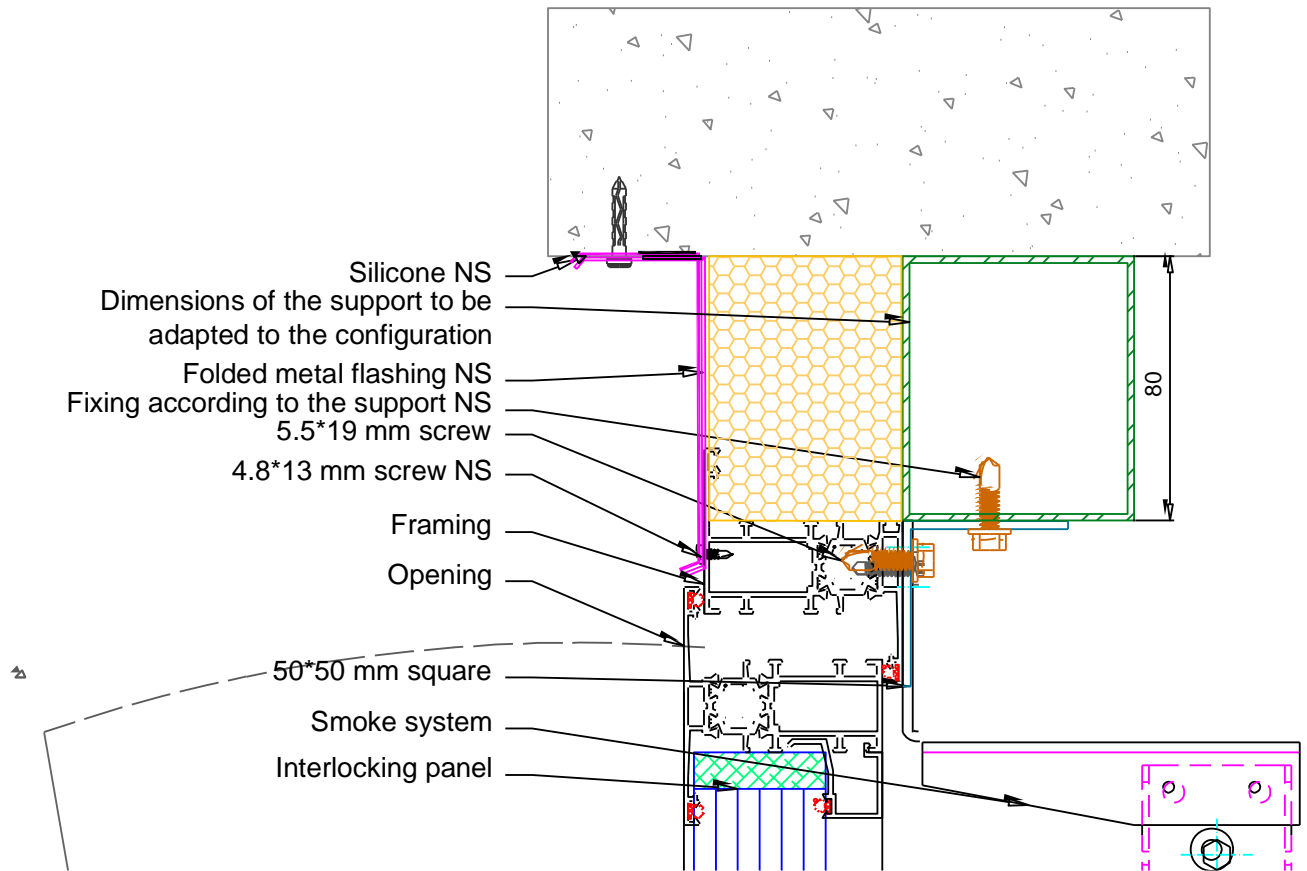
- Cleaning of seals and seal contact surfaces
- Check the drainage channels
- Remove dust from the mechanisms

Perform a monthly opening and closing to avoid the phenomenon of sticking of the seals

