COST AND USE-OPTIMISED RENOVATING SHED GLAZING

REASONS FOR RENOVATION

If your business uses less energy for electricity and heating in the future, your monthly energy costs will decrease. Energy efficiency thus increases your profitability and competitiveness and makes you less dependent on fluctuating market prices for fossil fuels. In addition, you increase the value of your property through energy-efficient renovation and construction. Those who position themselves wisely in this area will save a lot of money. Thanks to significant savings in heating and electricity costs and significant subsidies for energy-efficient renovations from the public sector, your investment will pay for itself after just a few years.

Renovation requires expertise – so it's good to have a competent partner like roda by your side. Statutory regulations, health regulations and industrial requirements call for customised and tailor-made solutions, especially on business premises. For this reason, take advantage of our decades of experience and receive comprehensive and optimum service. From on-site analysis to acceptance, we are your partner. We are not satisfied until you are.

ADVANTAGES OF RENOVATION

Adaptation of lighting areas to requirements

Electricity and heating cost savings thanks to better insulation values

Satisfied employees thanks to better indoor climate

Adaptation of aeration and ventilation systems

Modern fire protection via SHEV systems

Increase in property value as a result of your investment

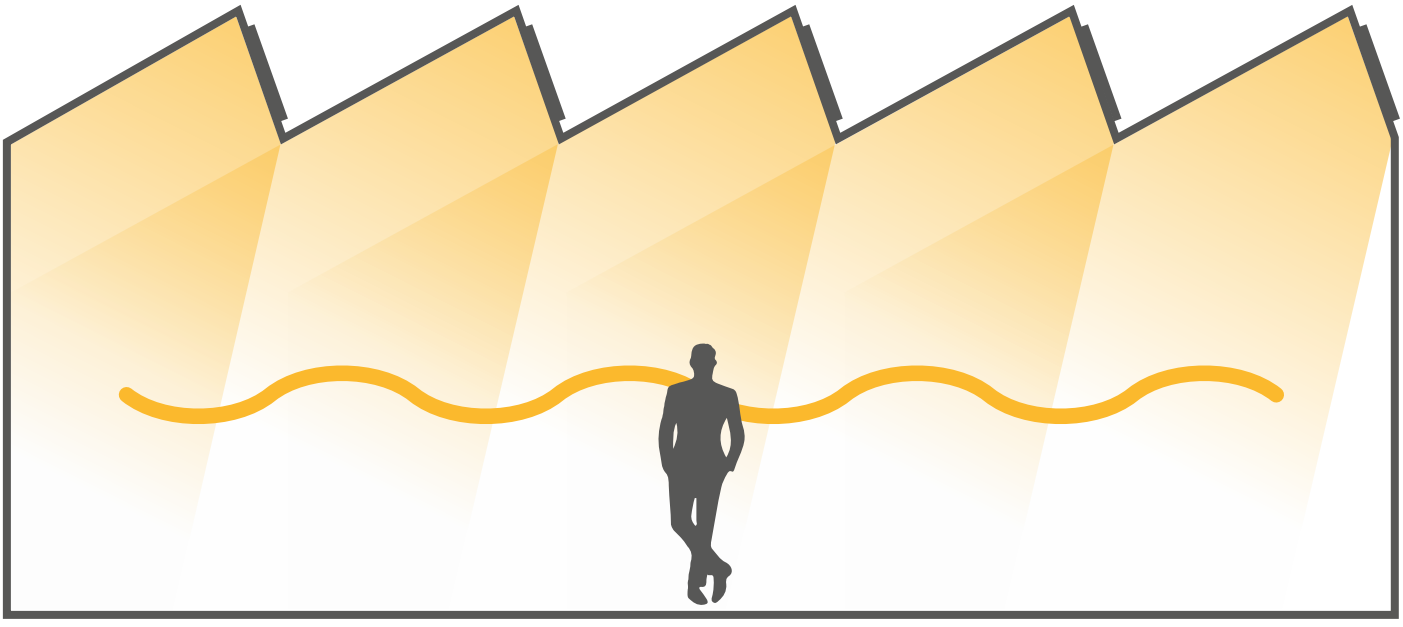
Complete renovation from a single source

Fall-through protection possible

SHED ROOF RENOVATION WITH RODA AS YOUR RELIABLE PARTNER

Renovation requires expertise – so it's good to have a competent partner like roda by your side. Statutory regulations, health regulations and industrial requirements call for customised and tailor-made solutions, especially on business premises. For this reason, take advantage of our decades of experience and receive comprehensive and optimum service. From on-site analysis to acceptance, we are your partner. We are not satisfied until you are.

