



**SKYLIGHTS**

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## **BASSO LUCERNARI, LEADING COMPANY IN INNOVATION AND TECHNOLOGY**

A working environment filled with natural light is more welcoming and has a good effect on staff, improving their productivity.

Basso Lucernari has been working in this field for more than thirty years, studying, planning, and producing ventilation and skylight systems specifically for industrial, commercial and public buildings.

### **Basso Lucernari stands for:**

**WIDE CHOICE**, as they offer various types of products made to suit clients needs.

**COMPLETE SERVICE**, as they guarantee consultancy during the planning phase and assistance during production and all the way through to installation

**RELIABILITY**, as their products are the fruits of a careful selection of materials, thorough manufacturing and strict testing carried out at each stage of production.

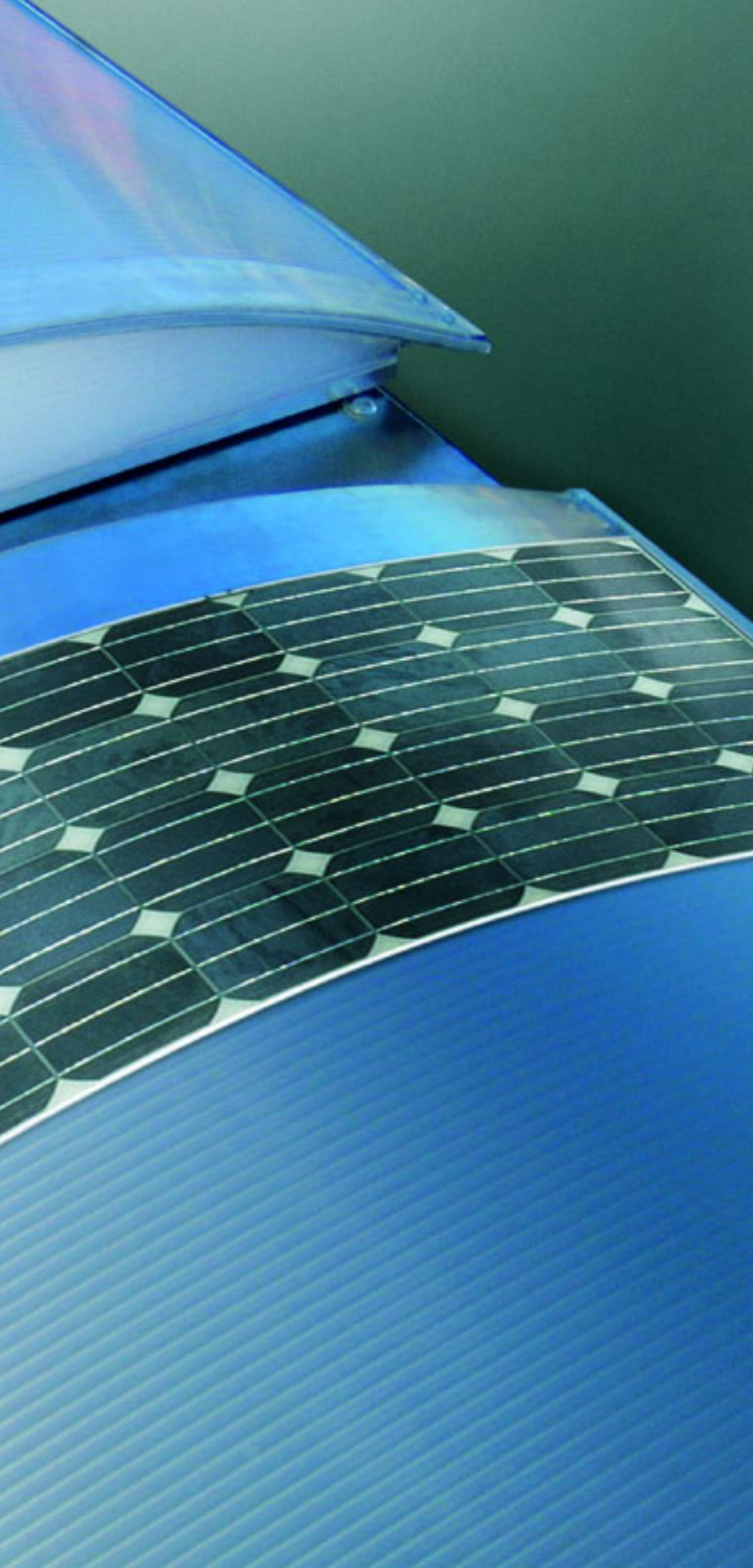
***BASSO LUCERNARI  
GIVING NEW MEANING TO LIGHT.***



**[www.bassoskylights.com](http://www.bassoskylights.com)**







## PHOTOVOLTAIC SYSTEM

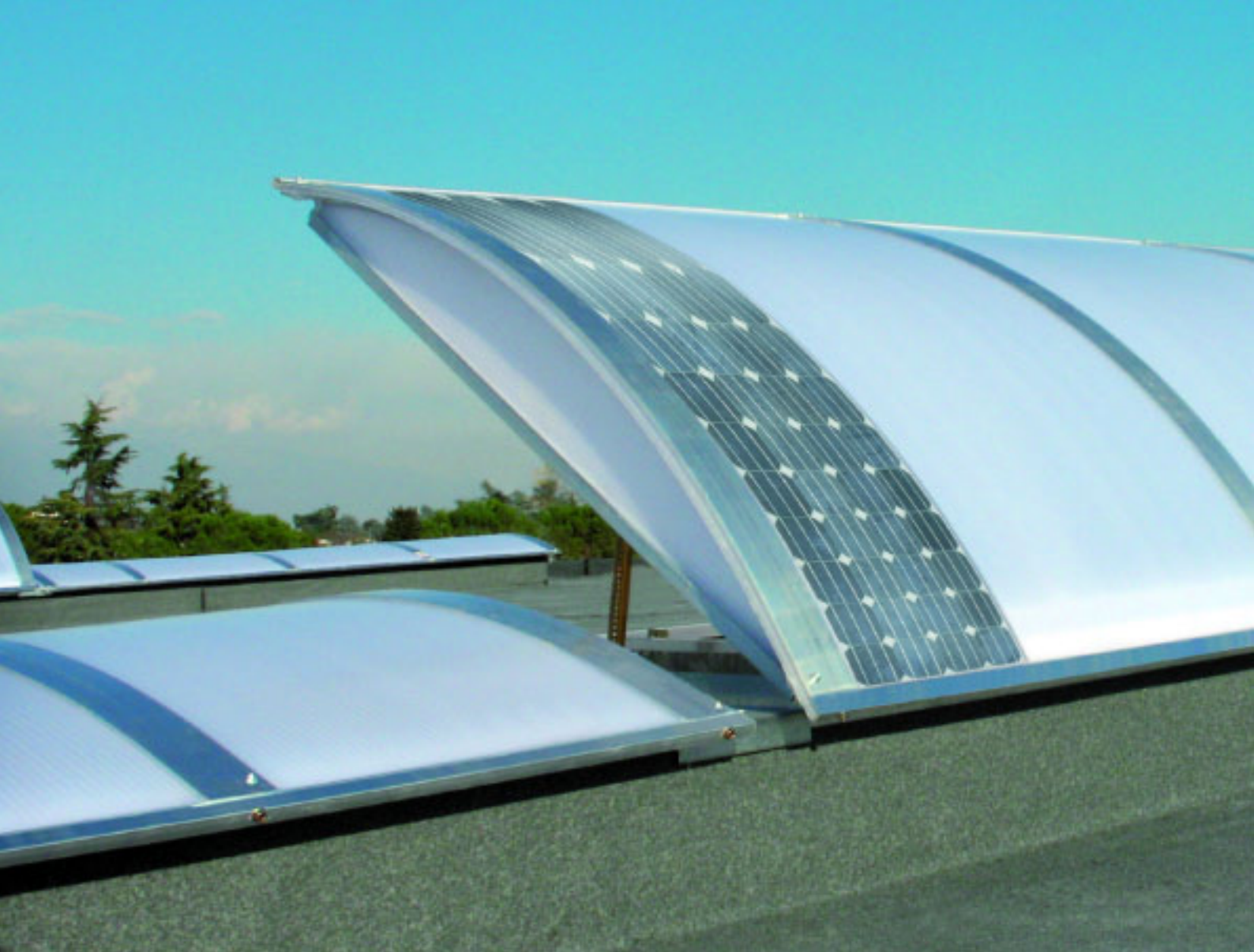
### SKYLIGHTS CONTROLLED USING RENEWABLE ENERGY

Basso Lucernari introduce a brand new product to the sector: skylights which open using a photovoltaic power supply system. The first skylights to open and close via remote control, using clean and renewable energy.

**The system has some significant advantages:**

- Works even when electricity is down.
- Saves energy.
- Saves costs of electrical power supply units (as they are no longer necessary).
- Quick to install.
- Skylights work immediately after assembly.
- Can be used with any type of skylight.





Example of application using **flexible photovoltaic module**.

## ACCESSORIES AVAILABLE ON REQUEST

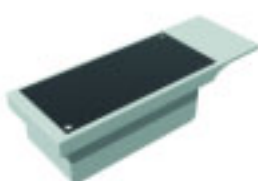
### ANEMOMETER (WIND-GAUGE)

Automatic closing  
in case of wind



### PLUVIOMETER (RAIN-GAUGE)

Automatic closing  
in case of rain



### TIMER

Automatic opening and closing  
at pre-set times.



### THERMOSTAT

Automatic opening and closing  
at pre-determined temperatures.







## PHOTOVOLTAIC SYSTEM

### TECHNICAL CHARACTERISTICS

**Controls the simultaneous opening and closing** of one or more skylights by dividing into groups. Uses a remote control which can be programmed for different zones.

**Pre-set opening and closing** with 8 opening/closing cycles during summer and 4 during winter.

Rigid or flexible photovoltaic **modules made from amorphous silicon** produced depending on various needs.

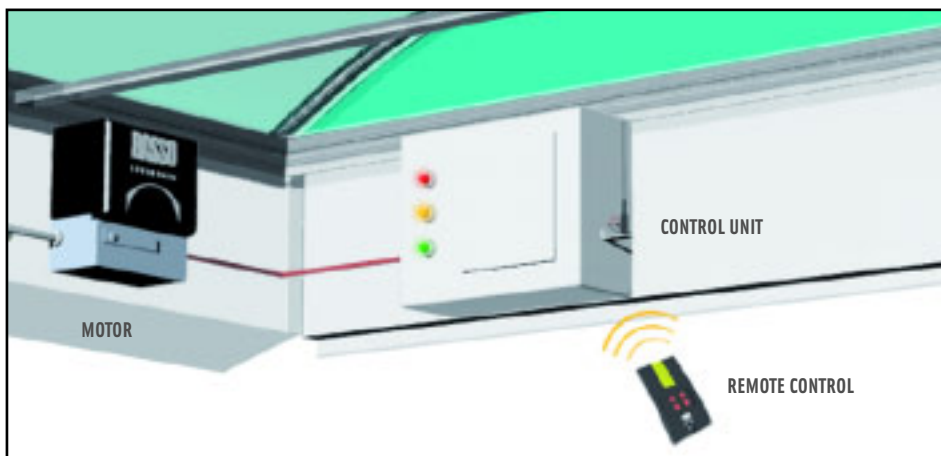
**Possibility of installing various accessories:**

Anemometer, pluviometer, timer, thermostat.

**Control unit, composed of:**

- Antenna and signal card
- Hermetic sealed lead-acid batteries exempt from maintenance
- Smart battery-charging which maintains charge and preserves batteries for a long time
- Led-lighting system which shows the status of the batteries
- Electrical protection in compliance with current regulations

Example of use with photovoltaic module on **hard frame**.









## ACL SKYLIGHTS

### ACL SKYLIGHTS LATERAL OPENING

Skylights from the ACL series are ideal for each working environment and guarantee daily lighting and ventilation. They can be distinguished for their ease of installation, practicality and reliability over time.

CE

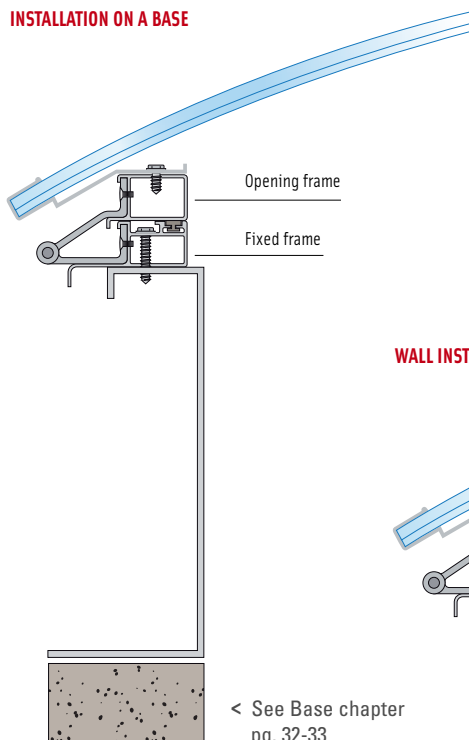


## OPENING FRAMES

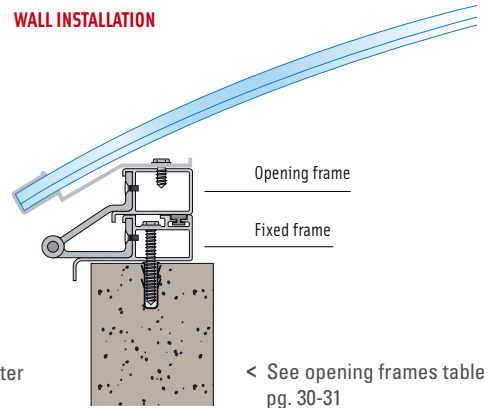
The opening system consists of two extruded aluminium tubular frames (opening and fixed) made with a natural aluminium alloy UNI 6060, joined by aluminium hinges with stainless steel pins. The opening frame has EPDM rubber sealing to guarantee perfect closing with fixed frames.



### INSTALLATION ON A BASE



### WALL INSTALLATION







# ACL SKYLIGHTS

## LATERAL OPENING

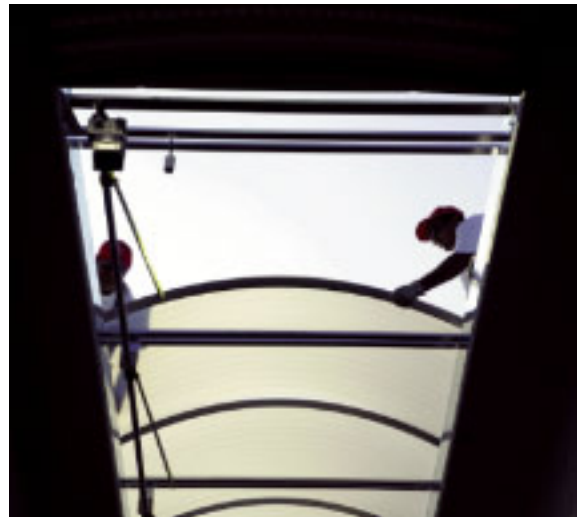
Skylights from the ACL series consist of a base frame made from galvanized steel anchored to the cover and an opening frame operated by an electrically-operated geared motor working at 220V with incorporated limit switch, galvanized steel transmission shaft of diameter 33mm, revolving bearings on balls, galvanized rack and pinion shaft, bronze gears.

