

## Product information

# Vertical window element VFE



### Product description

- High quality natural pinewood coated with impregnation and layers of water-based acrylic clear lacquer or white paint
- Bottom-hung sash
- Inwards opening/tilting sash
- Handle on the top sash
- For installation in the wall below a VELUX roof window
- Maintenance-free exterior covers

### Roof pitch

- For vertical installation below a VELUX roof window installed in a roof pitch between 15° and 55°

### Materials

- Laminated pinewood
- Glass, toughened outer glass / laminated inner glass
- Lacquered aluminium, copper or zinc

### Downloads

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

### 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

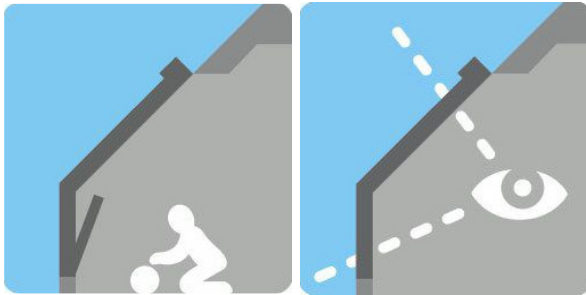
	472 mm	550 mm	660 mm	780 mm	942 mm	1140 mm	1340 mm
600 mm				<b>VFE MK31</b> (0.23)	<b>VFE PK31</b> (0.29)	<b>VFE SK31</b> (0.36)	<b>VFE UK31</b> (0.44)
954 mm				<b>VFE MK35</b> (0.44)	<b>VFE PK35</b> (0.56)	<b>VFE SK35</b> (0.70)	<b>VFE UK35</b> (0.85)
1154 mm				<b>VFE MK36</b> (0.56)	<b>VFE PK36</b> (0.71)	<b>VFE SK36</b> (0.90)	<b>VFE UK36</b> (1.08)
1374 mm				<b>VFE MK38</b> (0.69)	<b>VFE PK38</b> (0.88)	<b>VFE SK38</b> (1.11)	<b>VFE UK38</b> (1.34)

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

Lining measurements

Size	Width (mm)
MK--	603
PK--	765
SK--	963
UK--	1163

Size	Height (mm)
--31	377
--35	731
--36	931
--38	1151



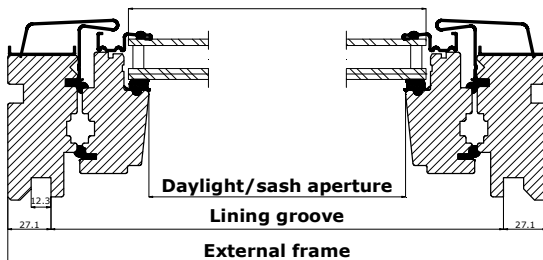
Vertical window element VFE

- is installed vertically - directly below a VELUX roof window
- opens/tilts inwards
- features insulating glass unit with safety glass
- can be secured in ventilation position with sash approx 155 mm open

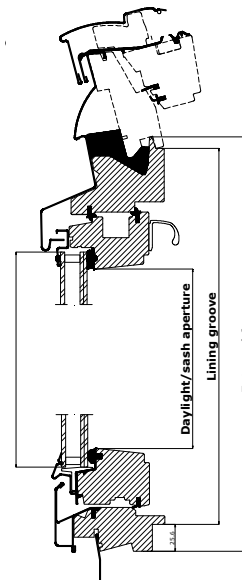
Combining a roof window and a vertical window element ensures

- even more daylight
- a great view – when standing and when seated

Width



Height



### Technical values

	--73	--57	--60	--66
<b>U<sub>w</sub> [W/m<sup>2</sup>K]</b>	1.2	1.2	1.2	1.0
<b>U<sub>g</sub> [W/m<sup>2</sup>K]</b>	1.0	1.0	1.0	0.7
<b>R<sub>w</sub> [dB]</b>	35	37	37	37
<b>g [ ]</b>	0.52	0.30	0.30	0.50
<b>τ<sub>v</sub> [ ]</b>	0.75	0.61	0.61	0.69
<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

