

SKYLIGHT PLAN CHECK RESPONSE

SKYLIGHT PRODUCT AND COMPLIANCE DOCUMENTATION HAS BEEN PROVIDED. SKYLIGHTS ARE FIXED, CURB-MOUNTED VELUX FCM GLASS SKYLIGHTS WITH INSULATED MULTIPANE GLAZING, INCLUDING A MINIMUM OF ONE TEMPERED EXTERIOR PANE AND A LAMINATED INTERIOR SAFETY-GLASS PANE.

THE SKYLIGHTS COMPLY WITH LABC/CBC SECTION 708A.2.1, ITEM 1 [OR LARC/CRC SECTION R337.8.2.1, ITEM 1], THROUGH THE PRESCRIPTIVE MULTIPANE/TEMPERED-GLASS COMPLIANCE PATH. COMPLIANCE IS NOT BASED ON THE ALTERNATIVE 20-MINUTE FIRE-RATING OR SFM 12-7A-2 TESTING PATHS. BECAUSE THE SKYLIGHTS ARE FIXED AND NONOPERABLE, THE OPERABLE-SKYLIGHT MESH REQUIREMENT DOES NOT APPLY.

MANUFACTURER'S PRODUCT DATA, TESTING INFORMATION AND INSTALLATION REQUIREMENTS ARE ENCLOSED. PERMANENT SAFETY-GLAZING IDENTIFICATION AND NFRC CERTIFICATION LABELS SHALL BE PROVIDED AS REQUIRED.

ELUX FS FIXED DECK-MOUNTED GLASS SKYLIGHT — IAPMO UES EVALUATION REPORT ER-0199, REVISED 08/04/2026, VALID THROUGH 09/30/2026, INCLUDING 2025 CALIFORNIA BUILDING CODE SUPPLEMENT. PROVIDE INSULATED MULTIPANE GLAZING WITH TEMPERED EXTERIOR LITE AND LAMINATED INTERIOR LITE AS DESCRIBED IN SECTION 3.2.1.



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VELUX FS, VS, VSE, AND VSS DECK MOUNT GLASS-GLAZED UNIT SKYLIGHT
VELUX FCM, VCE, VCS, VCM GSM, TZR, TZRL, TZRQ and CURB MOUNT GLASS-GLAZED UNIT SKYLIGHTS
VELUX CC2 CURB MOUNT PLASTIC-GLAZED CIRCULAR UNIT SKYLIGHTS
VELUX SUN TUNNEL SKYLIGHTS (TCC, TCR, TGC, TGF, TGR, TMF, and TMR) (PLASTIC-GLAZED TUBULAR DAYLIGHTING DEVICES)

CSI Section:
08 62 00 Unit Skylights

1.0 RECOGNITION

VELUX America, LLC's Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-Glazed Circular Unit Skylights and Tubular Daylighting Devices recognized in this report have been evaluated for use as glazed skylights. The structural performance, air and water tightness, operating forces, durability and thermal and optical performance properties of the Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-Glazed Circular Unit Skylights, and Tubular Daylighting Devices were evaluated, as applicable, for compliance with the following codes:

- 2024, 2021, 2018, and 2015 International Building Code® (IBC)
- 2024, 2021, 2018, and 2015 International Residential Code® (IRC)
- 2024, 2021, 2018, and 2015 International Energy Conservation Code® (IECC)
- 2025 California Building Code (CBC) – attached Supplement

2.0 LIMITATIONS

Use of the VELUX Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-Glazed Circular Unit Skylights, and Tubular Daylighting Devices recognized in this report is subject to the following limitations:

2.1 VELUX Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-

Glazed Circular Unit Skylights, and Tubular Daylighting Devices shall be installed in accordance with the applicable code, the manufacturer's instructions, and this report. In the event of a conflict, the more restrictive governs.

2.2 Deck and curb mount glass-glazed unit skylights shall not be used in Type I or II construction, over acid fume-containing spaces, in wind-borne debris regions, or where unusual loading is expected.

2.3 Deck and curb mount glass-glazed unit skylights that are set at an angle of less than 45 degrees from the horizontal shall be mounted at least 4 inches (102 mm) above the plane of the roof except for Group R-3 occupancies with a minimum roof slope of 3-units vertical in 12-units horizontal.

2.4 Light transmitting plastic of tubular daylighting devices shall be mounted at least 4 inches (102 mm) above the plane of the roof except: 1) for Group R-3 occupancies having a minimum roof slope of 3-units vertical in 12-units horizontal; or 2) for buildings where a non-classified roof covering is permitted.

2.5 Aggregate area, separation and location of tubular daylighting devices shall be in accordance with the 2024 and 2021 IBC Sections 2606.7, 2610.5, 2610.6, 2610.7, 2610.8; and the 2021 and 2018 IBC Section 803.1.2 (2015 IBC Section 803.1.1) as applicable, for those occupancies within the scope of the IBC.

2.6 Installation of skylights and tubular daylighting devices shall be in accordance with 2024 IRC Section R324 and 2021, 2018, and 2015 IRC Section R308.6, as applicable, for those occupancies within the scope of the IRC.

2.7 Edges of light transmitting plastic of tubular daylighting devices shall be protected by metal or noncombustible edge material except where non-classified roof coverings are permitted.

2.8 Electric motor-driven sash operators, in VSE, VSS, VCE, and VCS skylights shall comply with the applicable electrical code requirements and are subject to approval of the building official.

2.9 VELUX Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, and Tubular Daylighting Devices recognized in this report are produced by VELUX America, LLC in Greenwood, SC. VELUX Curb Mount Plastic-Glazed Circular Unit Skylights are produced by Velux America, LLC in Wells, ME. Velux GSM Skymax is produced in Wells, ME, and Sparks, NV.

3.0 DECK MOUNT GLASS-GLAZED UNIT SKYLIGHTS

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with Section 104.2.3 of the 2024 IBC and Section 104.11 of previous editions. This document shall only be reproduced in its entirety.

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3.1 Uses: VELUX® FS, VS, VSE, and VSS No Leak Skylights™ are unit skylights complying with IBC

Section 2405.5 that provide natural light and views into the interior of building spaces. The skylights are intended for use on building roofs sloped from 3-units vertical in 12-units horizontal (25-percent slope) to 85 degrees from the horizontal. Each unit contains an integral supporting frame with continuous mounting flange intended for direct attachment to roofing substrate. VS, VSE, and VSS skylights provide natural ventilation via an operable top-hinged sash. FS units are fixed. The glass is continuously supported on all four sides.

3.2 Description

3.2.1 Insulating Glass Units: Insulating glass units (IGU), used in deck mount glass-glazed unit skylights complying with Section 10.2 of AAMA/WDMA/CSA 101/I.S.2/A440-22, 17 and -11, comply with ASTM E2190 and are constructed from a 1/8-inch (3.2 mm) thick clear Low-E³-coated tempered glass lite outboard, a sheet of 7/32-inch (5.6 mm) thick laminated glass lite inboard and a stainless-steel spacer system for an overall thickness of 5/8-inch (15.9 mm). The laminated glass lite inboard is comprised of two sheets of 3/32-inch (2.4 mm) thick heat strengthened glass that are each permanently bonded to either a 0.030 or 0.090 inch (0.8 or 2.3 mm) thick polyvinyl butyral (PVB) clear interlayer. When increased thermal performance is desired, an additional Low-E coating is applied on the interior glass surface of the IGU. The space between glass lites is filled with 95 percent argon gas.

3.2.2 Assembly Details: Condensation control gasketing for all skylight models directs accumulated water droplets from the inner glass surface to the exterior without compromising required air tightness.

VELUX FS, VS, VSE, and VSS skylights consist of several integrated components: one panel of flat IGU top-mounted onto an aluminum-clad wood sash (VS, VSE, and VSS), or directly onto an aluminum-clad wood frame (FS). The top-hinged sash on any VS, VSE, or VSS skylight is fastened to and supported on a similar aluminum-clad wood frame. Sash and frames are manufactured from white-finished pine wood having a nominal specific gravity of 0.47 and are covered on the weather-exposed sides with roll-formed aluminum cladding that is coated with Kynar and lacquer.

Frames have mortised corners secured with adhesive and aligned and stabilized by a 1 1/4 inch (44.5 mm) long corner nail. A continuous galvanized steel mounting flange with mitered and welded corners is attached to the lower part of the frame and rests upon a foam isolation pad to interface with the mounting surface. Galvanized nails secure the flange to the frame every 9 inches (229 mm) or less. Only the VS, VSE, and VSS frames have a support ledge all around the interior face, to which a gasket is stapled for a tight seal with the sash frame. The frames also support the fixed half of the

extruded aluminum sash hinge on the top of the frame head, fastened with 1 inch (25.4 mm) long No. 8 screws spaced at 10 inches (254 mm) on center.

VELUX VS, VSE, and VSS skylight sashes also use a mortise joint corner construction with one 5/16-inch (7.9 mm) long staple at each corner. The rotating half of the extruded aluminum hinge is fastened with 1 inch (25.4 mm) long No. 8 screws spaced at 10 inches (254 mm) on center. The IGU is secured with hot-applied primary sealant bonded to roll formed aluminum glazing retaining profiles that are secured to the sash or frame using No. 8 stainless steel screws of various lengths, 1 and 2 1/2 inches (25.4 and 63.5 mm) for VS, VSE, and VSS, and 1 1/4 inch (31.8 mm) for FS spaced every 9 inches (229 mm). All VS, VSE, and VSS skylights are equipped with insect screens.

VSE and VSS skylights employ an electric motor-driven sash operator with radio frequency remote control and have exterior sensors to automatically trigger the operator to close an open sash when rain droplets are present. VSS skylights use solar powered batteries to operate the sash. VS skylights utilize a manually-driven rotary operator.

Sizes, general dimensions, and fastener requirements for deck mount units are described in [Tables 1](#) (FS) and [2](#) (VS/VSE/VSS) and [Figures 1](#) (FS), [2](#) (FS), [3](#) (VS/VSE/VSS) and [4](#) (VS/VSE/VSS) of this report. Certified energy, light and comfort factors (U, SHGC, VT, and CR) shall conform to the IRC Section N1101.10.3, and IECC Sections C303.1.3 and R303.1.3 (NFRC 100 and 200), and NFRC 500 for all sizes and are shown in [Table 3](#) of this report.

3.2.3 Design and Installation: Based on the positive and negative performance grade ratings listed in [Tables 1](#) and [2](#) of this report, the product size(s) shall be selected that have performance grades in excess of the design pressures that are applicable to the unit's final location. Uplift wind ratings recognized in this report are based on attachment to a lumber substrate exhibiting a minimum specific gravity of 0.43 as defined in Table 12.3.3A of the ANSI/AWC NDS with full nail engagement. Installation on wood substrates with a specific gravity less than 0.43 may result in a lower wind uplift rating. Deck mount units shall be installed into a minimum of 1/2 inch plywood decking.

4.0 CURB MOUNT GLASS-GLAZED UNIT SKYLIGHTS

4.1 Uses: VELUX® FCM, VCE, VCM, VCS No Leak Skylights™, and GMS SkyMax are unit skylights complying with IBC Section 2405.5 that provide natural light and views into the interior of building spaces. The skylights are intended for use on building roofs sloped from 0° (0:12 slope) from the horizontal to 60° (21:12 slope) from the horizontal. Each unit is designed to attach to a site-built curb that is constructed from nominal 2-inch (50.8 mm) by 4-inch (102 mm) wood members of sufficient strength to transfer the skylight loads to the framing members. Skylights may be attached to other curb materials of equal or greater size and



strength. VCE, VCM, and VCS skylights provide natural ventilation via an operable top-hinged sash supported by an integral frame assembly. FCM and GSM SkyMax units are fixed. The glass is continuously supported on all four sides using a roll-formed aluminum frame (assembled with ASA corner keys) to resist uplift wind loads. Curb mount products are particularly well-suited for replacement of existing curb-mounted skylights.

4.2 VELUX® FCM, VCE, VCM, and VCS NO LEAK SKYLIGHTS™ Description

4.2.1 Insulating Glass Units: Insulating glass units (IGU), used in curb mount glass-glazed unit skylights complying with Section 10.2 of AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11, comply with ASTM E2190 and are constructed from either a 1/8-inch (3.2 mm) or 5/32-inch (3.97 mm) thick clear Low-E³-coated tempered glass lite outboard, a sheet of 7/32-inch (5.6 mm) thick laminated glass lite inboard and a stainless-steel spacer system for an overall thickness of 3/8-inch (15.9 mm). For FCM, a centered 1/8-inch (3.2 mm) tempered glass lite may be added, creating a three-pane assembly with an overall thickness of 0.984 inches (25 mm). The Laminated glass lite inboard is comprised of two sheets of 3/32-inch (2.4 mm) thick heat strengthened glass that are each permanently bonded to either a 0.030 or 0.090 inch (0.8 or 2.3 mm) thick polyvinyl butyral (PVB) clear interlayer. When increased thermal performance is desired, an additional Low-E coating is applied on the interior glass surface of the IGU. The spaces between glass lites are filled with 90 percent argon gas.

4.2.2 Assembly Details: Condensation and air leakage control is accomplished through the use of baffled weep holes in the pane support gasketing.

VELUX FCM, VCE, VCM, and VCS skylights consist of several integrated components. One panel of aluminum-framed flat IGU is bottom-mounted onto a rigid polyvinyl chloride (PVC) sash for the VCE, VCM, and VCS skylights and is directly mounted in the field onto the site-built curb for the FCM skylight. Hot-applied primary sealant is bonded to the aluminum frame prior to IGU placement, for all three models. Top-hinged sashes on the VCE, VCM, and VCS Skylights are fastened to and supported on a similar rigid PVC frame with extruded aluminum counter flashing. This frame is supported in the field by the site-built curb. VELUX FCM skylight utilizes a dual-durometer thermoplastic elastomer (TPE) inner frame gasket that is stapled to the glazing frame to lock the IGU in place for sealant curing and handling stability. VCE, VCM, and VCS counter flashing is a mitered and welded frame that is used to fasten the entire unit to the site-built curb. All VELUX VCE, VCM, and VCS skylights are equipped with insect screens.

VCE and VCS skylights employ an electric motor-driven sash operator with radio frequency remote control and have exterior sensors to automatically trigger the operator to close an open sash when rain droplets are present. VCS skylights

use solar powered batteries to operate the sash. VCM skylights utilize a manually-driven rotary operator. Sizes, general dimensions and fastener requirements for curb mount units are described in [Tables 4](#) (FCM) and [5](#) (VCE/VCM/VCS) and [Figures 5](#) (FCM), [6](#) (VCE/VCM/VCS) and [7](#) (VCE/VCM/VCS) of this report. Certified energy, light, and comfort factors (U, SHGC, VT, and CR) for all sizes shall conform to IRC Section N1101.10.3, and IECC Sections C303.1.3 and R303.1.3 (NFRC 100 and 200), and NFRC 500. The ratings are shown in [Table 6](#) of this report.

4.3 GSM SkyMax Description:

4.3.1 Insulating Glass Units: Insulating glass units (IGU) used in the GSM SkyMax curb mount glass-glazed unit skylights complying with Section 10.2 of AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11 comply with ASTM E2190. The GSM SkyMax is produced with a 99-100 series IGU and a 99-200 series IGU. The 99-100 IGU is constructed from a 1/4-inch (6 mm) thick clear Low-E3 coated tempered outer pane of glass over a 5/16 inch (5 mm) over 5/16 inch (5 mm) heat strengthened glazing with .060 PVB polyvinyl butyral interlayer clear laminated pane and 0.37 inch (9.5mm) Argon gas infill with stainless steel spacer or thermoplastic spacer for an overall insulated glass thickness of 1 1/16 inch (27 mm). The 99-200 IGU is constructed from a 1/4 inch (6 mm) thick clear Low-E3 coated tempered outer pane of glass over a 5/16 inch (5 mm) over 5/16 inch (5mm) heat strengthened clear glazing with .090 PVB polyvinyl butyral interlayer clear laminated pane and 0.33 inch (8.5 mm) Argon gas infill with stainless steel spacer or thermoplastic spacer for an overall insulated glass thickness of 1 1/16 inch (27 mm). The spaces between glass lites for both series are filled with 90 percent argon gas.

4.3.2 Assembly Details: Condensation and air leakage control is accomplished through the use of baffled weep holes in the pane support gasketing.

GSM SkyMax skylights consist of several integrated components. Each unit has IGU which is retained by an aluminum frame attached to a continuous rigid PVC curb. A retaining gasket is used between the retaining frame and outer glazing, and a VHB tape between the inner glazing and the PVC curb. The entire unit is supported in the field by the site-built curb.

4.3.3 Design and Installation: Based on the positive and negative performance grade ratings listed in [Tables 4](#), [5](#), and [7](#) of this report, the product size(s) shall be selected that have performance grades in excess of the design pressures that are applicable to the unit's final location. Uplift wind ratings recognized in this report are based on attachment of the curb to a lumber substrate exhibiting a minimum specific gravity of 0.43 as defined in Table 12.3.3A of the ANSI/AF&PA NDS with full nail engagement. Installation on lumber substrates with a specific gravity less than 0.43 may result in a lower wind uplift rating. Skylights shall be attached to the curb with corrosion resistant #10 x 2.125 -inch (54mm) self-



drill point panhead screws spaced at 8-inches on-center and installed 4 inches from corners of skylight.

GSM SkyMax Certified energy, light, and comfort factors (U, SHGC, VT, and CR) for all sizes shall conform to IRC Section N1101.10.3, and IECC Sections C303.1.3 and R303.1.3 (NFRC 100 and 200), and NFRC 500. The ratings are shown in Table 8 of this report.

4.4 TZR, TZRL, and TZRQ

4.4.1 Insulating Glass Units: Insulating glass units (IGU), used in the TZR, TZRL, and TZRQ glass-glazed unit skylights complying with Section 10.2 of AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11, comply with ASTM E2190, and they are dual pane constructed from an 1/8-inch (3.2 mm) tempered glass lite outboard, either a 1/8 inch (3.2 mm) tempered glass lite outboard or 5/32-inch (7 mm) thick clear annealed with 26-gauge steel wire scrim tempered inboard and a stainless-steel spacer system for an overall thickness of 0.74-inch (18.8 mm) or 0.75-inch (19 mm), respectively. The spaces between glass lites are filled with 90 percent argon gas.

4.4.2 Assembly Details: Condensation and air leakage control is accomplished through the use of baffled weep holes in the pane support gasketing. TZR, TZRL, and TZRQ skylights consist of several integrated components. The TZR standard series consists of curb-mount skylight roof section only. The TZRL & TZRQ series consist of low profile flashing that mount to the roof deck, projects 4 inches (102 mm) upward and aligns the flat glass skylight to be parallel to the roof deck. The diffuser is for use where a rigid ceiling will support the diffusers and lower tunnel. This assembly holds two or three light diffusing acrylic glazing layers, with two being standard. One additional layer is recommended when the attic insulation is at the ceiling and available as part of the 'residential' Energy Kit. That kit also includes a heat gain diffuser that is installed at the upper end of the tunnel support ring 14 inch (356 mm).

One panel of aluminum-framed flat IGU is bottom-mounted onto a rigid dual-durometer thermoplastic elastomer (TPE) inner frame gasket and is directly mounted in the field onto the site-built curb. Hot-applied primary sealant is bonded to the aluminum frame prior to IGU placement. This frame is supported in the field by the site-built curb for the TZR and TZRL. The TZRQ uses a pre-installed metal pan flashing. The skylight utilizes a dual-durometer thermoplastic elastomer (TPE) inner frame gasket that is stapled to the glazing frame. The IGU is set into a bed of sealant and corner keys hold the glazing in place for sealant curing and handling stability. The skylights are attached to an interior diffuser assembly joined by a rigid metallic tunnel tube with a reflective interior surface.