The cover is made from polycarbonate panes (other materials available on request), connected by aluminium supporting structural profiles.

### ACL SKYLIGHTS SYSTEM

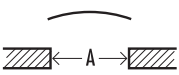
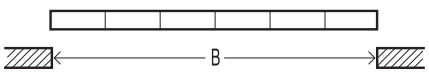
BASE FRAME	Galvanized steel
	White grey steel
	Other materials available on request
OPENABLE FRAME	Natural aluminium alloy UNI 6060
MOTORISED OPENING SYSTEM	Tubular in galvanized steel
	Moulded galvanized
MOTORIZATION	24-220-380 Volt/pneumatic
COVERING	Alveolar polycarbonate
	Reinforced alveolar polycarbonate
	Other materials available on request





## EXAMPLE DIMENSIONS

ACL skylights are made to measure. The following table gives some examples of possible sizes from a minimum to a maximum.

WIDTH (VENT)	LENGTH (VENT)														
															
(Meters)	3	4	5	6	7	8	9	10	11	12	13	14	15		
da 0.6 a 1.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
da 1.5 a 2.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Recommended measurements 



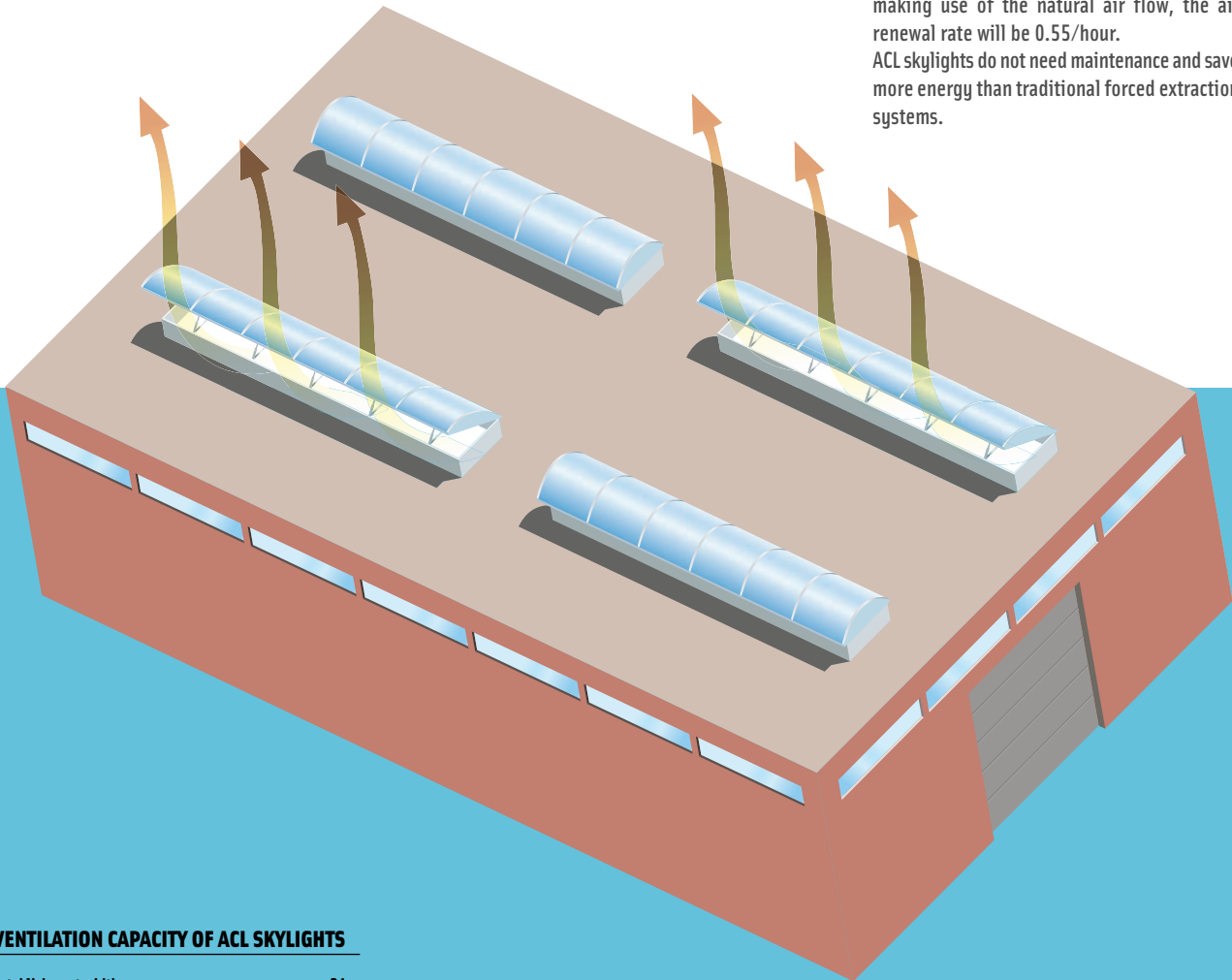


## OUR TESTS

### GUARANTEED VENTILATION

Our tests show that, in an environment of around 1,000 m<sup>3</sup>, with 4 6 x 1.5m ACLs installed, making use of the natural air flow, the air renewal rate will be 0.55/hour.

ACL skylights do not need maintenance and save more energy than traditional forced extraction systems.



### VENTILATION CAPACITY OF ACL SKYLIGHTS

Establishment width	24 m
Establishment length	40 m
Establishment height	7 m
Skylights	4 ADR internal dimensions 6 x 1.5 m
External temperature	5°C
Internal temperature	18°C

### COEFFICIENT OF OUTFLOW 0.6

OPENING OF SKYLIGHT ONTO ROOF DECK

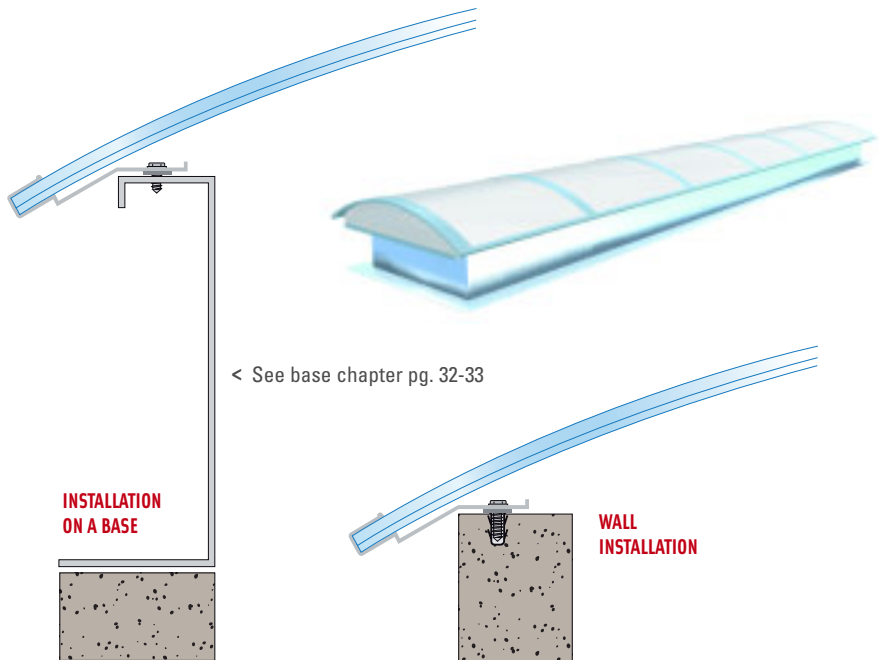
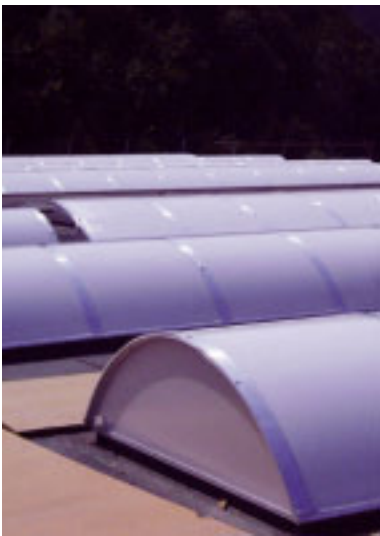
	ACL
Ventilation capacity (m <sup>2</sup> /second of outflow)	0.258
Air renewal rate per hour	0.55

## ACL SKYLIGHTS

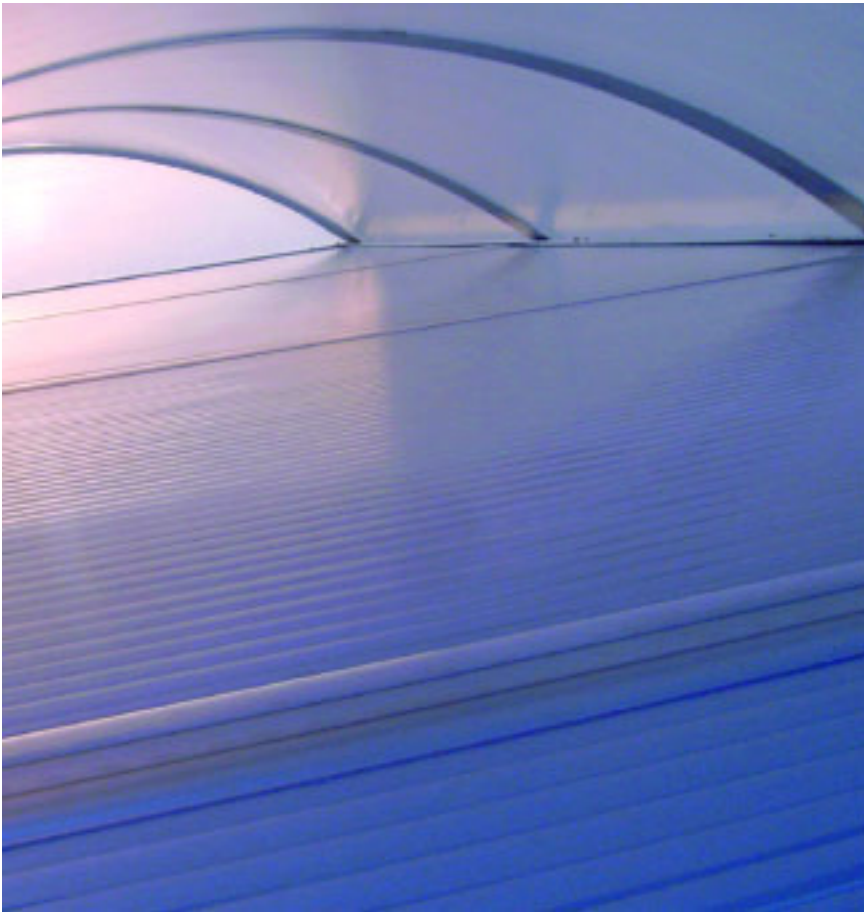
# ACL SKYLIGHTS FIXED

## FOR WELL-LIT ENVIRONMENTS

ACL Skylights are also available in a fixed version, used when an environment needs light over a greater space.  
In areas needing ventilation it is possible to use the mixed ACL system (see pg.44), guaranteeing optimum light and air flow.







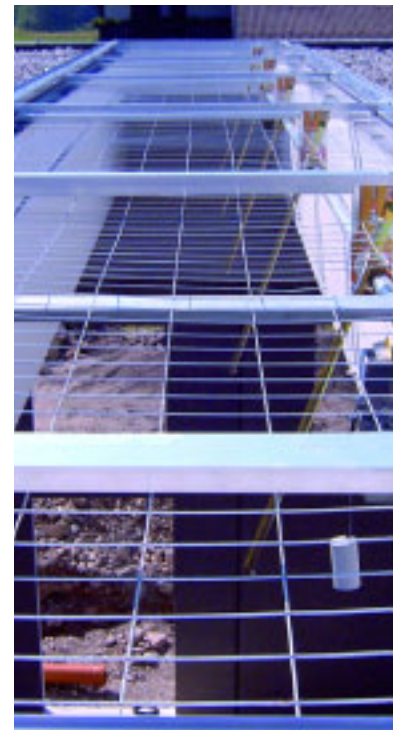
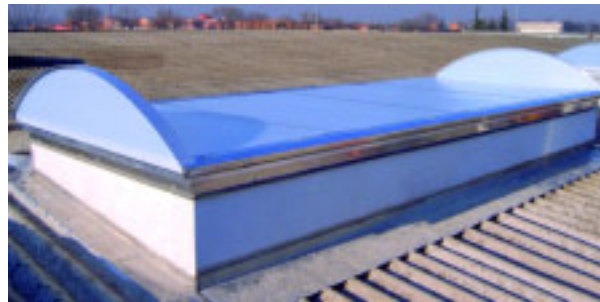
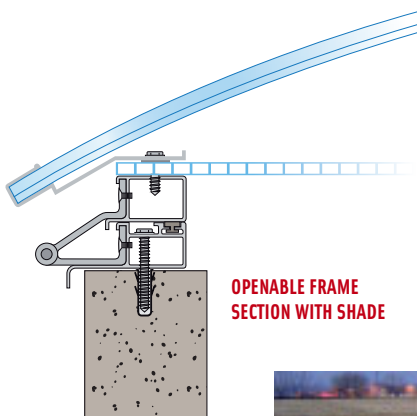
## ACL SKYLIGHTS INSULATED

### THERMAL INSULATION IN A WORKING ENVIRONMENT

To guarantee a constant temperature in the working environment (e.g. needed for the food sector) it is possible to insulate the skylight by installing shades of various thicknesses, positioned between the cover and the opening frame. Basso Lucernari can offer assistance in the planning phase to find and create the solution according to clients needs.

### SAFETY NET (ANTI-FALL)

All skylights can be fitted with an anti-fall safety net, mosquito net, bird net and anti-break-in net.





## CONTINUOUS SKYLIGHTS

### COVERING

The cover is made from sectional thermoformed domes in polycarbonate or polymethacrylate (pmma) synthesis original, exempt from recovery monomer, with mechanical/optical characteristics typical of pure polymer.

The dome, single or double walled, can come in crown or pyramid form. A strengthening system is positioned every 300mm subdivided into modular central units and head. The external and internal dome can be either opal or transparent depending on client needs.

