

SMOKE EVACUATION / VENTILATION

ARCALAM ÉVOLUTION PNEUMATIQUE

CE
0333



SKYDÔME[®]
La sécurité en toute clarté



ARCALAM ADAPTER PLATE VERSION ALUMINIUM

ARCALAM ADAPTER PLATE VERSION GALVANISED STEEL



ARCALAM STEEL KERB

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is a unit used for smoke evacuation and daily ventilation in all its versions on all types of structures, e.g.: waterproofed roof, tiles' roofs, slates' roofs, steel roofs, sheds, glass roof (for a slope of 5 to 60°).

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is destined for all types of buildings, e.g.: public access buildings, industrial buildings, commercial buildings.

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ÉVOLUTION PNEUMATIQUE



1 ADVANTAGES

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is delivered **ready to be connected to the control system** in all its versions.

The mechanism of the **ARCALAM ÉVOLUTION PNEUMATIQUE** has a **low consumption of pneumatic energy** as well in the smoke evacuation function as in the ventilation one.

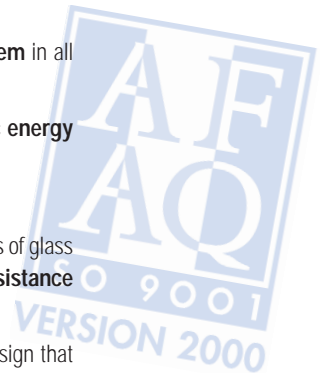
Its design allows an optimal use of the ventilation function even in regions with strong wind exposures.

In the Aluminium adapter plate version, the conception of the profiles permits an **easy integration** in all types of glass roofs and sheds (new or renovation). **ARCALAM ÉVOLUTION PNEUMATIQUE guarantees a 1200 Joules resistance as well in its closed position as in its opened one.**

The **ARCALAM ÉVOLUTION PNEUMATIQUE has an excellent resistance in the time** thanks to its design that avoids the use of too many efforts on the mechanism's components.

The inside opening dimensions of the kerbs vary from 1107 mm to 3051 mm in the length and from 1000 to 2200 mm in the width.

An operating pressure of **15 bars** is necessary **for the smoke evacuation function** and **7 bars for the ventilation function.**



The **ARCALAM ÉVOLUTION PNEUMATIQUE** has several versions:

STEEL KERB Version:

The standard is a galvanised steel kerb of a height of 300 mm covered with a bitumen-surfaced thermal insulation designed to accept torch-on waterproofing membranes.

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is composed of a kerb and of opening blades in aluminium profiles, articulating on their own rotation axle and opening to an angle of 90° minimum and +5° maximum. The conception of the profiles assures a perfect water tightness.

The opening mechanism is a pneumatic cylinder (opening/closing) which diameter varies depending on the dimension of the unit and its chosen snow load class.



ALUMINIUM FRAME Version:

The frame is an aluminium profile width 3 mm assembled by welding.

The height of the frame is 250 mm in its adapter plate version with a return and 200 mm in its version without return. The insulation is an option for the aluminium adapter plate version.

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is composed of a kerb and of opening blades in aluminium profiles, articulating on their own rotation axle and opening to an angle of 90° minimum and +5° maximum. The conception of the profiles assures a perfect water tightness.

The opening mechanism, identical to the steel kerb version, is a pneumatic cylinder (opening/closing).



GALVANISED STEEL ADAPTER PLATE Version:

The adapter plate kerb is in galvanised steel width 1,2 mm and could be insulated in option. The composition of the blades and of the mechanism is identical to the steel kerb version.



3 GLAZING OF THE OPENING BLADES

Different glazing could be on the **ARCALAM ÉVOLUTION PNEUMATIQUE**.

There are two versions:

• **Lighting Version:**

- **Structured polycarbonate:** composed of a structured polycarbonate plate width 6 to 10 mm fixed between two aluminium profiles.
- **Laminated glass:** composed of a volume in clear laminated glass 33/2.
- **Wired glass:** composed of a volume in glass width 6 mm (could not be installed on roof, recommended only for sheds).

• **Opaque Blades' Version:**

- Blades composed of non-insulated aluminium profile.
- Insulated opaque blades composed of two aluminium sheets including an insulation material.

4 FUNCTION

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is a unit working whatever the pneumatic supply mode.

The **ARCALAM ÉVOLUTION PNEUMATIQUE** is adapted to all options in its ventilation function (complete or gradual opening).

An operating pressure of 15 bars is necessary for the smoke evacuation function and 7 bars for the ventilation function. The necessary gas and air volumes have to take the total installation consumption into account.

