

# LAMILUX SKYLIGHTS - MAXIMUM EFFICIENCY

"Modern construction is shaped by the topic of energy efficiency. Skylights in industrial and administrative buildings, aesthetic showpiece buildings and private residences are regarded as an integral part of energy-efficient building constructions. At LAMILUX, we focus on the permanent development of innovative daylight solutions for sustainable and energy-efficient construction of the future."

### Dr. Alexander Strunz

Executive Manager LAMILUX Heinrich Strunz GmbH



### The LAMILUX CI Philosophy

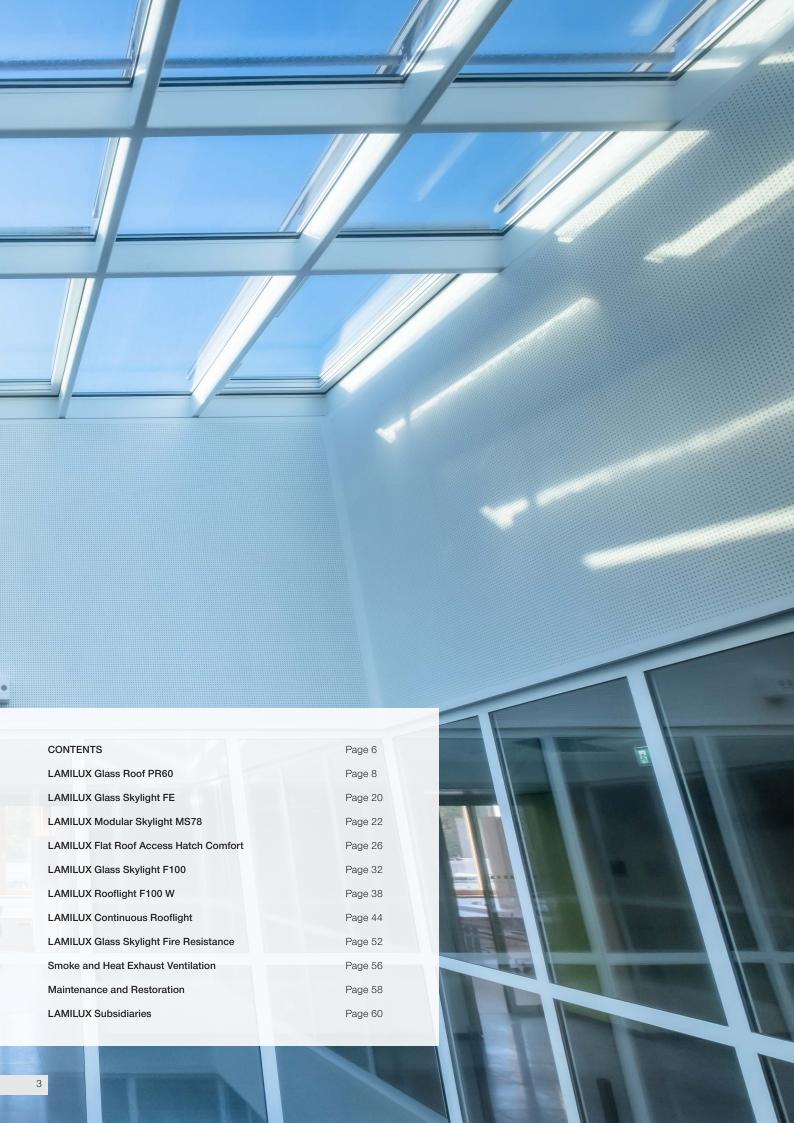
Customer value is the reason we exist – and the focus of our activities. This requires harmony, identity and a balance between customer value and company strategy.

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

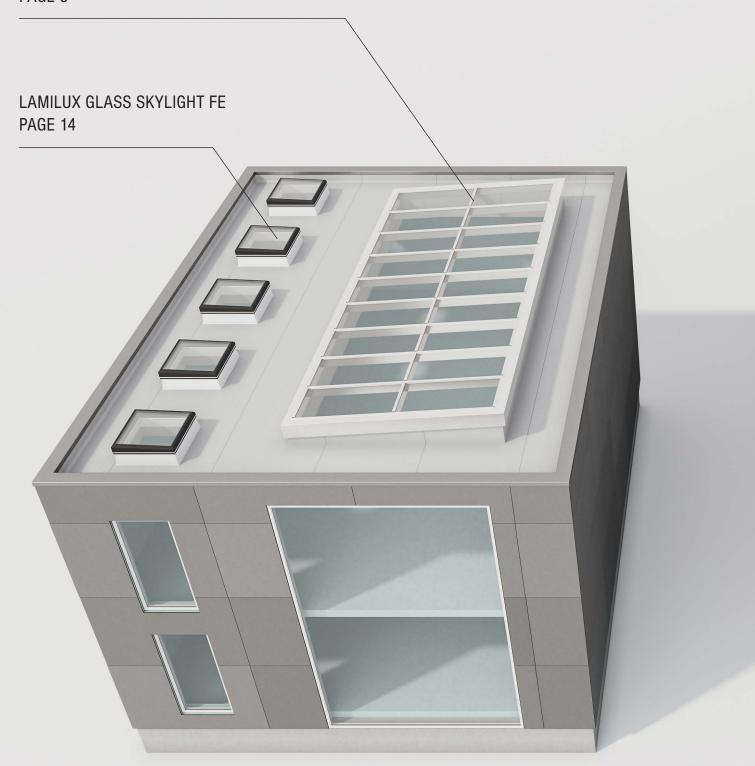
### Customized Intelligence - serving customers is our first priority:

