

## Product information

# Centre-pivot white-painted roof window GGL



### Product description

- High quality natural pinewood coated with impregnation and layers of water-based acrylic white paint or clear lacquer
- Top control bar for easy operation even with furniture under the window
- Ventilation flap and integrated dust and insect filter
- Maintenance-free exterior covers

### Roof pitch

- Can be installed in roof pitches between 15° and 90°

### Materials

- Laminated pinewood
- Glass
- Lacquered aluminium
- VELUX ThermoTechnology™ insulation

### Downloads

For installation instructions, CAD drawings, 3D BIM objects, 3D GDL objects, SketchUp objects etc, please visit [www.velux.co.uk](http://www.velux.co.uk)

## Certifications



The VELUX product factories guarantee quality systems implementation process and environmental management systems through appropriate accreditations ISO 9001 and ISO 14001

**EUTR** In compliance with the EU Timber Regulation (EUTR), EU regulation 995/2010

**REACH** We are aware of the REACH regulation and acknowledge the obligations. No products are obliged to be registered in accordance to REACH and none of our products contain any Substances of Very High Concern.

**Available sizes and daylight area**

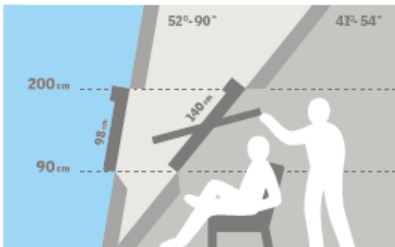
|         |                           |                           |                           |                           |                           |                           |                           |
|---------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
|         | 472 mm                    | 550 mm                    | 660 mm                    | 780 mm                    | 942 mm                    | 1140 mm                   | 1340 mm                   |
| 778 mm  |                           | <b>GGL CK02</b><br>(0.22) |                           |                           |                           |                           |                           |
| 978 mm  | <b>GGL BK04</b><br>(0.29) | <b>GGL CK04</b><br>(0.29) | <b>GGL FK04</b><br>(0.38) | <b>GGL MK04</b><br>(0.47) | <b>GGL PK04</b><br>(0.60) |                           | <b>GGL UK04</b><br>(0.91) |
| 1178 mm |                           | <b>GGL CK06</b><br>(0.37) | <b>GGL FK06</b><br>(0.47) | <b>GGL MK06</b><br>(0.59) | <b>GGL PK06</b><br>(0.75) | <b>GGL SK06</b><br>(0.95) |                           |
| 1398 mm |                           |                           | <b>GGL FK08</b><br>(0.58) | <b>GGL MK08</b><br>(0.72) | <b>GGL PK08</b><br>(0.92) | <b>GGL SK08</b><br>(1.16) | <b>GGL UK08</b><br>(1.40) |
| 1600 mm |                           |                           |                           | <b>GGL MK10</b><br>(0.85) | <b>GGL PK10</b><br>(1.07) | <b>GGL SK10</b><br>(1.35) | <b>GGL UK10</b><br>(1.63) |

**Lining measurements**

| Size | Width (mm) |
|------|------------|
| BK-- | 417        |
| CK-- | 495        |
| FK-- | 605        |
| MK-- | 725        |
| PK-- | 887        |
| SK-- | 1085       |
| UK-- | 1285       |

| Size | Height (mm) |
|------|-------------|
| --02 | 719         |
| --04 | 919         |
| --06 | 1119        |
| --08 | 1339        |
| --10 | 1549        |

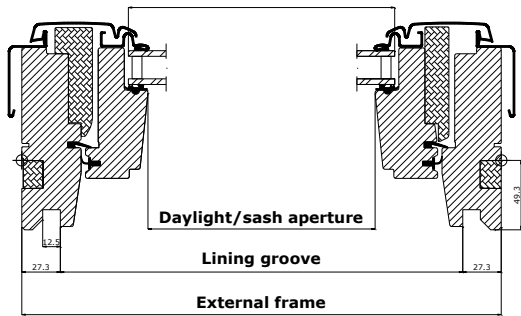
( ) = Effective daylight area, m<sup>2</sup>



