

# VELUX INTEGRA<sup>®</sup> solar roof window GGL

Glazing 66SG



The VELUX INTEGRA<sup>®</sup> solar top-operated, centre-pivot roof window GGL is a wireless solution that makes installation fast and easy. The roof window has an integrated and silent motor. Control is simple – just operate the control pad. If it rains, the rain sensor automatically closes the window.

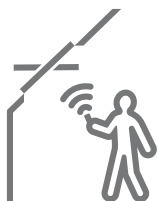
- Solar-powered design delivers all of the benefits of a motorised window without the wires.
- Rain sensor automatically closes the window in the event of rain.
- The motor is hidden in the top cover and totally invisible from view.
- Silent motor keeps rooms quiet for sleeping children or simply for improved well-being.
- Compatible with VELUX ACTIVE with NETATMO automatic indoor climate control for a healthier home, including smart phone and voice control.
- Entrapment control detects objects in the path of the window.
- The secure io-homecontrol<sup>®</sup> platform delivers future-proof integration with VELUX ACTIVE and Somfy.



## Application guidance operation method

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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 control pad, 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.

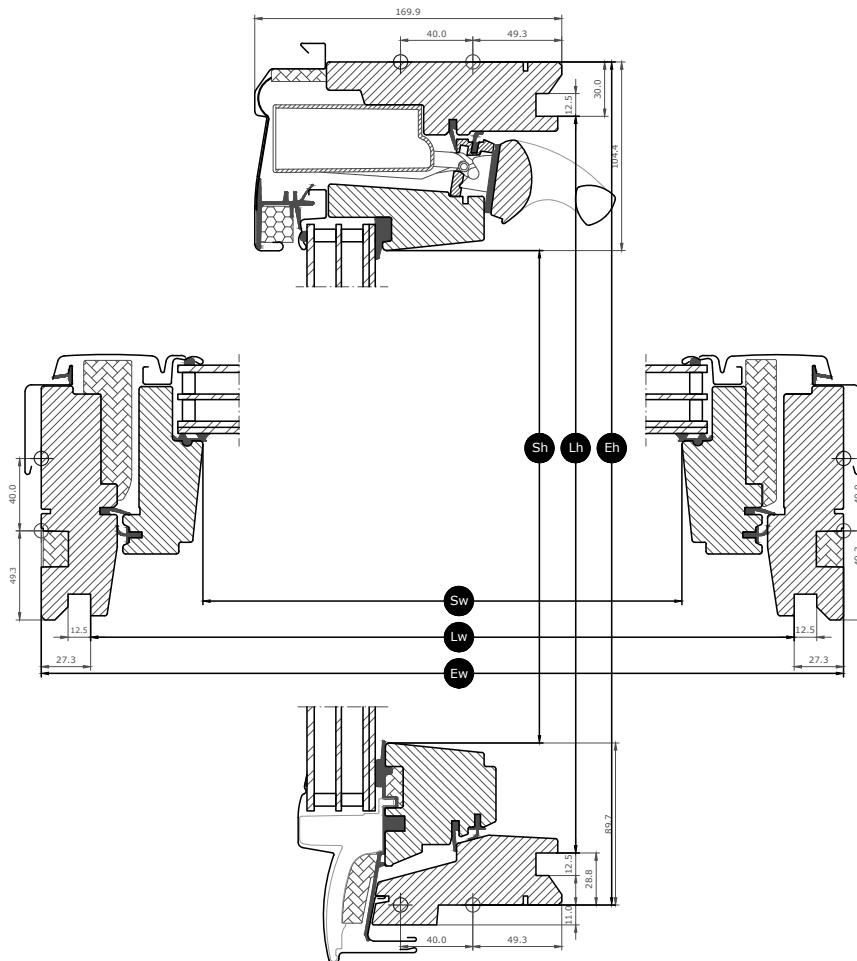
## Available sizes and daylight area

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All measurements are in mm. ( ) = Effective daylight area, m<sup>2</sup>



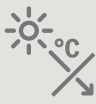








# Cross section dimensions



Width		SK--
Sw	Sash aperture width	961
Lw	Distance between lining grooves, width	1085
Ew	External frame width	1140

Height		--06
Sh	Sash aperture height	984
Lh	Distance between lining grooves, height	1119
Eh	External frame height	1178

## Glazing features

Glazing 66SG		
	<b>Heat insulation</b> The low energy glazing unit reduces heat loss through the window and enhanced indoor comfort.	<b><math>U_g = 0.6</math></b>
	<b>Solar gain</b> In the wintertime, the heat from the sun entering through the windows is a usable solar gain.	<b><math>g = 0.44</math></b>
	<b>Solar protection</b> In warm climates and in rooms with large window areas, a sun protective coating provides a better indoor climate during summer periods.	★★★★☆
	<b>Security</b> Thicker laminated inner glass increases resistance to manual attack (burglary).	★★★★☆
	<b>Safety</b> Laminated inner glass is designed to hold the fragments together if the glass breaks. We recommend that you consider using glass units with laminated glass on the inside for windows placed above areas where people sleep, play or work.	✓
	<b>Outside strength</b> Toughened outer glass makes your glazing more resistant to hail, heavy wind and snow loads.	✓
	<b>Delayed fading of material</b> Laminated inner glass protects materials behind the glass against UV radiation and therefore delays fading of the materials.	✓
	<b>Rain noise reduction</b> The combination of laminated glass and extra thick glass helps provide a significant, audible reduction of rainfall sound.	✓
	<b>Easy-to-clean</b> The easy-to-clean coating minimises the cleaning frequency of the outer glass and gives you a clearer view in case of rain.	✓
	<b>Anti-dew</b> 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	Variant composition
Triple-glazed	6.8 mm laminated float glass - 13 mm Argon - 3 mm heat strengthened glass - 13 mm Argon - 4 mm toughened glass

