



LAMILUX CONTINUOUS ROOFLIGHT SYSTEMS

CONTINUOUS DAYLIGHT

CUSTOM-FIT DAYLIGHT AND SAFETY FOR INDUSTRY

"Anyone wishing to achieve top performance in a production hall or warehouse requires an optimal environment and suitable conditions. With this goal in mind, we have developed continuous rooflights that can be customised for every application situation. As systems completely free of thermal bridges, they bring lots of daylight and healthy fresh air into a hall as well as safety in the event of a fire. Getting such optimum performance out of the large roof surfaces is precisely our trade".

Sören Winkler Sales Manager Daylight Systems



The LAMILUX CI Philosophy

Customer value is the reason we exist – and the focus of our activities. This requires harmony, identity and a balance between customer value and company strategy.

The principles that guide our company's actions and customer relations are set out in LAMILUX's company philosophy:

Customized Intelligence – serving customers is our first priority:

This requires outstanding performance and leadership in all areas relevant to customers, particularly in the role of:

- A leader in quality – optimum benefit for customers
- A leader in innovation – at the cutting edge of technology
- A leader in service – fast, uncomplicated, reliable and friendly
- A leader in expertise – optimum sales and technical advisory services
- A leader in solving problems – customised, made-to-order solutions



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LAMILUX Continuous Rooflights

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LAMILUX CONTINUOUS ROOFLIGHTS

NEW First continuous rooflight on the market with tested airtightness up to class A according to ETA 09/0347

Every employee and manager is grateful for an abundant intake of daylight in industrial halls or warehouses. For buildings with flat roofs, large skylight solutions such as continuous rooflights are particularly well-suited. They direct healthy daylight into the interior of the building, lower energy costs and serve both as natural ventilation as well as smoke and heat exhaust ventilation (SHEV).

At LAMILUX, we have decades of experience in the construction and

installation of continuous rooflights. Our products also have excellent thermal insulation and are structurally safe even under heavy wind and snow loads. The overall system consists of numerous coordinated individual components. This results in innovative and customised skylight solutions - available in three variants: the arched Continuous Rooflight B, the even more energy-efficient Continuous Rooflight B Passivhaus variant and the saddleback roof-shaped Continuous Rooflight S.



LAMILUX Continuous Rooflight B
on the industrial hall of Bang Kransysteme in Oelsnitz



LAMILUX Continuous Rooflight S
on the industrial hall of Kemper GmbH in Olpe





ALL ADVANTAGES AT A GLANCE



Energy efficiency

- Tested and certified heat insulation values (ETA – European technical assessment)
- Optimisation of isothermal characteristics and rebate base ventilation as well as minimisation of the condensate risk due to thermal separation on all construction components
- Optimal insulating effect and air-tightness for the overall structure, suitable for air-tight shells of buildings (blower door)
- Customised intake of daylight and solar heat input thanks to object-specific composite glazing with heat transmission coefficients of up to $1.0 \text{ W}/(\text{m}^2\text{K})$



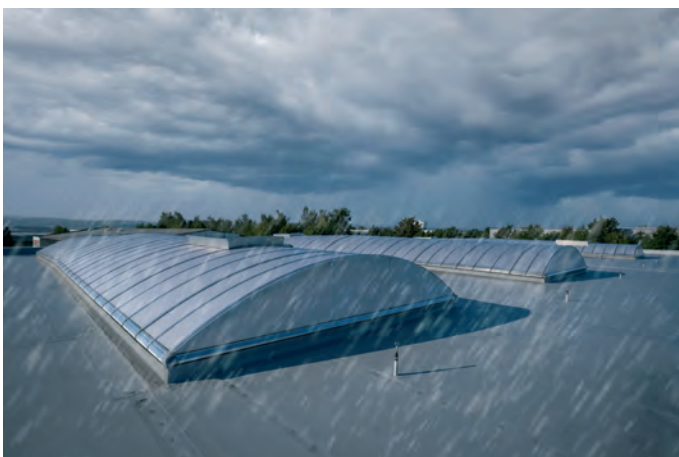
Functionality in extreme weather conditions

- Durability thanks to the active expansion absorber as optimal protection of the construction in the event of snow, ice, wind and excessive heat
- High level of stability and safety under wind and snow loads thanks to the dynamic torque control in the vents
- Resistance to hail tested as per VKF Bern guidelines and tested watertightness in heavy rain and during storms ($\text{DRI } 3.0 \text{ m}^2/\text{s}$)
- Impervious to driving rain thanks to welded sealing frames for flap systems and certified airtightness for the overall system



Safety

- Preventive fire protection according to DIN 18234: Prevention of fire spreading on the roof as a result of the Linear Burn-through Protection
- Melt-out of the glazing in the event of a fire to ensure heat extraction
- Integration of natural smoke and heat exhaust ventilation devices (NSHEV) and smoke and heat exhaust control systems for smoke removal from the building in the event of a fire
- Glazing types that are resistant to flying sparks and radiating heat

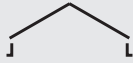


ALL LAMILUX CONTINUOUS ROOFLIGHTS AT A GLANCE

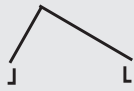
SHAPES



Arched shape



Saddleback design

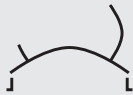


Shed design

OPENING / VENTILATION / SHEV FOR ARCHED DESIGN



Single vent

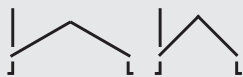


asymmetric double vent

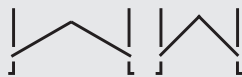


symmetric double vent

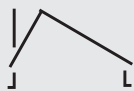
OPENING / VENTILATION / SHEV FOR SADDLEBACK ROOF AND SHED DESIGN



30° / 45° single vent or combination vent



30° / 45° double vent or combination vent



Shed single vent

UPSTAND



Installation on sheet steel frame

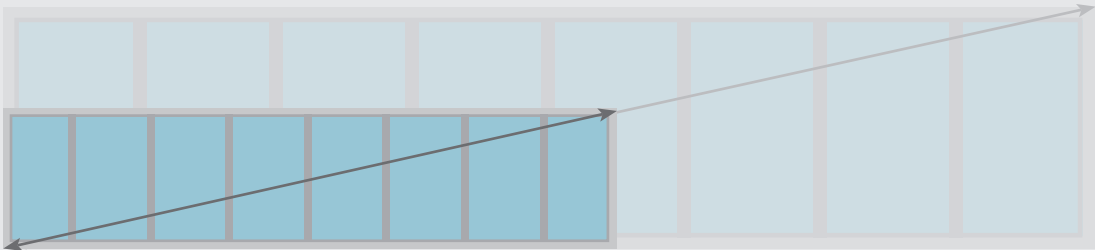


Installation on laminated wooden beams



Installation on concrete upstand

SIZE GRID



Width: from 0.8 m up to 6.0 m
Length: unlimited

OPENING VARIANTS

Pneumatic cylinder*

Lifting heights: 300 mm, 500 mm, 700 mm
*suitable for SHEVS

Spindle drive* 24 V/230 V

Lifting heights: 300 mm, 500 mm, 750 mm
*suitable for SHEVS (24 V and 48 V)

Chain drive 24V/230 V

Lifting heights: 300 mm, 500 mm

FALL-THROUGH PROTECTION

Fall-through protection grid

Spot welding grid made of steel or steel mesh steel bands for fastening to load-bearing profiles

Safety Strips

Perforated louvre panel with deciduous tree effect

Sunshade

U-VALUES OF THE GLAZING

Arched design

$U_i = 1.0$ to $2.5 \text{ W/(m}^2\text{K)}$
different types of glazing depending on requirements

Saddleback shape

$U_i = 1.2$ to $2.5 \text{ W/(m}^2\text{K)}$
different types of glazing depending on requirements

Shed design

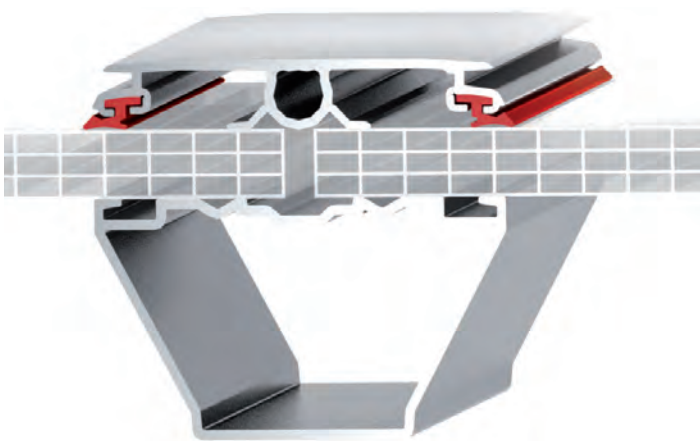
$U_i = 1.2$ to $2.5 \text{ W/(m}^2\text{K)}$
different types of glazing depending on requirements



LAMILUX CONTINUOUS ROOFLIGHTS – CHARACTERISTICS

ABSOLUTELY TIGHT – EVEN IN EXTREME WEATHER

Active expansion absorber



The active expansion absorber ensures a permanently tight, flush joint between the cover strips and the glazing. It also prevents the seals from slipping in the area of the glazing bars – even in the event of wind suction forces and high snow loads.

