

ALUCO SKYLIGHT

roof skylight systems



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Discover Daylight

Learn about the positive effects of natural daylight on humans and their surroundings.

Adding light to selected places in a room with skylights or windows is the easiest way to take advantage of natural sunlight. It reduces the operating costs of buildings and at the same time protects the natural environment by reducing fuel consumption and carbon dioxide emissions.

Research proves that daylight has a positive effect on our mood and health. Our brain responds better to natural light than to artificial light. In addition, rooms filled with sunlight create an atmosphere in which employees feel better and function much more efficiently.



**A comprehensive range
of roof skylights for
industry**

Aluco System Offering

Roof skylight systems

Aluco System has been on the market for over 20 years. We specialize in skylights, which we have installed over 700,000 m² to date

Our company was founded in 1997. Since then, we have installed over 700,000 m² of roof skylights all over Poland and abroad. This fact places Aluco System among the most experienced and recognized Polish brands in this sector. We specialize in roof skylight systems for industrial buildings. The

range of barrel vault, roof top and polygon skylights is extended by a comprehensive set of additional solutions, thanks to which our system has virtually no design or architectural limitations.



Aluco Skylight SL

A proven and economical system of barrel vault skylights



Aluco Skylight Therm

Skylights with thermally insulated profiles



Aluco Skylight TR

Polygon skylights for thermal modernization and renovation of historic buildings



Aluco Skylight SP

Roof top skylights



Aluco Skylight AIR

Ventilation vents



Aluco Skylight AIR TR

Ventilation vents for polygon skylights



Aluco Mega Delta

Equipment for industrial ventilation



Aluco Kalon

Universal ventilation bases



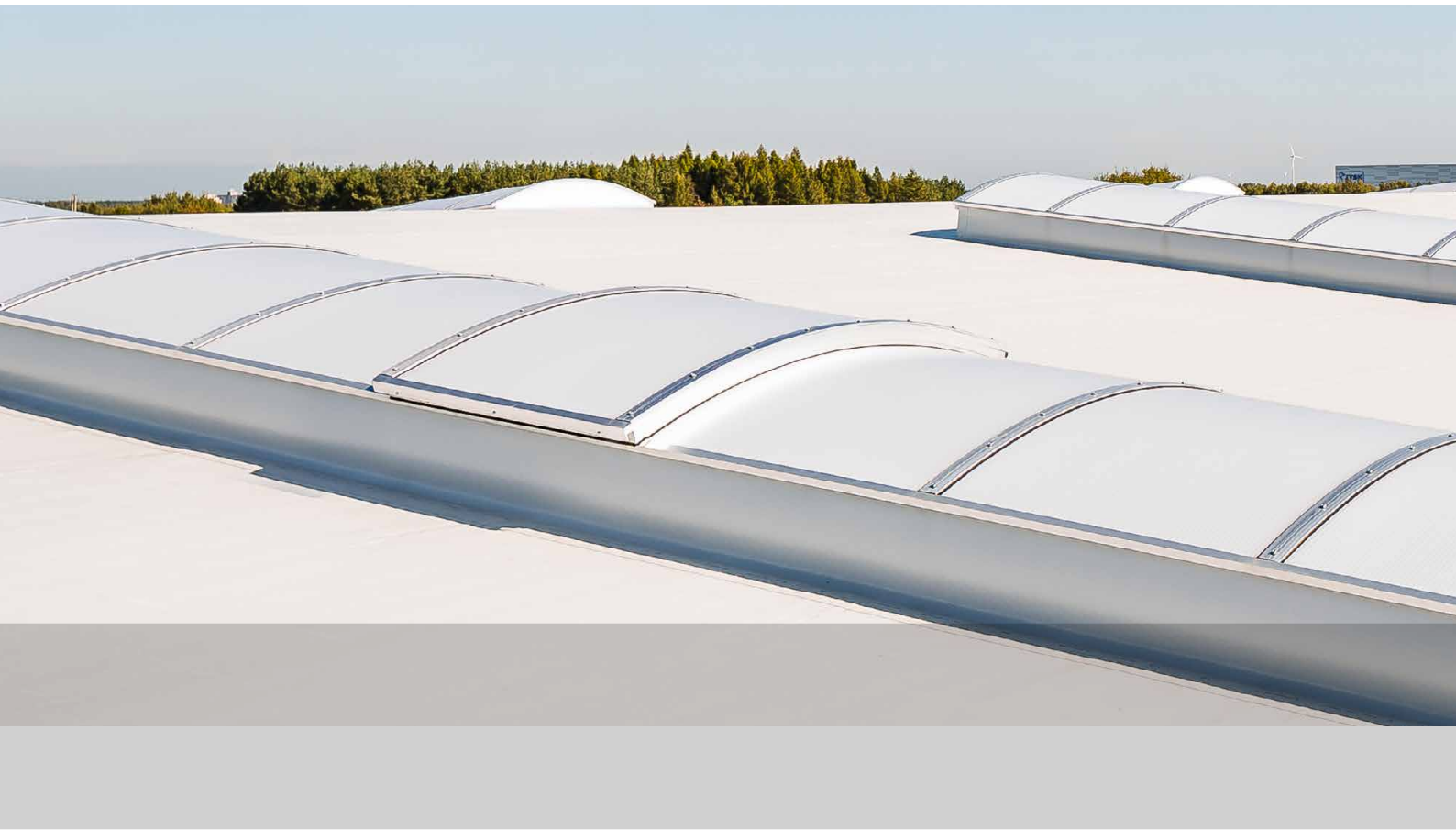
Aluco Safety Grid

Fall protection safety grids



Aerogel Lumira

The skylight range is extended by the version with aerogel. See the catalog: *Lumira Aerogel*



ALUCO SKYLIGHT SL

Barrel vault continuous skylights

ALUCO SKYLIGHT SL system is the flagship product of our company, which has been successfully used for over 20 years

ALUCO SKYLIGHT SL system is the most mature product in our company's portfolio. It is characterized by the optimal selection of aluminum profiles in terms of economy and strength. The consistent evolution of the system has led to obtaining a certificate of compliance with the latest European

standards. The primary goal of the SKYLIGHT SL system is to bring as much natural diffused daylight as possible to the interior of buildings.



**A proven and economical
skylight system**



**High-quality aluminum
and perfect light
distribution**





Skylights can be equipped with smoke vents and ventilation vents



Great flexibility in terms of adjusting the dimensions and thickness of the infill.



