



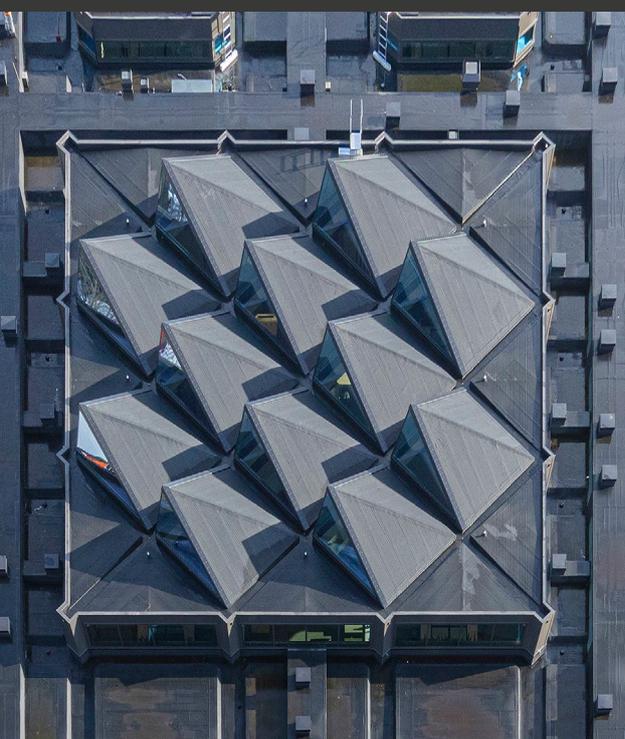
Design for the Future

Refurbishing of existing buildings:
How can VELUX Commercial support you?

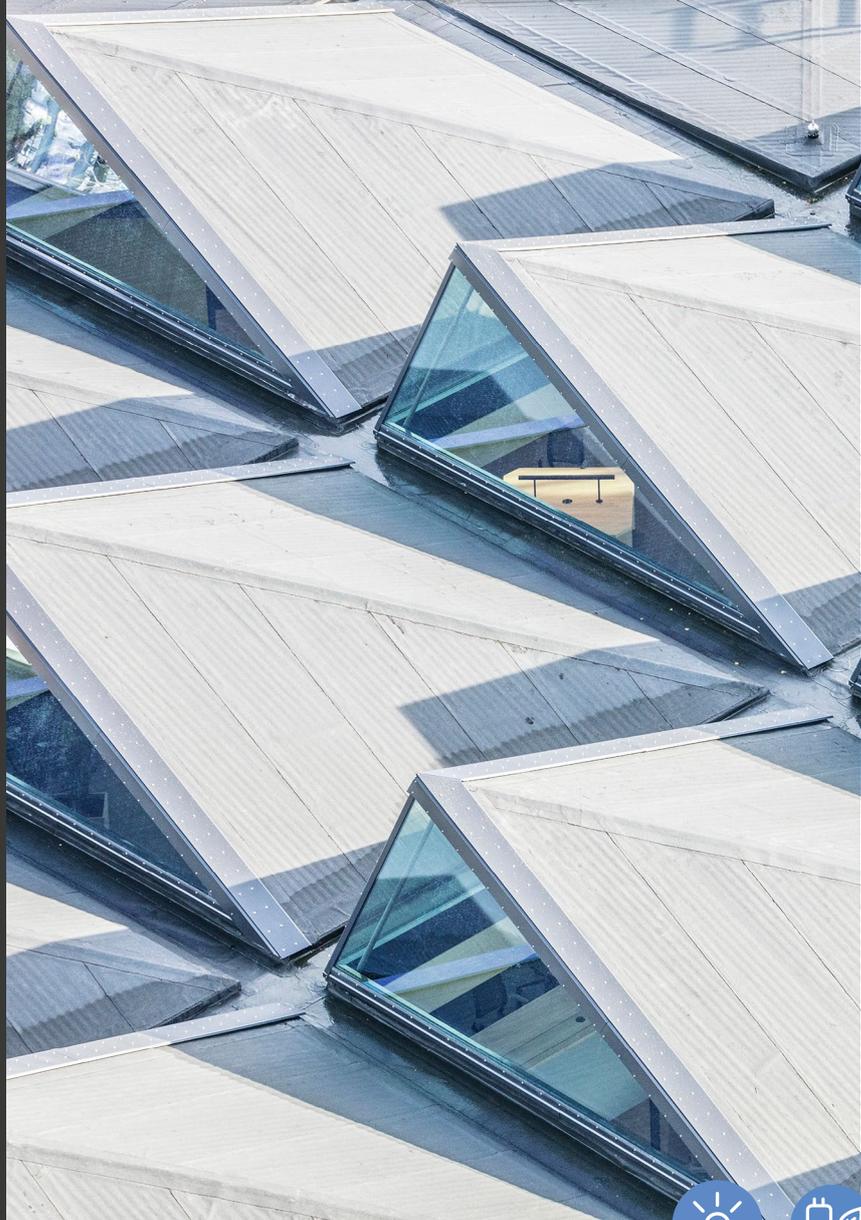
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VELUX[®]