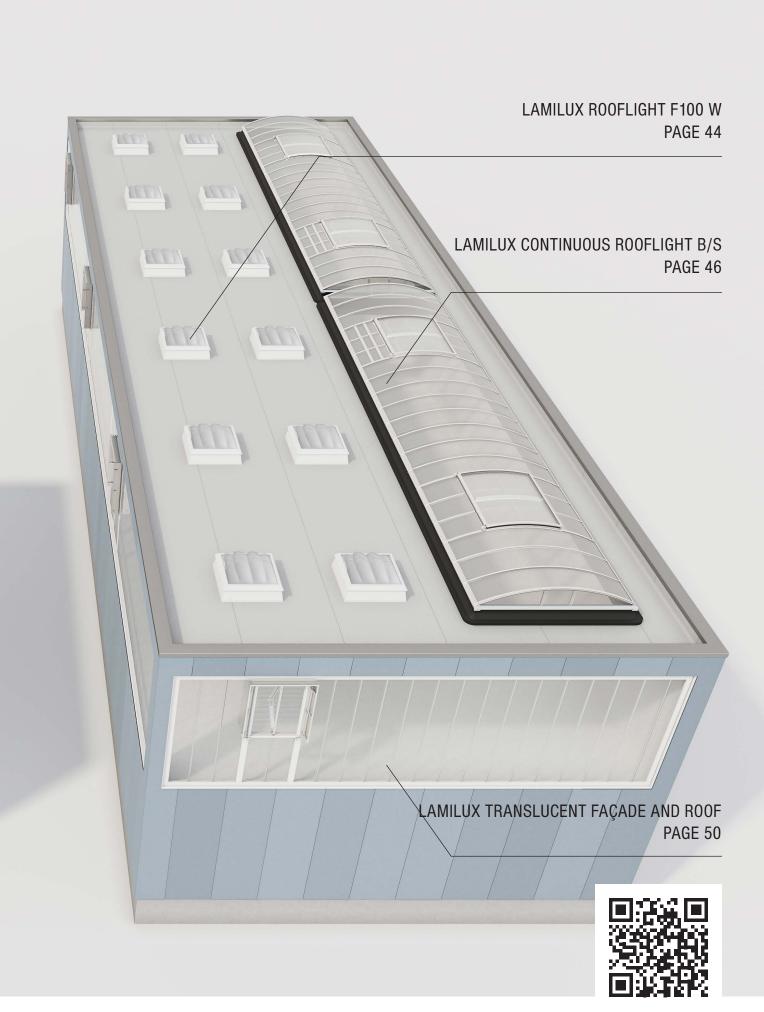
This requires outstanding performance and leadership in all areas relevant to customers, particularly in the role of:

- 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



### LAMILUX GLASS ROOF PR60 PAGE 8





# BIM AND PRODUCT CONFIGURATOR – FOR LAMILUX SKYLIGHTS

Easily configure a single, dedicated space for each product variant through an interactive, real-time 3D preview.

Seamlessly explore and define your product using a dynamic dialogue interface, then with just one click, share, request, or download BIM objects, 2D/3D CAD models, high-quality images, dimensional drawings, or data sheets — all in your preferred file format.

IWith or without BIM, the PDF data sheet is your all-in-one document. It includes all technical specifications, an active 3D model, a detailed dimensional drawing, and a direct link back to your configured product. Perfectly tailored to your selected variant, it's the ideal reference for planning your project. Generate it yourself now 24/7. Avoid transmission errors and misunderstandings on long chains of tenders, requests and quotations. Download BIM objects and equip the model with data and information from all project participants throughout the entire planning process.

Check out this gr code to try our

product configurator.



Use reliable BIM objects of our skylights right from the start instead of planning placeholders where geometry and properties or even availability are unclear. You can make changes directly in the building model as you advance through the reliable system thanks to our parametric models — or even more flexible with a plug-in directly within the configurator.



The final variant of the skylight system can be requested and ordered with just a few clicks for the configurator-based model, using ID with variant accuracy. This avoids transmission errors and misunderstandings on long chains of tenders, requests and offers.



Generate data sheets for the product variant directly in the configurator or store supplied documents via a link to the components in the building model.

For more information check our website.

www.lamilux.com/bim

# 3D/2D share-function request data sheets data sheets components in the building model. Share-function Share-function BIM Share-function BIM Share-function BIM Share-function Share-function Share-function BIM Share-function Share-function

# AUGMENTED REALITY -EXPERIENCE OUR PRODUCTS ON YOUR SMARTPHONE

Immerse yourself in the world of virtual reality and explore the product in a real environment. Visit the LAMILUX World and scan the QR codes with your smartphone or tablet.

Choose between flat roof skylights, rooflight domes or flat roof access hatches. By utilising augmented reality, you can position your selected product in any desired location, allowing you to visualise how it would appear in that setting. View the product from all angles or change the size. Augmented reality creates a bridge between the physical and virtual worlds.







Glass Skylight



F100



Rooflight F100 W



Glass Skylight F100 circular



Rooflight F100 Circular

















Glass Skylight FE 3°



Flat Roof Access Hatch Comfort Square



Flat Roof Access Hatch Comfort Swing





# LAMILUX GLASS ROOF PR60

Design glass roofs that are customised to the unique characteristics of your building project: The LAMILUX Glass Roof PR60 features a highly versatile mullion-transom system, allowing for a wide range of shapes with pitches ranging from 2 to 75 degrees: from saddle and hip roofs to pyramids and barrel roofs to fully customised geometries. The LAMILUX Glass Roof PR60 is available in many glazing variants, such as insulating, solar control or sound insulation glass as well as light-directing or light-diffusing glazing.

provide exceptional dimensional stability, particularly at load-bearing joints, enabling the creation of complex profile joints without difficulty. In addition, the narrow face width of the profiles of 60 millimetres ensures a high incidence of daylight - hence the 60 in the name of our mullion-transom construction. Furthermore, the system has been rigorously tested for driving rain tightness, airtightness, and wind load resistance, ensuring reliable performance even in severe weather conditions.

The system's specially designed interlocking slide-in connectors



### Cover strips with splash water duct

(available with optional cover profile)

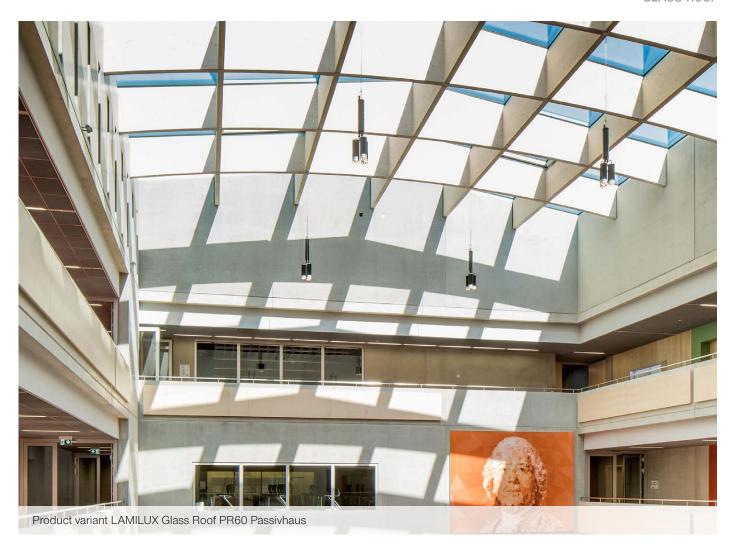
High degree of driving rain tightness and airtightness thanks to continuous EPDM outer seal

Thermally optimised insulation core

**Double or triple glazing** available in many glazing types

Internal, multi-stage seal system with secondary water drainage

High intake of daylight thanks to **narrow support profiles** 





Savings on heating costs and minimised risk of condensation thanks to optimal isothermal characteristics