The span of the skylights
from 1500 mm to 6200 mm

Technical details and product's advantages

Basic parameters

- Continuous skylights made in accordance with the requirements of PN-EN14963: 2006, with CE marking.
- Base made of galvanized sheet of different height and thickness, depending on the assumed parameters of the continuous skylight.
- The shape of the base approximating the shape of a U section with the bottom shelf with the minimum width of 50mm.
- The base of the continuous skylight is adapted to the installation of thermal insulation of various thickness depending on the design assumptions.
- The structure of the continuous skylight is made of high-quality aluminum profiles ensuring effective water drainage.
- Filling the continuous skylights with panels or sets of chamber polycarbonate panels with the BRoof (t1) classification with a thickness of packages up to 45mm.

Safety

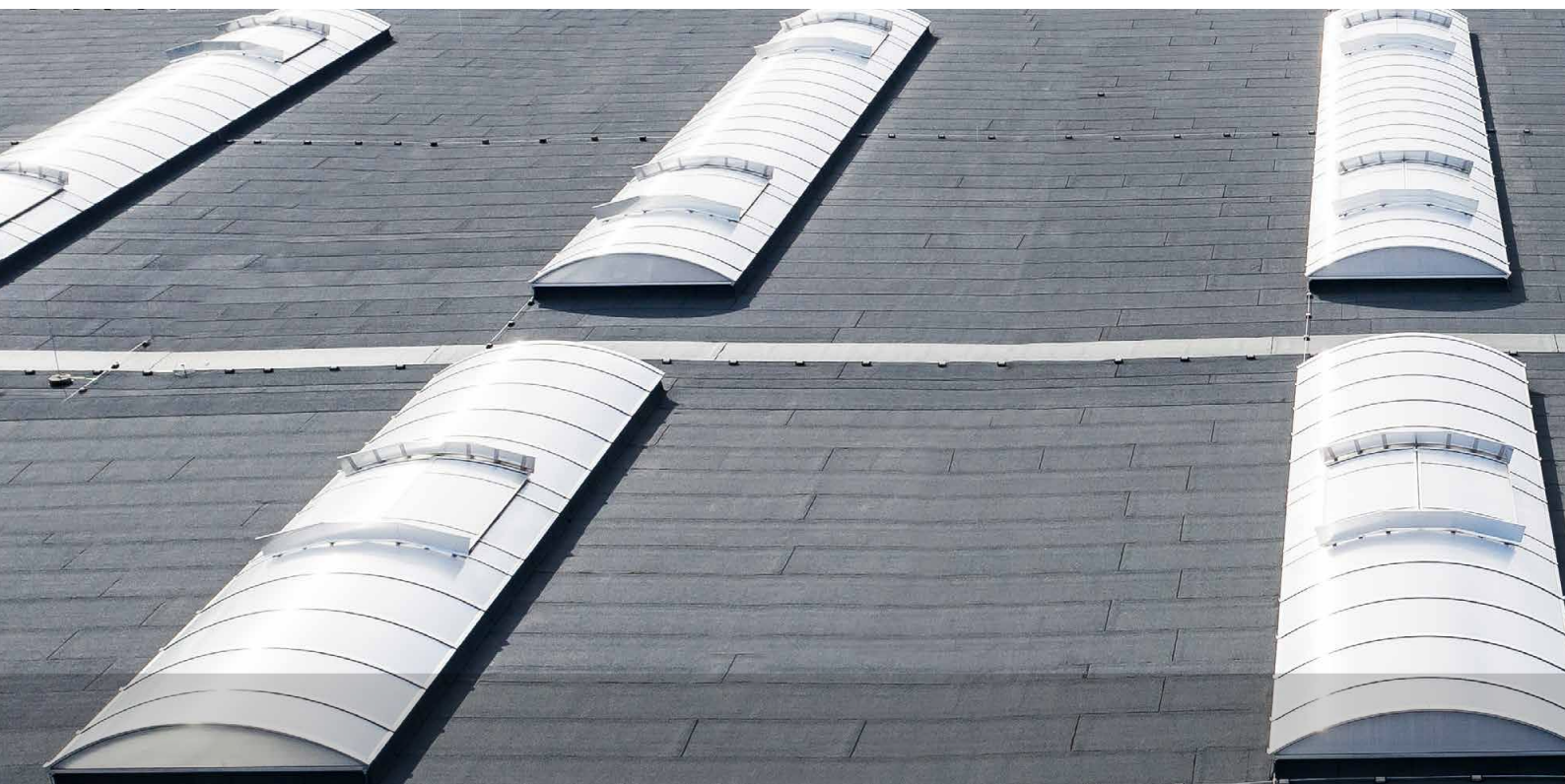
- The skylights have the highest safety classification against drop from height (SB 1200) - no need to use safety grid.
- Very good load resistance.
- Breaking load resistance: UL 1500.
- Compressive load resistance: DL 2500.

Options

- Continuous skylights can be equipped with ALUCO SAFETY GRID.
- Continuous skylights can be equipped with ventilation or smoke vents.

Application

- Industrial halls
- Sports halls
- Warehouse halls
- Shopping centers



ALUCO SKYLIGHT THERM

Skylights with thermal insulation

The change in the provisions of the ordinance on technical conditions to be met by buildings and their location, forced a change in design and material solutions aimed at ensuring better thermal insulation of buildings.

These changes will significantly contribute to increasing the comfort of users, reducing operating costs and the decreased pollution generated in the production of heating

The highest quality, efficiency and innovation in barrel vault and roof top skylights

energy. For this reason, we have designed a modern ALUCO SKYLIGHT THERM system that meets the above-mentioned requirements.



Skylights with excellent thermal insulation

The idea of this innovative solution is to eliminate thermal bridges in the joints of infill in barrel vault and flat skylights. Their characteristic feature is the infill with elements made of transparent or partially transparent plastics. For most skylights, as well as in the case of ALUCO SKYLIGHT THERM, polycarbonate panels are the basic infill. The differences between individual panels may include their thickness and their internal structure. Optionally, chamber polycarbonate panels with aerogel infill, which have excellent thermal insulation properties.

The structure of the skylights is made of system aluminum profiles with modern thermal spacers whose task is to eliminate thermal bridges. With the use of appropriate polycarbonate panels, it results in a very low heat transfer coefficient for the entire partition.





**Aesthetic value of
workmanship High
quality and durability**

Technical details and product's advantages

Thermal insulation

ALUCO SKYLIGHT THERM skylights display a very low heat transfer coefficient at the level of:

$$U < 0,5 \text{ W}/(\text{m}^2\text{K})$$

Basic parameters

- Continuous skylights made in accordance with the requirements of PN-EN14963: 2006, with CE marking.
- Base made of galvanized sheet of different height and thickness, depending on the assumed parameters of the continuous skylight.



