



LAMILUX ROOFLIGHT F100 W

NEW STANDARD FOR THE INDUSTRIAL FLAT ROOF

# THE PROVEN CLASSIC WITH GEOMETRICALLY OPTIMISED DESIGN

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“You could almost call the rooflight the mother of all skylights. We have been planning, manufacturing and installing this skylight system for over 70 years and have been constantly improving since then – in every process step, quality and performance. Today, a rooflight covers much more than daylight gain. It is a real energy and safety system. This is exactly why you should work with professionals.”

**David Plaetrich**, Sales Director 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:

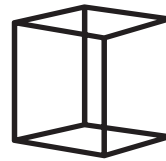
### **Customised Intelligence – serving customers is our first priority:**

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 advisory services**
- **Leader in solving problems – individual, tailor-made solutions**



## OUR TIP



# LAMILUX – BIM AND PRODUCT CONFIGURATOR

- Create individual product variant, guided by a dynamic dialogue with 3D preview in real time

- Share, request or download BIM objects, 2D and 3D CAD models, images, dimensional drawings and data sheets in the desired file format with just one click
- Support for your individual glass roof or continuous roof-light project



Discover more at:  
[lamilux.com/bim](https://lamilux.com/bim)

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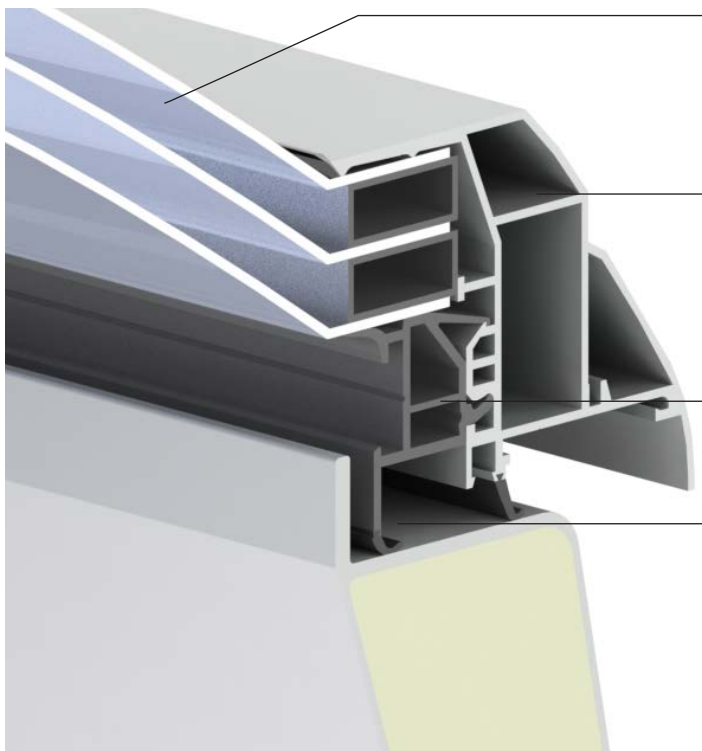
# LAMILUX ROOFLIGHT F100 W

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**The 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 composite glazing, the rooflight has also become a true energy miracle.**

The clever geometry instead of more material equips the rooflight for future challenges. The new wave shape of the dome with its protected design ensures better load transfer and guarantees more rigidity without using more material. In this way, Rooflight 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 enhanced safety during extreme weather events and long service life

**Range of variants** – Customised glazing systems for optimum use of daylight  
 Your benefit: 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** – Composite glazing bead with circumferential functional groove  
 Your benefit: Easy upgrade with fitting components possible at any time

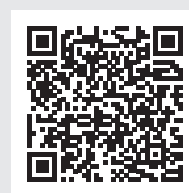
**Energy efficiency** – Multi-layered sealing system for compact system-tightness  
 Your benefit: Heating cost savings and minimised risk of condensation due to excellent thermal insulation of the border frame ( $U_f = 0.76 \text{ W}/(\text{m}^2\text{K})$ )



