

Topline ELS

The unrivalled industry leader for rooflights



NEW

Topline ELS 0.9

- U_{total} as low as 0,84 W/m²K
- Market-leading
- Reduces energy costs
- Reduces CO₂ consumption



- Thermal insulation U_{total} up to 0.9 W/m²K
- Solar protection can be integrated in a flexible manner
- Soundproofing values of up to 33 dB
- Integrated complete system
- Technology leadership
- Ultimate energy savings
- Outperforms the latest EnEV stipulations

**INDU
LIGHT**

The new ELS series from INDU LIGHT: Best values right across a continuous rooflight

With Topline ELS INDU LIGHT is unveiling a newcomer to the world of rooflight technology. This new development, known as Energy-Line-Silent technology (ELS), is a trailblazer that features outstanding thermal insulation, great soundproofing values and variable sunblinds within double-glazing cavity.

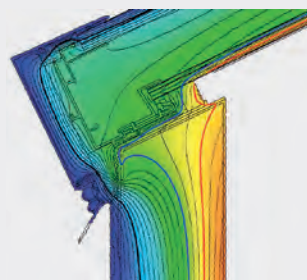
The above-average energy-saving potential of the ELS system is exemplary on the market: the superlative thermal insulation values counteract energy losses from the heating system in the building. Valuable daylight floods into the interior and helps to save electricity by reducing the need for electric lighting. The ELS Sunbloc sunblinds which can be integrated provide protection against sunlight and dispense with the need for energy to cool the building in summer. Together with its optimised hail protection, exemplary soundproofing values and regionally coordinated UV properties, INDU LIGHT continuous rooflights make a decisive contribution towards maintaining property values.

Topline ELS is ideally suited for use in all climate zones and boasts an aesthetically pleasing design.

Outstanding U value compliant with DIN standards also in a horizontal installation position

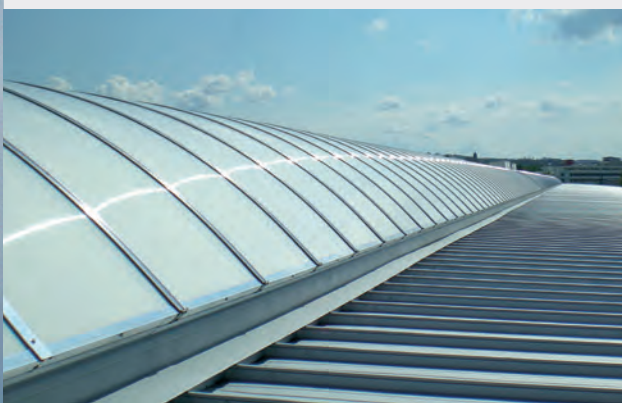
With its top U_{total} value of up to $0.9 \text{ W/m}^2\text{K}$, planners and building owners can comply easily with maximum limits specified by EnEV and can also save money as well. Topline ELS delivers on what it promises because the U value calculation is performed by an independent body and is based solely on a realistic simulation involving horizontal installation. This process puts a dependable set of figures on the table and highlights the anticipated saving in terms of energy and expenditure.

The advent of ELS technology marks a new era in the manufacturing of rooflights: the dust-free system construction of super-imposed multiwall polycarbonate sheets creates an air cushion that not only provides superlative insulation but also prevents the ingress of dirt between the multiwall sheets – a familiar problem with conventional configurations. The blower door test was passed with great ease, delivering firm evidence of the great seal integrity (leak tightness) of our ELS technology.



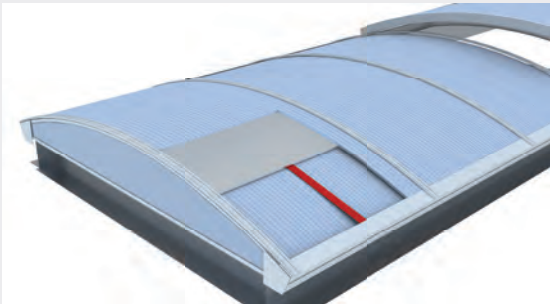
Another new feature is the thermal frame profile around the thermally separated bottom end. The insertion of additional thermal insulation and integrated diaphragm

seals assures a design free of thermal bridges which in turn constitutes a substantial energy saving in the winter months.



ELS Sunbloc – sunblinds, glare shield and climate control

For the first time, Toplevel ELS 1.1 offers integrated or retrofittable sunblinds for optimum light control to suit time of year and requirements. ELS Sunbloc features an infinitely variable and easy-to-use remote control for shading or for overhead projection sessions – a decisive criterion for maximum energy saving in respect of the cooling of buildings during the summer months.



Top skin, shading, lower skin

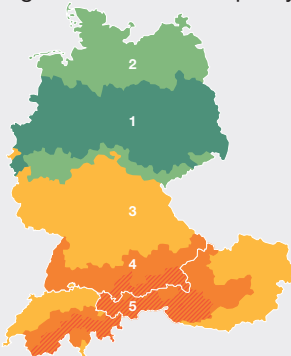
Thanks to its protected installation location between the multiwall polycarbonate sheets, the ELS Sunbloc system scores highly with its multifunctional range of applications: Whether during rain or strong wind, emissions from production processes or in sports halls, the functional capabilities of ELS Sunbloc are always independent of internal and external factors.

Safety – our top priority

Weather phenomena such as hailstones with a diameter of more than 20 mm are on the increase. INDU LIGHT has therefore developed a new kind of hail protection, in addition to the familiar perforated waved sheet, that can contend with hailstones measuring up to 50 mm in diameter. The system has been tested and has been classified by the Swiss VKF-Hagelschutzregister (hail protection register) with the best possible hail resistance class of 5. At the same time, the degree of impairment of light transmission has been limited to a minimum to ensure that your continuous rooflight continues to be just that – a dependable light source.

