

# VELUX manual centre-pivot 3in1 roof window GGLS

**VELUX®**



15°-90°

With our new VELUX 3in1 daylight solution, you will experience an extensive view, increased influx of daylight and an aesthetic design due to extra slim profiles. With three windows in one frame, this daylight solution allows for easy installation.

- Enjoy an extensive view to the outside and more daylight due to extra slim frame profiles
- One-piece top cover and slim profile covers feature a very aesthetic integration in the roof.
- One frame module allows a simple well-known installation process with few components.
- Upgrade to a remote-controlled mains- or solar-powered motor for extra convenience.
- Get more control over your indoor climate with our wide range of accessories.
- Quickly and easily add blinds by simply clicking them into the pre-fitted brackets
- Easily rotate the window 180° for safe cleaning of the outer glass from the inside.



## Application guidance

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



Manually top-operated, centre-pivot roof windows make it possible to place furniture directly below the window without obstructing the window's operation. The 3in1 roof window GGLS consists of two openable, centre-pivot and one fixed roof windows in one frame to provide extra daylight and an extensive view while offering all the benefits of our centre-pivot window. To benefit optimally from the wide view, we recommend an installation height that allows for a clear sight line to the outside from both a standing and seated position.

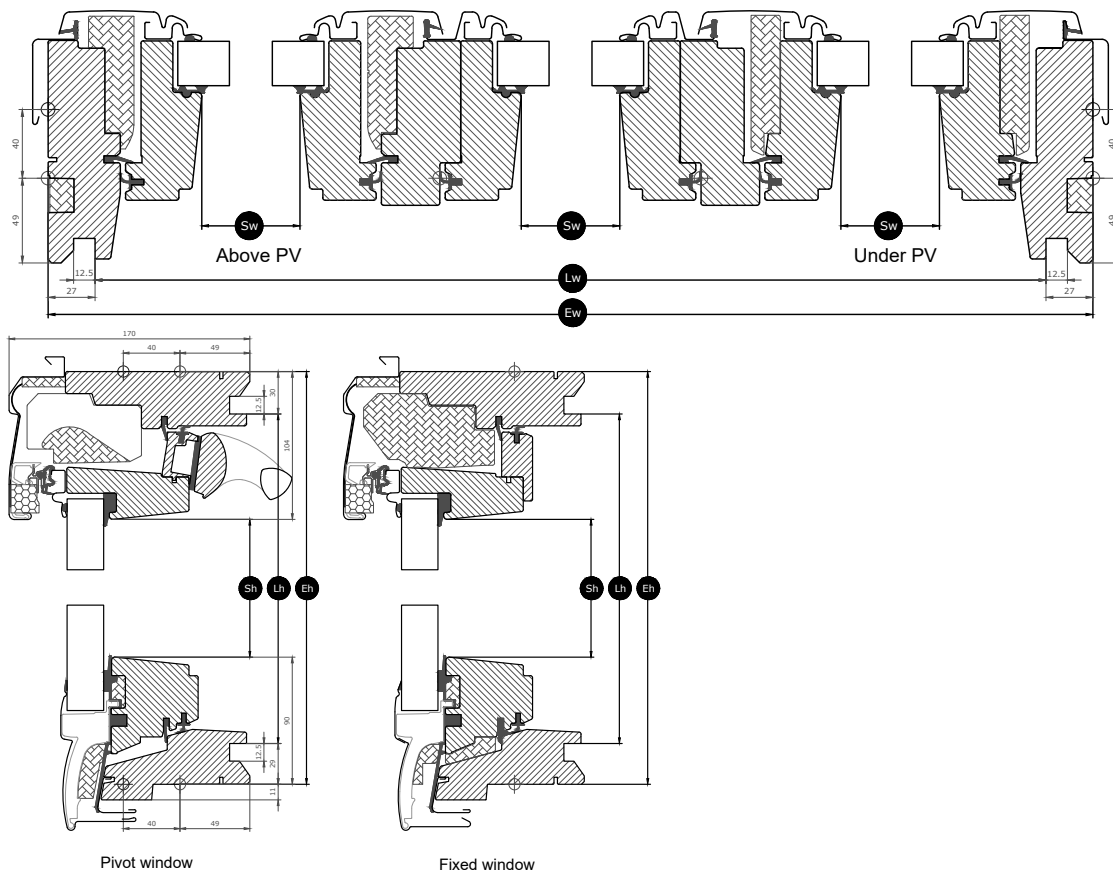
## Available sizes and daylight area

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.