4.4.3 Design and Installation: Based on the positive and negative performance grade ratings listed in Table 13 of this report, the product size(s) shall be selected that have

performance grades in excess of the design pressures that are applicable to the unit's final location. Uplift wind ratings recognized in this report which are based on attachment of the curb to a lumber substrate exhibiting a minimum specific gravity of 0.43 as defined in Table 12.3.3A of the ANSI/AF&PA NDS with full nail engagement. Installation on lumber substrates with a specific gravity less than 0.43 may result in a lower wind uplift rating. Skylights shall be attached to the curb with eight (8) zinc coated stainless steel screws corrosion resistant #8 x 1.75-inch (45 mm) self-drill point panhead screws installed in the predrilled holes. Figure 13 depicts the TZR, TZRL, and TZRQ skylights. Certified energy, light, and comfort factors (U, SHGC, VT, and CR) for all sizes shall conform to IRC Section N1101.10.3 and IECC Sections C303.1.3 and R303.1.3 (NFRC 100 and 200), and NFRC 500. The ratings are shown in Table 14 of this report.

5.0 CURB MOUNT PLASTIC-GLAZED CIRCULAR UNIT SKYLIGHTS

5.1 Uses: VELUX CC2 (Figure 12) are unit skylights complying with IBC Section 2405.5 that provide natural light and views into the interior of building spaces. The skylights are intended for use on building roofs sloped from 0° (0:12 slope) from the horizontal plane to 60° (21:12 slope) from the horizontal plane. Each unit is designed to attach to a site-built curb that is constructed from nominal 2-inch (50.8 mm) by 4-inch (102 mm) member of sufficient strength to transfer the skylight loads to the framing members. Skylights may be attached to other curb materials of equal or greater size and strength. CC2 units are fixed. Plastic glazing is continuously supported on the entire circumference of the dome glazing using a roll-formed aluminum to resist uplift wind loads.

5.2 Description

5.2.1 Acrylic Dome: The acrylic dome materials comply as Class CC2 light-transmitting plastics in accordance with criteria prescribed in IBC Section 2606.4 and the standard referenced in IBC Section 2405.5.

5.2.2 Assembly Details: VELUX CC2 unit skylights consist of several integrated components. Each unit has interior and exterior glazing which is retained by an aluminum frame attached to a continuous PVC permatherm curb. Tape is used between the retaining frame and outer glazing, the outer glazing and inner glazing, and the inner glazing and the PVC permatherm curb. The PVC permatherm curb is attached to a site-built curb and is attached using 8d stainless steel or galvanized steel nails spaced at 12 inches (305 mm) on center.

5.3 Design and Installation: Based on the positive and negative performance grade ratings listed in Table 12 of this report, the product size(s) shall be selected that have performance grades in excess of the design pressures that are applicable to the unit's final location. Uplift wind ratings



recognized in this report are based on attachment of the curb to a lumber substrate exhibiting a minimum specific gravity of 0.43 as defined in Table 12.3.3A of the ANSI/AF&PA NDS with full engagement. Installation on lumber substrates with a specific gravity less than 0.43 may result in a lower wind uplift rating.

6.0 TUBULAR DAYLIGHTING DEVICES

6.1 Uses: VELUX Sun Tunnel TCR, TGR, TGF, THR, TMR, and TMF Residential Skylights, and TCC and TGC Commercial Skylights are tubular daylighting devices (TDD) complying with the IBC Sections 1709.6 and 2405 that collect and conduct natural light from above into building spaces. All series listed are intended for use on building roofs sloped up to 60 degrees from the horizontal plane. The TGF, TGR, THR, TMF, and TMR series are designed for slopes of 3 unit's vertical in 12 units from the horizontal plane (25-percent) and above.

6.2 Description

6.2.1 VELUX Sun Tunnel TCC, TCR, TGC, TGF, TGR, THR, TMF, and TMR Skylights are series of tubular daylighting devices, each consisting of an exterior steel roof flashing capped with a clear molded acrylic copolymer (Plexiglas® HFI-7) exterior dome unit, and an interior diffuser assembly consisting of one or more acrylic layers joined by a rigid metallic telescopic or flexible tunnel tube with a reflective interior surface. The Sun Tunnel THR skylight uses a polypropylene flashing instead of the steel roof flashing. The dome materials comply as Class CC2 light-transmitting plastics in accordance with criteria prescribed in IBC Section 2606.4 and the standard referenced in IBC Section 2405.5.

6.2.2 Assembly Details: TGC, TGF, and TGR standard series consist of a low profile flashing that mount to the roof deck, projects 4 inches (102 mm) upward and aligns the dome base to be parallel to the roof deck. TMF, THR, and TMR standard series consist of a pitched flashing that mounts to the roof deck and projects 9 inches (229 mm) upward on the downward roof slope and allows the dome base to be inclined relative to the adjacent roof. TCC and TCR standard series consist of a square flashing designed for mounting on a site-built curb of any material or height. Optional tile roof flashing kits are available for all the series.

Each Sun Tunnel series is available in up to three model sizes – 10, 14, and 22 inches (254, 356, and 559 mm) defined by the tunnel diameter – depending on the series selected. Domes for all available in 10 and 14 inches (254 and 356 mm) models and the 22-inch (559 mm) TGF and TGR are the traditional “shallow dish” shape proven on residential buildings. Domes for all other 22-inch (559 mm) models use a new light-directing assembly that is significantly taller and houses the SunCurve Daylight Directing device more appropriate for larger, nonresidential spaces. An optional 12- or 36-inch (305 or 914 mm) long steel turret extender is

available for all 14- and 22-inch (356 and 559 mm) flashings if the dome elevation needs to be higher than standard. An optional galvanized steel fire band is available to protect the dome edge where Class A, B, or C roof coverings are required.

Flexible tunnels are used on the TGF and TMF series, in 14- and 22-inch (356 and 559 mm) sizes. Rigid tunnels with elbow fittings are used for all other standard series. Rigid tunnel joints are easily fastened in the field with Flexi Loc™ spring clips and sealed with metalized tape, included in standard kits. Where building insulation is installed at the roof level, an optional thermal break section may be inserted into 14 and 22 inch (356 and 559 mm) rigid tunnels in line with that insulation for enhanced energy performance. Assemblies with this option carry numbers ending in E0 and have certified thermal ratings. Where needed, a power-operated daylight controller wafer is available as an additional rigid tunnel option.

Diffuser Assemblies: Three bottom designs are available:

- Type THC, for use where a rigid ceiling will support the diffusers and lower tunnel. This assembly holds two or three light diffusing acrylic glazing layers, with two being standard. One additional layer is recommended when the attic insulation is at the ceiling and available as part of the ‘residential’ Energy Kit. That kit also includes a heat gain diffuser that is installed at the upper end of the tunnel support ring. [10 and 14 inch (254 and 356 mm)]. The 22-inch (559 mm) variant adds a fourth diffuser at the ceiling level, in lieu of the heat gain element at the upper end of the tunnel.
- Type TOC used where no ceiling exists. This assembly caps the tunnel end using one diffusing acrylic layer. [14 and 22-inch (356 and 559 mm) only].
- Type TTC, used where there is a non-rigid ceiling and a square diffuser is required. This assembly includes a transition section to fit the round tunnel bottom and support a 24-inch square panel of diffusing acrylic. [14- and 22-inch (356 and 559 mm) only]. The TOC and TTC diffuser types utilize one of three available lower glazing finishes – frosted, prismatic, or Fresnel-patterned.
- The THC diffuser option with a frosted finish is the standard for TCC, TCR, TGC, TGF, TGR, TMF, and TMR series assemblies. The base kits for these series are shipped complete, with all parts used in the tested specimens.

There is no complete “Base Kit” available for the TCC and TGC series. These products are packaged in subassembly cartons that shall be ordered together and field assembled to create assemblies qualified by the tested ones.



EVALUATION REPORT

Number: 199

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The following are the assembly model numbers covered herein:

Residential Models Shipped as Complete Kits					
TCR 014 0000US TCR 014 0000USE0	TGF 014 0000 TGF 014 0000E0 TGF 022 0000 TGF 022 0000E0	TGR 010 0000 TGR 010 0000E0 TGR 014 0000 TGR 014 0000E0	THR 010 0000 THR 010 0000E0 THR 014 0000 THR 014 0000E0	TMF 014 0000 TMF 014 0000E0	TMR 010 0000 TMR 010 0000E0 TMR 014 0000 TMR 014 0000E0

Commercial Models Shipped as Separate Subassemblies				
Flashings w/Dome	Diffusers	Tunnel	Energy Kits	Other Options
Available Subassemblies for 14" Commercial Sun Tunnels				
TCC 014 0000 TGC 014 0000 Optional Flashing turret ZTA 014 0012 ZTA 014 0036	THC 014 0000 THC 014 0002 THC 014 0003 TOC 014 0000 TOC 014 0002 TOC 014 0003 TTC 014 0000 TTC 014 0002 TTC 014 0003	TTK 014 Added tunnel sections ZTR 014	ZTC 014 0051US ZTC 014 0401US	-Daylight Controller ZTP 014 -Round-to-round adaptor ZTZ 206 -Fire band ZZZ 192 0014 -Suspension wire kit ZTZ 203 -Tunnel seal tape ZTZ 204
Available Subassemblies for 22" Commercial Sun Tunnels				
TCC 022 3000 TGC 022 3000 Optional Flashing turret ZTA 022 0012 ZTA 022 0036	THC 022 0000 THC 022 0002 THC 022 0003 TOC 022 0000 TOC 022 0002 TOC 022 0003 TTC 022 0000 TTC 022 0002 TTC 022 0003	TTK 022 Added tunnel sections ZTR 022	ZTC 022 0041US ZTC 022 0401US	-Daylight Controller ZTP 022 -Fire band ZZZ 192 0022 -Suspension wire kit ZTZ 203 -Tunnel seal tape ZTZ 204

Sizes, general dimensions, and fastener requirements for tubular daylighting devices are described in Tables 9 and 10 and Figures 9 (TGF/TMF), 10 (TGR/TMR), and 11 (TCR/TCC/TGC) of this report. Certified energy and comfort factors (U and SHGC), applicable to all listed models for all sizes, shall conform to Sections N1101.10.3 of the 2021, 2018, and 2015 IRC; and 2021, 2018, and 2015 IECC Sections C303.1.3 and R303.1.3, and are shown in Table 11 of this report.

6.3 Design and Installation

Based on the positive and negative performance grade ratings listed in Tables 9 and 10 of this report, identify the product size(s) that have performance grades in excess of the design pressures that are applicable to the unit's final location.

Uplift wind ratings recognized in this report are based on attachment to a wood substrate exhibiting a minimum specific gravity of 0.43 as defined in Table 12.3.3A of the ANSI/AF&PA NDS full nail engagement. Installation on wood substrate with a specific gravity less than 0.43 result in a lower wind uplift rating.

Suspension wires may be required in some projects such as where there is no rigid ceiling to offer support at the diffuser level. A kit is available for this purpose.

7.0 IDENTIFICATION

7.1 VELUX FS, VS, VSE, VSS, FCM, VCE, VCM, and VCS skylights covered by this report shall be identified with permanent labeling that includes the following information:

Manufacturer's name, address, full model number, and traceability code number.

7.2 VELUX FS, VS, VSE, VSS, FCM, VCE, VCM, VCS, TZR, TZRL, and TZRQ skylights covered by this report shall be identified with temporary pane labeling that includes the following information:

- Manufacturer's name and address, tested model size and designation, glass type and thickness, NFRC-certified ratings and WDMA or another approved labeling agency.
- Primary and secondary designators as required by the AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11 specification including but not limited to the positive and negative performance grade ratings.
- IAPMO ES or UES Marks of Conformity and evaluation report number (IAPMO UES ER-199).



7.3 VELUX Sun Tunnel TCC, TCR, TGC, TGF, TGR, TMF, and TMR skylights covered by this report shall be identified with permanent labeling that includes the following information:

- Risk of Fall and ID label with the manufacturer's name, address and a traceability code number placed at the bottom center of the flashing during factory subassembly.
- The assembly model number(s) and any applicable NFRC ID number is printed on an adhesive label that will need to be applied to a specified unexposed surface at installation.

7.4 VELUX Sun Tunnel TCC, TCR, TGC, TGF, TGR, THR, TMF, and TMR skylights covered by this report shall be identified with temporary labeling that includes the following information:

- Manufacturer's name and address, tested model size and designation, dome type, NFRC-certified ratings and WDMA or other approved labeling agencies.
- Primary and secondary designators as required by the AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11 specification including but not limited to the positive and negative performance grade ratings.
- IAPMO ES or UES Marks of Conformity and evaluation report number (IAPMO UES ER-199).

7.5 VELUX CC2 skylights covered by this report shall be identified with permanent labeling that includes the following information:

Manufacturer's name, address, full model number and traceability code number.

7.6 VELUX CC2 skylights covered by this report shall be identified with temporary pane labeling that includes the following information:

- Manufacturer's name and address, tested model size and designation, glass type and thickness, NFRC-certified ratings and WDMA or another approved labeling agency.
- Primary and secondary designators as required by the AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11 specification including but not limited to the positive and negative performance grade ratings.
- IAPMO ES or UES Marks of Conformity and evaluation report number (IAPMO UES ER-199).

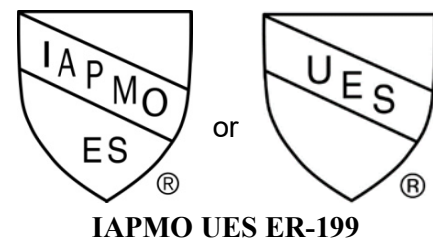
7.7 VELUX GSM SkyMax skylights covered by this report shall be identified with permanent labeling that includes the following information:

Manufacturer's name, address, full model number and traceability code number.

7.8 VELUX GSM SkyMax skylights covered by this report shall be identified with temporary pane labeling that includes the following information:

- Manufacturer's name and address, tested model size and designation, glass type and thickness, NFRC-certified ratings and WDMA or another approved labeling agency.
- Primary and secondary designators as required by the AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11 specification including but not limited to the positive and negative performance grade ratings.
- IAPMO ES or UES Marks of Conformity and evaluation report number (IAPMO UES ER-199).

Either IAPMO UES Mark of Conformity may also be used as shown below:



8.0 SUBSTANTIATING DATA

8.1 Reports of component and assembly testing and evaluation in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-22, -17 and -11, NFRC 100, 200 and 500.

8.2 Test reports are from laboratories in compliance with ISO/IEC 17025.

9.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on VELUX America, LLC's Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, and Tubular Daylighting Devices to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at locations noted in Section 2.9 of this report under a quality control program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



EVALUATION REPORT

Number: 199

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TABLE 1 – VELUX FS Skylights – Glass Weight = 5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ (inches)	Download (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
A06	14-½ x 45-¾	+11,491 Pa (+240 psf)	-5,027 Pa (-105 psf)	SKG-PG105 768x1390* (30.25x54.75)	0,05L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
C01	21 x 26-7/8					
C04	21 x 37-7/8					
C06	21 x 45-¾					
C08	21 x 54-7/16					
D26	22-½ x 22-15/16					
D06	22-½ x 45-¾					
M02	30-1/16 x 30					
M04	30-1/16 x 37-7/8					
M06	30-1/16 x 45-¾					
M08	30-1/16 x 54-7/16					
S01	44-¼ x 26-7/8	+15,800 Pa (+330 psf)	-3,355 Pa (-70 psf)	SKG-PG70 1130x1162 (44.5x45.75)	0.05 L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
S06	44-1/4 x 45-¾					

⁽¹⁾ Rough opening dimensions

⁽²⁾ Based on tested size indicated in Primary Designator

TABLE 2 – VELUX VS, VSE and VSS Skylights – Glass Weight = 5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ (inches)	Downward (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
C01	21 x 26-7/8	+19,176 Pa (+400 psf)	-5,040 Pa (-105 psf)	SKG-PG105 800x1422* (32x56*)	0.1L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
C04	21 x 37-7/8					
C06	21 x 45-¾					
C08	21 x 54-7/16					
M02	30-1/16 x 30-1/2					
M04	30-1/16 x 37-7/8					
M06	30-1/16 x 45-¾					
M08	30-1/16 x 54-7/16					
S01	44-1/4 x 26-7/8	+14,440 Pa (+300 psf)	-3,120 Pa (-65 psf)	SKG-PG65 1194x1238 (47x48)	0.3 L/s/m ² (0.05 cfm/ft ²)	720 Pa (15 psf)
S06	44-1/4 x 45-¾					

⁽¹⁾ Rough opening dimensions

⁽²⁾ Based on tested size indicated in Primary Designator

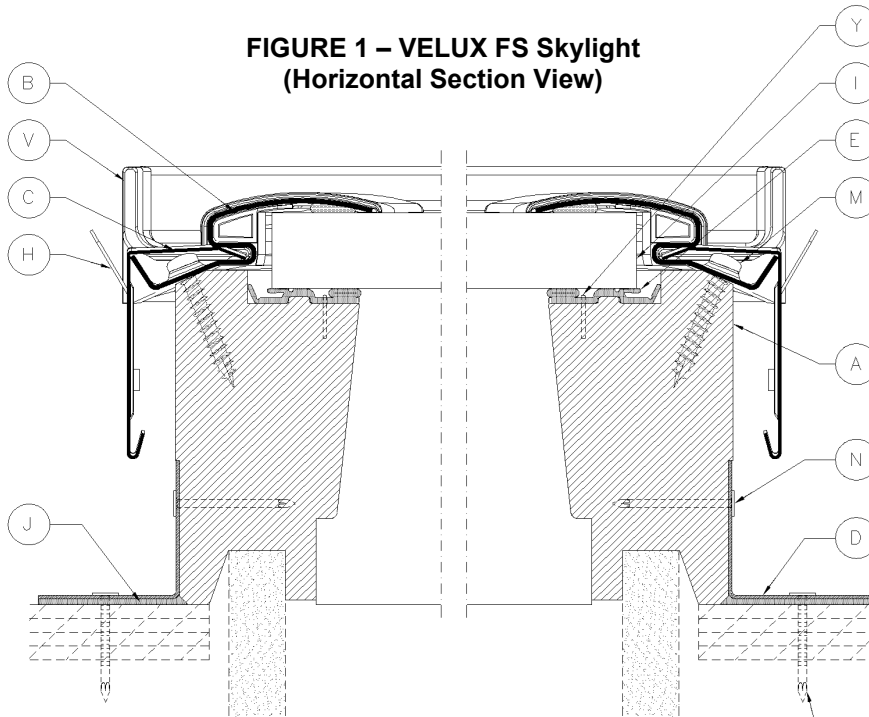
TABLE 3: Deck Mount Skylights – Energy, Light and Comfort

Model/Glazing	U-Factor (Btu/ft ² °F/hr)	Solar Heat Gain Coefficient (SHGC)	Visible Transmittance (VT)	Condensation Resistance (CR)
FS ...04	0.44	0.26	0.60	51
FS ...06	0.41	0.26	0.60	51
FS ...08	0.44	0.25	0.54	51
FS ...89	0.38	0.25	0.59	43
VS...04	0.43	0.23	0.53	53
VS...06	0.41	0.23	0.53	55
VS...08	0.43	0.23	0.47	53
VS...89	0.38	0.22	0.52	44

¹U-factors and Solar Heat Gain Coefficient, Visible Transmittance have been determined in accordance with NFRC 100 and NFRC 200, respectively by an accredited, independent laboratory, and labeled and certified by the manufacturer.