With our translucent polycarbonate light elements, we have the perfect refurbishment solution for you. Thanks to its high flexibility in form, colour and function, the system can be individually adapted to your requirements. Benefit from optimal daylight illumination and excellent thermal insulation values, with U-values of up to 0.71 W/m²K. This guarantees an excellent energy balance.



The light incidence from a shed roof is indirect and extensive.

INDIVIDUAL MEASURES ON THE BUILDING ENVELOPE

Energy efficiency is the trend. Various funding programmes have been set up by the national government and the federal states for energy-efficient renovation measures. On the state's side, all programmes are bundled under the umbrella term Federal Support for Efficient Buildings (BEG). Since 1 January 2021, BAFA has been promoting all individual energy-related measures of BEG EM with a directly disbursed grant. This grant is the same as the redemption grant for the KfW loan.

THE NEW BEG FUNDING PRODUCTS AS OF 1 JULY 2021

- Non-residential buildings – loan (263)
- Non-residential buildings – grant (463)

Don't forget municipal funding programmes – It is also worth finding out about the funding programmes available in your own municipality and state. Some of these can be combined with other funding.

SUBJECT OF FUNDING

Funding is available for individual measures on existing buildings that contribute to increasing the building's energy efficiency on the building envelope, such as windows or skylights, insulation of the exterior walls or the roof.

ELIGIBILITY TO APPLY

As a company, you are eligible to apply. In this regard, the eligibility applies to owners as well as tenants, leaseholders of the property or contractors. The application process requires the involvement of an energy efficiency expert (EEE).

The funding rate is at least 20 per cent of the eligible expenditure. Loan of up to 15 million euros for individual measures.

PREREQUISITE FOR THE RENOVATION OF EXISTING NON-RESIDENTIAL BUILDINGS

Maximum values of the heat transfer coefficients U_{max}

Residential buildings and zones of non-residential buildings with indoor temperatures ≥ 19 °C	Zones of non-residential buildings with indoor temperatures from 12 to < 19 °C
U_{max} = 1.4 W/(m²K)²	**U_{max} = 1.9 W/(m²K)²**

RENOVATION PAYS OFF TWICE OVER

If your business uses less energy for electricity and heating in the future, your monthly energy costs will decrease. Energy efficiency thus increases your profitability and competitiveness and makes you less dependent on fluctuating market prices for fossil fuels. In addition, you increase the value of your property through energy-efficient renovation and construction. Those who position themselves wisely in this area will save a lot of money. Thanks to significant savings in heating and electricity costs and significant subsidies for energy-efficient renovations from the public sector, your investment will pay for itself after just a few years.

Renovation requires expertise – so it's good to have a competent partner like roda by your side. Statutory regulations, health regulations and industrial requirements call for customised and tailor-made solutions, especially on business premises. For this reason, take advantage of our decades of experience and receive comprehensive and optimum service. From on-site analysis to acceptance, we are your partner. We are not satisfied until you are.

Savings through support programmes

30%

Total investment

Annual energy savings approx.

66,229

litres of heating oil
corresponds to **1,760** tonnes of CO_2

COMPARISON OF WIRED GLASS AND PC 40 MM SAVINGS POTENTIAL:
Wired glass U-value = 6.0 W/m²K
40/7 PC opal U-value = 1.28 W/m²K

Heat loss at an assumed temperature difference of 25°K.
QT Wired glass =
1,540 m² x 6.0 W/m²K x 25°K = 231 KW
QT PC 40/7 =
1,540 m² x 1.28 W/m²K x 25°K = 49.28 KW

Heat loss per day
QT Wired glass =
231 KW x 24h = 5,544 KW/day
QT 40/7 PC opal =
49.28 KW x 24h = 1,128.72 KW/day

Heat loss per heating period
QT Wired glass =
5,544 KW/day x 150 days = 831,600 KW/year
QT 40/7 PC opal =
1,128.72 KW/day x 150 days = 169,308 KW/year

