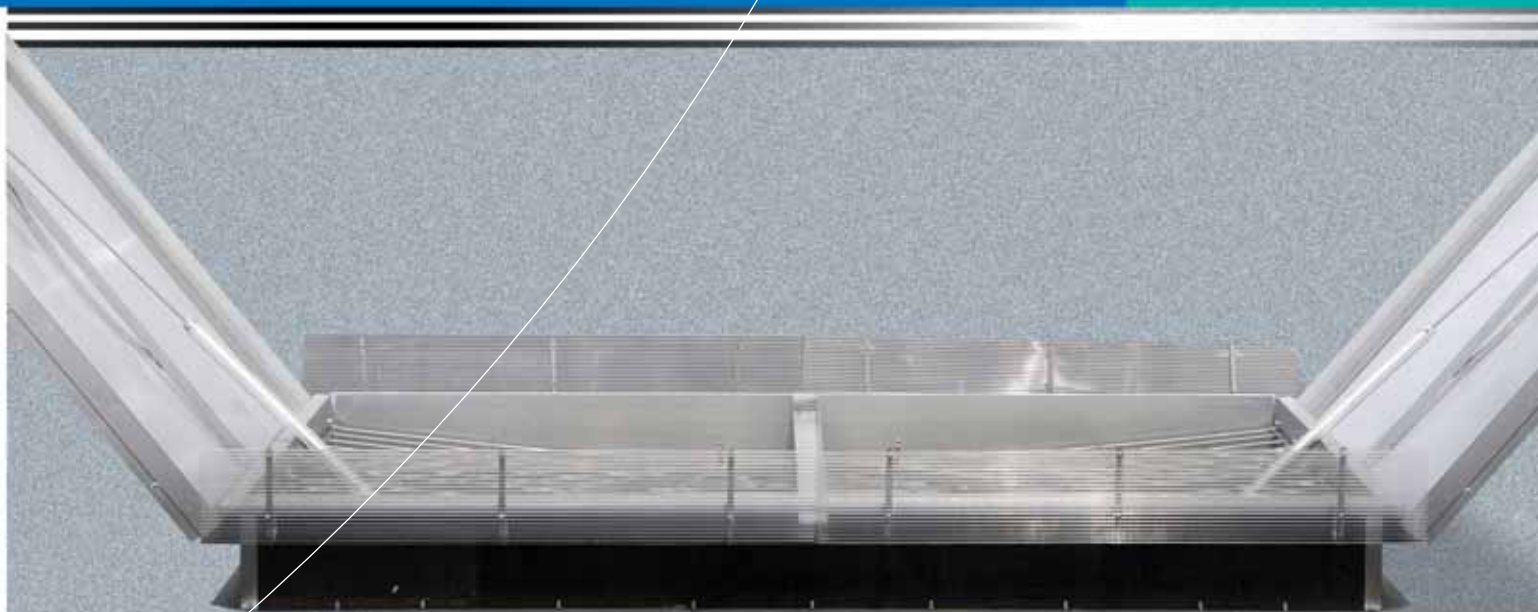




SMOKE EVACUATION / NATURAL DAYLIGHTING / VENTILATION

PYROCLAIR[®] EVOLUTION PNEUMATIQUE

CE
0333



SKYDÔME[®]
La sécurité en toute clarté



The **PYROCLAIR® EVOLUTION PNEUMATIQUE** is an unit used on flat and low slope roof with waterproofing and on tiled or slate pitched roofs for all types of smoke evacuation, e.g.: public access buildings, industrial buildings, commercial buildings, offices, etc.

The **PYROCLAIR® EVOLUTION PNEUMATIQUE** is best used in large buildings which require smoke evacuation systems comprising several pieces of equipment.

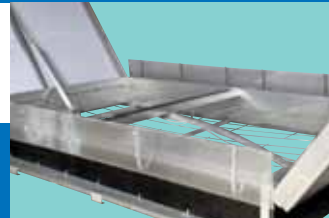
The **PYROCLAIR® EVOLUTION PNEUMATIQUE** opening control has to be connected by copper tubing to a pneumatic box (manual control).