All-round optimum thermal insulation in a thermally separated overall construction

Preservation of significant thermal Passivhaus-certified variant energy in the building thanks to the comprehensive efficiency of the system

(phA) with optimised thermal insulation and excellent airtightness values



### **COMFORT & DESIGN**

Unique full service thanks to planning, construction and installation of the glass structure from a single source

Made-to-order complete solutions Narrow supporting profiles ensure for daylight, SHEV, ventilation and an unobstructed view to the outcontrol technology

side and a high intake of daylight

LAMILUX Ventilation Flap PR60 in an architecturally appealing design with a roof upstand of only 40 mm



### **FUNCTIONALITY IN EXTREME WEATHER CONDITIONS**

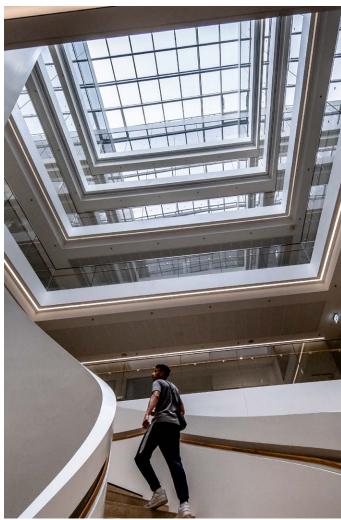
Tested watertightness in heavy rain and during storms (impervious to driving rain, in accordance with DIN EN 13830, Class RE1950)

High resistance to wind loads (2000 Pa as per DIN EN 13830)

Outstanding airtightness (AE 3000 positive test pressure as per DIN EN 13830)

Optimised soundproofing and minimised rain noise thanks to special glazing (R<sub>w</sub> = 46 dB as per EN 10140-2)





# BMW GROUP FIZ, MUNICH

# UNFALLKRANKENHAUS, BERLIN

### Project:

Complete renovation of a four-storey building, used for product development, to reconfigure the layout giving best use of space. Covering of the area located between the main and outer building with a special glass construction.

### Systems:

- Glass roof construction composed of 60 axes each with 15 panes
- A total of 900 panes, 225 of which have a unique shape
- Removal of the old and installation of the new glass roof while normal operations continued
- Elevated installation of the glass panes to compensate for any glare

### Project:

New construction of the rehab clinic of the Unfallkrank-enhaus Berlin with the principle of "healing architecture". Targeted use of the LAMILUX PR60 glass roof above the open foyer to provide all floors with daylight.

### Systems:

LAMILUX glass roof PR60 with a surface pitch of 5°





# SINGLE FAMILY HOUSE, NORTH GERMANY

# BYODO NATURKOST, MÜHLDORF

### Project:

New construction of a spacious single family house with a focus on maximum, show-stopping daylight intake.

### Project:

Nature first: Natural food centre with plenty of natural light

### Systems:

- One LAMILUX Glass Roof PR60 in a pyramid shape with a surface inclination of 25° and structural roof opening size of 4 x 4 m
- Two integrated LAMILUX Ventilation Flaps PR60 for daily ventilation

### Systems:

- A LAMILUX Glass Roof PR60 with a surface pitch of 3° and dimension of 14.5 x 16 m in 84 glass panels
- Integration of twelve LAMILUX PR60 ventilation sashes made of thermally separated, extruded aluminium profiles





# LAMILUX GLASS SKYLIGHT FE

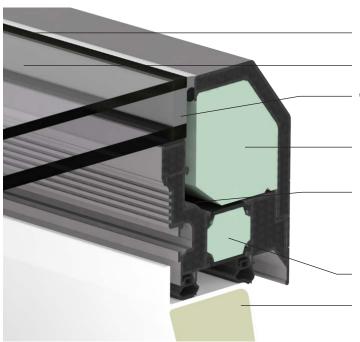
Sophisticated design in a number of variants: The LAMILUX Glass Skylight FE represents a milestone in product development at LAMILUX. Architects, builders and building users benefit from an innovative frame profile and sophisticated design features with a wealth of additional benefits. For this, the skylight received the German Design Award 2019, the Red Dot Award 2019 as well as two Plus X Awards.

The design of the LAMILUX Glass Skylight FE can also be adapted to any construction project's overall architectural concept. Design freedom is offered with a wide variety of glazing and sizes up to 2.5 x 2.5 metres. In addition the drive concealed within the profile frame and the freely selectable exterior and interior colours of the skylight offers choice and flexibility. Just as impressive is its all-round optimum thermal insulation in a compact overall system free of thermal bridges and optional certification in Passivhaus as a phC certified component.









### Structural Glazing design

### Flat drainage surface

"Warm edge" (spacers between the panes, made of materials with low thermal conductivity) as a standard feature

Integration of all drives and components in the profile frame

**TAD - Thermo Active Design:** A patented component below the glazing support for surface enlargement absorbs more heat energy from the room air contributing to the optimised isothermal curve

### Thermally optimised insulation core

**Insulated GRP upstand:** Manufactured without joints (optional) and with a continuous insulation core made of 60 mm thick PU foam



Savings on heating costs and minimised risk of condensation thanks to flawless isothermal characteristics All-round optimum thermal insulation in a compact overall system free of thermal bridges and optional certification as a phC certified component

Preservation of thermal energy in the building thanks to the comprehensive efficiency of the system Seamless and vapour-tight upstand made of glass-fibre reinforced composite with integrated insulation



### **COMFORT & DESIGN**

Uniform appearance throughout thanks to new joining technology: no visible screw joints or weld seams as well as four-sided flat water drainage

Easy installation thanks to completely pre-assembled delivery of the skylight The integration of all drives, power adapters, cables and other components into the frame of the skylight creates a smooth interior design

Variety of design and colours thanks to freely selectable exterior and interior colours of the flat roof skylight



### FUNCTIONALITY IN EXTREME WEATHER CONDITIONS

Tested watertightness in heavy rain and during storms (highly impervious to driving rain, in accordance with DIN EN 12208, Class E 1950) High stability against wind load (highest wind load class C5 according to DIN EN 12210)

Excellent air permeability (performance class 4 – DIN EN 12207)

Optimised sound insulation and minimised rain noise due to special glazing ( $R_{\rm w}$  = 38 dB)



Approved fall-through protection as per DIN 18008-6

Preventive fire protection according to DIN 18234: Prevents fire spreading on the roof without additional measures

Optional use as a smoke outlet in stairwells meeting all requirements of DIN EN 12101-2

High hail resistance due to TSG exterior pane as standard



Product variant LAMILUX Glass Skylight FE 3°

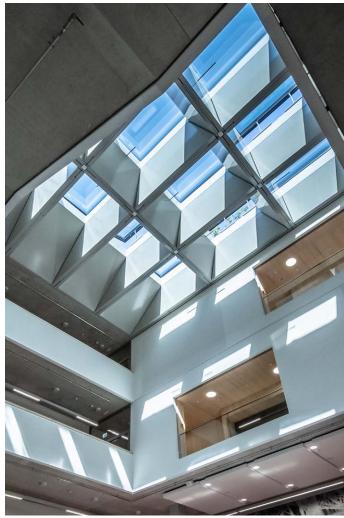


Product variant LAMILUX Glass Skylight FE Pyramid or FE Hipped









# HUMBOLDT UNIVERSITY, BERLIN

# UNIVERSITY, AUGSBURG

### Project:

Large-scale, natural illumination of the central library and reading area of the new building with at the same time high demands on the thermal insulation of the skylights.

