LAMILUX

CONTINUOUS ROOFLIGHT W | R

Customized Intelligence

Dem Kunden dienen als Programm

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 large roof surfaces and façades is exactly our business. "

Sören Winkler Head of Sales Skylight Systems

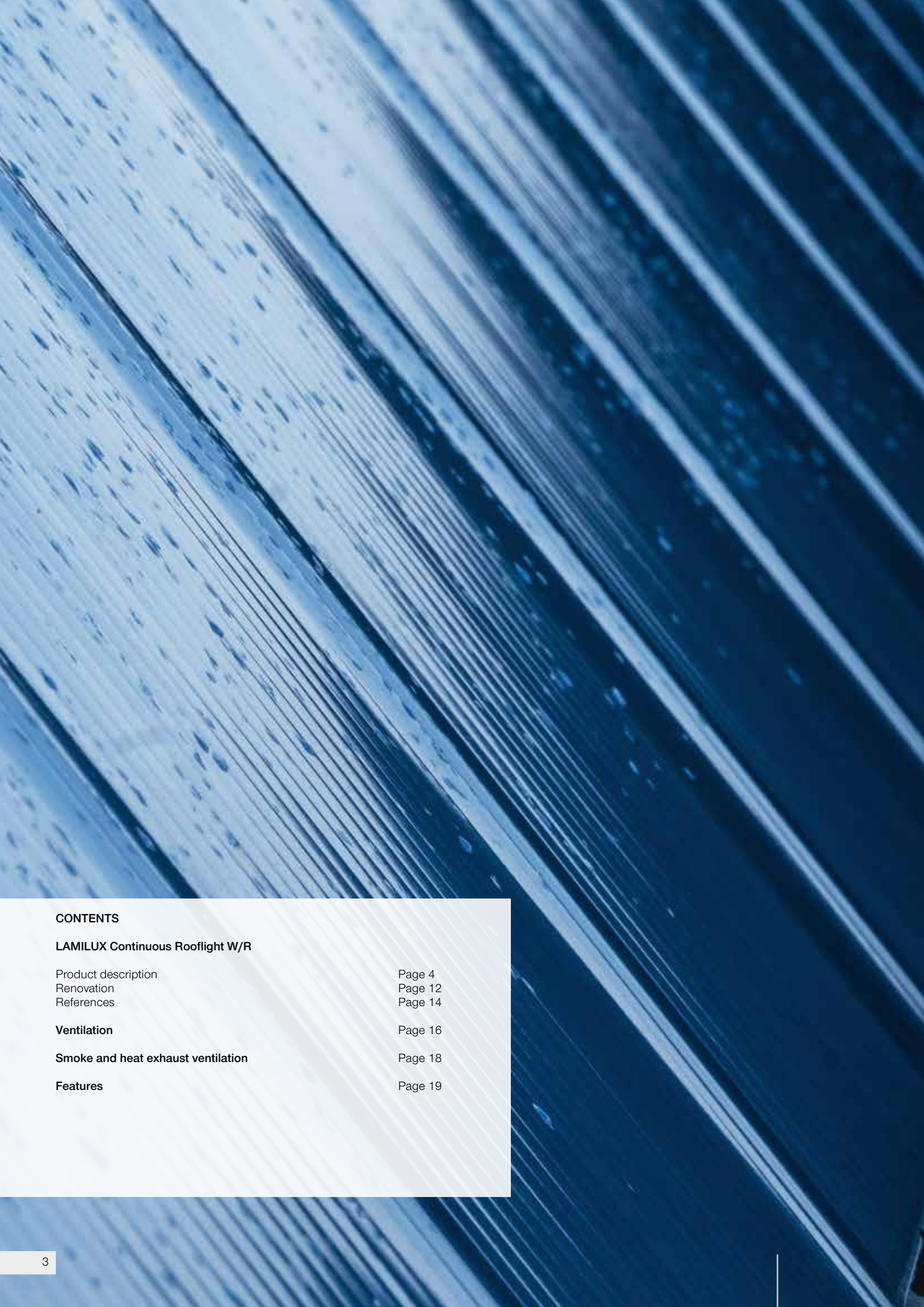
The LAMILUX CI Philosophy

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:

Customised 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, order-related solutions



