

VELUX INTEGRA[®] solar Passive House roof window GGU



Glazing 82A&B



The VELUX INTEGRA[®] solar Passive House roof window GGU is certified in Class A for Passive House building constructions in cold climate regions. Consisting of an outer triple glazing combined with additional inner double glazing, the window offers ultra low energy consumption, with a U-value of just 0.51 W/(m²K).

- Rain sensor automatically closes the window in the event of rain.
- The motor is hidden in the top cover and totally invisible from view.
- Easily control your roof window with the wireless wall switch that offers simple open/close/stop functionality.
- Silent motor keeps rooms quiet for sleeping children or simply for improved well-being.
- Entrapment control detects objects in the path of the window.
- Compatible with VELUX ACTIVE with NETATMO for a better indoor climate with sensor-based ventilation. Remote controlled via smartphone or voice.
- The io-homecontrol[®] platform ensures very high and future-proof system security.



Application guidance

The window can be installed in roof pitches between 15° and 90° to the horizontal.



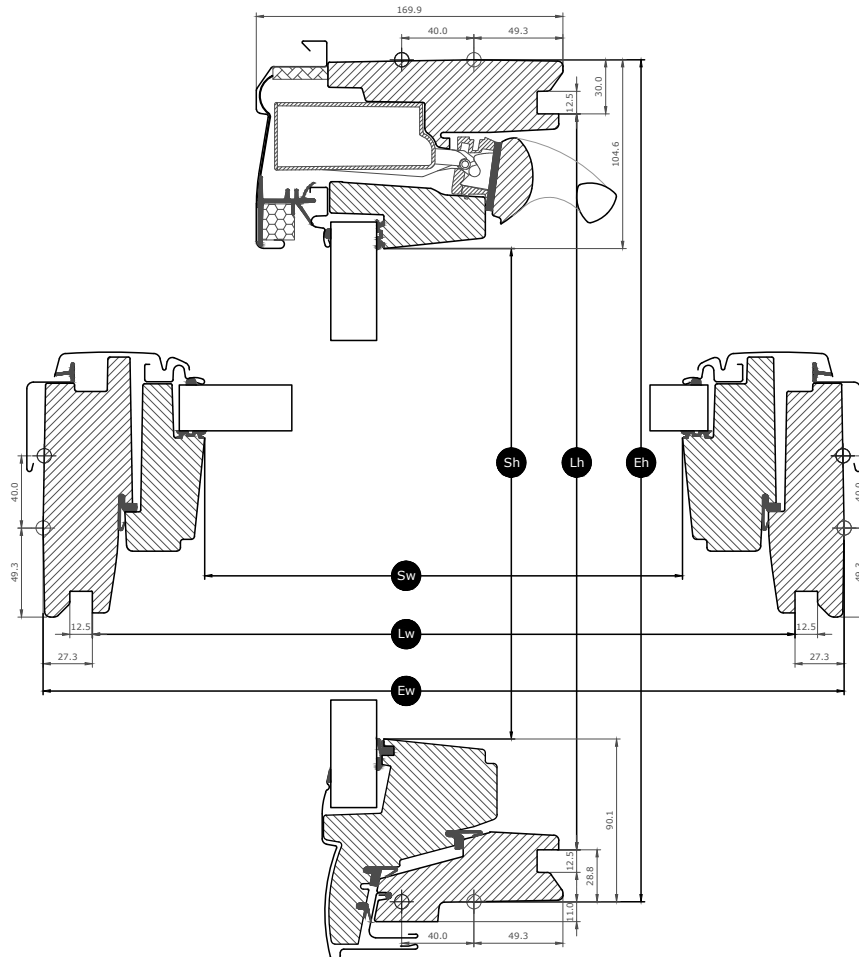
VELUX INTEGRA® remote-controlled roof windows are easily operated by a wireless wall switch, providing fresh air at the touch of a button. Perfect for both within-reach and out-of-reach applications where extra comfort and convenient operation is required. Available in mains- and solar-powered versions. For optimum daylight, choose larger windows for lower roof pitches.

Available sizes and daylight area

| | 780 | 1140 |
|------|--------------------|--------------------|
| 978 | GGU MK04 (0.47) | |
| 1178 | GGU MK06 (0.59) | GGU SK06 (0.95) |
| 1398 | GGU MK08 (0.72) | |

All measurements are in mm. () = Effective daylight area, m²











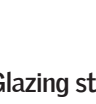
Cross section dimensions



| Width | | MK-- | SK-- |
|-------|--|------|------|
| Sw | Sash aperture width | 601 | 961 |
| Lw | Distance between lining grooves, width | 725 | 1085 |
| Ew | Exterior frame width | 780 | 1140 |

| Height | | --04 | --06 | --08 |
|--------|---|------|------|------|
| Sh | Sash aperture height | 784 | 984 | 1204 |
| Lh | Distance between lining grooves, height | 919 | 1119 | 1339 |
| Eh | Exterior frame height | 978 | 1178 | 1398 |