The active expansion absorber compensates the tension and expansion which occurs when under loads. This is achieved through the continuous, shear-resistant connection between the seals and the cover strips – optimal protection of the construction in the event of snow, ice, wind and excessive heat.

Safety aspects in detail

- + The glazing is watertight and is positively fitted to the cover strips and glazing bars.
- + The cover strips have integrated guide rails for mounting fittings, sun protection devices and maintenance equipment.
- + The clamp is made even safer through an extended adhesive area.

BUILT FOR HEAT - DESIGNED FOR SAFETY

Linear burn-through protection



Material components that are perfectly coordinated with each other in the base profile of the continuous rooflight prevent fire from spreading on the roof if there is a fire inside the building – tested as per DIN 18234. Without any need for costly additional measures, such as gravel fill, the Linear Burn-through Protection prevents the “fuse effect” in the vicinity of the skylight opening thereby stopping the flames striking from inside and spreading to the roofing membrane.

In most cases, the roofing membrane, which is attached to a substructure such as a frame, is pulled up to the upstand and is fed under the base profile of the Continuous Rooflight. In the event of a fire inside the building, this means that the roofing membrane on the inside of the upstand will catch fire and will tend to burn like a “fuse” to the outside of the roof.

Linear Burn-through Protection can be understood as an intelligent system, which restricts the spread of the fire at the roof penetrations. The base profile of the Continuous Rooflight plays an essential role: It is made of a thermoplastic composite which softens on the upstand in the event of high temperatures and spreads directly over the burning roofing membrane. This process seals the burning joints, cutting off the supply of oxygen and smothering the fire in the area. This prevents burn-through to the roof exterior.

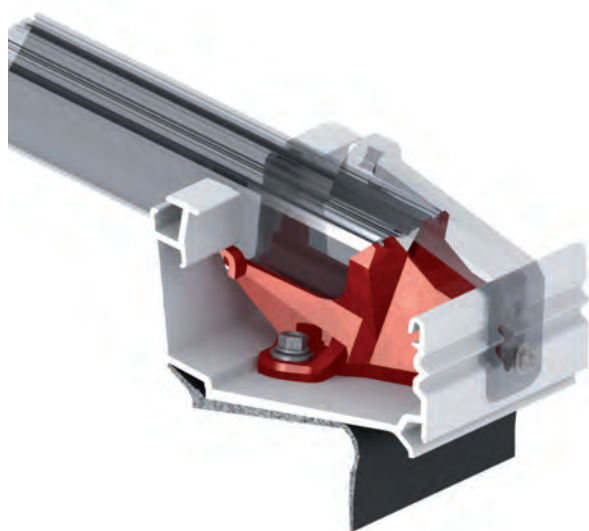
Sophisticated fire protection technology

- + The patented technology prevents fire from spreading onto the roof through roof penetrations in accordance with specifications in DIN 18234 Part 4.
- + The Linear Burn-through Protection renders heavy gravel fills around the Continuous Rooflights unnecessary.

NEW Design snow load up to 4,4 kN/m²

CLEVER POWER TRANSMISSION

Isothermal load converter



The isothermal load converter channels the load on the continuous rooflight into the supporting structure. Since this frees the base profile from loads and tension, there is no need for any further heat-conducting, metallic components in the base profile.

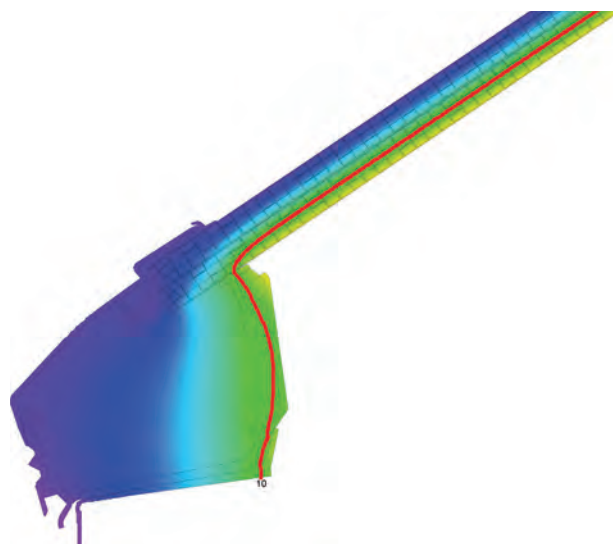
High-quality composite with very good heat insulation values can therefore be used for the base profile. This achieves optimised isothermal lines running continuously through the construction and prevents thermal bridges.

Benefit from optimum energy efficiency

- + The base profile exhibits excellent heat insulation.
- + The risk of condensation is significantly reduced.
- + The rebate base ventilation is optimised.
- + The interior has a smooth appearance thanks to fewer edges which ensures less dirt and grime.

ENERGY EFFICIENT

Isothermal characteristics without weak spots



We require our products to make the greatest possible contribution to the optimised energy performance of buildings. We give this the utmost consideration in the LAMILUX Continuous Rooflight systems.

Optimised isothermal lines

Isothermal lines describe lines of equal temperature. With regard to LAMILUX Continuous Rooflights, these lines run continuously in the construction. This results in a significantly minimised risk of condensation formation on the inside of the construction.

This is how the isothermal lines are determined and defined

- Standard conditions have been established to quantify the risk of condensation. According to DIN 4108-2 "Thermal insulation and energy economy in buildings", these conditions are: inside temperature of 20°C, outside temperature of -5°C, 50% relative humidity.
- Temperatures within the construction can be mapped by what are known as isothermal lines.
- If we adopt the standard conditions, condensate always forms on the inner face of the Continuous Rooflights if its temperature falls below 10°C. Condensate leads to a risk of mould and frost and thus potentially causes damage to the building structure.
- The better the Continuous Rooflight structure is, the less cold air is let into the building and the warmer the surface on the inside of the Continuous Rooflight is.
- The course of the 10°C isothermal line (red line in the diagram) provides information on where condensate can be expected to form on the inside face of the Continuous Rooflight: Namely, wherever the 10°C isothermal line emerges from the construction. As can be seen in the diagram, the 10°C isothermal line runs completely within the construction in all LAMILUX Continuous Rooflights.

LAMILUX CONTINUOUS ROOFLIGHTS – PRODUCT VARIANTS

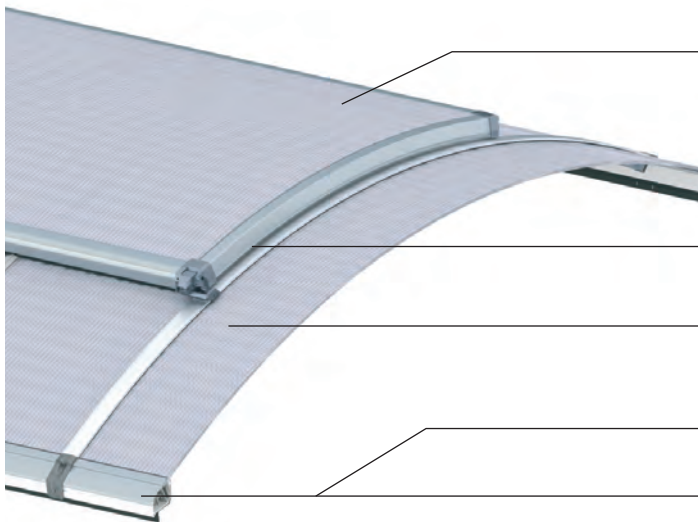


LAMILUX

CONTINUOUS ROOFLIGHT B

Our LAMILUX Continuous Rooflight B is a pioneering daylight system in terms of energy and structure. Specifically, this refers to an arched, modular skylight system that achieves an optimized energy balance due to its complete thermal separation. Optimal solutions for smoke removal and ventilation are available for nearly every application, thanks to the comprehensive selection of ventilation and smoke and heat exhaust flaps that can be integrated into the Continuous Rooflight.