ITEM	SIZE (CM)			CROWN MODEL (VM)		PYRAMID MODEL (PM)	
	TOTAL LIGHT A	EXTERNAL SUPPORT B	MAXIMUM VOLUME C	SINGLE WALL SW	DOUBLE WALL DW	SINGLE WALL SW	DOUBLE WALL DW
75	75	90	98	•	•		
85	85	100	108	•	•		
100	100	115	123	•	•	•	•
110	110	125	133	•	•		
120	120	135	143	•	•	•	•
125	125	140	148	•	•		
135	135	150	158	•	•	•	•
150	150	170	174	•	•	•	•
160	158	170	178	•	•		
185	185	200	208	•	•		
220	220	240	250	•	•	•	•





## CONTINUOUS SKYLIGHTS

### CONTINUOUS SKYLIGHTS FIXED OR OPENING

Thermoformed continuous skylights represent the ideal solution for **illuminating and ventilating environments** in which lighting is as important as appearance.

These skylights are made with acrylic or polycarbonate panes. They are fitted with strengthening ribs which guarantee **hold, capacity, and strength**.

They are of a modular design for installation in any type of architectural situation, and pre-moulded for **simple and quick placement**.

Available with **crown or pyramid formed sections**.





CE







## ADR VENTILATORS

### VERTICAL OPENING SKYLIGHTS

Skylights from the ADR series are the jewel in the crown of Basso Lucernari productions and represent the top of the market for opening skylights. They guarantee optimal illumination for the environment and favour constant ventilation against any excess of smoke, heat, or odour.





## THE BEST SKYLIGHTS FOR VENTILATION ENVIRONMENTS

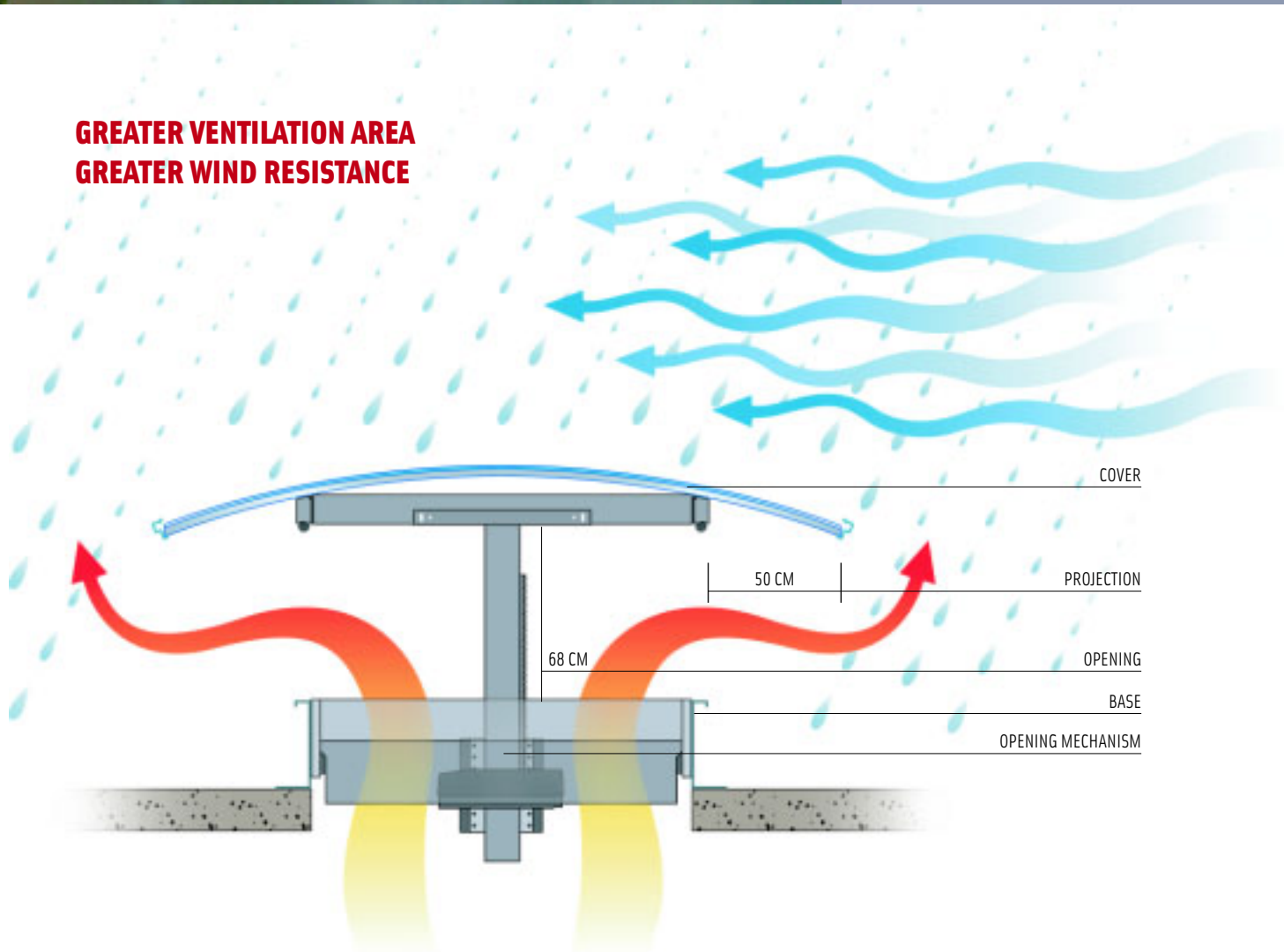
Thanks to its particular opening system and working design, the ADR model offers many more advantages than traditional systems, those with lateral or 'protruding' opening (shed skylights).

The vertical raising of the cover, freeing the vent on all 4 sides, ensures a greater ventilation area and better wind resistance.

The lateral projection, compared to the base vent, makes it possible to open the ventilator even when raining.

A solid structure formed by sections in steel and aluminium, designed and planned by Basso Lucernari, guarantee maximum strength.

**GREATER VENTILATION AREA**  
**GREATER WIND RESISTANCE**



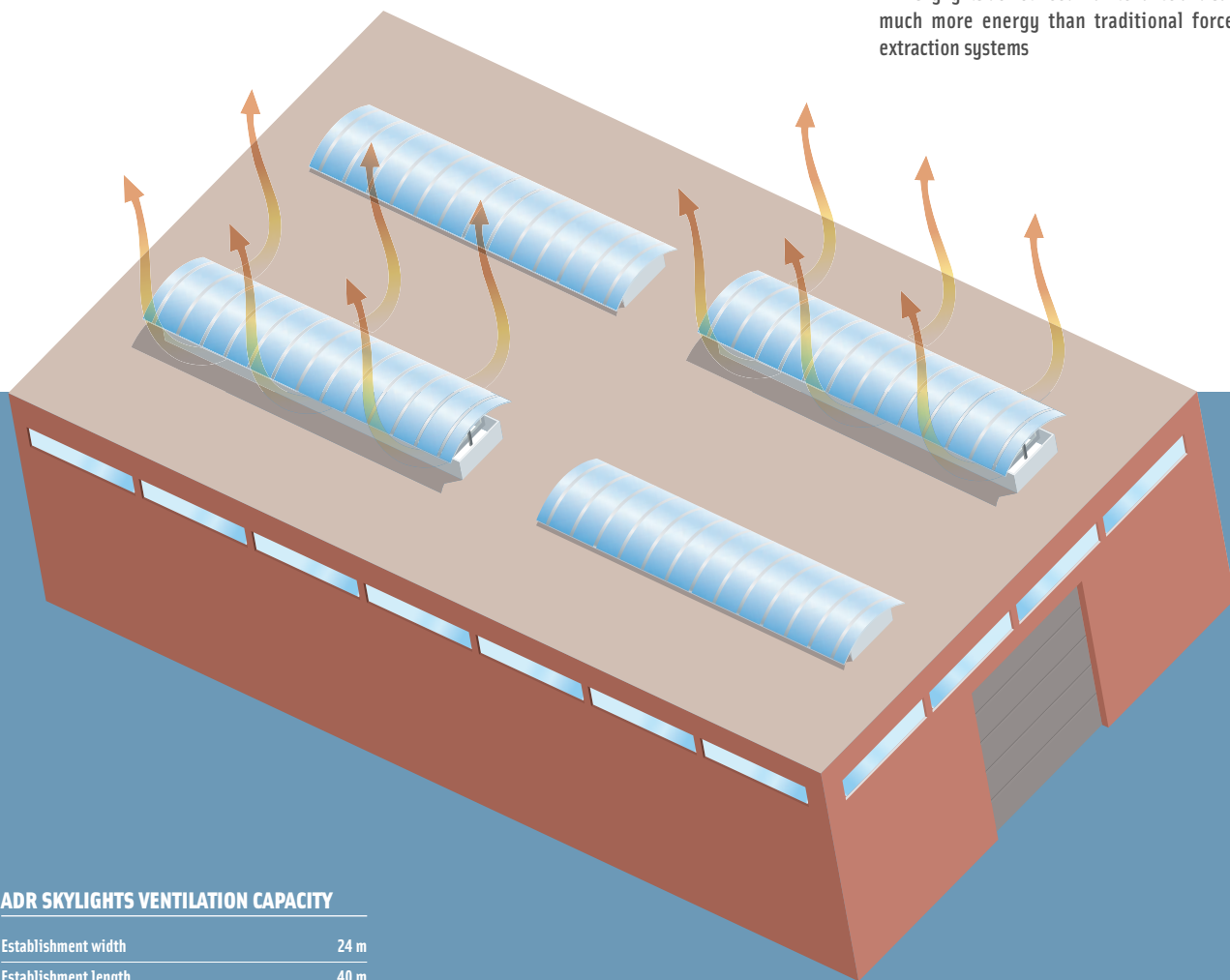


## OUR TESTS

### GUARANTEED VENTILATION

Our studies show that, in an area of around 1,000 m<sup>2</sup>, with 4 6 x 1.5m ADR skylights, making use of the natural air flow, the air renewal rate will be 1.02/hour.

ADR skylights do not need maintenance and save much more energy than traditional forced extraction systems



#### ADR SKYLIGHTS VENTILATION CAPACITY

Establishment width	24 m
Establishment length	40 m
Establishment height	7 m
Skylights	4 ADR internal dimensions 6 x 1.5 m
External temperature	5°C
Internal temperature	18°C

#### COEFFICIENT OF OUTFLOW 0,6

OPENING OF SKYLIGHT ONTO ROOF DECK

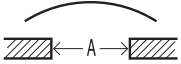
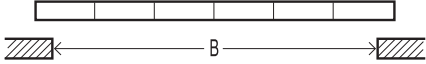
	ADR
Ventilation capacity (m <sup>2</sup> /second of flow)	0.476
Air renewal rate per hour	1.02

## ADR VENTILATORS



## EXAMPLE OF POSSIBLE DIMENSIONS

ADR skylights are made to measure. Some of the possible sizes are given in the following table from a minimum to a maximum.

WIDTH (VENT)	LENGTH (VENT)												
													
(meters)	3	4	5	6	7	8	9	10	11	12	13	14	15
da 0.8 a 2.5	•	•	•	•	•	•	•	•	•	•	•	•	•
da 2.5 a 6	•	•	•	•	•	•	•	•	•	•	•	•	•

Recommended size 







## TECHNICAL CHARACTERISTICS

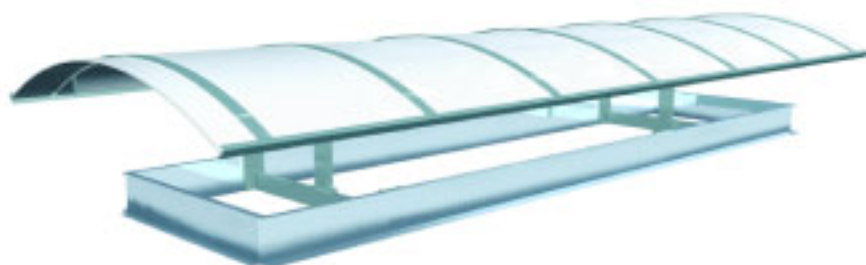
Years of continuous research have made it possible to create a simple and very resistant structure (the product is installed on the roof and becomes an integral and permanent part). The opening system does not need maintenance due to the use of high quality components and to the use of Teflon runners which ensure long life.

A geared motor acts on a transmission shaft (in drawn steel); with rack gears (width 40mm M4) which make it possible to raise the cover up to 68cm (with variations on request).

The whole system is supported by a steel structure of 2-3mm thickness.

### ADR VENTILATION SYSTEM

<b>UPSTAND</b>	Galvanized steel White grey steel Other materials available on request
<b>OPENABLE FRAME</b>	Natural aluminium alloy UNI 6060
<b>OPENING SYSTEM</b>	Tubular in galvanized steel Moulded galvanized
<b>MOTORIZATIONS</b>	24-220-380 Volt/pneumatic
<b>COVER</b>	Alveolar polycarbonate Reinforced alveolar polycarbonate Other materials available on request



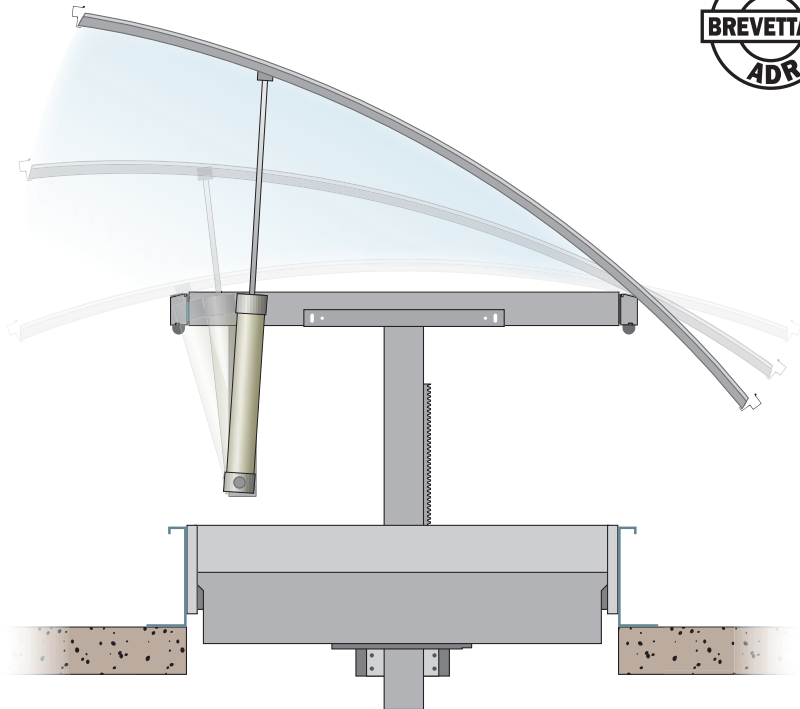
## ADR VENTILATORS

## ADR SYSTEM OTHER VARIETIES



### DOUBLE OPENING: VERTICAL OR TO ONE SIDE

To further increase the area of ventilation the skylights can be setup for double opening: vertical raising and opening to one side.