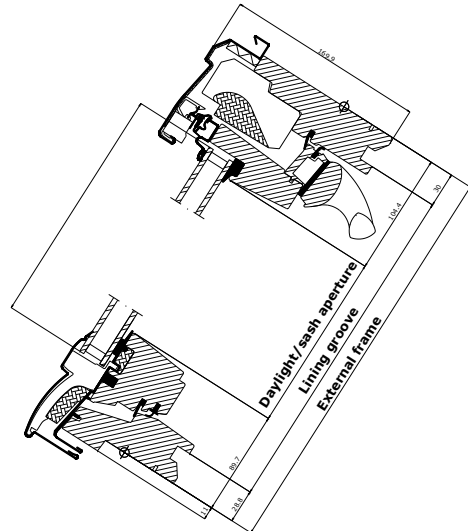
Centre-pivot roof windows make it possible to place furniture directly below the window without obstructing operation of the window.

For windows to be placed within reach, try to allow for a clear view when standing and when seated. Note that the optimum window height depends on the roof pitch.

**Width**



**Height**



## Technical values

|   | --70 | --60 | --66 | --62 |
|---|------|------|------|------|
| <b>U<sub>w</sub> [W/m<sup>2</sup>K]</b> | 1.3  | 1.3  | 1.0  | 0.83 |
| <b>U<sub>g</sub> [W/m<sup>2</sup>K]</b> | 1.0  | 1.0  | 0.5  | 0.5  |
| <b>R<sub>w</sub> [dB]</b>               | 35   | 37   | 37   | 42   |
| <b>g [ ]</b>                            | 0.46 | 0.30 | 0.51 | 0.52 |
| <b>τ<sub>v</sub> [ ]</b>                | 0.68 | 0.62 | 0.71 | 0.70 |
| <b>τ<sub>UV</sub> [ ]</b>               | 0.05 | 0.05 | 0.05 | 0.05 |
| <b>Air permeability [class]</b>         | 4    | 4    | 4    | 4    |

Thermal improvements such as lower U-value (U<sub>w</sub>) and lower linear heat loss coefficient (φ) can, for some variants, be obtained with frame insulation collar and/or recessed installation.

## Glazing structure

|                          | --70  | --60  | --66  | --62  |
|--------------------------|---|---|---|---|
| <b>Inner glass pane</b>  | 2 x 3 mm laminated float with low ε coating | 2 x 3 mm laminated float with low ε coating | 2 x 3 mm laminated float with low ε coating     | 2 x 3 mm laminated float with low ε coating     |
| <b>Middle glass pane</b> | -   | -   | 3 mm heat strengthened float with low ε coating | 3 mm heat strengthened float with low ε coating |
| <b>Outer glass pane</b>  | 4 mm toughened                              | 6 mm toughened with coatings                | 4 mm toughened with coatings                    | 8 mm toughened with coating                     |
| <b>Cavity</b>            | 15 mm                                       | 15 mm                                       | 2 x 12 mm                                       | 2 x 10 mm                                       |
| <b>Glass panes</b>       | Double                                      | Double                                      | Triple  | Triple  |
| <b>Gas filling</b>       | Argon                                       | Argon                                       | Krypton   | Krypton   |