The LAMILUX Continuous Rooflight B is optimally suitable for using daylight to provide extensive illumination in halls and for using as an extensive heat exhaust system with melt-out glazing types in the event of a fire. The system is optimised for use as an inexpensive solution in industrial halls and warehouses as standard, but can also be manufactured for installation in other applications such as sports halls and sales outlets by using glazing with improved heat insulation properties.



Arched flap as ventilation or certified smoke and heat exhaust ventilation **with optimised Uf values**, excellent thermal separation and perfected flap adjustment system

Tension bar with active expansion absorber

Wide range of variants for polycarbonate glazing for every use case

Isothermal Load Converter

Base profile: Effective prevention of fire spreading on the roof as per DIN 18234

LAMILUX

CONTINUOUS ROOFLIGHT B PASSIVHAUS



Anyone also wishing to build large hall complexes in an especially energy-efficient way is making a good decision with our Passivhaus-certified Continuous Rooflight. The overall system has a heat transmission coefficient of only 0.95 W/(m²/K). This enables an overall construction free of thermal bridges with flawless isothermal lines.

Metallic components on the inside and outside are completely thermally separated from each other. The isothermal load converter enables the use of materials with excellent heat insulation properties in the base, while the additional glazing also contributes to the considerable heat insulation properties of the overall system. This makes it the first Continuous Rooflight system in the world to be certified to the Passivhaus standard.



Passivhaus-appropriate polycarbonate glazing

Thermally optimised base profile



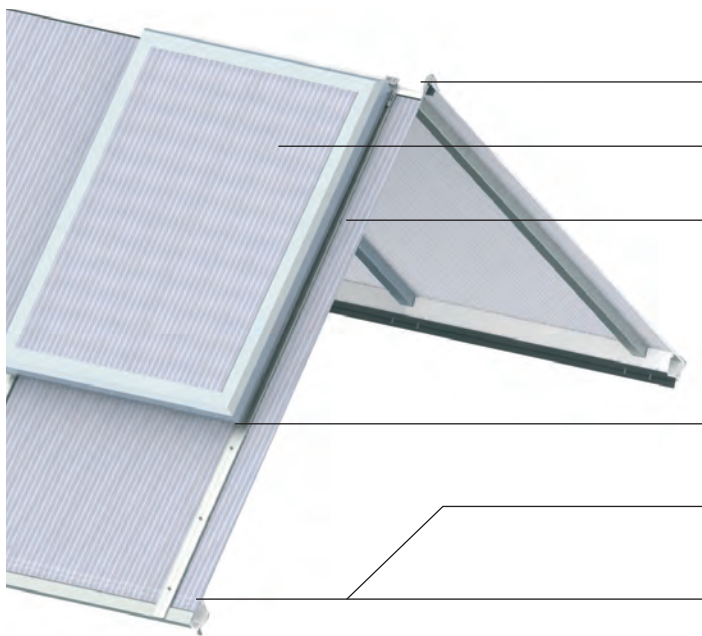


LAMILUX

CONTINUOUS ROOFLIGHT S

The LAMILUX Continuous Rooflight S is a modular, ridged roof Continuous Rooflight system and can be fitted with a range of composite glazing types according to requirements. Its completely thermally separated profile system ensures optimum thermal protection and minimises the risk of condensation on the construction's surfaces compared with conventional, non-thermally separated structures.

Combined with the frame system, which has been optimised for the construction, ideally matched solutions are possible without additional upstands provided by the client. Optimum smoke removal and ventilation solutions for the property for almost every application as a result of ventilation and smoke and heat exhaust vents that can be integrated.



Ridge cover profile

Ventilation Flap as as natural ventilation or certified smoke and heat exhaust ventilation

Wide range of variants for polycarbonate glazing for every use application

Tension bar with active expansion absorber

Isothermal Load Converter

Base profile: Effective prevention of fire spreading on the roof as per DIN 18234

FLEXIBILITY IN MODERN CONSTRUCTION AND RENOVATION

Energy efficiency and modern design as well as the use of sustainable construction elements dominate the new construction and renovation of industrial halls, warehouses and exhibition halls. Architectural flexibility in aesthetic and functional planning is offered by the three variants of the LAMILUX Continuous Rooflight S.

LAMILUX Continuous Rooflight S 30°

The Continuous Rooflight ridged design features a 30 degree inclination at the base. This variant blends perfectly into the roofscape. This Continuous Rooflight offers many variations for integrating the modular, combinable vent systems for SHEV and natural ventilation. The LAMILUX Continuous Rooflight S 30° can be built up to a width of six metres.



LAMILUX Continuous Rooflight S 45°

The 45 degree variant of the ridged roof offers great flexibility for integrating SHEV devices. The steeper design creates a larger area for installing vent systems and, consequently, a greater smoke extraction area. The LAMILUX Continuous Rooflight S 45° can be built up to a width of 4.75 metres.



DYNAMIC TENSIONING TECHNOLOGY

The dynamic tensioning technology is a structural design principle in the ridged section of Continuous Rooflight constructions with a ridged roof design. It provides flexible force/tension compensation in the event of heavy loads on the overall construction. The technology is based on nature's ability to create integrative form and function.

In areas which consist of several materials in a hybrid construction, there are ridged, elastic and semi-elastic sections in the ridge. In addition to clamps and static latches, the components are also connected by friction fasteners, as an example. The result is a lasting elastic and positive locking construction. In the event of vertical and horizontal compressive and tensile loads, the components are prevented from drifting apart or pushing together excessively with the result that they remain connected within defined movement and displacement boundaries. The Continuous Rooflight system will remain torsion-resistant and therefore watertight and secure even in the event of high wind and snow loads.

Flexible force/tension compensation

- + The ridged section is positively connected by means of rigid, elastic and semi-elastic zones.
- + The design principle is bionic thanks to integrative form and function.
- + The Continuous Rooflight system can withstand very strong wind and snow loads.



LAMILUX CONTINUOUS ROOFLIGHT S SHED

The design of the continuous rooflight in the form of a shed roof, with an angle of inclination of 30 and 60 degrees, makes it possible to integrate photovoltaic systems. Photovoltaic modules can be mounted on the wide shed back due to the very stable substructure. The LAMILUX continuous rooflight S Shed can be built up to a width of four metres.





RENOVATION OF CONTINUOUS ROOFLIGHT SYSTEMS

This is what renovation of continuous rooflight systems with LAMILUX means for you: All processes run smoothly and primarily have a single focus: Comprehensive and optimum service for the customer – from planning to installation, all from a single source. To achieve this goal, we record all the requisite parameters involved in the renovation using a detailed checklist before putting the clearly regulated steps into practice by the given deadline.

We have been renovating daylight systems throughout Europe in this way for decades. You benefit from this experience, from our product diversity and our focus on customer-specific projects. It is our goal to develop and implement a technically impressive, innovative, sophisticated and, at the same time, cost-efficient solution for you.

RENOVATION EXAMPLE: WEGMANN GRUNDBESITZ GMBH, KASSEL



Before the refurbishment

The old shed roofs were refurbished with modern arched rooflights, which improved both the climatic and energy conditions in the hall as well as the visual aesthetics on the roof.



After refurbishment

- Twelve LAMILUX continuous rooflights B with thermally separated frame profiles in insulating chamber design
- Limitation of fire propagation in accordance with the requirements of DIN 18234 thanks to an integrated safety package with linear burn-through protection
- Twelve smoke lift continuous rooflights B as smoke and heat extraction devices and an opener for an additional ventilation function

REFERENCES



HEIDELBERGER DRUCKMASCHINEN, HEIDELBERG

Project:

Refurbishment of the roof of production hall 6 at Heidelberger Druckmaschinen in Wiesloch. The 620 metre long hall has a roof area of 77,000 square metres.

Systems:

- 4.2 kilometres of LAMILUX Continuous Rooflights B
- ventilation and smoke and heat extraction flaps



MAN, MUNICH

Project:

Renovation of the roof surface of a production facility belonging to the car manufacturer.