EXPERIENCE OUR  
 ROOFLIGHTS IN  
 AUGMENTED REALITY



Rooflight F100 W

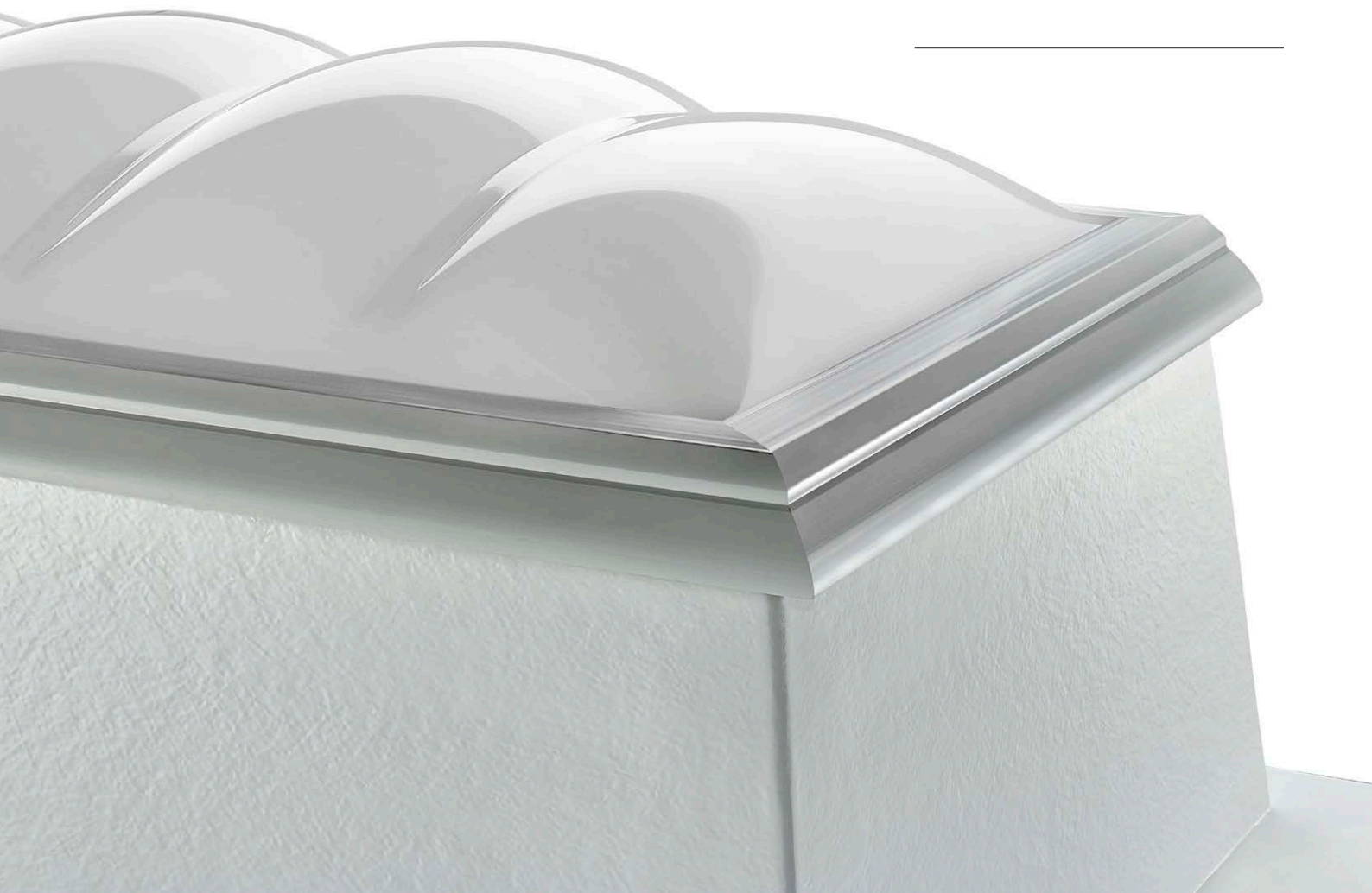


Rooflight F100 Circular



# ALL BENEFITS AT A GLANCE

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## Energy efficiency

- All-round optimum thermal insulation with minimised condensation risk thanks to the overall construction completely free of thermal bridges
- Fully heat-insulated upstand made of glass-fibre reinforced composite, optionally available with heat-insulated base flange
- Our LAMILUX rooflights are rated in accordance with the LEED, BREEAM and DGNB green building certification systems for use in sustainable buildings
- Snow load tested in frost and snow (snow-making system) over 4 days