No thermal bridges

- The shape of the base approximating the shape of a U section with the bottom shelf with minimum width of 50mm.
- The base of the continuous skylight is adapted to the installation of thermal insulation of various thickness depending on the design.
- The structure of the continuous skylight is made of high-quality aluminum profiles with integrated thermal insulators ensuring high thermal insulation, tightness and effective drainage of water to the outside.
- Filling the continuous skylights with panels or sets of chamber polycarbonate panels with the BROOF (t1) classification with a thickness of packages up to 50mm.
- Low weight compared to glass skylights while maintaining similar thermal parameters.

Safety

- The skylights have the highest safety classification against drop from height (SB 1200) - no need to use safety grid.
- Very good load resistance.
- Breaking load resistance: UL 2500.
- Compressive load resistance: DL 2500.

Options

- Continuous skylights can be equipped with ventilation or smoke vents.
- Continuous skylights can be equipped with ALUCO SAFETY GRID.
- Excellent light diffusion effect obtained by filling the skylights with polycarbonate sheets with aerogel.

Application


- Facilities with increased requirements as to thermal insulation
- Swimming pools (when using aerogel plates, the skylights are not susceptible to growing mold and fungi)
- Industrial halls
- Sports halls
- Public utility facilities
- Shopping centers





How much can you save?

In order to easily select skylights and determine the heat transfer coefficient, the Kielce University of Technology has developed a dedicated calculator. Correct determination of the heat transfer coefficient allows you to calculate the amount of saved energy.



Heat transfer coefficient U
for ALUCO SKYLIGHT THERM SL

Kielce University of Technology
Faculty of Environmental Engineering, Geomatics and Power Engineering
Department of Building Physics and Renewable Energy

Dimensions of skylight

A=	3300	mm	max 6500 mm
B=	30000	mm	

U* = 0,497 W/m²K

Calculate

Filler of skylight

d=	2x25mm+LUMIRA	mm
U _{wypehlenia} =	0,47	W/m ² K

Mounting base

h=	500	mm
d _{ocieplenia} =	100	mm
d _{otuliny} =	0	mm

designation: A - width (max 6500 mm), [mm]
 B - length
 h - height of mounting base, [mm]
 d_{isolation} - thickness of isolation, [mm]
 d_{lagging} - thickness of lagging, [mm]
 d - filler of skylight thickness, [mm]

*- according to the PN EN 10077, PN EN 6946

The calculation of the heat transfer coefficient in the calculator meets the requirements of the PN EN 10077 and PN EN 6946 standards. It takes into account the thermal properties of the frame and skylight infill, as well as linear thermal bridges. The user enters the dimensions of the skylight he plans to install and obtains the value of the heat transfer coefficient.

Solutions with aerogel introduce even higher thermal insulation parameters and many other advantages. See the catalog: Lumira Aerogel.



ALUCO SKYLIGHT THERM skylights are also available with aerogel



ALUCO SKYLIGHT TR THERM

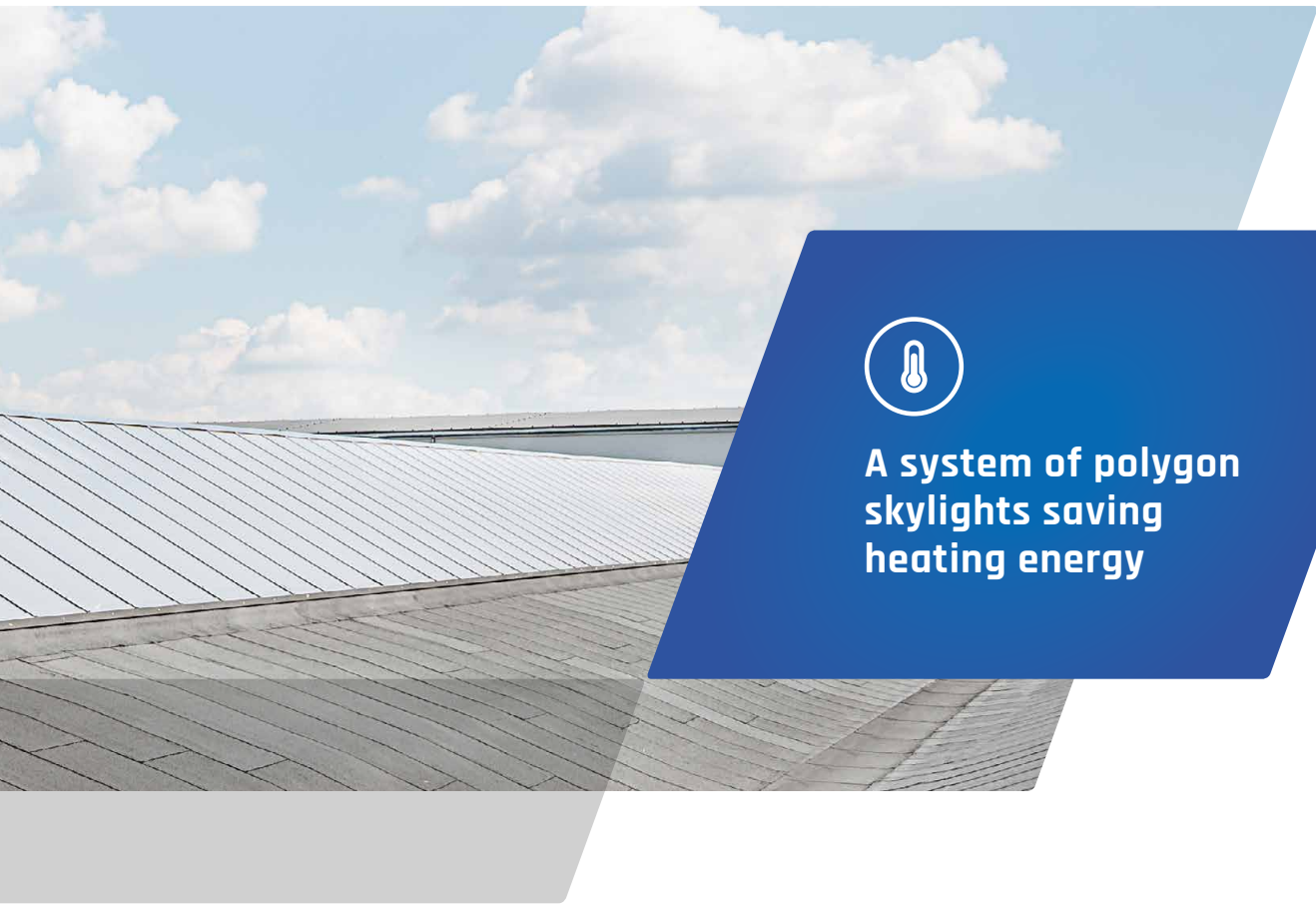
Polygon skylights

ALUCO SKYLIGHT TR THERM polygon skylight system was created in response to frequent questions from architects regarding modernized industrial facilities, where, due to their historic nature, it is not possible to change the architectural form of the building.