Systems:

- 24 LAMILUX Continuous Rooflights B with varying lengths of 45, 35, 32 and 29 metres
- Equipped with fall-through protection LAMILUX Safety Stripes
- 48 LAMILUX Smoke Lifts Continuous Rooflight B as asymmetric double flaps



HANGAR 10, MUNICH AIRPORT

Project:

Refurbishment of the roof of production hall 6 at Heidelberger Druckmaschinen in Wiesloch. The 620 metre long hall has a roof area of 77,000 square metres.

Systems:

- 38 LAMILUX Continuous Rooflights B incl. fall-through protection grille
- 38 LAMILUX Smoke Lift Continuous Rooflight B



EVENTS HALL, WURZEN

Project:

Renovation and conversion of a former production hall into an events hall.

Systems:

- 21 LAMILUX Continuous Rooflights S 30° with lengths of up to 28 metres
- Eight LAMILUX Smoke Lifts Continuous Rooflight S

NATURAL VENTILATION



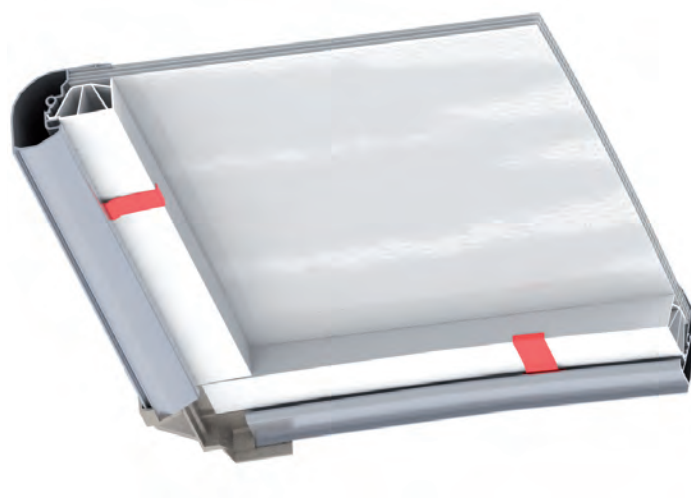
PROTECTION IN THE EVENT OF HEAVY WIND LOADS

Another innovative component in the construction of LAMILUX Continuous Rooflights – dynamic torque control – optimises the tension of the glazing in the flap systems and ensures that the glazing is firmly secured. This results in a high level of stability in the event of wind loads.

Integrated suspension beneath the glazing bead in the mounting frame ensures that the glazing is secured in position by a specific holding force even when subjected to load. This results in the glazing remaining tension-optimised in all situations. As a result, the acting loads are optimally cushioned and absorbed by the mounting frame.

Dynamic torque control

- + The vents have a high level of stability even when they are open.
- + The anchorage of the polycarbonate glazing is optimised.
- + Spring-mounted multiple-joint traverses provide additional protection for the flap systems.



NATURAL VENTILATION AND AERATION

Daylight is one thing, fresh air is the other you gain with a Continuous Rooflight. Flap systems with automated actuation that can be integrated make a considerable and economically attractive contribution to an optimal building climate. Like the construction itself, they are thermally decoupled and, together with their welded sealing frame, they provide a compact, closed sealing layer.

The flap systems can be combined in various ways to create ideally dimensioned opening areas as per the property-specific requirements. Fair weather ventilation and night-time cooling can also be automatically mapped in the control matrix: With an additional wind and rain sensor set as well as other control components.



LAMILUX Ventilation Flap Continuous Rooflight B



LAMILUX Ventilation Flap Continuous Rooflight S




LAMILUX SMOKE LIFT CONTINUOUS ROOFLIGHT B & S



In the event of a fire, smoke levels in escape routes must be kept low for as long as possible. LAMILUX Smoke Lifts Continuous Rooflight B and S, with standard-compliant triggering, achieve this thanks to their effective smoke vent effect. This allows people to escape from inside the building and allows the fire brigade to enter it to extinguish the fire. In their function as natural smoke and heat exhaust ventilation devices, LAMILUX Smoke Lift Continuous Rooflight B and S meet all requirements of DIN EN 12101-2.

Temperature parameters according to DIN EN 12101-2 and test results

Our NSHEVs reliably open into the SHEV position in less than 60 seconds...

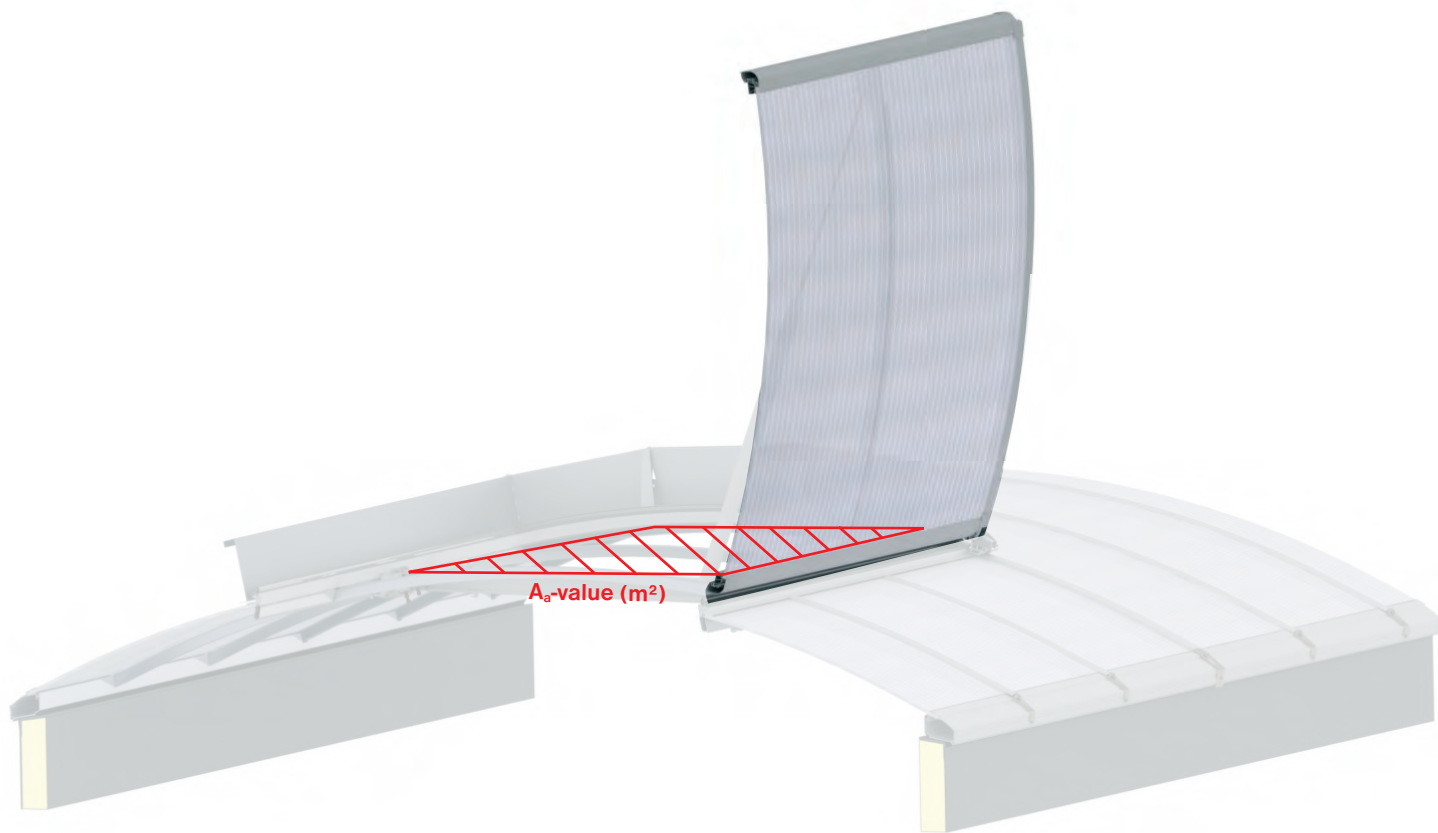
| | | |
|---|--|--|
|  | ... and ensure high smoke discharge volumes | Flow rate coefficient Cv between 0.50 and 0.77 |
| | Aerodynamically effective opening area A _a : | Continuous Rooflight B: from 0.59 m² to 7.65 m² Continuous Rooflight S: from 0.32 m² to 7.49 m² |
|  | ... after endurance test (1,000 times in SHEV position and 10,000 times in ventilation position) | RE 1000 Ventilation 10,000 |
|  | ...under snow load | SL 200 to SL 2780 |
|  | ... in indoor temperatures as low as -25 °C | Continuous Rooflight B: T(-5) T(-15) T(-25) Continuous Rooflight S: T(-5) T(-15) T(-25) |
|  | ... after exposure to wind suction (up to 3,000 N/m²) | WL 1500 to WL 5100 |
|  | ...when exposed to fire | B 300 |



Our flap systems enable large-scale aerodynamic smoke extraction surfaces and large-scale full ventilation. Even with large dimensions, the flaps of the smoke lift prove to be an extremely stable overall system, even when open and under strong wind loads. In the event of a fire, they are opened quickly via thermal release or CO₂ or electrical remote release. If additional opening drives are used, our NSHEVs can be used for daily ventilation.

