

Product information

Optima line

centre-pivot pine roof window GRR bottom-operated



Product description

- High quality natural pinewood coated with impregnation and layers of water-based acrylic clear lacquer
- Bottom handle for easy operation of roof windows in high installations, for instance in connection with a high knee wall
- Maintenance-free exterior covers

Roof pitch

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

Materials

- Laminated pinewood
- Glass
- Lacquered aluminium

Certifications

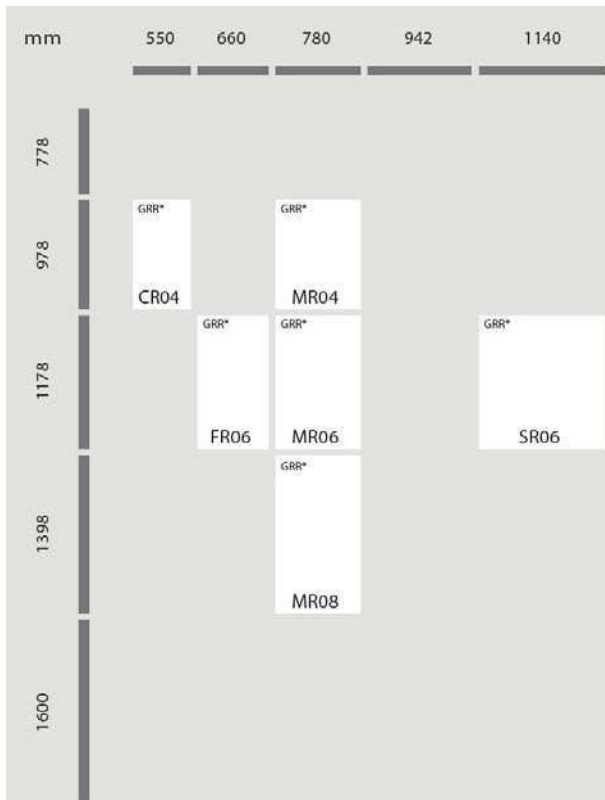


The VELUX product factories guarantee quality systems implementation process and environmental management systems through appropriate accreditations ISO 9001 and ISO 14001

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

REACH We are aware of the European 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.

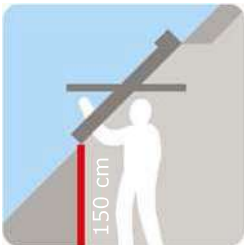
Available sizes



Lining measurements

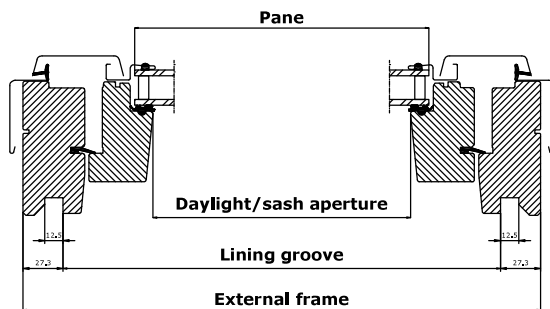
Size	Width (mm)
CR--	495
FR--	605
MR--	725
SR--	1085

Size	Height (mm)
-R04	923
-R06	1123
-R08	1343

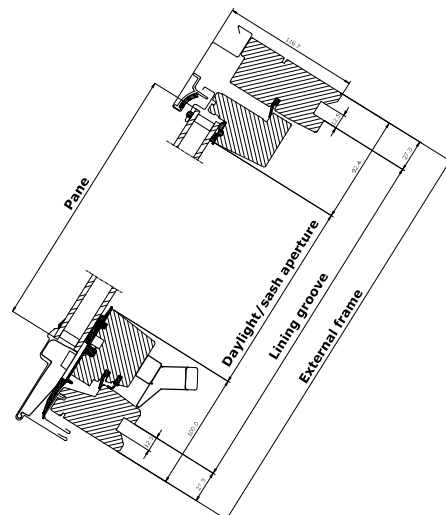


Bottom-operated centre-pivot roof windows are recommended when high installation is required, for instance in connection with a high knee wall.

Width



Height



Technical values













	--50R
U_w [W/m²K]	1.4
U_g [W/m²K]	1.1
R_w [dB]	32
g [%]	0.64
τ_v [%]	0.81
τ_{uv} [%]	0.32
Air permeability [class]	3

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

Glazing structure

	--50R
Inner glass pane	4 mm float with coating
Middle glass pane	-
Outer glass pane	4 mm toughened
Cavity	16 mm
Glass panes	Double
Gas filling	Argon

Glazing features

		--50R
	Heat insulation Low energy glazing provides reduced heat loss through the window and enhanced indoor comfort.	•
	Solar gain In the wintertime, the heat from the sun entering through the windows is a usable solar gain.	•••
	Solar protection 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.	
	Sound insulation A combination of laminated glass and optimal glass thickness provides better sound insulation. Frame/sash construction and gaskets are equally important.	•
	Security Thicker laminated inner glass pane designed to increase resistance to manual attack (burglary).	
	Energy balance 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.	✓
	Safety 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.	
	Outside strength Toughened outer glass pane makes your glazing more resistant to hail, heavy wind and snow loads.	✓
	Delayed fading of materials Inner laminated glass protects materials behind the glass against UV radiation and therefore delays fading of the materials.	
	Rain noise reduction 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.	
	Easy-to-clean The easy-to-clean coating minimises the cleaning frequency of the outer glass pane and gives you a clearer view in case of rain.	
	Anti-dew 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

Visible features



1 Bottom handle

- coated zinc
- colour: grey metallic
- two ventilating positions



2 Data plate

- window type, size and variant code
- production code



3 Hinges with friction

- electro-galvanised steel
- colour: "silver"

Cleaning and maintenance



Rotate sash to clean the outer pane from the inside.



VELUX repair and maintenance kits are available.

Exterior covers

Material	NCS standard colour	RAL nearest standard colour
Lacquered aluminium (-0-- grey)	S 7500-N	7043

Interior finish

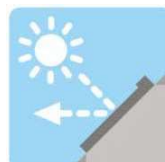
Clear lacquer	Impregnation and layers of water-based acrylic lacquer
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Blinds, awnings and shutters



Interior suncreening

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



Exterior suncreening

- Awning blind ●●●
- Roller shutter ●●●



Additional accessories

- Insect roller screen ●●●

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

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

Flashings and installation products



Flashings:

- ED- for single 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)

Control options



- Telescopic rod

Note

We reserve the right to make technical changes.