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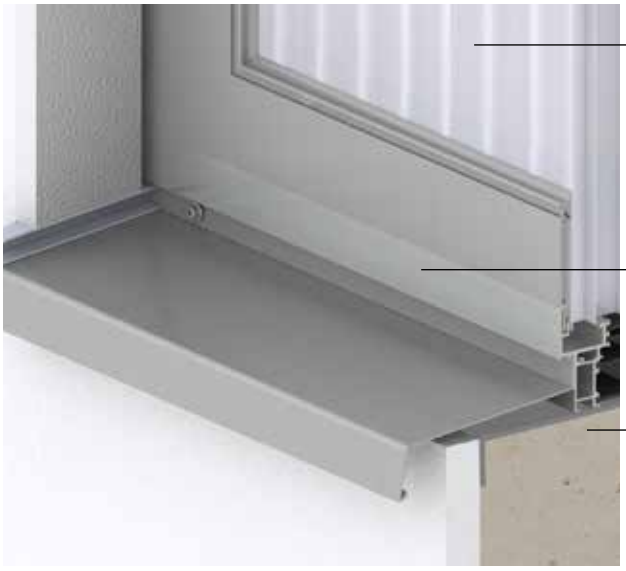
CONTINUOUS ROOFLIGHT W | R

The LAMILUX Continuous Rooflight W|R is ideally suited for large-area illumination of industrial halls and building complexes with daylight. Natural light increases work performance, reduces downtime and error rates, and is an economic and safety factor in industrial and commercial construction. In addition, the glazing of the Continuous Rooflight W|R is meltable and can thus serve as a heat exhaust ventilation in the event of a fire.

The LAMILUX Continuous Rooflight W|R can be installed in building heights of up to 20 m with a maximum panel length of 12 m. It can be extended indefinitely in length. Thanks to its high flexibility in form, colour and function, the system can be individually adapted to your requirements in new buildings or renovations. Due to the variety of glazing variants, visually high-quality areas of use are also possible for sports halls, sales outlets and the like. Requirements beyond this are checked by the technical office on an order-by-order basis.
Natural light incidence with maximum daylight yield thanks to minimal frame parts increase the well-being of building users and reduce electricity costs for electric lighting. In addition, the optimised building structure connection system ensures precisely fitting, cost-optimised solutions without an additional upstand on site.



Energy efficiency – Wide range of glazing for optimal use of daylight

Stability – Frame made of thermally separated aluminium profiles

Flexibility – Installation position in the reveal and as a front façade as well as a shed roof and a ridged roof

LAMILUX
CONTINUOUS ROOFLIGHT W | R

ENERGY EFFICIENCY

All-round optimum thermal insulation with minimised condensation risk thanks to an overall construction completely free of thermal bridges

Preservation of thermal energy in the building due to continuous thermal insulation zones without weak points

Continuous rooflight with good life cycle assessment and comprehensive environmental product declaration as per DIN EN ISO 14025 and DIN EN 15804 (EPD - modules A1 - D)

Customised intake of daylight and solar heat input thanks to object-specific composite glazing with heat transmission coefficients up to 0.75 W/(m²K)

FUNCTIONALITY IN EXTREME WEATHER EVENTS

Weather protection layer consisting of frame profiles, external seals and the outside of the glazing to protect the construction from external influences

Highest air tightness class of all glazing variants according to EN 12207 up to class 4

High stability in driving rain and during storms

Hail-resistance in line with EMPA SIA standard 280.8

SAFETY

From a single source: From planning to installation

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

Preventive fire protection: Melt-out capability of the glazing according to DIN 18230-1 to ensure heat extraction and non-combustion dripping according to EN 13501 B-s1, d0

Perfectly coordinated: overall system with general type approval and ETA-19/0452

SECONDARY SEALING

To ensure that we can guarantee the tightness and safety of the overall system even with larger surfaces, we have developed the secondary sealing for our Continuous Rooflight W|R system. This connection sealing is a continuous EPDM profile, which is fitted onto the upstand and features a flexible, perforated bracket which runs down the upstand.

The secondary sealing serves to prevent rising water (capillary effect). The profiles are connected to the on-site substructure with a sealant and can optionally be mechanically fastened with a clamping strip too.

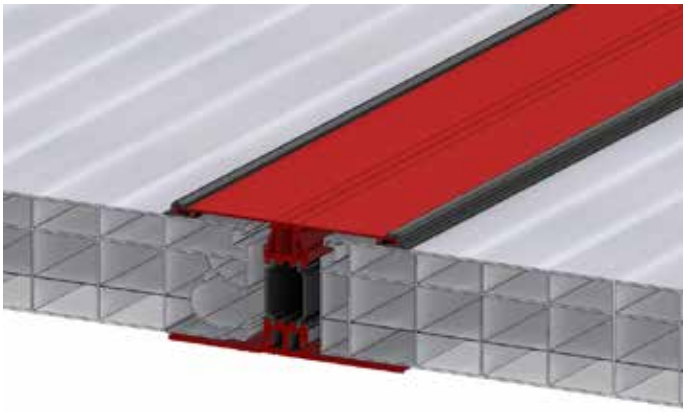
Tightness

+ Optimum tightness with increased wind and suction loads
+ Prevents the capillary effect
+ Can be fastened to any load-bearing material

H-BAR

Our Continuous Rooflight W|R is freely extendable in length. The H-bar counteracts the natural thermal expansion of the material for lengths from 25 metres. The H-bar is a thermally separated system component that prevents the glazing from slipping even under strong wind suction forces.