### NETS

**Mosquito net** to prevent the entrance of insects.  
**Metal net** with small holes to prevent the entrance of birds or flying objects.  
**Anti-break-in net** used for safety reasons



### LAYERED DOUBLE GLAZING

ADR skylights are also available with glass covers guaranteeing optimum thermal insulation.



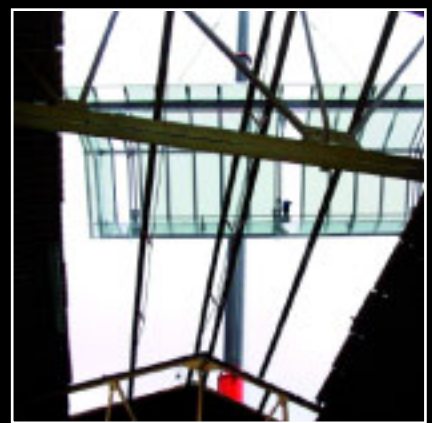


## LARGE SIZE ADR SYSTEMS

For particular needs Basso Lucernari can plan and create large size ADRs for any type of roofing.

The photos here show the various stages of installation of three double layer ADRs (internal dimensions: 10 x 4.2m), with a single lateral motor with six thrust points.

The skylights are assembled on the ground and raised by crane to make installation easier.



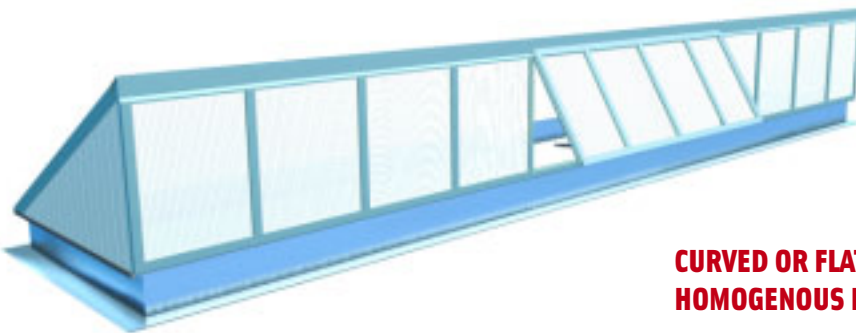
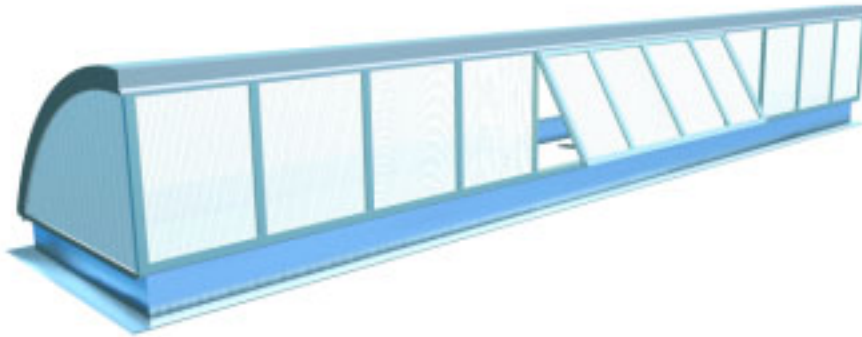




## SHED SKYLIGHTS

### SHED, OPENABLE SKYLIGHTS WITH INDIRECT LIGHT

The SHED skylights are a true classic from the Basso Lucernari range as they meet all illumination and ventilation needs of the workplace in an efficient and flexible way. Available in various solutions, **made to measure**, these skylights can be adapted to any type of roofing and provide the environment with a widely **diffused, homogenous light**.



### CURVED OR FLAT FOR HOMOGENOUS LIGHT

The sheds allow:

- Widely diffused and efficient illumination
- Optimal thermal insulation

They can be installed intelligently, usually facing north so that the light does not enter the building directly but is gradual and pleasant.



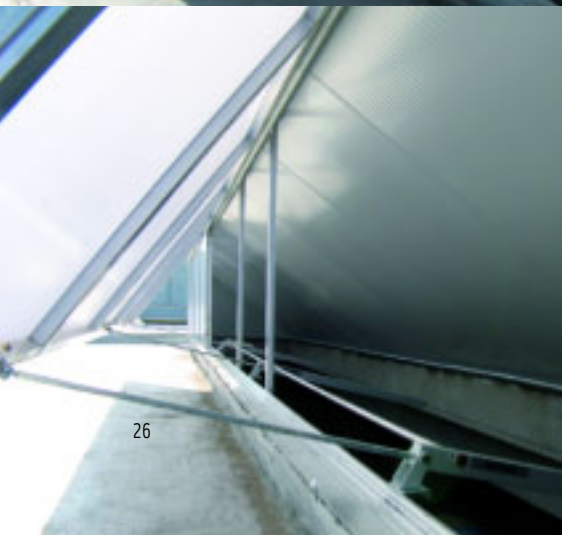
# SHED SKYLIGHTS

## OPENING DEVICES

SHED skylights are opened by an electrical opening device composed of frame and secondary frame, both trimmed in natural aluminium UNI 6060, joined by aluminium hinges with stainless steel pins, EPDM rubber sealing is inserted between the two frames guaranteeing perfect closing. The frames are opened by an electric motor, working at 220 V - IP55, acting on one or more thrusting points, with 350/550 mm. travel and limit switch incorporated. The motor is connected with an aluminium transmission bar to a rack-rail.

## ELECTRICAL OPENING

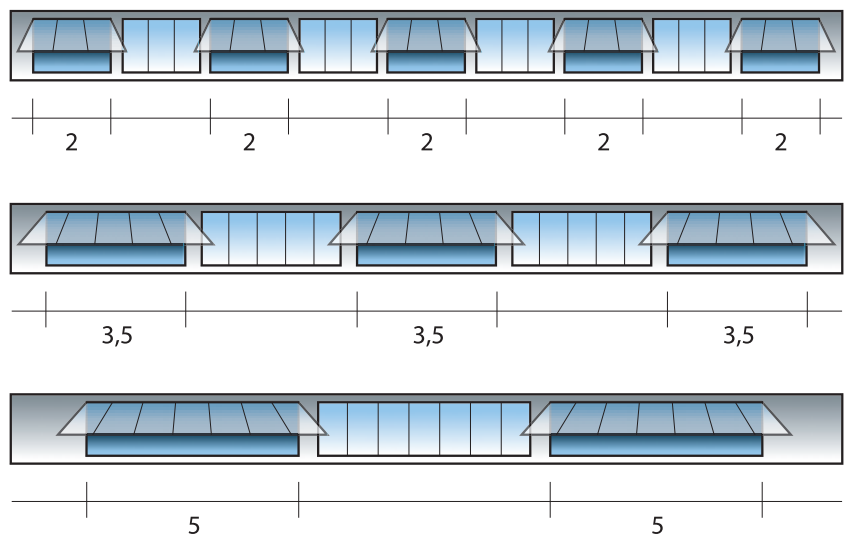
The opening shutter is made with the same mould as the fixed frame, with aluminium hinges fitted with stainless steel pins, positioned on the upper part of the shutter and controlled by an electrical actuator.



## EFFICIENT VENTILATION

With SHED skylights ventilation is guaranteed with the opening of the modules carried out by electrical or pneumatic actuators.

## SHED OPENING: SHUTTER SIZES (given in meters)

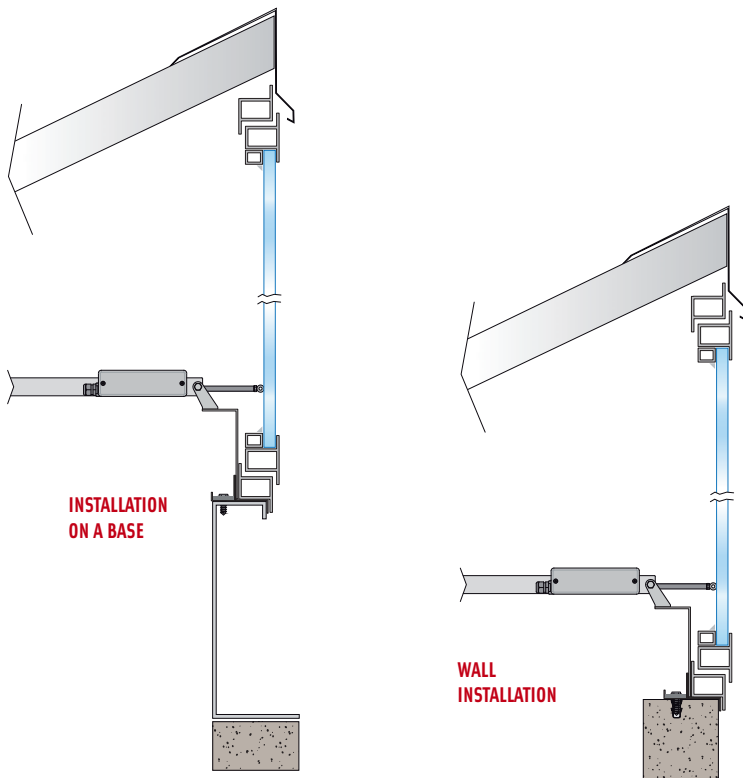






## TECHNICAL CHARACTERISITCS

SHED is made with **curved or flat sandwich panel** covering with a thickness of 40mm. The **supporting structure** of the shutters is made from aluminium and makes it possible to insert mirroring in alveolar polycarbonate, glass or other materials requested.



## SHED DIMENSIONS

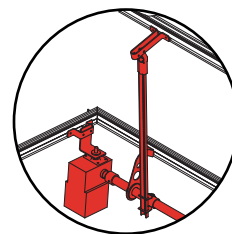
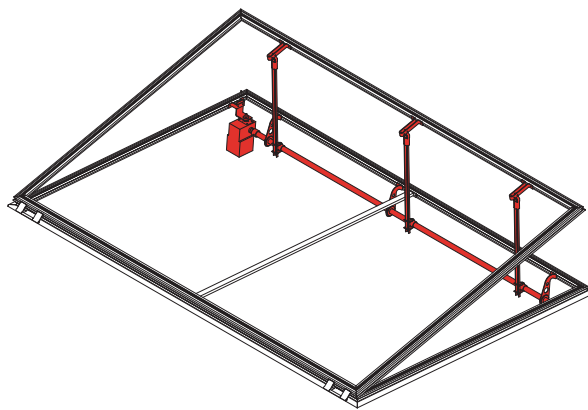
WIDTH (VENT)	LENGTH (VENT)												
(meters)	3	4	5	6	7	8	9	10	11	12	13	14	15
da 0.8 a 2.5	•	•	•	•	•	•	•	•	•	•	•	•	•
da 2.5 a 6	•	•	•	•	•	•	•	•	•	•	•	•	•

## SHED SKYLIGHTS SYSTEM

<b>BASES</b>	Galvanized steel White grey steel Other materials available on request
<b>OPENING FRAME</b>	Natural aluminium alloy UNI 6060
<b>MOTORIZATIONS</b>	24-220 Volt/pneumatic
<b>COVERING</b>	Sandwich panel 40mm
<b>LATERAL CLOSING HEADS</b>	Sandwich panel 40mm
<b>BUFFERING</b>	Alveolar polycarbonate Reinforced alveolar polycarbonate Other materials available on request

## RACK AND PINION OPENING DEVICE

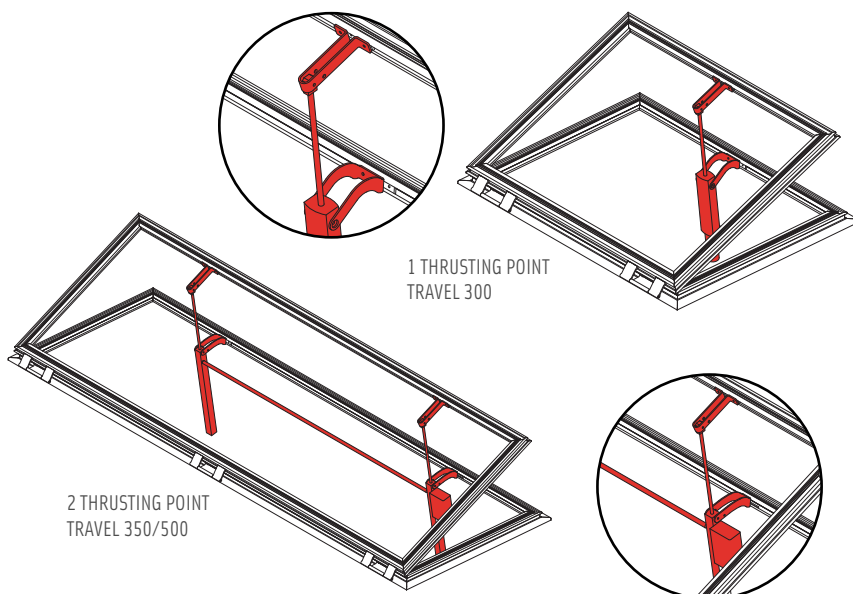
The opening of the skylight, on the longer edge, is ensured by an electrically-operated geared motor operating at 220Volt, fitted with limit switch, galvanized steel transmission shaft (diameter 33mm), revolving bearings on balls, galvanized rack and pinion shaft bronze gears.



RACK AND PINION  
DEVICE

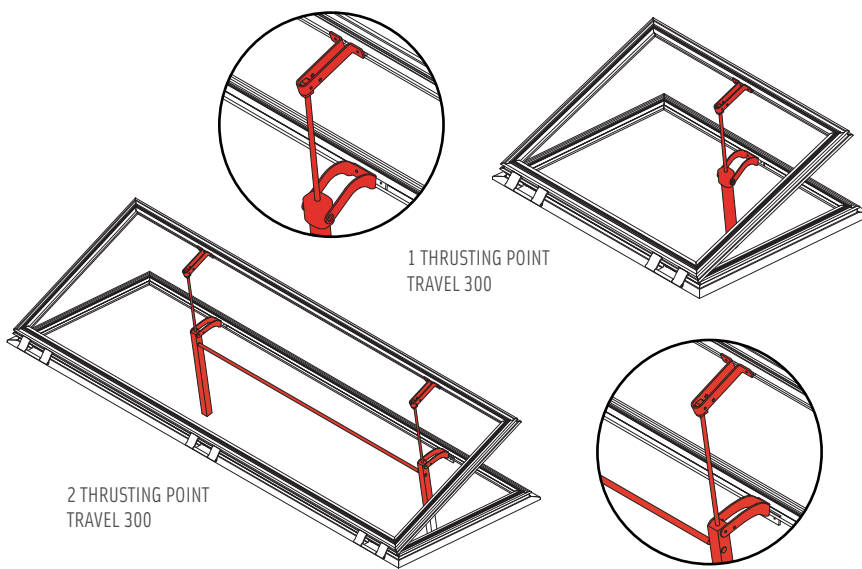
## SHAFT OPENING DEVICE

The electrical opening device for dome ventilation consists of a frame and secondary frame, both sectional in natural aluminium UNI 6060, joined by aluminium hinges with stainless steel pins, EPDM rubber sealing is inserted between the two frames to ensure perfect closing. Opening is controlled by an electrical motor operating at 220 V - IP55, working on one or two thrusting points with 350/550 mm. travel, limit switch incorporated. The motor is connected by an aluminium transmission bar to a rack and pinion.