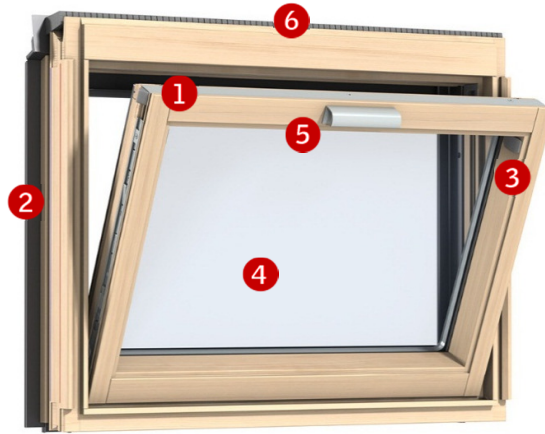
	--73	--57	--60	--66
<b>Inner glass pane</b>	2 x 3 mm laminated float with low ε coating	2 x 3 mm laminated float with low ε coating	2 x 3 mm laminated float with low ε coating	2 x 3 mm laminated float with low ε coating
<b>Middle glass pane</b>	-	-	-	3 mm heat strengthened float with low ε coating
<b>Outer glass pane</b>	4 mm toughened	6 mm toughened with coatings	6 mm toughened with coatings	4 mm toughened with coatings
<b>Cavity</b>	15 mm	15 mm	15 mm	2 x 12 mm
<b>Glass panes</b>	Double	Double	Double	Triple
<b>Gas filling</b>	Argon	Argon	Argon	Argon

## Glazing features

		--73	--57	--60	--66
	<b>Heat insulation</b> Low energy glazing provides reduced heat loss through the window and enhanced indoor comfort.	••	••	••	•••
	<b>Solar gain</b> In the wintertime, the heat from the sun entering through the windows is a usable solar gain.	••	•	•	••
	<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. Alternatively, exterior sunscreening can be installed.		•••	•••	
	<b>Sound insulation</b> A combination of laminated glass and optimal glass thickness provides better sound insulation. Frame/sash construction and gaskets are equally important.	••	•••	•••	•••
	<b>Security</b> Thicker laminated inner glass pane designed to increase resistance to manual attack (burglary).	•		•	•
	<b>Energy balance</b> 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> 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 pane makes your glazing more resistant to hail, heavy wind and snow loads.	✓	✓	✓	✓
	<b>Delayed fading of materials</b> Inner laminated 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. Frame/sash construction and gaskets are equally important.		✓	✓	
	<b>Easy-to-clean</b> 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> The anti-dew coating significantly reduces the days with dew on the outer glass pane and thus gives you a clear view.				✓

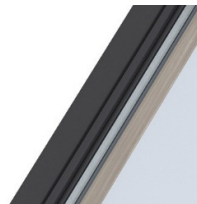
• Good •• Better ••• Best ✓ Feature included in glazing variant

## Visible features



### 1 Data plate

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



### 2 Covers

- lacquered aluminium



### 3 Brackets for accessories

- plastic
- colour: grey



### 4 Laminated glass

- Laminated inner glass on all variants for personal safety



### 5 Handle

- anodised aluminium



### 6 Insulated top cover

- soft foam
- colour: grey

## Cleaning and maintenance



To clean the outer pane from the inside, open and tilt the window inwards. For cleaning, the sash can be opened approx 45°. Special tool supplied with the window.



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
Copper (-1--)	-	-
Titanium zinc (-3--)	-	-

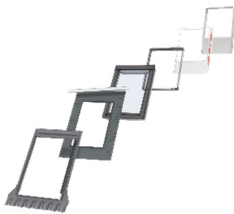
Special colour requests, please contact [www.velux.bg](http://www.velux.bg).

## Interior finish

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

Special colour requests, please contact [www.velux.bg](http://www.velux.bg).

## Flashings and installation products



Flashings for the complete installation:

- EF- for single installation
- EF- for twin installation
- EF- for combi installation

Available for standard and recessed installation

Installation products for the roof window above VFE:

- Installation set BDX 20-- (incl BFX)
- Underfelt collar BFX 10-- including transverse drainage gutter
- Vapour barrier collar BBX 0000

Linings for the complete installation:

- Linings LS- + LVI (incl BBX)
- Kit for lining LSG (incl BBX)

## Note

We reserve the right to make technical changes.

For more information on vertical window element VFE and other VELUX products, please visit [www.velux.bg](http://www.velux.bg).

## Blinds, awnings and shutters



### Interior suncreening

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



### Exterior suncreening

- Awning blind

- 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.