### Systems:

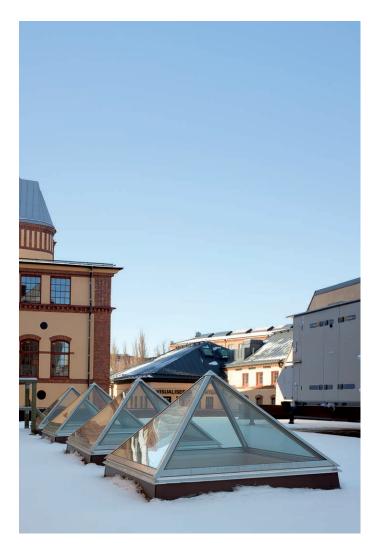
- 92 elements of the type LAMILUX Glass Skylight FE  $3^{\circ}$  in the dimensions 250 x 250 cm
- Partly designed as natural ventilation and with SHEV function
- Top structures made of glass-fibre reinforced plastic with inside cladding of coated sheet steel
- Sun protection glazing with 50% light transmittance and 17% energy transmittance

### Project:

New construction of the medical campus of the University of Augsburg. The use of LAMILUX Glass Skylight FE 3° ensures optimum daylight into the large hall with open staircase.

### Systems:

15 LAMILUX Glass Skylight FE 3°





# NORRKÖPING SCHOOL, SWEDEN

# MILTON KEYNES UNIVERSI-TY HOSPITAL, ENGLAND

### Project:

Conversion of a former industrial building into a school building. Supply of the building with natural daylight even on cloudy winter days.

### Systems:

- $\bullet$  LAMILUX Glass Skylight FE Pyramid in the dimensions 180 x 180 cm with a U  $_{\rm g}$  value of 1.1 W/(m  $^2$ K) and a sound insulation value of 35 dB
- Upstands made of glass-fibre reinforced composite, 50 cm in height
- Condensate detector

### Project:

New construction of an administration building with a focus on aesthetic, natural lighting.

### Systems:

- Six LAMILUX Glass Skylights FE Circular opening for ventilation
- 17 LAMILUX Smoke Lifts Glass Skylight F100
- Six motors in special design for flat roof windows
- Wind and rain sensor set
  - SHEV central units and CO<sub>2</sub> alarm stations

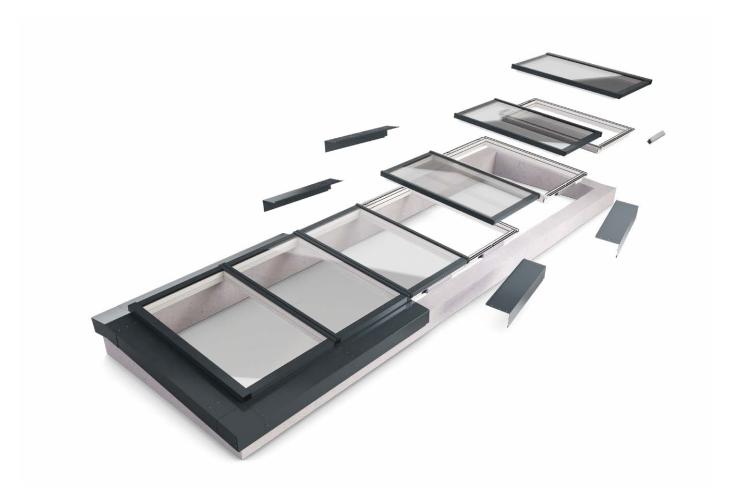




# LAMILUX MODULAR GLASS SKYLIGHT MS78

The LAMILUX Modular Glass Skylight MS78 combines the advantages of two proven LAMILUX-systems – The LAMILUX Glass Skylight FE and the LAMILUX Glass Roof PR60 and inspires with glass roof innovations. With large areas of light thanks to multipane glazing and opening vent, it provides increased daylight incidence in buildings with a width of up to 3 metres and variable length.

The variable and opening vent integration of the new LAMILUX glass roof ensures high ventilation comfort and offers a uniform appearance of opening vents and fixed elements with concealed integrated drives. Architects and roofers benefit above all from short delivery times thanks to lean and automated processes as well as simple and safe roof integration thanks to the system's own connection technology.







### **ENERGY EFFICIENCY AND SUSTAINABILITY**

The overall system offers thermal insulation values significantly above the legal requirements according to GEG

Sustainable product design enables a closed raw material cycle through pure recycling All-around optimal thermal protection in a compact, thermal-bridgefree overall system

Heating cost savings and minimized condensation and achieved due to isothermal protection.

Heating cost savings and minimized condensation risk achieved due to isothermal line remaining within the structure for consistent heat insulation



### PRODUCT DIVERSITY IN HIGH QUALITY STANDARDS

Native vent integration (NFI) for uniform appearance of opening and fixed modules More air thanks to maximum ventilation area with no restrictions on positioning of opening modules

More light due to the high glazing share with module sizes up to  $1.30 \times 3.00 \text{ m}$ 

Even more light thanks to full light area through modules without clamping frames



### **FUNCTIONALITY AND SAFETY**

Overlap-covering drainage profile (NFI) offers the highest safety on the first sealing level

Self-aligning module connection (SAM) with V-groove simplifies precise installation

Simple and secure roof integration thanks to system-own connection technology

Complete glazing from the roof in one step incl. vapour-tight connection





# LAMILUX FLAT ROOF ACCESS HATCH COMFORT

In the past, flat roof access hatches were only used as roof access for maintenance and inspection purposes. In the meantime, other aspects of use have been added and the demands on skylights have become much more complex. In addition to optimised thermal insulation values and proven durability, the focus is mainly on architectural requirements and comfort.