Commercial



Neuron Building – The Netherlands



Structural Glazing Systems



Renovation solutions

VELUX Commercial can help you make sure that rooflight solutions meet the objectives of your refurbishment project. Even if you need to fix an unexpected damage or have a comprehensive renovation plan, well-designed rooflight solutions can bring several benefits by contributing to a variety of energy efficiency and comfort related measures. You might need: improvement in daylighting and fresh air supply, better energy/thermal efficiency, enhancement of the fire protection and safety of the building. In our product portfolio you can find either prefabricated or tailor -made skylights and rooflights with quick installation time, as well as fixed or venting modules and smoke and heat exhaust systems.

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"75 % of the buildings in use today are expected to still be in use in 2050 — which is why renovating existing buildings is becoming increasingly important."

Source: VELUX Healthy Homes Barometer 2020, EU Buildings Data



Key Reasons for Renovations

Rooflight refurbishment offers an opportunity to significantly enhance your building's performance and occupants' comfort.

Minimizing heat loss and **improving energy consumption** of the building through optimal illumination and insulation are central to any renovation project. If you let in more natural light into your building, you will be less reliant on artificial light and thus save energy. Another significant aspect of the energy performance of buildings is **ventilation**. With a controlled ventilation system, you can avoid heat loss, while ensuring an adequate supply of fresh air.

A roof, and any rooflight solution in it, is part of a building's thermal envelope. The ideal rooflight solution will contribute to a **healthy and comfortable environment** – a good place for children to learn and for employees to work efficiently.

Not only is it the architects' and building owners' goal to create a comfortable indoor climate, but local regulations often require daylighting solutions to meet a specific thermal transmittance value.

Skylights and rooflights play a major role in keeping the building and its occupants safe by removing toxic smoke in the event of a fire. **Smoke ventilation systems** channel smoke and heat through the roof, thus people have better visibility and oxygen level. Therefore, smoke and heat ventilation are crucial to the implementation/renewal of fire protection concepts. New daylight and ventilation solutions need to comply with health and safety regulations and therefore must be complemented by SHEV systems and safety grids against fall-through.

When it comes to modernization, you might want to **enhance functionality**: improve/implement ventilation modules, improve thermal insulation and/or soundproofing, control light transmission, implement smoke and heat exhaust systems (SHEV). Rooflight replacement aims at providing the right amount of natural light. At this point the question of daylighting is important. You need different rooflights for diffused lighting throughout a warehouse area and direct light for the reception area or hallways.

The **lack of unexploited building areas** or buildings available for purchase means you have to use the existing building. You need to rearrange production/office areas and use formerly vacant areas and/or create spaces that fit their new purpose.

Sustainability is an important pillar of governmental and organizational strategies. State subsidies are often available to building owners who wish to renovate their assets and pursue sustainability goals. Most of the sustainability certification schemes (e.g. BREEAM, LEED, DGNB and WELL Building Standard) have a holistic strategy considering energy-related issues, as well as indoor climate.

As a result of a well-thought-out and planned renovation, both the value and the thermal performance of the building will increase.

