

SMOKE EVACUATION / NATURAL DAYLIGHTING / VENTILATION

PYRODÔME[®] ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE

CE
0333



SKYDÔME[®]
La sécurité en toute clarté

PYRODÔME® ÉVOLUTION PNEUMATIQUE

PYRODÔME® ÉVOLUTION XL PNEUMATIQUE

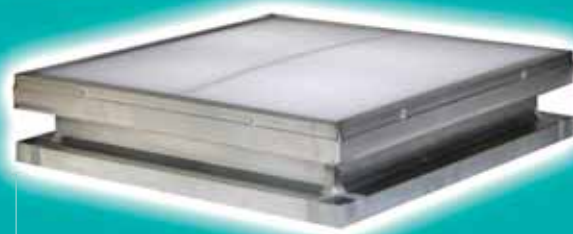


TRANSPARENT DEFLECTOR
IN OPTION

OPAL DEFLECTOR
IN STANDARD



PYRODÔME® ÉVOLUTION PNEUMATIQUE ANGLED ADAPTER PLATE VERSION
(picture without installation of deflectors)



The PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is a 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, residential buildings (stairs), etc. The PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is best used in large buildings which require smoke evacuation systems comprising several pieces of equipment. The PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE opening control has to be connected by copper tubing to a pneumatic box (manual control).

SMOKE EVACUATION / NATURAL DAYLIGHTING / VENTILATION

PYRODÔME®



ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE



1 ADVANTAGES

Integrated mechanisms: the opening and closing mechanisms of the PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE are completely contained within the height of the kerb as well in the open as the closed position. This means that they do not impede the passage of other networks or the use of other equipment under the ceiling. For opening dimensions 100 x 100 and 120 x 120 the integrated mechanism of PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is fixed on the side allowing easy roof access.

High resistance to corrosion: the galvanised steel kerb is assembled by crimping techniques. 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 means that PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE has an excellent resistance to weathering and corrosion, even when scratched.

Colour finish: the PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is available in galvanised steel or, upon request, in steel and pre-coated in CLASSIC WHITE SKYDÔME® colour. They can also be painted after manufacture in one of the main RAL colours (thickness of pre-coating: 25 µ, thickness of post-painting: more than 25 µ).

The PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is an architectural feature of the roof.

The Electric Ventilation Kit Option: the PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE can be equipped, with an electric Ventilation Kit, an efficient and simple system for buildings' ventilation.

The opening and closing of the PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE is executed thanks to a 300 mm electric cylinder, connected to the 220 volts electric supply.

The electric closing is possible at any roof angle (patented system).



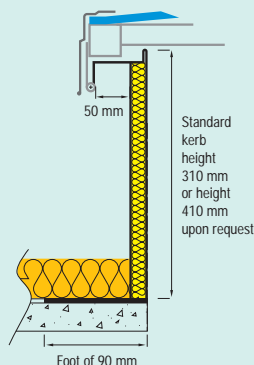
In case of fire, the system automatically disconnects, giving priority to the fire safety function. While closing after tests or fire, the electric ventilation system reconnects automatically, avoiding the manual operation on roof (put the electric cylinder in low position).

The **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE**, with the Ventilation Kit Option, has the CE Product Certification: NF EN 12101-2.

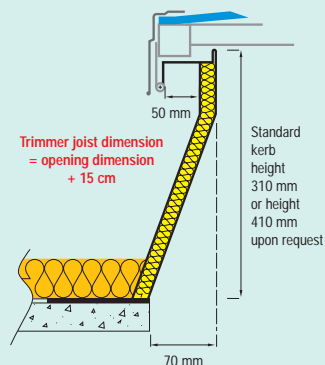
2 TYPES OF KERB

NEW

PYRODÔME® ÉVOLUTION PNEUMATIQUE
Height: 310 mm

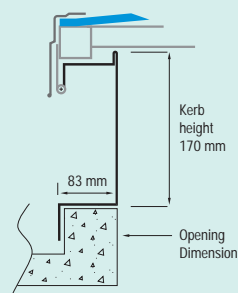


PYRODÔME® ÉVOLUTION XL PNEUMATIQUE
Height: 310 mm

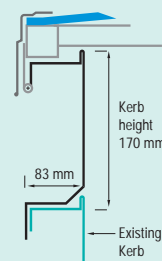


RENOVATION

ADAPTER PLATE PYRODÔME® ÉVOL. PNEUMATIQUE
Height: 170 mm



ADAPTER PLATE PYRODÔME® ÉVOL. PNEUMATIQUE
Angled kerb - Height: 170 mm



3 COMPOSITION

The **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE** comprises following elements:

- **A galvanised steel kerb**, this is the main component of the unit. It carries the opening section, the mechanisms and the pneumatic opening system. The straight sided kerb is covered on the outside by a bitumen-surfaced insulation designed to accept torch-on waterproofing membranes. In the Adapter Plate version, we can quote as option an insulation for the kerb.
- **A tubular opening frame in galvanised steel**: the opening frame is activated by a pneumatic cylinder for opening and closing. The frame is kept closed thanks to a mechanical lock mechanism including a visual closed position indicator.
- **Glazing**: as standard 10 mm reinforced structured opalescent polycarbonate sheet (PCA), or double dome PMMA. 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 anti-UV treated. **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 units reduces the build-up of condensation as air circulates between the frame and the kerb.
- **Aluminium beading frame fixed by stainless steel screws and nylon washers**: it holds the glazing in place and protects edges from lateral impacts. It improves the aesthetic appeal of **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE**.

The **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE** is connected to a pneumatic circuit linked to a CO₂ cartridge control. Pressure on the circuit from ground level activates the pneumatic cylinder, allowing the release of the cylinder head and the opening of the unit to 155°.

In case of fire, for automatic opening when the temperature rises, a thermal fuse is installed in factory, with a cartridge and bulb calibrated at the desired release temperature, on the **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE**.

The **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE** is closed again using a CO₂ cartridge control in case of only fire function, or with the air compressor network if the installation is working on ventilation system.

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

TYPE OF GLAZING	THERMAL TRANSMISSION U (W/m ² °C)	LIGHT TRANSMISSION (%)	FIRE CLASSIFICATION*	ACOUSTIC (db (A))
Double Domes PMMA (Polymetacrylate methyl)	3.1	76	Test in progress (M4)	19
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 Opal	2.5	55	Bs1do	17
16 mm structured polycarbonate - Opal	2.3	57	Bs1do	21
Aluminium cover 10	3.1	0	Test in progress (M0)	17
Aluminium cover 20	0.98	0	Test in progress (M0)	-
Aluminium cover 60	0.6	0	Test in progress (M0)	24

For other types of glazing: see the datasheet on Optional Functions

* Euroclass Classification

() Former Fire classification

OPENING cm x cm	Av (GEOMETRIC SURFACE) in m ²		Aa (OPENING SURFACE) Straight kerb HT 310 mm in m ²		Aa (OPENING SURFACE) Adapter plate version HT 170 mm in m ²	
	Évolution	Évolution XL	Évolution	Évolution XL	Straight Profile	Angled Profile
100 x 100*	1.00	1.30	0.68	0.87	0.63	0.68
120 x 120*	1.44	1.80	0.96	1.20	0.91	0.97
140 x 140	1.96	2.37	1.28	1.60	1.22	1.30
150 x 150	2.25	2.69	1.45	1.82	1.40	1.48
160 x 160	2.56	3.03	1.63	2.05	1.59	1.67
180 x 180	3.24	3.76	2.12	2.56	2.01	2.13
195 x 200	3.90	4.47	2.60	3.13	2.40	2.50
100 x 150	1.50	1.87	1.00	1.25	0.94	1.01
100 x 200	2.00	2.44	1.33	1.64	1.25	1.33
120 x 200	2.40	2.87	1.59	1.95	1.49	1.57
120 x 250	3.00	3.54	1.98	2.41	1.86	1.95
140 x 200	2.80	3.30	1.85	2.24	1.74	1.83

* Side fixed mechanism - Value with installed deflectors

Attention: no XL products for adapter plate version

Laboratory tests guarantee that the **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE** resistance and performance levels conform to the most stringent current regulatory standards when installed in accordance with current regulation DTU 43-3.

The **PYRODÔME® ÉVOLUTION / ÉVOLUTION XL PNEUMATIQUE** has the Product Certification CENF EN 12101-2 N°0333 CPD219 015 with all our glazings (see table), including with the safety options:

- Position contacts.
- Thermal fuse.

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 under the heading "Espace Partenaires" (Partner Information).

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 **PYRODOME® ÉVOLUTION/ÉVOLUTION XL** are of type B and T(00)

OPENING (mm)	PCA		DOUBLE DOME		ALU COVER	
	SL in kg/m ²	Mechanism	SL in kg/m ²	Mechanism	SL in kg/m ²	Mechanism
100 x 100	50	Side	50	Side	50	Side
120 x 120	50	Side	25 / 50	Side / Centre	25 / 50	Side / Centre
140 x 140	50	Centre	50	Centre	25	Centre
150 x 150	50	Centre	50	Centre	50	Centre
160 x 160	50	Centre	50	Centre	50	Centre
180 x 180	25	Centre	–	–	–	–
195 x 200	25	Centre	–	–	–	–
100 x 150	50	Centre	50	Centre	50	Centre
100 x 200	50	Centre	50	Centre	50	Centre
120 x 200	50	Centre	–	–	–	–
120 x 250	50	Centre	–	–	–	–
140 x 200	50	Centre	–	–	–	–

In standard, the **PYRODOME® ÉVOLUTION/ÉVOLUTION XL** are 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').”