The H-bar compensates the tension and expansion which occurs when under loads. Its simple design blends in well with the smooth overall appearance of the Continuous Rooflight W|R and can be matched in colour to the overall concept.



Exact fit

+ Expansion joint for long continuous rooflights with simultaneously tight and positively connected glazing
+ Stabilisation of panels (no need for additional pipes to reinforce the panels at the flaps)

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 inside face of the continuous rooflight 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.

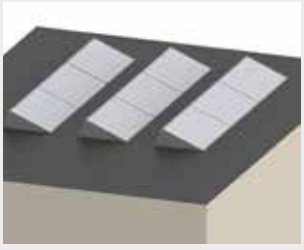
FLEXIBILITY IN MODERN CONSTRUCTION AND RENOVATION

The LAMILUX Continuous Rooflight W|R allows you to bring daylight into your building in an energy-optimised and unbreakable way via lateral light surfaces and from above. Our system is used for the construction of new façades or for the renovation of shed and ridged roofs.

In addition to fresh air, our flap systems as tested smoke and heat exhaust ventilation systems also provide smoke and heat extraction for the safety of people and property. We offer you everything from a single source: from planning to installation and also, if necessary, the disposal of existing constructions.

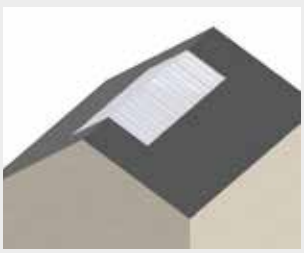
LAMILUX CONTINUOUS ROOFLIGHT W|R in the façade

The Continuous Rooflight W|R is customised to the building and can be installed as a front façade or in the reveal. Heights up to 12 m can be realised here. The continuous rooflight system is ideal for illuminating large industrial halls with daylight via the façade. And since appearance is often an important matter, especially in the façade, you can customise the colour of our system to your individual requirements: The profiles as well as the glazing.



LAMILUX CONTINUOUS ROOFLIGHT W|R as shed roof

The LAMILUX Continuous Rooflight W|R designed as a shed roof is ideally suited for renovation. It often happens that in renovation projects the on-site shed roof construction is retained. We can mount our Continuous Rooflight W|R on your constructions, regardless of the angle of inclination. Benefit from the fact that we can build on almost any load-bearing construction with our system.



LAMILUX CONTINUOUS ROOFLIGHT W|R as ridged roof

The LAMILUX Continuous Rooflight W|R designed as a ridged roof blends very harmoniously into the roof landscape thanks to the butt-free glazing. This continuous rooflight offers many variations for integrating the modular, combinable flap systems for SHEV and ventilation. Our system can be used for renovations regardless of the pitch of the ridged roof.

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 this end, 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. For 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: Alter Postbahnhof in Leipzig

Prior to the renovation
The old shed roofs were getting on in years, as was the Alter Postbahnhof. When the building was converted into a commercial and office building, the skylight systems also had to be adapted to meet modern climate, energy and fire protection requirements.

After the renovation
- Ten LAMILUX Continuous Rooflights W/R with a surface inclination of 60°
- 47 single flap PHOENIX ventilators as smoke and heat exhaust ventilation devices and for energy-free ventilation

COROPLAST, WUPPERTAL

Project:

Renovation of a shed construction for better daylighting and to comply with current fire protection regulations

Systems:

- 55 LAMILUX Continuous Rooflights W|R as shed construction
- 55 LAMILUX fall-through protection grids for installation under the shed glazing
- Twelve LAMILUX-roda louvered ventilators as natural ventilation units for daily aeration and ventilation

HELDELE, SALACH

Project:

Renovation of a production hall to optimise energy and climatic conditions

Systems:

- 28 LAMILUX Continuous Rooflights W|R as shed construction with thermally separated aluminium adapter profile and 90 mm windowsill
- 15 LAMILUX Smoke Lifts M

CG DRIVES & AUTOMATION, WERNIGERODE

Project:

Renovation of a yellowed shed construction of a production hall for better daylighting and fresh air supply during ongoing operation

Systems:

- Nine LAMILUX Continuous Rooflights W|R as shed construction
- 18 single flap PHOENIX ventilators with fall-through protection grid from our subsidiary roda

