



**LAMILUX SKYLIGHTS
RENOVATION**

LAMILUX RENOVATION

"Upkeep is an important topic in construction, as we cannot only think in terms of new buildings. Renovation, refurbishment and upgrading of buildings and parts of buildings is the clear future of the industry and even the present. It is an issue construction specialists will be addressing on an ever more frequent basis. We are therefore constantly working on solutions that bring daylight, fresh air and safety into existing buildings of any age from above."

Dr. Alexander Strunz
Executive Manager LAMILUX Heinrich Strunz GmbH

The LAMILUX CI Philosophy



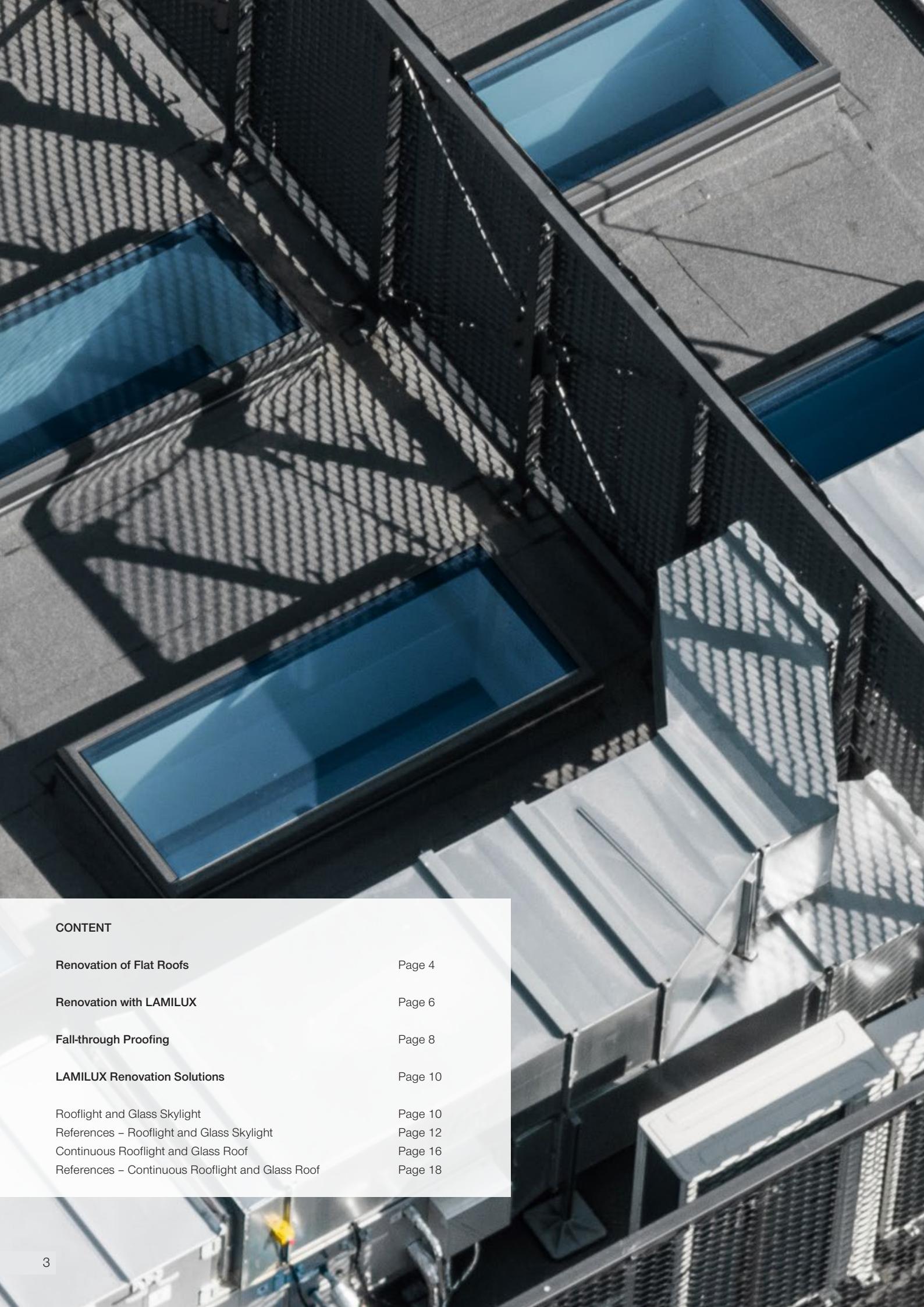
Customer value is the reason we exist – and the focus of our activities. This requires harmony, identity and a balance between customer value and company strategy.

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



CONTENT

Renovation of Flat Roofs Page 4

Renovation with LAMILUX Page 6

Fall-through Proofing Page 8

LAMILUX Renovation Solutions Page 10

Rooflight and Glass Skylight Page 10

References – Rooflight and Glass Skylight Page 12

Continuous Rooflight and Glass Roof Page 16

References – Continuous Rooflight and Glass Roof Page 18

FLAT ROOF RENOVATION WITH LAMILUX

To maintain the function of a flat roof, it must be checked for damage regularly. This is because undetected leaks can quickly become very expensive. If left unchecked and unmaintained, far-reaching consequences and long-term damage can often only become apparent further down the line. Checking for example porous seals or weather-related damage to skylights is therefore recommended. To ensure that you have an intact and functional flat roof for the future and that you are legally on the safe side, you should take appropriate precautions.

