VELUX®

FCM Fixed Skylight Flat roof

Main features

Heavy duty seal used to suit low roof pitch applications

Laminated double glazing as standard

11 sizes available

Fixed non-vented

NEAT™ coating on outer pane

All metal exterior frame (grey)

Smooth exterior for a lower profile on the roof

0°-60°
INSTALLATION PITCH*
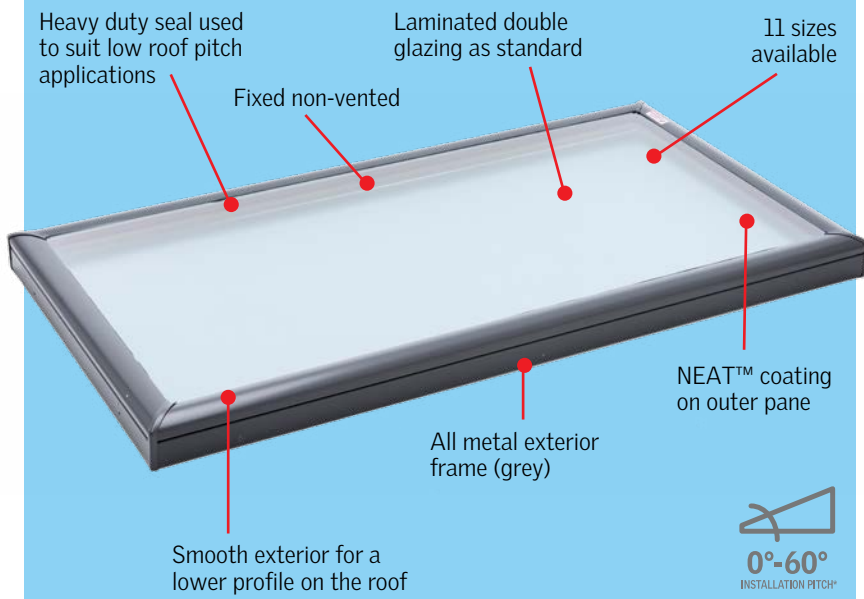
Construction

The brilliantly simple fixed, non-vented, FCM flat roof skylight incorporates the VELUX High Performance glazing unit and an all metal exterior frame.
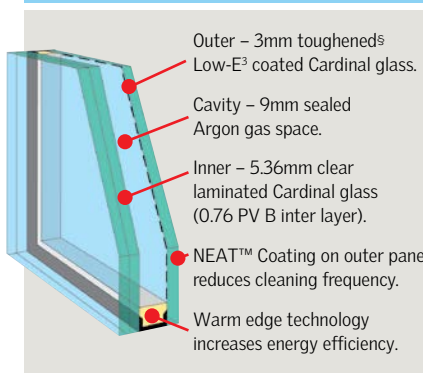
The smooth exterior gives not only a lower profile on the roof, but also provides a "cool" daylighting solution by effectively blocking heat build up and UV rays.

Maintenance-free PVDF lacquered aluminium frame withstands the extremes of the New Zealand climate.

Frame is finished in a smooth grey colour, similar to 'COLORSTEEL® Grey Friars'. Versatile positioning: most sizes can be used in portrait, landscape or even "diamond shape" orientation.†

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 73%
           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.

§FCM 4646 outer pane is 3.9mm.

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

* The FCM is watertight for pitches between 0-60°, though raising the installation pitch to 10° may be preferred for best aesthetic appearance. Below this pitch you are likely to experience water ponding on the glass.

FCM 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.

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

FCM 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	0.27

Visible Light Transmittance

Complete skylight	0.64

Luminous Efficacy (Ke = VT/SHGC)

Complete skylight	2.51

Acoustic performance

Complete skylight	29dB#

† See preparation guide overleaf.
#Based on STC value tested to AS1276.1.

CodeMark⟫⟫
CMNZ10008

BRANZ Appraised
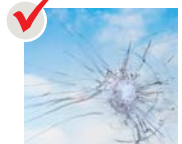Appraisal No. 968

WORLD-CLASS QUALITY

✔ **LOAD TESTED**
(NZBC Clause B1)
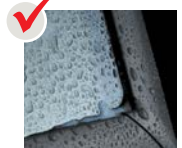
✔ **DURABILITY**
(NZBC Clause B2)
Exceeds requirements for Exposure Zone D (NZ3604).

✔ **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°.

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Solar-Powered Honeycomb Blind (FSCC)

The thermal performance of FCM Skylights can be enhanced with the inclusion of a Honeycomb blind. Different levels of light and heat control are available by using Honeycomb 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.

Accessory Tray ZZZ 199 required to fit blinds to FCM.

No additional electrical control system required when adding blinds. (Blinds supplied with remote control).

- 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 channels and top cover.
- Unique installation system allows easy installation.
- Reduce heat by approx 60%.*

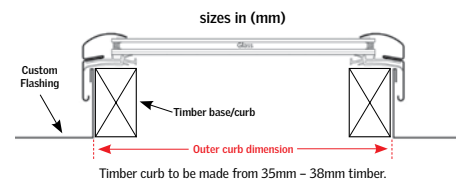Blinds sold separately.

NB: Blinds not available for FCM 1430.

Important considerations

- VELUX FCM Skylights can be used for low sloping roofs. The low profile external covering and glazing seal prevents water infiltration even at 0°. Raising the installation pitch to 10° may be preferred for best aesthetic appearance. Below this pitch you are likely to experience water ponding on the glass.

Custom-made flashing required

FCM is a curb mounted skylight and requires a custom made flashing to be made by roofer. See below for curb dimensions. (No VELUX proprietary flashing available).

Preparation guide for custom-made flashing

sizes in (mm)

Glass

Custom Flashing

Timber base/curb

Outer curb dimension

Timber curb to be made from 35mm – 38mm timber.

FCM – Technical Data

Product/size code ▶	1430	2222	2230	2234	2246	2270	3030	3046	3434	3446	4646
External frame dimensions (wxh) mm	488x895	692x692	692x895	692x997	692x1302	692x1911	895x895	895x1302	997x997	997x1302	1302x1302
Outer curb dimensions (wxh) mm	445x850	645x645	645x850	645x950	645x1255	645x1865	850x850	850x1255	950x950	950x1255	1255x1255
Visible glass dimensions (wxh) mm	368x775	572x572	572x775	572x876	572x1181	572x1791	775x775	775x1181	876x876	876x1181	1181x1181
Daylight area (m²)^	0.29	0.33	0.44	0.50	0.68	1.02	0.60	0.92	0.77	1.03	1.39
R-Value (BRANZ Verified Horizontal R-Value)‡	0.362	0.365	0.365	0.365	0.365	0.365	0.396	0.396	0.409	0.409	0.438
Weight (kg) excluding flashing	10.0	11.0	14.0	15.4	19.8	33.4	17.6	25.0	21.7	27.2	39.1

^ Daylight area decreases with addition of a blind.
* 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.