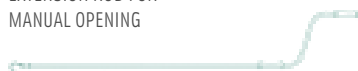


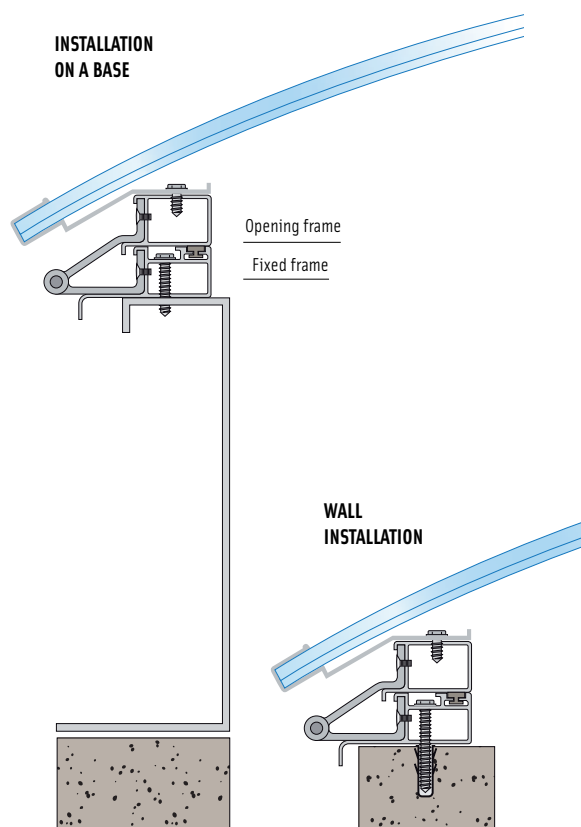
## MANUAL OPENING DEVICE

The manual opening device for dome ventilation consists of a frame and secondary frame made from natural aluminium UNI 6060, joined by aluminium hinges with stainless steel pins and EPDM rubber sealing inserted between the two frames to ensure perfect closing. The manual opening actuator is controlled by a mobile rod of 200cm length (fitting on request) and 300/500mm opening acting on one or more thrusting points.



EXTENSION ROD FOR  
MANUAL OPENING





## OPENING FRAMES

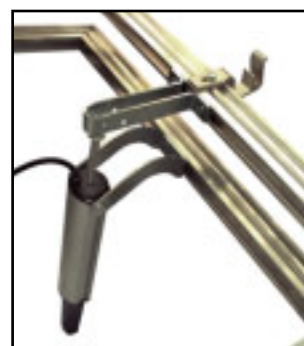
The opening device consists of frame and secondary frame made with natural aluminium UNI6060 profile and have aluminium hinges with stainless steel pins and EPDM rubber sealing to guarantee perfect closing.

### SUPPORT BRACKETS

Other than offering an innovative design, the particular support brackets planned by BASSO LUCERNARI, guarantee a safer and more efficient method for attaching the opening system of an opening frame.



Detail: support brackets for rack and pinion opening.



Detail: support brackets for shaft opening.

### OPENING SYSTEM DIMENSIONS

**RACK AND PINION OPENING**

**WITH MORE THAN ONE THRUSTING POINTS**

With the rack and pinion opening system it is also possible to create the frames to measure, also in large sizes, as well as the standard measurements.

**ELECTRICAL**

1 THRUST POINT	2 THRUST POINTS
<b>TRAVEL 300</b>	<b>TRAVEL 350/550</b>
Square base: from 60cm to 150cm Rectangular base: from 60 x 90cm to 80 x 130cm	Square base: from 130cm to 250cm Rectangular base: from 60 x 130cm to 160 x 300cm

**MANUAL**

1 THRUST POINT	2 THRUST POINTS
<b>TRAVEL 300</b>	<b>TRAVEL 300/500</b>
Square base: from 60cm to 150cm Rectangular base: from 60 x 90cm to 80 x 130cm	Square base: from 130cm to 250cm Rectangular base: from 60 x 130cm to 160 x 280cm

**WITH CHAIN MOTOR**

Square base: from 60cm to 90cm  
Rectangular base: from 60 x 90cm to 60 x 90cm

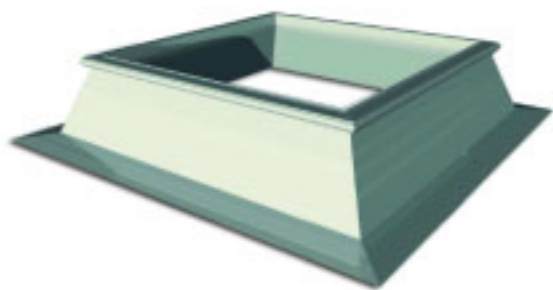
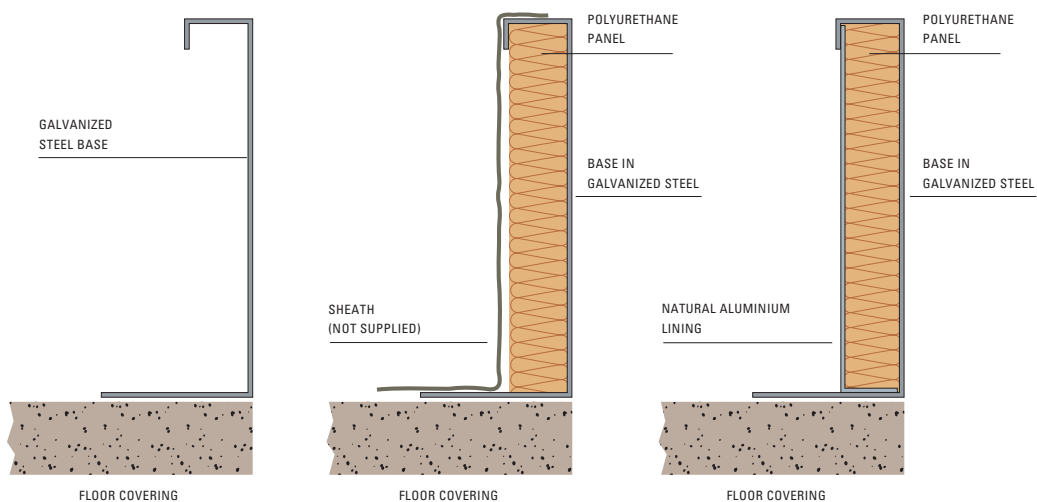
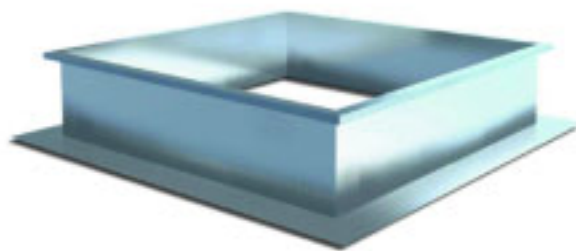
**AT A MAN'S PACE**

Square base: from 60cm to 250cm  
Rectangular base: from 60 x 90cm to 160 x 280cm



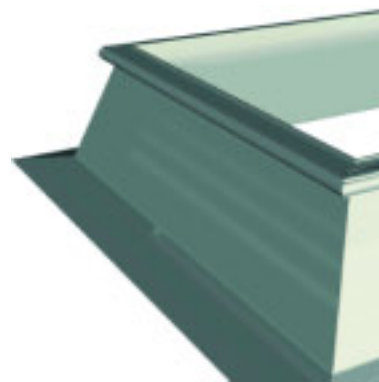
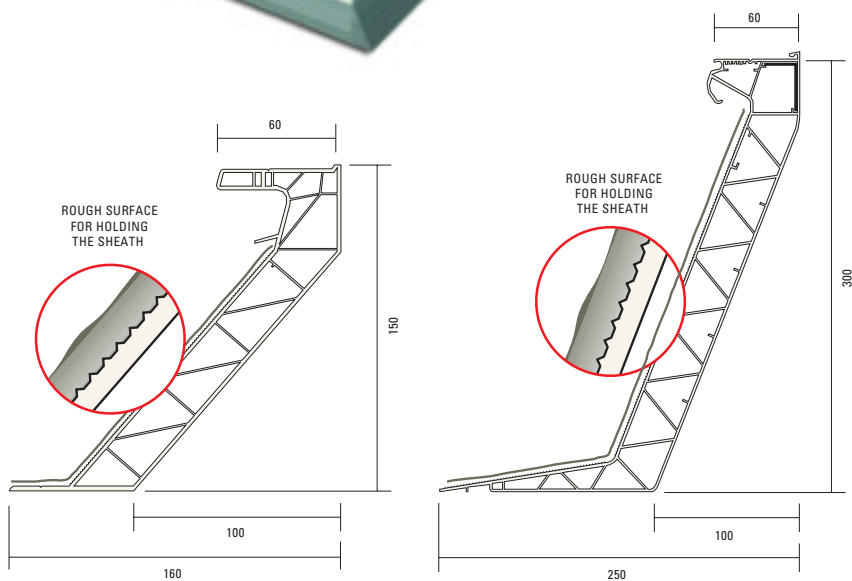
## GALVANIZED STEEL BASES

To guarantee suitable insulation, the bases are insulated with auto-extinguishing expanded polyurethane panels with a thickness of 3-4 cm. Assembly and positioning is fast and easy: each base comes provided with all metal anchoring devices and positioning instruction manual.



## PVC BASE

The shape of the base is reamed to allow better diffusion of light. The metallic bases, in galvanized sheet or other chosen metal, can have vertical or reamed sides and be opportunely shaped to guarantee a perfect anchoring and support base for the whole skylight.





## AN APPROPRIATE BASE FOR EACH SKYLIGHT

### BASES

(FOR SKYLIGHTS)

Different bases are available for each type of skylight, varying in shape and material.

The choice is aimed at the best installation and performance of the product.

Basso Lucernari has a warehouse with a wide choice of bases: in steel, PVC and with square or rectangular base.

### BASES

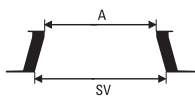
(FOR VENTILATION)

The metallic base for natural ventilation consists of extruded aluminium modular slats of 15 cm, 30 cm, and 45 cm height. The particular shape of the slats allows suitable ventilation, preventing the entrance of water via the base.



## BASE DIMENSIONS

### PVC



H:15cm  
SV 10+10

H:30cm  
SV 10+10

#### Square base:

A: from 60 cm to 200 cm

#### Square base:

A: from 60 cm to 200 cm

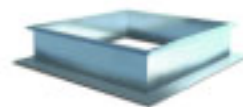
#### Rectangular base:

A: from 60x90 cm to 160x280 cm

#### Rectangular base:

A: from 60x90 cm to 160x280 cm

### GALVANIZED STEEL

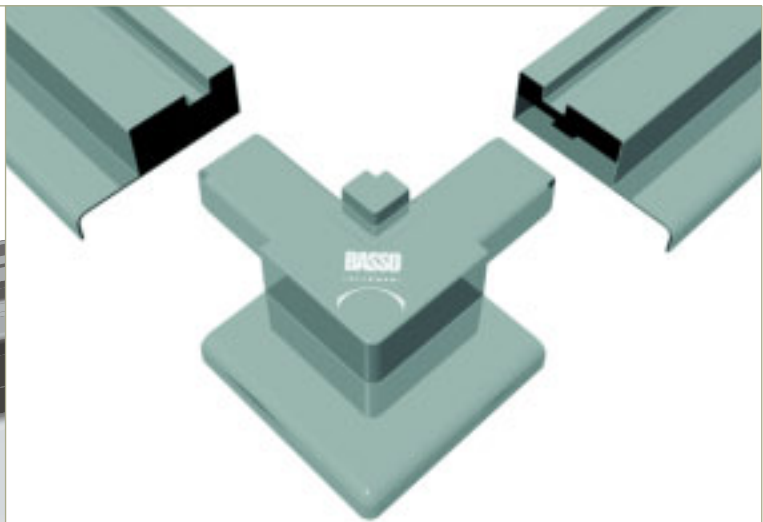
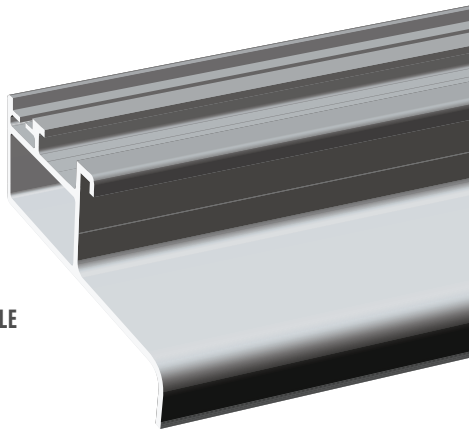


Galvanized sheet bases can be made to measure.

# OUR PROFILES

BASSO LUCERNARI have planned a wide range of profiles in natural or anodized aluminium, with designed sections which vary depending on the type of skylight.

PROFILE



## ANGULAR

To avoid welding the frames BASSO LUCERNARI have patented graft pressure-cast corners with the aim of avoiding caulking which can result from infiltrated water.

# EXTERNAL DIMENSIONS PANE THICKNESS

The table on the right shows the external dimensions of the skylight related to the thickness of the polycarbonate panes.

ADR  
ACL

PANE THICKNESS	EXTERNAL SUPPORT (meters)									
	0,6	0,8	1	1,2	1,3	1,5	1,7	2	2,5	2,75
6mm										
8mm										
10mm										
10mm REINFORCED										
16mm										
8+2mm										

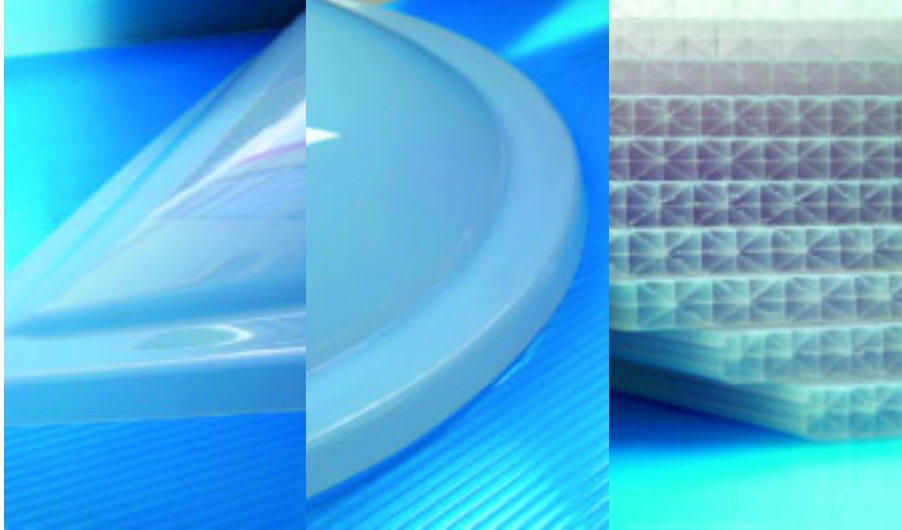
# COVERING MATERIALS

Auto-extinguishing alveolar polycarbonate panes Euro class B, external protection from UV rays.

