
LAMILUX
LAMILUX
TRANSLUCENT FAÇADE AND ROOF
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 solutions 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 – Skylights

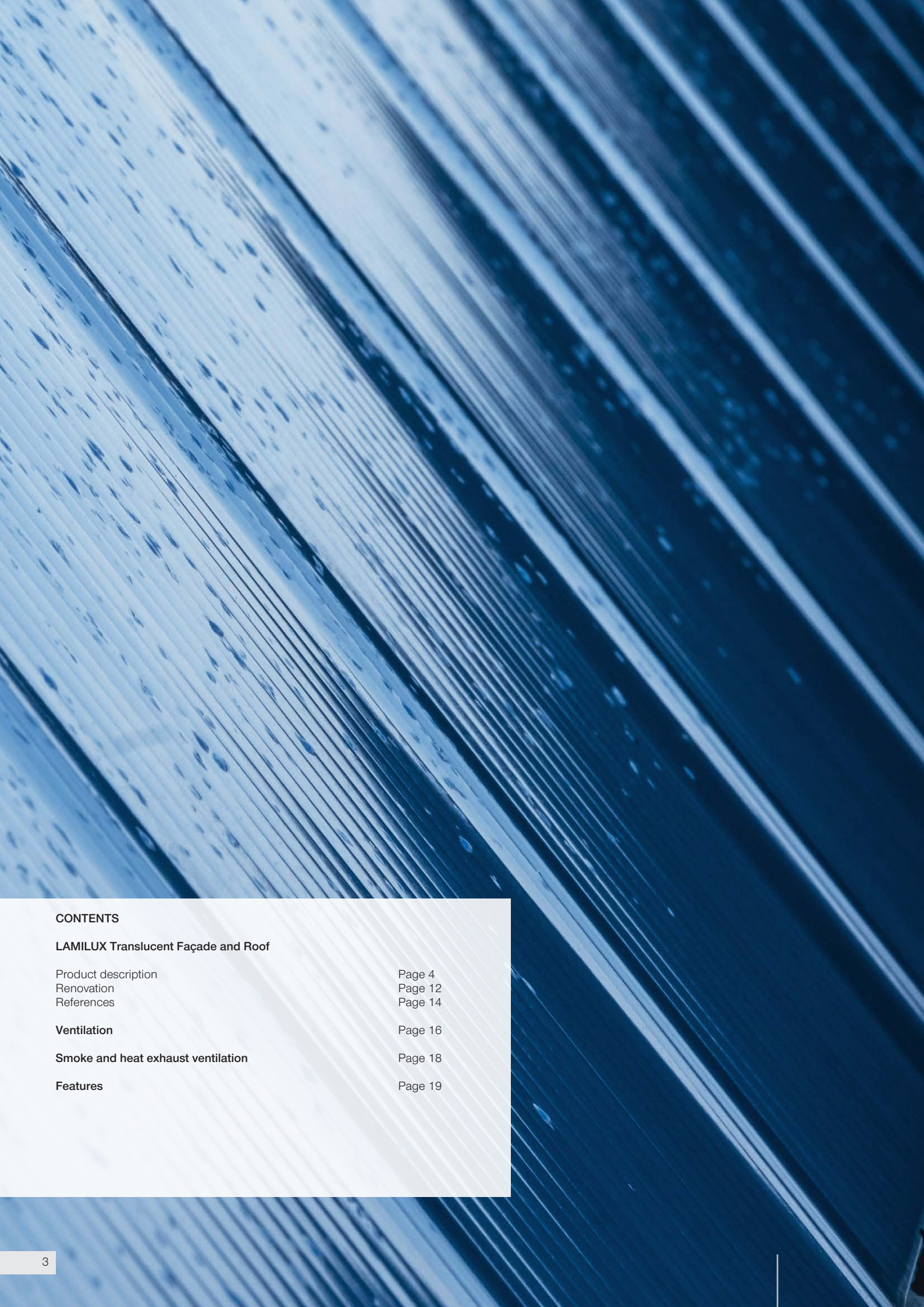
The LAMILUX CI Philosophy

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



CONTENTS

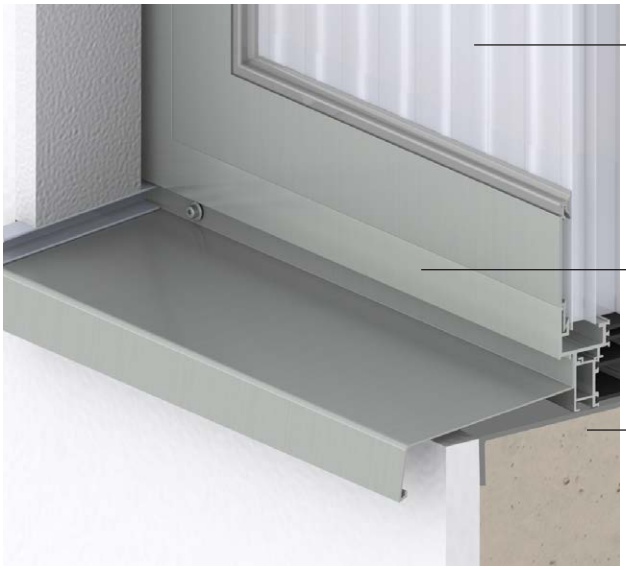
LAMILUX Translucent Façade and Roof

LAMILUX
TRANSLUCENT FAÇADE AND ROOF

The LAMILUX Translucent Façade and Roof is ideally suited for large-area illumination of industrial halls and building complexes with daylight requirements. Natural light increases work performance, reduces downtime and error rates, and is an economic and safety factor in industrial and commercial system. In addition, the glazing of the façade and roofing system is meltable and can thus serve as a heat exhaust ventilation in the event of a fire.