Do you know the condition of your daylight elements and SHEV systems? Is the thermal insulation still suitable for the current use of your building? Do you have concerns about the current condition of your daylight elements or are you already planning to renovate the entire flat roof? In all these cases, we are happy to help you with our many years of experience.



We renovate every skylight, regardless of manufacturer

We attach great importance to customised solutions and work closely with our customers to fulfil their individual requirements and wishes. Thanks to our wide range of products, system solutions can be individually exchanged and supplemented regardless of the manufacturer. We offer a diverse approach to optimising the use of daylight in buildings through full compatibility with individual advice on the renovation of each skylight.



Optimum all-round service - from planning to installation, everything from a single source

With an experienced team of experts and our all-round service, we support our customers with personal advice on site. We immediately process enquiries and orders and respond flexibly to individual customer requests. With our trained specialists, we offer a competent and reliable installation service.



Decades of experience

We have decades of experience and are active in many different sectors. These include architecture, industrial, transportation and residential construction. Through intensive research and development and close cooperation with customers, we have developed expertise in the field of flat roof renovation with an extensive product portfolio that meets the highest quality standards.



Would you like some assistance
from a LAMILUX expert?
Scan here and find your local
contact person.





PROFESSIONAL RENOVATION SERVICES

- FOR A LONG LASTING FLAT ROOF

Your renovation request: Our PLAN

LAMILUX provides you with an experienced team of experts to plan a customised renovation solution for your flat roof following an individual on-site consultation.* *

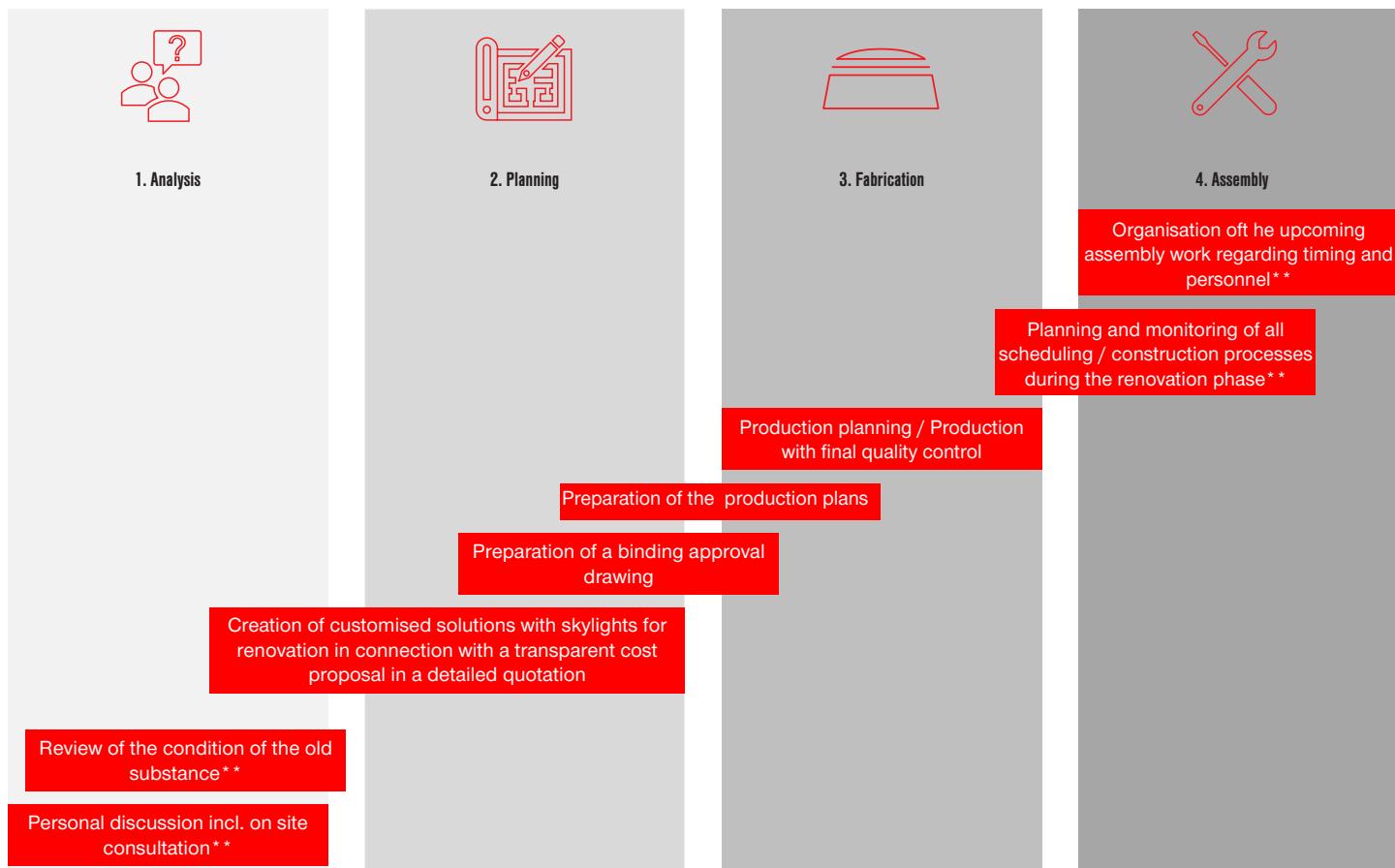
Your project: Our renovation services are a all-round service. From PRODUCTION to INSTALLATION **