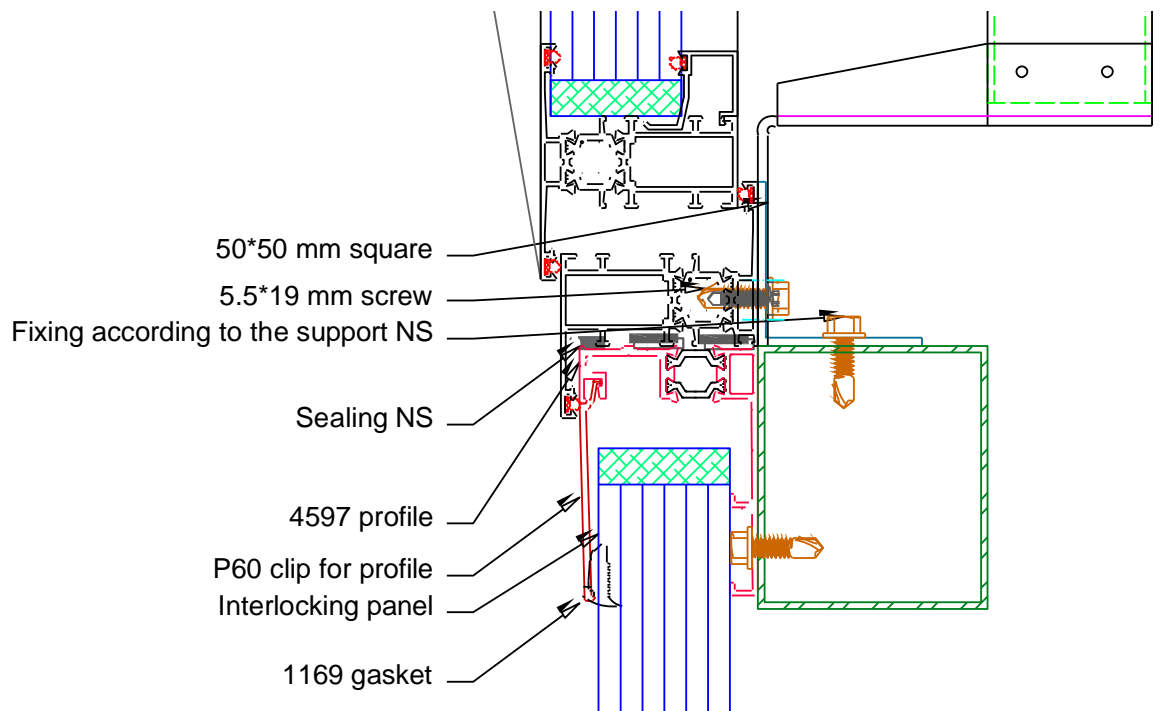
Interlocking integration



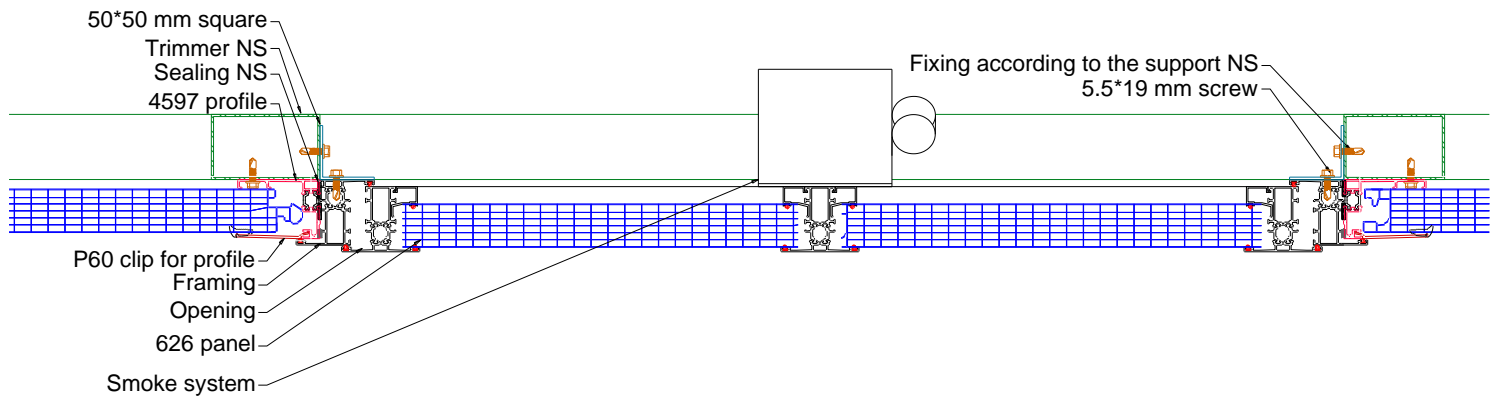
Top support



Intermediary support



Horizontal section



Connectable

1 - System definition

Smoke extraction openings with connectable filling are used to evacuate smoke and hot gases to the outside of the building in case of fire. It is also a ventilation solution.

They can be integrated directly into polycarbonate facades with connectable panels, which facilitates integration and aesthetic consistency:

- Lacquering of the window frames identical to the profiles of the polycarbonate cladding
- Visual aspect and screening identical to polycarbonate cladding
- Simplified integration
- Perfect seal between the frame and polycarbonate cladding

On the other hand, the components with thermal breakers allow to meet the needs of energy performance.

2 - Field of application

The smoke system is integrated into the interlocking polycarbonate facades. The field of application is similar to that of the façade in which the smoke system is integrated (see the corresponding technical booklet).

3 - Technical assistance

The technical assistance and the distribution in France are carried out by the company Poly-Pac, ZA La Porte de Ker Lann in Bruz (Rennes). The company Poly-Pac defines the most suitable design for the project by listing a precise list of panels, profiles and accessories necessary for its realization. Poly-Pac does not install itself, but can, at the request of the user, provide technical assistance to start the installation.