This provides a previously unattained level of daylight incidence for exclusive attic flats and creates an even more comfortable access to the roof. The indoor climate also benefits from the high energy efficiency of the systems and the unrestricted use as ventilation unit.

### Highest quality standards

To us, quality does not only mean high energy efficiency of our products, but also durability through the use of the highest quality materials, certified functional safety for daily use and perfectly shaped design.

### Pre-assembled to the construction site

We deliver all our elements completely preassembled to the construction site. Only the control unit for the Flat Roof Access Hatch Comfort Solo and Duo has to be installed on site. This reduces the amount of crane work, fastening and sealing required.

### **Proven functionality**

As a planner and installer, you benefit from the simple and fast usability of our flat roof access hatches, which brings planning security in terms of weather, saves time and costs. Once the roof is closed, dry construction can begin.



Flat Roof Access Hatch Comfort Square



Flat Roof Access Hatch Comfort Swing



Flat Roof Access Hatch Comfort Solo



to kink-free isotherms

free overall system

Heating cost savings and minimi- All-round optimum thermal insula- Preservation of a high amount of Available with high-quality funcsed risk of condensation thanks tion in a compact, thermal bridge- thermal energy in the building due tional glass (upon request) to the frame construction



### **COMFORT & DESIGN**

Easy to install thanks to completely pre-assembled delivery of the flat roof access hatch.

Self-cleaning - thanks to level water drainage\* and inclined upstand

Non-visible drives offer a particularly high-quality interior view

Variable ventilation with pushbutton function



### SAFETY

Roof access hatch fall-throughproof according to DIN EN 18008-6 in closed position.

Preventive fire protection according to DIN 18234: prevention of fire spreading on the roof without additional measures

Entry and exit area monitored by light barrier or motion detector

Meets the requirements of the Machinery Directive



### PRODUCT CONFIGURATOR

Create individual product variants, Share, request or download BIM Support for your individual glass guided by a dynamic dialogue with objects, 2D and 3D CAD models, roof or continuous rooflight project 3D preview in real time.

images, dimensional drawings and data sheets in the desired file format with a single click



Check out this qr code and test our product configurator.



### ACCESS HATCH COMFORT SOLO

### Residential building, Paris - France

The Flat Roof Access Hatch Comfort Solo made it possible to create a sophisticated ambience with a view over the rooftops of Paris combined with a pleasant incidence of light for the attic flats.

The overall system, free from thermal bridges, optimised isothermal processes and the option of special glazing also meet modern demands on sustainability, energy efficiency and climate protection.



### FLAT ROOF ACCESS HATCH COMFORT SOLO

### Residential building - Berlin

Due to local regulations, access via a stairwell was not possible. This could be resolved though with the Flat Roof Access Hatch Comfort Solo.

A variable opening of the sash allows a roof access hatch that can also be used as a ventilation option. The control is effected via an external 24V rack and pinion drive on telescopic rails made of stainless steel with brush seal.



### FLAT ROOF ACCESS HATCH COMFORT SWING

### Townhouse - Hohen Neuendorf

A luxurious living space for the discerning was created thanks to the large amount of natural light, controllable ventilation and convenient access to the roof terrace.

The opening is stepless across the entire folding sash with hinges on the long side. The maximum opening angle is approx. 84°.



### FLAT ROOF ACCESS HATCH COMFORT SWING

### Residential building - Denmark

With the Flat Roof Access Hatch Comfort Swing, a space-saving access to the roof terrace and alongside an exclusive ambience could be created.

The Comfort Swing can be opened variably over the entire folding sash like a door. It has a compact, highly energy-efficient overall construction, which rests on an upstand made of glass-fibre reinforced plastic with an integrated core insulation block.

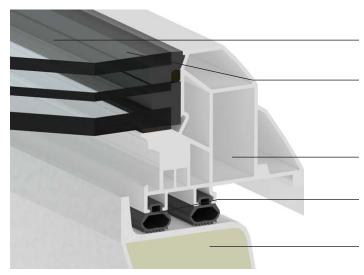




# LAMILUX GLASS SKYLIGHT F100

The LAMILUX Glass Skylight F100 is an energy-efficient skylight for rooms with high optical demands. Particularly in residential, administrative and office buildings, it floods rooms with daylight and fresh air. Various shading options can be used to control the amount of light and heat entering the room – conveniently controlled up to a comfortable climate.

Not only the building user, but also the builder benefits from practical advantages: The skylight is very quick and easy to install. It is completely pre-assembled on the upstand when it is delivered to the construction site and it can be fixed onto the flat roof immediately – both with the ventilated and the fixed variant.



First flat roof window with national technical approval featuring a **Structural Glazing design** 

**Flat drainage surface:** The unique frame profile provides a smooth transition between the glazing and the border frame, creating an unobstructed drain for rainwater

### Thermally optimised PVC border frame

Outstanding, certified air-tightness due to the **balloon double** sealing system

**Insulated GRP upstand:** Manufactured without joints (optional) and with a continuous insulation core made of 60 mm thick PU foam; Optional ventilation drives concealed in the upstand



Product variant LAMILUX Glass Skylight F100 Circular



### **ENERGY EFFICIENCY**

Savings on heating costs and minimised risk of condensation thanks to flawless isothermal characteristics All-round optimum thermal insulation in a compact, thermal-bridgefree overall system

Preservation of thermal energy in the building thanks to the tight overall system

Seamless and vapour-tight upstand made of glass-fibre reinforced composite with integrated insulation



### **COMFORT & DESIGN**

Optional concealed integration of all drives, cables and other components into the frame

Avoidance of internal plastering work thanks to smooth, silk-white interior finish of the upstand

Permanently clear view, infinitely variable water drainage and generous daylight incidence due to scratch-resistant glazing and uniquely designed frame profile

Optional simplification of connection work through optimum structural attachments for a wide variety of sealing techniques



### **FUNCTIONALITY IN EXTREME WEATHER CONDITIONS**

Tested watertightness in heavy rain and during storms (impervious to driving rain, in accordance with DIN EN 12208, Class E 1950)

Optimised sound insulation and minimised rain noise due to special glazing (R<sub>w</sub> = 38 dB)

High stability against wind and snow loads (wind load – class C4 according to DIN EN 12210) Optional internal or external shading as well as UV-resistant edge seal against strong solar radiation



### **SAFETY**

Approved fall-through protection according to DIN 18008-6

Preventive fire protection according to DIN 18234: Prevents fire spreading on the roof without additional measures

Optionally available for use as a smoke outlet in stairwells

Available as fully certified smoke and heat exhaust ventilation device according to DIN 12101-2





# MODERSOHN ELEMENTARY SCHOOL, BERLIN

# CARITAS, HAGEN

### Project:

Extension to the new Modersohn elementary school in Berlin. To promote the children's well-being and attention, 20 LAMILUX Glass Skylight F100 were installed.