With services from a single source, from production to installation, LAMILUX stands for competent and seamless flat roof renovation.

Our promise: LOYALTY

LAMILUX stands for conscientiousness and experience. We are at your side as a competent partner in all phases of renovation.

The renovation phases at a glance:



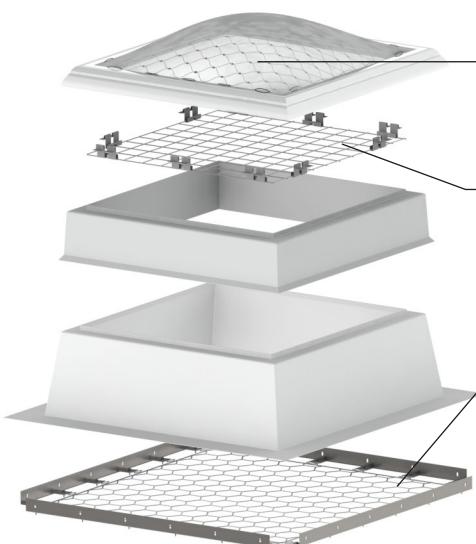
FALL-THROUGH PROTECTION

Fall-through protection is an issue of ever greater importance on flat roofs. If a person falls from the roof, the building operator is responsible and personally liable. We therefore recommend you to equip your roof with fall-through protection.

We offer various fall-through protection solutions on and in the glazing, under the glazing as well as in the roof opening - for all our daylight elements such as Rooflight Domes, Flat Roof Windows, Continuous Rooflights Systems and Glass Roofs.

Accidents involving falls do not only happen because untrained personnel set foot on the roof (e.g. for snow removal work). Even experts can stumble, fall over and fall through a non-load-bearing area on the roof while working. Such falls often have serious consequences.

Our Flat Roof Skylights made of real glass are all tested for permanent fall-through protection. However, there is no plastic glazing that is permanently fall-through-proof, which is why additional measures such as fall-through grilles must be used.



In the glazing – Our retrofittable spot-welded grid can be easily installed on the upstand or heightening element during renovation

Under the glazing – Our retrofittable spot-welded grid can be easily mounted on the upstand or heightening element during renovation

In the roof opening – A laser grid can be retrofitted if the on-site reveal is made of concrete, wood or steel of sufficient stability



LAMILUX RENOVATION SOLUTIONS

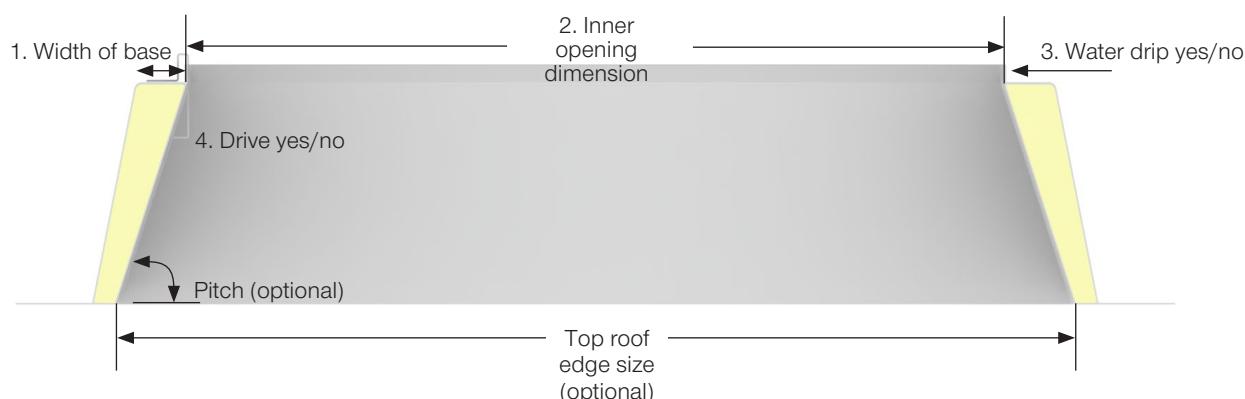
ROOFLIGHT AND GLASS SKYLIGHT

We offer you made-to-order solutions for the renovation of your circular and square rooflight domes and flat roof windows. With our renovation frames we are able to mount on any on-site upstand to ensure easy exchange. If the roof is also renovated in terms of energy efficiency, the roof system is usually heightened. In such cases, our heightening elements, which are mounted on the on-site upstand, are the right choice.