The system is characterized by the optimal selection of aluminum profiles in terms of economy and strength. It was designed

Polygon skylights are perfect for thermal modernization of historic industrial facilities

in the THERM profile system with thermal insulators. The product is distinguished by aesthetic value and quality of workmanship - only high-quality aluminum is used in the production process.



A system of polygon skylights saving heating energy





Example of ALUCO SKYLIGHT TR THERM system on the industrial building in Wrocław, Poland.

Technical details and product's advantages

Basic parameters

- Continuous skylights with a triangular cross-section are made in accordance with the requirements of PN-EN14963: 2006, with CE marking.
- Base made of galvanized sheet of different height and thickness, depending on the assumed parameters of the continuous skylight.
- The shape of the base approximating the shape of a U section with the bottom shelf with the minimum width of 50mm.
- The base of the continuous skylight is adapted to the installation of thermal insulation of various thickness depending on the design.
- The structure of the continuous skylight is made of high-quality aluminum profiles with integrated thermal insulators ensuring high thermal insulation, tightness and effective drainage of water to the outside.
- The infill of ALUCO SKYLIGHT TR HERM skylights can be standard chamber polycarbonate panels with the thickness of 10 mm to 50 mm and solid panels. With the use of a spacer made of polyester board of 1.1 mm, our skylights have the BRoof (t1) classification.
- Span of skylights ranging from 1000 mm to 4000 mm. When using a steel supporting structure up to 14 meters.
- Heat transfer coefficient:
 $U = 0.5 \text{ W}/(\text{m}^2\text{K})$

Safety

- The skylights have the highest safety classification against drop from a height (SB 1200) - no need to use safety grid.
- Breaking load resistance: UL 2500.
- Compressive load resistance: DL 2500.

Options

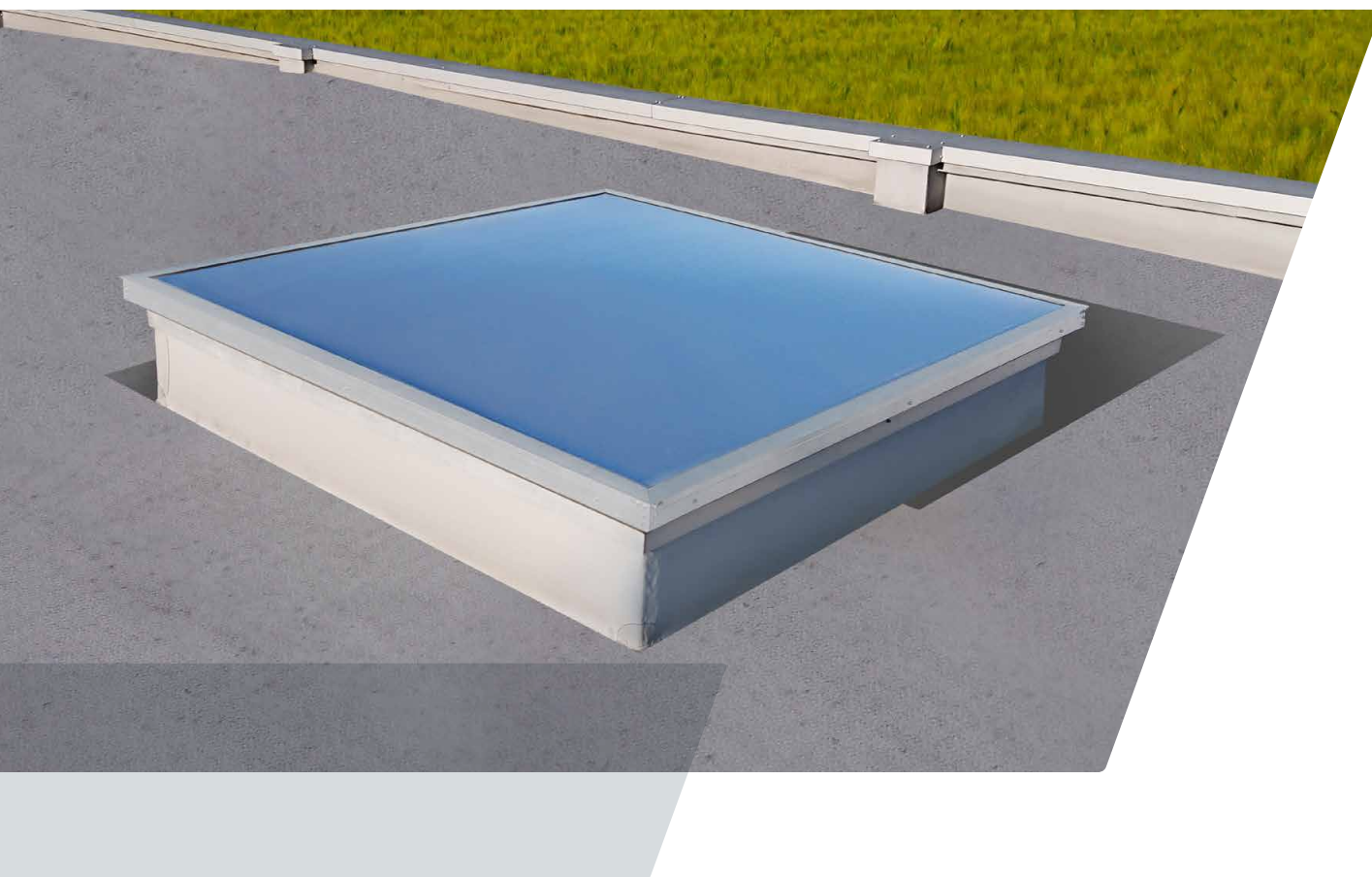
- ALUCO SKYLIGHT TR THERM continuous skylight system can be equipped with:
 - ventilation vents, BRoof class (t1),
 - smoke vents,
 - photovoltaic panels,
 - fall protection ALUCO SAFETY GRID.