### Systems:

- 18 LAMILUX Glass Skylight F100, structural roof opening dimension: 150 cm x 150 cm
- Two LAMILUX Glass Skylight F100, structural roof opening dimension: 120 cm x 120 cm

### Project:

Renovation of the roof of the Caritas workshop for people with disabilities: Natural illumination of the premises with around 70 LAMILUX Glass Skylights F100. Flush surface allows rainwater and dirt to run off.

### Systems:

- LAMILUX Glass Skylight F100
- LAMILUX Glass Skylight FE





## WORKSHOPS, STRAUBING

# ST. SEVERIN NURSERY, GARCHING

#### Project:

Modernisation of a workshop building with over 120 LAMILUX Glass Skylights F100. Increase of natural daylight and reduction of running energy costs.

#### Systems:

- LAMILUX Glass Skylights F100 in different sizes
- Interior sun protection

#### Project:

New construction of the nursery with a rippled roof shape. Integration of skylights in the large recreational and dining area.

- 13 LAMILUX Glass Skylights F100 Circular in a fixed design and a structural roof opening size of 150 cm
- Nine LAMILUX Glass Skylights F100 Circular opening for ventilation with a stroke height of 300 mm

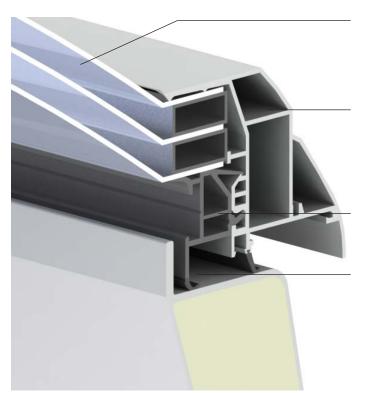




### LAMILUX ROOFLIGHT F100 W

The domed rooflight is the ideal skylight on flat roofs of production halls, warehouses, sports and exhibition halls. It not only brings daylight and fresh air into the building, but also ensures the personal and property safety as a smoke and heat exhaust ventilation unit. Thanks to a multi-layered seal system and up to quadruple glazing, the rooflight boasts exceptional heat-insulation values.

With clever geometry instead of more material, the rooflight equips itself for future challenges. The new wave shape of the rooflight shell with its protected design ensures better load transfer and guarantees rigidity stiffness without using more material. This design ensures, the skylight F100 W remains watertight even at higher wind speeds and withstands more wind and snow.



**Stability** – Clever geometry instead of more material due to the wave shape in the glazing.

Your benefit: Better load transfer and more safety during extreme weather events and a long life span.

**Variety of variants** – individual glazing systems for optimum use of daylight.

Your benefits: Increase in the well-being of the building users thanks to the natural incidence of light and reduction of electricity costs for electric lighting.

**Flexibility** – plastic glass strip with circumferential functional groove. Your benefit: Easy retrofitting with fitting parts possible at any time

**Energy efficiency** – multi-stage sealing system for compact system tightness.

Your benefit: Heating cost savings and minimised risk of condensation due to excellent thermal insulation of the surrounding frame (Uf =  $0.76~W/(m^2K)$ )



Product variant LAMILUX Rooflight F100 W



#### **ENERGY EFFICIENCY**

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

Preservation of the thermal energy in the building thanks to the internal, multi-layered seal system

Fully heat-insulated upstand made of GRP, optionally available with heat-insulated base flange 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)



#### **FUNCTIONALITY IN EXTREME WEATHER CONDITIONS**

Tested watertightness in heavy rain and during storms (Driven Rain Index DRI up to 14.7 m²/s)

High stability in heavy rain and during storms

High resistance to wind loads up to UL 1780 as per DIN EN 1873

Hail resistance as per VKF No. 10 test regulations



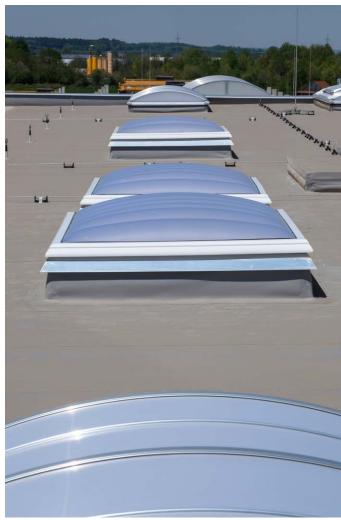
#### **COMFORT & SAFETY**

Easy processing thanks to completely pre-assembled delivery of the skylight Lockable ventilation as standard with the option of retrofitting ventilation drives at any time

Passive fire protection: Compliance with DIN 18234 for the prevention of fire spread on rooftops without additional measures

Available as certified smoke and heat exhaust ventilation device according to DIN 12101-2





## FRANKIA, MARKTSCHORGAST

#### Project:

Roof renovation of the regional motorhome manufacturer Frankia.

#### Systems:

- Two LAMILUX F100 flat roof windows
- 15 LAMILUX Rooflight F100 W
- 26 LAMILUX Smoke Lift Rooflight

## UNGLEHRT, MEMMINGEN

#### Project:

New construction of a production hall for the Unglehrt construction company. The installed LAMILUX Rooflights F100 W and LAMILUX Rooflights B provide optimal daylight illumination in the production hall. Furthermore, the smoke and heat extraction devices serve as preventive fire protection.

- Three LAMILUX Rooflight F100 W with fall-through grille in 180 x 240 cm
- Two LAMILUX Smoke Lift Rooflight F100 W with fall-through grille in 180 x 240 cm
- Eleven LAMILUX Continuous Rooflights B with fall-through grille and safety stripes, with a length of 5-15 m and a width of 3.5 m
- Seven LAMILUX Smoke and Heat Extraction Units installed in continuous rooflights





## EQUILIBRIUM OFFICE, BUKAREST

#### Project:

New construction of an office building in Bucharest, Romania. The approx. 2,000 m2 office complex has a large covered outdoor area equipped with 11 circular LAMILUX skylights. These ensure an even higher daylight utilisation in the outdoor area of the canteen and are also a visual highlight.

#### Systems:

• Eleven LAMILUX Rooflights F100 Circular with a diameter of 180 cm and laser grille as fall-through protection in a filigree look

# APARTMENT COMPLEX, GREEN PARK | MOSCOW

#### Project:

New construction of a residential complex at Green Park in Moscow. The residential complex has an all-round roofing of the entrance area, which was equipped with 31 circular LAMILUX rooflights. Thanks to daylight illumination they provide a brighter entrance area and visually enhance the building.