²Condensation Resistance has been determined in accordance with NFRC 500 by an accredited, independent laboratory, and labeled and certified by the manufacturer.

**FIGURE 1 – VELUX FS Skylight
(Horizontal Section View)**



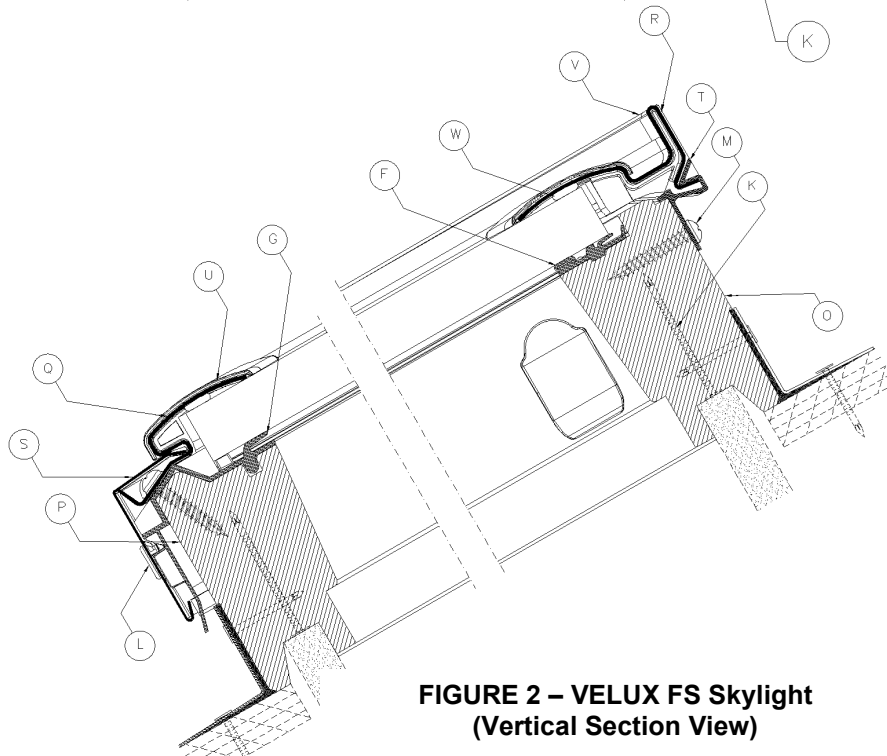
COMPONENT SCHEDULE

ITEM	COMPONENT
A	Side Frame
B	Side glazing profile
C	Side frame cover
D	Deck Seal
E	FSS gasket
F	TGS gasket
G	UFA gasket
H	Frame cover with tab
I	Pane
J	Foam, Deck seal

FASTENER SCHEDULE

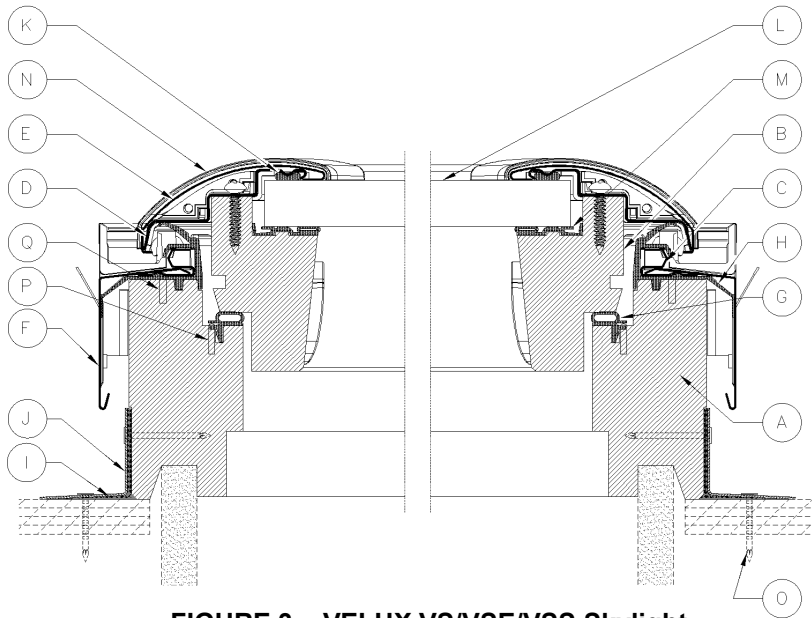
ITEM	FASTENER
K	Nail
L	Plug
M	Screw
N	Nail
Y	Staple

**FIGURE 2 – VELUX FS Skylight
(Vertical Section View)**



COMPONENT SCHEDULE

ITEM	COMPONENT
O	Top Frame
P	Bottom Frame
Q	Bottom glazing profile
R	Top glazing profile
S	Bottom frame cover
T	Top glazing profile retainer
U	Bottom corner key
V	Top left corner key
W	Sealant



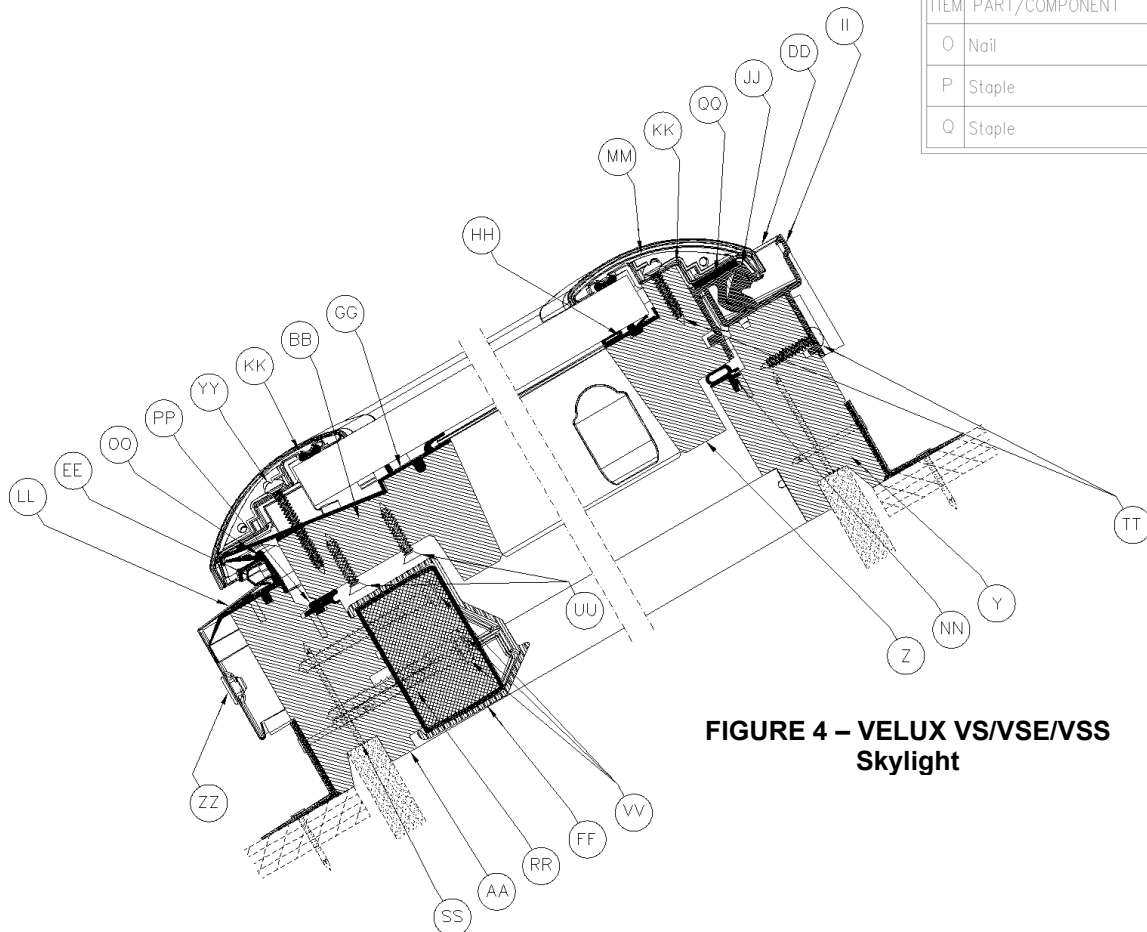
**FIGURE 3 – VELUX VS/VSE/VSS Skylight
(Horizontal Section View)**

COMPONENT SCHEDULE	
ITEM	PART/COMPONENT
A	Side frame
B	Side sash
C	GSP rail
D	Glazing profile
E	Covering
F	Side & Bottom Frame covering
G	Frame gasket
H	FTSA gasket
I	Foam, Deck seal
J	Deck seal
K	Sealant
L	Pane
M	FSS gasket
N	Sash corner key

FASTENER SCHEDULE	
ITEM	PART/COMPONENT
O	Nail
P	Staple
Q	Staple

COMPONENT SCHEDULE	
ITEM	COMPONENT
Y	Top frame
Z	Top sash
AA	Bottom frame
BB	Bottom sash
CC	Hinge corner key
DD	Hinge corner key
EE	GSP rail
FF	Operator cover
GG	BSGA gasket
HH	TGS gasket
II	Frame Hinge
JJ	Sash Hinge
KK	Glazing profile
LL	Frame cover
MM	Covering
NN	TSFA Frame gasket
OO	FTSA gasket
PP	Bottom frame gasket
QQ	Foam, Sash hinge
RR	Operator

FASTENER SCHEDULE	
ITEM	COMPONENT
SS	Nail
TT	Screw
UU	Screw
VV	Wood screw
YY	Screw
ZZ	Plug



**FIGURE 4 – VELUX VS/VSE/VSS
Skylight**



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TABLE 4 – VELUX FCM Skylights – Glass Weight = 5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ (inches)	Download (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
1430	17-1/2 x 33-1/2	+8,380 Pa (+175 psf)	-5,750 Pa (-120 psf)	SKG-PG120 1302 x 1302 (51.25 x 51.25*)	0.05 L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
1446	17-1/2 x 49-1/2					
2222	25-1/2 x 25-1/2					
2230	25-1/2 x 33-1/2					
2234	25-1/2 x 37-1/2					
2246	25-1/2 x 49-1/2					
3030	33-1/2 x 33-1/2					
3046	33-1/2 x 49-1/2					
3434	37-1/2 x 37-1/2					
3446	37-1/2 x 49-1/2					
4646	49-1/2 x 49-1/2					
2270	25-1/2 x 73-1/2	+ 9,600 Pa (+200 psf)	-4,800 Pa (-100 psf)	SKG-PG100 660 x 1854* (26 x 73*)	<0.05 L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
3055	33-1/2 x 58-1/2	+ 3,360 Pa (+70 psf)	-3,840 Pa (-80 psf)	SKG-PG70 1308 x 1960 (51 x 77)	0.1 L/s/m ² (0.01 cfm/ft ²)	720 Pa (15 psf)
4672	49-1/2 x 75-1/2					
4646 Triple pane	49-1/2 x 49-1/2	+ 3,600 Pa (+75 psf)	-2,880 Pa (-60 psf)	SKG-PG60 1302 x 1302 (51 x 51)	0.1 L/s/m ² (0.02 cfm/ft ²)	720 Pa (15 psf)

⁽¹⁾ Outside Curb dimensions

⁽²⁾ Based on tested size indicated in Primary Designator

TABLE 5 – VELUX VCE, VCM and VCS Skylights – Glass Weight = 5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ (inches)	Downward (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
2222	25-1/2 x 25-1/2	+11,052 Pa (+230 psf)	-2,640 Pa (-55 psf)	SKG-PG55 1302 x 1303 (51x51*)	0.2L/s/m ² (0.04 cfm/ft ²)	720 Pa (15 psf)
2234	25-1/2 x 37-1/2					
2246	25-1/2 x 49-1/2					
3030	33-1/2 x 33-1/2					
3046	33-1/2 x 49-1/2					
3434	37-1/2 x 37-1/2					
4622	49-1/2 x 25-1/2					
4646	49-1/2 x 49-1/2					

⁽¹⁾ Outside Curb dimensions

⁽²⁾ Based on tested size indicated in Primary Designator

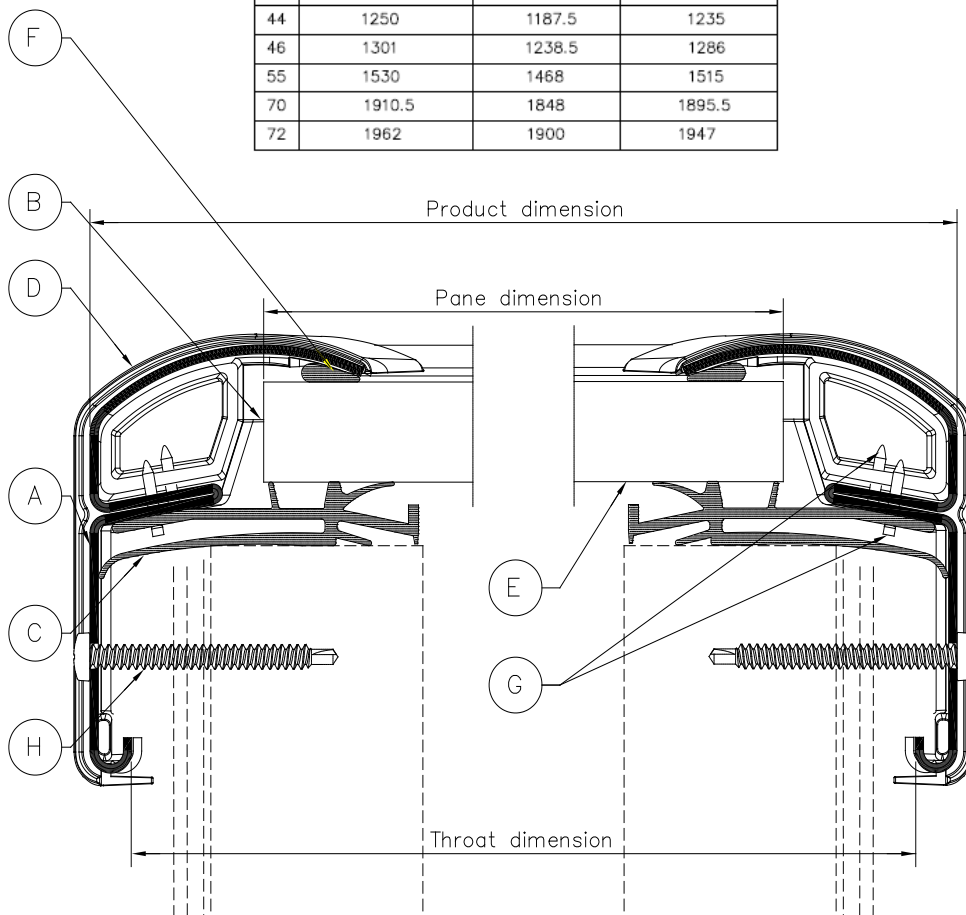
TABLE 6: Curb Mount Skylights – Energy, Light and Comfort

Model/Glazing	U-Factor (Btu/ft ² /°F/hr)	Solar Heat Gain Coefficient (SHGC)	Visible Transmittance (VT)	Condensation Resistance (CR)
FCM...04	0.48	0.27	0.63	50
FCM...06	0.46	0.27	0.63	52
FCM...08	0.48	0.27	0.56	50
FCM...89	0.42	0.27	0.62	42
FCM...29	0.38	0.25	0.58	53
VC...04	0.52	0.24	0.55	59
VC...06	0.50	0.24	0.55	60
VC...08	0.52	0.24	0.49	59
VC...89	0.47	0.23	0.54	49

1. U-factors and Solar Heat Gain Coefficient, Visible Transmittance shall be determined in accordance with NFRC 100 and NFRC 200, respectively and by an accredited, independent laboratory, and labeled and certified by the manufacturer.
2. Condensation Resistance shall be determined in accordance with NFRC 500 and by an accredited, independent laboratory, and labeled and certified by the manufacturer.

Code	Product dimensions	Pane dimensions	Throat dimensions
14	488	426	473
20	640	578	625
22	691	629	676
30	894.5	832	879.5
34	996	933.8	981
44	1250	1187.5	1235
46	1301	1238.5	1286
55	1530	1468	1515
70	1910.5	1848	1895.5
72	1962	1900	1947

**FIGURE 5 – VELUX FCM Skylight
Horizontal Section View
(Typical for Vertical Section View)**



COMPONENT SCHEDULE

ITEM	PART/COMPONENT
A	Outer Frame
B	Pane Spacer
C	Inner frame gasket
D	Corner Key
E	Pane
F	Sealant