The façade and roofing system 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 similar building constructions. 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 reduces 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
TRANSLUCENT FAÇADE AND ROOF

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

Façade and roofing system with good life cycle assessment and comprehensive environmental pro-duct 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

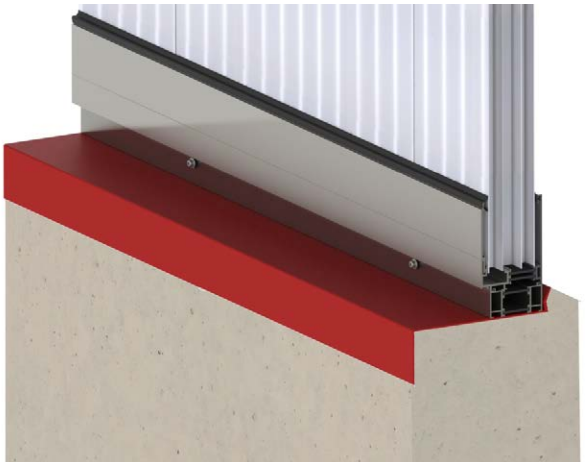
Perfectly coordinated: overall system with general type approval and ETA-19/0452


SIEMENS

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 Translucent Façade and Roof 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.



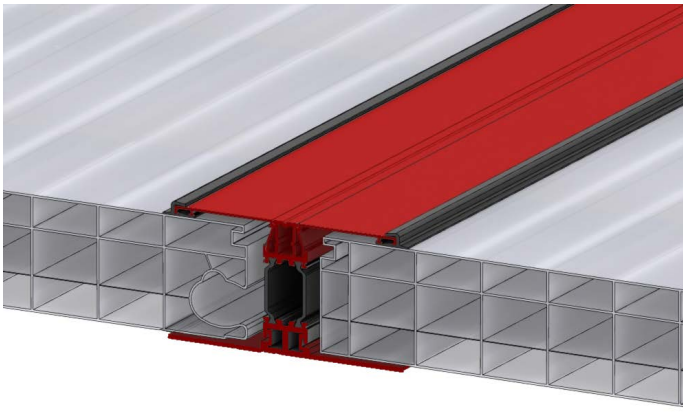
Tightness

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

H-BAR

The LAMILUX Translucent Façade and Roof 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 façade and roof system and can be matched in colour to the overall concept.



