VSS Solar Skylight Pitched roof

Main features

Construction

Quality frame made from Ponderosa pine. Factory treated with a wood preservative and further treated with white enamel paint (2 coats) for a clean interior finish.

Aluminium external capping finished in a smooth grey colour, similar to 'COLORSTEEL® Grey Friars'.

Wireless control

The VSS Solar Powered Skylight comes complete with a pre-programmed radio frequency wireless wall mounted keypad for skylight operation. Externally mounted rain sensors automatically close the skylight once rain is detected**.

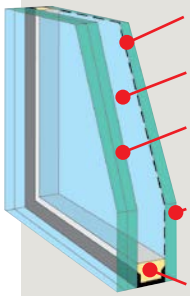
VELUX ACTIVE

Indoor climate control (sold separately)

- **Sensor-based ventilation:** Smart sensors continuously monitor temperature, humidity and CO_2 levels and open or close your skylights accordingly.
- **Stay in control:** Use the app to operate your skylights and blinds using your smartphone.

VELUX Active operates on 2.4GHz and is compatible with modern 'smart' modems. (select the 2.4GHz channel in dual mode on your modem).

High Performance Double Glazing



Outer – 3mm toughened Low-E³ coated Cardinal glass.

Cavity – 9mm sealed Argon gas space.

Inner – 5.36mm clear laminated Cardinal glass (0.76 PV B inter layer).

NEAT™ Coating on outer pane reduces cleaning frequency.

Warm edge technology increases energy efficiency.

Benefits:

• Radiant heat block: Complete window	approx 80%
Glass only	approx 70%
• UV Harmful rays block	approx 99%
• WERS rating	5 stars
• Low-E³ coated.	✓
• Reduced cleaning frequency.	✓

New Zealand Standard 4223.4

Laminated glass (standard) must be used for skylights installed 5m or more above floor level.

NEAT™ Photocatalytic Coating

- Silicone Dioxide/Titanium Dioxide coating reacts with the sun's UV rays to decompose surface organic dirt before rinsing away with the next shower of rain, thereby reducing cleaning frequency.
- The coating also makes the glass surface smoother, so water disperses evenly, sheets off, and evaporates quickly; thereby minimising water spotting on the pane.

Neat

* For roofs below 15° pitch, skylights need to be raised to at least 15° and custom flashed. (Not supplied by VELUX). Refer to website or contact VELUX for technical advice and drawings. **Activation causes the skylight to close faster than normal operation.

VSS technical performance

CodeMark® is a voluntary scheme owned by the Ministry of Business, Innovation & Employment that provides an easily understood and robust way to show a building product, design or method meets the requirements of the New Zealand Building Code. CodeMark is unchallengeable and has legal status equivalent to that of an Acceptable Solution or Verification Method.

New Zealand Standards

VELUX Skylights are tested and appraised to the appropriate New Zealand Standards.

NZS4223 NZS3604 NZS1170

AS4285 SKYLIGHTS

(Exceeds Wind Pressure requirement for 'Extra High wind zones – 55m/s, 1.8kpa).

Hailstone Test

VELUX Simulated Tests ^ASTM E822-2009.

^ ASTM E822-2009 standard practice for determining resistance of Solar Collector Covers to Hail impact with propelled ice balls. Hailstone test not performed on solar panel.

H1 Compliance

Listed thermal values (see reverse side) have been verified by BRANZ and can be used for all climate zones to show compliance with NZBC H1/AS1 using Alternative Solution VELUX Schedule Method (CodeMark), or the Calculation Method.

Energy rating

VSS Skylights have been energy rated in accordance with the Skylight Energy Rating Scheme (WERS).

★★★★★ **Maximum 5 stars Summer Ratings**

4.5 out of 5 stars for Winter Rating.
4.5 out of 5 stars for Cool Daylight in Summer.

Technical Values

R-value	
Refer to reverse side	
Solar Heat Gain Co-efficient	
Complete skylight	0.23
Visible Light Transmittance	
Complete skylight	0.54
Luminous Efficacy (Ke = VT/SHGC)	
Complete skylight	2.35
Acoustic performance	
Complete skylight	32dB#

#Based on STC value tested to AS1276.1.

