

For **WATERPROOFED ROOFS**

# ARCADEF GD<sup>®</sup>

## Évolution Pneumatique



NF 537  
Actuated safety devices (DAS)  
Control devices (DC)



EN 12101-2  
EN 1873 + A1: 2016



## VERSION



### Filling

#### ORIGIN' RANGE:

- Opal PCA 10



### Arcade rooflight

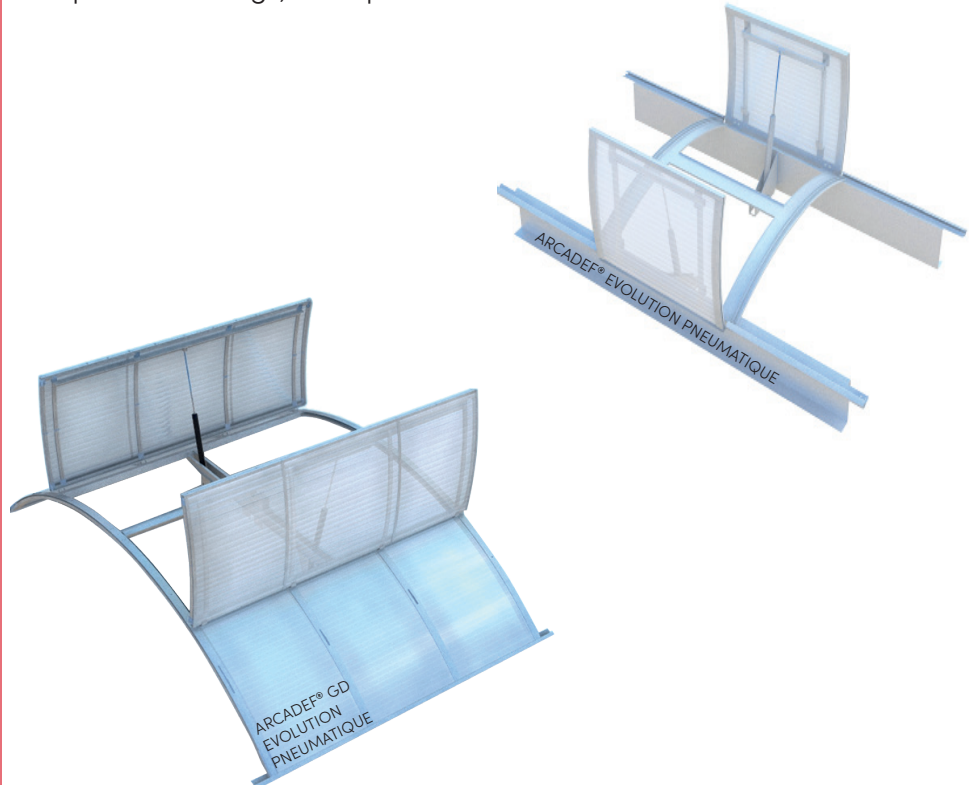
- The ARCADEF<sup>®</sup> is designed to be fastened to the arcade rooflight upstand
- Straight upstand with an angle of inclination depending on the arcade rooflight chord



### Control

- 2 factory pre-assembled panels made of unfinished extruded aluminium, with an opening angle of 100°
- 2 hinged double-acting pneumatic jacks mounted on 2 galvanised steel brackets anchored in the upstand. The mechanism's footprint during opening and closing operations remains within the volume of the upstand

The ARCADEF<sup>®</sup> ÉVOLUTION PNEUMATIQUE / GD range comprises two NSHEVs capable of natural smoke exhaust and ventilation functions across a wide range of sizes. These products integrate seamlessly with the toplighting function of the ARCADE rooflight. They are suitable for installation on all types of buildings (including public buildings, work premises and industrial buildings).



## OPTIONS



### Types of filling

- Opal PCA 10 IR
- Transparent PCA 10
- PCA 10 + Lumira\*
- Opal PCA 16
- Opal PCA 16 IR



### Control

- Thermo-fuse (93°C as standard)



### Other information

- Hot-lacquered frames (in RAL colours to order)
- 6 mm round bar or 16 x 16 mm 1200 joule square tube grid, galvanised or lacquered in standard RAL

## FUNCTIONAL OPTIONS



### Electric ventilation kit (only available for the ARCADEF GD ÉVOLUTION PNEUMATIQUE)

Electric ventilation system coupled to the opening mechanism:

- Electric opening by a jack with a stroke of 300 mm (220 V)
- The system is automatically decoupled in smoke extraction mode
- Connection to a wind and rain unit supported
- Optional switch

## Dimensions

ARCADEF® type	ARCADEF® Width x Length (cm)
ARCADEF® ÉVOLUTION PNEUMATIQUE	100 x "arcade rooflight chord" (150 to 300 cm)
	190 x 202
ARCADEF® GD ÉVOLUTION PNEUMATIQUE	190 x 309
	250 x 202
	250 x 309

Contact us for other dimensions.

## Control system

- CO<sub>2</sub> opening / closing module
- Two-zone CO<sub>2</sub> cabinets, 2 opening / 1 closing
- Copper piping
- See the "Control System" data sheet for standard installations (contact us for alternatives)

## Filling performance

Other filling and filling options: see "Filling" data sheet.