- 30 LAMILUX Rooflights F100 Circular, 1-layered clear
- One LAMILUX Rooflight F100 Circular, 3-layered clear

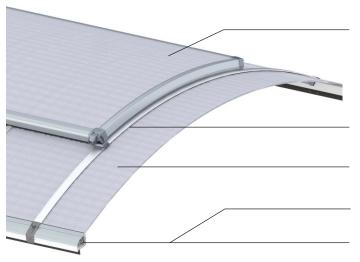




## LAMILUX CONTINUOUS ROOFLIGHT B

Our LAMILUX Continuous Rooflight B is a pioneering skylight in terms of energy and statics. That precisely means that it is an arc-shaped, modular dome light system with an optimised energy balance thanks to its seamless thermal separation. Thanks to the wide range of ventilation and smoke and heat extraction flaps that can be integrated into the continuous rooflight, optimum solutions can be found for almost every type of application for smoke extraction as well as for the aeration and ventilation of the bulding.

The LAMILUX Continuous Rooflight B is optimally suited for large-area illumination of halls with daylight as well as for use as large-area heat extraction with the melt-out glazing variants in case of fire. The system is optimised as standard for use as a low-cost solution in industrial halls and warehouses, but can also be manufactured for installation in sports halls and retail outlets, for example, by using glazing with improved thermal insulation properties.



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

Tension bar with active expansion absorber

Wide range of variants for polycarbonate glazing for every use

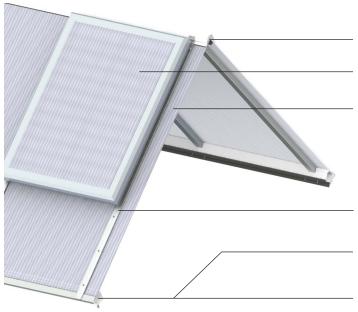
Isothermal Load Converter

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

## LAMILUX CONTINUOUS ROOFLIGHT S

The LAMILUX Continuous Rooflight S is a modular, ridged roof continuous rooflight system and can be fitted with different 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 use as a result of ventilation and smoke and heat exhaust vents that can be integrated.



#### Ridge cover profile

Flap as ventilation or certified smoke and heat exhaust ventilation

Wide range of variants for polycarbonate glazing for every use

Tension bar with active expansion absorber

Isothermal Load Converter

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



Product variant LAMILUX Continuous Rooflight B Passivhaus



#### **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

Customised intake of daylight and solar heat input thanks to object-specific composite glazing with heat transmission coefficients of up to 1.0 W/(m<sup>2</sup>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 flaps

Resistance to hail tested as per VKF Bern guidelines and tested watertightness in heavy rain and during storms (DRI 3.0 m<sup>2</sup>/s)

Impervious to driving rain thanks to welded sealing frames for flap systems and certified airtightness for the overall system

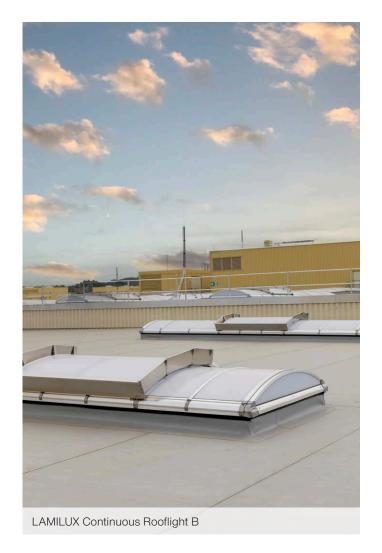


Preventive fire protection according to DIN 18234: Prevention of fire spreading on the roof as a result of the Linear Burn-through Protection

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





## HEIDELBERGER DRUCK-MASCHINEN, HEIDELBERG

## EVENTS HALL, WURZEN

#### Project:

Roof refurbishment of the production hall as part of extensive renovation work.

Installation of 4.2 kilometers of LAMILUX Continuous Rooflight B with integrated ventilation and smoke and heat extraction flaps for brighter, light-flooded and safe working areas

#### Systems:

LAMILUX Continuous Rooflight B

#### Project:

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

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

## LAMILUX TRANSLUCENT FAÇADE AND ROOF

The system from LAMILUX enables energy-optimised, breakproof glazing of lateral light surfaces. Non-supporting walls can be used as lighting, ventilation, and smoke and heat extraction surfaces. Ventilation flaps and smoke and heat exhaust ventilation flaps, as well as their various ventilation and activation variants, can be easily integrated into the façade and roof system. We differentiate between the Translucent Roof, which is installed as shed glazing, and the Translucent Façade, which is installed as a front-mounted facade or in the reveal. With both systems, the daylight can be optimally used through lateral light intake. It enables a clear-cut architectural division of the facade. Its completely thermally separated profile system ensures optimum thermal protection and minimises the risk of condensation on the construction's surfaces.

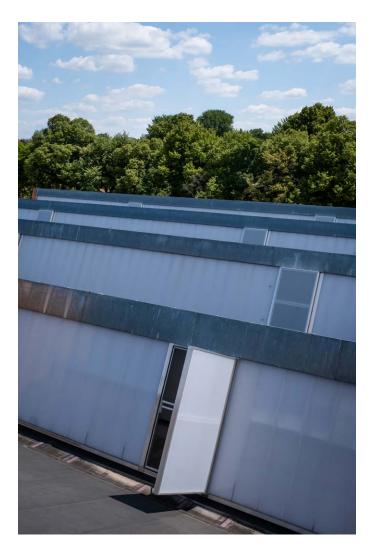


**Flap** as ventilation or certified smoke and heat exhaust ventilation (also with roda single and double flap ventilator Phoenix and louvre ventilator Smokejet available)

Range of variants for polycarbonate glazing

Capping section

Thermally separated aluminium profile





## ALTER POSTBAHNHOF, LEIPZIG

# COROPLAST, WUPPERTAL

#### Project:

Renovation of Alter Postbahnhof in Leipzig to create commercial and office spaces.

#### Project:

Supplying a production hall with maximum daylight.

#### Systems:

- Ten LAMILUX Translucent Façade and Roof systems as shed roof with a surface inclination of 60°
- 47 single flap PHOENIX ventilators of our subsidiary roda

- LAMILUX Translucent Façade and Roof system as a shed construction with a length of 18 metres in an overall system completely free of thermal bridges
- 15 SMOKEJET louvered ventilators of our subsidiary roda





## LAMILUX WINDOWS FIRE RESISTANCE

LAMILUX offers a range of fire resistant windows called Fire Resistance, which is classified according to the European standard EN 13501-2.