Exact fit

+ Expansion joint for long façade and roof constructions 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

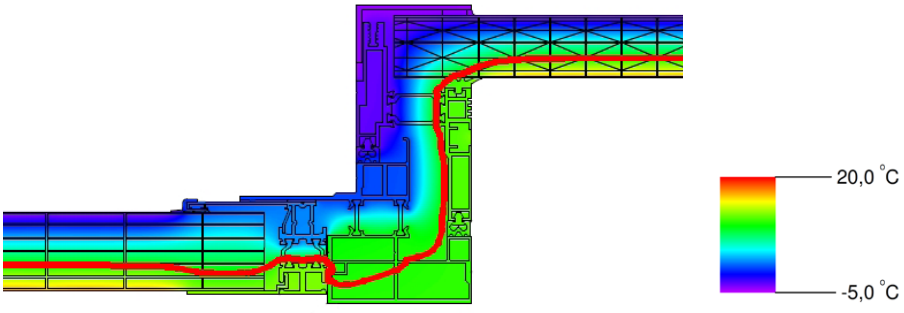
We require our products to make the greatest possible contribution to the optimised energy performance of buildings. We give this the utmost consideration in the LAMILUX façade and roof systems.

Optimised isothermal lines

Isothermal lines describe lines of equal temperature. With regard to LAMILUX systems, 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:

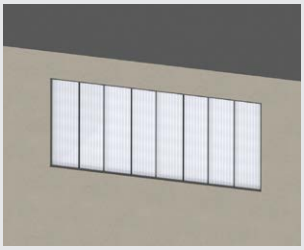
- Standard conditions have been established to quantify the risk of condensation. According to DIN 4108-2 "Thermal insulation and energy economy in buildings", these conditions are: inside temperature of 20 °C, outside temperature of -5 °C, 50% relative humidity.
- Temperatures within the construction can be mapped by what are known as isothermal lines.
- If we adopt the standard conditions, condensate always forms on the inside face 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 building envelope elements are, 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 products.



FLEXIBILITY IN MODERN CONSTRUCTION AND RENOVATION

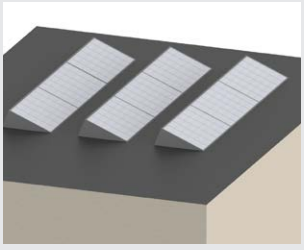
The LAMILUX Translucent Façade and Roof allows you to bring daylight into your building in an energy-optimised and unbreakable way via lateral light surfaces and from above. Our system is used for the construction of new façades or for the renovation of shed and ridged roofs.

In addition to fresh air, our ventilated systems are 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.



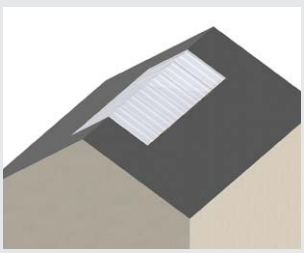
LAMILUX TRANSLUCENT FAÇADE

The LAMILUX Translucent Façade 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 façade 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 TRANSLUCENT ROOF as shed roof

The LAMILUX Translucent Roof 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 skylight 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.



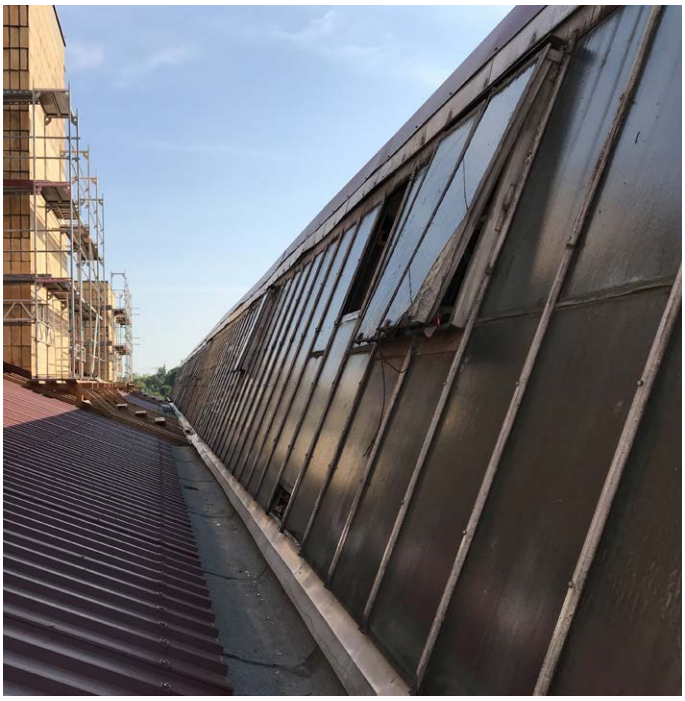
LAMILUX TRANSLUCENT ROOF as ridged roof

The LAMILUX Translucent Roof designed as a ridged roof blends very harmoniously into the roof landscape thanks to the butt-free glazing. This skylight 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 TRANSLUCENT FAÇADE AND ROOF SYSTEMS

This is what renovation of façade and roofing 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. 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.