4 - Technical specifications

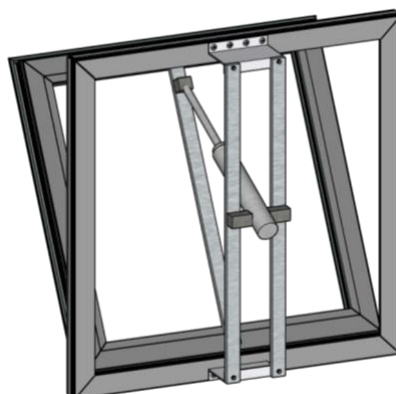
4.1. Smoke system

Maximum sizes

- Height between 600 and 1200 mm
- Width between 800 and 2500 mm

Opening system

The opening system is pneumatic.



Finishes

Two types of finishes are available for aluminium profiles:

- Lacquering (SFPI range)
- Natural anodizing

Filling

The filling is done in interlocking polycarbonate sheets 40 mm thick. Other filling solutions can be studied on request.

Number of hinges

The number of hinges will be established according to the dimensions and filling of the opening.

Useful evacuation surface as a function of the geometric opening surface

Smoke system sizes (Width*height) mm	Geometric opening area or A_v (m^2)	Useful extraction surface or A_a (m^2)
800 mm*600 mm	0.48	0.34
1650 mm*900 mm	1.48	0.89
2500 mm*1200 mm	3	1.73

$$A_a = 0.5509 * A_v + 0.0808 (m^2)$$

Exterior hopper



4.2. Pneumatic system

CE Certification according to EN 12101.2 :

- RE 300
- WL 1500
- B 300
- T 00

5 - Optional features

Rain / wind sensor, detects the presence of rain or strong wind

CO₂ / VOC sensor, detects the quantity of CO₂ / VOC contained in the indoor air

Pulse mode, allows an opening / closing by a simple pulse

6 - Installation

6.1. Smoke system

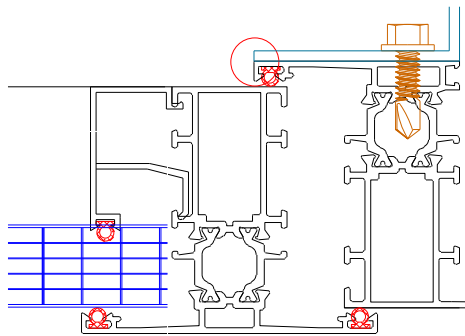
The smoke systems are delivered pre-assembled.