Glass is a profitable, long-term alternative for anyone renovating a rooflight while, at the same time, keeping an eye on the energy balance of their building. After all, better heat insulation values save energy. That being said, all our Glass Skylights provide fall-through protection as a matter of principle.

It is also easy to add fall-through protection to rooflights during renovation as an option. Take advantage of our extensive product range and our accessories. Similar to a construction kit, the system solutions can be exchanged on an individual basis and be expanded – with full compatibility. Of utmost importance in this regard: Individual consultation in individual cases.

Important renovation features



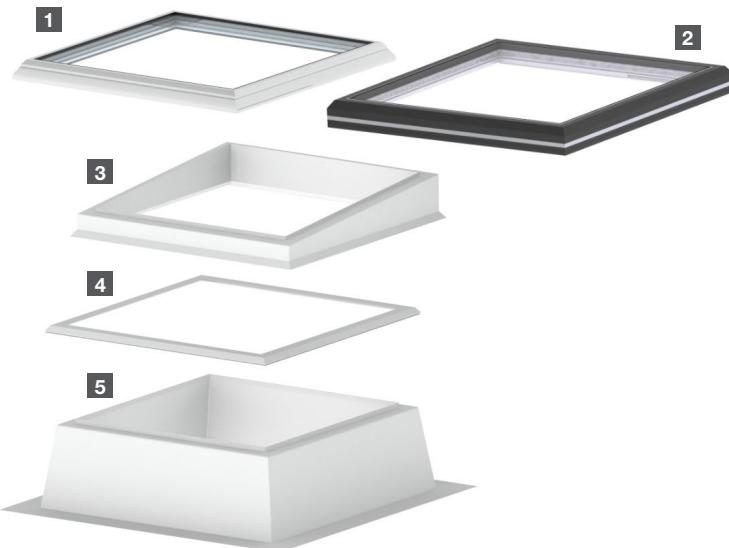
Here you can access the checklists for renovation on LAMILUX and all on-site upstands.

LAMILUX Glass Skylight F100 or LAMILUX Glass Skylight FE

LAMILUX Glass Skylight

Optional Heightening Element

Renovation Frame

Existing on-site
upstand

1 LAMILUX Glass Skylight F100

2 LAMILUX Glass Skylight FE

3 GRP Heightening Element 5°

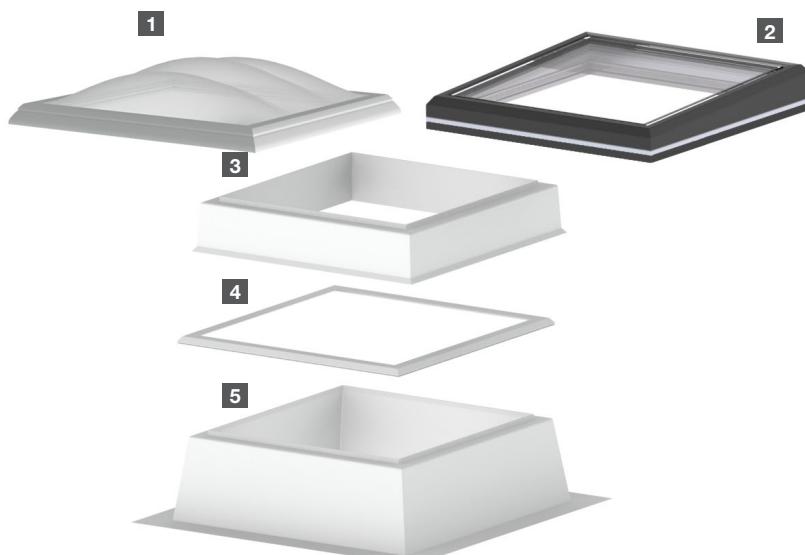
4 Renovation Frame 1 or 11

5 Existing on-site upstand

LAMILUX Rooflight F100 or LAMILUX Glass Skylight FE 3°LAMILUX Rooflight /
Glass Skylight

Optional Heightening Element

Renovation Frame

Existing on-site
upstand

1 LAMILUX Rooflight F100

2 LAMILUX Glass Skylight FE 3°

3 GRP Heightening Element

4 Renovation Frame 1 or 11

5 Existing on-site upstand



RENOVATION EXAMPLE ROOFLIGHT F100 W R-PHARM, ILLERTISSEN

Before the renovation

The roof and rooflight domes were getting on in years. This was noticeable in the lack of daylight, as the panes became cloudy, as well as in the energy values of the hall.