## Technical values for the window

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

Window characteristics	Performance
Thermal transmittance	1.0 W/(m <sup>2</sup> K)
Light transmittance	0.62
Total solar energy transmittance	0.44
Sound insulation	37(-2;-4)
Air permeability	4
External fire performance - British	AC
External fire performance - European	npd
Impact resistance	3
Load-bearing capacity of safety devices	√
Reaction to fire	C-s1,d2
Resistance to snow load	See glazing composition
Resistance to wind load	C3 (>SK08: NPD)
Water tightness	E900

NPD: No performance determined

## 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.



### Ventilation flap, pine wood

The full-width ventilation flap can be used for ventilation even with a closed window. The ventilation flap is connected to the top sash with the lock casing.



### Blind bracket, manual

Easily install blinds on the window without the need for extra tools. Simply click on the blind in the pre-fitted brackets.



### Frame hinge, centre-pivot, side

Durable hinge design allows for reliable operation and enables the sash to be rotated for easy cleaning of the outer pane.



### Barrel bolt, centre-pivot, top-operated

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.



### Interior insulation, frame top sides

Innovative ThermoTechnology™ insulation is integrated into the top frame sides of the window to increase energy-efficiency.



### 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

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Material Description	White-painted Finished with triple coat, white painted.
Colour code NCS, inner surface	S 0500-N
Colour code nearest RAL, inner surface	9003

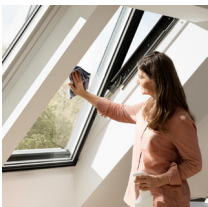
## Exterior covers

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Material Description	Untreated copper
Colour code NCS, outer surface	No colour code
Colour code nearest RAL, outer surface	No colour code

## Cleaning and maintenance

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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

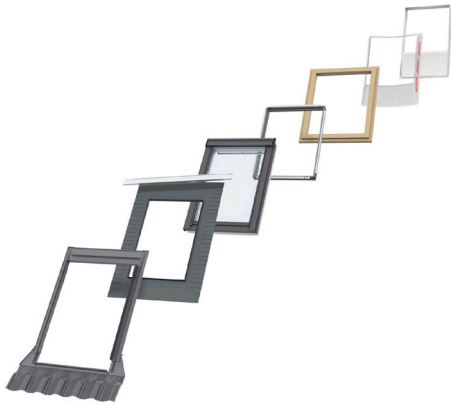
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All electrical components have a 3 year guarantee period

## Flashings and installation products

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### 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 a perfect, watertight fit. Flashings can also be used to combine multiple roof windows.

### Installation products

Ensure a proper insulation 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

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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

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Compatible with VELUX ACTIVE with NETATMO automatic indoor climate control for a healthier home, including smart phone and voice control.



## Further information

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We reserve the right to make technical changes.

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

## Technical information

<b>VELUX INTEGRA® solar roof window GGL</b>	<b>Size and weight description</b>	Size of product including packaging: The same as equivalent manually operated roof window. Weight: Approx 3 kg more than equivalent manually operated roof window.
	<b>Installation and use</b>	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).
	<b>Window opening</b>	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. Window opening for sizes --K01 and --K02 = 135 mm. Window opening for sizes --K25 and --K27 = 38 mm. The chain engages and disengages automatically when the window is closed.
	<b>Compatibility</b>	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 suncreening products will be reduced. Connection to non-compatible products may cause damage or malfunction.
<b>Control pad</b>	<b>Materials</b>	ABS plastic, white (NCS S 1000-N), black (RAL 9005) and metallic grey.
	<b>Size and weight description</b>	95 x 95 x 23 mm (W x H x D), 114 g (with batteries 184 g).
	<b>Installation and use</b>	The control pad is for indoor use, maximum ambient temperature 50 °C. Radio frequency range: 200 m free field. Depending on building construction, the indoor range is approximately 20 m.
	<b>Power consumption</b>	3 x alkaline AA/LR6 (1.5 V) batteries. Expected battery lifetime: Approximately 1 year.
<b>Integrated rain sensor, solar</b>	<b>Materials</b>	PC with glass fibre
<b>Solar panel</b>	<b>Materials</b>	ASA with glass fibre, black (NCS S 9000-N), with ASI 3 solar cell
	<b>Size and weight description</b>	Solar cell incl. rain sensor: 520 x 20 x 88 mm (W x H x D), 0.4 kg
<b>Window operator, solar</b>	<b>Materials</b>	Motor casing of polybutulene terephthalate (PBT) with glass fibre, black (NCS S 9000-N). Stainless steel chain.
	<b>Size and weight description</b>	370 x 50 x 110 mm (W x H x D), 1.2 kg
	<b>Power consumption</b>	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.
	<b>Motor capacity</b>	Traction capacity: Min 225 N Pressure capacity: Min 150 N