FASTENER SCHEDULE

ITEM	PART/COMPONENT
G	T-nail
H	Wood Screw

FIGURE 6 – VELUX VCM/VCE/VCS Skylight Horizontal Section View

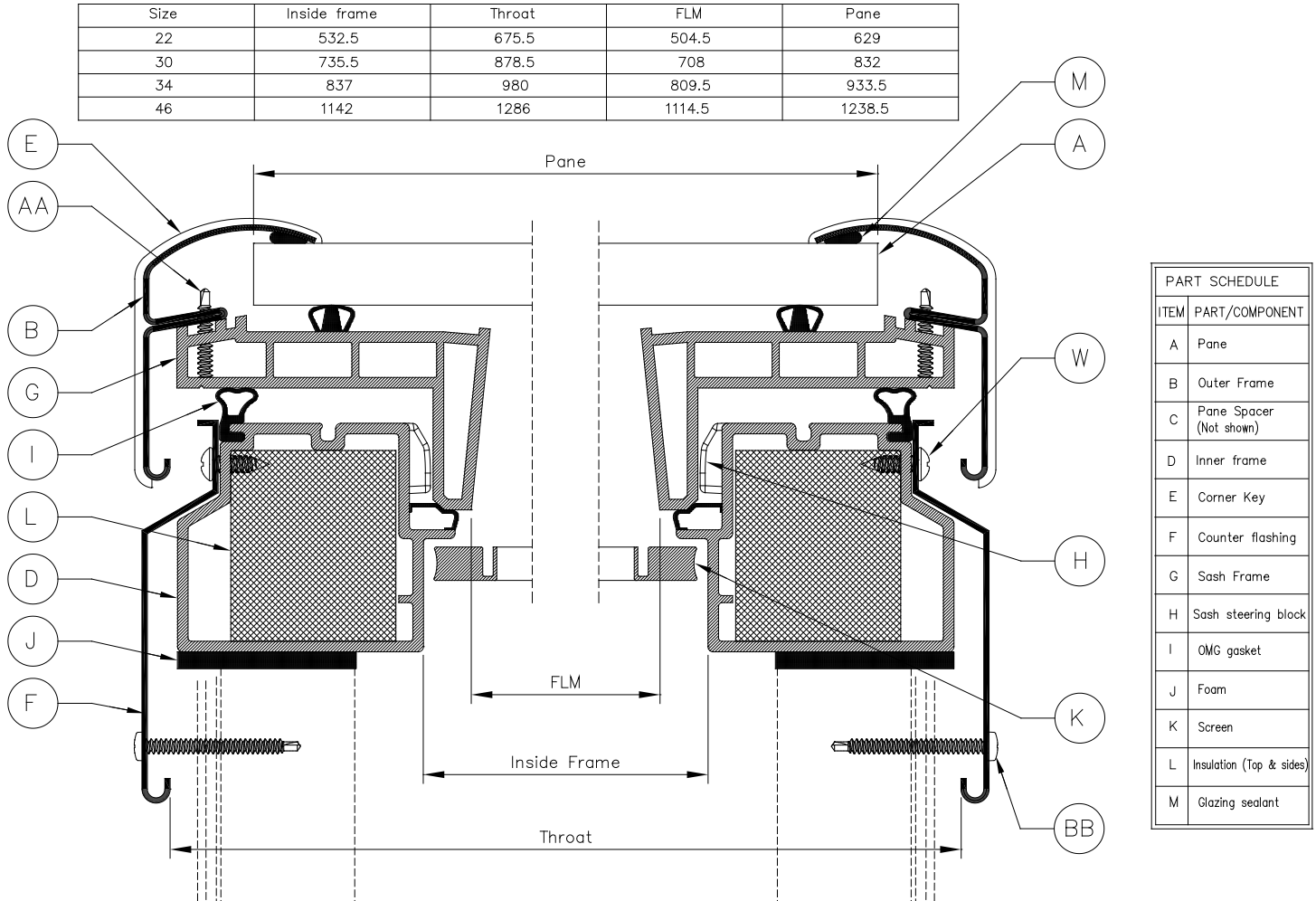
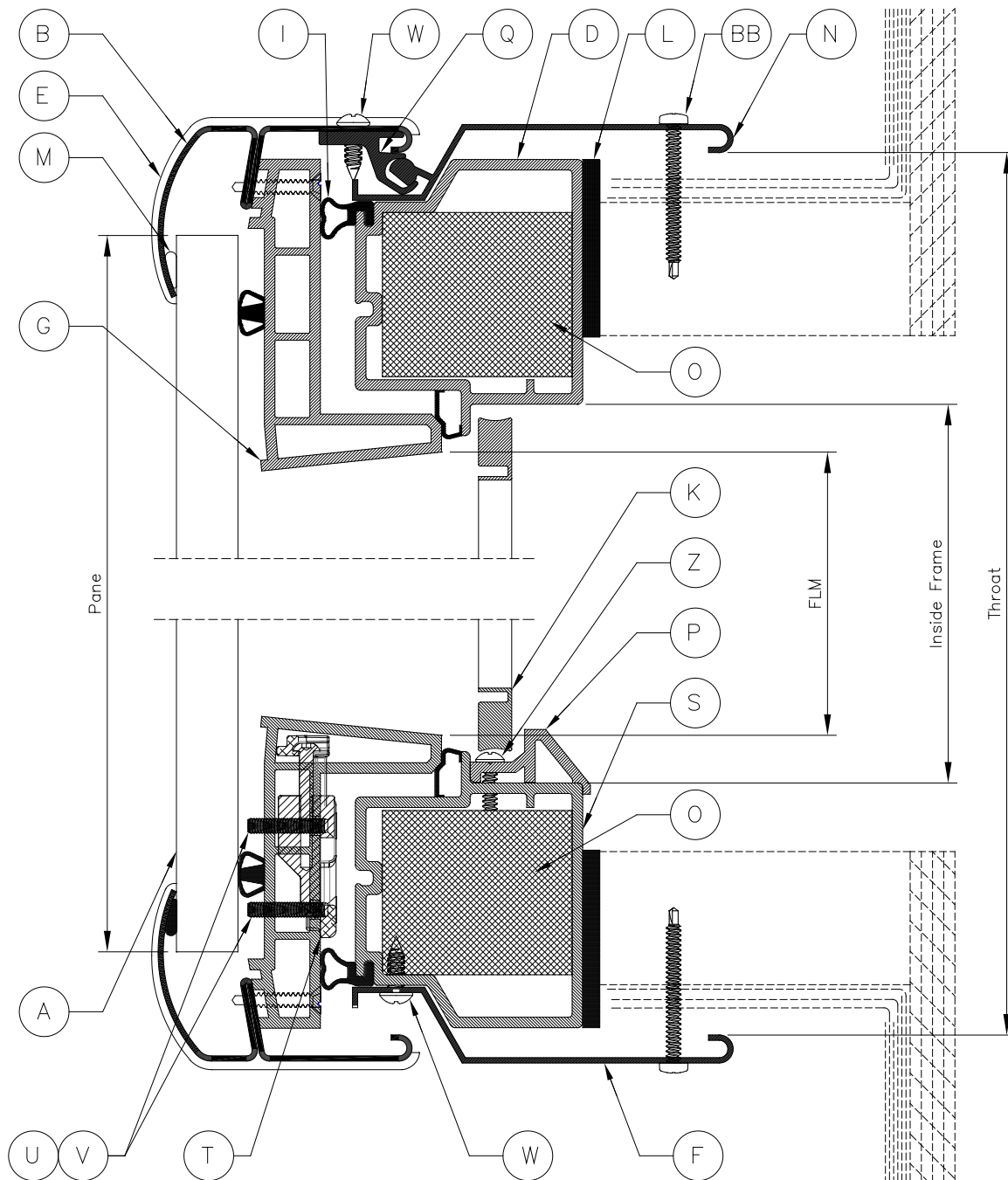


FIGURE 7 – VELUX VCM/VCE/VCS Skylight Vertical Section View

Size	Inside frame	Throat	FLM	Pane
22	532.5	675.5	504.5	629
30	735.5	878.5	708	832
34	837	980	809.5	933.5
46	1142	1286	1114.5	1238.5



PART SCHEDULE	
ITEM	PART/COMPONENT
N	Counter flashing
O	Insulation (Bottom, left)
	Insulation (Bottom, right)
P	Screen retainer (Bottom only)
Q	Hinge socket
R*	Plug
S	Operator
T	Chain attachment
U	Screw
V	8-32 Threaded Insert
W	Self tapping Pan head Screw
X*	Machine Screw
Y*	Brass Insert
Z	Screw
AA	Screw
BB	Pan Head Screw

* Note designates, this Item is Not Shown
Items X (Machine Screw) & Item Y
(Brass Insert) are used in Item S (Operator).



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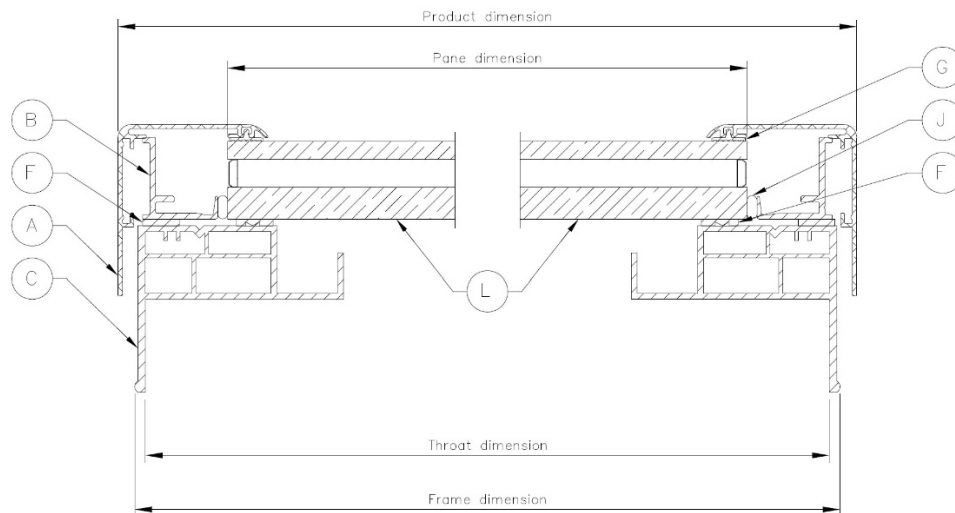
TABLE 7 – VELUX GSM SkyMax Glass Weight = 99-100: 11 psf and 99-200 11.5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Series Code	Unit size ⁽¹⁾ (inches)	Download (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
99-100 Non-Impact	Up to 38¼ x 121¼	+5400 Pa (+112.5psf)	-3840 Pa (-80 psf)	SKG-PG80 Size Tested 972 x3080 mm (38.35 x125 in)	0.2 L/s/m ² (0.04 cfm/ft ²)	960 Pa (20 psf)
99-200 Impact	Up to 52 x 96	+7200 Pa (+150 psf)	-3840Pa (-80 psf)	SKG-PG80 Size Tested 1320 x2438 mm (38.35 x125 in)	0.09 L/s/m ² (0.017 cfm/ft ²)	720 Pa (15 psf)

¹ Outside Curb dimensions.

² Based on tested size indicated in Primary Designator.

³ Impact performance is outside the scope of this report and is used in this table for designation only.



PART SCHEDULE								
ITEM	QTY.	PART/COMPONENT	COMPONENT NO.	DESCRIPTION	DRAWING NO.			COMMENTS
					Category	Commodity No.	Rev.	
A	4	VTR Retainer	302403 Brz 300261 Mill	Extruded aluminum 6063-T5	21302403	000000	01	EV/EVMS/GSM Profile
					21302403	0A0310	01	Cutting
					21302403	0A0360	01	Cutting/Punching
B	4	Glazing channel	302415	Extruded aluminum 6063-T5	21302415	000000	01	Glazing U channel
					21302415	0A0310	01	Cutting
C	4	RS Curb	303880	Rigid PVC Color: White NCS S 0500-N	21303880	000000	01	Frame
					21303880	0A0310	01	Cutting/Punching
D	8	Setting block	303881	Aluminum tubing (6061-15) w/rubber tape	21303881	000000	01	Setting block
E	1	LBL GSM lifting warning	300718	Warning lift label	21300718	000000	01	
F	Varies	VHB tape	305674 (1/2") 305675 (1")		21305674	000000	02	
					21305674	0A0310	01	
					21305675	0A0500	01	Tape placement
G	1	Retainer gasket	303860	Santoprene Color: black	21303860	000000	01	E-class, Gasket
H	4	Chevron	303855		--	--	--	--
I	4	Corner key	303856		--	--	--	--
J	N/A	Silicone	305673	Grey limestone	--	--	--	--
K	Varies	Screw	306244	#10 x 2-1/8" PH TR HDSS screw	21306244	000000	01	EF, SST Screw
L	1	Pane	-----	Solarban 70XL Clear, Bronze, Gray	--	--	--	--
								See Product Code Chart (below)

FIGURE 8 – VELUX GSM SkyMax Horizontal Cross Section


TABLE 8 – VELUX GSM SkyMax- Energy, Light and Comfort¹

VELUX Product Code	U-Factor (Btu/ft ² /°F/hr)	Solar Heat Gain Coefficient (SHGC)	Visible Transmittance (VT)	Condensation Resistance (CR)
99-100 IGU				
99-100: SB70XL/arg/Clear HS lami (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.25	0.58	51
99-101: SB70XL/arg/Cool Mist HS lami (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.25	0.51	51
99-102: SB70XL/arg/Arctic Snow HS lami (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.24	0.42	51
99-106: SB70XL on Bronze/arg/Clear HS lami (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.18	0.35	51
99-108: SB70XL on Gray/arg/Clear HS lami (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.17	0.29	51
99-103: SB70XL/arg/clear HS lami+EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.24	0.54	43
99-104: SB70XL/arg/Cool Mist HS lami +EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.23	0.47	43
99-105: SB70XL/arg/Arctic Snow HS lami+EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.23	0.39	43
99-107: SB70XL on Bronze/arg/Clear HS lami +EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.17	0.32	43
99-109: SB70XLon Gray/arg/clear HS lami+EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.16	0.27	43
99-200 IGU				
99-200: SB70XL/arg/Clear HS lami (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.25	0.58	51
99-201: SB70XL/arg/Cool Mist HS lami (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.25	0.51	51
99-202: SB70XL/arg/Arctic Snow HS lami (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.24	0.42	51
99-206: SB70XL on Bronze/arg/Clear HS lami (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.18	0.35	51
99-208: SB70XL on Gray/arg/Clear HS lami (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.51	0.17	0.29	51
99-203: SB70XL/arg/clear HS lami+EnAdv (6mm/5mm/060 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.24	0.54	44
99-204: SB70XL/arg/Cool Mist HS lami +EnAdv (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.23	0.47	434
99-205: SB70XL/arg/Arctic Snow HS lami+EnAdv (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.23	0.39	44
99-207: SB70XL on Bronze/arg/Clear HS lami +EnAdv (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.17	0.32	44
99-209: SB70XLon Gray/arg/clear HS lami+EnAdv (6mm/5mm/090 PVB/5mm)1 1/16" IG (SS-D)	0.46	0.16	0.27	44

¹ U-factors and Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance have been determined in accordance with NFRC 100, NFRC 200, and NFRC 500, respectively by an accredited, independent laboratory, and labeled and certified b the manufacturer.



TABLE 9 – VELUX Sun Tunnel Skylights (Residential)

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Model Code	Unit size ⁽¹⁾ (inches)	Download (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
TGF 014	14	+14,364 Pa (+300 psf)	-7,661 Pa (-160 psf)	TDDCC-PG160 Size Tested 356 mm (14")	0.1 L/s/m ² (0.01 cfm/ft ²)	720 Pa (15 psf)
TGF 022	22	+14,364 Pa (+300 psf)	-6,384 Pa (-130 psf)	TDDCC-PG130 Size Tested 559 mm (22")	0.1 L/s/m ² (0.01 cfm/ft ²)	720 Pa (15 psf)
TMF 014	14	+14,364 Pa (+300 psf)	-7,980 Pa (-165 psf)	TDDCC-PG165 Size Tested 356 mm (14")	0.2 L/s/m ² (0.03 cfm/ft ²)	720 Pa (15 psf)
TGR 010	10	+14,364 Pa (+300 psf)	-7,661 Pa (-160 psf)	TDDCC/TDDCC- PG160 Size Tested 356 mm (14")	0.1 L/s/m ² (0.01 cfm/ft ²)	720 Pa (15 psf)
TGR 014	14					
THR 010	10					
THR 014	14					
TMR 010	10					
TMR 014	14					
TCR 014	14	+14,364 Pa (+300 psf)	-7,980 Pa (-165 psf)	TDDCC-PG165 Size Tested 356 mm (14")	0.2 L/s/m ² (0.03 cfm/ft ²)	720 Pa (15 psf)

⁽¹⁾ Nominal tunnel size

⁽²⁾ Based on tested size indicated in Primary Designator

TABLE 10 – VELUX Sun Tunnel Skylights (Commercial)

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Model Code	Unit size ⁽¹⁾ (inches)	Download (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
TCC 014	14	+14,364 Pa (+300 psf)	-7,980 Pa (-166 psf)	TDDCC/TDDCC- PG165 Size Tested 356 mm (14")	0.2 L/s/m ² (0.03 cfm/ft ²)	720 Pa (15 psf)
TGC 014	14	+14,364 Pa (+300 psf)	-7,661 Pa (-160 psf)	TDDCC/TDDCC- PG160 Size Tested 356 mm (14")	0.1 L/s/m ² (0.02 cfm/ft ²)	720 Pa (15 psf)
TCC 022	22	+14,364 Pa (+300 psf)	-7,661 Pa (-160 psf)	TDDCC/TDDCC- PG160 Size Tested 559 mm (22")	1.3 L/s/m ² (0.25 cfm/ft ²)	720 Pa (15 psf)
TGC 022		+14,364 Pa (+300 psf)	-7,661 Pa (-160 psf)	TDDCC/TDDCC- PG160 Size Tested 559 mm (22")	0.1 L/s/m ² (0.02 cfm/ft ²)	720 Pa (15 psf)

⁽¹⁾ Nominal tunnel size

⁽²⁾ Based on tested size indicated in Primary Designator



TABLE 11: VELUX Sun Tunnel Skylights with US Energy Kits – Energy and Comfort¹

Assembly Names	U-Factor (Btu/ft ² /°F/hr)	Solar Heat Gain Coefficient (SHGC)	Annual Average Visible Transmittance (VT _{annual})
TGF/TMF (14" / 22")	0.34 / 0.27	0.22 / 0.30	0.16 / 0.28
TGR/TMR/THR/TCR (14")	0.37	0.26	0.27
TCC/TGC/ 014 w/TOC Insulation at Roof	0.50	0.33	0.33
TCC/TGC/ 014 w/TTC Insulation at Roof	0.51	0.34	0.36
TCC/TGC/ 014 w/THC Insulation at Ceiling	0.37	0.26	0.27
TCC/TGC 022 w/TOC Insulation at Roof	0.40	0.27	0.42
TCC/TGC 022 w/TTC Insulation at Roof	0.40	0.26	0.41
TGC 022 w/THC Insulation at Ceiling	0.30	0.25	0.37

¹ U-factors, Solar Heat Gain Coefficient and Annual Average Visible Transmittance shall be determined in accordance with NFRC 100 and NFRC 200, respectively and by an accredited, independent laboratory, and labeled and certified by the manufacturer.