SCHWARZ ELEKTROMOTOREN, REHAU

Project:

New construction of a production hall for electric motors with skylight systems in the façade and on the roof for optimum daylight utilisation

Systems:

- 25 LAMILUX Continuous Rooflights W|R as façade construction in the reveal with up to 24 m length and 95 mm windowsill
- Six LAMILUX Continuous Rooflights B
- 18 LAMILUX Smoke Lift Continuous Rooflights B as double flap systems
- Two LAMILUX Rooflights F100

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 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 SMOKE LIFT M
FOR CONTINUOUS ROOFLIGHT W | R

LAMILUX Smoke Lift units meet legal requirements and official standards for fast and efficient smoke and heat exhaust ventilation (SHEV). But we also meet the demands of building owners, because they can rely on our pneumatic or electric solutions which are economical and precisely tailored to their needs.

As a natural smoke and heat exhaust ventilation (NSHEV) system, the LAMILUX Smoke Lift M for Continuous Rooflight W|R is far more than an 'off-the-rack' product and offers great variety and flexibility: We match LAMILUX Smoke Lift M to individual requirements, customer wishes and structural conditions. And we also keep one thing in mind above all else: the utmost safety and reliability of our NSHEVs in the event of fire.

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 C_v of 0.55 Aerodynamically effective opening area A_a between 0.37 m² and 1.7 m²
 ...after endurance testing (1,000 times in SHEV position and 10,000 times in airing position)	RE 50/1000 | Ventilation 10,000
 ...under snow load	SL 500 to SL 1000
 ...down to indoor temperature of -15 °C	T(-5) + T(-15)
 ... after exposure to wind suction (up to 1,500 N/m²)	WL 1500
 ...when exposed to fire	B 300

How you benefit

- Tested to DIN EN 12101-2
- The LAMILUX Smoke Lift M does not hit against the roof or wall and does not need to be replaced even when triggered during testing or due to false alarms
- Combination with natural ventilation function (30/50 cm stroke)
- CO_2 cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Possibility for pneumatic and/or electric remote release

Flap combinations

All smoke lift systems can be integrated as a single flap or as opposing double flaps.

Single flap in the façade

Single flap in shed roof

Single flap in a ridged roof

Double flap in ridged roof

Ventilation flap

Various opening variants are available for use in façades in the reveal installation variant.

side-hung sash

Tilt flap

Folding flap

horizontally pivoted sash

Glazing types

For your safety: Continuous Rooflight W|R glazing is considered to be normally flammable and non-flammable dripping.

PC40-4

U_g value*:	abt. 1.5 W/(m²K)
Noise-proofing value:	abt. 20 dB
Installation thickness:	40 mm
Light transmittance (o|k)**:	abt. 29%|abt. 66%
Energy transmission:	abt. 42%|abt. 60%

PC40-7

U_g value*:	abt.1.1 W/(m²K)
Noise-proofing value:	abt. 22 dB
Installation thickness:	40 mm
Light transmittance (o|k)**:	abt. 25%|abt. 55%
Energy transmission:	abt. 39%|abt. 56%

PC50-10

U_g value*:	abt. 0.9 W/(m²K)
Noise-proofing value:	abt. 22 dB
Installation thickness:	50 mm
Light transmittance (o|k)**:	abt. 21%|abt. 48%
Energy transmission:	abt. 38%|abt. 50%

PC60-12

U_g value*:	abt. 0.75 W/(m²K)
Noise-proofing value:	abt. 22 dB
Installation thickness:	60 mm
Light transmittance (o|k)**:	abt. 18%|abt. 42%
Energy transmission:	abt. 34%|abt.45%

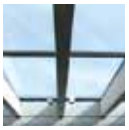
* for vertical installation; slight deviation in horizontal installation
** opal | crystal

Scan this to learn more about LAMILUX skylights!


ROOFLIGHT F100


GLASS SKYLIGHT F100


GLASS SKYLIGHT FE


GLASS ARCHITECTURE


RENOVATION


MIROTEC STEEL CONSTRUCTIONS


CONTINUOUS ROOFLIGHT B


CONTINUOUS ROOFLIGHT S


CONTINUOUS ROOFLIGHT W|R


SMOKE AND HEAT EXHAUST VENTILATION SYSTEMS


BUILDING SMOKE EXTRACTION


RODA LIGHT AND AIR TECHNOLOGY

LAMILUX Heinrich Strunz GmbH
Zehstraße 2 · PO Box 1540 · 95111 Rehau · Tel.: +49 (0) 92 83 / 5 95-0 · Fax +49 (0) 92 83 / 5 95-29 0
E-Mail: information@lamilux.de · www.lamilux.com

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