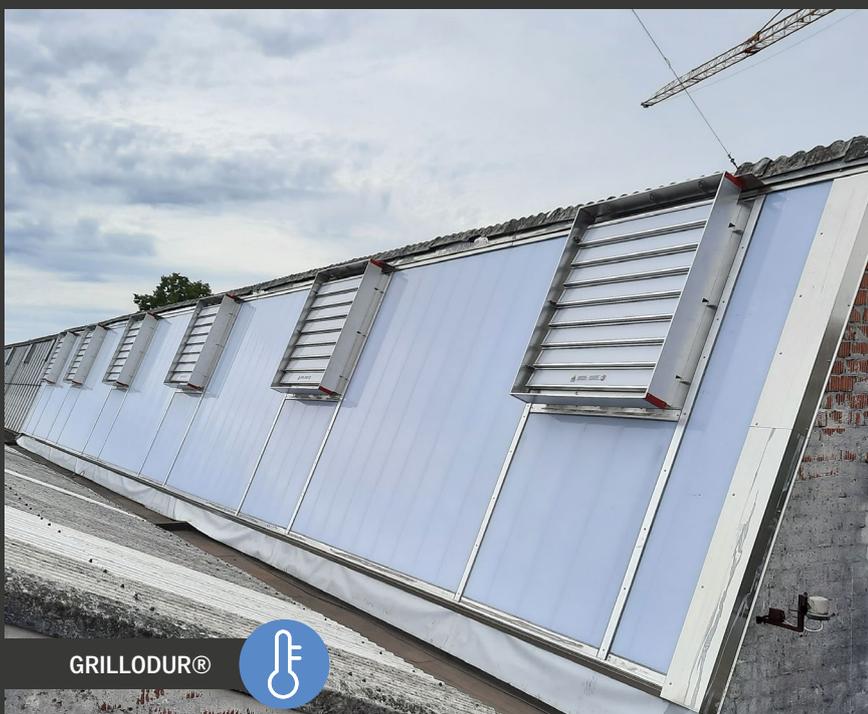


Thomas Buxton Primary School - UK

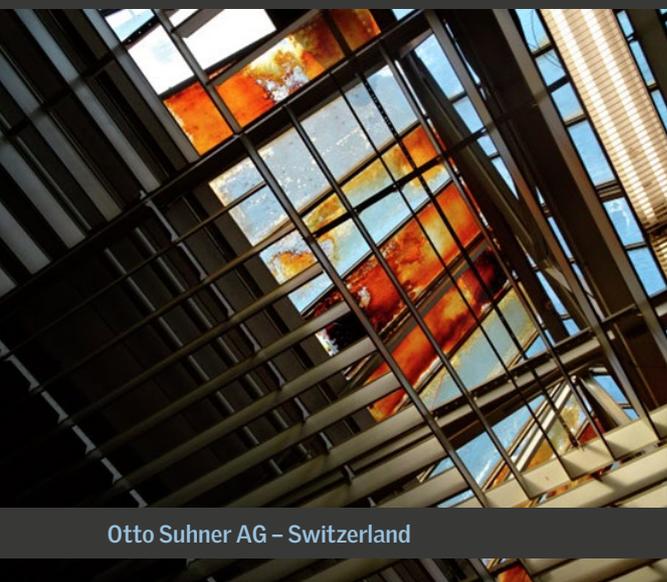
VELUX Modular Skylights



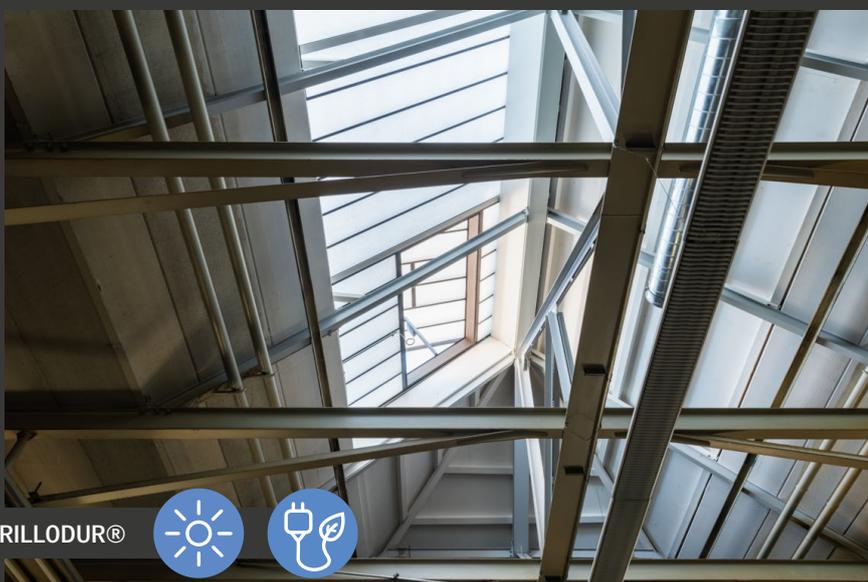
Rieker in Welzheim - Germany



GRILLODUR®



Otto Suhner AG - Switzerland



GRILLODUR®





Structural Glazing Systems

RAI Europehall



VELUX Modular Skylights

Dottignies

Checklist for Refurbishment

We collected the most important factors you need to look at for your refurbishment project to have a clear view of future needs and the benefits of installing VELUX Commercial rooflights and skylights. Contact our expert team to help you discuss and specify your requirements. We are ready to support you at every step.

Have a clear understanding of what you want to achieve with the renovation. New rooflight solutions should contribute to your overall plan: improve/replace outdated structures, improve energy efficiency and sustainability, enhance indoor comfort.



Before starting your renovation project,
discuss the following points.