- Steel kerb pre-painted in Classic White SKYDOME®
 - Steel kerb painted after manufacture in one of the main RAL colours
 - Grill tested to 1200 joules
 - Painted grill tested to 1200 joules
 - Thermal fuse category 1
 - Position contacts
 - Domes 1200 joules
 - Domes, pyramid domes
 - PCA 10 black, PCA 16, etc
 - Aluminium cover 10-20-60
 - Technical solution to adapt the unit to a roof with PVC waterproofing
- Options for adapter plates:**
- Insulation
 - Foot lengths from 50 to 180 mm (and longer on request)

- 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 and resistant and should conform to the requirements of current decking standards and of the installation guide.

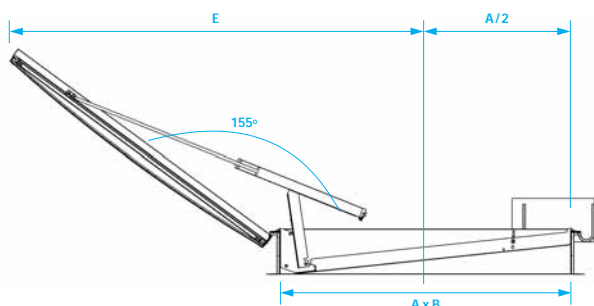
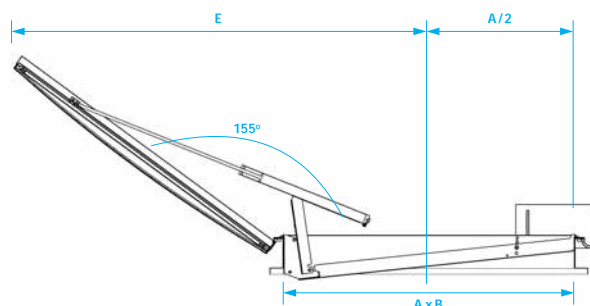
Maintenance: the installation must be maintained at regular intervals and a preventive maintenance check should be scheduled for at least once a year (refer to current regulations for the type of building).

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

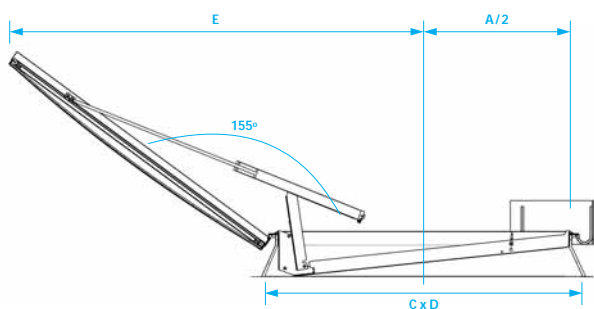
DIMENSION OF OPENING A x B* (cm)	DIMENSION OF OPENING XL C x D* (cm)	E (cm)	H (cm)		H1 (cm)		Weight with grill (kg)	
			in DD	in PCA	in DD	in PCA	in DD	in PCA
100 x 100	114 x 114	165	55	41	41	27	67	62
120 x 120	134 x 134	195	57	41	43	27	80	74
140 x 140	154 x 154	220	60	41	46	27	96	90
150 x 150	164 x 164	235	65	41	51	27	108	92
160 x 160	174 x 174	250	65	41	51	27	116	98
180 x 180	194 x 194	275	-	41	-	27	-	119
195 x 200	209 x 214	305	-	41	-	27	-	131
100 x 150	114 x 164	165	67	41	55	27	83	76
100 x 200	114 x 214	165	55	41	41	27	96	84
120 x 200	134 x 214	195	-	41	-	27	-	101
120 x 250	134 x 264	195	-	41	-	27	-	113
140 x 200	154 x 214	220	-	41	-	27	-	117

*B and D are the longest, hinged sides of the unit

PYRODÔME® ÉVOLUTION PNEUMATIQUE

ADAPTER PLATE
PYRODÔME® ÉVOLUTION PNEUMATIQUE

PYRODÔME® ÉVOLUTION XL PNEUMATIQUE



H1: height of adapter plate