Type of filling	Thermal transmittance factor Ug (W/ m <sup>2</sup> .K)	LT D65 <sup>(2)</sup>	SF or g <sup>(2)</sup>	Reaction to fire	R <sub>w</sub> (dB) <sup>(3)</sup>	
	U <sub>hor</sub> <sup>(1)</sup>					
PCA	Opal 4-wall PCA 10	2.9	61%	61%	B-s1-d0	R <sub>w</sub> =19 dB
	Opal multi-wall PCA 16	1.9	45%	46%	B-s1-d0	R <sub>w</sub> = 21 dB
	Transparent PCA 16 with Lumira™ aerogel	1.5	67%	67%	B-s1-d0	R <sub>w</sub> = 21 dB

<sup>(1)</sup>Relative to the horizontal, as per §2.31 of the Th-Bat regulations.

<sup>(2)</sup>Light transmittance LT D65 and solar transmittance SF (TST or g) as per EN 410.

<sup>(3)</sup>Filling insulated against airborne noise R<sub>w</sub>, pink noise R<sub>x</sub> (environment, airport and industrial activities) and road noise R<sub>x,Tr</sub>, laboratory-measured according to NF EN ISO 140.

## PERFORMANCE

**Exhaust ventilator opening:** type B (open + close)

**Reliability:** Re 300

**Low ambient temperature:** T(0°C)

**Resistance to heat:** B<sub>300</sub>

**Thermo-fuse set temperature:** 93°C (eutectic fuse mounted in series)

**Resistance to wind load:** WL1500

**Opening under load:** SL 250 to SL 500 depending on filling

## COMPLIANCE & INSTALLATION

CE certified NSHEV compliant with **NF EN 12101-2. (Product certification No. 0333 CPR 219053).**

The product must be fastened and sealed in accordance with the requirements defined in the applicable DTU specifications (series 40 and 43).

Maximum insulation height: as per the DTUs, the sealing flashing must extend to a height of at least 150 mm.

The waterproofing complex (substrate, vapour barrier, insulation and two-layer sealant) must be no thicker than 140 mm for an interior upstand height of 310 mm, or 240 mm for an interior upstand height of 410 mm.

Maximum permissible slope: 25° or 46% (see installation instructions).

Only the security bar option provides guaranteed 1200 joule protection.

**DoP available at [www.skydome.eu](http://www.skydome.eu)**

## Consumption

Roof opening (cm)	Opening operating pressure (bar)	Closing operating pressure (bar)	Volume (Litres)
100 x "rooflight chord"	15	7	Contact us for details
190 x 202	15	7	0.90
190 x 309	15	7	1.36
250 x 202	15	7	2.92
250 x 309	15	7	2.92

## Selection guide based on the ARCADE® rooflight chord

Integrable ARCADEF type	ARCADEF Width x Length (cm)	Arcade rooflight chord (cm)								
		150	to	200	to	260	to	300	to	500
ARCADEF® EVOLUTION PNEUMATIQUE	100 x "arcade rooflight chord"									
ARCADEF® GD EVOLUTION PNEUMATIQUE	190 x 202									
ARCADEF® GD EVOLUTION PNEUMATIQUE	190 x 309									
ARCADEF® GD EVOLUTION PNEUMATIQUE	250 x 202									
ARCADEF® GD EVOLUTION PNEUMATIQUE	250 x 309									

Example:

Product selection for an ARCADE rooflight with a 270 cm chord:

- ARCADEF EVOLUTION PNEUMATIQUE measuring 100 x 270 cm
- ARCADEF GD EVOLUTION PNEUMATIQUE measuring 190 x 202 cm, 190 x 309 cm or 250 x 309 cm.

## Aeraulic performance

	Chord (cm)	Useful width (cm)	Av* (m <sup>2</sup> )	Aa* (m <sup>2</sup> )	
				Wind baffles Height 100 mm	Wind baffles Height 150 mm
ARCADEF® ÉVOLUTION PNEUMATIQUE	150	100	1.50	0.89	0.96
	160	100	1.60	0.95	1.03
	170	100	1.70	1.02	1.10
	180	100	1.80	1.09	1.18
	190	100	1.90	1.16	1.25
	200	100	2.00	1.23	1.33
	210	100	2.10	1.30	1.40
	220	100	2.20	1.37	1.48
	230	100	2.30	1.44	1.56
	240	100	2.40	1.52	1.64
	250	100	2.50	1.59	1.72
	260	100	2.60	1.67	1.80
	270	100	2.70	1.74	1.88
	280	100	2.80	1.82	1.96
	290	100	2.90	1.90	2.05
300	100	3.00	1.98	2.13	

\*Av: geometric area - Aa: effective opening area

	Width x Length (mm)	Av* (m <sup>2</sup> )	Aa* (m <sup>2</sup> )					
			Chord = 200 mm		Chord = 260 mm		200 cm < Chord < 260 mm 260 cm < Chord < 500 mm	
			Wind baffles Height 150 mm	Wind baffles Height 300 mm	Wind baffles Height 150 mm	Wind baffles Height 300 mm	Wind baffles Height 150 mm	Wind baffles Height 300 mm
ARCADEF® GD ÉVOLUTION PNEUMATIQUE	190 x 202	3.84	2.02	2.83	-	-	1.92	2.57
	190 x 309	5.87	3.09	4.45	-	-	2.94	3.76
	250 x 202	5.05	-	-	2.63	3.73	2.53	3.33
	250 x 309	7.73	-	-	4.02	5.95	3.86	4.87

\*Av: geometric area - Aa: effective opening area



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