Received items :

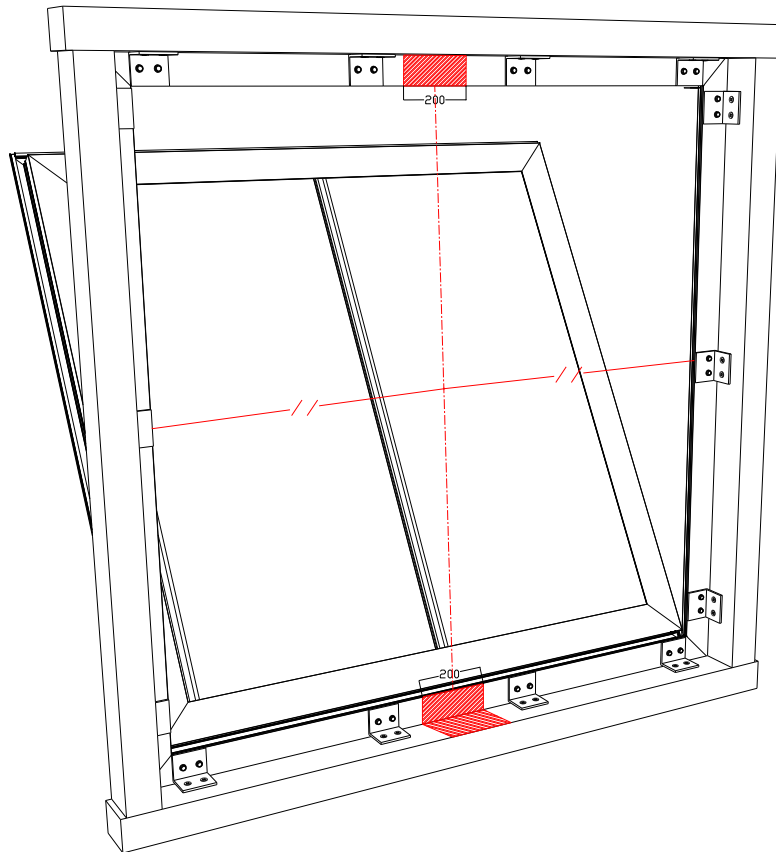
- Pre-assembled smoke systems including framing, opening, pneumatic opening system and filling
- The opening system, including fixing screws between the frame and the latter and accessories
- 50*80*60*3 mm or 30*80*60*3 mm (depending on the configuration) pre-drilled squares, delivered in batches of 10 (1 batch per frame)
- Fixings for squares
 - o On framing, stainless steel H-head screws A2 5.5x19 mm, 2 per square

Items to be provided :

- Fixings for brackets
 - o On supports, stainless steel H-head screws A2 5.5x X mm, length depending on the support, 2 per square
 - o The fixing of the squares are aligned with the interior end of the framing (red circle):



The squares are fixed every 500 mm maximum on the perimeter of the framing except for the zone of fixing of the opening systems indicated in red on the following visual:



The main types of installation are illustrated in the following pages.

The installation must follow the recommendations of the NF DTU in force concerning the technology used.

Particular attention must be paid to the flatness of the support (± 2 mm) and to the squareness of the framing.

6.2. Bottom panels

The insertion of the panels is done in the traditional way, according to the installation methodology indicated in the technical specifications or DTA arcoPlus connectable.

The maximum height of the panel at the bottom is 16 m.