Glazing features

| Glazing 82A&B | |  |
|---|--|---|
|  | Heat insulation The low energy glazing unit reduces heat loss through the window and enhanced indoor comfort. | $U_g = 0.3$ |
|  | Solar gain In colder climates and in rooms with large window areas, solar gain provides a better indoor climate during winter periods. | $g = 0.44$ |
|  | Solar protection In warm climates and in rooms with large window areas, a sun protective glazing unit provides a better indoor climate during summer periods. | ★★★★☆ |
|  | Sound insulation A combination of laminated glass and extra thick glass provides better sound insulation against noise from outside (traffic, playgrounds, etc). | R_w dB = 37(-1;-4) |
|  | Security Thicker laminated inner glass increases resistance to manual attack (burglary). | ★★★★☆ |
|  | Safety lamination Prevents glass from falling into the room in case of accidental breakage. | ✓ |
|  | Toughened glass Adds strength to the outer pane to protect from wayward balls and extreme weather such as heavy storms and hail. | ✓ |
|  | UV filter Protects your interior furnishings from fading due to the sun's harmful UV rays. | ✓ |
|  | Easy-to-clean Dirt-repellent coating lets you spend less time cleaning and more time enjoying the view. | ✓ |
|  | Anti-dew The anti-dew coating significantly reduces the days with dew on the outer glass and thus gives you a clear view. | ✓ |

Glazing structure

| Glazing unit | Composition (from inside to outside) |
|----------------------|--|
| Double+triple-glazed | Inner IGU: 6.8 mm laminated inner glass with coating - 12 mm krypton - 3 mm heat strengthened outer glass with coating - 77.6 mm air cavity Outer IGU: 3 mm heat strengthened inner glass with coating - 14 mm krypton - 3 mm heat strengthened middle glass with coating - 14 mm krypton - 4 mm toughened outer glass with coating |

Technical values for the window

Overview of technical values for the product, covering CE marking in accordance with EN 14531 and other EN standards.

| Window characteristics | Performance |
|--|---------------------------|
| Thermal transmittance (U-value) | 0.51 W/(m ² K) |
| Light transmittance (τ _v) | 0.60 |
| Total solar energy transmittance (g-value) | 0.44 |
| Sound insulation | 37(-1;-4) |
| Air permeability | 4 (PK10: 3) |
| External fire performance - British | AC |
| External fire performance - European | npd |
| Impact resistance | 3 |
| Load-bearing capacity of safety | |
| Reaction to fire | D-s2,d2 |
| Resistance to snow load | See glazing composition |
| Resistance to wind load | C3 (>SK08: NPD) |
| Water tightness | E900 |

Visible features



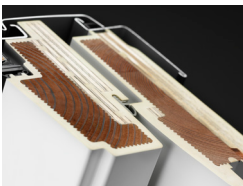
Window operator, solar

Fully-integrated solar-powered motor is hidden from view in the top of the frame and is operated by remote control.



Integrated rain sensor, solar

The roof window closes automatically in the event of rain or is prevented from opening thanks to the rain sensor.



Excellent insulation

High performance insulation materials in the window construction and thermally modified timber core increase the energy efficiency of the window.



Blind bracket, manual

Easily install blinds on the window without the need for extra tools using the VELUX Pick&Click™ system.



Sliding gasket

Gasket fitted to the sash to improve air tightness and sound reduction.



Barrel bolt

The barrel bolt can be placed into the integrated barrel bolt bushing to secure the window for cleaning of outer glass surface or for safe ventilation.



Data plate

Every VELUX roof window has a unique data plate with information that can be used to look up CE marking documentation, when purchasing accessories or in case of service or replacement.

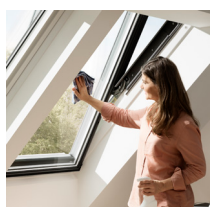
Interior finish

| Material Description | White maintenance-free Finished with polyurethane lacquer. |
|--|---|
| Colour code NCS, inner surface | S 0500-N |
| Colour code nearest RAL, inner surface | 9003 |

Exterior covers

| Material Description | Aluminium, dark grey Dark grey |
|--|-----------------------------------|
| Colour code NCS, outer surface | S 7500-N |
| Colour code nearest RAL, outer surface | 7043 |

Cleaning and maintenance



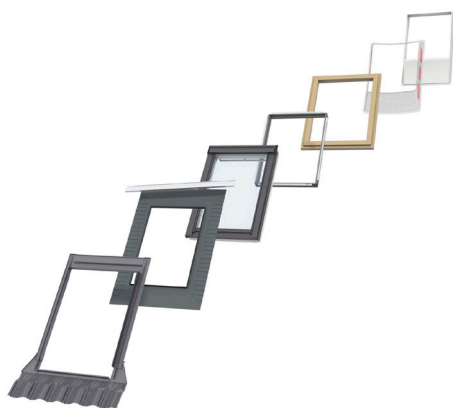
To clean the outer glass surface from the inside, rotate sash manually and secure in cleaning position with barrel bolts.



