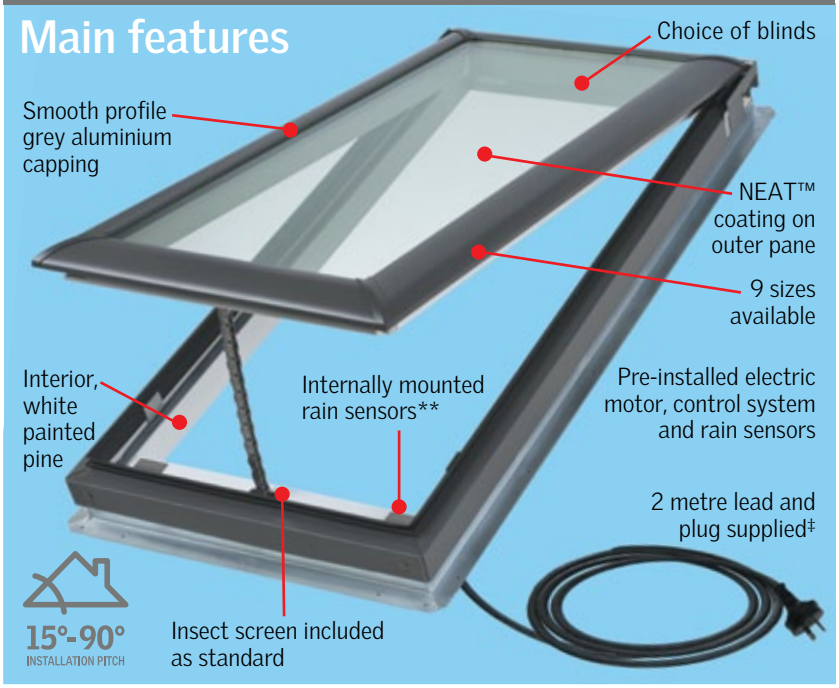
# VSE electronically operated top-hung skylight

## Main features




## Construction

Quality frame made from Ponderosa pine. Factory treated with a base preservative to reduce mould and mildew.

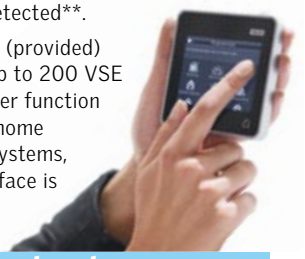
Further treated with paint (2 coats) for a clean white interior finish.

## Wireless control

The VSE Skylight comes complete with a radio frequency controller with advanced control options for both skylight and blind operations.

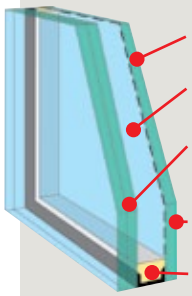
Internally mounted rain sensors, exposed to the rain when the skylight is open, automatically closes the skylight once rain is detected**.

One controller (provided) can operate up to 200 VSE Skylights. Timer function included. For home Automation Systems, KLF 100 interface is available.



## High Performance glazing as standard

**2004** High Performance laminated 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 75% |
| • UV Harmful rays block | approx 99% |
| • Noise reduction factor | 32 decibels |
| • WERS rating | 5 stars |

- Double layer of Low-E³ coating.
- 10 year warranty on insulated glass seal.
- Reduced cleaning frequency.

### Australian Standard AS1288

Laminated glass (2004) must be used for skylights installed 3m or more above floor level (standard with VSE).

## 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.

‡ Requires connection to a GPO (power outlet) which can be located in the roof space. **Activation causes the skylight to close faster than normal operation. Rain Sensor can be de-activated for a set period using the remote control unit.

**10 YEAR WARRANTY** on skylights, flashings & glazing

**3 YEAR WARRANTY** on blinds, accessories & electric controls

## VSE technical performance

### Australian Standards

VELUX Skylights are tested and approved to the appropriate Australian Standards.

**AS4285 SKYLIGHTS**
Cyclonic & Non-Cyclonic

**AS1288 OVERHEAD GLAZING**
Laminated inner pane

**AS3959 BUSHFIRE**
Attack Level 40^

**AS1530.1 NON-COMBUSTIBILITY**

**BCA BOUNDARY SEPARATION#**
Class 1 & Class 10 buildings:
Within 900mm of a boundary wall
Class 2 to Class 9 buildings:
3 metres from a boundary wall^^

VELUX Skylights are deemed non-combustible and thereby comply with BCA Fire Separation requirements*.