After the renovation

- 23 LAMILUX Rooflight Domes F100 W (150 x 150 cm) with smoke exhaust ventilation units and integrated fall-through protection grid
- A LAMILUX Continous Rooflight B with a length of 8 meters
- CO₂ alarm stations



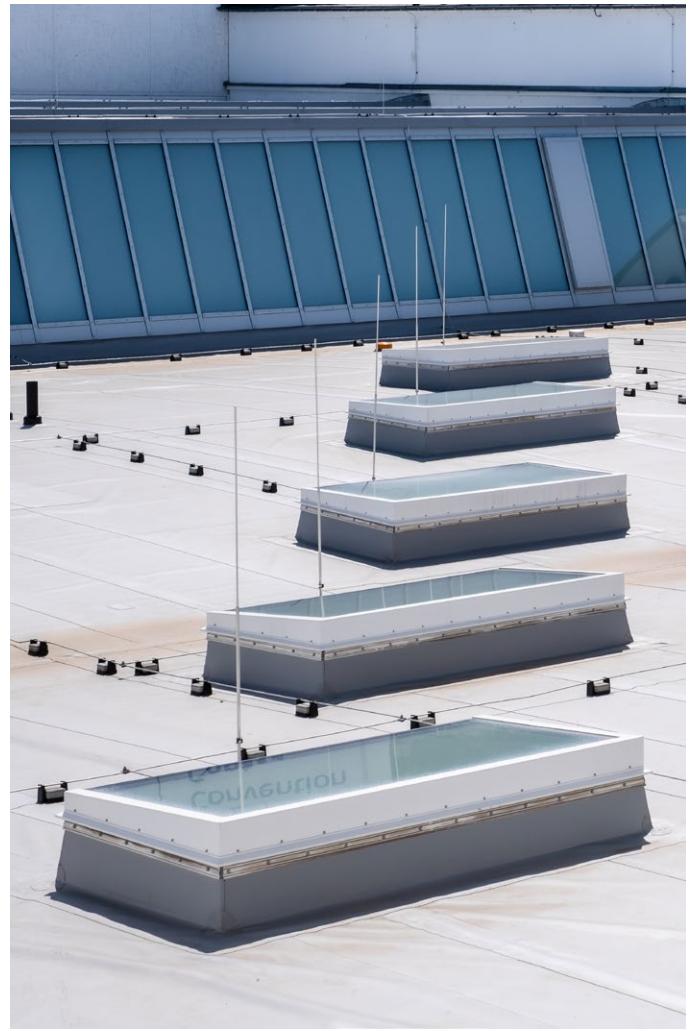
RENOVATION EXAMPLE GLASS SKYLIGHT F100 CARITAS, HAGEN

Before the renovation

Dirt deposits on the daylight elements and the ageing of such elements had significantly reduced the daylight intake.

After the renovation

- 54 LAMILUX Glass Skylights F100
- Nine LAMILUX Glass Skylights FE
- Fall-through protection provided by the glazing as per GS-Bau 18 or DIN 18008-6
- Flush-mounted glazing in the border frame to ensure planar water drainage for preventing dirt deposits



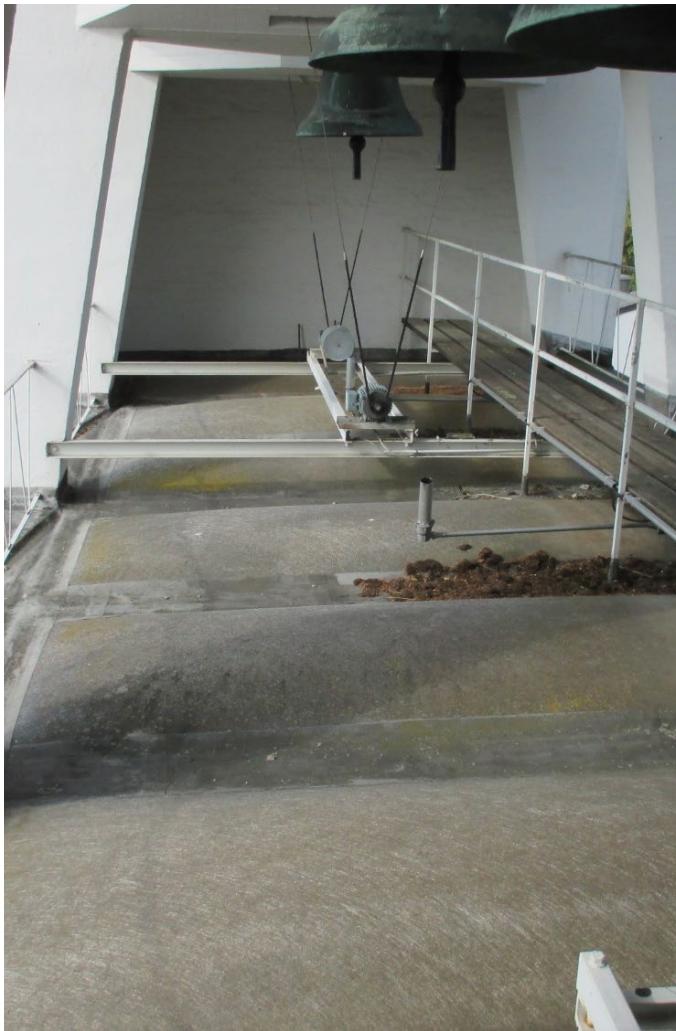
RENOVATION EXAMPLE GLASS SKYLIGHT FE 3° VOGEL CONVENTION CENTRE, WÜRZBURG

Before the renovation

The yellowed rooflights as well as the old wired glass shed roofs did not do justice – neither in terms of energy efficiency or visually – to the showpiece building of the event centre and publishing house.