	1880
1178	GGLS FFKF06  (1.41) [0.81]
1398	GGLS FFKF08  (1.74) [0.66]

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










# Cross section dimensions



Width		FFKF--
Sw	Sash aperture width	481, 481, 481
Lw	Distance between lining grooves, width	1826
Ew	Exterior frame width	1880

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

## Glazing features

	Glazing 66SG	Glazing 70	Glazing 76	Glazing 57
 Solar protection	★★★★☆	★★★★☆	★★★★★	★★★★★
 Security	★★★★☆	★★★★☆	★★★★☆	★★★★☆
 Safety lamination	✓	✓	✓	✓
 Toughened glass	✓	✓	✓	✓
 UV filter	✓	✓	✓	✓
 Rain noise reduction	✓	✓		✓
 Easy-to-clean	✓			✓
 Anti-dew	✓			

## Glazing structure

Glazing variant	Glazing unit	Composition (from inside to outside)
Glazing 66SG	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
Glazing 76	Double-glazed	6.8 mm laminated float glass - 16 mm Argon - 4 mm toughened glass
Glazing 57	Double-glazed	6.8 mm laminated float glass - 16 mm Argon - 6 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	Performance			
	Glazing 66SG	Glazing 70	Glazing 76	Glazing 57
Thermal transmittance (U-value)	1.0 (size 06: 1.1) W/(m <sup>2</sup> K)	1.3 (size 06: 1.4) W/(m <sup>2</sup> K)	1.3 (size 06: 1.4) W/(m <sup>2</sup> K)	1.3 (size 06: 1.4) W/(m <sup>2</sup> K)
Light transmittance (τ <sub>v</sub> )	0.62	0.68	0.62	0.61
Total solar energy transmittance (g-value)	0.44	0.46	0.30	0.30
Sound insulation (R <sub>w</sub> )	36(-1;-5)	34(-1;-4)	34 (-1;-4)	34 (-1;-4)
Air permeability, [class]	4	4	4	4
External fire performance - British [class]	npd	npd	npd	npd
External fire performance - European [class]	npd	npd	npd	npd
Impact resistance [class]	3	Class 3	Class 3	3
Load-bearing capacity of safety devices	✓	✓	✓	✓
Reaction to fire [class]	C-s1,d2	C-s1,d2	C-s1,d2	C-s1,d2
Resistance to snow load	**	**	**	**
Resistance to wind load [class]	Class C3	Class C3	npd	npd
Water tightness [class]	9A	9A	9A	9A

Resistance to snow load = \*\* See glazing composition

NPD: No Performance Determined

## 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

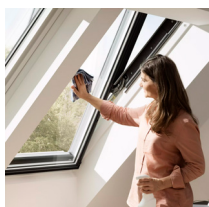
## Exterior covers

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Material Description	Aluminium, dark grey Dark grey	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

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To clean the outer glass surface from the inside, rotate sash and secure in cleaning position with barrel bolts. The fixed centre sash can be cleaned outside by opening the right/left sashes.



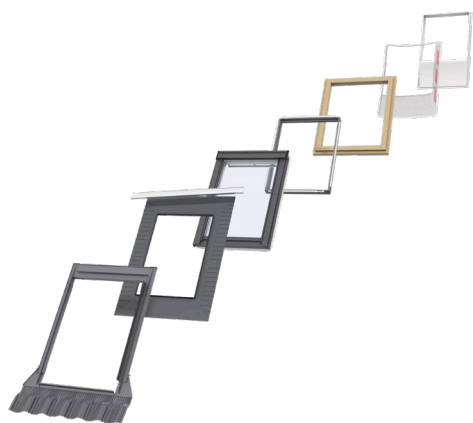
VELUX repair and maintenance kits are available.

## Guarantee period

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## 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 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

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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 or blackout. 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

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We reserve the right to make technical changes.

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