7 - Reception and storage

- Make sure that the frame is not damaged upon receipt
- Store the frame upright, hinges down, away from weather and dirt
- Take care not to scratch the profile faces with a sharp tool
- Handle the frame with care

8 - Maintenance

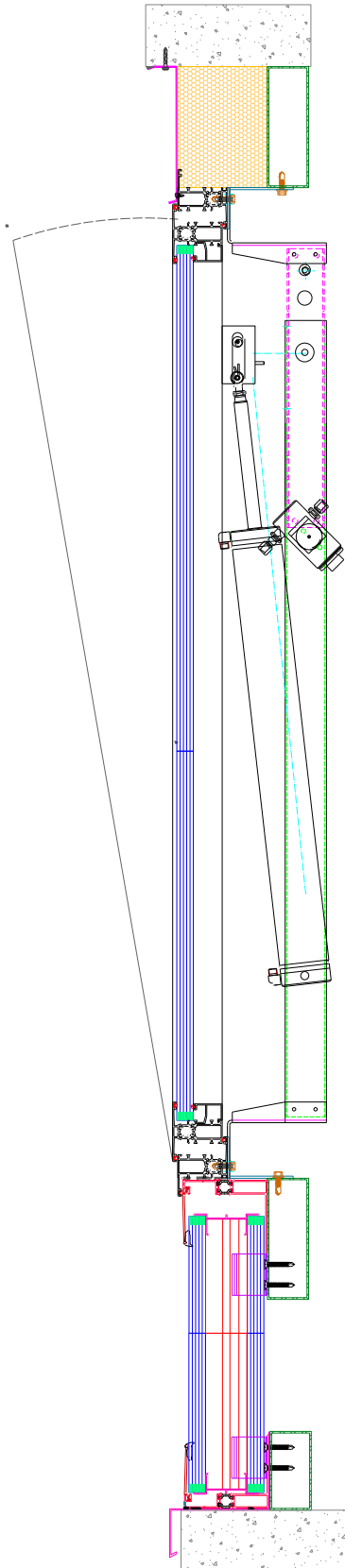
Carry out maintenance operations. Perform the following operations annually:

- Cleaning of seals and seal contact surfaces
- Check the drainage channels
- Remove dust from the mechanisms

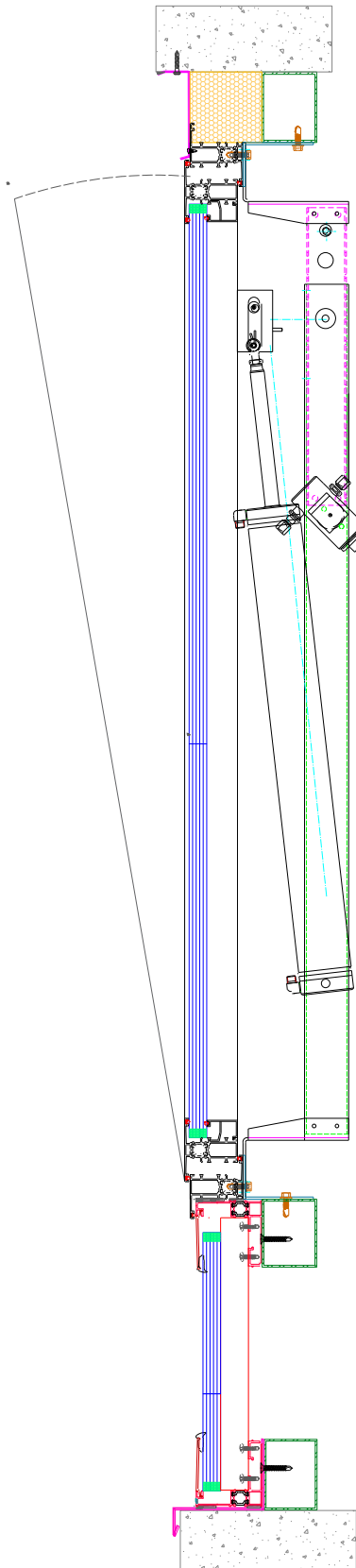
Perform a monthly opening and closing to avoid the phenomenon of sticking of the seals