After the renovation

- 23 LAMILUX Glass Skylights FE 3° as an energy-efficiency upgrade and fall-through protection thanks to real glass, 16 of which in ventilated design
- Three LAMILUX Glass Roofs PR60 as shed roof with 60° inclination and each one 40 metres in length including heat-insulated base point with circumferential secondary water drainage, split into 44 glass panels with double thermal insulation glazing
- Integration of seven LAMILUX Ventilation Flaps PR60 for daily aeration and ventilation



RENOVATION EXAMPLE GLASS SKYLIGHT FE 3° PAULUSKIRCHE, TRAUNREUT

Before the renovation

The chancel provides a unique view of the bell tower thanks to the skylights. However, the yellowed plastic glazing obstructed this view when it came down to it and also made it difficult for daylight to enter the church.

After the renovation

- Eight LAMILUX Glass Skylights FE 3° and a sound insulation value of 38 dB
- Mounted on eight LAMILUX Renovation Frames 11 to ensure safe installation on the existing supporting structure

LAMILUX RENOVATION SOLUTIONS

CONTINUOUS ROOFLIGHTS AND GLASS ARCHITECTURE

With our complete systems made of plastic and glass, we offer you an integrated solution. Our portfolio provides you with economical solutions for all installation situations. Whether as a usage-optimized continuous rooflight in an industrial hall or technically sophisticated and aesthetically appealing with our PR60 glass roof constructions.

For more demanding requirements, such as extreme site conditions, special glazing, historic preservation, installation opening or other applications, we are also happy to find individual solutions for you on site.





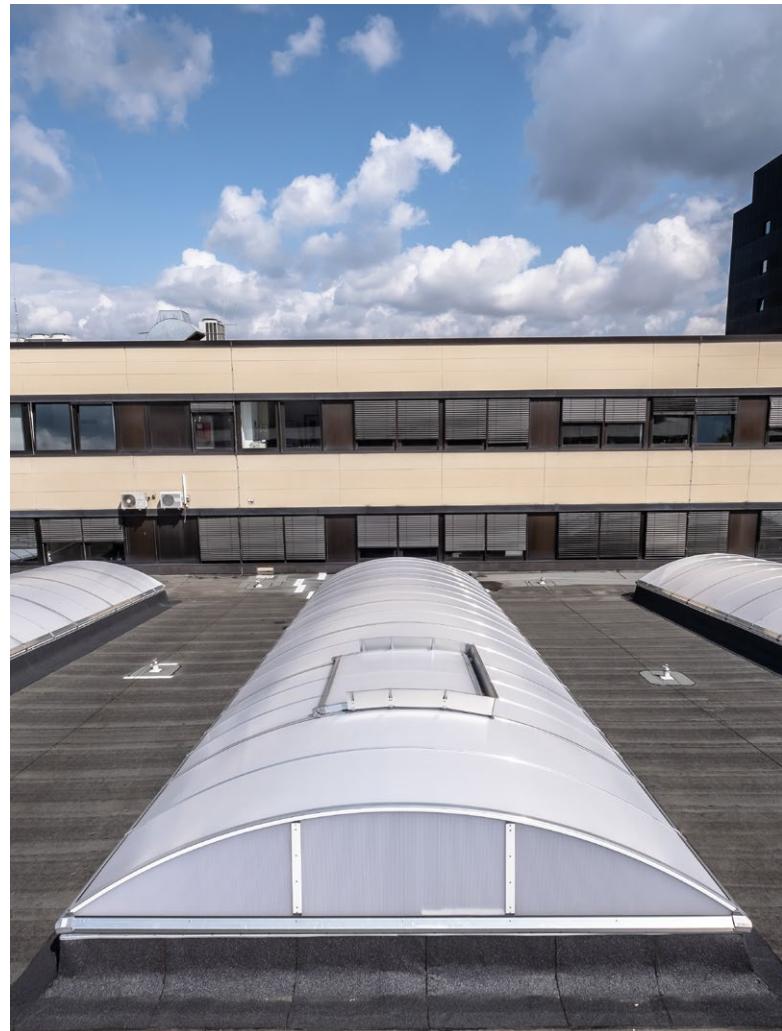
RENOVATION EXAMPLE CONTINUOUS ROOFLIGHT B STUTE, PADERBORN

Before the renovation

The hall roofs and skylights of the food plant had been severely damaged by a storm. The energy-efficiency values of the old continuous rooflights were also no longer satisfactory.

After the renovation

- 36 LAMILUX Continuous Rooflights B in different sizes, thermally separated and free of thermal bridges with glazing in multi-shell polycarbonate panels of opal design, for non-glare daylight illumination where possible.
- 15 LAMILUX Smoke Lifts Continuous Rooflight B each integrated as a single flap to ensure safety in the event of a fire and for daily aeration and ventilation



RENOVATION EXAMPLE CONTINUOUS ROOFLIGHT B WEGMANN GRUNDBESITZ GMBH, KASSEL

Before the renovation

The old wired glass constructions could no longer meet their energy-efficiency requirements. Even the top view of the yellowed shed roofs was no longer aesthetically pleasing.