Advantages of the system

- Natural and diffused light - no light reflections when filled with an opal polycarbonate panel or with an aerogel infill.
- Aesthetic value of workmanship.
- Ease and speed of assembly.
- Relatively low price compared to glass skylights.
- Very good load resistance.
- Great flexibility in terms of dimensions.

Application

- Modernized industrial halls, where the original shape of skylights is to be preserved
- Sports halls
- Public utility facilities
- Shopping centers
- Market halls
- Roofing of stadiums
- Roofing of fairgrounds, car parks, sheds, etc.



ALUCO SKYLIGHT SP

Roof top skylights

ALUCO SKYLIGHT SP roof top skylights allow natural light to illuminate a selected area in a room. They are especially useful in spacious rooms, where their use is often the only way to fill the building with daylight.

Roof top skylights have an aluminum structure and their shape can be square or rectangular. From the outside of the base, they are insulated with mineral wool. The skylight is filled with a polycarbonate chamber panel of any color

and thickness. The skylights are characterized by high resistance to compressive load (up to DL 4200) and breaking load (up to UL 2500). ALUCO SKYLIGHT SP skylights are made in accordance with the requirements of PN-EN 1873, with CE marking.

Application

- Large-format facilities
- Production halls
- Warehouse halls
- Top storeys of multi-storey buildings
- Public utility facilities





ALUCO SKYLIGHT AIR

*Vents for daily ventilation
dedicated to barrel vault skylights*

ALUCO SKYLIGHT AIR ventilation vent system is an extension of the ALUCO SKYLIGHT SL system with a ventilation function. Barrel vault continuous skylights with a ventilation function are used wherever, in addition to lighting, it is necessary to ensure proper exchange of used air with fresh air.

Ventilation vents, which can be equipped with mechanical or electric drive mechanisms, are installed in the continuous skylight. In the case of electric mechanisms, it is possible to use additional automation systems that control the opening and closing of the vents.

INDUSTRIAL VENTILATION

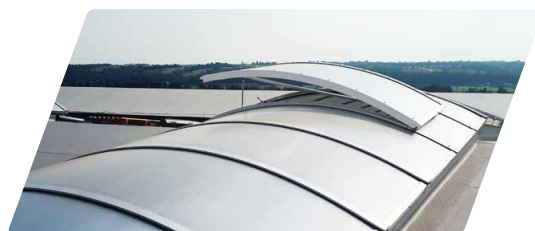
The automatic control systems enable the control of the vents in response to weather conditions, rainfall, wind as well as the temperature inside the rooms.

The control can be carried out for individual vents as well as for sections of several vents simultaneously.

Aluco System offers ventilation vents with dimensions from 1000mm x 1000mm to 2500mm x 2500mm, in a single or double leaf version.

The vents are activated by electric actuators with a spindle extension of up to 750mm.

The vents can be equipped with fall protection grids, limit switches with notification of the vent leaf position, or bird and insect guards.



**Perfect for facilities
that emit large
amounts of heat**



ALUCO SKYLIGHT AIR TR

*Vents for daily ventilation
dedicated to polygon skylights*

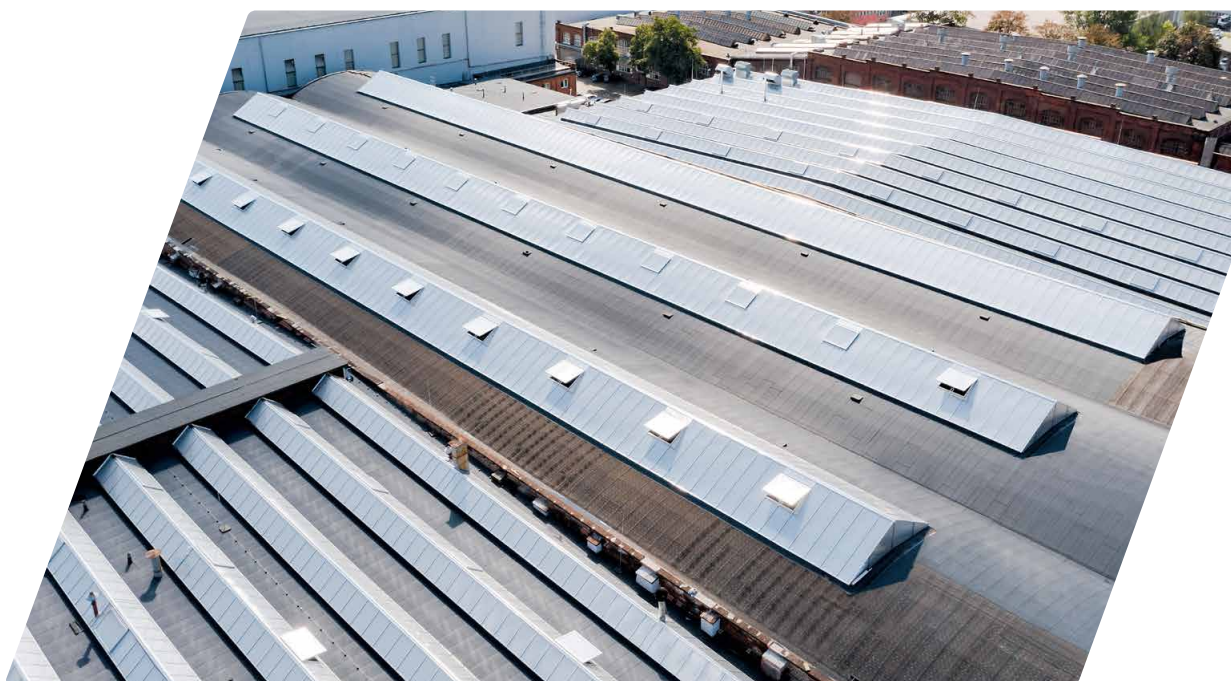
ALUCO SKYLIGHT AIR TR ventilation vent system is an extension of the ALUCO SKYLIGHT TR THERM system with a ventilation function. Polygon skylights with a ventilation function are used wherever, in addition to lighting, it is necessary to ensure proper exchange of used air with fresh air.

Ventilation vents, which can be equipped with electric or pneumatic drive mechanisms, are installed in the continuous skylight.

Dimensions of the vents from 1.0m x 1.0m to 2.0m x 3.0m.

In the case of larger dimensions of the vents, an opening system using TANDEM actuators is provided. The ventilation system can be equipped with an automation system that controls the vents operation.