- ✓ **Consider the building type and its purpose**
- ✓ **Consider the building's condition and the load bearing capability of the roof**
- ✓ **Consider energy-efficient solutions for lighting and ventilation**
- ✓ **Ensure compliance with health and safety legislation**
- ✓ **Get the right amount of natural light in the design**
- ✓ **Avoid glare by selecting the ideal solution and glazing type**
- ✓ **Reduce ambient noise levels**
- ✓ **Consider implementing smoke and heat exhaust systems**
- ✓ **Consider implementing safety grids**
- ✓ **Consider installing photovoltaic panels**
- ✓ **Design in accordance with sustainability standards**

If you need help with your renovation project, contact us. Our sales colleagues are happy to help find your ideal daylight and ventilation solutions.

Support for Your Renovation Project

We offer you end-to-end support throughout a renovation - from product specification and technical advice to installation and after sales services.

PLANNING AND DELIVERY



Advice and Planning Support

Our experts are available to advise you throughout the entire process, help you get started, plan and design your solutions.

On-site consultation is available to assess the existing rooflights.

You will get a full picture of our core product portfolio and the possible solutions tailored to your renovation project.

Our support includes ventilation and SHEV consulting and planning, including coordination with third-party contractors.

We are able to support you with offers for customised photovoltaic solutions.



Draft

Our free planning tools, including the VELUX Daylight Visualizer and CAD/BIM objects, ensure virtual design and optimal product specification.



Specification and Technical Documentation

We provide all data and technical documents for selecting the right products.



Logistics

We will provide approximate lead times and delivery dates for our products.

We coordinate with third-party contractors to ensure smooth project execution.

INSTALLATION



Either a VELUX Commercial installation team, trained contractors or the customers themselves can install the products depending on the solution.

We offer installation guides and videos to the installer and service technicians.

AFTER-SALES SERVICE AND MAINTENANCE



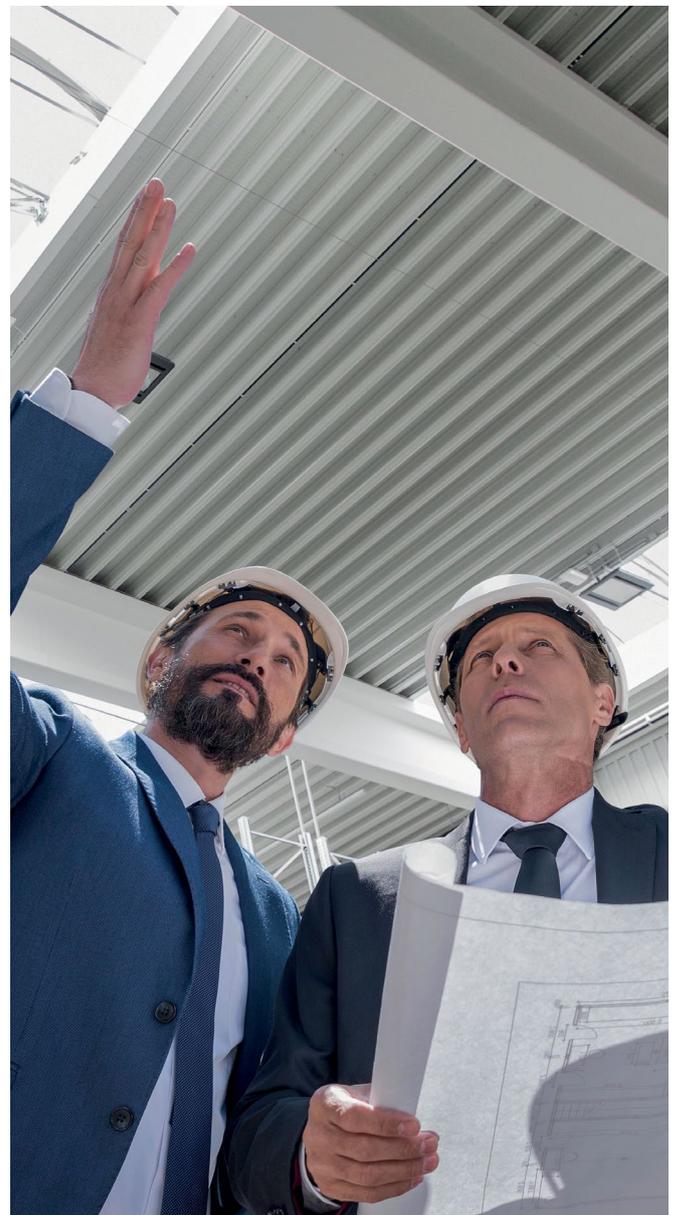
Guarantees

Our products and accessories are backed by comprehensive guarantees of up to 10 years.



Maintenance and Service (SHEV Systems)

We offer regular maintenance of SHEV systems.