## Functionality in extreme weather events

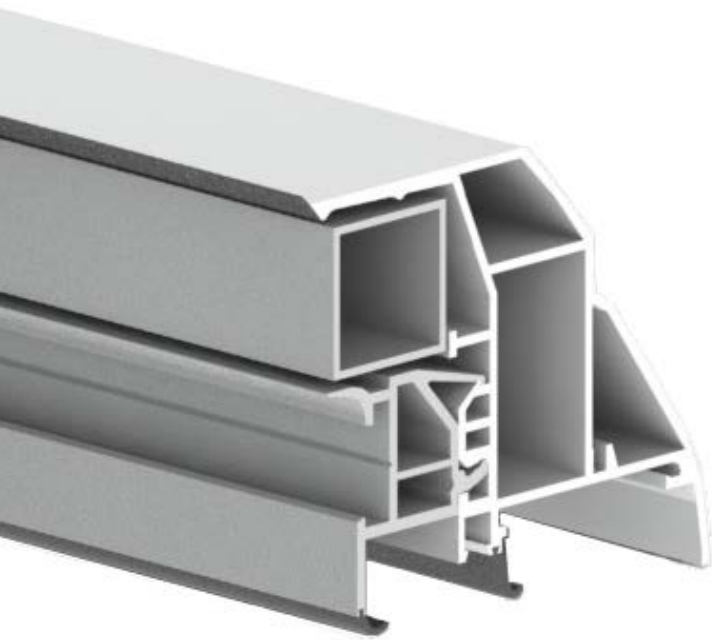
- Heavy rain test with 8 litres per m<sup>2</sup> and minute with 115 km/h hurricane simultaneously
- Wind load tested in wind tunnel, with gusts up to 140 km/h (closed) or 70 km/h open
- Hail test at frost (surface ice cold), with 50 mm ice ball (final speed free fall = 111 km/h)
- Snow load tested at frost, with snow (snow-making system), over 4 days

## Comfort and 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
- Available as qualified smoke and heat exhaust ventilation device according to DIN 12101-2



Through clever geometry, we achieve better load transfer and greater rigidity in the roof-light.



## THE BORDER FRAME: ENERGY EFFICIENCY, STABILITY, DESIGN

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**The unobtrusive design and high stability are the hallmarks of our of our material-optimised border frame. The arrangement of the seals is of great importance for the thermal insulation and thus the energy efficiency of the rooflight. Due to their spatial configuration, the seals form four separate insulation chambers in the transition from the rooflight to the upstand.**

- High stability thanks to innovative partial reinforcement of the frame profile using long-fibre-reinforced plastic
- Possibility of convenient retrofitting by simple inclusion of hardware parts thanks to the glazing bead with safety latch hook and all-round functional groove
- Excellent thermal insulation thanks to the multi-layer sealing system
- Secure anchoring of load-bearing fitting parts thanks to the axial screw channels
- Greater stability by accommodating additional steel profiles with large frame dimensions thanks to circumferential profile chamber
- Minimisation of dirt deposits thanks to co-extruded laminated lip between the frame profile and the glazing





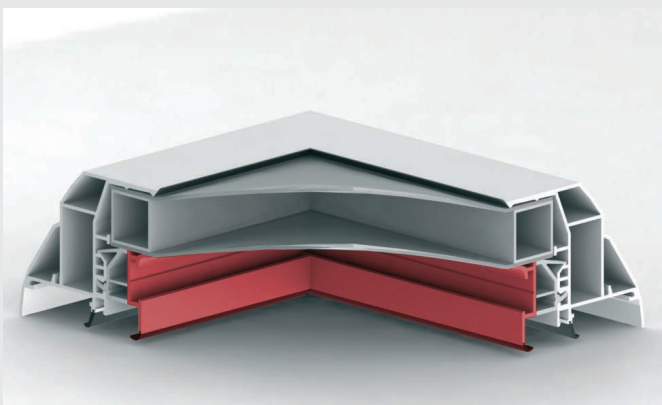
**Frame profile with patented glass-fibre reinforcement**

In the border frame, a long-fibre reinforcement is partially integrated in the upper and lower area of the profile (upper flange and lower flange), which was awarded the "JEC Paris Innovation Award". Produced during a patented process, this system enables us to achieve exceptional stability in the frame profile.

**Your benefit:**

Despite strong loads due to wind suction forces, the entire upper part remains tightly closed on the upstand thanks to its high level of air tightness.

Thanks to the long fibre reinforcement, which absorbs any tensile stresses that occur, the profile is extremely resistant to bending.



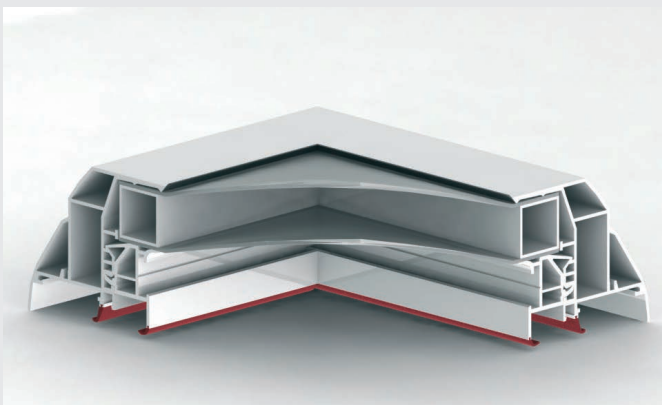
**Glazing bead**

A profiled, composite glazing bead provides a form-fitted and force-fitted load transfer element.