PANE SECTIONS IN ALVEOLAR POLYCARBONATE			
Thickness 6mm 1.3kg/mq		Thickness 10mm Reinforced 3.1kg/mq	
Thickness 8mm 1.5kg/mq		Thickness 16mm 2.7kg/mq	
Thickness 10mm 1.7kg/mq		Thickness 8+2mm 3.9kg/mq	

Compact  
polycarbonate  
Alveolar  
polycarbonate





## MATERIAL TECHNICAL CHARACTERISTICS

### METHACRYLATE PMMA

Compact methacrylate (PMMA) flat panes guaranteed synthesis original, as the material is of the highest quality, exempt from recovery monomers. The optical and physical-mechanic properties typical of pure polymer are guaranteed to be unchangeable; normally exposed to the outside for ten years with total protection from UV rays, with the following technical characteristics.

TECHNICAL CHARACTERISTICS	REFERENCE REGULATION	METHACRYLATE PMMA
Apparent specific weight	DIN 53479	GR/cm <sup>3</sup> 1.19
Resistance to bending	ISO 178	N/mm <sup>2</sup> 105
Resistance to knocks with Charpy intaglio	ISO 180/1A	Kj/m <sup>2</sup> 1.6
Temperature of softening	ISO 306	°C 102
Coefficient of linear extension	VDE 0304/1	mm/m °C 0.07
Transmission of light Trans.+Trans.	DIN 5036	90%
Transmission of light Trans.+Opal	DIN 5036	73%
Transmission of light Opal+Opal	DIN 5036	62%
Reaction to fire	DIN 4102	Class B2

### COMPACT POLYCARBONATE PC

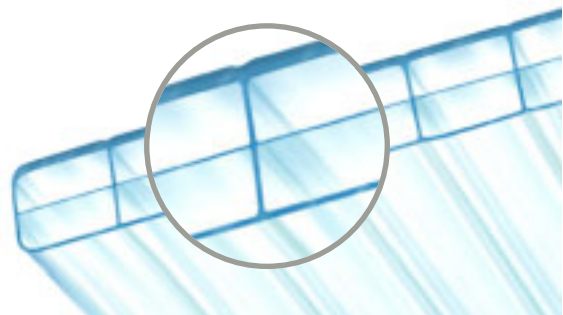
Compact polycarbonate (PC) flat panes are guaranteed auto-extinguishing with certification of proof "Class 1A" of reaction to fire and synthesis original as the material is of the highest quality and is exempt from recovery monomers. Anti-breaking and the optical and physical-mechanic properties typical of pure polymer are guaranteed to be unchangeable; normally exposed to the outside for ten years with total protection from UV rays, with the following technical characteristics.

TECHNICAL CHARACTERISTICS	REFERENCE REGULATION	METHACRYLATE PCC
Apparent specific weight	DIN 53479	GR/cm <sup>3</sup> 1.20
Resistance to bending	ISO 178	N/mm <sup>2</sup> 90
Resistance to knocks with Charpy intaglio	ISO 180/1A	Kj/m <sup>2</sup> 10
Temperature of softening	ISO 306	°C 145
Coefficient of linear extension	VDE 0304/1	mm/m °C 0.07
Transmission of light Trans.+Trans	DIN 5036	84%
Transmission of light Trans.+Opal	DIN 5036	67%
Transmission of light Opal+Opal	DIN 5036	56%
Reaction to fire	DIN 4102	Class B1

### REINFORCED ALVEOLAR POLYCARBONATE

Double chamber 10mm panes, which combine the resistance of the compact pane to the insulation properties of the alveolar pane. The higher external side has a reinforced thickness of 1.5 mm. and offers excellent protection against hail (resistance 11 times higher than that of normal alveolar polycarbonate).

TECHNICAL CHARACTERISTICS	
Thickness	DIN 53479
Ext. reinforcement	ISO 178
Weight	ISO 180/1A



## STAGES OF INSTALLATION

The sequence of photos shows the ascending moments of installation of skylights on the roofing of industrial warehouses: from mounting the frame to the roof to the final application of silicon to the skylights.



**Photo 1:** Lorry equipped with basket for safer and quicker access to the roofing.

**Photo 2:** Lorry equipped with tow and crane, with an arm of 27mt for raising the material.





## INSTALLATION

### A TEAM JOB FOR ACCURATE INSTALLATION

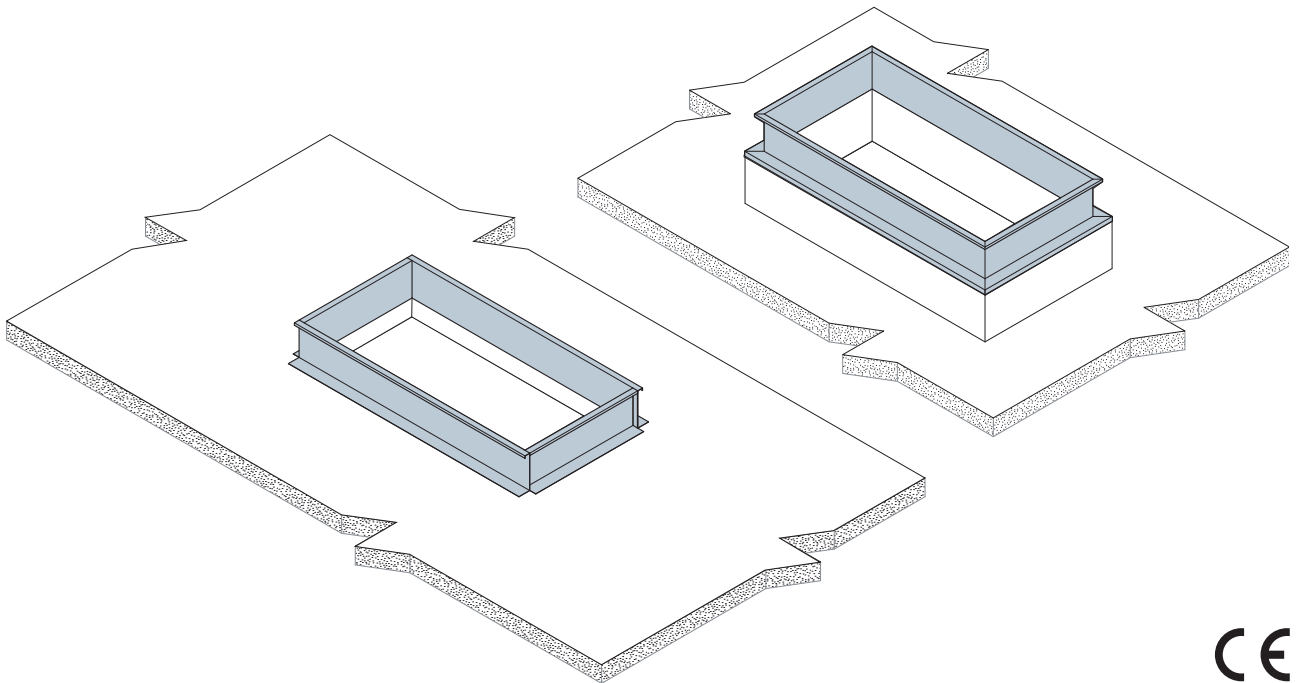
Basso Lucernari places a lot of attention on the most delicate stage of delivery: installation. They have various assembly teams in the company, well-prepared people who are able to carry out each stage of installation according to active regulations.

- INSTALLATION ON ROOF DECK
- INSTALLATION ON ROOFING WITH A "Y" BEAM
- INSTALLATION ON CURVED ROOFING
- INSTALLATION ON SLOPED SURFACE
- INSTALLATION ON THE ROOF TOP

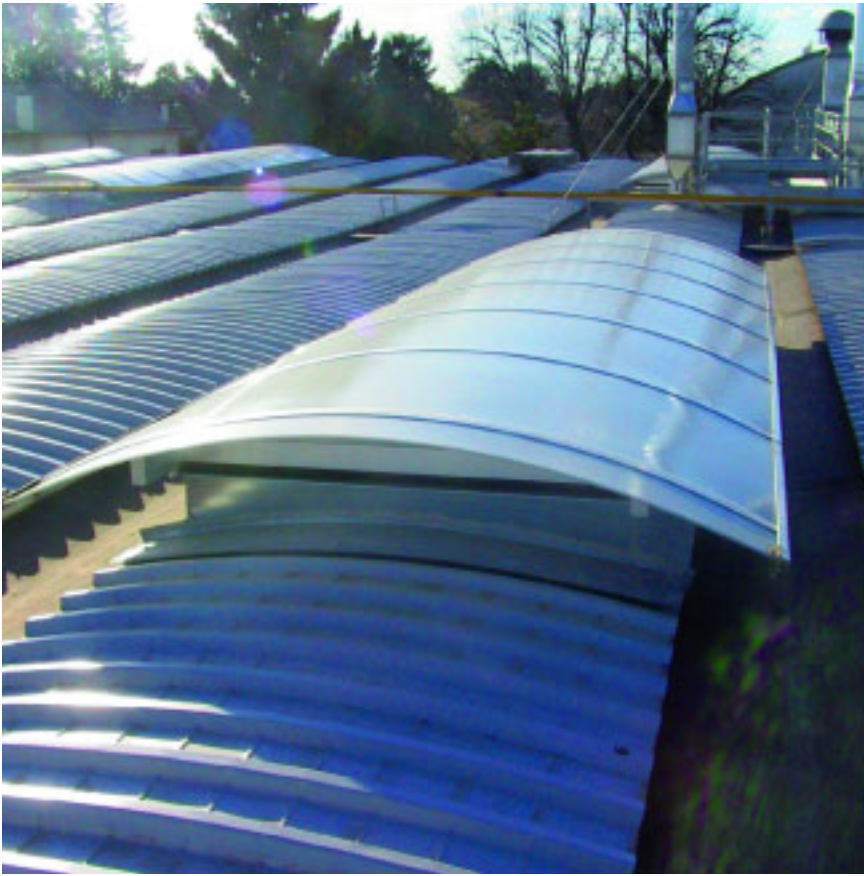


## INSTALLATION ON ROOF DECK

The base has an inferior edge for attachment to the roof deck, with vertical sides for the possible insertion of insulation.

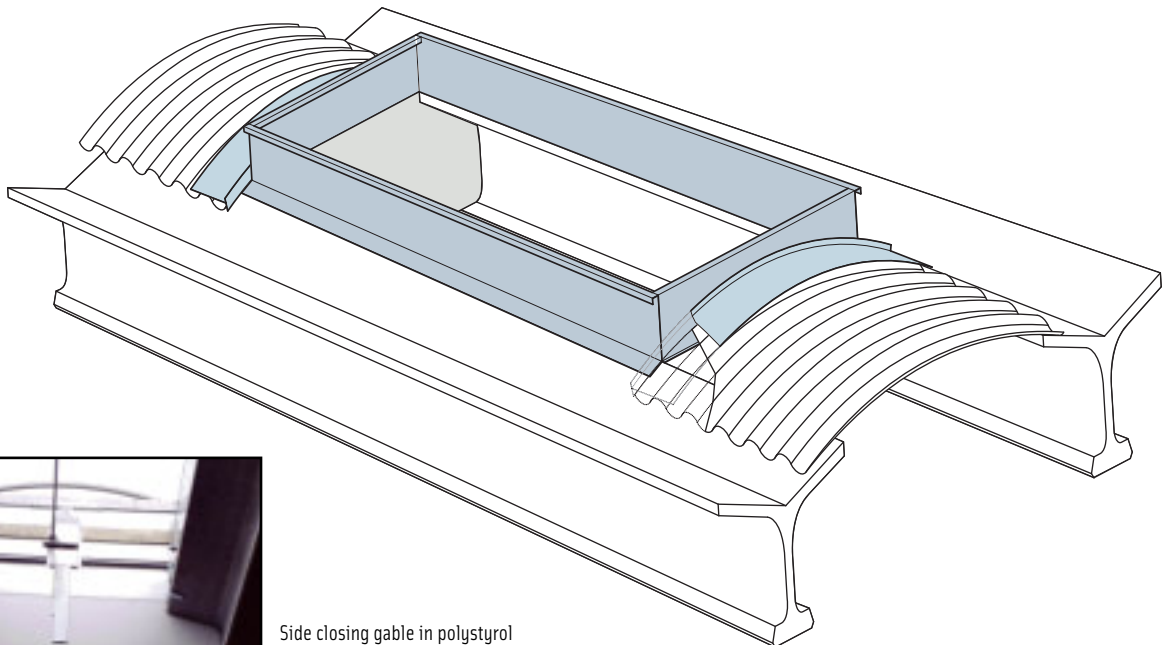
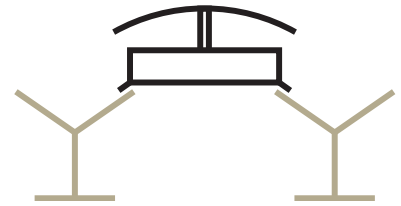


CE



## INSTALLATION ON ROOFING WITH A "Y" BEAM

A valley gutter is fixed and applied with silicon at the contact point between the base and the roofing mantle (to the sides of the base). The space between the false ceiling and the base is closed with a moulded panel in the form of a beam. The fixing of the base to the beam is carried out using steel brackets.