* CSIRO assessment report available on request. VELUX recommends consultation with relevant authority before work commences.
^ Bushfire testing applicable to 2004 glazing variant skylight in roof pitch 18°-75°. Skylight only. Custom-made flashing required. Skylight tested in closed position, additional mesh protection may be required for opening apertures (consult local council).
# Skylight to be in closed position.
^^ Skylight cannot be closer than 3mtrs unless the boundary is adjoining a road or public place. Consult BCA for further details.

### 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 (2004 glazing).

### Energy rating

VSE 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.

| Glazing type | 2004 |
|---|---|
| **U-value (W/m²K)** | |
| Complete skylight | 2.50 |
| Glass only | 1.93 |
| **Solar Heat Gain Co-efficient** | |
| Complete skylight | 0.21 |
| Glass only | 0.27 |
| **Visible Light Transmittance** | |
| Complete skylight | 0.48 |
| **Luminous Efficacy (Ke = VT/SHGC)** | |
| Complete skylight | 2.29 |

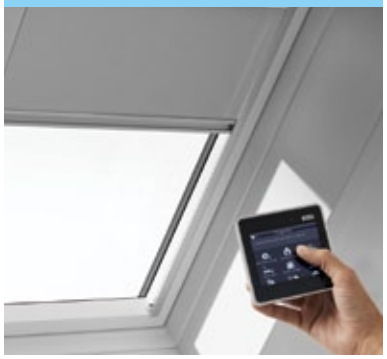
All figures generated by AFRC accredited simulators. Figures based on complete skylight: nominal size 1140mm (W) x 1180mm (H).

# VSE electronically operated top-hung skylight

## Choice of electronically controlled blinds

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

### Blockout blinds



- Provides blockout from light.
- Colour: White on internal side. Silver coating on external side.
- Materials: Light-tight polyester with heat resistant coating. Clear anodized aluminium side channels and top cover.
- Reduce light by approx 100%. Reduce heat by approx 40%.

### Venetian blinds

- Controls the amount and direction of light.
- Colour: Egg-shell white on both sides.
- Materials: 35mm wide slimline aluminium blades. Clear anodized aluminium side channels and top cover.
- Reduce light by up to 85%. Reduce heat by approx 57%.

Now even easier to fit using VELUX Pick&Click!* system.

**NB:** No additional electrical control system required when adding blinds. (Blinds use remote control supplied with VSE.). New VELUX blinds and flashings do not fit VELUX Skylights manufactured prior to March 2010 and must be ordered accordingly.

## Choice of flashing

### EDW flashing for profiled roofing material

EDW flashing is used for skylights installed into tiled roofs and low profiled metal roofs (such as corrugated iron and custom orb).

### EDL flashing for flat roofing material

EDL flashing is used for skylights installed into slate or shingle roofs – typically 4-8mm thick. 'L' shaped sections are provided that act as soaker pieces on either side of the skylight.

* For roofs below 15° pitch, skylights need to be raised to 15° and custom flashed. VELUX can assist with technical advice and drawings. (NB: build-up not recommended in Bushfire areas.)


**NB:** When used in side-by-side/above-below combination, skylights must be 100mm apart and utilise EKW/L combination flashing.

## Opening Restrictors

BCA 2013 Vol 1 & 2 regulations (Prevention of Falls from Windows – Balustrades & Barriers): contact VELUX for information relating to restrictor devices for within-reach opening skylights.

## VSE – frame and glazing dimensions – technical details

2004 High Performance double glazing as standard

| Product/size code ▶ / (Old code – pre April 2010) ▶ | C01 (101) | C04 (104) | C06 (106) | C08 (108) | M04 (304) | M06 (306) | M08 (308) | S01 (601) | S06 (606) |
|---|---|---|---|---|---|---|---|---|---|
| Overall frame size wxh – mm | 550x700 | 550x980 | 550x1180 | 550x1400 | 780x980 | 780x1180 | 780x1400 | 1140x700 | 1140x1180 |
| Internal glass size wxh – mm | 407x519 | 407x799 | 407x999 | 407x1219 | 637x799 | 637x999 | 637x1219 | 997x519 | 997x999 |
| Daylight area ($M^2$) | 0.21 | 0.33 | 0.41 | 0.50 | 0.51 | 0.64 | 0.78 | 0.52 | 1.00 |
| Ventilation area ($M^2$) | 0.24 | 0.33 | 0.38 | 0.44 | 0.39 | 0.44 | 0.49 | 0.40 | 0.54 |
| 2004 High Performance glazing sizes available | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Weight in kg • | 24.7 | 29.1 | 32.8 | 37.0 | 36.6 | 42.6 | 47.3 | 40.1 | 55.8 |

Skylights can only be installed as per orientation depicted above.
•Weight includes flashing.