**Your benefit:**

Thanks to the floating mounting of the glazing without screw connections, the glazing is protected against tension cracks.

A surrounding, functional groove ensures fitting components can be easily attached.



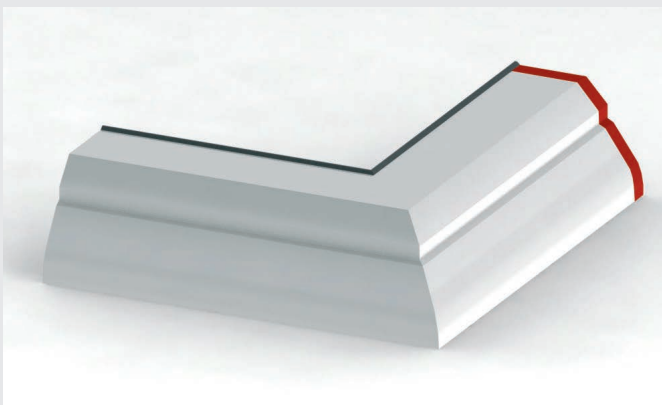
**Multi-layer sealing system**

Both the frame profile and the glazing bead feature coextruded seal lips which join to the upstand's upper installation surface. The inside seals overlap in a T-shape in the corner joints.

**Your benefit:**

Four thermally enclosed seal air spaces are formed, which enhance the system's insulating properties.

The overall system has good sound insulation properties and high stability in heavy rain and storms.



**Comfort and optics**

The border frame features a prominent stepped seam, a bi-convex, curved, external contour and finished welded joints.

**Your benefit:**

The water flow is optimised with good self-cleaning properties.

The design of the border frame ensures that the overall system is visually appealing.











# LAMILUX ROOFLIGHT F100 CIRCULAR

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**Statutory regulations, health regulations and industrial requirements call for customised and tailor-made solutions, especially on business premises. The LAMILUX Rooflight F100 round is a guarantor for pleasant and healthy working conditions, especially for company buildings. Double-glazed or triple-glazed, it also ensures continuous water drainage in a round design. The curved plastic frame is currently unique and offers an optimal indoor climate as well as an equally special design. Even in extreme weather events, the rooflight provides functional protection for the building.**

- Innovative design
- Continuous water drainage
- Available up to a standard size of 180 cm (other sizes upon request)
- Rigid or ventilated design
- 24V stairwell SHEV
- Glazing variants: Double-glazed, triple-glazed and double-glazed with tested PC sheet
- Upstand heights: 30, 50, 70 cm
- EPDM sealing profiles