Product Overview

Whether you need a single rooflight replacement or plan to undertake a comprehensive renovation of the roof structure, our range of solutions offer complete flexibility for providing daylight and natural ventilation, as well as smoke and heat exhaust ventilation (SHEV). Our products can be used to enhance the performance and safety of existing commercial, industrial and public buildings. Furthermore, our products may be installed with photovoltaic modules on the roof next to each other or fixed to the rooflight, thus improving the building's overall energy efficiency.

1 Domes

Our plastic domes provide natural light for flat roofs where the goal is to direct light to a specific area with a single source of daylight. Domes can be complemented with additional functions for comfort ventilation and for smoke and heat extraction. We offer various types of glazing to meet specific requirements such as thermal efficiency, hail protection, sun protection and fall-through protection. The mechanical fastening of the dome shells enables simple, quick and therefore cost-effective upgrades for energy-related renovation that impacts the whole roof or replacement for an old dome rooflight.

3 VARIO Continuous Rooflights

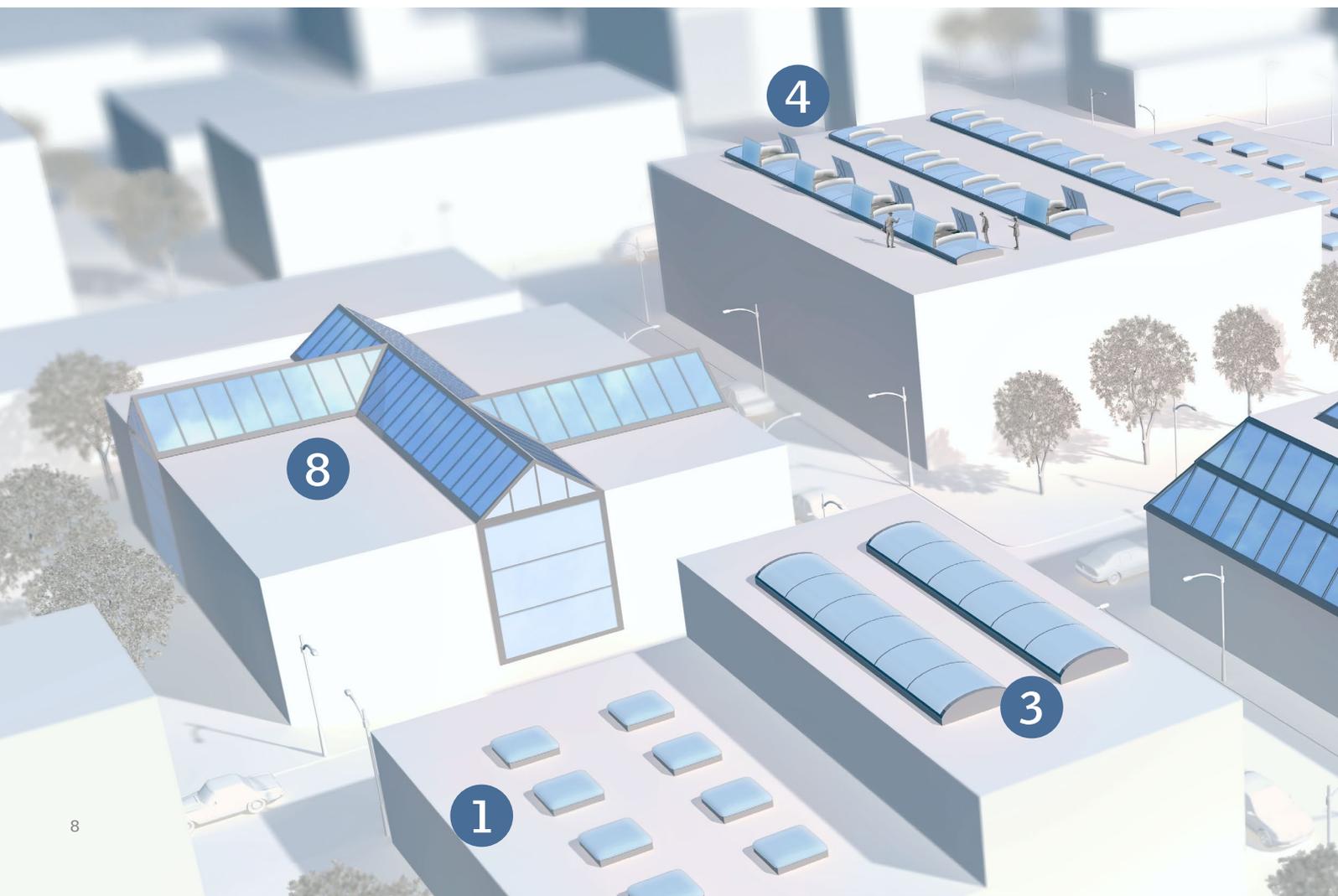
Vario Continuous Rooflights are ideal solutions for covering large areas where increased amount of daylight and smoke and heat ventilation is needed. These polycarbonate rooflights guarantee optimum roof illumination with natural, diffused light. Suitable for flat and sloping roofs, Vario rooflights are durable, lightweight, and cost-effective alternatives to glass. This is a made-to-measure solution and can be installed on existing kerbs.