A pneumatic thermal fuse is assembled in factory only if the legislation requires it (release temperature to be specified on the order).



5 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 opal	2,5	55	Bs1do	17
10 mm structured polycarbonate - 5 walled	2,3	65	Bs1do	17

* Euroclass Classification

For other types of glazing: contact us.

ARCALAM PNEUMATIQUE STEEL KERB WITH DEFLECTORS

Nb	Width	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
	Length	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa
6	1107	0.66	0.73	0.80	0.87	0.94	1.01	1.07	1.14	1.21	1.28	1.35	1.42	1.49
7	1269	0.76	0.84	0.92	1.00	1.08	1.16	1.24	1.32	1.40	1.50	1.58	1.66	1.74
8	1431	0.86	0.95	1.04	1.13	1.22	1.31	1.42	1.51	1.60	1.69	1.78	1.87	1.96
9	1593	0.96	1.06	1.16	1.26	1.37	1.48	1.58	1.68	1.79	1.89	1.99	2.09	2.19
10	1755	1.06	1.17	1.28	1.41	1.53	1.64	1.75	1.86	1.97	2.08	2.19	2.30	2.42
11	1917	1.16	1.28	1.41	1.55	1.67	1.79	1.91	2.03	2.16	2.28	2.40	2.52	2.64
12	2079	1.26	1.39	1.55	1.68	1.81	1.94	2.08	2.21	2.34	2.47	2.60	2.74	2.87
13	2241	1.36	1.51	1.67	1.81	1.95	2.10	2.24	2.38	2.53	2.67	2.81	2.95	3.10
14	2403	1.46	1.64	1.79	1.94	2.10	2.25	2.40	2.56	2.71	2.86	3.02	3.17	3.32
15	2565	1.56	1.75	1.91	2.08	2.24	2.40	2.57	2.73	2.89	3.06	3.22	3.39	3.55
16	2727	1.66	1.86	2.04	2.21	2.38	2.56	2.73	2.91	3.08	3.25	3.43	3.60	3.78
17	2889	1.77	1.97	2.16	2.34	2.53	2.71	2.90	3.08	3.26	3.45	3.63	3.82	4.00
18	3051	1.89	2.09	2.28	2.48	2.67	2.87	3.06	3.25	3.45	3.64	3.84	4.03	4.23

CE unit used for the smoke evacuation of industrial buildings, offices and all types of public access building.
Also certified for ventilation function. Steel kerb for waterproofed system.

ARCALAM PNEUMATIQUE ADAPTER PLATE VERSION ALUMINIUM OR GALVANISED STEEL WITH DEFLECTORS

Nb	Width	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
	Length	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa
6	1107	0.66	0.73	0.81	0.88	0.95	1.02	1.09	1.16	1.23	1.30	1.37	1.44	1.51
7	1269	0.77	0.85	0.93	1.01	1.09	1.17	1.25	1.34	1.43	1.52	1.60	1.69	1.77
8	1431	0.87	0.96	1.05	1.15	1.24	1.33	1.44	1.54	1.63	1.72	1.82	1.91	2.00
9	1593	0.97	1.07	1.18	1.28	1.39	1.51	1.61	1.72	1.82	1.93	2.03	2.13	2.24
10	1755	1.07	1.19	1.30	1.43	1.55	1.67	1.78	1.90	2.01	2.13	2.24	2.36	2.48
11	1917	1.18	1.30	1.43	1.57	1.70	1.83	1.95	2.08	2.21	2.33	2.46	2.58	2.71
12	2079	1.28	1.42	1.57	1.71	1.85	1.99	2.12	2.26	2.40	2.53	2.67	2.81	2.95
13	2241	1.38	1.53	1.70	1.85	2.00	2.14	2.29	2.44	2.59	2.74	2.89	3.03	3.18
14	2403	1.48	1.67	1.82	1.98	2.14	2.30	2.46	2.62	2.78	2.94	3.10	3.26	3.40
15	2565	1.59	1.78	1.95	2.12	2.29	2.46	2.63	2.80	2.97	3.14	3.31	3.48	3.61
16	2727	1.69	1.90	2.08	2.26	2.44	2.62	2.80	2.98	3.17	3.35	3.53	3.71	3.82
17	2889	1.80	2.01	2.20	2.40	2.59	2.78	2.97	3.16	3.36	3.55	3.74	3.91	4.03
18	3051	1.92	2.13	2.33	2.53	2.74	2.94	3.14	3.35	3.55	3.75	3.96	4.11	4.23

CE unit used for the smoke evacuation of industrial buildings, offices and all types of public access building.
Also certified for ventilation function. Adapter plate version.