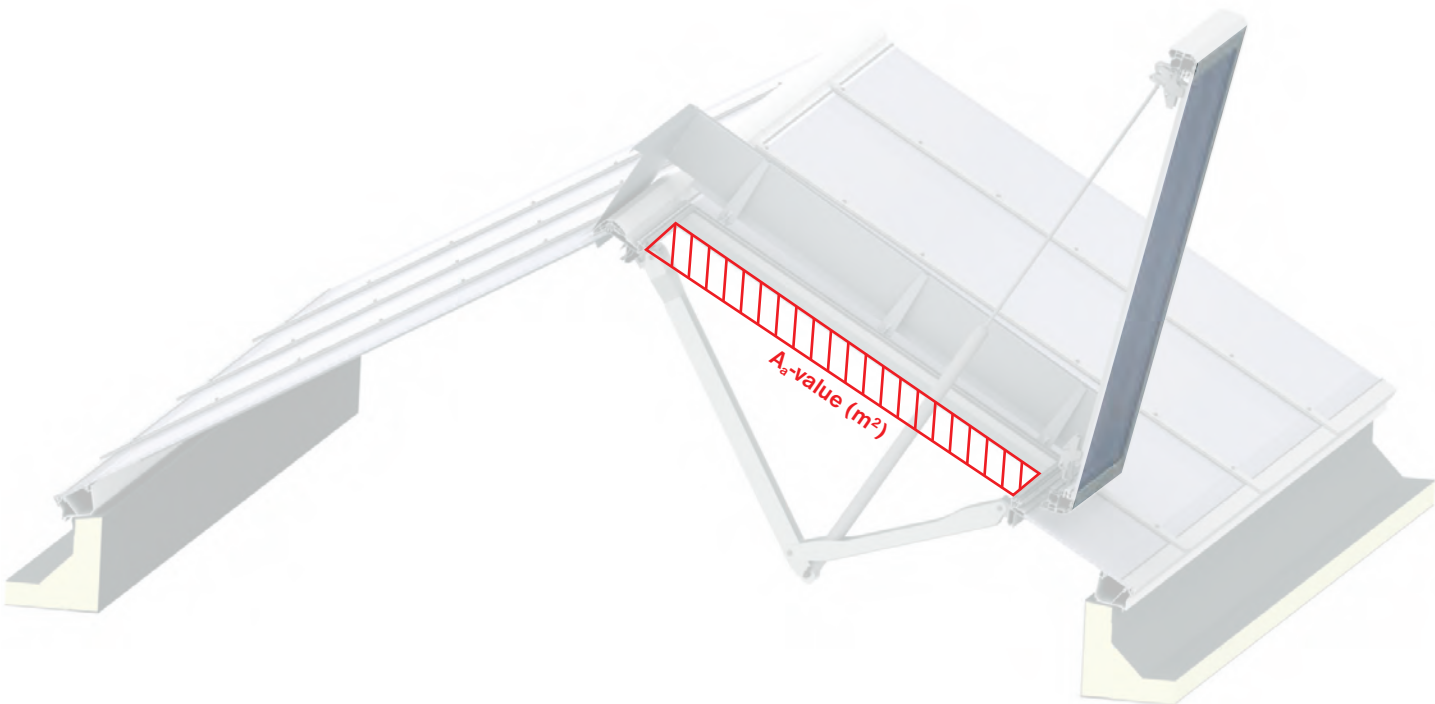
OVERVIEW OF THE AERO-DYNAMICALLY
EFFECTIVE OPENING AREA OF THE FLAPS
DEPENDING ON THE WIDTH OF THE ROOFLIGHT

LAMILUX SMOKE LIFT CONTINUOUS ROOFLIGHT B



| Continuous Rooflight B | | |
|------------------------|-----------------------------|---------------|
| From width of (m) | A _a -values (m²) | |
| | Standard flap | Tandem serial |
| 1.0 | 1.27 | 2.53 |
| 1.25 | 1.60 | 3.18 |
| 1.5 | 1.96 | 3.83 |
| 1.75 | 2.28 | 4.68 |
| 2.0 | 2.61 | 5.34 |
| 2.5 | 3.26 | 6.37 |
| 3.0 | 3.91 | 7.4 |

LAMILUX SMOKE LIFT CONTINUOUS ROOFLIGHT S



Continuous Rooflight S 30°/30°

| From width (m) | A _a -values (m²) | | |
|----------------|-----------------------------|-------------|---------------------------|
| | Single flap | Double flap | Double flap Tandem serial |
| 1.0 | 0.64 | 1.25 | 2.37 |
| 1.5 | 0.99 | 1.88 | 3.43 |
| 2.0 | 1.30 | 2.54 | 4.91 |
| 2.5 | 1.61 | 3.18 | 6.45 |
| 3.0 | 1.91 | 3.81 | 7.49 |

Continuous Rooflight S 45°/45°

| From width (m) | A _a -values (m²) | | |
|----------------|-----------------------------|-------------|---------------------------|
| | Single flap | Double flap | Double flap Tandem serial |
| 1.2 | 0.99 | 1.82 | 3.49 |
| 1.6 | 1.30 | 2.43 | 4.33 |
| 2.0 | 1.61 | 2.67 | 4.99 |
| 2.4 | 1.91 | 3.00 | 5.59 |

Continuous Rooflight SHED

| From width (m) | A _a -values (m²) | |
|----------------|-----------------------------|---------------------------|
| | Single flap | Double flap Tandem serial |
| 0.6 | 0.64 | 1.21 |
| 1.0 | 0.99 | 1.88 |
| 1.3 | 1.30 | 2.49 |
| 1.6 | 1.61 | 3.03 |
| 2.0 | 1.91 | 3.59 |

FLAP SYSTEM FOR VENTILATION AND SHEVS

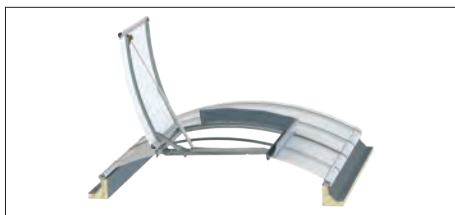
The combination flap for the continuous rooflight S enables effective ventilation, while optimum smoke extraction can be achieved in the event of a fire.



NEW Combi flap for Continuous Rooflight S

All smoke lift systems can be integrated as a single flap or as opposing double flaps. Similarly, it is possible to combine two flaps by arranging them directly next to each other. This flap combination acts as a natural smoke and heat exhaust ventilation device with a higher aerodynamic smoke extraction area, which is referred to as a tandem-serial single or double flap.

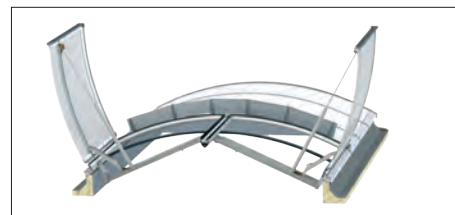
LAMILUX Smoke Lift Continuous Rooflight B



As single flap



As asymmetric double flap



As symmetric double flap

LAMILUX Smoke Lift Continuous Rooflight S



As single flap



As double flap



As combi flap



As combi flap

VENTILATION TECHNOLOGY WITH RODA



RODA & LAMILUX – A WELL-ESTABLISHED TEAM

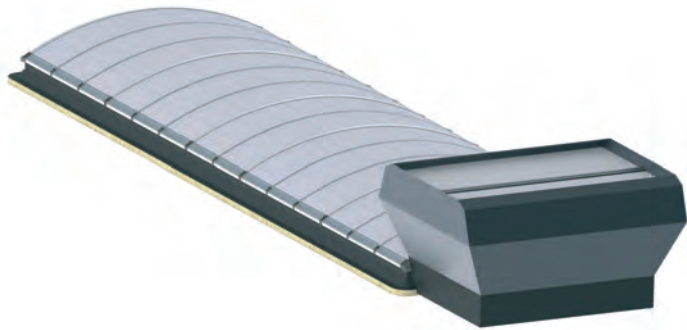
roda Licht- und Lufttechnik GmbH has been part of the LAMILUX Group since January 2018. The subsidiary's product portfolio covers four core competences: smoke and heat exhaust ventilation, industrial ventilation, daylight technology and translucent facade technology. roda takes care of all project planning up to on-site approval. In addition, roda offers maintenance for SHEV systems of all manufacturers as well as renovations within the scope of the four stated core competences.