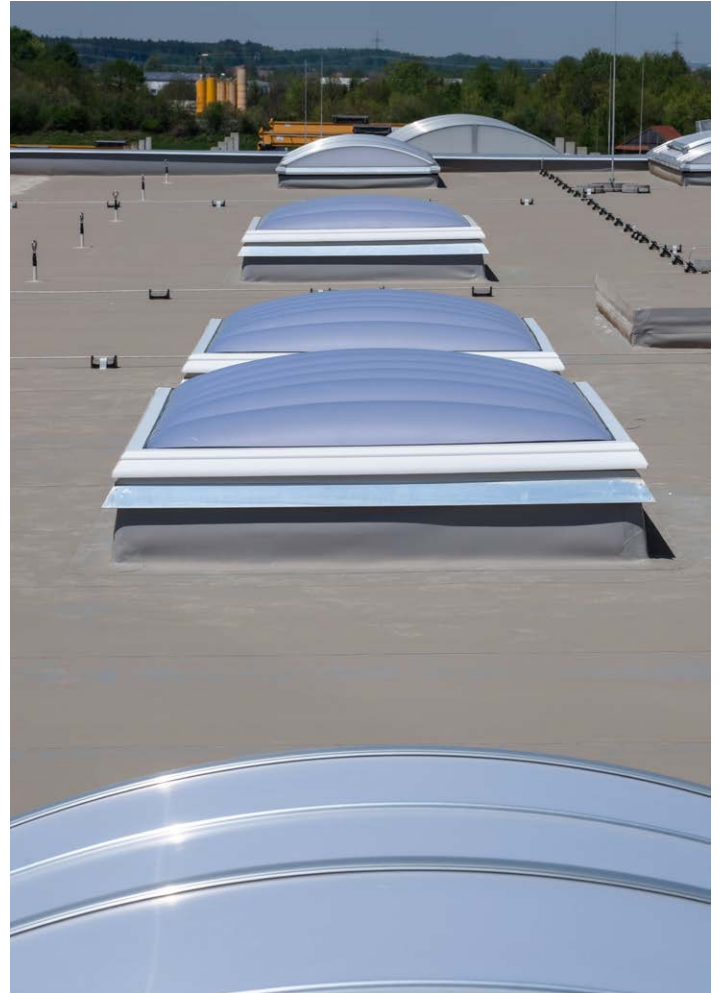
## UNGLEHRT, MEMMINGEN

### Project:

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

### Systems:

- Three LAMILUX Rooflight F100 W units with fall-through protection grid in 180 x 240 cm
- Two LAMILUX Smoke Lift Rooflight F100 W units with fall-through protection grid in 180 x 240 cm
- Eleven LAMILUX Continuous Rooflight B units with fall-through protection grid and Safety Stripes, with a length of 5-15 m and a width of 3.5 m
- Seven LAMILUX smoke and heat exhaust ventilation units installed in continuous rooflight
- With CO<sub>2</sub> alarm station



## R-PHARM, ILLERTISSEN

### Project:

Roof renovation of the production facility of the pharmaceutical company R-Pharm Germany in Illertissen. The LAMILUX skylight systems provide a pleasant atmosphere and optimum light incidence inside the building. The optimised load transfer and rigidity of the installed elements ensure a high level of safety during extreme weather events.

### Systems:

- 23 LAMILUX Smoke Lift Rooflight F100 W units with fall-through protection grid in 150 x 150 cm
- One LAMILUX Continuous Rooflight B unit with a length of 8 metres
- With CO<sub>2</sub> alarm station





## APARTMENT COMPLEX, GREEN PARK

### 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 LAMILUX Rooflight Circular units. They ensure a brighter entrance area by means of daylight illumination and visually enhance the building.

### Systems:

- 30 LAMILUX Rooflight F100 Circular units, 1-layer, clear
- One LAMILUX Rooflight F100 Circular unit, 3-layer, clear



## EQUILIBRIUM OFFICE, BUCHAREST

### Project:

New construction of an office building in Bucharest, Romania. The approximately 2,000 m<sup>2</sup> office complex has a large covered outdoor area equipped with 11 LAMILUX Rooflight Circular units. These ensure an even higher daylight yield in the outdoor area of the canteen and are also a visual highlight.

### Systems:

- Eleven LAMILUX F100 Rooflight Circular units with a diameter of 180 cm and laser grid as fall-through protection in a filigree look



SMOKE AND HEAT EXHAUST  
VENTILATION:

CO <sub>2</sub>	24V	48V	230V
bar	24V	48V	230V









## LAMILUX SMOKE LIFT ROOFLIGHT F100 W

**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 that are economical and precisely tailored to their needs.**

LAMILUX Smoke Lift Rooflight F100 consists of an upstand for a roof mount and a rooflight upper section. The natural smoke and heat exhaust ventilation system (NSHEV) is much more than an 'off-the-rack product' and offers great diversity and flexibility: Our extensive selection of accessories helps us to match LAMILUX Smoke Lift Rooflight F100 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 between 0.60 and 0.75 Aerodynamically effective opening area $A_a$ of between 0.6 m <sup>2</sup> and 4.05 m <sup>2</sup>
	...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 2400
	...down to indoor temperature of -15 °C	T(-15)
	... after exposure to wind suction (up to 1,500 N/m <sup>2</sup> )	WL 1500
	...when exposed to fire	B 300

**How your benefit:**

- Tested to DIN EN 12101-2
- The LAMILUX Smoke Lift Rooflight F100 does not hit against the roof 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<sub>2</sub> cartridges in the NSHEV are not damaged during manual triggering and maintenance
- Possibility for pneumatic and/or electric remote release



# LAMILUX RENOVATION SOLUTIONS

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**Renovations can be carried out for a wide variety of reasons. For example, to replace a damaged top section or to insulate the roof better. LAMILUX offers made-to-order solutions for this - as well as for all other renovation cases.**

This includes for example the renovation frame for easy replacement of skylights. If, in addition, an energetic renovation of the roof is carried out, this is usually accompanied by an increase in the roof structure. In this case, the additional extension elements are the right choice: Existing upstands can be easily extended with it. Thanks to the made-to-order renovation solutions, LAMILUX can extend any on-site upstand. The most important thing here: individual consultation in each case.