These fire resistant windows are available as fire resistant glass skylight and fire resistant glass roofs. With fire-resistant glazing, the Glass Skylight can withstand 30, 60 or 90 minutes of fire and heat, depending on the requirements of the building. With the new award-winning Glass Skylight Fire Resistance REI90, we have succeeded in extending the previous protection to 90 minutes. The Glass Roof version offers 30 or 60 minutes of adequate protection in case of fire.

The LAMILUX Glass Skylight Fire Resistance is delivered to the construction site as a completely pre-assembled element on a steel upstand. For larger roof openings, LAMILUX offers the Glass Roof Fire Resistance, which is installed directly on site and guarantees an aesthetically appealing appearance that can hardly be distinguished from conventional LAMILUX glass roofs.



#### 000 OPTIMISED SEALING AND DRAINAGE SYSTEM

Efficient ventilation of glazing rebates and controlled drainage of water and condensate

Overlapping, multi-layered sealing system, designed without direct joints and a secondary drainage system in the inner sealing layer

Joint-free, continuous drainage level on the mullion/transom

Increase and improvement of the surface temperature on the glass edge and subsequent reduction in risk of condensation



#### PRODUCT VARIETY IN HIGH QUALITY STANDARDS

Various fire protection windows available in all fire resistance classes

German Design Award 2023 in the category "Excellent Product Design - Building and Elements" for our new Glass Skylight Fire Resistance REI 90

Visible elements of the supporting structure with RAL coatings

Visible or concealed screw connection of the ceiling strips possible



Fire resistance with the functional integrity of the complete system certified to 30 minutes / 60 minutes / 90 minutes

Resistance to external fire exposu- Classification according to re from flying sparks and radiating EN 13501-2 heat with classification BROOF (t1) as per DIN EN 13501-5

### ACTIVE ENERGY MANAGEMENT

Reduction of heat loss in the frame

Optimised building energy balance through improved thermal insulation

Combination of fire protection properties and energy benefits

## LAMILUX SMOKE AND HEAT EXHAUST VENTILATION SYSTEMS

Natural smoke and heat exhaust ventilation units (NSHEVs) save lives and protect property. This is why all LAMILUX product groups are also available as NSHEV. LAMILUX smoke and heat exhaust ventilation (also SHEV) systems are synonymous with safety in compliance with DIN EN 12101-2, DIN 18232, the German Industrial Building Guidelines and various VdS guidelines.

These systems use thermal lift to channel smoke, heat and fumes into the open air. As fresh air is drawn in, a smoke-free layer forms near to the ground: As a result, people are able to escape quickly into the open air and the rescue services can extinguish the fire and save lives safely and do so with the necessary visibility.



LAMILUX Smoke Lift Rooflight F100 W







### **MAINTENANCE**

### RENOVATION

Smoke and heat exhaust ventilation systems must trigger and respond quickly and correctly in case of fire. In other words, 100 percent reliability and functionality of the SHEV system. For this reason, regular maintenance is a must for SHEV system operators, as they are legally required to take any necessary measures to keep people out of danger in the event of a fire.

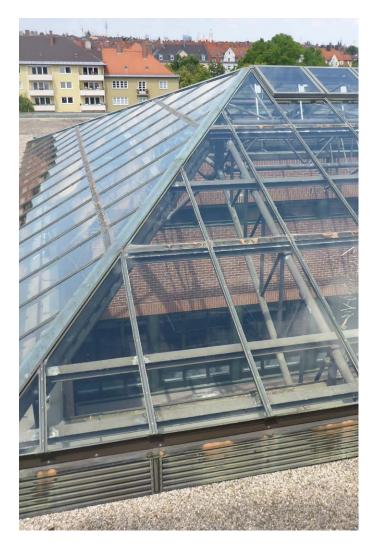
#### Key maintenance items:

- Examination of the overall system for modifications performed by the operator
- Test activation via CO<sub>2</sub> lines
- Testing of electrical wiring and accumulators
- Inspection of CO<sub>2</sub> cartridge filling levels
- Cleaning of SHEVs to remove dust, oily deposits and corrosion
- Complete activation of the SHEV system
- Transparent documentation of the work carried out

Retrofitting of skylights with LAMILUX means: All processes take place transparently and in accordance with a customer and result-oriented methodology – from planning through to installation. We record the many parameters involved in a renovation using a detailed checklist and then implement the clearly regulated steps in practice and on time.

#### The overall LAMILUX renovation package:

- Survey by LAMILUX
- Clarification of requirements
- Drafting of a proposal
- Organisation of coordinated measures
- Assembly, including control technology
- Maintenance in accordance with the applicable guidelines
- Short renovation times
- Disassembly and assembly also during on-going production
- · High level of planning and cost security





# RENOVATION EXAMPLE DANTE GYMNASIUM, MUNICH

#### Before the renovation

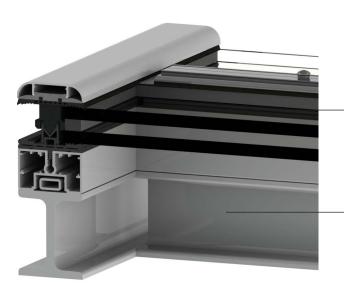
Heat energy was shown to escape from the old glass roof. The supporting structure had become unstable and the partly opaque glass panes were only letting a small amount of daylight into the building.

- Two hipped glass roofs with a surface inclination of 20° with dado wall panelling
- Coating of both constructions in customised RAL colours
- Option of daily ventilation with 24 LAMILUX Ventilation Flaps PR60
- Activation of the systems by means of 24 motor openers as flap drives for ventilation and SHEV function
- Installation of supply cable and ventilation control connection to the existing building control system

# STEEL CONSTRUCTIONS WITH LAMILUX

Large glass roofs can no longer support aluminium alone. This is where steel supporting constructions come into play – and we can offer you these as wel. Using state-of-the-art technology which makes it possible to create highly complex constructions via CAD, we are able to make your architectural ideas a reality.

We attribute great importance to aesthetics, modernity and environmental compatibility which we believe are fundamental requirements of modern building constructions.



LAMILUX Glass Roof PR60 with reduced profile height

Steel supporting structure



## VENTILATION TECHNOLOGY WITH RODA

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 acceptance. 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, larger product portfolio and volume of services.

The first collaborative product is a thermally separated continuous rooflight with rainproof ventilation: The connection between the LAMI-LUX Continuous Rooflight B and the MEGAPHOENIX 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 starts to rain.

The MEGAPHOENIX 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 MEGAPHOENIX is mounted as a "rider" directly on the glazing bars of the continuous rooflight without interruptions.

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



roda MEGAPHOENIX on the frame of the LAMILUX Continuous Rooflight B



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









### 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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