LAMILUX and roda work together very closely in both development and sales. The benefit for you as a customer: One central contact, no interfaces, a larger product portfolio and a broader range of services.

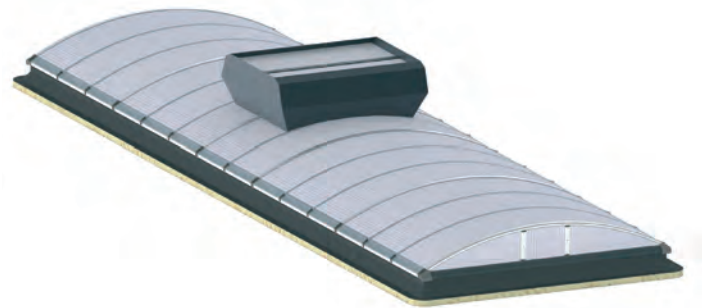
The first collaborative product is a thermally separated Continuous Rooflight with rainproof ventilation: The connection between the LAMILUX Continuous Rooflight B and the MEGAPHÖNIX double flap from roda. The element guarantees all-weather ventilation through its weather-resistant side opening flaps. These open automatically as soon as the top-mounted flaps close when it begins to rain.

The MEGAPHÖNIX can be mounted directly on the Continuous Rooflight frame with a continuous rooflight width of up to three metres. From a Continuous Rooflight width of more than three metres, the MEGAPHÖNIX is mounted as a "rider" directly on the glazing bars of the Continuous Rooflight without interruptions.

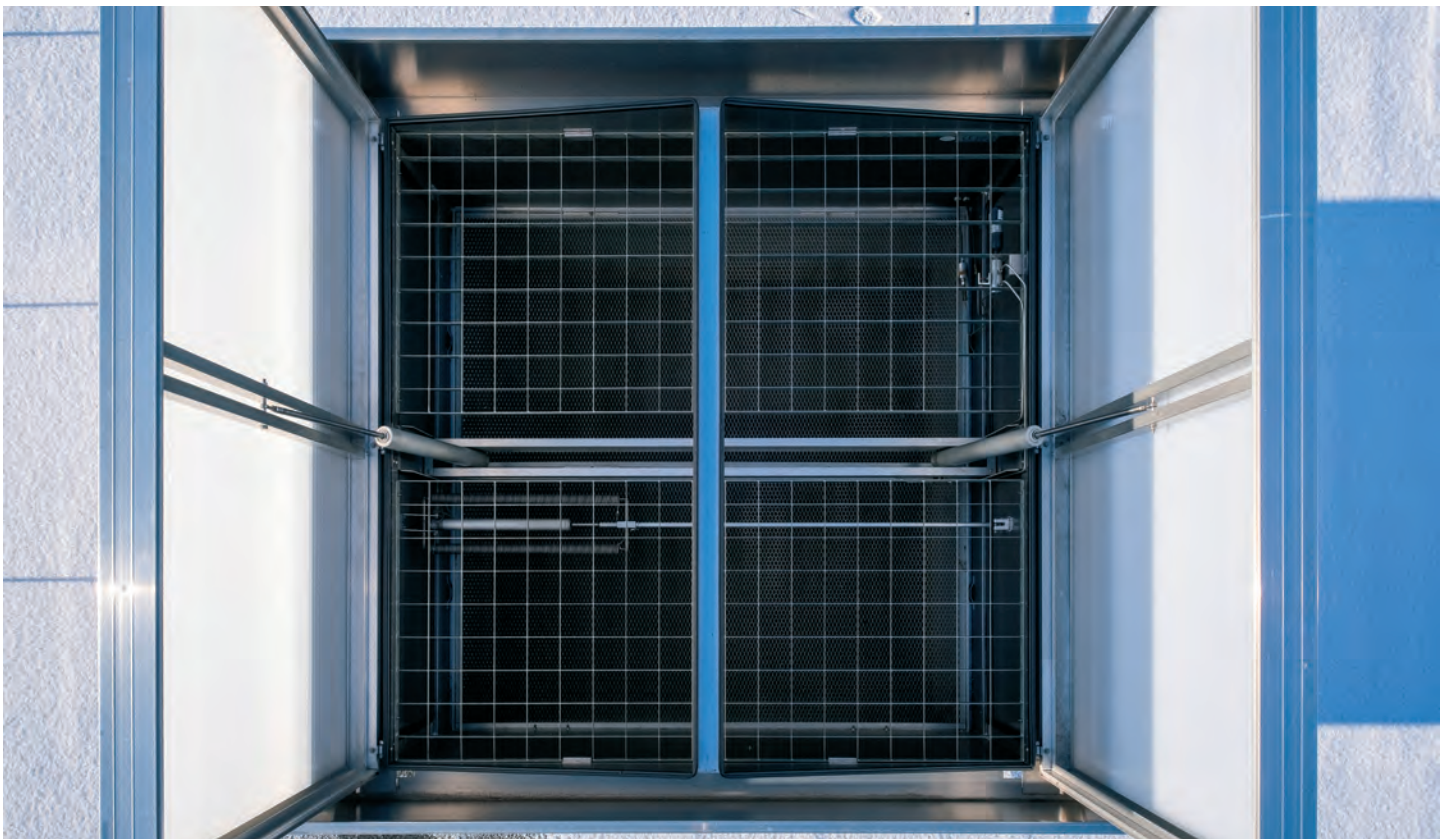
Another collaborative solution is the integration of roda's louvered ventilators into the LAMILUX Continuous Rooflight S.



roda MEGAPHÖNIX on the frame of the LAMILUX Continuous Rooflight B



roda MEGAPHÖNIX on the glazing bar of the LAMILUX Continuous Rooflight B



ACCESSORIES



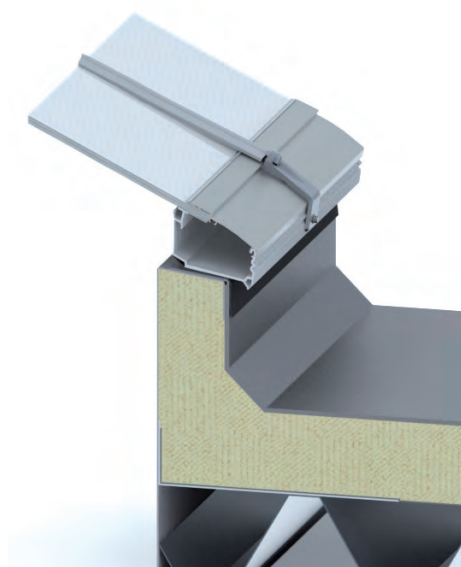
SOLUTIONS FOR THE OPTIMUM BUILDING CONNECTION

Roof mounting options include mounting on steel sheeting upstands, on wooden upstands or reinforced concrete upstands. We always adapt our Continuous Rooflight systems to local structural conditions on an individual basis. We would be pleased to provide you with thorough guidance regarding your individual project requirements.

NEW

with our GFUP glazing, a composite material made of glass fibers and polyester resin, we achieve hail resistance class HW5 according to the VKF guideline

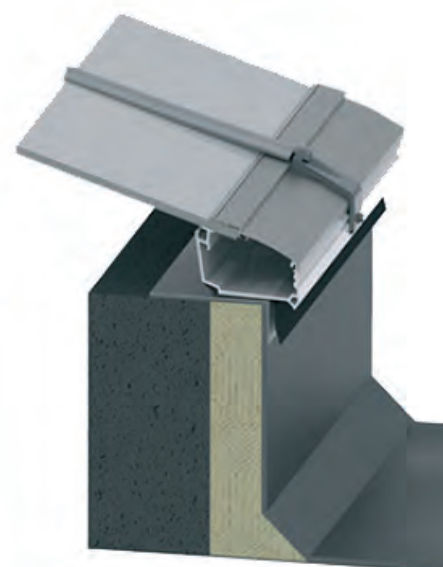
Stability is of primary concern with our own sheet steel upstands. LAMILUX complies with the requirements of the German Institute for Building Technology (Deutsches Institut für Bautechnik), according to which sheet steel upstands must be manufactured using high steel grades S 280 GD + Z 275 or S 320 GD + Z 275.