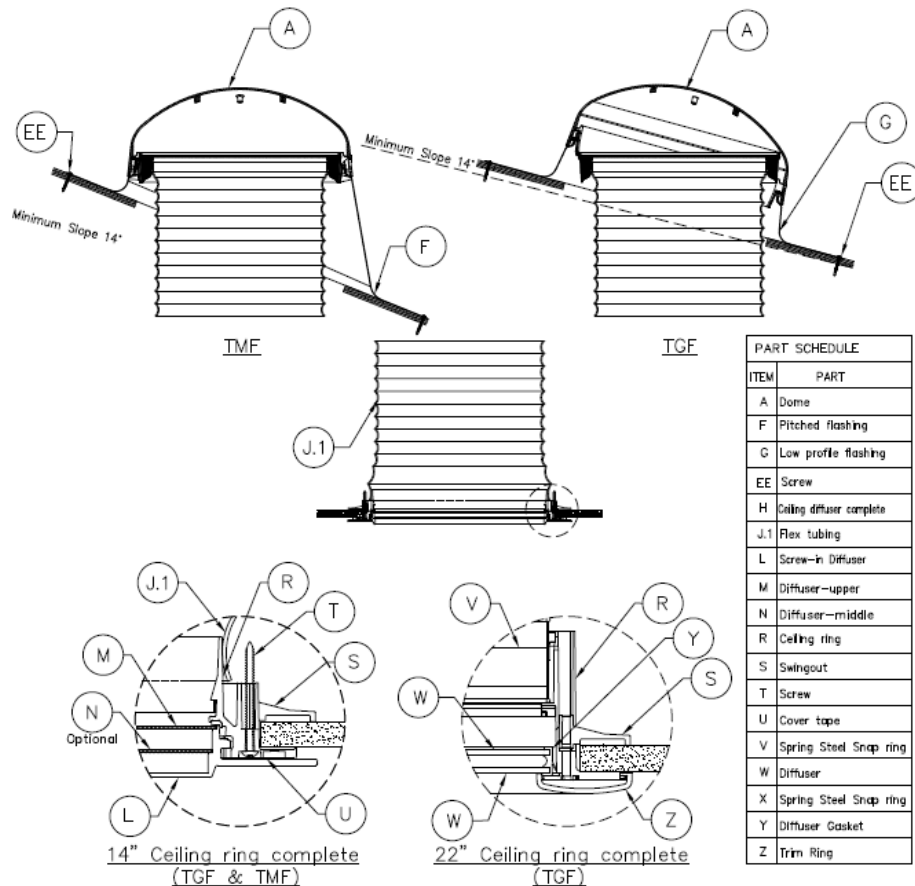


FIGURE 9 – VELUX Sun Tunnel (TGF/TMF) Skylight

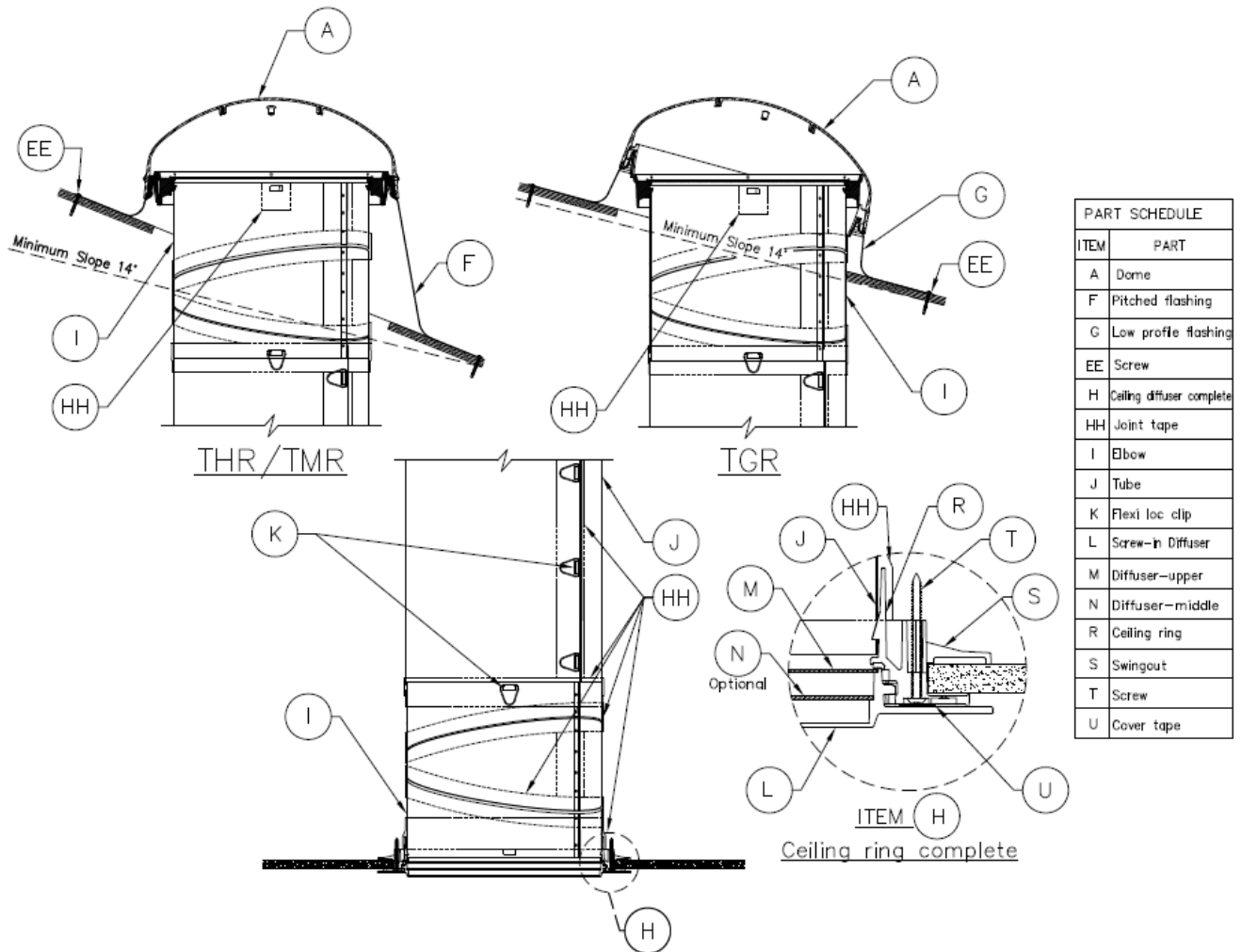


FIGURE 10 – VELUX Sun Tunnel (TGR/THR/TMR) Skylight

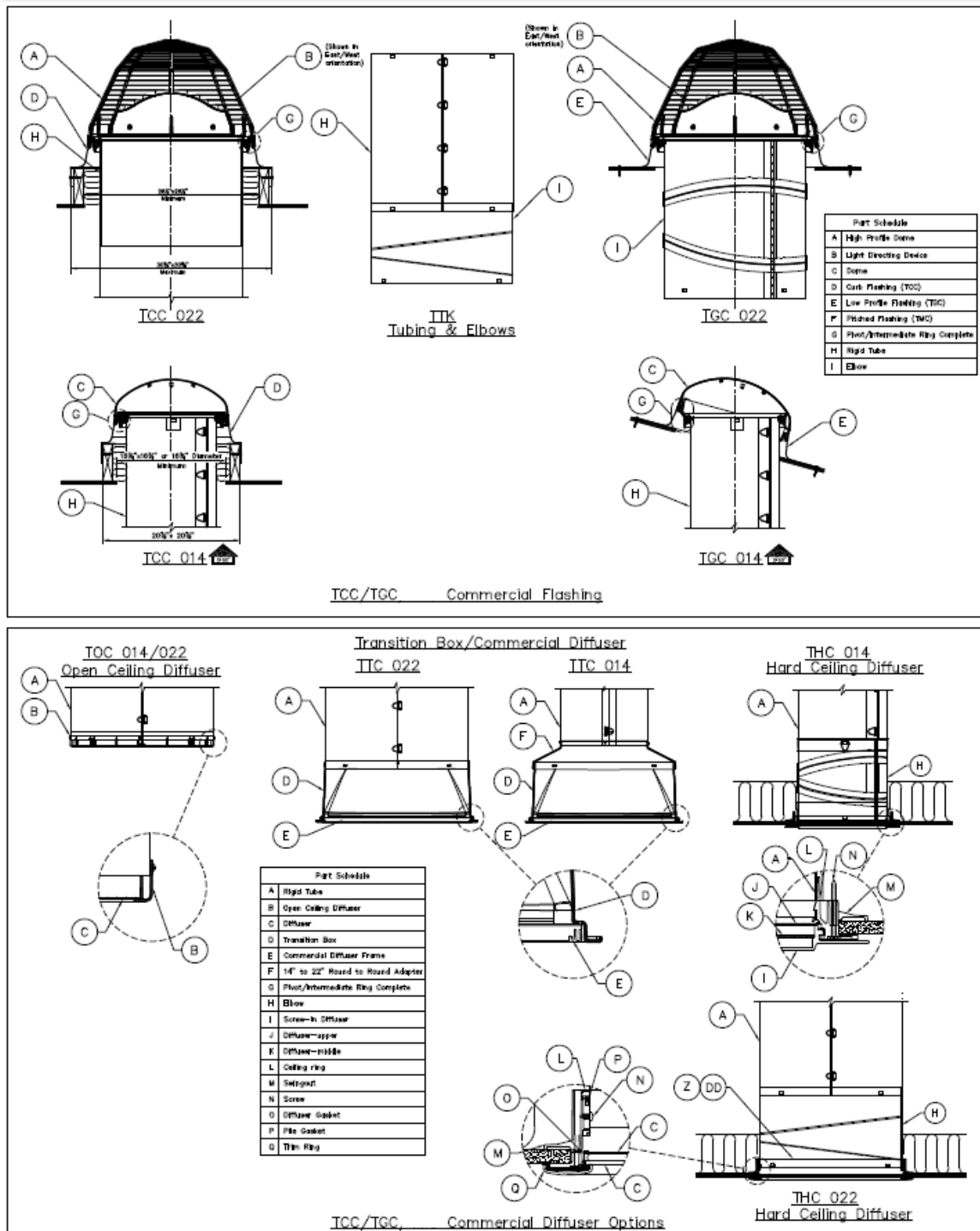


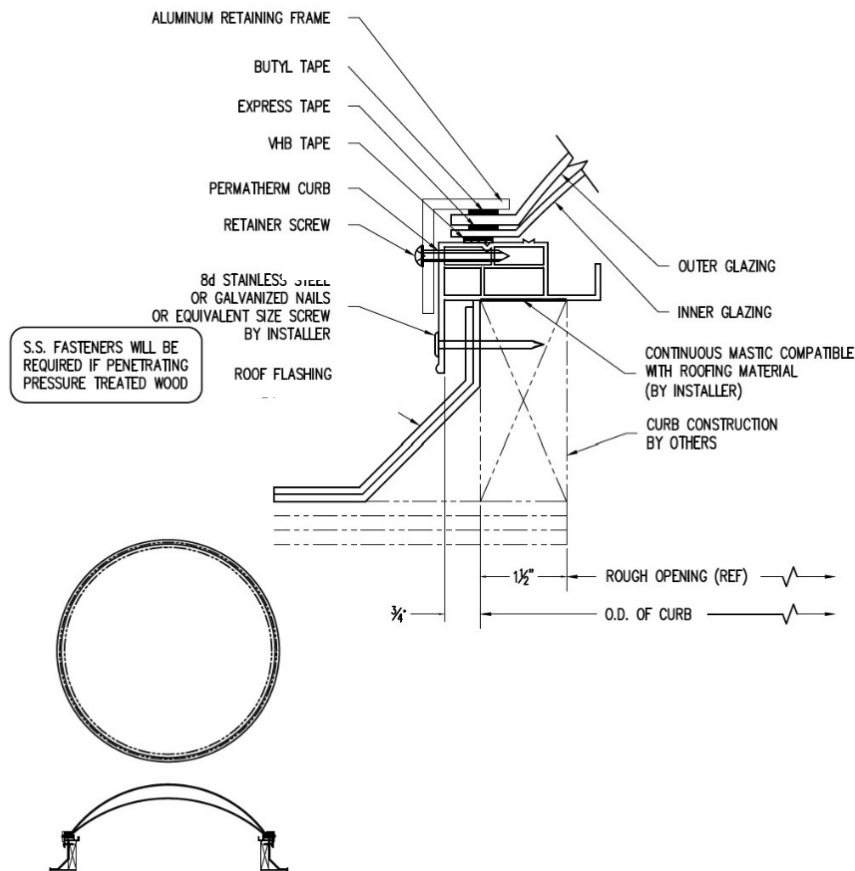
FIGURE 11 – VELUX Sun Tunnel (TCC/TCR/TGC) Skylight
(Note – TCR is similar to TCC 014 with THC Diffuser)

TABLE 12 – VELUX CC2 Dome Skylights

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ Outside Diameter (inches)	Downward (PGPos)	Uplift (PGNeg)	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
CC2-36	34	+11270 Pa (+235.38 psf)	-9705 Pa (-202.60 psf)	SKP-PG135 round – Size Tested 48" round	0.1 L/s/m ² (0.02 cfm/ft ²)	720 Pa (15 psf)
CC2-48	46			SKP-PG135 round – Size Tested 48" round		
CC2-60	57	+9600 Pa (+200.5 psf)	-7200 Pa (-150.38 psf)	SKP-PG100 round – Size Tested 72" round		
CC2-72	70			SKP-PG100 round – Size Tested 72" round		

⁽¹⁾ Outside Curb dimensions

⁽²⁾ Based on tested size indicated in Primary Designator



**FIGURE 12– VELUX Curb Mount Plastic Glazed Circular Unit (CC2) Unit Skylights
CC2 Skylight**



TABLE 13 – VELUX TZR, TZRL and TZRQ Skylights – Glass Weight = 5 psf

Skylight Description		NAFS Performance Grades		Other NAFS Designators		
Size Code	Unit size ⁽¹⁾ (inches)	Downward (PG _{Pos})	Uplift (PG _{Neg})	Primary	Maximum Air Leakage ⁽²⁾	Max. Pressure with No Water Penetration ⁽²⁾
Non-Impact	19x19	+7,190 Pa (+150 psf)	-6,710 Pa (-140 psf)	SKG-PG140 489x489 * (19x19")	0.1L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)
Impact	19 x19	+6,000 Pa (+125 psf)	-3,840Pa (-80 psf)	SKG-PG80 489x489 (19x19")	0.1L/s/m ² (<0.01 cfm/ft ²)	720 Pa (15 psf)

TABLE 14: TZR, TZRL and TZRQ Skylights with US Energy Kits – Energy and Comfort¹

Assembly Names	U-Factor (Btu/ft ² /°F/hr)	Solar Heat Gain Coefficient (SHGC)	Annual Average Visible Transmittance (VT _{annual})
TZR, TZRL and TZRQ Non-Impact	0.46	0.38	0.39
TZR, TZRL and TZRQ Impact	0.43	0.39	0.36

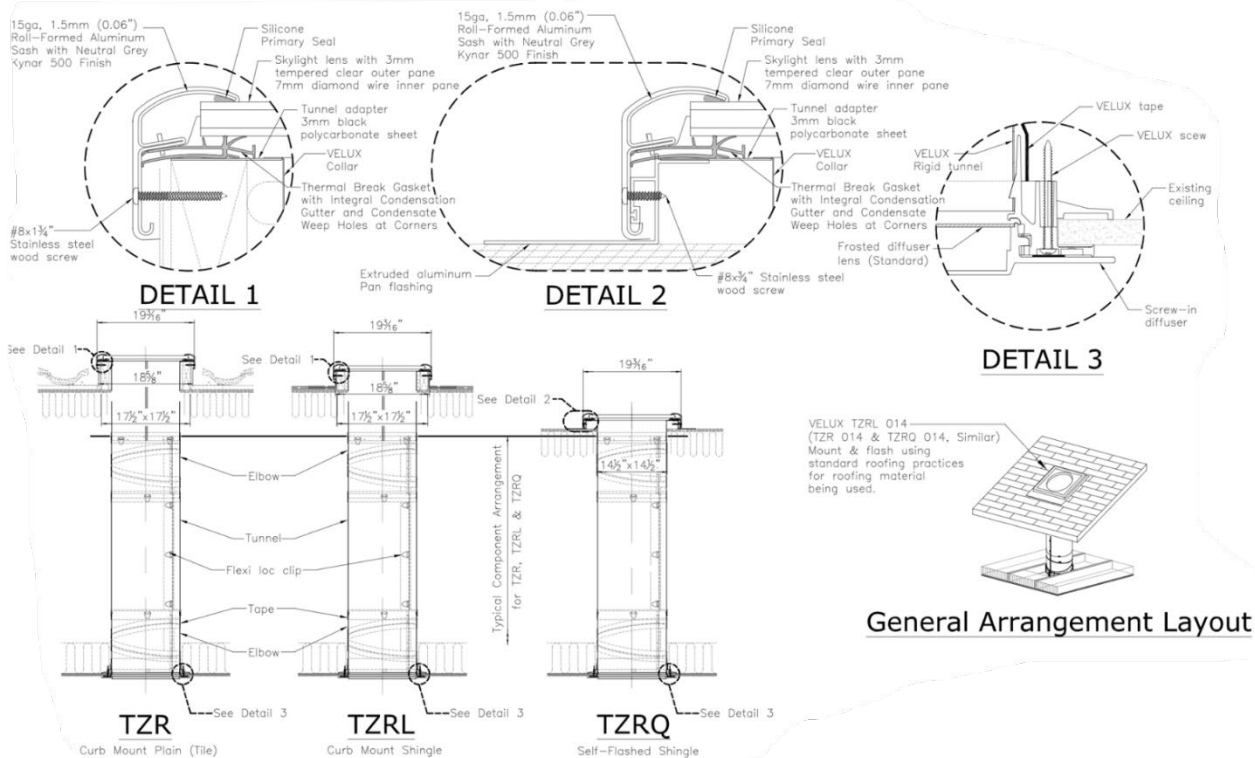


FIGURE 13– VELUX TZR, TZRL and TZRQ Skylights



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VELUX FS, VS, VSE, AND VSS DECK MOUNT GLASS-GLAZED UNIT SKYLIGHT
VELUX FCM, VCE, VCS, VCM GSM, TZR, TZRL, TZRQ and CURB MOUNT GLASS-GLAZED UNIT SKYLIGHTS
VELUX CC2 CURB MOUNT PLASTIC-GLAZED CIRCULAR UNIT SKYLIGHTS
VELUX SUN TUNNEL SKYLIGHTS (TCC, TCR, TGC, TGF, TGR, TMF, and TMR)
(PLASTIC-GLAZED TUBULAR DAYLIGHTING DEVICES)

CSI Section:
08 62 00 Unit Skylights

1.0 RECOGNITION

VELUX America, LLC's Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-Glazed Circular Unit Skylights and Tubular Daylighting Devices recognized in IAPMO UES Evaluation Report ER-199 and with changes as noted in this supplement were evaluated under the following codes (and regulations):

- 2025 California Building Code (CBC)

2.0 LIMITATIONS

VELUX America, LLC's Deck Mount Glass-Glazed Unit Skylights, Curb Mount Glass-Glazed Unit Skylights, Curb Mount Plastic-Glazed Circular Unit Skylights and Tubular Daylighting Devices, when installed and recognized in this report, is subject to the limitations stated in IAPMO UES Evaluation Report ER-199.

2.2 California Building Code: All provisions of IAPMO UES ER-199 referencing the 2024 IBC shall apply to use under the 2025 CBC.

3.0 ADDITIONAL REQUIREMENTS:

3.1 Compliance for Materials Used

Reports of material testing and evaluation in accordance with Clauses 10 and 11 of AAMA/WDMA/CSA 101/I.S.2/A440-22 comply with the applicable requirements of CBC Chapter 7A, Section 240.5 and Chapter 26 for light transmitting plastic components. Acrylic Domes are in compliance with CBC Sections 2606 and 2610.

3.2 Glazing Requirements

For those applications subject to the requirements of the Division of the State Architect-Structural Safety/Community Colleges (DSA-SS/CC) or the Office of Statewide Planning and Development (OSHPD 1 & 4), Table 1C of this supplement provides information to verify compliance with the additional provisions of Section 2403.2.1 and Table 2403.2.1 of the CBC, as applicable.

3.3 This supplement expires concurrently with IAPMO UES ER-199.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org

TABLE 1C –Glass Area, Nominal Frame Lap and Glass Edge Clearance

Skylight Model	Largest Size Glass Area (ft²)	Nominal Design Values - mm (in.)					
		Frame Lap			Glass Edge Clearance		
		Sides	Bottom	Top	Sides	Bottom	Top
FS	13.29	23 (7/8)	23 (7/8)	22 (7/8)	3 (1/8)	4 (1/8)	6 (1/4)
VS / VSE / VSS	12.02	12 (1/2)	14 (1/2)	14 (1/2)	4.5 (3/16)	3 (1/8)	3 (1/8)
FCM	25.33	18 (3/4)	18 (3/4)	18 (3/4)	31 (1-1/4)	31 (1-1/4)	31 (1-1/4)
VCE / VCM / VCS	16.51	18 (3/4)	18 (3/4)	18 (3/4)	31 (1-1/4)	31 (1-1/4)	31 (1-1/4)
GSM SkyMax	30.65	17.4 (11/16)	17.4 (11/16)	17.4 (11/16)	5 (0.2)	5 (0.2)	5 (0.2)
TZR/ TZRL / TZRQ	25.33	18 (3/4)	18 (3/4)	18 (3/4)	31 (1-1/4)	31 (1-1/4)	31 (1-1/4)

Fixed Skylight System

Curb-Mounted

FCM

For visually expanding areas in a home with daylight and sky views, the VELUX Fixed Skylight System is a perfect choice. Available in curb-mounted installations, and with no designated top, bottom, or sides, they can be installed in any direction to create just the right look.