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1 ADVANTAGES

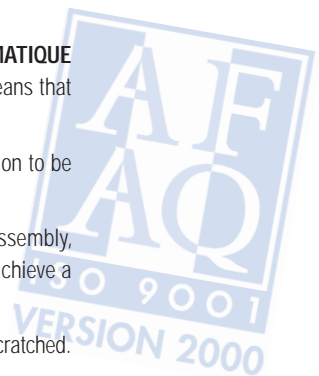
Integrated mechanisms: the opening and closing mechanisms of the **PYROCLAIR® EVOLUTION PNEUMATIQUE** are completely contained within the height of the kerb as well in the opened as the closed position. This means that they do not impede the passage of other networks and the use of other equipment under the ceiling.

The unit is delivered fully assembled. The cylinders are connected in the factory. There is only one connection to be completed by the installer.

High resistance to corrosion: the galvanised steel kerb is either welded or crimped. This method of assembly, used in the car industry, avoids the use of welding techniques which require subsequent reconditioning to achieve a level of protection equal to galvanisation.

This lets the **PYROCLAIR® EVOLUTION PNEUMATIQUE** have an excellent resistance to corrosion, even when scratched.

Colour finish: the **PYROCLAIR® EVOLUTION PNEUMATIQUE** is available in galvanised steel or, upon request, in pre-coated steel CLASSIC WHITE SKYDOME colour. It can be also painted after manufacture in most of the main RAL colours (thickness of pre-coating: 25 µ, thickness of post-painting: > 25 µ).



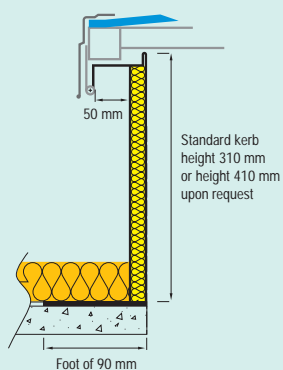
Ventilation Kit Option: the **PYROCLAIR EVOLUTION PNEUMATIQUE** can be equipped, upon request, with an electric ventilation kit, a simple and efficient system for buildings ventilation. This kit is installed on one of the panes of the equipment. The opening and closing of the **PYROCLAIR EVOLUTION PNEUMATIQUE** is executed thanks to a 300mm electric cylinder, connected to the 220 volts electric supply. In case of fire, the system disconnects automatically, giving priority to the fire safety function.

With the Ventilation Kit Option, the **PYROCLAIR EVOLUTION PNEUMATIQUE** gets the CE Product Certification: NF EN 12101-2. With this option, the **PYROCLAIR EVOLUTION PNEUMATIQUE** will be specified for all types of buildings.

2 TYPES OF KERB

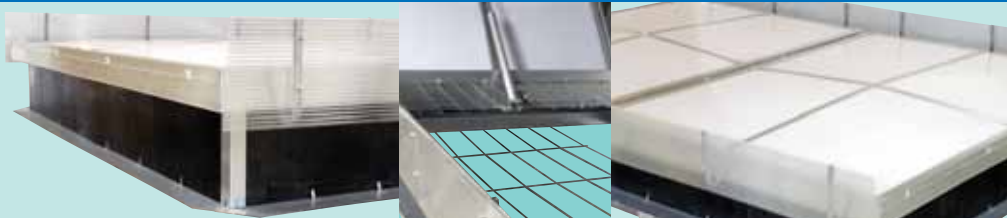
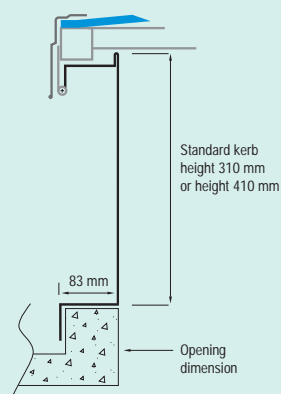
NEW

**PYROCLAIR®
EVOLUTION PNEUMATIQUE**
Height: 310 mm



RENOVATION

**ADAPTER PLATE PYROCLAIR®
EVOLUTION PNEUMATIQUE**
Height: 310 mm



3 COMPOSITION

The **PYROCLAIR® EVOLUTION PNEUMATIQUE** consists of:

- **A galvanised steel kerb**, this is the main component of the device. The two opening panes are fitted to the kerb, together with a crosspiece which supports the two pneumatic opening systems. A central channel 60mm deep ensures that the joint between the two opening panes remains watertight and that rainwater runs off. The straight sided kerb is covered on the outside by bitumen-surfaced thermal insulation designed to accept torch-on waterproofing membranes. Alternative designs are available for PVC roof membranes. In the **PYROCLAIR® EVOLUTION PNEUMATIQUE** Adapter plate version, the option of a two-layered insulation on the kerb is available on request.
- **Two opening panels:** These are tubular in galvanised steel and are activated by a cylinder. The two frames are kept in the closed position by a high performance mechanical lock mechanism.
- **Glazing:** as standard 10mm reinforced, structured opalescent polycarbonate sheet (PCA). As option, 10 and 16 mm structured polycarbonate, PCA triple – or quadruple-walled structured polycarbonate for better thermal resistance, or aluminium cover. All our glazings are treated anti-UV. **Only the grill option guarantees the "1200 joules" test.** To choose the type of glazing required, see the table entitled "Glazing Performance". The positioning of the glazing and the design of our devices reduce the build-up of condensation as air circulates between the frame and the kerb.
- **Two aluminium beading frames:** fixed by stainless steel screws and nylon washers. They hold the glazing in place and protect edges from lateral impacts. They improve the aesthetic appeal of **PYROCLAIR® EVOLUTION PNEUMATIQUE**.

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FUNCTION

The **PYROCLAIR® EVOLUTION PNEUMATIQUE** is connected in only one point to a pneumatic circuit linked to a CO₂ cartridge control. Pressure on the circuit from ground level activates the pneumatic cylinders, allows the release of the cylinder heads and the opening of the panes to 110°.

In case of fire, when the temperature increases, a thermal fuse is installed in factory for an automatic opening, and connected to the circuit further up from the two cylinders, with a cartridge and bulb 93° as standard, on the **PYROCLAIR® EVOLUTION PNEUMATIQUE**. The **PYROCLAIR® EVOLUTION PNEUMATIQUE** is closed again using the CO₂ cartridge control.

The thermal fuse is imposed by the norm NF EN12101-2 on all units, apart of specific restrictions (contact us).

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GLAZING PERFORMANCES

TYPE OF GLAZING	THERMAL TRANSMISSION U (W/m ² ·°C)	LIGHT TRANSMISSION (%)	FIRE CLASSIFICATION*	ACOUSTIC (db (A))
10 mm structured polycarbonate - clear	3.1	85	Bs1do	17
10 mm structured polycarbonate - opal	3.1	62	Bs1do	17
10 mm structured polycarbonate - 4 walled	2.5	55	Bs1do	17
16 mm structured polycarbonate - opal	2.3	57	Bs1do	21
Aluminium cover 10	3.1	0	Tests in progress (M0)	17
Aluminium cover 20	0.98	0	Tests in progress (M0)	–
Aluminium cover 60	0.6	0	Tests in progress (M0)	24

For other types of glazing: see the datasheet on OPTIONAL FUNCTIONS

* Euroclass Classification

() Former Fire classification

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VENTILATION PERFORMANCES

OPENING cm x cm	Av (GEOMETRIC SURFACE) in m ²	Aa (OPENING SURFACE) STRAIGHT KERB HT 310 mm in m ²
140 x 250	3.50	2.20
140 x 300	4.20	2.65
150 x 250	3.75	2.36
150 x 300	4.50	2.92
160 x 200	3.20	2.02
160 x 250	4.00	2.56
160 x 300	4.80	3.13
180 x 200	3.60	2.27
180 x 250	4.50	2.94
180 x 300	5.40	3.55
200 x 200	4.00	2.60
200 x 250	5.00	3.28
200 x 300	6.00	4.00

Value with installed deflectors

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APPROVAL

The laboratory tests guarantee the **PYROCLAIR® EVOLUTION PNEUMATIQUE** a resistance and performance levels in accordance with the most restricting current legislations, when installed in conformity with the DTU 43-3.

The **PYROCLAIR® EVOLUTION PNEUMATIQUE** has the Product Certification CENF EN 12101-2 N°0333 CPD219 011 with all our glazings (see table), including the following safety options:

- Position contacts.
- Thermal fuse with bulb 93° as standard.

The conformity certifications of the norm NF EN 12101-2, 1200 joules and fire rating data are available on our website: www.skydome-axt.com on the heading "Espace Partenaires".

8 PERFORMANCES

LOADS KG/m ²	WIND LOADING (Depression test)	RELIABILITY TEST	HEAT RESISTANCE
From 25 to 50 kg/m ² Depending on the glazing	WL 1500	Re 1000	B 300

In standard, the PYROCLAIR® ÉVOLUTION PNEUMATIQUE are of type B and T (00).