2 VELUX Modular Rooflights - Monolight

Monolight flat glass rooflight combines quality, performance and aesthetics with solutions for maintenance access and ventilation. This single unit rooflight can be ordered as fixed or comfort venting units. Monolight consists of a stylish glass top unit with a silky finish, which makes it ideal for refurbishments with design in focus. We offer Monolight in a wide range of shapes and sizes to suit a variety of applications. In some regions circularlight, burglary resistance and walk-on product variants may be available.

4 GRILLODUR®

GRILLODUR® is a multi-layer panel made of at least two semi-transparent fibreglass panels. With a mere weight of 10 kg/m², it imposes minimal static load on the substructure. This solution provides glare-free and shadow-free illumination, along with fall-through safety. GRILLODUR® comes partly pre-assembled, resulting in brief installation times and minimal disruption of building operations. The flexibility of GRILLODUR® allows for customised solutions. It stands out as an excellent choice for roof renovations with special requirements such as chemical, mechanical and hail resistance.



5 VELUX Modular Skylights

Modular Skylights can be combined in several rooflight configurations, creating perfect solutions for a wide variety of building types. This product range includes: Longlight 5-30°, Wall-mounted Longlight 5-45°, Northlight 25-90°, Ridgelight, Step Longlight, Atrium Longlight/Ridgelight. The modules are 100% prefabricated, which makes the installation process smooth and fast. If quick sealing of the roof with an aesthetically appealing solution matters in your renovation project, Modular Skylights will be a perfect choice.

7 VELUX Glazing Panels

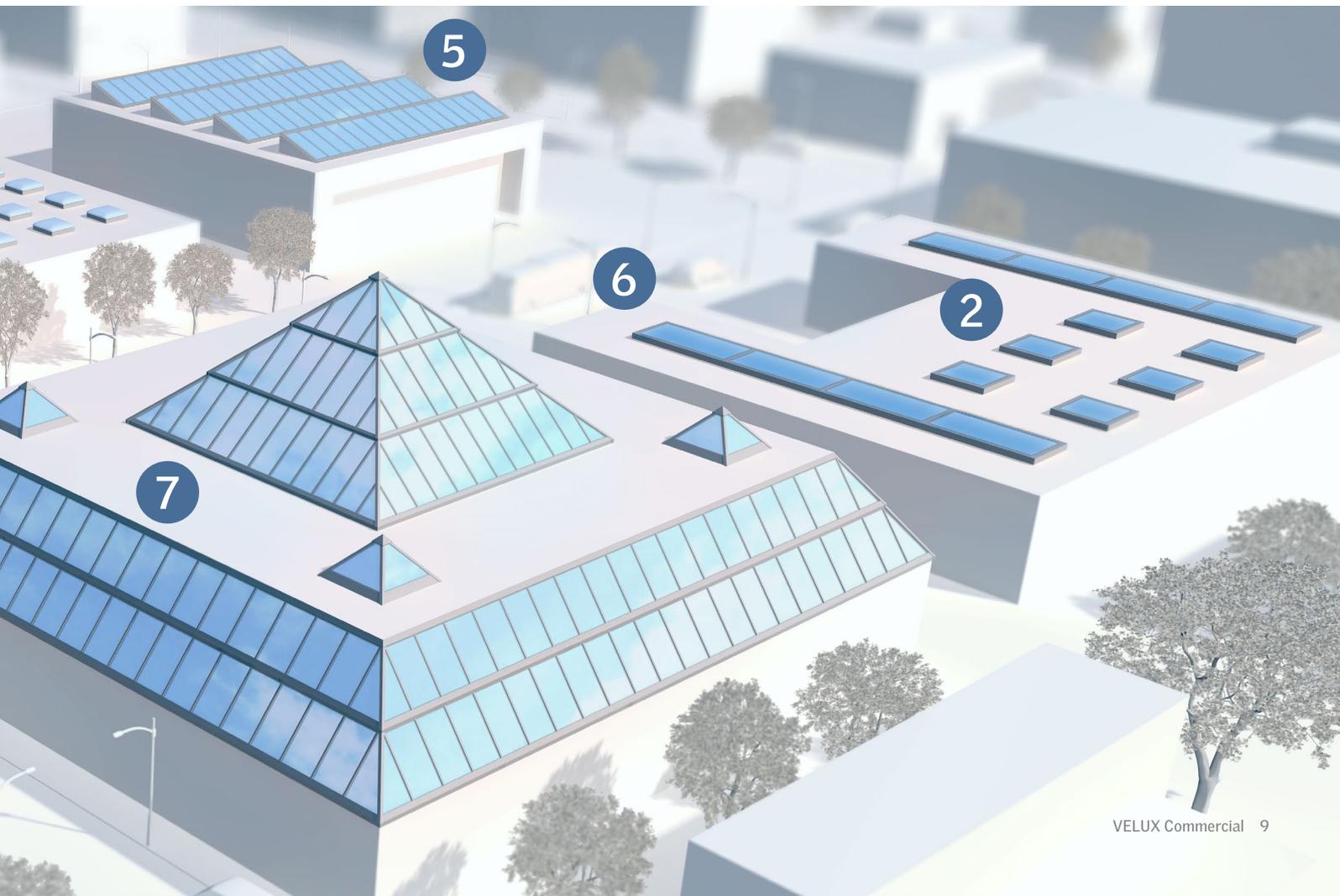
Glazing panels form a bespoke glass system of prefabricated panels with slim and shallow profiles for optimal daylight influx. The system can be configured in multiple solutions, by combining the various installation options with gable and corner solutions. The bespoke nature of the system enables you to design almost any rooflight for commercial and public buildings, which makes it suitable for renovation projects.