Connectable integrations

arcoTherm

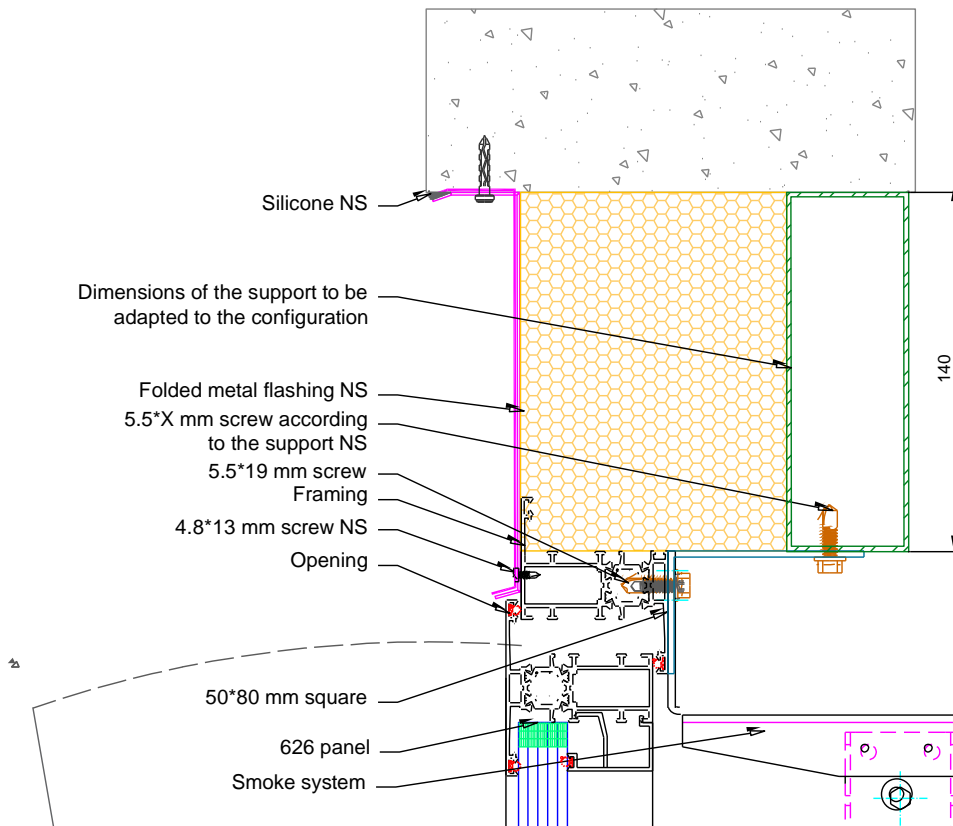


Single skin

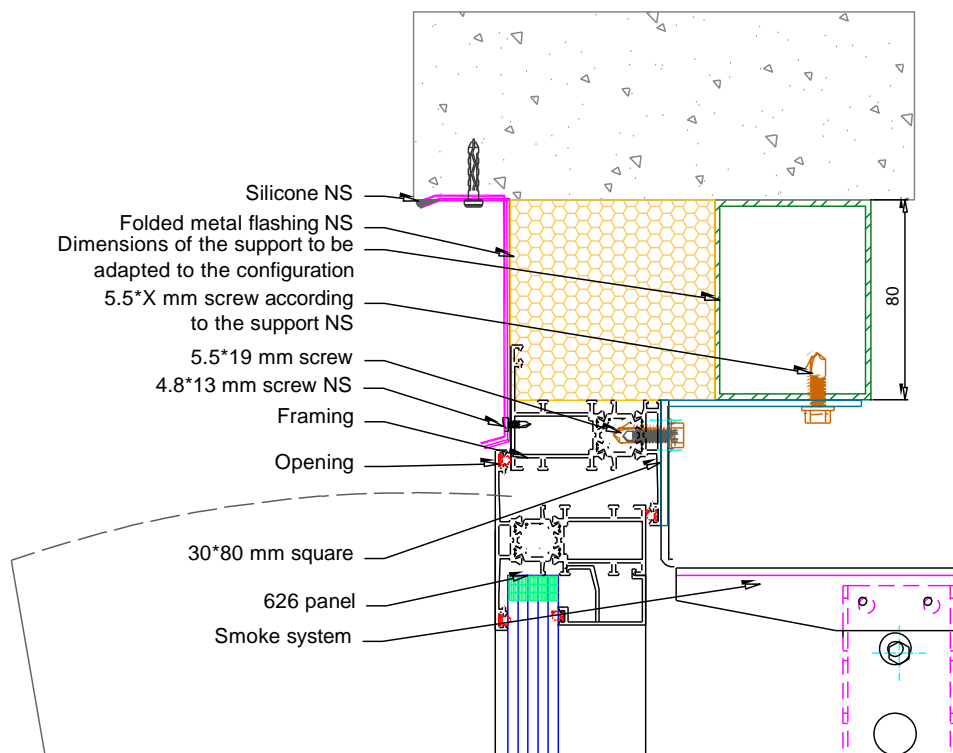