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**LAMILUX Rooflight and Glass Skylight**

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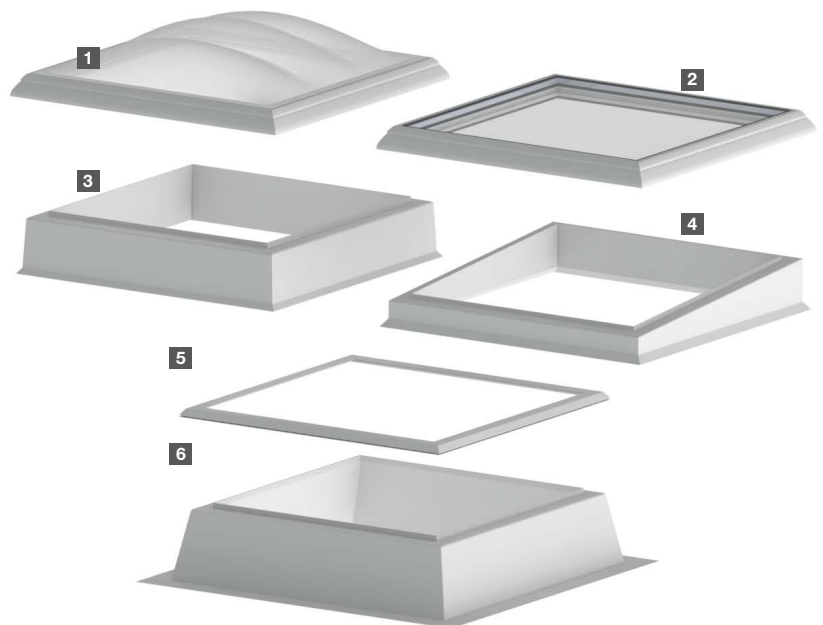
**Optional heightening element**

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**Renovation frame**

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**Existing on-site Upstand**



(1) LAMILUX Rooflight F100 W  
(4) GRP Heightening Element 5°

(2) LAMILUX Glass Skylight F100  
(5) Renovation frame 1 or 11

(3) GRP Heightening Element  
(6) Existing on-site upstand

# LAMILUX UPSTAND: IDEAL STRUCTURAL ATTACHMENT

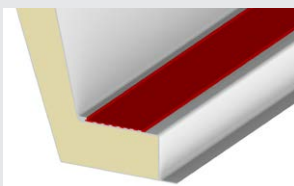
**The upstand is a key component in the whole rooflight dome system. Constantly further developed in terms of stability and heat-insulating properties, the upstand forms the base for the structure. It provides a thermally optimum connection to the building structure.**

Upstands are available in GRP (glass-fibre reinforced composite), aluminium and steel sheet. A big advantage for the builder is the complete pre-assembly of the products we deliver. This saves time during installation on the roof and ensures fast closing of the roof opening. The LAMILUX GRP upstands also offer many options for customised roof mounts.



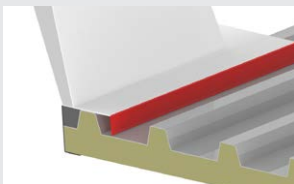
### Heat-insulated base flange

The base flange made of glass-fibre reinforced composite and thermally insulated with PU foam is characterised by very good insulating properties and can be individually adapted to the height of the roof insulation. This upstand offers the possibility of connecting bitumen roofing membranes directly to the base flange in a system-compatible manner, so that time-consuming raising of the roofing membrane at the upstand is no longer necessary. The thermally insulated base flange is also available in combination with the rigid PVC connecting rail.



### Hard PVC connecting rail

Hard PVC connecting rail is circumferentially laminated onto the base flange at the factory and seal-welded in the corners. This upstand offers the possibility of welding PVC roofing membranes directly to the PVC connecting rail at the base flange. In this way, a material-locking, all-round tight connection with the upstand is ensured. The rigid PVC connecting rail is also available without the thermally insulated base flange.




### Bevelled base flange

A variant of the GRP skylight base with a base flange bevelled on both sides is available for structural attachment to profile roofs. For further requirements, e.g. on-site upstand, it is also available in a four-sided bevelled design.




# Glazing types

## Standard glazing types:



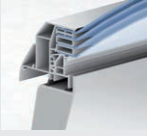
**Double-glazed opal/opal**

U<sub>g</sub> value: about 2.7 W/(m<sup>2</sup>K)  
 Noise-proofing value: Approx. 20 dB  
 Translucency: Approx. 70 %  
 Energy transmission: Approx. 70 %




**Triple-glazed opal/opal/opal**

U<sub>g</sub> value: about 1.8 W/(m<sup>2</sup>K)  
 Noise-proofing value: Approx. 22 dB  
 Translucency: Approx. 59 %  
 Energy transmission: Approx. 59 %



**Quadruple-glazed opal/clear/clear/opal**

U<sub>g</sub> value: about 1.5 W/(m<sup>2</sup>K)  
 Noise-proofing value: Approx. 22 dB  
 Translucency: Approx. 63 %  
 Energy transmission: Approx. 63 %



**Double-glazed + PC16**


U<sub>g</sub> value: about 1.3 W/(m<sup>2</sup>K)  
 Noise-proofing value: Approx. 25 dB  
 Translucency: Approx. 22 %  
 Energy transmission: Approx. 39 %

## Customised glazing:

For your safety: The rooflights with plastic glazing are considered to be normally flammable and non-flammable dripping. For further requirements, there are shells made of GRP that are resistant to flying sparks and radiant heat (hard roofing) in accordance with EN 13501-5. For even better fire protection, flame-retardant and non-dripping shells are used.