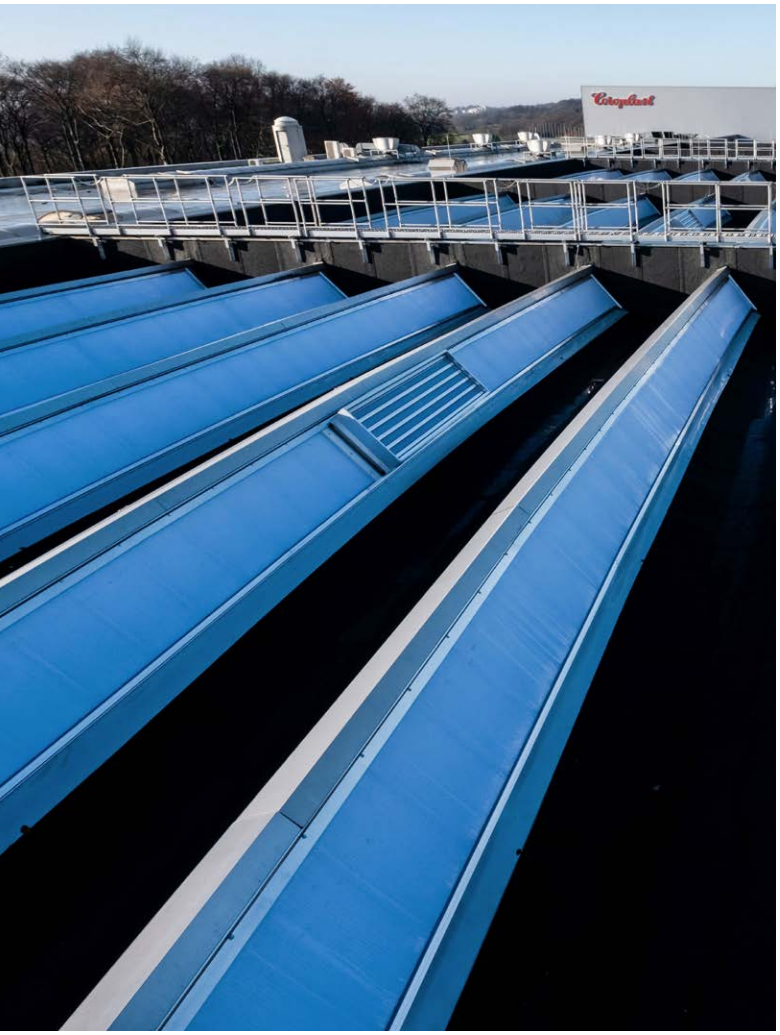
We have been renovating daylight systems throughout Europe in this way for decades. You benefit from this experience, from our product diversity and our focus on customer-specific projects. For it is our goal to develop and implement a technically impressive, innovative, sophisticated and, at the same 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 skylights also had to be adapted to meet modern climate, energy and fire protection requirements.

After the renovation
- Ten LAMILUX Translucent Façade and Roof systems 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 Translucent Façade and Roof systems 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 Translucent Façade and Roof systems 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 Translucent Façade and Roof systems 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 LAMILUX systems in the façade and on the roof for optimum daylight utilisation

Systems:

- 25 LAMILUX Translucent Façade and Roof systems as façade construction in the reveal with up to 24 m length and 95 mm windowsill
- Six LAMILUX Continuous Rooflights B
- 18 LAMILUX Smoke Lifts Continuous Rooflight 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 TRANSLUCENT FAÇADE AND ROOF

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 LAMILUX Translucent Façade and Roof 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

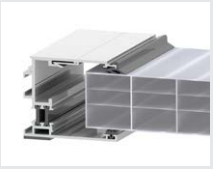
Tilt vent

Folding vent

Horizontally pivoted sash

Glazing types

For your safety: LAMILUX Translucent Façade and Roof glazing is considered to be normally flammable and non-flammable dripping.