Top support

arcoTherm

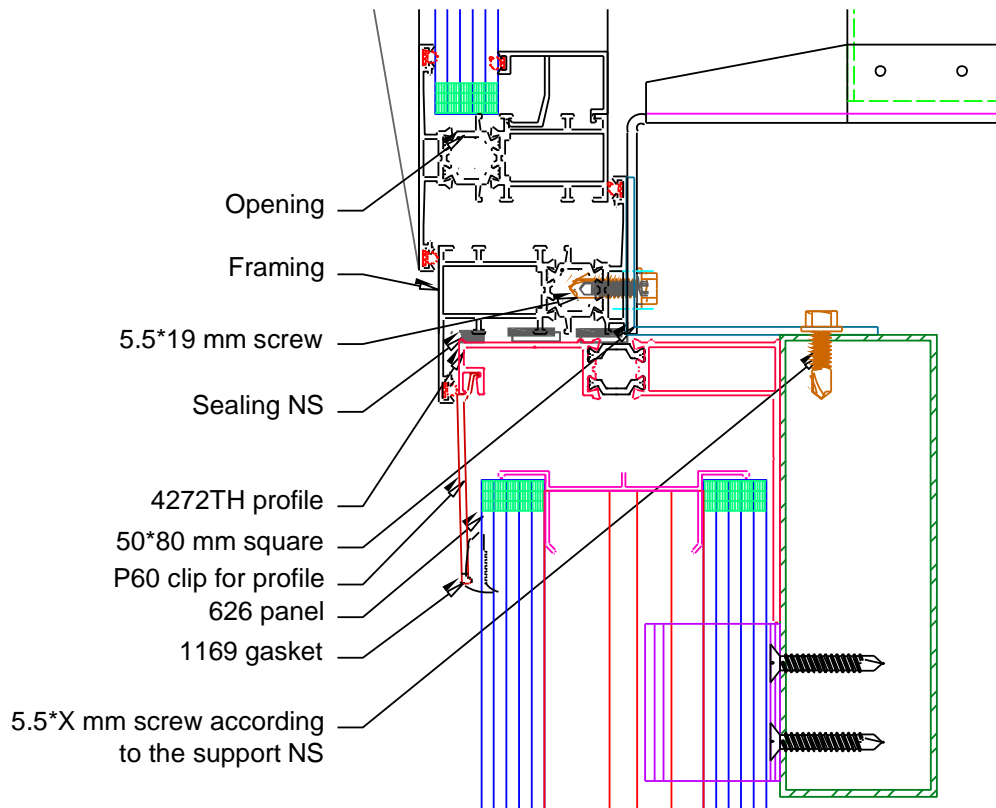


Single skin

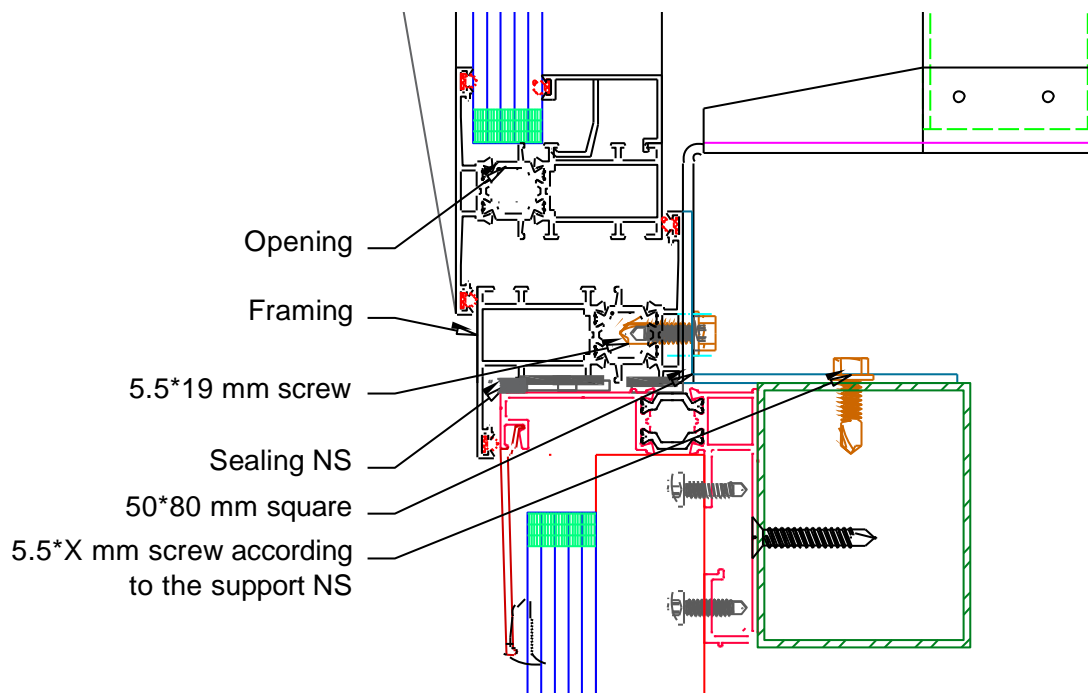