- Curb-mounted
- Maintenance free frame
- No designated top, bottom or sides - can be installed in any direction
- White laminated glass available for applications where diffused lighting is required

[View FCM Technical Resources](#)

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[Download Skylight Measurement Guide](#)

[Download Skylight Measurement Guide \(Spanish\)](#)



Product Details



①	Skylight Shades
②	Standard Safety Glass
③	Industry-Leading Warranty
④	Roof Pitch

FCM Skylight Sizes

	2222	2230	2234	2246	2270	3030	3046	3055	3422
Inside curb (W"xH")	22½ x 22½	22½ x 30½	22½ x 34½	22½ x 46½	22½ x 70½	30½ x 30½	30½ x 46½	30½ x 55½	34½ x 22½
Outside curb (W"xH")	25½ x 25½	25½ x 33½	25½ x 37½	25½ x 49½	25½ x 73½	33½ x 33½	33½ x 49½	33½ x 58½	37½ x 25½
Maximum skylight clearance (W"xH")	26⅝ x 26⅝	26⅝ x 34⅝	26⅝ x 38⅝	26⅝ x 50⅝	26⅝ x 74⅝	34⅝ x 34⅝	34⅝ x 50⅝	34⅝ x 59⅝	38⅝ x 26⅝
	3434	3446	4622	4630	4646	4672	1943	2347	3171

Inside curb (W"xH")	34½ x 34½	34½ x 46½	46½ x 22½	46½ x 30½	46½ x 46½	46½ x 72½	19½ x 43½	23½ x 47½	32 x 72
Outside curb (W"xH")	37½ x 37½	37½ x 49½	49½ x 25½	49½ x 33½	49½ x 49½	49½ x 75½	22½ x 46½	26½ x 50½	35 x 75
Maximum skylight clearance (W"xH")	38⅝ x 38⅝	38⅝ x 50⅝	50⅝ x 26⅝	50⅝ x 34⅝	50⅝ x 50⅝	50⅝ x 76⅝	23⅝ x 47⅝	27⅝ x 51⅝	36⅝ x 76⅝

[View skylight size details](#)

Flashing systems for FCM skylights

Description	Roofing material	Roof pitch	Product code
Step flashing w/ adhesive underlayment	Asphalt shingles, wood shakes and flat tile	10°-60°	ECL 0000C
High profile flashing w/ adhesive underlayment	Tile	14°-60°	ECW 0000C

[View skylight flashing systems](#)

Skylight Accessories



VELUX has a range of accessories that can compliment your skylights from blinds to manual rods.

[View Accessories](#)

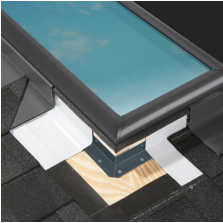
Maintenance Guide



We have handy guides to help you maintain and care for your skylight for years to come.

[View Guide](#)

VELUX Warranty



We have one of the best warranties covering skylights, sun tunnels, and blinds!

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VELUX Fixed Skylight

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FCM Tested Performance Information								
Glass	04	05 / 05C	06**	08	10	29 / 30	99 93	99 94
Air infiltration/exfiltration* [max. @ 75 Pa (1.57 lbs/ft ²) differential pressure]								
l/s/m ²	0.2	<.1	<.1	0.2	0.1	0.3	<.1	0.2
cfm/ft ²	0.03	<0.01	<0.01	0.03	0.01	0.05	<0.01	0.03
Water resistance @ 3.4 L/m ² /min (5 USgal/ft ² /hr) * [max. tested differential pressure with no leakage]								
Pascals	720	720	720	720	720	720	720	720
lbs/ft ²	15	15	15	15	15	15	15	15
Thermal performance (Certified, complete unit values)								
- VELUX Glass Skylights are rated at 20° slope and labeled with NFRC-certified U-Factor, SHGC, and VT ratings listed in the NFRC Certified Products Directory. - Ratings for products with standard available fitted shades are available.								
U-Factor (Btu/hr-ft ² -°F)	0.48	0.49 / 0.45	0.46	0.48	0.47	0.38	0.43	0.42
SHGC	0.27	0.27 / 0.28	0.28	0.26	0.28	0.25	0.27	0.27
VT	0.64	0.64 / 0.63	0.63	0.45	0.63	0.58	0.62	0.62
UV protection, % (Glass panel only)								
(300-380 nm)	99.9	95.2	99.9	99.9	99.9	95.2	95.3	99.9
Fading protection, % Krochmann damage function (Glass panel only)								
(300-600 nm)	83.1	79.2	84.6	88.4	83.2	79.2	81.6	85.1
Certified Structural Performance [Performance Grade or DP] *								
Tested Size	Uplift (lbs/ft ²)							
4672	80	n.r.	n.r.	80	n.r.	n.r.	n.r.	80
4646	120	140	80	120	135	60	140	120
2270	100	n.r.	n.r.	100	n.r.	n.r.	n.r.	100
Tested Size	Download (lbs/ft ²)							
4672	70	n.r.	n.r.	70	n.r.	n.r.	n.r.	70
4646	250	100	100	250	970	75	100	250
2270	200	n.r.	n.r.	200	n.r.	n.r.	n.r.	200
* Tested in accordance with AAMA/WDMA/CSA 101/IS.2/A440-11 (NAFS 2011) ** 06 variant is tested and WDMA Hallmark certified for Wind-Borne debris impact, Florida HVHZ : Large Missile Level D, Cycle Pressure +50/-50, tested per TAS 201, 202 and 203 (Wind Zone 4) Large Missile Level C, Cycle Pressure +50/-50, tested per ASTM E 1886 and ASTM E 1996								
Structural performance ratings also apply to sizes smaller than the Tested Size FCM skylights are WDMA Hallmark certified: Product Number 426-H-701.xx								
04 glass: Tempered over laminated HS (0.030" interlayer) 05 glass: Tempered over tempered; 05C for Canada has a smaller pane gap 06 glass: Tempered over laminated HS (0.090" interlayer) 08 glass: Same as 04, with white interlayer 10 glass: Temp. over laminated temp. (0.030" interlayer) 29 glass: Tempered over tempered over laminated HS (0.030" interlayer) 30 glass: Tempered over tempered over tempered 99 93 glass: Same as 05, with i89 coating on interior surface 99 94 glass: Same as 04, with i89 coating on interior surface								
NOTE: The FCM 4646 (or smaller) 06 is the only VELUX glass skylight currently qualified for use in the Florida HVHZ (High Velocity Hurricane Zone).								



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Detailed Product Ratings

GENERAL INFORMATION

Manufacturer:	VELUX
Series Name:	FS
Operator Type:	SKFX
Air Leakage:	≤ 0.3
Ventilation	
Ventilation	

RATINGS INFORMATION

Request Entry

CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage	Ventilation Rating (Standard Screen)	Ventilation Rating (Enhanced Screen)	Visible Light Transmittance of the Glass (glass only, not whole product)	Close			
VEL-N-18-00049-00001	0.44	0.26	0.60	51	≤ 0.3			64%				
Group ID	Manufacturer Product Code			Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	04: E366 / arg90 / lami (3mm/2.3mm)030PVB 2.3mm)			W/NA	2	0.02(2)	0.354	SS-D	Fill 1: ARG/AIR(90/10)	N	-	CL
VEL-N-18-00049-00002	08: E366 / arg90 / white-lami (3mm/2.3mm)030PVB 2.3mm)				0.44	0.26	0.54	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, OT, No Grid			
VEL-N-18-00050-00001	05: E366 / arg90 / clr (3mm/3mm)				0.45	0.26	0.61	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00050-00002	05C: E366 / arg90 / clr (3mm/3mm)				0.45	0.26	0.61	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00051-00001	06: E366 / arg90 / lami (3mm/2.3mm)090PVB 2.3mm)				0.42	0.26	0.60	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00052-00001	10: E366 / arg90 / lami (3mm/3mm)030PVB 3mm)				0.43	0.26	0.59	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00053-00001	14: E340 / arg90 / lami (3mm/2.3mm)030PVB 2.3mm)				0.44	0.17	0.36	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00054-00001	15: E340 / arg90 / clr (3mm/3mm)				0.45	0.17	0.36	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00055-00001	16: E340 / arg90 / lami (3mm/2.3mm)090PVB 2.3mm)				0.42	0.18	0.36	51	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00056-00001	88: E366 / arg90 / i89 (3mm/3mm)				0.39	0.25	0.59	43	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00057-00001	89: E366 / arg90 / i89-lami (3mm/2.3mm)030PVB 2.3mm)				0.38	0.25	0.59	43	Wood/Metal Combination/Not Applicable, Fill 1: ARG/AIR(90/10) , LowE, CL, No Grid			
VEL-N-18-00062-00001	04S: Standard Frame Shade Retracted - GS LoE? 366 on 3mm Clear/ARG/Clear-2 / .030 PVB / Clear-2				0.44	0.23	0.54	59	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00062-00002	08S: Standard Frame Shade Retracted - GS LoE? 366 on 3mm Clear/ARG/Clear-2 / .030 White PVB / Clear-2				0.44	0.23	0.49	59	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00063-00001	04S: Standard Frame Shade Retracted - PS LoE? 366 on 3mm Clear/ARG/Clear-2 / .030 PVB / Clear-2				0.43	0.23	0.54	59	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00063-00002	08S: Standard Frame Shade Retracted - PS LoE? 366 on 3mm Clear/ARG/Clear-2 / .030 White PVB / Clear-2				0.43	0.23	0.49	59	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00064-00001	06S: Standard Frame Shade Retracted - GS LoE? 366 on 3mm Clear/ARG/Clear-2 / .090 PVB / Clear-2				0.42	0.24	0.55	60	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00065-00001	06S: Standard Frame Shade Retracted - PS LoE? 366 on 3mm Clear/ARG/Clear-2 / .090 PVB / Clear-2				0.41	0.24	0.55	60	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00066-00001	10S: Standard Frame Shade Retracted - GS LoE? 366 on 3mm Clear/ARG/Clear-3/ .030 PVB / Clear-3				0.42	0.24	0.54	58	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00067-00001	10S: Standard Frame Shade Retracted - PS LoE? 366 on 3mm Clear/ARG/Clear-3/ .030 PVB / Clear-3				0.41	0.24	0.54	59	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00068-00001	89S: Standard Frame Shade Retracted - GS LoE? 366 on 3mm Clear/ARG/Clear-2 / 0.030 PVB / i89-2 (4)				0.39	0.23	0.54	49	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00069-00001	89S: Standard Frame Shade Retracted - PS LoE? 366 on 3mm Clear/ARG/Clear-2 / 0.030 PVB / i89-2 (4)				0.37	0.23	0.54	49	Wood/Metal Combination/Not Applicable, Fill 1: ARG(90/10) , LowE, CL, No Grid			
VEL-N-18-00070-00001	04S: Double Pleated Shade (Closed) - E366 / arg90 / lami (3mm/2.3mm)030PVB 2.3mm) ? 25.7mm CL SS-D Spacer				0.29	0.13	0.00	63	Wood/Metal Combination/Not Applicable, CL, No Grid			

Key:

Click the column headers to sort the data according to the column header.
A dash "-" in a rating column (SHGC / VT) indicates that there are no NFRC certified values for that individual product.

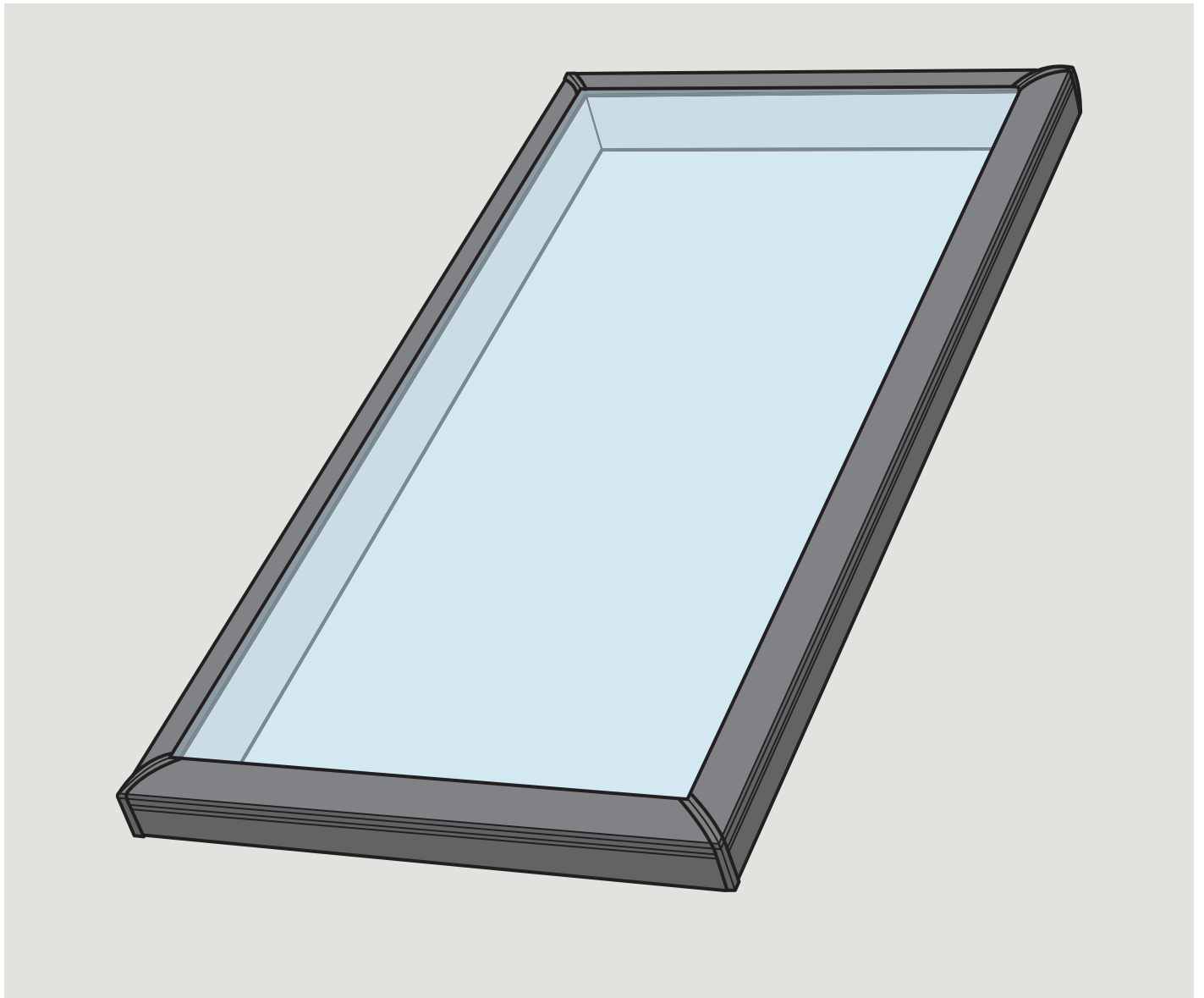
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CPD #	U-factor	SHGC	VT	Condensation Resistance	Air Leakage	Ventilation Rating (Standard Screen)	Ventilation Rating (Enhanced Screen)	Visible Light Transmittance of the Glass (glass only, not whole product)				
VEL-N-18-00049-00001	0.44	0.26	0.60	51	≤ 0.3			64%				
Group ID	Manufacturer Product Code			Frame/Sash Type	Glazing Layers	Low-E	Gap Widths	Spacer	Gap Fill	Grid	Divider	Tint
1	04: E366 / arg90 / lami (3mm/2.3mm 030PVB 2.3mm)			WA/NA	2	0.02(2)	0.354	SS-D	Fill 1: ARG/AIR(90/10)	N	-	CL

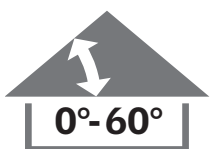
FCM



ENGLISH: FCM Curb Mounted Skylight Installation Instructions

ESPAÑOL: FCM tragaluz montado en brocal - Instrucciones de instalación

FRANÇAIS : Instruction d'installation du puits de lumière FCM monté sur cadre



ENGLISH: Content:

Page 2 Important installation requirements
 Page 3 Planning
 Page 5 Installing underlayment
 Page 6 Flashing
 Page 7 Mounting skylight

ESPAÑOL: Índice

Página 2 Requisitos importantes de instalación
 Página 3 Planificación
 Página 5 Instalación de la lámina de soporte
 Página 6 Tapajuntas
 Página 7 Montaje del tragaluz

FRANÇAIS : Index

Page 2 Spécifications importantes
 Page 3 Planification
 Page 5 Installation de la sous-couche
 Page 6 Solin
 Page 7 Installation du puits de lumière

ENGLISH: Important installation requirements**Roof pitch**

FCM is designed for roof pitches 0°-60° (0:12 - 20:12).

Special consideration for applications below roof pitch 15°:

- Any condensation that forms on the glass due to high humidity may drip.
- Standing water and dirt left on the glass over time may cause smudging and corrosion of the glass.

Neither of the two above stated occurrences are covered under the VELUX warranty.

Flashing

Flashing ECL is designed for roof pitches 10°-60° (2:12 - 20:12).

Flashing ECW is designed for roof pitches 14°-60° (3:12 - 20:12).

Importance of proper installation

Satisfactory product performance depends on proper installation.

Seller accepts no responsibility whatsoever for failure of an installer to install VELUX® roof windows and skylights in accordance with these installation instructions. Although VELUX roof windows and skylights are designed and manufactured to the highest standards, severe climatic exposure as well as adverse indoor conditions (i.e. high humidity) may produce temperature conditions which exceed product performance standards. In these cases, special preventive measures may be necessary.

Seller reserves the right to implement product changes for improvement without prior notification.

Sunscreening accessories

Refer to instructions for accessory type in question or contact VELUX for further information.

Seller assumes no obligation whatsoever for failure of an architect, installer or building owner to comply with all applicable laws, ordinances, building codes and safety requirements.

NOTICE

All glass may be subject to unexpected and spontaneous breakage in rare circumstances due to imperfections in the glass that are undetectable during the manufacturing and inspection process by the manufacturer of the glass and VELUX.

VELUX offers the choice of laminated or tempered glass skylights. Laminated glass is a combination of two or more glass sheets with one or more interlayers of plastic (PVB) or resin. In case of breakage, the interlayer is designed to hold the fragments together. Tempered glass does not contain an interlayer to hold the fragments together. Instead, tempered glass is designed to break into small, pebble-like pieces. When tempered glass breaks, pieces of glass come loose and may strike an individual.

Consult local regulations and/or building material consultants to determine which type of glass is right for you or if laminated glass is required in your application.

ESPAÑOL: Requisitos importantes de instalación**Inclinación del techo**

FCM está diseñado para techos con inclinación de 0°-60° (0:12 - 20:12).

Consideraciones especiales para aplicaciones con inclinaciones de menos de 15°:

- Cualquier condensación que se forme en el cristal debido a la humedad alta puede gotear.
- El agua estancada y la suciedad que permanecen en el cristal durante un tiempo pueden causar manchas y corrosión en el cristal.

Ninguno de los dos casos mencionados arriba está cubierto por la garantía de VELUX.

Tapajuntas

Tapajuntas ECL está diseñado para techos con inclinación de 10°-60° (2:12 - 20:12).

Tapajuntas ECW está diseñado para techos con inclinación de 14°-60° (3:12 - 20:12).

Importancia de una instalación correcta

El rendimiento satisfactorio del producto depende de su correcta instalación.

Las ventanas de tejado y los tragaluz VELUX® deben instalarse siguiendo estas instrucciones. El proveedor no acepta responsabilidad alguna por errores del instalador. Aunque las ventanas para tejados y los tragaluz VELUX se han diseñado y fabricado para lograr los niveles de calidad más altos, la exposición a condiciones climáticas severas e incluso unas condiciones interiores pueden producir niveles de temperatura que exceden las condiciones de desempeño del producto. En estos casos puede ser necesario establecer medidas preventivas. El proveedor se reserva el derecho a hacer modificaciones a los productos sin notificación previa con el fin de mejorarlos.