VELUX repair and maintenance kits are available.

Guarantee period

Flashings and installation products



Flashings

Install the VELUX roof window in virtually any roofing material by using genuine VELUX flashing solutions. Our flashings are designed specifically for the exact size and shape of the roof windows to create perfect, watertight fit. Flashings can also be used to combine multiple roof windows.

Installation products

Ensure a proper installation and an air- and watertight connection between the window and roof with VELUX installation products. All installation products are designed to perfectly fit the roof window for a reliable and durable result.

Blinds, awnings and shutters

Complete the VELUX roof window installation with roller shutters and awning blinds for heat protection and interior blinds for light dimming, blackout and insect protection. Choose from a wide range of manually operated or remote-controlled products that are made to fit the particular window type and size. Please contact your local VELUX sales company for more details about compatibility.

VELUX ACTIVE with NETATMO compatible



Compatible with VELUX ACTIVE with NETATMO for a better indoor climate with sensor-based ventilation. Remote controlled via smartphone or voice.

Further information

We reserve the right to make technical changes.

For more information on our products, please visit <https://velux.com>.

Technical information

| | | |
|---|--|--|
| VELUX INTEGRA® solar Passive House roof window GGU | Size and weight description | Size of product including packaging: The same as equivalent manually operated roof window. Weight: Approx 3 kg more than equivalent manually operated roof window. |
| | Installation and use | The window is classified in protection class IP44. The window operator is hidden in the top cover and functions at temperatures between -10 °C and +60 °C. Installation in rooms with a high level of humidity must comply with relevant regulations (contact a qualified electrician if necessary). |
| | Window opening | The window operator permits a maximum opening of 200 mm within 35 seconds. Due to a shorter chain, small/special window sizes have a different window opening. |
| | Compatibility | The roof window is based on radio frequency (RF) technology, 868 MHz range, and is compatible with other VELUX products with the io-homecontrol® logo. Subsequent installation of VELUX INTEGRA® solar roller shutter SSL or VELUX INTEGRA® solar awning blind MSL is possible if the window size code is MK--, PK--, SK-- or UK--. Only these sizes have enough room for the solar cell on the roller shutter top casing or the awning blind top cover. Installation of VELUX INTEGRA® solar roller shutter SSL or VELUX INTEGRA® solar awning blind MSL-VA requires adaptor plate kit ZOZ 213K. The kit must be purchased separately. Please note that the roller shutter must be io-homecontrol® labelled to be compatible with the VELUX INTEGRA® solar roof window. Interior decoration and sunscreening products can be fitted to VELUX INTEGRA® solar GGL and GGU. Please note that if these products are combined with VELUX INTEGRA® solar roller shutter SSL or VELUX INTEGRA® solar awning blind MSL, the battery recharging capability of the interior solar decoration and sunscreening products will be reduced. Connection to non-compatible products may cause damage or malfunction. |
| Pre-paired wall switch | Materials | ABS plastic, white (NCS S 1000-N) |
| | Size and weight description | 8.2 cm x 8.2 cm x 1.7 cm, 0.125 kg. |
| | Installation and use | The wall switch is for indoor use only, between a minimum ambient temperature 5 °C and a maximum ambient temperature 45 °C. It can be used in a dry or humid environment (such as a living room or a bathroom). Radio frequency range: 300 m range open field. Depending on the building construction, the indoor range is approximately 30 m. |
| Integrated rain sensor, solar Solar panel | Power consumption | 2 x alkaline AAA (1.5V) batteries Expected battery lifetime: Up to 1 year. |
| | Materials | PC with glass fibre |
| Window operator, solar | Materials | ASA with glass fibre, black (NCS S 9000-N), with ASI 3 solar cell |
| | Size and weight description | Solar cell incl. rain sensor: 520 x 20 x 88 mm (W x H x D), 0.4 kg |
| Window operator, solar | Materials | Motor casing of polybutulene terephthalate (PBT) with glass fibre, black (NCS S 9000-N). Stainless steel chain. |
| | Size and weight description | 370 x 50 x 110 mm (W x H x D), 1.2 kg |
| | Power consumption | 90 uA standby, supplied by the battery. High performance battery, 10.8 V d.c., NiMH, type VELUX. Recharged continuously by the solar cell. A fully charged battery allows up to 300 operations without recharging. Expected battery lifetime of the solar powered window operator: Approximately 10 years. |
| | Motor capacity | Traction capacity: Min 225 N Pressure capacity: Min 150 N |