6 VELUX Modular Linearlight

Modular Rooflights Linearlight is a row of connected bespoke flat glass rooflights. The solution consists of pure fixed modules, pure venting modules or a combination of both. It is possible to design wide, uninterrupted daylight sources with Linearlight, therefore this solution is ideal for rows of short and wide rooflights for corridors. When you need to replace old rooflights, this made-to-measure solution ensures perfect fit to the roof as well as the best energy-optimization.

8 Structural Glazing Systems

Specialist Structural Glazing is a stick system with made-to-measure solutions that allow for almost unlimited flexibility when designing your rooflight solution. It is highly customisable, providing lots of natural light and suitable for use in refurbishment projects that include covering large areas such as glass roofs and facades.



Smoke and Heat Exhaust Ventilation (SHEV)

Smoke and heat exhaust ventilation is a critical area of rooflight refurbishment specification. New daylight solutions must meet fire safety requirements and standards.

Skylights and rooflights play a major role in keeping the building and its occupants safe by removing toxic smoke in the event of a fire. Daylight solutions with SHEV systems ensure the rapid dissipation of toxic gases and vapours, providing better visibility when exiting the building and maintaining oxygen levels. Comprehensive planning reduces property damage or even prevents it altogether.

Our products can work as natural smoke and heat exhaust ventilators (NSHEVs), which open automatically or manually in the event of a fire. They can be fitted with electric or pneumatic opening devices.

In electric SHEV systems, the systems are triggered by automatic detectors and electric controls activate the flaps. You need only one actuator for SHEV and ventilation. This is an environmentally friendly and powerful system. Its functionality can be further enhanced with rain and wind sensors and central closure control with a timer.

Pneumatic systems, on the other hand, require CO2 cylinders. The heat generated by a fire causes the gas in the cartridge to expand, activating the actuator. Sensors and control units are also required in this case.

Our smoke and heat exhaust ventilation systems have been designed, tested and CE-marked in accordance with EN 12101-2:2003.

Regular maintenance of SHEV units and ventilation systems is required for long-term product functionality and building safety.