Accesorios de protección solar

Consulte las instrucciones por tipo de accesorio o comuníquese con VELUX para obtener más información.

El proveedor no asume responsabilidad alguna sobre errores de arquitecto, instalador o constructor por el incumplimiento de ordenanzas legales, normas de construcción o requisitos de seguridad.

AVISO

Bajo ciertas circunstancias, todo cristal está sujeto a romperse de manera inesperada o espontánea debido a imperfecciones en el cristal no detectadas durante su manufacturación o durante el proceso de inspección por el fabricante del cristal y por VELUX.

VELUX ofrece la opción de tragaluz de cristal laminado o templado: El cristal laminado es una combinación de dos o más hojas de cristal con una o más capas intercaladas de plástico (pnb) o resina. En caso de rotura, la capa está diseñada para sostener unidos los fragmentos de cristal. El cristal templado no contiene capa intercalada para sostener unidos los fragmentos de cristal. En su lugar, el cristal templado está diseñado para que se rompa en pedazos bien pequeños. Cuando el cristal templado se rompe, pedazos de cristal pueden soltarse y golpear a un individuo.

Consulte con los reglamentos locales y/o asesores de material de construcción para determinar cual tipo de cristal es el más adecuado para usted o si se requiere cristal laminado en su aplicación.

FRANÇAIS : Spécifications importantes**Pente de toit**

Le puits de lumière FCM est conçu pour les pentes de toit 0°-60° (0:12 - 20:12).

Attention particulière pour installation sur pente de toit de moins de 15° :

- Dans des conditions très humides, toute condensation se formant sur la surface vitrée pourra s'écouler.
- Avec le temps, l'eau s'accumulant directement sur la surface vitrée pourra générer de la corrosion et des taches sur le verre.

Aucunes des deux incidences ci-haut mentionnées sont couvertes sous la garantie VELUX.

Solin

Solin ECL est conçu pour une inclinaison de toiture variant entre 10° et 60° (2:12 - 20:12).

Solin ECW est conçu pour une inclinaison de toiture variant entre 14° et 60° (3:12 - 20:12).

L'importance d'une bonne installation

La qualité de l'installation influence le rendement du produit et, pour cette raison, l'entreprise.

Le vendeur désire vous informer qu'il n'accepte aucune responsabilité, quelle qu'elle soit, dans le cas où un installateur ne se conforme pas aux instructions recommandées dans ce feuillet pour l'installation d'un puits de lumière ou d'une fenêtre de toit VELUX®. Veuillez aussi remarquer que même si les fenêtres de toit et puits de lumière VELUX répondent à des normes de fabrication élevées, il se peut que certaines conditions climatiques particulièrement sévères, à l'intérieur (ex. humidité) comme à l'extérieur, affectent la performance du produit. Dans ces cas, des mesures préventives s'avèrent nécessaires.

D'autre part, le vendeur se réserve le droit d'apporter, sans préavis, des changements à ses produits dans le but de les améliorer.

Accessoires pare-soleil

Voir les instructions pour le type d'accessoires en question ou contacter VELUX pour de plus amples informations.

Le vendeur n'assume aucune responsabilité, quelle qu'elle soit, dans le cas où un architecte, un installateur ou un propriétaire n'observe pas les règlements de la loi qui sont applicables, les normes du code du bâtiment et de sécurité.

ATTENTION

Tout thermo/verre pourrait éclater d'une façon brusque et inattendu dans de rares circonstances dues à des imperfections du thermo/verre qui ne sont pas détectables lors de la fabrication et de l'inspection suivant la fabrication par le fabricant du thermo/verre et VELUX.

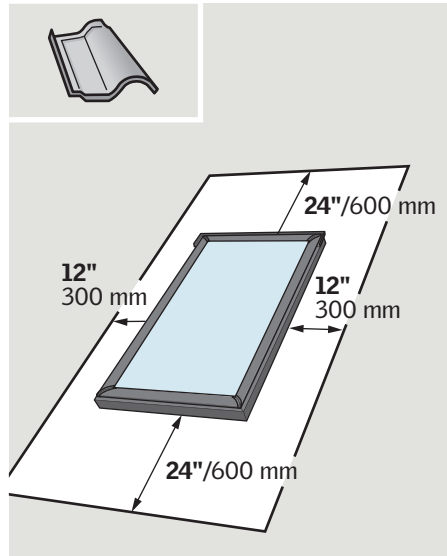
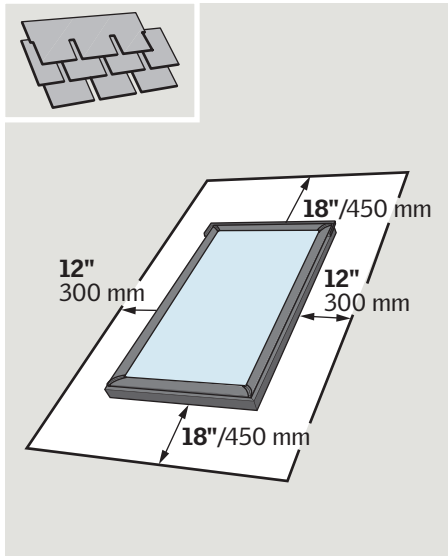
VELUX offre une sélection de thermo/verre laminé ou trempé pour ses puits de lumière. Le miné représente une combinaison de deux ou plus d'unités de verre incluant une ou plusieurs couches intérieures de plastique (pnb) ou résine. Dans le cas de bris instantané, cette/ces couches intérieures auront la propriété de retenir les fragments du thermo/verre ensemble. Par contre, le thermo/verre trempé n'inclut pas cette/ces couches intérieures pour retenir les fragments du thermo/verre ensemble. Le thermo/verre trempé est conçu pour s'émietter en de petits fragments de verre. Lorsque le thermo/verre trempé se casse, les petites pièces de verre éclatées pourraient dans certaines occasions causer des dommages physiques ou de légères blessures aux individus se trouvant à proximité.

Consulter votre code du bâtiment et/ou un professionnel-consultant afin de bien déterminer le thermo/verre recommandé pour votre application ou si un thermo/verre laminé est nécessaire dans votre cas.

ENGLISH: Clearance around installations

ESPAÑOL: Espacio libre alrededor de las instalaciones

FRANÇAIS : Dégagement requis autour de l'installation



ENGLISH: Maintain illustrated clearances between skylight frame and roof; also maintain these clearances from critical areas such as valleys, ridges and slope changes.

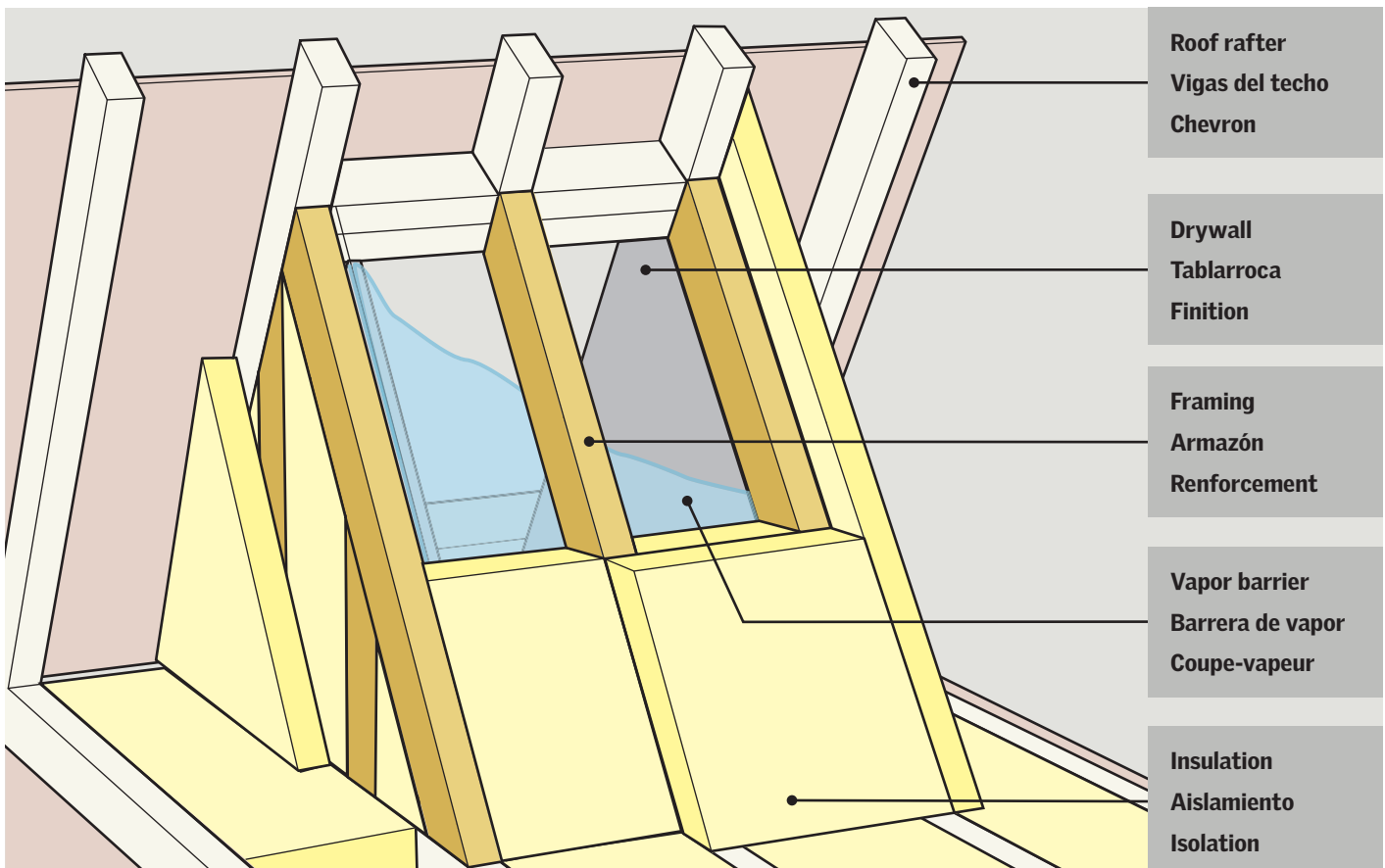
ESPAÑOL: Respete los espacios libres ilustrados entre el marco del tragaluz y el techo. También respete los espacios libres en áreas críticas como limahoyas, cumbreras y cambios de inclinación.

FRANÇAIS : Le dégagement illustré entre le cadrage du puits de lumière et la toiture doit être respecté ; maintenir également ce dégagement lorsqu'en présence de vallonnement, arrêt de faite ou variations de pente.

ENGLISH: Light shaft application

ESPAÑOL: Aplicación del hueco de luz

FRANÇAIS : Ouverture du puits de lumière



ENGLISH: Build curb according to measurements in the chart. Use lumber with an actual thickness of 1½"/38 mm and a minimum height of 3½"/90 mm. Curb height and attachment should comply with building codes and regulations and be secure enough to transfer the skylight loads to the framing members.

Note: FCM can be rotated 90° .

*No VELUX flashing is available for a rotated FCM, size 2270.

ESPAÑOL: Construya el brocal de acuerdo con las mediciones de la tabla. Use madera con un grosor real de 1½"/38 mm y una altura mínima de 3½"/90 mm. La altura y sujeción del brocal deben respetar los códigos y normas de construcción y estar bien fijados para transferir las cargas del tragaluz a los elementos del armazón.

Nota: El tragaluz FCM puede girarse a 90° .

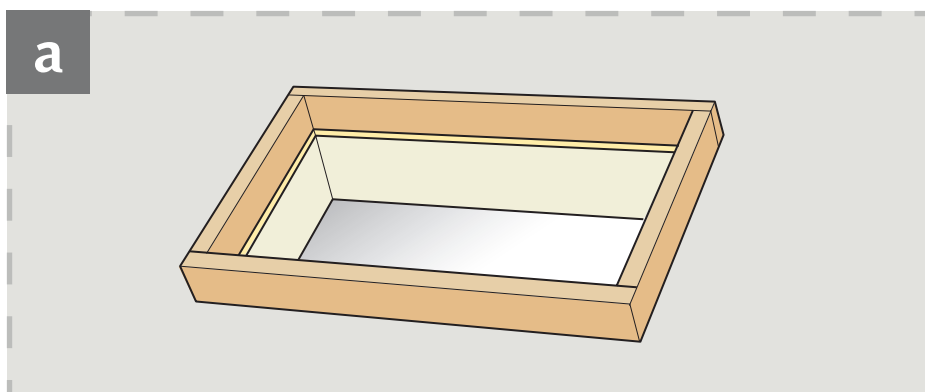
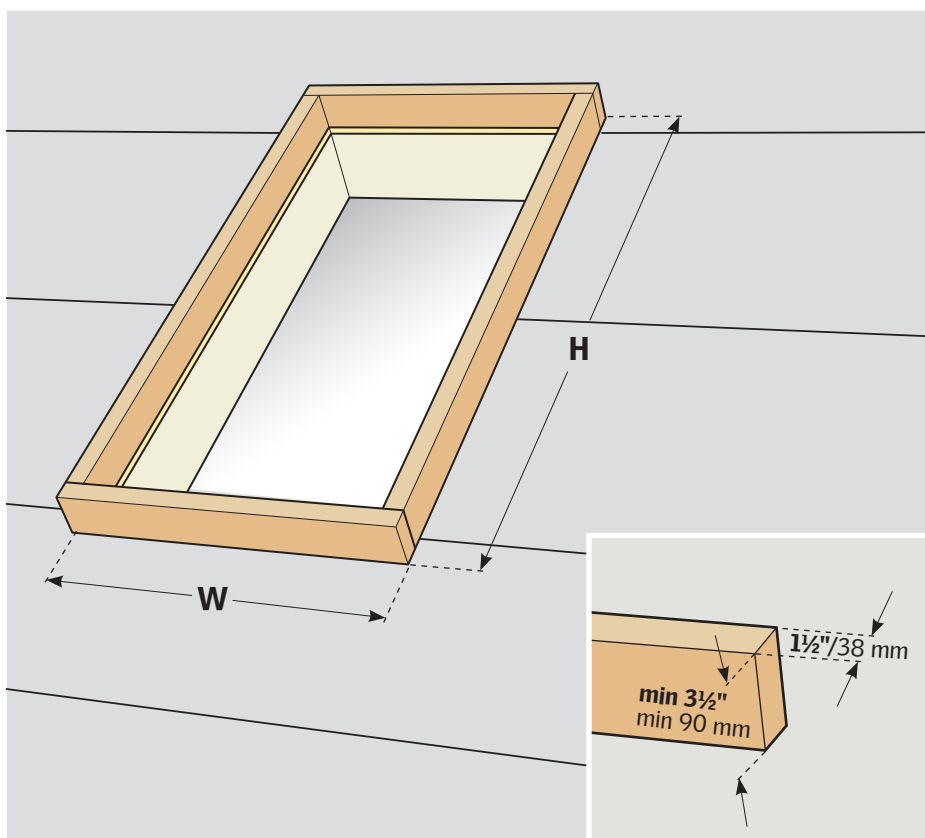
*No hay tapajuntas VELUX para modelo FCM con rotación, tamaño 2270.

FRANÇAIS : Construire un cadre selon les dimensions indiquées au diagramme. Utilisez du bois de 1½"/38 mm de largeur réelle et d'une hauteur minimale de 3½"/90 mm. La hauteur du cadre et les raccordements doivent respecter les exigences de la réglementation du Code du bâtiment et être suffisamment sécuritaires pour recevoir le poids de la structure du puits de lumière.

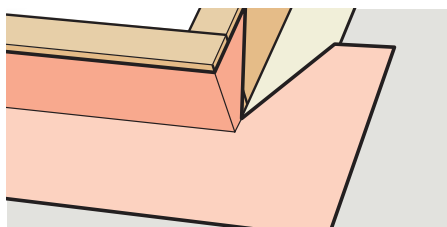
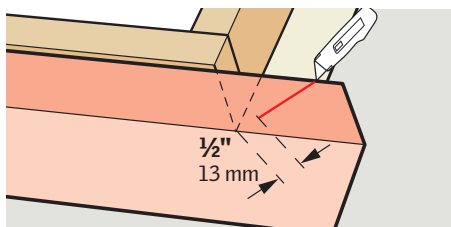
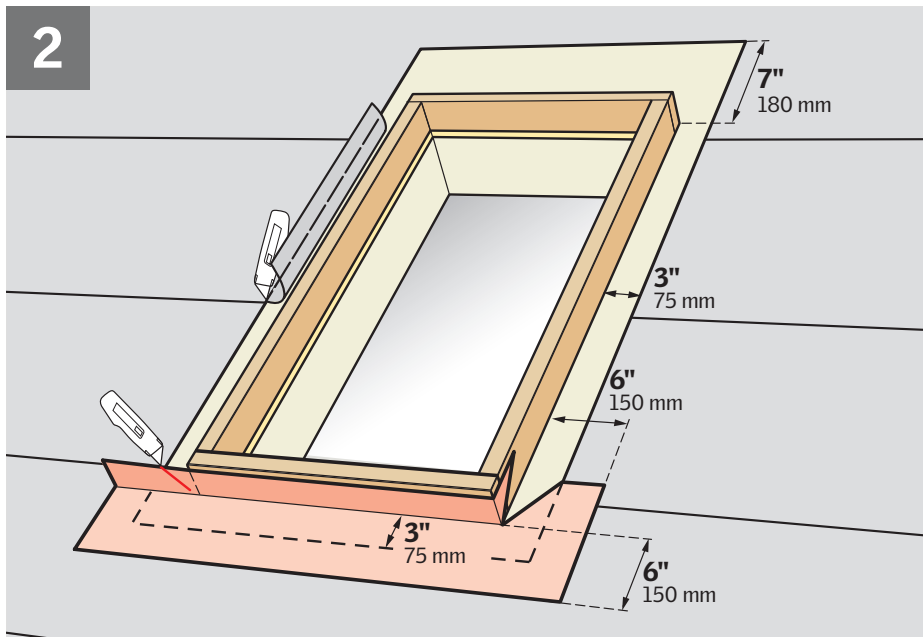
Note : Le puits de lumière FCM peut être tourné de 90° .

*Aucun solin VELUX n'est disponible pour une installation en rotation de 90°, dimension 2270.