Solar zone map as the basis for dimensioning the materials

In solar zones 1 to 5, the intensity of solar radiation and therefore the required level of UV resistance in the materials used varies quite substantially. Based on the solar zone map, we dimension our polycarbonate sheets to suit prevailing levels of UV radiation in a given location which means that, regardless of location, we are able to assure the highest standards of quality.

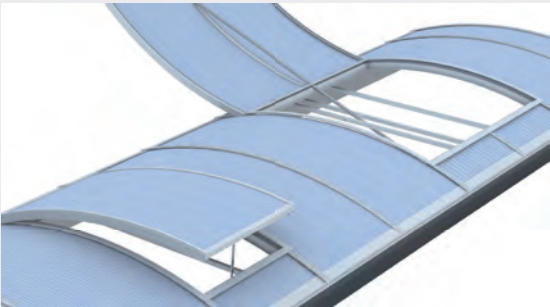


Environmentally friendly soundproofing values

This makes planners and building owners sit up and listen. The exemplary soundproofing value of the ELS system, with test results of up to 33 dB, satisfies the stringent soundproofing requirements of the German acoustic emissions legislation contained in the Bundesimmissionsschutzgesetz (BImSchG) and the technical instructions on noise abatement. This legislation defines maximum levels for the impact of sound on the environment and is intended to protect the population. For planners and building owners, this very specifically translates into safety in the construction approval process and into great flexibility in the choice of locations.

System components

Round off Topline ELS with continuous rooflight flaps in the form of natural smoke and heat exhaust units (SHEV) as part of a SHEV system, or with ventilation units for convenient daily ventilation.



Progressive lighting technology for a future worth living in

Greenhouse gases in the atmosphere are responsible for global warming and climate change. Rising air and water temperatures cause glaciers to melt more rapidly, in turn causing sea levels to rise alarmingly. Based on the best of current knowledge, drastic hazards for mankind and the environment can be avoided by limiting that rise in temperature by 2°C – for example through environmentally-aware construction and through the energy-aware renovation of existing building stock.






INDU LIGHT has committed itself to sustainability in its strategic product planning, and works consistently on the development of ecologically aware and economically viable products.

Topline ELS stands for cost-aware energy management and environmentally compliant construction. Exemplary thermal insulation and maximum light harvesting combined with limited release of heat protect the climate and conserve our valuable resources for generations to come.



Technical data for Topline ELS

Contemporary rooflight technology for renovation and construction.

	 TOPLINE ELS 1.8	 TOPLINE ELS 1.5	 TOPLINE ELS 1.3	 TOPLINE ELS 1.1	 TOPLINE ELS 0.9
U_{total} W/m²K	1.8	1.5	1.3	1.1	0.9
Soundproofing value	23 – 33 dB depending on requirement				
Construction materials class	B2, non-burning dripping, optional B1				
Hail protection class	HW3, optional HW5				
Fall-through protection	during installation, optionally permanent				
Light transmission	variable in acc. with daylight calculation				
Total energy transmittance	g value variable depending on type of glazing				
Shading	infinitely variable by means of remote control				

General approvals of construction authorities are available

All U_{total} values have been calculated for the entire continuous rooflight. They were determined by an independent body in respect of horizontal installation when using 80 mm frame insulation.

The values indicated are standard values and meet current technological standards. Values and properties may vary from this, in which case please contact INDU LIGHT directly.

With Topline ELS 0.9 you can save up to €1.952 of heating oil costs a year!

Assumed rooflight area of 100 m² with heating of 19°C and a heating oil price of €0.70 per litre:

Standard glazing:

U_{total} = 3.3 W/m²K
(max. values acc. to EnEV)

Topline ELS 0.9:

U_{total} = 0.9 W/m²K

Annual saving with Topline ELS 0.9
compared to standard glazing:

2789 litres of heating oil = €1.952

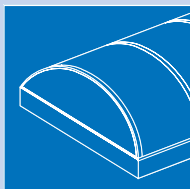
so your additional investment pays for itself within 4,9 years.

This rule of thumb applies:

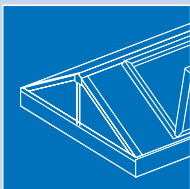
for every 0.1 of improved U values, you save at least one litre of heating oil per square metre of continuous rooflight!

Modular product range

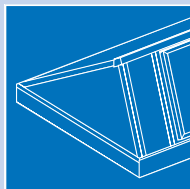
Continuous rooflights



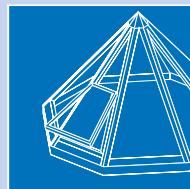
Topline ELS
Proline



Skyline

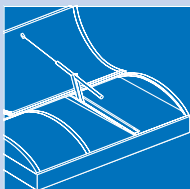


Shedline

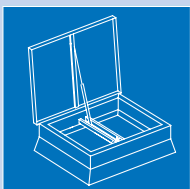


Glass roof
structures
and
customised
rooflights

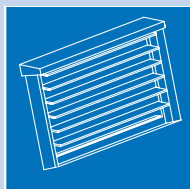
Smoke and heat ventilation systems (SHEV)



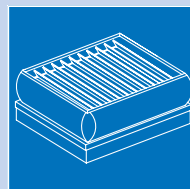
Top / Pro flap



Rooflight

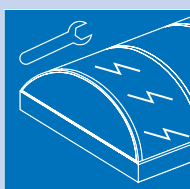


Louvered
ventilator

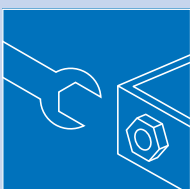


Multi-purpose
ventilator

Renovation – maintenance



Renovation



Maintenance

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