All special glazing, such as increased resistance to hail, as a dark flap or PC multi-skin panel, is available on request.

# Opener variants




**230 volt sliding shaft drive**

- Voltage: 230 V
- Stroke heights: 300, 500 mm



**24 volt sliding shaft drive**

- Voltage: 24 V
- Stroke heights: 300, 500 mm




**Pneumatic cylinder**

- Required operating pressure: 8 bar
- Stroke heights: 300, 500 mm




**24 volt / 230 volt chain propulsion drive**

- Voltage: 24 V / 230 V
- Stroke heights: 300, 500 mm



**Manual opening**

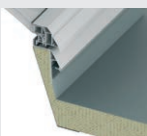
- Stroke height: 280 mm
- Available hand crank lengths: 150, 175 to 300 and 250 to 400 cm



**Aluminium upstand\***

- Building-specific production of special aluminium upstands for metal roofs
- Individual adjustment to the profile of the base flange

# Special upstands



**Steel sheet upstand**

- Reduction of thermal bridges through synthetic outer frame



**Aluminium upstand\***

- Building-specific production of special aluminium upstands for metal roofs
- Individual adjustment to the profile of the base flange

\* Aluminium upstands are only suitable for buildings with thermo-technical requirements. Condensation may form on the inside.

# Accessories



**Spot-welded grid**

- Permanent fall-through protection as per GS-Bau 18
- Pre-assembled on the upstand at the factory
- No reduction in the aerodynamically effective smoke exhaust ventilation area



**Safety net**

- Permanent fall-through protection as per EN 1873 and GS-Bau 18
- Fixed integration in the rooflight top section
- Factory Pre-assembled in the top section
- Easy to handle in the event of renovation



**Laser grid**

- For direct mounting on load bearing substrates
- Permanent fall-through protection as per GS-Bau 18
- Fine and delicate appearance



**Laser grid retrofit kit**

- Retrofittable solution to ensure fall-through safety
- Mounting in suitable reveal by the customer
- Permanent fall-through protection as per GS-Bau 18



**Roof exit hatch**

- Access to the roof from inside the building – primarily for roofing, maintenance and chimney sweeping work



**Openable fall-through protection grid for roof exit**

- Hinged fall-through protection grid for rooflights with roof exit function
- Permanently fall-through-proof when closed in accordance with GS-Bau 18



**Break-in protection grating**

- Burglary-resistant as per ENV 1627
- Permanent fall-through protection as per GS-Bau 18



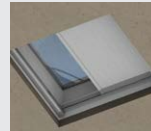
**Solar protection with deciduous tree effect**

- A louvre sheet for natural shade effect, hail protection and fall-through protection



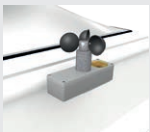
**Insect protection grating**

- Integration in the upstand
- Prevents insects from getting into the building when the rooflight is open



**Controllable sun protection system**

- Fastening the electrically operated blind to the inside of the upstand



**Wind and rain sensor set**

- For automatic closure in wind and rain
- Operated as a group and individually
- Pre-assembled on the border frame at the factory



**Reed contact**

- Integration of the magnetic switch in the frame profile
- Signalling of the opening status by means of a contactless switching process



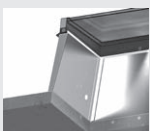
**Small space ventilation unit**

- Integration in 30, 40, 50 cm upstands
- Air flow volume: 170 m<sup>3</sup>/h



**Ventilator**

- Integration in 50 cm upstand
- With weather protection hood
- Air flow volume: 840 m<sup>3</sup>/h



**Reflective**

- Increase in light transmission by up to 50 percent due to the protected principle of lining with highly reflective aluminium material