9 MAXIMUM ACCEPTABLE LOADS

The maximum load for all glazings and openings is SL50 (50 kg/m²).

In standard, the PYROCLAIR® ÉVOLUTION PNEUMATIQUE is SL25.

Reminder IT 246: Article 3.8 Characteristics of smoke evacuation units

“The smoke evacuation units of reliability class **Re 300** (300 cycles of security process).

The bi-function units, used for ventilation, are opened 10 000 times during the ventilation tests.

The classification of the snow load is **SL 250** (25 daN/m²) for altitudes lower or equal to 400 m,

SL 500 (50 daN/m²) for altitudes over 400 m...

The units are inside temperature class **T00** (0°C) and heat resistance class **B₃₀₀ 30** (300° during 30').”




10 OPTIONS

- Steel kerb painted after manufacture in main RAL colours
- Grills tested to 1200 joules
- Painted grills tested to 1200 joules
- Thermal fuse category 1
- Position contacts
- PCA Black, PCA 16, etc...
- Aluminium cover 10, 20, 60
- Technical solution to adapt the unit to a roof with PVC waterproofing

Options for the adapter plates

- Insulation
- Foot lengths from 50 to 180 mm (and longer upon request)

11 CONTROLS

- CO₂ boxes for opening/closing 
- Two-zone CO₂ boxes, 2 openings / 1 closing 
- Copper network
- CO₂ boxes + ventilation 
- See Controls datasheet



Installation should be carried out in accordance with current regulations. Decks should be sound, resistant and in accordance with the requirements of current decking standards and the installation guide. Maximum roof slope: 25°, i.e. 45%. The hinged side of the unit must be parallel to the slope.

Fixing: In accordance with the current DTU series 43 in the case of a standard kerb, on metal, timber or concrete deck. If an adapter plate (or covering kerb) is used, this is adapted for installation on to the existing kerb or concrete surround. Dimensions (length and width) of the internal opening in the adapter plate must be less than or equal to those of the existing kerb on to which it will be fixed. This is necessary, in order to maintain the ventilation performance characteristics of the adapter plate.

Waterproofing seal:

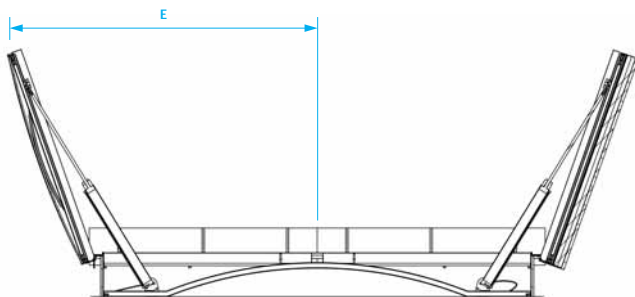
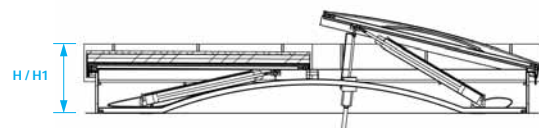
- The bitumen-faced insulation on the standard kerb guarantees a seal with waterproofing detailing material.
- Zinc or lead flashing should be installed in situ to create a seal with roof tiles or slates.
- A co-laminated metal sheet is used for PVC membranes.

Maintenance: the installation must be maintained at regular intervals and a preventive maintenance check should be scheduled for at least once a year (refer to current regulations for the type of building).

The installation notice of the **PYROCLAIR® EVOLUTION PNEUMATIQUE** is available on our website: www.skydome-axt.com on the heading "Espace Partenaires" (Partner Information).

DIMENSION OF OPENING A x B (cm)	E (cm)	H/H1 (cm)	WEIGHT WITH GRILL (kg)
140 x 250	185	41	136
140 x 300	220	41	156
150 x 250	185	41	139
150 x 300	220	41	155
160 x 200	150	41	127
160 x 250	185	41	147
160 x 300	220	41	158
180 x 200	150	41	136
180 x 250	185	41	151
180 x 300	220	41	165
200 x 200	150	41	139
200 x 250	185	41	153
200 x 300	220	41	170

PYROCLAIR® EVOLUTION PNEUMATIQUE

PYROCLAIR® EVOLUTION PNEUMATIQUE
+ ELECTRIC VENTILATION KIT

H1: height of adapter plate