VELUX solar roof window GGL

VELUX®

10 Year Guarantee

15°–90°

The VELUX solar, 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 click on the wall switch - perfect for both in-reach and out-of-reach. And 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.
- Compatible with VELUX ACTIVE with NETATMO for a better indoor climate with sensor-based ventilation. Remote controlled via smartphone or voice.
- 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.

CE

PEFC
PEFC/09-31-020

Application guidance

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

VELUX electric and solar 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. For optimum daylight, choose larger windows for lower roof pitches.
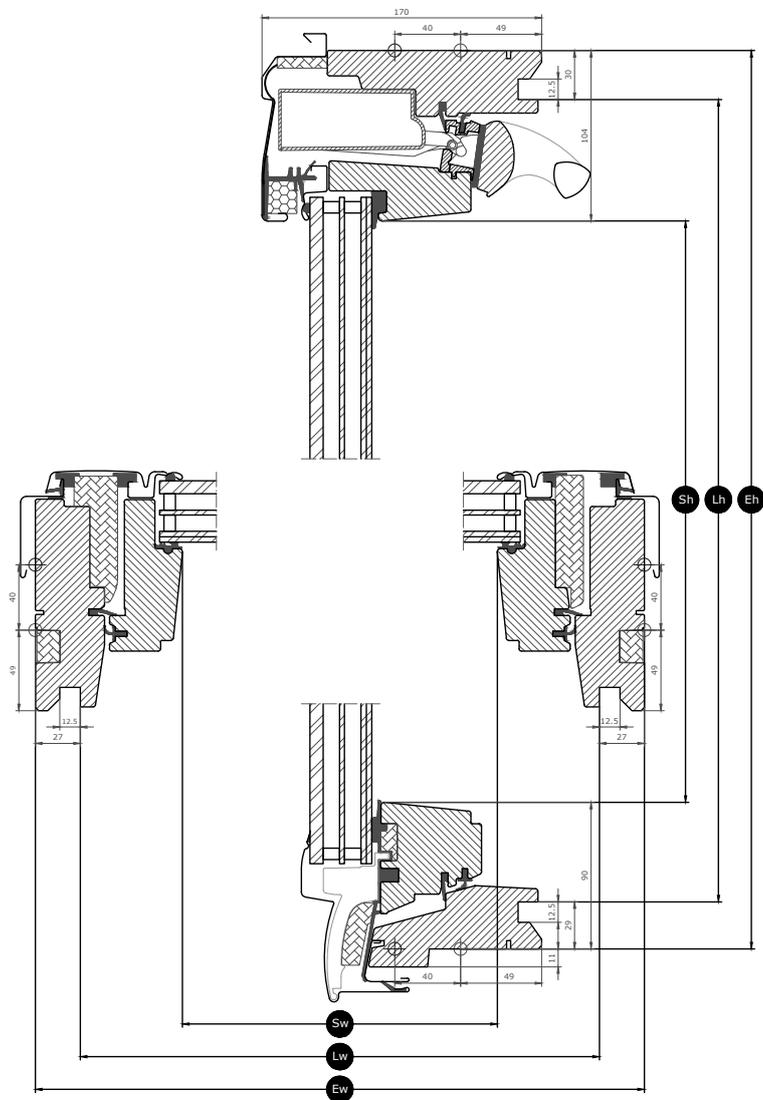
Available sizes and daylight area

The size overview shows the availability across the different glazing variants. Please note that the individual glazing variant may not be available in all the sizes shown.

	472	550	660	780	942	1140	1340
550					GGL PK25 (0.027) [0.09]		
698						GGL SK01 (0.48) [0.23]	
778		GGL CK02 (0.22) [0.10]					
978	GGL BK04 (0.23) [0.17]	GGL CK04 (0.29) [0.20]	GGL FK04 (0.38) [0.24]	GGL MK04 (0.47) [0.28]	GGL PK04 (0.60) [0.33]		GGL UK04 (0.91) [0.47]
1178		GGL CK06 (0.37) [0.20]	GGL FK06 (0.47) [0.24]	GGL MK06 (0.59) [0.28]	GGL PK06 (0.75) [0.33]	GGL SK06 (0.95) [0.39]	
1398			GGL FK08 (0.58) [0.24]	GGL MK08 (0.72) [0.28]	GGL PK08 (0.92) [0.33]	GGL SK08 (1.16) [0.39]	GGL UK08 (1.40) [0.46]
1600				GGL MK10 (0.85) [0.28]	GGL PK10 (1.07) [0.34]	GGL SK10 (1.35) [0.40]	GGL UK10 (1.63) [0.46]

All measurements are in mm.   ( ) = Effective daylight area, m² [ ] = Geometric free area, m²

Cross section dimensions

Width		BK--	CK--	FK--	MK--	PK--	SK--	UK--
Sw	Sash aperture width	293	371	481	601	763	961	1161
Lw	Distance between lining grooves, width	417	495	605	725	887	1085	1285
Ew	External frame width	472	550	660	780	942	1140	1340