**LAMILUX Smart Control**

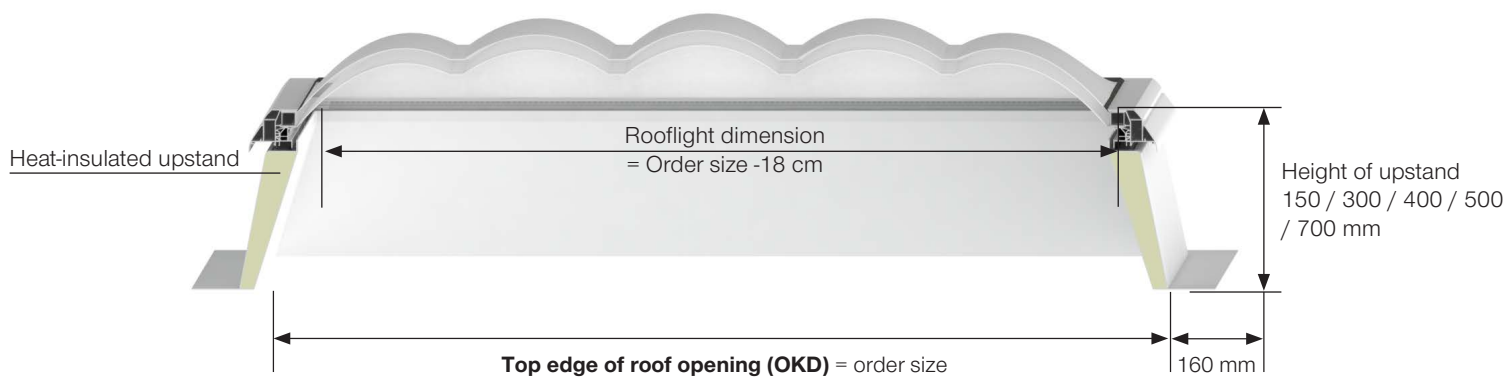
- Smart Home Integration
- Simple opening and closing or control of the sunshade via the Smart Speaker "Alexa" or via app



# Quality

- Tested watertightness in heavy rain and during storms (Driven Rain Index DRI to 14.7 m<sup>2</sup>/s)
- Tested and classified according to DIN EN 1873-2014 (first European product standard for rooflights) – e.g. in terms of wind and snow load absorption
- As a Smoke Lift, meets the requirements of DIN EN 12101-2 for smoke and heat exhaust ventilation units
- Meets all requirements of the EnEV 2014/16 and the current draft of the GEG 2019 (Energy Saving Ordinance – max. U-values regulated by law)
- Comprehensive environmental product declaration as per DIN EN ISO 14025 and DIN EN 15804 (EPD - modules A1 - D)
- Variants for fall-through protection as per GS-Bau 18

# Key measurements



# Available sizes

## LAMILUX Rooflight F100 W

Top roof edge size in cm	Standard position of lock	Light surface in m <sup>2</sup>	Number of crests*	Top roof edge size in cm	Standard position of lock	Light surface in m <sup>2</sup>	Number of crests*
60/60		0.18	2	225/225	—	4.28	8
80/80		0.38	2	135/230		2.48	8
60/90		0.30	3	100/240		1.82	9
90/90		0.52	3	120/240		2.26	9
50/100		0.26	3	150/240		2.93	9
100/100		0.67	3	180/240		3.60	9
60/120		0.43	4	100/250		1.90	9
90/120		0.73	4	120/250		2.37	9
120/120		1.04	4	125/250		2.48	9
125/125		1.15	4	150/250		3.06	9
70/135		0.61	5	180/250		3.76	9
140/140		1.49	5	200/250		4.22	9
90/145		0.91	5	250/250	—	5.38	9
50/150		0.42	5	120/270		2.57	10
80/150		0.82	5	150/270		3.33	10
100/150		1.08	5	180/270		4.08	10
120/150		1.35	5	250/270	—	5.85	10
150/150		1.74	5	270/270	—	6.35	10
120/180		1.65	6	100/300		2.31	11
150/180		2.14	6	120/300		2.88	11
180/180		2.62	6	150/300		3.72	11
100/200		1.49	7	180/300		4.57	11
150/200		2.40	7	200/300	—	5.13	11
200/200		3.31	7	300/300	—	7.95	11
150/210		2.53	8	180/320		4.89	12
180/210		3.11	8	200/350	—	6.04	13

\*dependent on variant, slight deviations possible

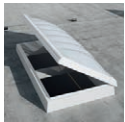
## LAMILUX Rooflight F100 Circular

Top roof edge size in cm	daylight area \ lighting area in m <sup>2</sup>	Top roof edge size in cm	daylight area \ lighting area in m <sup>2</sup>
60	0.23	120	0.82
80	0.30	150	1.37
90	0.41	180	2.06
100	0.53		





Scan this to learn more about  
LAMILUX skylights!



ROOFLIGHT F100 W



GLASS SKYLIGHT F100



GLASS SKYLIGHT FE



GLASS ARCHITECTURE



FLAT ROOF ACCESS HATCH



MIROTEC STEEL CONSTRUCTIONS



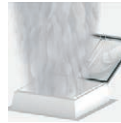
CONTINUOUS ROOFLIGHT B/S



RENOVIATION



TRANSLUCENT FAÇADE AND ROOF



SMOKE AND HEAT EXHAUST  
VENTILATION SYSTEMS



BUILDING SMOKE EXTRACTION



RODA LIGHT AND AIR TECHNOLOGY

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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