CodeMark CMNZ10008

BRANZ Appraised
Appraisal No. 968

WORLD-CLASS QUALITY

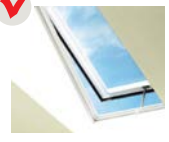
LOAD TESTED
(NZBC Clause B1)

DURABILITY
(NZBC Clause B2)
Exceeds requirements for Exposure Zone D (NZ3604).

WEATHERTIGHTNESS
(NZBC Clause E2)

SAFETY GLAZING
(NZBC Clause F2)

ENERGY EFFICIENCY
(NZBC Clause H1)



VENTILATION
(NZBC Clause G4)

NATURAL LIGHT
(NZBC Clause G7)

NB: CodeMark certification and BRANZ appraisal scope does not cover installations over 60°.

VSS Solar Skylight Pitched roof

Choice of solar powered blinds

The thermal performance of VSS Skylights can be enhanced with the inclusion of a blind. Different levels of light and heat control are available by using either Honeycomb or Blackout blinds. Tailor-made to fit perfectly to each size of skylight, they are easy to install and are supplied with white powder-coated aluminium side channels allowing blinds to be positioned at any point on the skylight.

No additional electrical control system required when adding blinds.
(Blinds supplied with wireless wall mounted keypad).

Honeycomb blinds (FSCH)

- Provides near total light reduction.
- Adds a decorative effect.
- Colour: White material and rails.
- Materials: Double layered pleats (polyester) form a 'honeycomb' structure. Inner structure of honeycomb has aluminium coating. White powder-coated aluminium side chanels and top cover.
- Reduce heat by approx 60%.^
- Unique installation system allows easy installation.

Blackout blinds (DSH)

- Provides near total light reduction.
- Colour: White rails and internal fabric, silver coating on external fabric face.
- Materials: Light-tight polyester with heat resistant coating. White powder-coated aluminium side channels and top cover.
- Reduce heat by approx 40%.^
- Unique installation system allows easy installation.

Blinds sold separately.

Choice of flashing

EDW flashing

15°-90°

EDW flashing is used for skylights installed into tiled roofs and profiled metal roofs (such as corrugated iron – not suitable for concealed clip roof profiles or membrane roofs).

EDL flashing

15°-90°

EDL flashing is used for skylights installed into slate or shingle roofs – max 5mm thick. 'L' shaped sections are provided that act as soaker pieces on either side of the skylight.

EKW combination flashing

15°-90°

Designed for installing multiple skylights side-by-side Skylights must be spaced 100mm apart. EKW suitable for same roofs as EDW flashing. Contact VELUX when installing VSS in above/below configuration due to positioning of solar panel.

Custom flashing

Useful for situations where VELUX flashing isn't suitable. Such as when installing in a roof outside the installation pitch range (15-90°) or when colour matching to roof is preferable. Not supplied by VELUX. Refer to website or contact VELUX for technical advice and drawings.

Opening Restrictions

Building regulations may require the use of a restrictor device: contact VELUX for information relating to restrictor devices for within-reach opening skylights.

VSS – Technical Data

Product/size code ▶	C04	C08	M02	M04	M06	M08	S01	S06
External frame dimensions mm (wxh)	550x980	550x1400	780x780	780x980	780x1180	780x1400	1140x700	1140x1180
Internal glass size mm (wxh)	407x799	407x1219	637x599	637x799	637x999	637x1219	997x519	997x999
Daylight area (m²)	0.33	0.50	0.38	0.51	0.64	0.78	0.52	1.00
Ventilation with open sash (m²)	0.44	0.64	0.51	0.65	0.79	0.95	0.68	1.20
R-Value (BRANZ Verified Horizontal R-Value)*	0.382	0.389	0.402	0.410	0.416	0.420	0.418	0.441
Weight (kg) including flashings	26.2	33.3	30.5	33.7	37.4	41.7	38.7	50.9
Weight (kg) excluding flashings	22.5	29.4	26.5	29.5	33.1	37.2	33.8	45.7

Skylights can only be installed as per orientation depicted above.
^ Based on VELUX internal testing with 3076 model Roof Window.
* Listed thermal values have been verified by BRANZ and can be used for all climate zones to show compliance with NZBC H1/AS1 using Alternative Solution VELUX Schedule Method (CodeMark), or the Calculation Method.