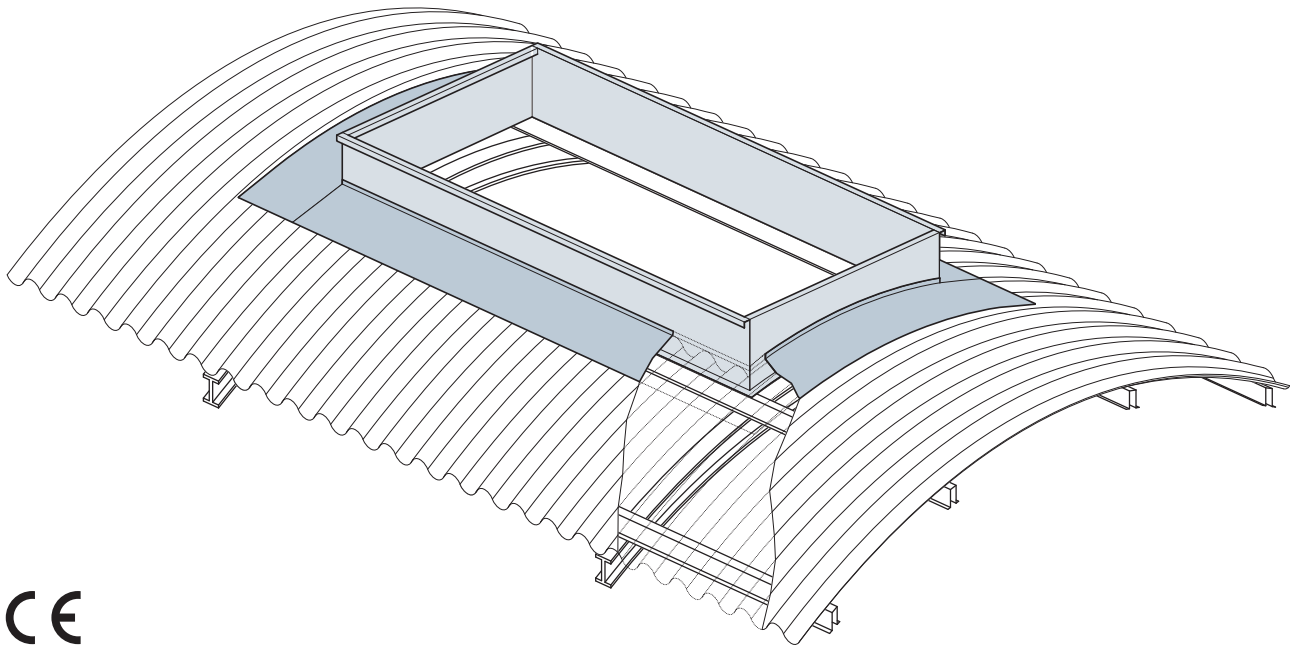


Side closing gable in polystyrol (standard), galvanised steel with white grey finishing, stainless steel, and aluminium.



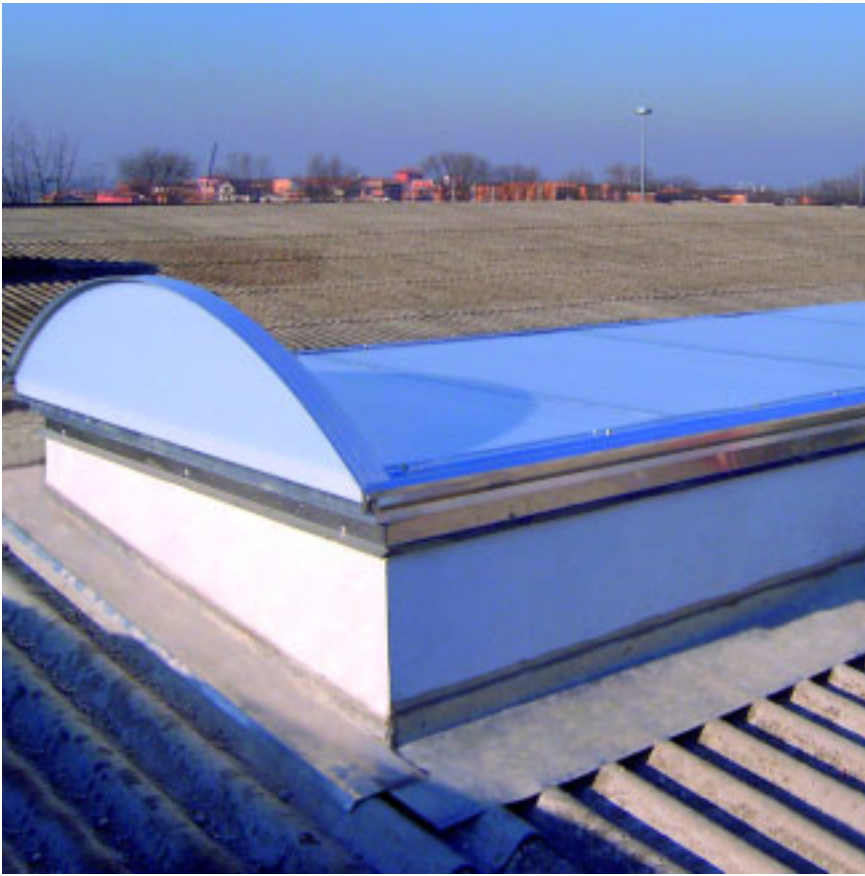
## INSTALLATION ON CURVED ROOFING

A galvanized steel valley gutter is fixed and applied with silicon at the contact point between the base and the roofing mantle of the building. The longer sides have an edge for the support and fixing of the base to the purlins.



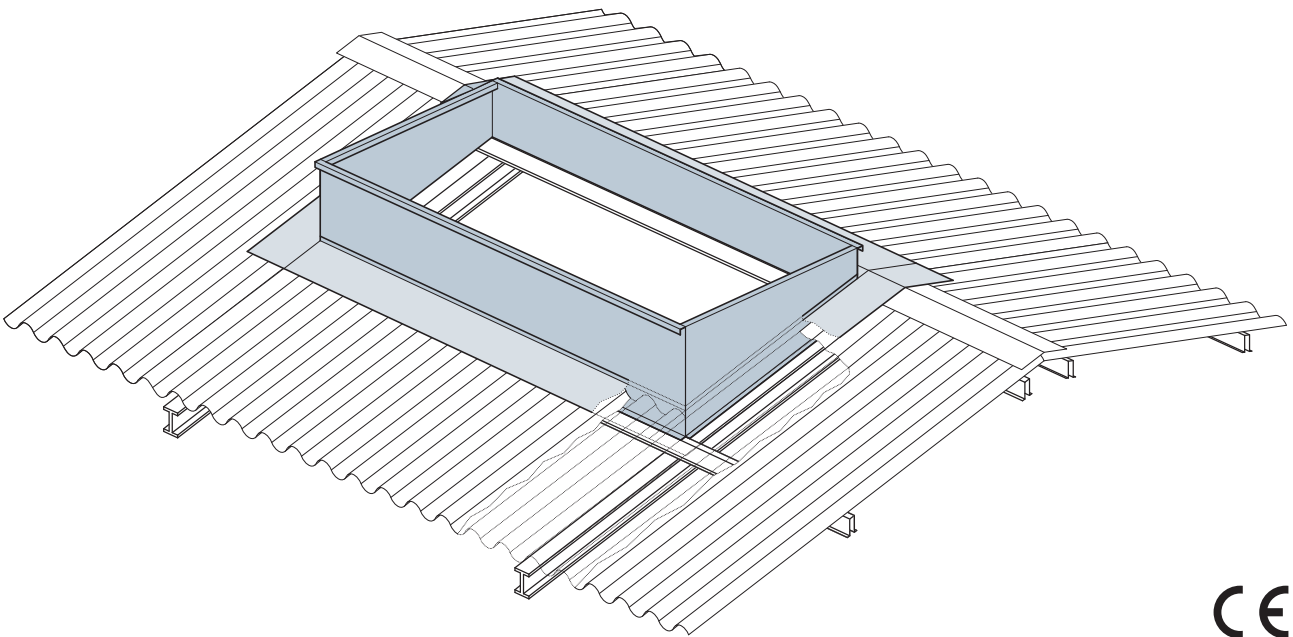
CE





## INSTALLATION ON SLOPED SURFACE

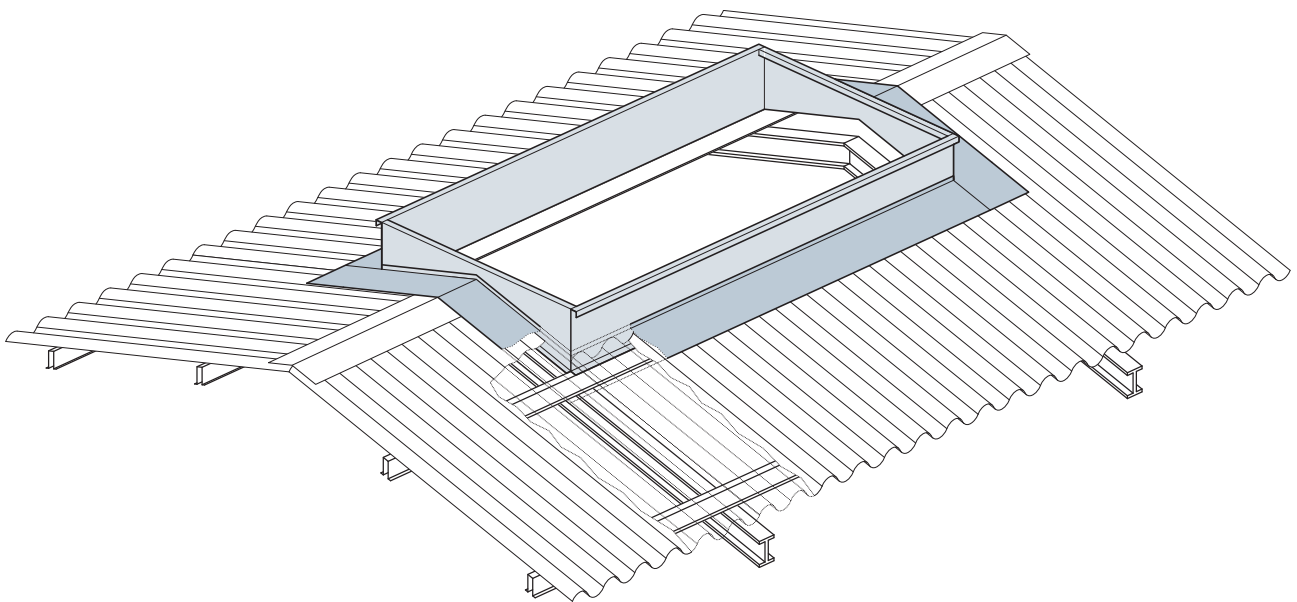
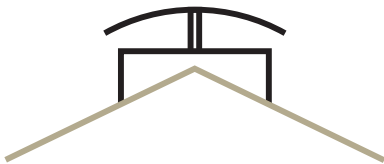
The base is made in counter slope and has a channel for the collection of water carried in the roofing.

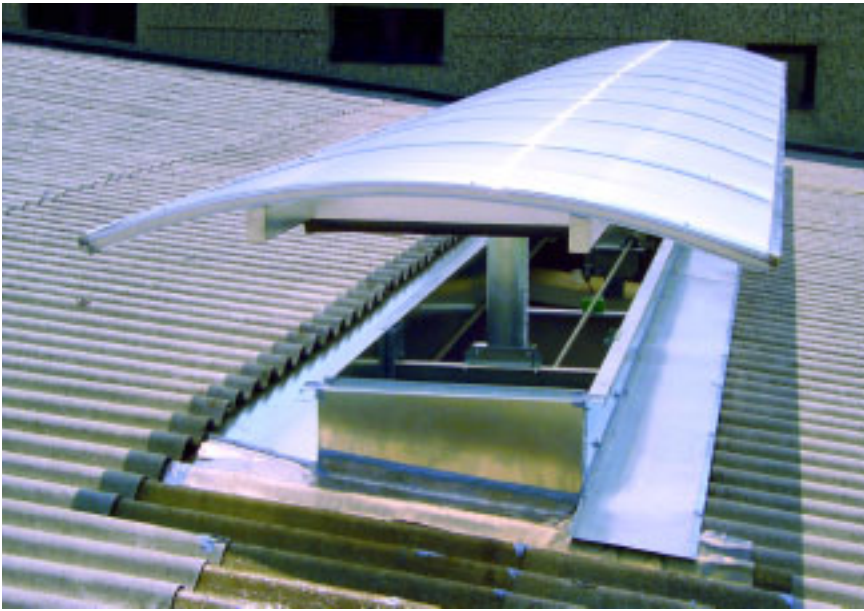


CE

## INSTALLATION ON THE ROOF TOP

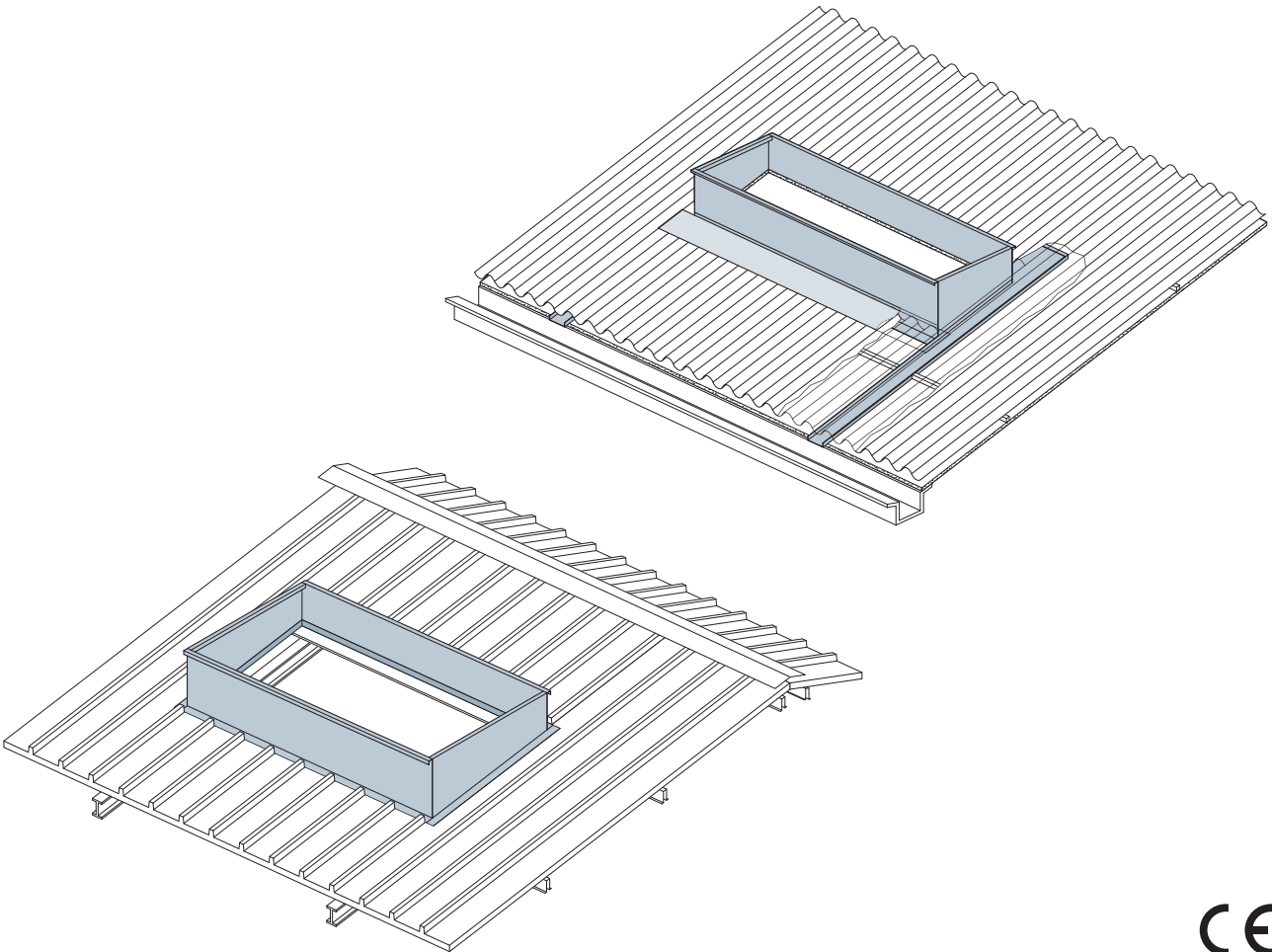
A galvanized steel valley gutter is fixed and applied with silicon at the contact point between the basement and the roofing mantel of the building along the whole perimeter. The longer sides have an edge for the support and fixing of the base to the purlins.