Installation on steel sheet upstand



Installation on wooden trusses



Installation on concrete upstand

GLAZING MADE OF GLASS-FIBRE REINFORCED COMPOSITE – GRP

Every LAMILUX Continuous Rooflight comes with the optimum glazing for its intended location on the roof. Alongside traditional solutions, there are also options for special energy efficiency, sound and hail protection as well as special corrosion-resistant variants. Solar protection glazing types are also possible for some of these variants. The durable roofing option that can withstand flying sparks and radiating heat.

Glazing made of glass fibre-reinforced polyester is especially resistant. Due to special material properties, it also manages to hold fast in the event of strong UV radiation and weathering. This glazing was developed for production areas with heightened requirements in relation to the corrosion resistance of installed components. The reason for this could be chemically aggressive emissions from evaporating cooling lubricants in machining, as an example. Brittleness or cracks, which chemically aggressive materials could cause in polycarbonates, also do not occur in the material in the long term.

NEW: with our GFUP glazing, a composite material made of glass fibres and polyester resin, we achieve hail resistance class HW5 in accordance with the VKF guideline

Glazing made of glass-fibre reinforced composite – GRP

- + The glazing is highly resistant to UV radiation and weathering.
- + Increased resistance to chemically aggressive emissions.
- + HW5 hail resistance



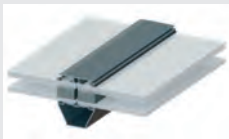
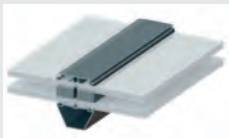
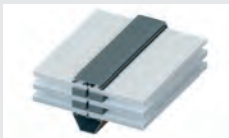
NOTE: The connections shown are for guidance only. The applicable roofing trade regulations and standards must be observed by the roofing company when planning and carrying out the roof waterproofing work.

GLAZING TYPES: CONTINUOUS ROOFLIGHT B

Standard

| | | | |
|---|--|--|---|
|  | PC10 U _g value 2.5 W/(m²K) Sound-proofing value 17 dB Fire behaviour B-s1, d0 Translucency Approx. 61 % |  | PC10 + PC6 U _g value 1.8 W/(m²K) Sound-proofing value 18 dB Fire behaviour B-s1, d0 Translucency Approx. 44 % |
|  | PC10 + PC10 U _g value 1.6 W/(m²K) Sound-proofing value 24 dB Fire behaviour E-d0 Translucency Approx. 39 % | | |

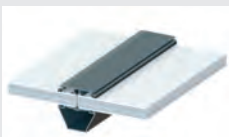
Energy efficiency

| | | | |
|---|--|--|--|
|  | PC10 + PC6 thermal composite 16 U _g value 1.4 W/(m²K) Sound-proofing value 17 dB Fire behaviour B-s1, d0 Translucency Approx. 44 % | Thermal Composite 32 mm is LAMILUX's own development! This glazing offers low flammability combined with excellent thermal insulation. | |
|  | PC10 + PC10 thermal composite 16 U _g value 1.2 W/(m²K) Sound-proofing value 18 dB Fire behaviour E-d0 Translucency Approx. 39 % |  | PC10 + PC6 + PC10 2x tc 5 U _g value 1.0 W/(m²K) Sound-proofing value 18 dB Fire behaviour E-d0 Translucency Approx. 27 % |

Sound insulation

| | | | |
|---|--|--|--|
|  | 16 mm soundproof glazing 31dB U _g value 2.3 W/(m²K) Sound-proofing value 31 dB Fire behaviour E-d0 Translucency Approx. 54 % |  | 20 mm soundproof glazing 25dB U _g value 1.8 W/(m²K) Sound-proofing value 25 dB Fire behaviour E-d0 Translucency Approx. 39 % |
|  | 36 mm soundproof glazing 26dB U _g value 1.3 W/(m²K) Sound-proofing value 26 dB Fire behaviour E-d0 Translucency Approx. 39 % | | |

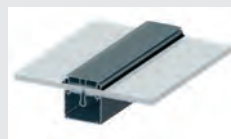
Corrosion resistance*

| | |
|---|--|
|  | 20 mm GRP Composite U _g value 1.8 W/(m²K) Sound-proofing value 20 dB Fire behaviour E-d0 Translucency Approx. 31 % |
|---|--|

* see page 35

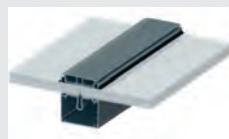
GLAZING TYPES: CONTINUOUS ROOFLIGHT S

Standard



PC10

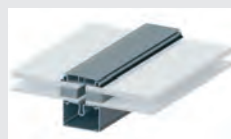
| | |
|----------------------|--------------|
| U _g value | 2.5 W/(m²K) |
| Sound-proofing value | 17 dB |
| Fire behaviour | B-s1, d0 |
| Translucency | Approx. 61 % |



PC10 + PC6

| | |
|----------------------|--------------|
| U _g value | 1.8 W/(m²K) |
| Sound-proofing value | 18 dB |
| Fire behaviour | B-s1, d0 |
| Translucency | Approx. 44 % |

Energy efficiency



PC10 + PC6 thermal composite 16

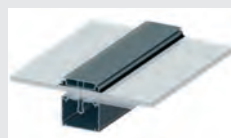
| | |
|----------------------|--------------|
| U _g value | 1.4 W/(m²K) |
| Sound-proofing value | 17 dB |
| Fire behaviour | B-s1, d0 |
| Translucency | Approx. 44 % |



PC32-5

| | |
|----------------------|--------------|
| U _g value | 1.2 W/(m²K) |
| Sound-proofing value | 18 dB |
| Fire behaviour | B-s1, d0 |
| Translucency | Approx. 32 % |

Sound insulation



16 mm soundproof glazing 31dB

| | |
|----------------------|--------------|
| U _g value | 2.3 W/(m²K) |
| Sound-proofing value | 31 dB |
| Fire behaviour | E-d0 |
| Translucency | Approx. 54 % |

Corrosion resistance*



32 mm GRP Composite

| | |
|----------------------|--------------|
| U _g value | 1.3 W/(m²K) |
| Sound-proofing value | 17 dB |
| Fire behaviour | E-d0 |
| Translucency | Approx. 26 % |

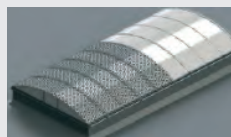
ADDITIONAL EQUIPMENT VARIANTS

“Hard roofing”



The Continuous Rooflight B and S glazing meets the conditions for “hard roofing” and “melt-out area” (DIN 18230-1) at the same time – or comply with these two characteristics separately. It fulfils the DIN 13501-5 requirements for resistance to flying sparks and radiated heat – as confirmed by MFPA Leipzig GmbH.

“sun protect“

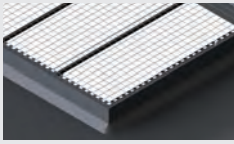


The glazing of Continuous Rooflight B and S can be combined with a louvre sheet in any desired RAL colour. This sheet provides a natural shade effect with a deciduous tree effect and at the same time protects against hail and UV radiation. It also ensures permanent fall-through protection.

* see page 31

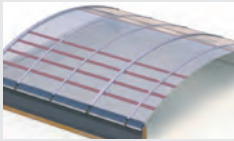
ACCESSORIES

Fall-through protection grids



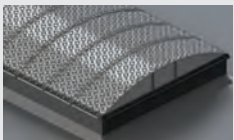
Fall-through protection grids are permanently fall-through proof in compliance with GS-Bau 18 for widths of between 0.80 metres and 6.00 metres. The grid is fastened to specially manufactured stainless steel retaining plates, which in turn are screwed onto the supporting structure, e.g. sheet steel frame or wooden upstand.

LAMILUX Safety Stripes



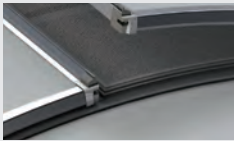
LAMILUX Safety Stripes are fastened directly to the support profiles of the Continuous Rooflight. With a discreet visual appearance, they offer permanent fall-through protection as per GS-Bau 18 even before the glazing is mounted. Filigree laser grids are used in the ventilation area. These ensure reliable fall-through protection even when the vents are open, e.g. during maintenance work.