Savings with 40/7 PC panel: 662,292 KW heating output / year

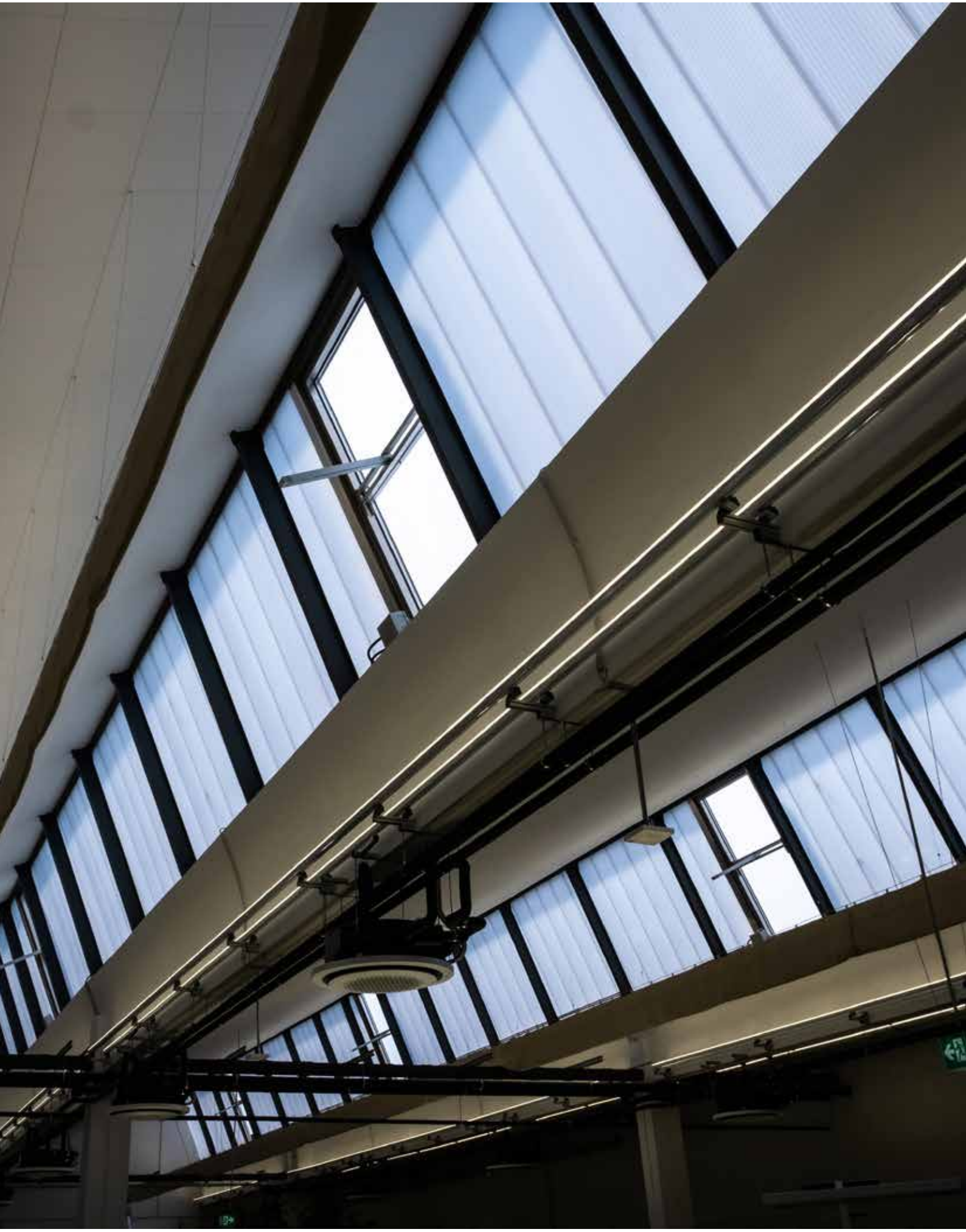
RENOVATION EXAMPLE COROPLAST, WUPPERTAL

Prior to the renovation

The old shed construction brought only a small amount of daylight into the building and the ventilation possibilities no longer met the requirements.