PC40-4

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

PC40-7

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

PC50-10

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

PC60-12

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

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

roda
SINGLE AND DOUBLE FLAP VENTILATORS

The PHÖNIX and MEGAPHÖNIX double flap ventilators from roda are designed as versatile, customisable solutions for natural ventilation to meet the highest requirements in industrial environments. With a ventilation position of 90°, they are optimally suited for daily air exchange and are also approved as smoke and heat extraction devices.

Roda products represent high quality and a long service life. The double flap ventilators are designed for over 150,000 opening cycles, which is fifteen times the standard.
With its rainproof ventilation, the MEGAPHÖNIX multi-purpose ventilator offers a special feature, providing maximum permanent air exchange even in bad weather.

Advantages of a double flap ventilator:

- Dimensionally accurate planning, possible on any roof opening
- Can be easily combined with skylights
- Can also be installed on existing continuous rooflights
- Compatible with existing control systems
- Ideal for flat roofs with flexible construction sizes
- Tested according to DIN EN 12101-2 and VdS 2159
- Suitable for multiple daily ventilation
- For new construction, subsequent installation and renovation projects
- Natural smoke extraction
- Durable and low-maintenance
- Fall-through protection, insect screen and sound insulation can be integrated

roda
LOUVRE WINDOWS

Louvre windows are natural air supply units that can also be designed as natural smoke and heat extraction units. Due to their architecture, they offer narrow opening widths and are therefore optimised for use in façades in industrial and administrative buildings.

Thanks to its particularly easy installation and maintenance, the AIRSTREAM louvre window is a reliable companion for decades. This is because all components are easily accessible and can be replaced individually, making it a real survivor. The thermally separated system can be installed in solid walls, sandwich façades or even old window frames, making it extremely flexible.

GERMAN DESIGN AWARD SPECIAL 2023

Advantages of the AIRSTREAM louvre window

- Particularly durable and modular design
- Easy installation and maintenance
- Also suitable for the renovation of existing, old windows
- Many installation and fastening options
- Conserves resources
- Use for daily ventilation
- Optimum air and water tightness thanks to EPDM seals
- Up to triple insulating glazing, but GRP sandwich and polycarbonate multiwall sheet glazing also possible
- Choice of pneumatic, electric drive (24V or 230V) or with manually operated lever

roda
LOUVRE VENTILATOR

The SMOKEJET is a louvre ventilator which, in addition to its function as a SHEV system, can also be used as a natural ventilation unit. It utilises the advantages of a smoke and heat extraction device and also ensures natural air exchange and daylight in buildings.

In addition to a wide range of installation options in the roof, the SMOKEJET can also be integrated into any wall construction as a supply air system. Due to its high stability, low weight and wide range of applications, the SMOKEJET is always appreciated by architects and building owners.

LAMILUX SKYLIGHTS

ROOFLIGHT F100 W

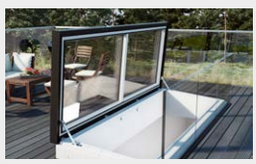
GLASS SKYLIGHT F100

GLASS SKYLIGHT FE

GLASS ARCHITECTURE

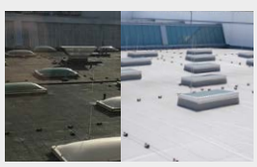
MODULAR GLASS SKYLIGHT MS78

FLAT ROOF HATCHES

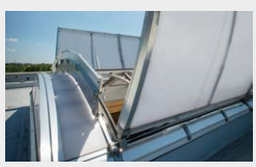


CONTINUOUS ROOFLIGHT

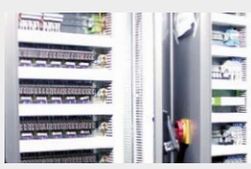
RENOVATION



SMOKE AND HEAT EXHAUST



BUILDING SMOKE EXTRACTION



RODA LIGHT AND AIR TECHNOLOGY

Scan this to learn more about LAMILUX skylights!

LAMILUX

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