INDUSTRIAL VENTILATION





ALUCO MEGA DELTA

A device for industrial ventilation

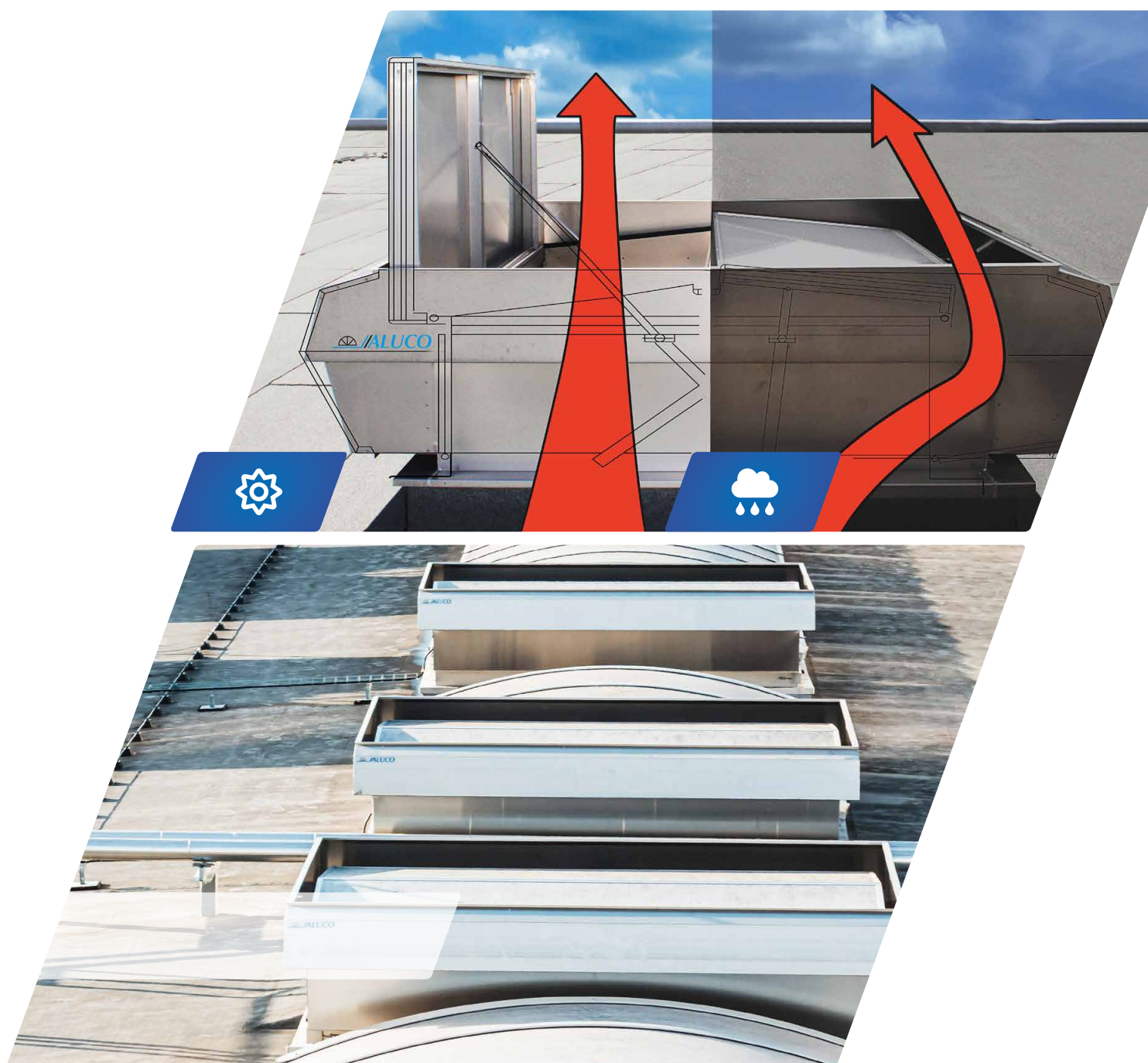
Universal ALUCO MEGA DELTA fan naturally and economically blows warm air through two independently working pairs of double vents. Rainproof ventilation is provided by pneumatic or electric side dampers. The upper blades of the device are controlled by pneumatic or electric actuators with locks at the ends and a remote unlocking system.

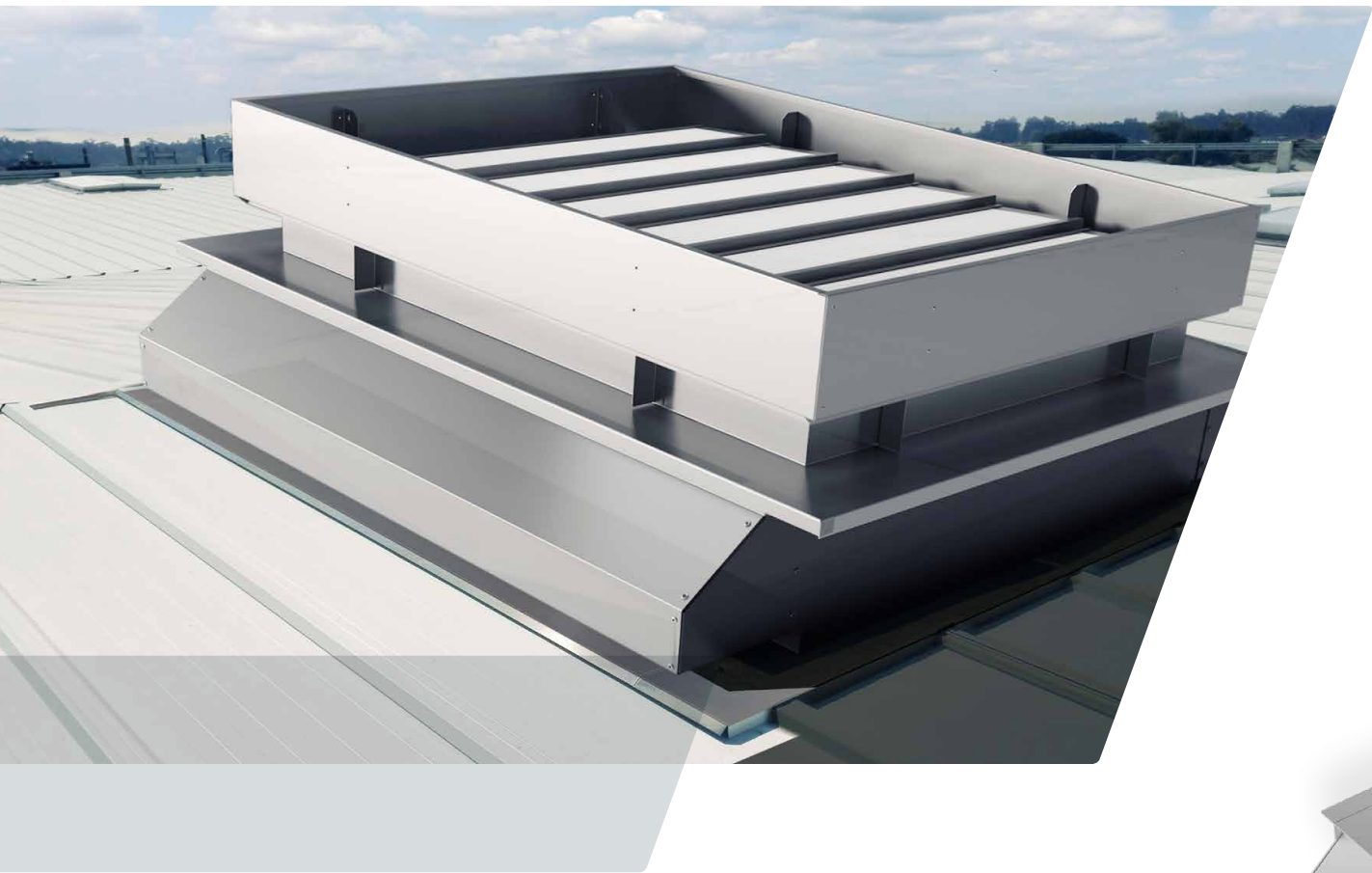
An automatic heat release mechanism, independent of other control systems, is integrated to open the upper blades also in the event of a fire, classifying the device as a smoke exhaust vent. The aerodynamically