After the renovation

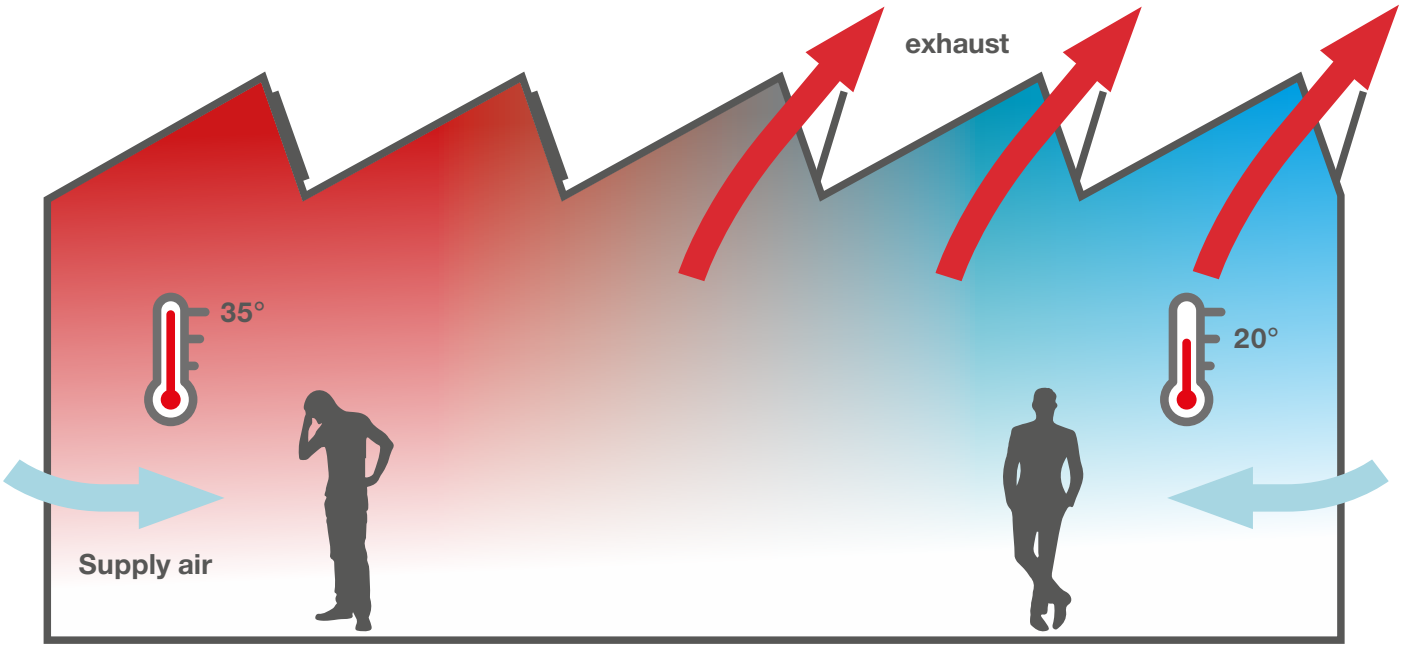
- 55 continuous rooflights as shed construction in a tongue-and-groove system without glazing bars
- 55 LAMILUX fall-through protection grids for installation under the shed glazing
- Twelve roda Smokejet louvre ventilators as natural ventilation units for daily ventilation and smoke extraction.



RETROFITTING VENTILATION SYSTEMS

High air quality is indispensable in industry and commerce. Systems can also be retrofitted to ensure the important air exchange. The advantages are obvious. With suitable ventilation concepts in your company, you will increase the productivity of your employees and reduce the likelihood of errors at the same time. In the long term, you will increase the motivation levels among your employees and reduce sickness-related absences, which occur more frequently when the air is poor.

In addition to the complete restoration of your skylights, roda also offers the renewal/replacement of individual elements that can be directly installed in your constructions. For you, this means that you can expect maximum flexibility during the renovation, with a customised solution specifically for your building project.



Better air exchange can prevent a drop in staff performance.

RENOVATION EXAMPLE
CG DRIVES, WERNIGERODE

Prior to the renovation

The old shed roof with wired glass did not meet current requirements. In summer there was a build-up of heat due to defective ventilation flaps, and in winter very high heating costs due to a lack of thermal insulation.

After the renovation:

- 9 x 56 m continuous rooflights as shed glazing with a U-value of 1.1 W/m“K
- 18 roda double flap ventilator (PHOENIX)) as smoke and heat exhaust ventilation system and for daily ventilation, including fall-through grids
- Wind and rain sensor system as rain detection

Scan this to discover more about roda systems!

PHOENIX AND MEGAPHOENIX

FIREFIGHTER

VENTURISMOKE VS1/VS2

SMOKEJET AND MULTIJET

SMOKE CURTAINS

LOUVER WINDOWS

DAYLIGHT TECHNOLOGY

NATURAL AND MECHANICAL VENTILATION

SMOKE AND HEAT EXHAUST VENTILATION

RENOVATION

MIROTEC GLASS AND METAL CONSTRUCTIONS

LAMILUX DAYLIGHT SYSTEMS

The technical data listed in this brochure correspond to the current status at the time of printing and are subject to change. Our technical data refer to calculations, supplier information or have been determined by an independent testing institute in the course of a test in accordance with the applicable standards. The heat transfer coefficients for our plastic glazing were calculated using the “method of the finite elements” with reference values according to DIN EN 673 for insulating glass. In doing so, the temperature difference of 15 K between the outer surfaces of the material was defined, taking into account practical experience and the specific characteristics of the plastic. The functional values refer only to test pieces in the dimensions intended for the test. No further guarantee for technical values is given. This applies in particular to changed installation situations or if subsequent measurements are made on the building site.

roda by LAMILUX

E.M.B. Products GmbH
Rudolf-Diesel-Straße 6 | 46446 Emmerich am Rhein
Phone: +49 2822 69762
contact@emb-products.de | www.roda.de

VdS

MPA NRW. Materialprüfungsamt Nordrhein-Westfalen geprüft + überwacht Nr.: 21004512

MITGLIED IM FVLR Fachverband Tageslicht und Rauchschutz e.V.

roda shed glazing 04/2021