After the renovation

- Twelve LAMILUX Continuous Rooflights B with thermally separated frame profiles in an insulation chamber
- Restriction of fire spreading as per the requirements of DIN18234 by means of an integrated safety package with linear burn-through protection
- Twelve Smoke Lifts Continuous Rooflight B as smoke and heat exhaust ventilation devices and an opener for an additional ventilation function



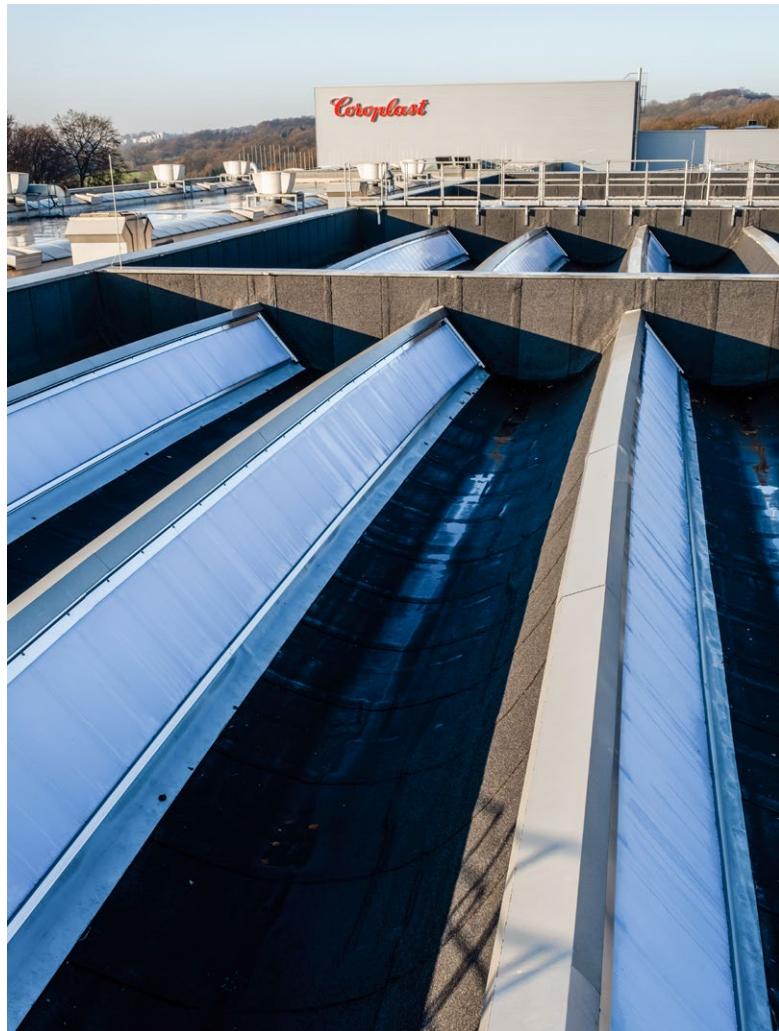
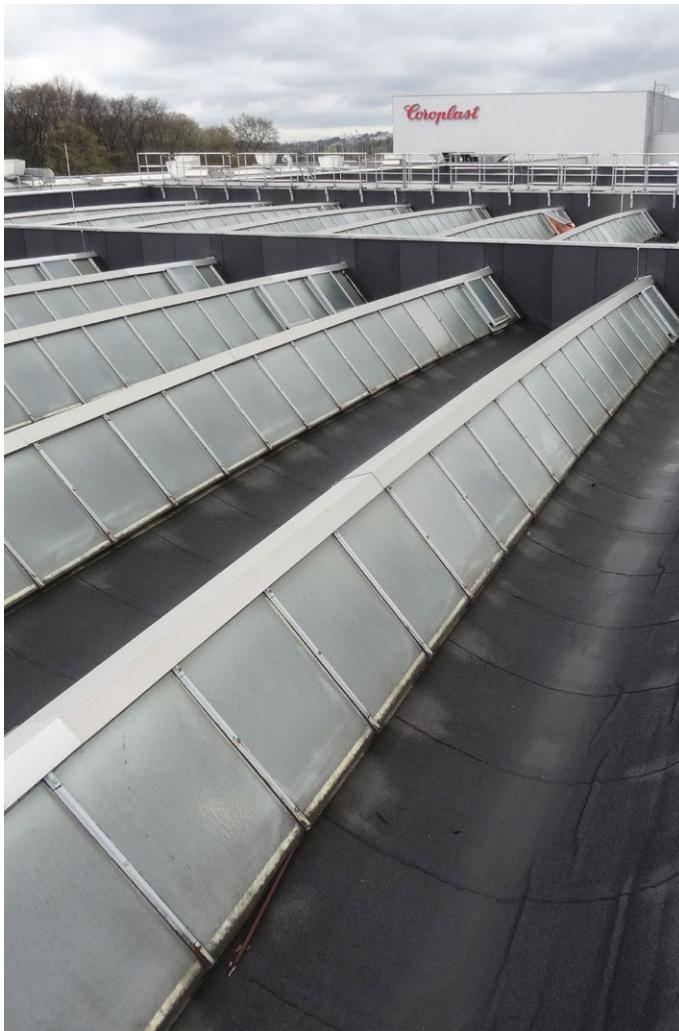
RENOVATION EXAMPLE CONTINUOUS ROOFLIGHT S PRODUCTION HALL, WURZEN

Before the renovation

Today's event hall used to be a production facility that had not been used for some time. Accordingly, the demands placed on the yellowed, partly blind skylights hardly optimised in terms of energy efficiency were different.