Sun protection



A metal screen coated in the RAL colour you require and featuring a deciduous tree effect for natural shade. Deciduous tree effect screens fulfil GS-Bau 18 requirements with regard to continuous fall-through protection. The perforated steel sheet also provides protection against hail and incidental UV light.

Insect protection grid



The insect protection grid is integrated into the vent systems. No insects can enter the building interior when the vents are open.

Gable wall ventilator



All ventilators have an electric cover flap. Installation is dependent on some parameters, such as the Continuous Rooflight width and the installation position.

Smoke seal



The smoke seal consists of an internal polycarbonate sheet and external aluminium plates. It is used for the compartmentalisation of fire sections whereby the polycarbonate of the Continuous Rooflight glazing melts and the smoke seal further restricts the fire section.

Anchor point for PPE



The anchor point for PPE is mounted on LAMILUX Continuous Rooflight frames prepared for such purposes and serves as an anchor point for personal protective equipment to prevent falls. It is an anchor point for using a carabiner in conjunction with a safety harness (EN 361) and fall arrest system (EN 363). No more than three persons are permitted to attach themselves to the rotatable anchorage eye.

Other available features: Installation opening, roof access hatch, blind connection, RAL colouring for the profiles

COMFORT AND SAFETY

NEW SHEV and ventilation drive
now also available as a 48 V motor

Opener variants



Pneumatic cylinder

- Lift heights: 300 mm, 500 mm, 700 mm



Spindle drive

- Voltage: 24 V
- Lift heights: 300 mm, 500 mm, 750 mm
- also suitable for SHEVS



Spindle drive

- Voltage: 230 Volt
- Lift heights: 300 mm, 500 mm, 750 mm



Chain drive

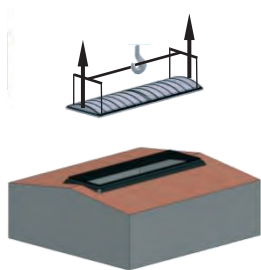
- Voltage: 24 Volt / 230 Volt
- Lift heights: 300 mm, 500 mm

MOUNTING FRAME FOR LAMILUX CONTINUOUS ROOFLIGHTS

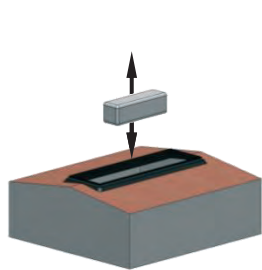
The mounting opening is used to lift large objects in and out through the roof.
The following steps are necessary for this:



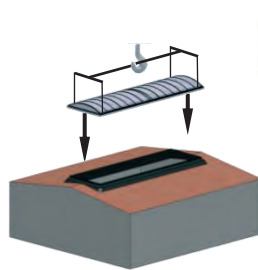
Unscrew the Continuous Rooflight from the frame



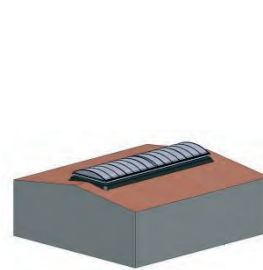
Lift the Continuous Rooflight



Lift objects in/out

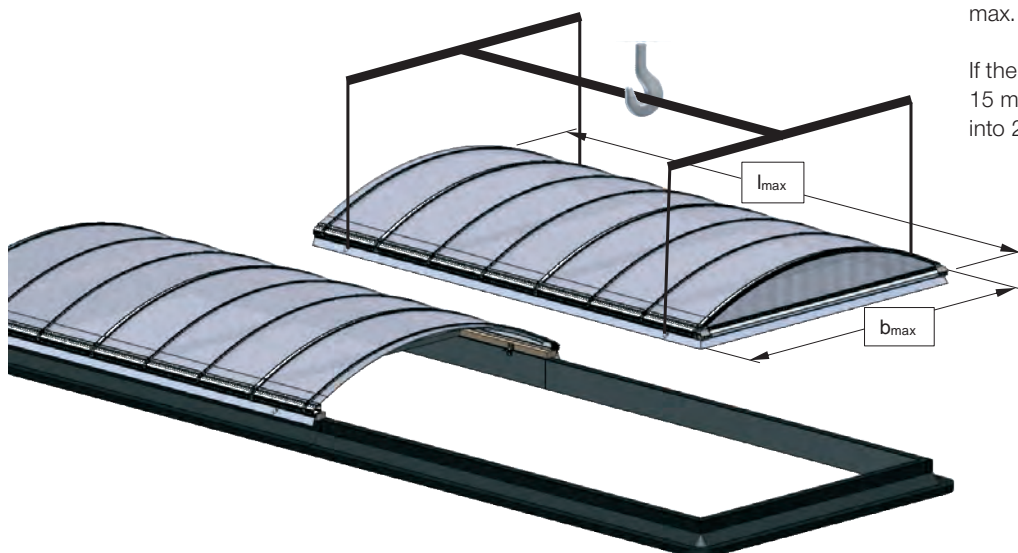


Position the Continuous Rooflight on the frame



Fasten the Continuous Rooflight to the frame again

DESIGN



max. Continuous Rooflight length $l_{\text{maxOKD}} = 5.7 \text{ m}$
max. Continuous Rooflight width $b_{\text{maxOKD}} = 5.45 \text{ m}$
max. Continuous Rooflight area $A_{\text{maxOKD}} = 15 \text{ m}^2$

If the length exceeds 5.7 m or the area exceeds 15 m², the Continuous Rooflight must be divided into 2 parts.

CONTINUOUS ROOFLIGHT WITH PHOTOVOLTAICS



With photovoltaic systems on roof surfaces, building owners can utilise a long-term, cost-effective source of energy. For newly constructed non-residential buildings, photovoltaics are already mandatory in many regions.

The Continuous Rooflights S from LAMILUX bring daylight and, in combination with a PV system, electricity into buildings.

The Continuous Rooflight S is designed as standard to support the loads of PV modules. This means that a photovoltaic system can be retrofitted at any time.



QUALITY



German General Technical Approval:

The German General Technical Approval is issued by the German Institute of Building Technology (Deutsches Institut für Bautechnik – DIBt) for all German federal states. This certificate verifies that a construction product meets the technical requirements for its use.



European Technical Approval – ETA:

An ETA is a recognised certificate valid in EU member states which attests the technical usability of a building product. The test assessment for the LAMILUX Continuous Rooflight B is based on the approval guidelines drawn up by European Organisation for Technical Approval (ETAGs). The approval issued to LAMILUX takes into account all key product features needed to comply with the building regulation requirements in individual EU countries.



Declaration of performance for building products:

The declaration of performance states the performance of building products in relation to the key features of such products in accordance with the relevant harmonised technical specifications.



The LAMILUX certificate of quality – a document regarding your safety:

This document enables us to provide proof to our customers of the excellent quality of the supplied product each time we deliver a system. We submit evidence which confirms that our daylight systems are consistently manufactured and implemented in accordance with product approvals and the technical standards specified in the approvals.



Environmental product declarations for all systems:

Environmental Product Declarations are issued as per the requirements of European standard DIN EN 15804 and DIN EN ISO 14025 and are an internationally recognised and accepted product eco-label, because: They make it possible to draw valid conclusions about the environmental impact of a product – from its manufacture, the raw materials used and resource consumption through the product life cycle until its dismantling and disposal.

LAMILUX SKYLIGHTS

ROOFLIGHT F100 W



GLASS SKYLIGHT F100



GLASS SKYLIGHT FE





GLASS ARCHITECTURE



MODULAR GLASS SKYLIGHT MS78





FLAT ROOF HATCHES



CONTINUOUS ROOFLIGHT



RENOVATION



SMOKE AND HEAT EXHAUST



RODA LIGHT AND AIR TECHNOLOGY



 Scan this
to learn more
about
LAMILUX
skylights!

The technical data listed in this brochure correspond to the current status at the time of printing and are subject to change. Our technical specifications are based on calculations and supplier specifications, or have been determined by independent testing authorities within the scope of applicable standards.

Thermal transmission coefficients for our plastic glazing were calculated using the finite element method with reference values in accordance with DIN EN 673 for insulated glass. Taking into account practical experience and the specific characteristics of plastic, the temperature difference between the outer surfaces of the material was defined as 15 K. Functional values refer to test specimens and the dimensions used in testing only. We cannot provide any further guarantees of technical values. This particularly applies to changed installation conditions or if dimensions are re-measured on site.



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