molded upper blades and the inner side dampers include longitudinal sealing.

ALUCO MEGA DELTA systems can be produced in all lengths and widths up to 1900mm x 3000mm. They can be equipped with additional drawers (insect guards) protecting the building against insects from entering its interior.

INDUSTRIAL VENTILATION





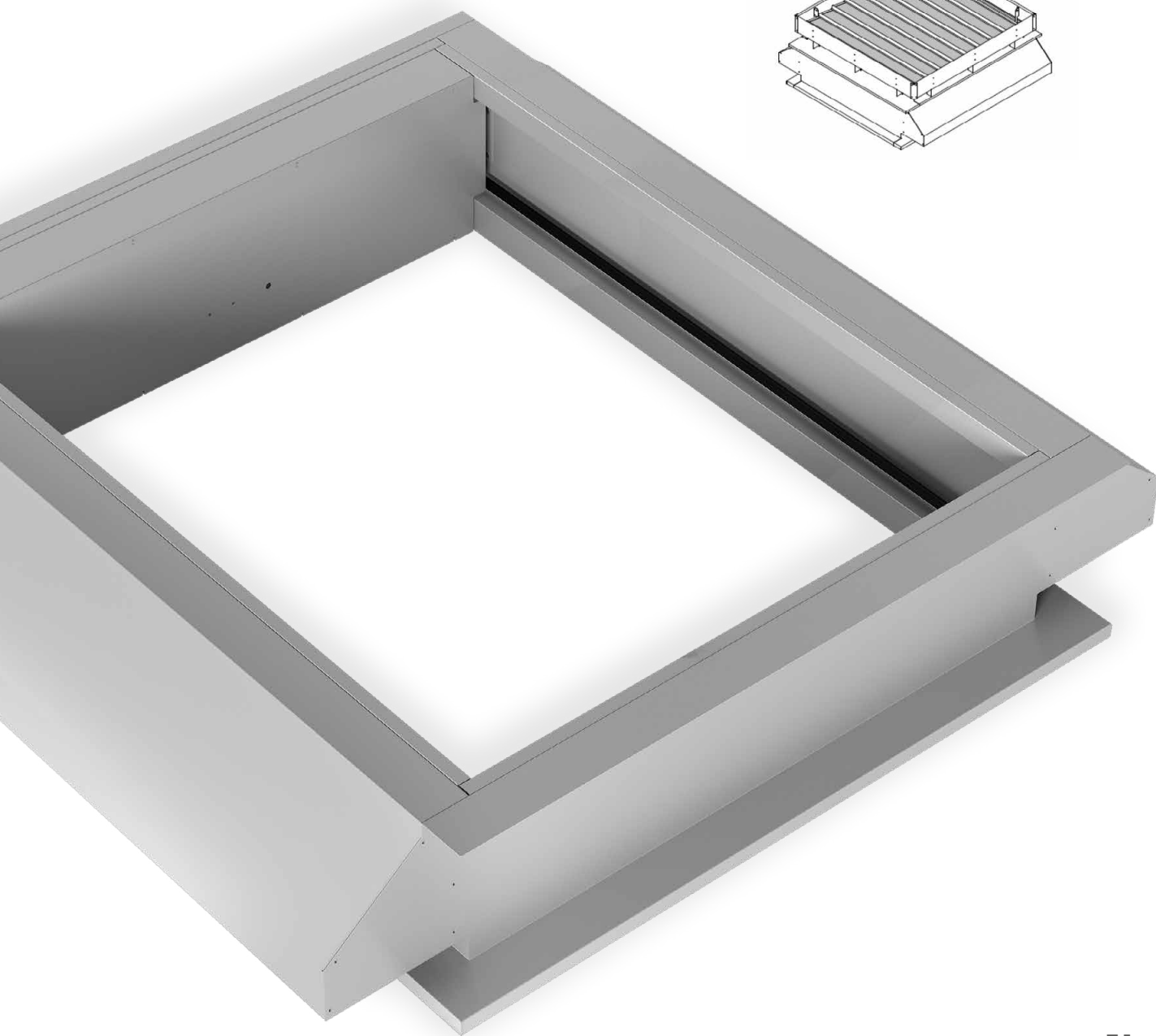
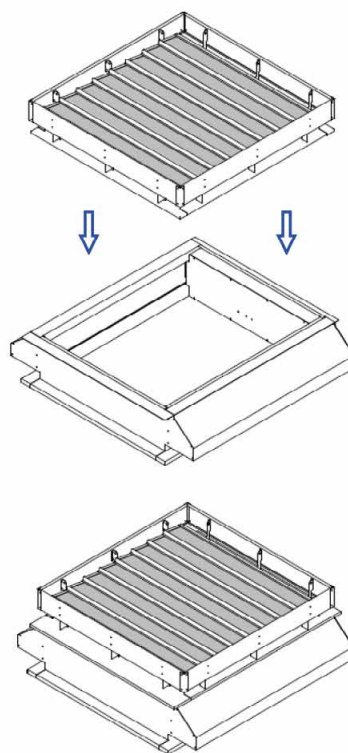
ALUCO KALON