After the renovation

- 22 saddle roof shaped LAMILUX Continuous Rooflights S with a 30° inclination and, in part, with ridge bend
- Eight LAMILUX Smoke Lifts Continuous Rooflight S as single flaps for smoke and heat exhaust ventilation in the event of a fire



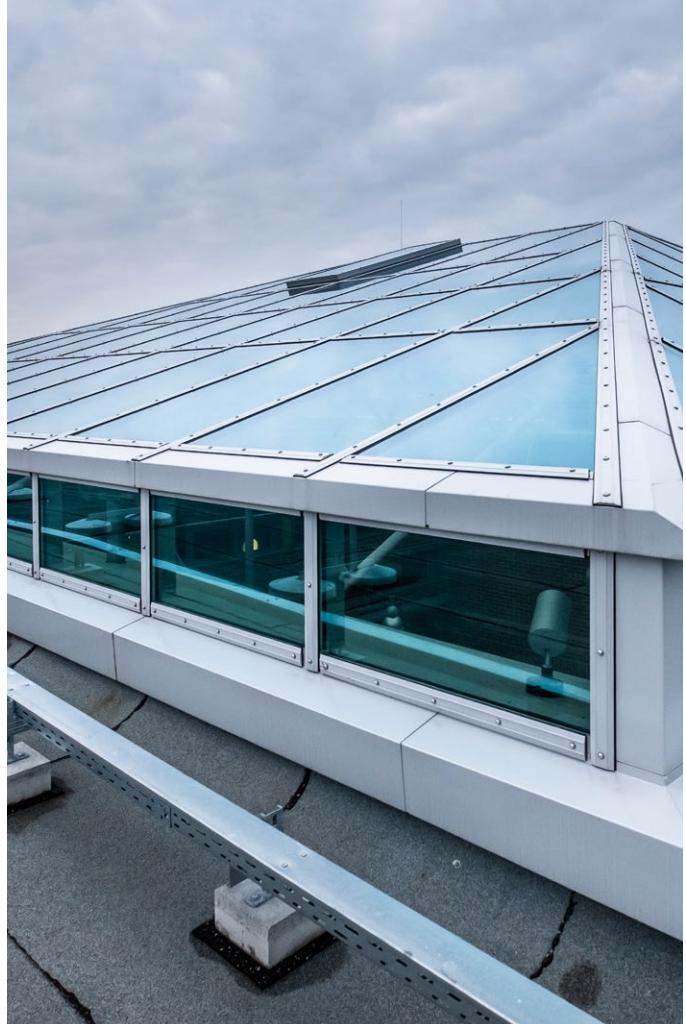
RENOVATION EXAMPLE TRANSLUCENT FAÇADE AND ROOF SYSTEMS COROPLAST, WUPPERTAL

Before the renovation

The old shed construction brought only a small amount of daylight into the building and could no longer keep up with the new fire protection regulations.

After the renovation

- 55 LAMILUX Translucent Façade and Roof systems as shed construction in a system completely free of thermal bridges
- 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



RENOVATION EXAMPLE GLASS ROOF PR60 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.

After the renovation

- One Glass Roof PR60 in pyramid shape with double insulation glazing and a size of 275 m²
- Integration of two LAMILUX Ventilation Flaps PR60
- Construction on an existing steel supporting structure accompanied by extensive measurement
- Upgrading of the old brick base using additionally fixed steel beams
- Renovation work below a protective roof 2500 m² in size, which was opened and closed the same way as a blind on a daily basis



RENOVATION EXAMPLE MS78 RESIDENTIAL BUILDING; FREIBURG

Before the renovation

A self-built glass roof became leaky over the years. Therefore, a renovation was absolutely necessary. The challenge was to find a solution which not only solve the existent problem, but is consistent in the long-term fulfil current energy efficiency values.

After the renovation

A LAMILUX Modular Glass Skylight MS78 with a width of 1.5 m and a length of 6.5 m including 2 ventilation sashes, which are indistinguishable due to the homogeneous outlook of ventilation-and fixed elements.

LAMILUX SKYLIGHTS

ROOFLIGHT F100 W



GLASS SKYLIGHT F100



GLASS SKYLIGHT FE



GLASS ARCHITECTURE



MODULAR GLASS SKYLIGHT MS78



FLAT ROOF ACCESS HATCHES



CONTINUOUS ROOFLIGHT



RENOVATION



SMOKE AND HEAT EXHAUST



BUILDING SMOKE EXTRACTION



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.



LAMILUX Heinrich Strunz GmbH

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