Intermediary support

arcoTherm

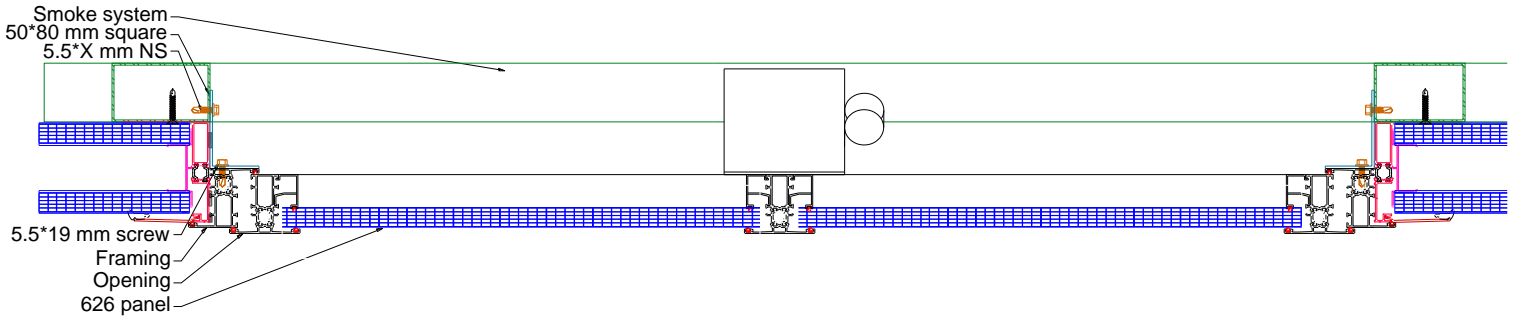


Single skin



Horizontal sections

arcoTherm



Single skin