## Glazing features

|  |   | --70 | --60 | --66 | --62 |
|--|---|------|------|------|------|
|  | <b>Heat insulation</b><br>Low energy glazing provides reduced heat loss through the window and enhanced indoor comfort.   | •    | ••   | •••  | •••  |
|  | <b>Solar gain</b><br>In the wintertime, the heat from the sun entering through the windows is a usable solar gain.  | •••  | •    | ••   | ••   |
|  | <b>Solar protection</b><br>In warm climates and in rooms with large window areas, a sun protective coating provides a better indoor climate during summer periods. Alternatively, exterior sunscreening can be installed.   |      | •••  |      |      |
|  | <b>Sound insulation</b><br>A combination of laminated glass and optimal glass thickness provides better sound insulation. Frame/sash construction and gaskets are equally important.  | ••   | •••  | •••  | •••  |
|  | <b>Security</b><br>Thicker laminated inner glass pane designed to increase resistance to manual attack (burglary).  | •    | •    | •    | •    |
|  | <b>Energy balance</b><br>The energy balance represents the ability of the roof window to utilise the passive solar gain and keep in the heat during winter and its ability to protect against the risk of overheating during summer. Sunscreening products can further improve indoor summer comfort. | ✓    | ✓    | ✓    | ✓    |
|  | <b>Safety</b><br>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><br>Toughened outer glass pane makes your glazing more resistant to hail, heavy wind and snow loads.   | ✓    | ✓    | ✓    | ✓    |
|  | <b>Delayed fading of materials</b><br>Inner laminated glass protects materials behind the glass against UV radiation and therefore delays fading of the materials.  | ✓    | ✓    | ✓    | ✓    |
|  | <b>Rain noise reduction</b><br>The combination of laminated glass and extra thick glass helps provide a significant, audible reduction of rainfall sound. Frame/sash construction and gaskets are equally important.  |      | ✓    | ✓    | ✓    |
|  | <b>Easy-to-clean</b><br>The easy-to-clean coating minimises the cleaning frequency of the outer glass pane and gives you a clearer view in case of rain.  |      | ✓    | ✓    |      |
|  | <b>Anti-dew</b><br>The anti-dew coating significantly reduces the days with dew on the outer glass pane and thus gives you a clear view.  |      |      | ✓    | ✓    |

• Good   •• Better   ••• Best   ✓ Feature included in glazing variant

**Technical values, ventilation through ventilation flap**

| Property  | Windows with double glazing |      |      |      |      |       |
|---|-----------------------------|------|------|------|------|-------|
|   | Width                       |      |      |      |      |       |
|   | CK--                        | FK-- | MK-- | PK-- | SK-- | UK--  |
| Air flow characteristics [l/s]                              | 1.9                         | 2.3  | 2.8  | 3.4  | 4.1  | 4.8   |
| Air flow exponent [-]                                       | 0.53                        | 0.53 | 0.53 | 0.53 | 0.53 | 0.53  |
| Ventilation capacity at 4 Pa [l/s]                          | 4.0                         | 4.8  | 5.8  | 7.1  | 8.5  | 10.0  |
| Ventilation capacity at 8 Pa [l/s]                          | 5.7                         | 6.9  | 8.4  | 10.2 | 12.3 | 14.5  |
| Ventilation capacity at 10 Pa [l/s]                         | 6.4                         | 7.8  | 9.5  | 11.5 | 13.9 | 16.3  |
| Ventilation capacity at 20 Pa [l/s]                         | 9.3                         | 11.3 | 13.7 | 16.6 | 20.1 | 23.5  |
| Equivalent area through ventilation flap [mm <sup>2</sup> ] | 2600                        | 3100 | 3700 | 4600 | 5600 | 6600  |
| Geometrical free area [mm <sup>2</sup> ]                    | 2800                        | 3700 | 4500 | 6100 | 7200 | 10600 |