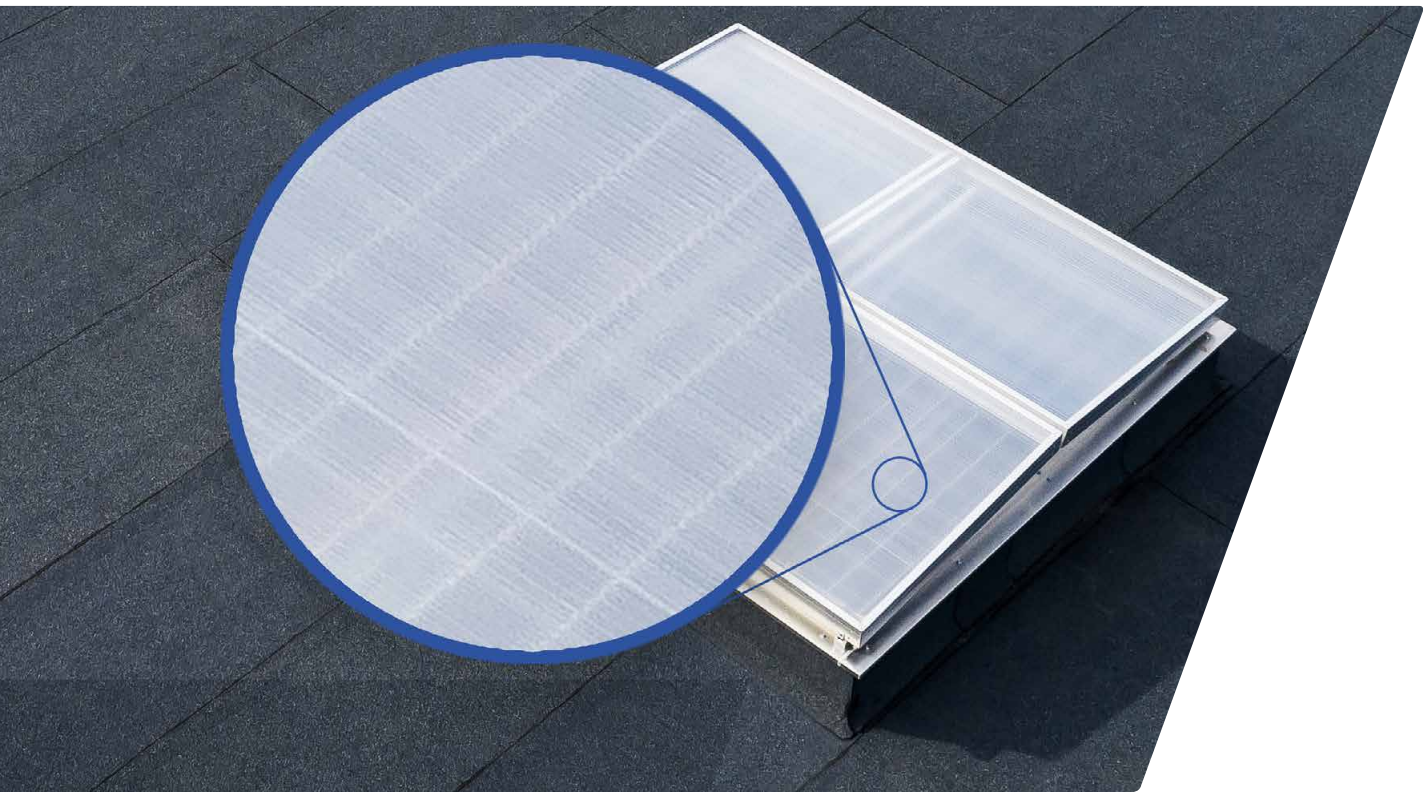
ALUCO KALON is a natural ventilation base that can be installed under any smoke and heat ventilation device or any skylight. It enables daily ventilation, regardless of the weather conditions outside, with the use of internal side blades. Internal blades are controlled by an independent pneumatic or electric system. ALUCO KALON base can be combined with all products Aluco System offers. The product has several optional configuration versions: non-

Universal and economical base for natural ventilation

standard dimensions, powder coated elements in any color from the RAL palette, insect guard, insulated version.

INDUSTRIAL VENTILATION





ALUCO SAFETY GRID

Fall protection safety grids are used in roofs and are used to secure the openings in the skylights against a person falling from height

ALUCO SAFETY GRIDS have been designed to improve the safety of people staying and working on roofs. The grid system has been tested for compliance with the PN-EN 1873 and PN-EN14963 standards and obtained the SB 1200 classification. This allows the product to be marked with the CE mark.

The grids are designed for installation in smoke vents, roof top skylights and continuous skylights up to a maximum width of 3500mm. The grids can be combined into modules whose length is unlimited. The dimensions of the „openings“ 150mm x 150mm mean that the use of ALUCO SAFETY GRIDS under smoke vents does not reduce

FALL PROTECTION SAFETY

their active surface for smoke extraction, unlike grids with smaller openings.

The grids have been designed so that after mounting to the skylight bases, they also function as braces without any additional elements.

Additionally, ALUCO SAFETY GRID can be used as anti-burglary device, protecting against the intrusion of unauthorized persons into the interior of the building through smoke vents and skylights.





Discover
Daylight

About us

We help our customers take full advantage of natural light

At Aluco System, we have been helping our customers to make the most of the benefits of natural daylight for over 20 years.

Our company's product range includes:

- roof skylight systems,
- natural smoke exhaust systems,
- polycarbonate facades,
- aluminium joinery,
- industrial ventilation,
- Lumira aerogel ,
- thermal modernization.

Our priorities are technological development, energy efficiency and top materials. Our solutions have been used in dozens of facilities throughout Poland, both in industrial buildings and architectural projects with a bold concept. We are a 100% Polish capital company.

We perform orders all over the European Union and beyond.

Selected customers: Fiat Chrysler Automobiles, Skanska, Volkswagen, LOT, PKP CARGO, MAN, Eiffage, Budimex, Castorama, Cersanit, MediaMarkt, Rockwool, Echo Investment, Targi Kielce, DS Smith, Cerrad, Forte, Browary Tyskie.



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