Height		--01	--02	--04	--06	--08	--10	--25
Sh	Sash aperture height	504	584	784	984	1204	1406	356
Lh	Distance between lining grooves, height	639	719	919	1119	1339	1541	491
Eh	External frame height	698	778	978	1178	1398	1600	550

Glazing features

	Glazing 66SG	Glazing 67	Glazing 69	Glazing 68	Glazing 70
Solar protection	★★★☆	★★★☆	★★★★	★★★☆	★★★☆
Security	★★☆☆	★★☆☆	★★☆☆	★★☆☆	★★☆☆
Safety lamination	✓	✓	✓	✓	✓
Toughened glass	✓	✓	✓	✓	✓
UV filter	✓	✓	✓	✓	✓
Rain noise reduction	✓	✓	✓	✓	✓
Easy-to-clean	✓	✓			
Anti-dew	✓	✓			

Glazing structure

Glazing variant	Glazing unit	Variant composition
Glazing 66SG	Triple-glazed	6.8mm laminated float glass - 13mm Argon - 3mm heat strengthened glass - 13mm Argon - 4mm toughened glass
Glazing 67	Triple-glazed	6.8 mm laminated float glass - 12 mm Krypton - 3 mm heat strengthened glass - 12 mm Krypton - 4 mm toughened glass
Glazing 69	Triple-glazed	6.8mm laminated float glass - 13mm Argon - 3mm heat strengthened glass - 13mm Argon - 4mm toughened glass
Glazing 68	Triple-glazed	6.8 mm laminated float glass - 13 mm Argon - 3 mm heat strengthened glass - 13 mm Argon - 4 mm toughened glass
Glazing 70	Double-glazed	6.8 mm laminated float glass - 16 mm Argon - 4 mm toughened glass

Technical values for the window

Overview of technical values for the product, covering among other, CE marking in accordance with EN 14351-1.

Window characteristics	Glazing 66SG	Glazing 67	Glazing 69	Glazing 68	Glazing 70
	Performance				
Thermal transmittance	1.0 W/(m²K)	0.86 W/(m²K)	1.1 W/(m²K)	1.1 W/(m²K)	1.3 W/(m²K)
Light transmittance	0.62	0.62	0.57	0.68	0.68
Total solar energy transmittance	0.44	0.44	0.27	0.49	0.46
Sound insulation	37(-2;-4)	38(-2;-5)	35(-1;-3)	35(-1;-3)	35(-1;-3)
Air permeability	4	4	4	4	4
External fire performance - British	AC	AC	AC	AC	AC
External fire performance - European	npd	npd	npd	npd	npd
Impact resistance	3	3	3	3	3
Load-bearing capacity of safety devices	✓	✓	✓	✓	✓
Reaction to fire	C-s1,d2	C-s1,d2	C-s1,d2	C-s1,d2	C-s1,d2
Resistance to snow load	**	**	**	**	**
Resistance to wind load	C3 (>SK08: NPD)	C3 (>SK08: NPD)	C3 (>SK08: NPD)	C3 (>SK08: NPD)	C3 (>SK08: NPD)
Water tightness	E900	E900	E900	E900	E900

Resistance to snow load = ** See glazing composition

NPD: No performance determined

Interior finish

Material Description	Clear lacquer Finished with triple coat, clear lacquered.	White-painted Finished with triple coat, white painted.
Colour code NCS, inner surface	No colour code	S 0500-N
Colour code nearest RAL, inner surface	No colour code	9003

Exterior covers

The availability of the variants listed below may change. For the most accurate and up to date information, please refer to the current product catalogue or price list.

Material Description	Aluminium, dark grey Dark grey	Titanium zinc	Untreated copper
Colour code NCS, outer surface	S 7500-N	No colour code	
Colour code nearest RAL, outer surface	7043	No colour code	

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

10 Year Guarantee

All electrical components have a 3 year guarantee period. The full terms and conditions of the VELUX Product Guarantee are available on our website www.velux.co.uk or www.velux.ie

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.

Further information

We reserve the right to make technical changes.

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

Technical information

VELUX solar roof window GGL	**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. 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.
	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 solar roller shutter SSL is possible if the window size code is FK--, MK--, PK--, SK-- or UK--. Only these sizes have enough room for the solar cell on the roller shutter top casing. For windows produced after June 2019, installation in windows with size code CK-- is also possible. Installation of VELUX solar awning blind MSL-VA requires adaptor plate kit ZOZ 213K. The kit must be purchased separately. Installation of VELUX solar MSL-SA and SSS-SA is possible if the window size is MK--, PK--, SK-- and UK--. For sizes CK-- or FK--, dual solar switch ZOZ 246 is required. Please note that the roller shutter must be io-homecontrol® labelled to be compatible with the VELUX solar roof window. Interior decoration and sunscreening products can be fitted to VELUX solar GGL and GGU. Please note that if these products are combined with VELUX solar roller shutter SSL or VELUX 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.
	Connection	Powered by the solar panel
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.
	Power consumption	2 x alkaline AAA (1.5V) batteries Expected battery lifetime: Up to 1 year.
Integrated rain sensor, solar	**Materials**	PC with glass fibre
	Size and weight description	N/A
	Power consumption	N/A
Solar panel	**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