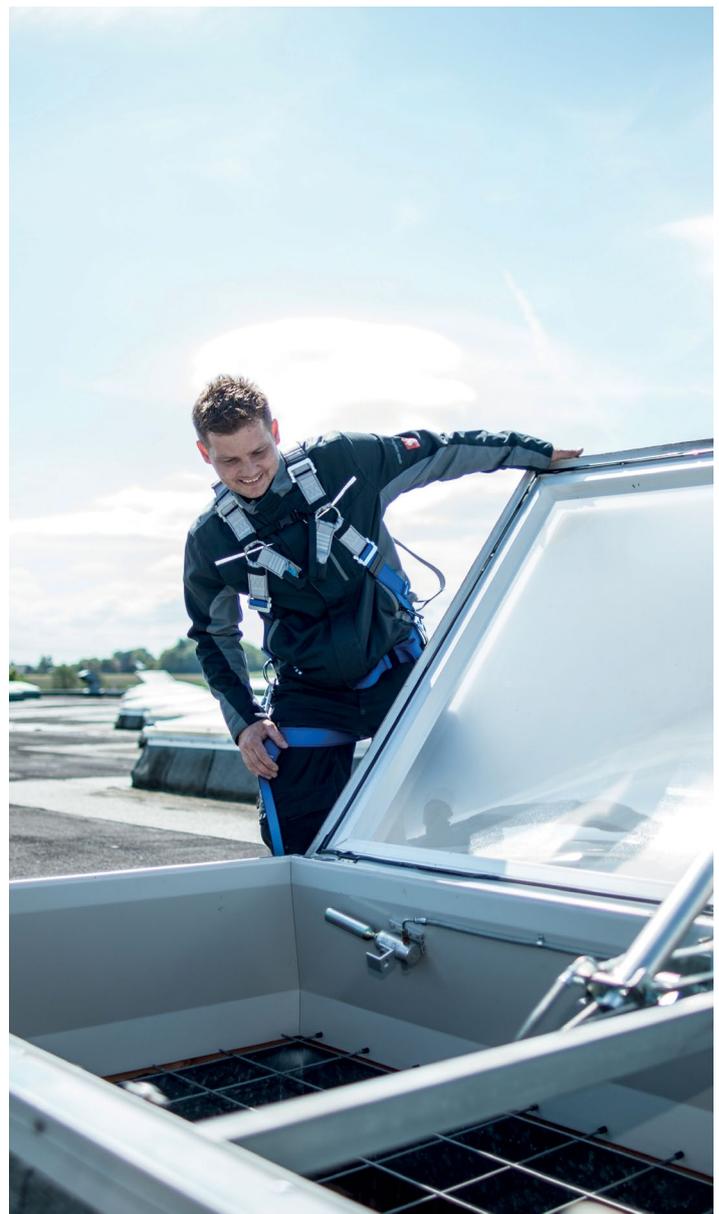
Safety on the Roof

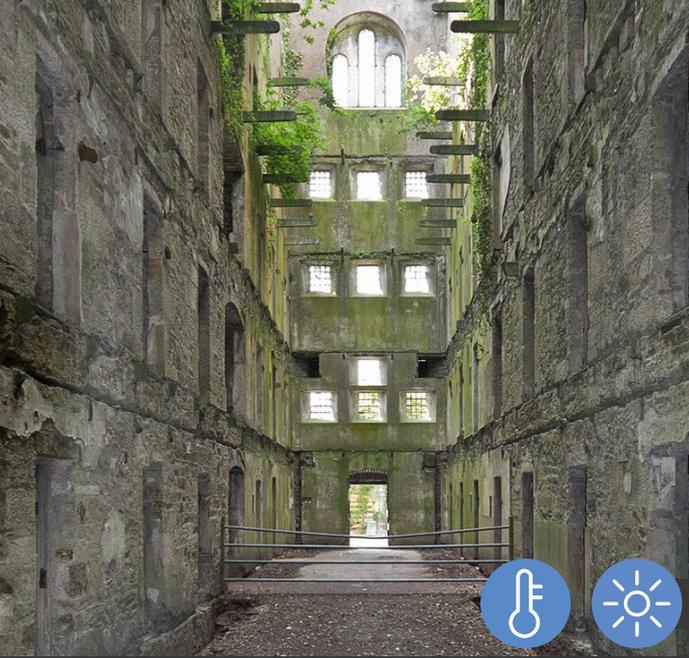
Building owners and operators are responsible for safety on the roof. Rooflights that are not designed to be permanently fall-through-proof must be fitted with suitable equipment to prevent people from falling through or falling from the roof. This is regulated by local authorities. Failure to comply with these regulations can result in fines, and managers can be held personally liable.

New rooflight solutions can improve safety for maintenance teams who access the roof. Our non-fragile rooflights that meet all current manufacturing standards provide impact resistance and fall-through protection.

Our glass products – modular skylights and rooflights, glazing panels, structural glazing systems and GRILLODUR® – generally do not need additional safety grids due to the material itself. However, in case your rooflight has opening flaps, you need to fix safety grids.

For plastic domes and polycarbonate continuous rooflights we offer safety grids made of steel or aluminium that protect from falling through and ensure high daylight penetration level. They are particularly suitable for safety-related refurbishment projects due to their light weight and easy installation from the roof. We offer safety grids with short delivery times.





VELUX Glazing Panels

Bodmin Jail Hotel – UK



VELUX Modular Skylights

Herter GmbH – Switzerland



VELUX Modular Skylights

Georg Fischer Wavin AG – Switzerland

VELUX Commercial
Ådalsvej 99
2970 Hørsholm
Denmark

Web: veluxcommercial.com
Blog: commercial.velux.com/blog



Your preferred partner for
daylight and ventilation solutions

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Version 1.0

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