The laboratory tests guarantee resistance and performance levels in accordance with the most restricting tests.

The **ARCALAM ÉVOLUTION PNEUMATIQUE** has the **CE Product Certification** corresponding to the norm **NF EN 12101-2** with the certificate number: **0333 CPD219 054**.



In standard, the **ARCALAM ÉVOLUTION PNEUMATIQUE** is SL250.

In option: SL500 upon request.

9 PERFORMANCES CLASSES

CO₂ CONSUMPTION ARCALAM PNEUMATIC JACKS STEEL OR ALU KERB (SL250)

Nb	Width	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
	Length	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa
6	1107	■	■	■	■	■	■	■	■	■	■	■	■	■
7	1269	■	■	■	■	■	■	■	■	■	■	■	■	■
8	1431	■	■	■	■	■	■	■	■	■	■	■	■	■
9	1593	■	■	■	■	■	■	■	■	■	■	■	■	■
10	1755	■	■	■	■	■	■	■	■	■	■	■	■	■
11	1917	■	■	■	■	■	■	■	■	■	■	■	■	■
12	2079	■	■	■	■	■	■	■	■	■	■	■	■	■
13	2241	■	■	■	■	■	■	■	■	■	■	■	■	■
14	2403	■	■	■	■	■	■	■	■	■	■	■	■	■
15	2565	■	■	■	■	■	■	■	■	■	■	■	■	■
16	2727	■	■	■	■	■	■	■	■	■	■	■	■	■
17	2889	■	■	■	■	■	■	■	■	■	■	■	■	■
18	3051	■	■	■	■	■	■	■	■	■	■	■	■	■

IN VENTILATION FUNCTION (compressed air on site) a minimum pressure of 7 bars is sufficient.
These values are identical for ALU and PCA BLADES (glass: contact us) Adapter plate.

- Diameter 32 mm - 30 normo-litres - load 25 kg/m²
- Diameter 40 mm - 43,5 normo-litres at 15 bars - load 25 kg/m²
- Diameter 50 mm - 66 normo-litres at 15 bars - load 25 kg/m²
- Diameter 63 mm - 96 normo-litres at 15 bars - load 25 kg/m²

CO₂ CONSUMPTION ARCALAM PNEUMATIC JACKS STEEL OR ALU KERB (SL500)

Nb	Width	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
	Length	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa	Aa
6	1107	■	■	■	■	■	■	■	■	■	■	■	■	■
7	1269	■	■	■	■	■	■	■	■	■	■	■	■	■
8	1431	■	■	■	■	■	■	■	■	■	■	■	■	■
9	1593	■	■	■	■	■	■	■	■	■	■	■	■	■
10	1755	■	■	■	■	■	■	■	■	■	■	■	■	■
11	1917	■	■	■	■	■	■	■	■	■	■	■	■	■
12	2079	■	■	■	■	■	■	■	■	■	■	■	■	■
13	2241	■	■	■	■	■	■	■	■	■	■	■	■	■
14	2403	■	■	■	■	■	■	■	■	■	■	■	■	■
15	2565	■	■	■	■	■	■	■	■	■	■	■	■	■
16	2727	■	■	■	■	■	■	■	■	■	■	■	■	■
17	2889	■	■	■	■	■	■	■	■	■	■	■	■	■
18	3051	■	■	■	■	■	■	■	■	■	■	■	■	■

IN VENTILATION FUNCTION (compressed air on site) a minimum pressure of 7 bars is sufficient.
These values are identical for ALU and PCA BLADES (glass: contact us) Adapter plate.

- Diameter 40 mm - 43,5 normo-litres - load 50 kg/m²
- Diameter 50 mm - 66 normo-litres at 15 bars - load 50 kg/m²
- Diameter 63 mm - 96 normo-litres at 15 bars - load 50 kg/m²
- Diameter 80 mm - 154 normo-litres at 15 bars - load 50 kg/m²

10 OPTIONS

- **Deflector's option:**
 - As option, the unit can be equipped with deflectors allowing the improvement of its smoke evacuation performance.
 - The deflectors are positioned on 3 sides of the unit. They can be in PCA or in aluminium.
- Adapter plate and steel kerb versions painted in standard RAL colours.
- Thermal fuse.
- Specific adaptations on aluminium adapter plate version.
- Aluminium adapter plate versions painted in standard RAL colours.

11 INSTALLATION

See the installation notice on our website: www.skydome.eu.

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