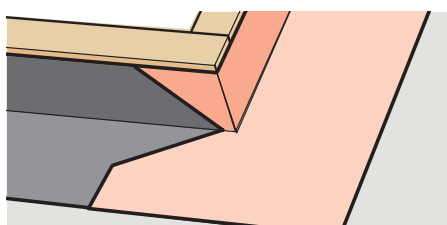
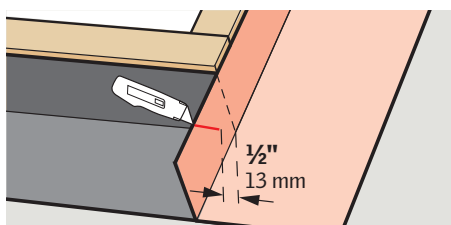
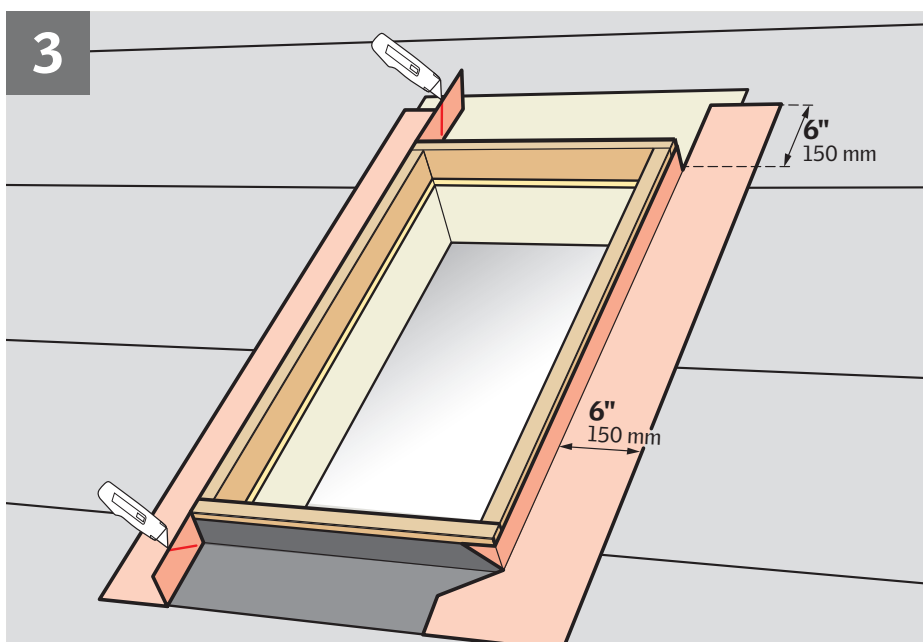
Skylight size Tamaño del tragaluz Taille du puits de lumière	Outside curb dimensions Medida interior del brocal Dimensions hors-tout
1430	17½" x 33½" 445 mm x 851 mm
1446	17½" x 49½" 445 mm x 1257 mm
2222	25½" x 25½" 648 mm x 648 mm
2230	25½" x 33½" 648 mm x 851 mm
2234	25½" x 37½" 648 mm x 952 mm
2246	25½" x 49½" 648 mm x 1257 mm
2270 *	25½" x 73½" 648 mm x 1867 mm
3030	33½" x 33½" 851 mm x 851 mm
3046	33½" x 49½" 851 mm x 1257 mm
3434	37½" x 37½" 952 mm x 952 mm
4646	49½" x 49½" 1257 mm x 1257 mm



2



3



ENGLISH: Skylight curbs should be completely wrapped in self-adhesive membrane to ensure waterproofing. To achieve this waterproofing, use VELUX roofing underlayment ZOX 216 (9" wide). ZOX 216 must be applied before installing the flashing.

First cut back felt 3"/75 mm at bottom and sides of skylight, and 7"/180 mm at top of skylight.

Note: In case of roof pitches below 15° and if snow accumulation on the roof is likely, waterproofing is achieved by installing a continuous self-adhesive waterproof membrane beneath the roofing material and flashing material. Waterproof membrane around the skylight curb must be properly integrated with waterproof membrane on roof decking. Skylight curbs with heights over 3½" may require additional ZOX 216 material for proper installation.

ESPAÑOL: Los brocales del tragaluz deben estar totalmente envueltos en membrana autoadhesiva para garantizar la impermeabilidad. Para asegurar la impermeabilidad, use lámina de soporte VELUX ZOX 216 (9" ancho). La lámina ZOX 216 debe aplicarse antes de instalar el tapajuntas.

Primero corte el fieltro a 3"/75 mm de la parte inferior y lados del tragaluz, y a 7"/180 mm de la parte superior del tragaluz.

Nota: Para los techos con inclinación de menos de 15° y si se acumula nieve sobre el techo, se logra la impermeabilidad instalando una membrana impermeable autoadhesiva continua por debajo del material de cubierta y del material del tapajuntas. La membrana impermeable colocada alrededor del tragaluz debe integrarse correctamente con la membrana impermeable del tablero. Los brocales de tragaluz cuyas alturas superen los 3½" pueden necesitar material ZOX 216 extra para una correcta instalación.

FRANÇAIS : Le cadre destiné à recevoir le puits de lumière doit être enveloppé d'une membrane autocollante à l'épreuve des intempéries pour en assurer son étanchéité. Pour ce faire, utilisez la sous-couche pour toiture VELUX ZOX 216 (9" de largeur). Celle-ci doit être apposée avant l'installation des solins.

Recoupez d'abord le feutre à 3"/75 mm sur la partie inférieure et sur les côtés du puits de lumière et recoupez le feutre à 7"/180 mm sur la partie supérieure.

Note : Dans le cas d'une installation sur inclinaison de toiture inférieure à 15° et si des accumulations de neige sont probables, l'étanchéité sera assurée en installant une membrane autocollante à l'épreuve des intempéries en continu sous le matériel de toiture et sous les solins. La membrane étanche autour du cadre du puits de lumière doit être proprement intégrée à la membrane étanche du tablier de toiture. Les cadres de hauteur supérieurs à 3½" pourraient demander davantage de matériel ZOX 216 pour une installation adéquate.

ENGLISH: Wrap the curb with VELUX roofing underlayment ZOX 216 and create water-shedding laps over felt at bottom and sides of skylight **2**, **3**.

Note: Observe the measurements stated in **2** and **3**.

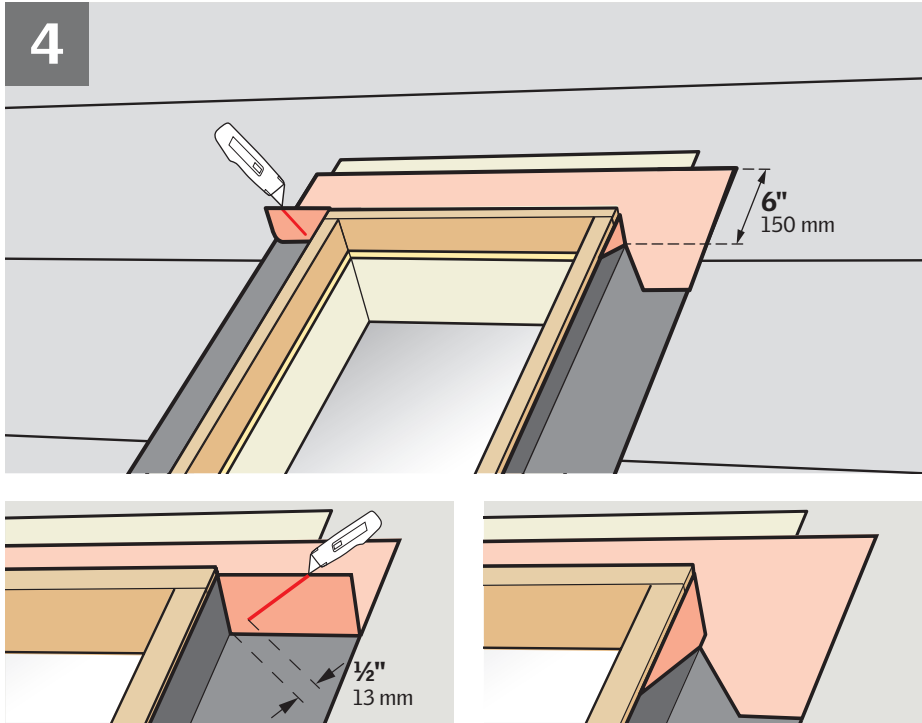
ESPAÑOL: Envuelva el brocal con lámina de soporte VELUX ZOX 216 y cree solapas impermeabilizantes con el fieltro en la parte inferior y lados del tragaluz **2**, **3**.

Nota: Observe las medidas especificadas en **2** y **3**.

FRANÇAIS : Envelopper le cadre avec la sous-couche ZOX 216 de VELUX afin de créer un rebord étanche par-dessus le feutre sur la partie inférieure et sur les côtés du puits de lumière **2**, **3**.

Note : Respectez les dimensions illustrées aux figures **2** et **3**.

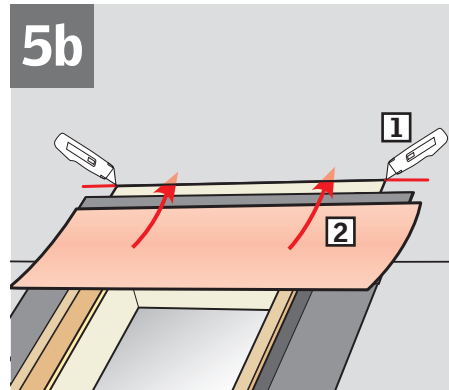
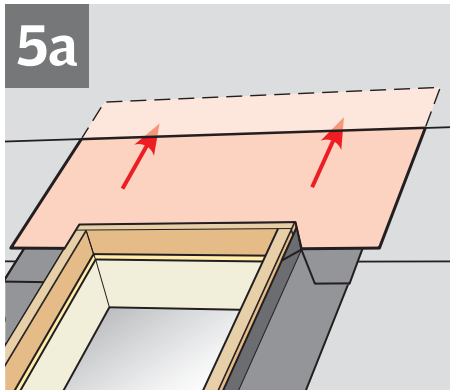
4



ENGLISH: Wrap the curb at top frame of skylight with VELUX roofing underlayment ZOX 216 and create proper water-shedding lap.

ESPAÑOL: Envuelva el brocal por la parte superior del marco con lámina de soporte VELUX ZOX 216 y cree solapas impermeabilizantes adecuadas.

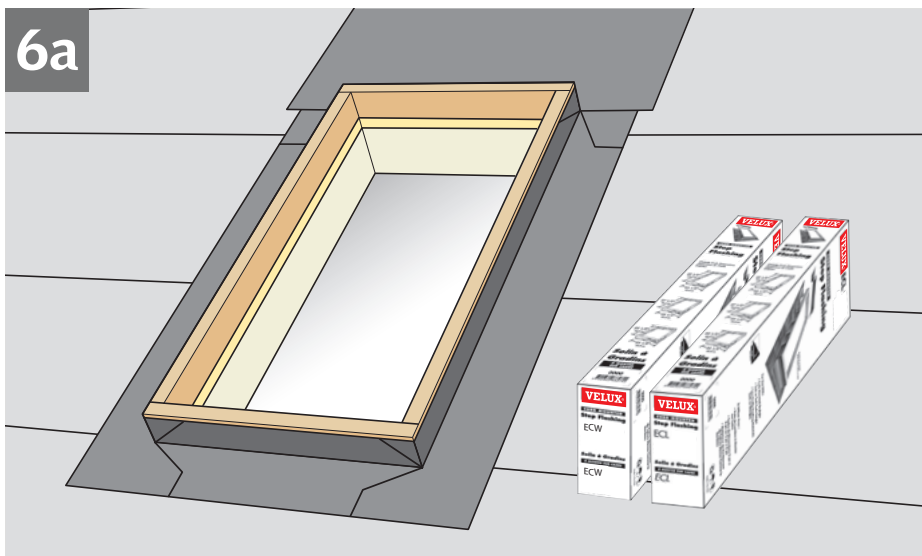
FRANÇAIS : Envelopper le cadre avec la sous-couche ZOX 216 de VELUX sur la partie supérieure afin de créer un rebord étanche.



ENGLISH: To secure the water-shedding, interweave felt with additional standard roofing underlayment as shown in 5a for new construction applications. For retrofit applications, interweave felt with additional standard roofing underlayment as shown in 5b.

ESPAÑOL: Para asegurar la impermeabilización, intercale el fieltro con lámina de soporte estándar adicional como se indica en 5a para las aplicaciones en construcciones nuevas. Para aplicaciones mejoradas, intercale el fieltro con lámina de soporte estándar adicional como se indica en 5b.

FRANÇAIS : Pour assurer l'étanchéité, entrecroisez le feutre avec du matériel de toiture standard comme illustré à la figure 5a dans le cas d'une installation sur nouvelle construction. Pour une installation sur toiture existante, entrecroisez le feutre avec du matériel de toiture additionnel comme illustré à la figure 5b.



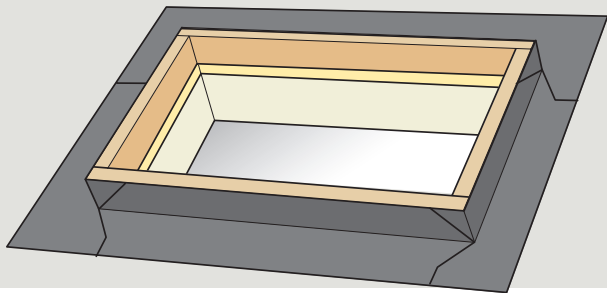
ENGLISH: For thin roofing materials, use flashing ECL. ECL is designed for roof pitches 10°-60° (2:12 - 20:12).

For profiled roofing materials, use flashing ECW. ECW is designed for roof pitches 14°-60° (3:12 - 20:12).

ESPAÑOL: Para materiales de cubierta delgados, use tapajuntas ECL. ECL está diseñado para techos con inclinación de 10°-60° (2:12 - 20:12). Para materiales de cubierta ondulados, use tapajuntas ECW. ECW está diseñado para techos con inclinación de 14°-60° (3:12 - 20:12).

FRANÇAIS : En présence de matériel de toiture mince, utilisez les solins ECL conçus pour inclinaison de toiture de 10°-60° (2:12 - 20:12). Pour matériel de toiture profilé, utilisez les solins ECW conçus pour inclinaison de toiture 14°-60° (3:12 - 20:12).

6b

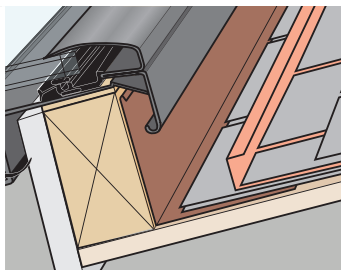
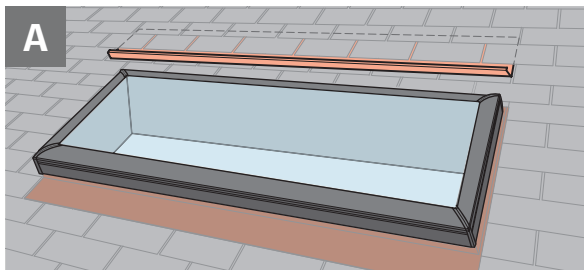


ENGLISH: If custom made flashing is used, consider options **A**, **B** or **C**.

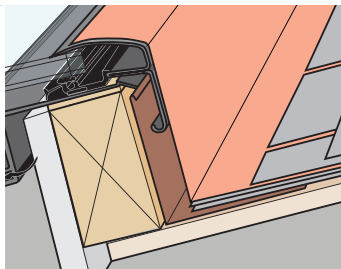
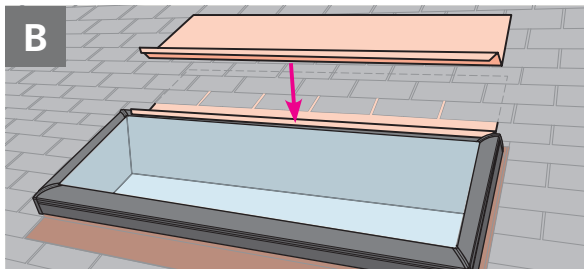
ESPAÑOL: Si se utilizan tapajuntas a medida, considere las opciones **A**, **B** o **C**.

FRANÇAIS: Dans le cas où du solin fabriqué sur mesure est utilisé, considérez les options **A**, **B** ou **C**.

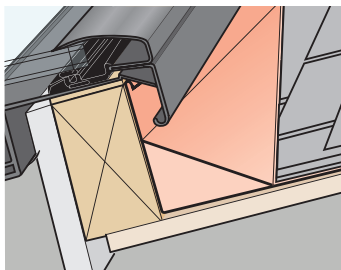
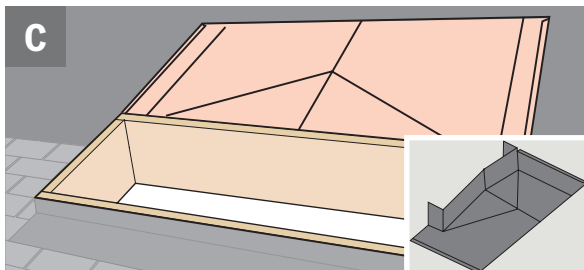
A



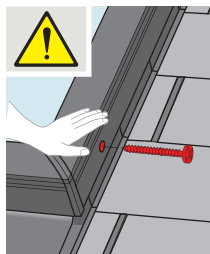
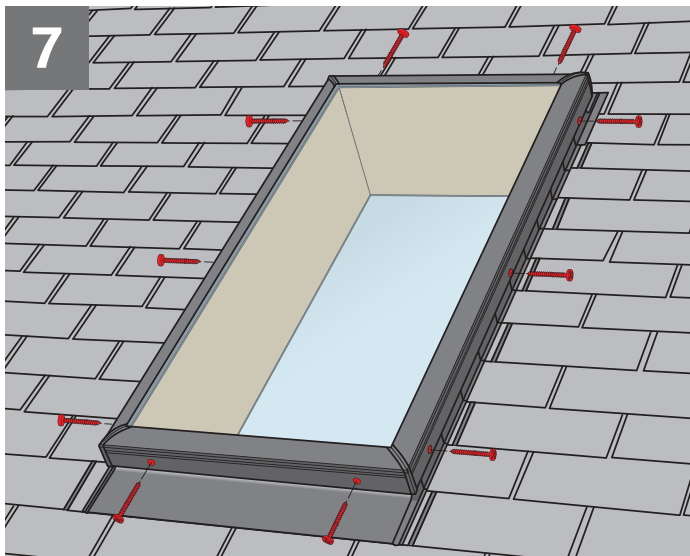
B



C



7



ENGLISH: Center the skylight on top of the curb and secure with #8 1½"/38.2 mm pan head stainless steel screws provided. Screws will penetrate the curb by at least ¾"/19 mm.

⚠ Apply downward pressure to the top of the skylight frame while securing the screws.

ESPAÑOL: Centre el tragaluz sobre el brocal y fíjelo con los tornillos de acero inoxidable de cabeza chanfleada de #8 1½"/38,2 mm suministrados. Los tornillos penetrarán el brocal un mínimo de ¾"/19 mm.

⚠ Aplique presión sobre el armazón del tragaluz mientras inserta los tornillos.

FRANÇAIS: Centrez le puits de lumière sur le cadre et fixez-le avec les vis cylindriques en acier inoxydable #8 1½"/38,2 mm fournies. Les vis seront insérées dans le cadre sur une longueur d'environ ¾"/19 mm.

⚠ Appliquez une pression descendante sur la partie supérieure du puits de lumière lors de l'installation des vis.

ENGLISH:

Home owner information

Please complete and give to home owner.

Product number:
(stamped on product exterior)

Quantity:

Flashing:

Date:

Accessories installed:

Model Size Variant code

Roofing material:

Installation contractor:

Dealer purchased from:

ESPAÑOL:

Información del propietario

Completar y entregar al propietario.

Número de producto:
(impreso en la parte externa del producto)

Cantidad:

Tapajuntas:

Fecha:

Accesorios instalados:

Modelo Tamaño Código de variante

Material de cubierta:

Instalador:

Distribuidor al que se compró el producto:

FRANÇAIS :

Information pour le propriétaire occupant

Veuillez compléter et remettre au propriétaire occupant.

Numéro de produit :
(étampé sur la partie extérieure du produit)

Quantité :

Solin:

Date :

Accessoires installés :

Modèle Dimension Code

Matériel de toiture :

Entrepreneur en installation :

Détaillant :

USA: VELUX America Inc.
1-800-88-VELUX

AUS: VELUX Australia Pty. Ltd
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CDN: VELUX Canada Inc.
1 800 88-VELUX (888-3589)

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