## INSTALLATION ON SLOPED SURFACE

The base is made in counter slope and has a channel for the collection of water carried to the gutter.

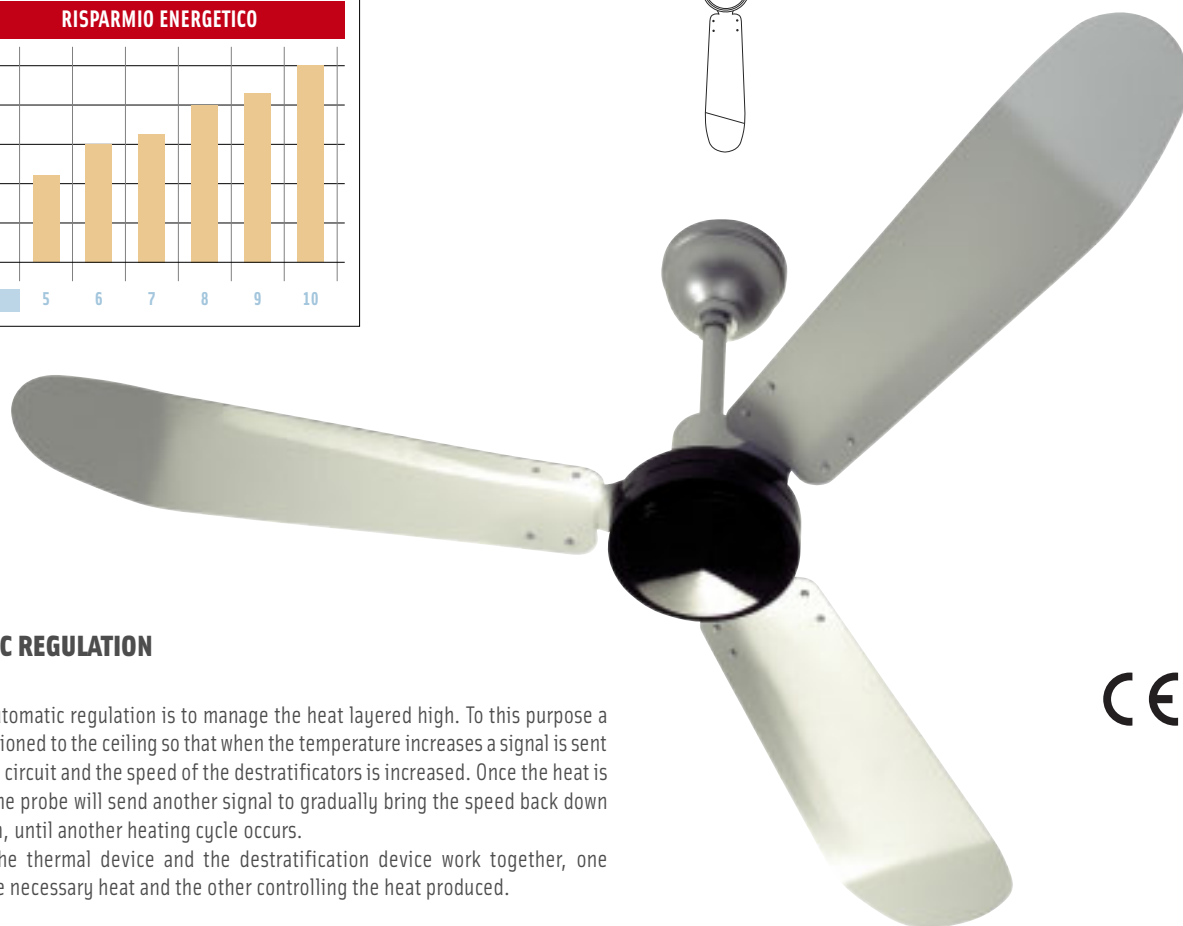
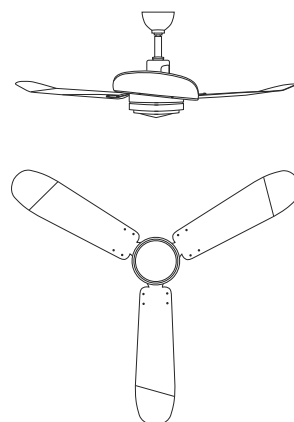
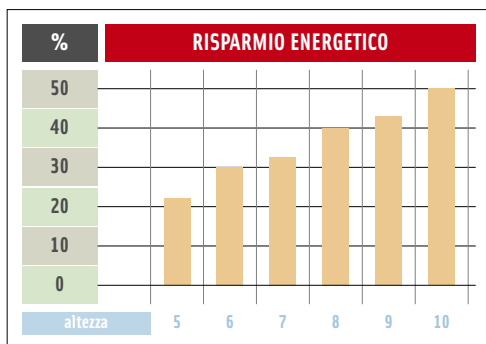


CE



## GUARANTEED ENERGY SAVING!

With the use of heat destratifiers energy saving quantifiable with a percentage varying between 25 and 50%.

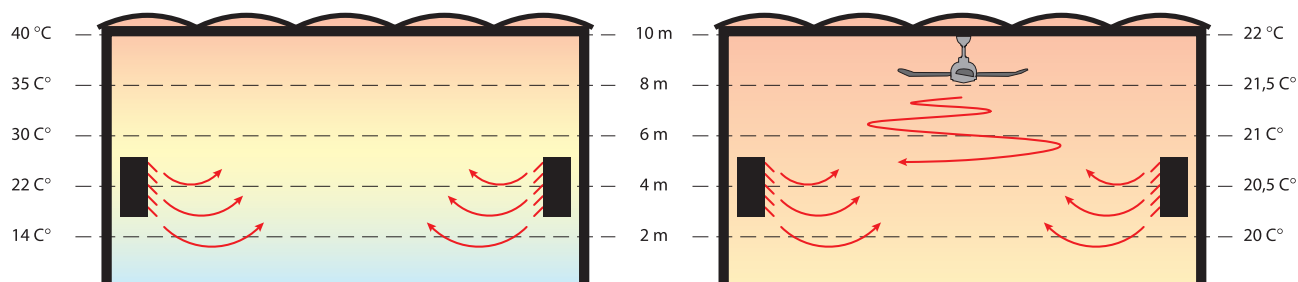


CE

## AUTOMATIC REGULATION

The aim of automatic regulation is to manage the heat layered high. To this purpose a probe is positioned to the ceiling so that when the temperature increases a signal is sent to the control circuit and the speed of the destratifiers is increased. Once the heat is back to low the probe will send another signal to gradually bring the speed back down to a minimum, until another heating cycle occurs.

In practice the thermal device and the destratification device work together, one producing the necessary heat and the other controlling the heat produced.



The device does not create annoying currents, rising of dust, noise or other secondary negative effects in the workplace. It is a device planned in Canada where the vital need to defend oneself from the cold (up to  $-40^{\circ}\text{C}$  below zero) forced technology to adapt to the valid working criteria and economical of management.



# TWISTER

BASSO LUCERNARI

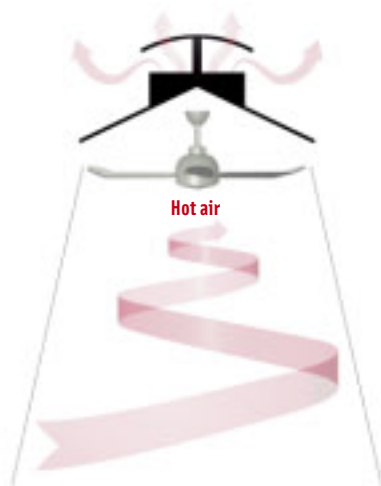
**ACCESSORY:**

## THE HEAT DESTRATIFICATOR WHICH HELPS THE EXTRACTION OF AIR

**The heat destratificator TWISTER is not a simple ventilator.**

When accompanied by any skylight produced by Basso Lucernari, it allows the extraction of air thanks to the particular blade shape and clockwise and anti-clockwise rotation.

An extremely up-to-date accessory which leads to a significant saving in energy, working in the winter, together with the thermal device and in the summer as an "extractor" of hot air.

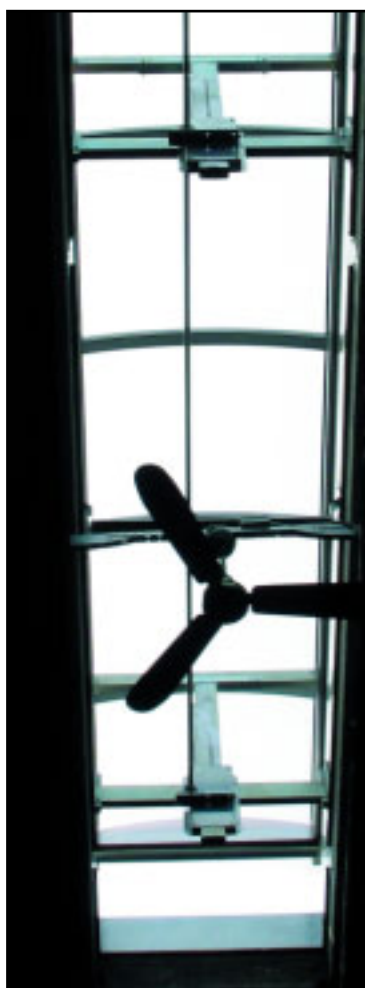


SUMMER



WINTER

The heat destratificator is a device constructed with the precise aim of re-circulating stagnant hot air on the ceiling bringing it back down to ground level until the temperature of the room is balanced in a vertical direction, in the winter. In the summer, however, the aim is to extract hot air increasing the ventilation capacity of the skylights. They should not be confused with heating or ventilation devices.



## ADVANTAGES

The advantages of installing the destratifiers are as follows:

**Helps the extraction of hot air in the summer increasing the ventilation capacity of the skylights.**

**Equalizing the temperature in a vertical direction to reduce the average heating temperature.**

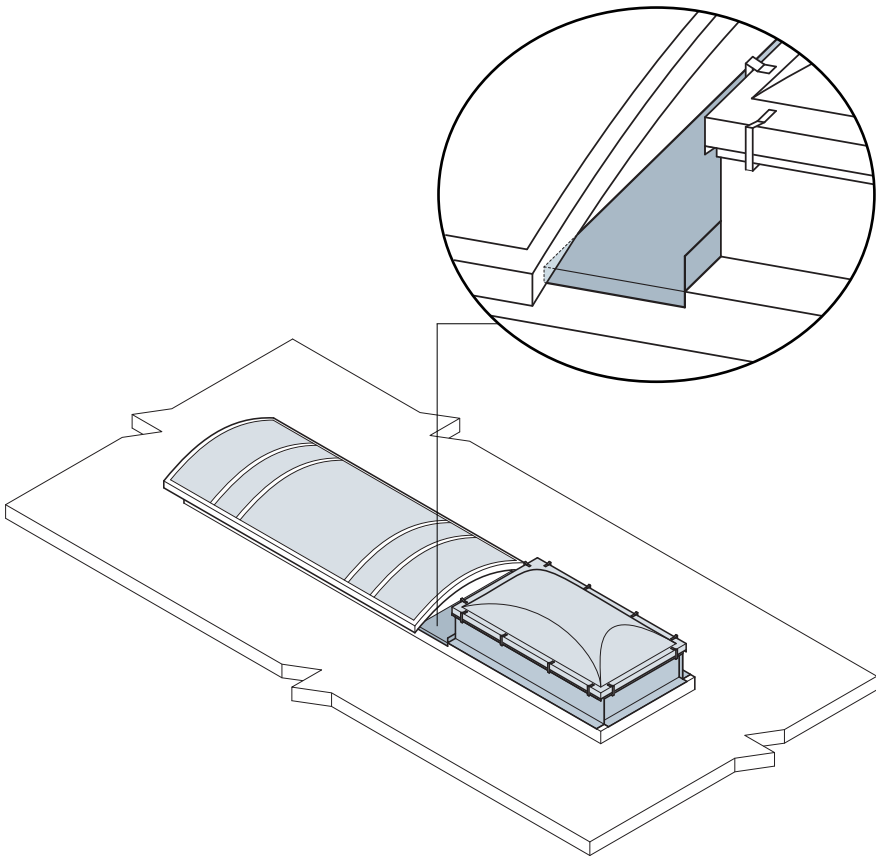
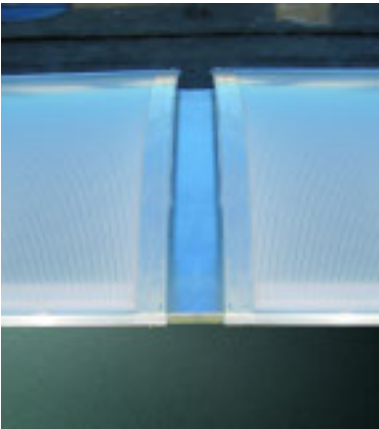
**The time taken for the device to function is reduced by about 50%.**

**Heat dispersion through the ceiling is reduced drastically by around 28%.**

TWISTER heat destratifiers are supplied by Basso Lucernari in the standard colour of dark green.

# DIVISION CHANNEL

Made from galvanized steel this is used to guarantee the separation of skylights of various types. This can be insulated on request.



# EXAMPLES OF INSTALLATION

## MIXED INSTALLATION MADE TO SUIT THE ENVIRONMENT

To guarantee the best ventilation and lighting for an environment, skylights of various types can be installed together and separated by a division channel. Some of the various types of mixed installation are shown here.







**BASSO**  
L U C E R N A R I

**Basso Franco Srl**

35014 Fontaniva (PD) Italy  
Via Ragazzi del '99 n°5  
Tel.: +39 049.594 09 35  
Fax: +39 049.594 22 66

[www.bassoskylights.com](http://www.bassoskylights.com)