| Property  | Windows with triple glazing |      |      |      |      |       |
|---|-----------------------------|------|------|------|------|-------|
|   | Width                       |      |      |      |      |       |
|   | CK--                        | FK-- | MK-- | PK-- | SK-- | UK--  |
| Air flow characteristics [l/s]                              | 1.2                         | 1.3  | 1.5  | 1.7  | 2.1  | 2.4   |
| Air flow exponent [-]                                       | 0.63                        | 0.63 | 0.63 | 0.63 | 0.63 | 0.63  |
| Ventilation capacity at 4 Pa [l/s]                          | 2.8                         | 3.1  | 3.5  | 4.1  | 4.9  | 5.7   |
| Ventilation capacity at 8 Pa [l/s]                          | 4.3                         | 4.8  | 5.4  | 6.3  | 7.6  | 8.9   |
| Ventilation capacity at 10 Pa [l/s]                         | 4.9                         | 5.5  | 6.2  | 7.3  | 8.2  | 10.2  |
| Ventilation capacity at 20 Pa [l/s]                         | 5.5                         | 6.2  | 6.9  | 8.1  | 9.8  | 11.5  |
| Equivalent area through ventilation flap [mm <sup>2</sup> ] | 2000                        | 2200 | 2500 | 2900 | 3500 | 4100  |
| Geometrical free area [mm <sup>2</sup> ]                    | 2800                        | 3700 | 4500 | 6100 | 7200 | 10600 |

**Visible features**



**1 Lock casing**

- electro-galvanised steel
- colour: "silver"



**2 Data plate**

- window type, size and variant code
- CE marking
- production code
- QR code



**3 Click-on covers**

- lacquered aluminium



**4 Control bar**

- anodised aluminium



**5 Excellent insulation**

ThermoTechnology™

- expanded polystyrene
- colour: grey charcoal



**6 Barrel bolt**

- plastic
- colour: grey
- steel
- colour: "silver"



**7 Hinges with friction**

- electro-galvanised steel
- colour: "silver"



**8 Barrel bolt bushings**

- plastic
- colour: grey

## Cleaning and maintenance



To clean the outer pane from the inside, rotate sash and secure in cleaning position with barrel bolt.



VELUX repair and maintenance kits are available.

## Exterior covers

| Material                                   | NCS standard colour | RAL nearest standard colour |
|--|---------------------|-----------------------------|
| <b>Lacquered aluminium</b><br>(-0--) grey  | S 7500-N            | 7043                        |
| <b>Lacquered aluminium</b><br>(-5--) black | S 9000-N            | 9005                        |
| <b>Copper</b><br>(-1--)                    | -                   | -                           |
| <b>Titanium zinc</b><br>(-3--)             | -                   | -                           |

Special colour requests, please contact enquiries@velux.co.uk

## Interior finish

|                      |   |
|----------------------|---|
| <b>Clear lacquer</b> | Impregnation and layers of water-based acrylic lacquer  |
| <b>White paint</b>   | Impregnation and layers of water-based acrylic lacquer and paint, NCS standard colour: S 0500-N, nearest RAL standard colour: 9003. |

Special colour requests, please contact enquiries@velux.co.uk

## Flashings and installation products



Flashings:

- ED- for single installation
- EB- for twin installation
- EK- for combi installation

Available for standard and recessed installation

Installation products:

- Installation set BDX 2000 (incl BFX)
- Underfelt collar BFX 1000 incl transverse drainage gutter
- Vapour barrier collar BBX 0000
- Linings LS- (incl BBX)
- Kit for lining LSG 1000 (incl BBX)

## Note

We reserve the right to make technical changes.

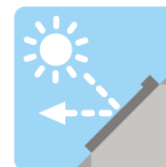
For more information on roof window GGL and other VELUX products, please visit [www.velux.co.uk](http://www.velux.co.uk)

## Blinds, awnings and shutters



### Interior sun screening

- Blackout blind
- Roller blind
- Pleated blind
- Flying pleated blind
- Double pleated energy blind
- Venetian blind
- Duo blackout blind



### Exterior sun screening

- Awning blind
- Roller shutter



### Additional accessories

- Insect roller screen

- Available in manual and mains/solar powered versions
- Available in manual and mains powered versions
- Available in manual version

The mains and solar powered versions are part of the VELUX INTEGRA® product range.

## Control options



### VELUX INTEGRA®

- Solar upgrade kit KSX 100K can be fitted to upgrade manual windows to obtain a series of benefits

- Touch screen control pad



- Telescopic rod