



**VS / VSE / VSS Product Data Sheet**

VSS Starting Production Code: BC 01A

VS / VSE Starting Production Code: AX 08A

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| <b>Description</b>  | General  | <p>The VS / VSE / VSS deck mount, top hinged, venting, "No Leak" skylights: Consisting of the following integrated components: an interior condensation drainage gasket, pre-painted white wooden frame and sash, a VS manual, VSE electric, or VSS solar operator, exterior maintenance-free aluminum cladding and counter flashing, corner keys, and an insulating thermal pane glass unit with two seals, warm edge spacer system, and three coats of LowE3 silver to increase visible light transmittance while reducing solar heat gain. The skylights are mounted to the roof deck by fastening the continuous deck seal mounting system with durable foam seal directly to the roof deck.</p> <p><b>NOTE:</b> The VSE &amp; VSS skylights are operated and controlled by a 2.4 GHz radio frequency remote control and the VS is operated with a ZCT 300 manual control rod or a ZMT 300 battery operated control rod. VSS skylight is charged (from the factory) and ready for use when the unit is removed from the carton and ready for installation. The battery should have enough power to operate the VSS unit at least a minimum 3 or more times during the installation process before recharging is required. For the battery to reach its fully charged capacity the solar panel must receive an average of 24 hours of direct sunlight. This recharging time is subject to variation due to time of year due to sun angle, shading of the PV panel. VSS units placed in shaded areas of the roof or in northern latitudes such as Canada or Seattle in the US, may only receive enough sunlight to recharge the battery enough to operate the skylights 2-3 times daily all year. As with any type rechargeable battery, the number of operations from a fully charged battery will reduce with age. The remote control will display "limited by power supply" if the battery does not have enough power to open the skylight. If skylight is open, the operator will automatically close when battery reaches low voltage and if the operator is stopped during this operation, it will resume closing after 2 minutes. After closing the operator will not open again until the battery voltage has been charged to a level to support operation</p> |
| <b>Installation</b> | Instructions   | Installation Instructions included in every box, and are also available at VELUX country-specific websites, or through VELUX country-specific sales companies.   |
|                     | Orientation  | The skylight has a specific top and bottom and can not be rotated.   |
|                     | Roof Pitch   | 0° - 10° - Install with site-built curb to elevate the pitch of the glass to 14 degrees. Then install a VELUX ECB counter flashing kit to create a water tight joint between the skylight and the site-built curb. Drawings and instructions are available on the VELUX country-specific web site.   |
|                     |  | 14° - 85° - Mount the skylight directly to the roof deck by aligning and securing the continuous deck sealing mounting system directly to the roof deck.   |
|                     | Under 20° - Condensation drips from the interior pane can be expected. |  |

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| <b>Compatibility</b>   | Flashings  | EDL - Single installation with thin roofing material.  |
|  |  | EDW - Single installation with high profile roofing material. NOT available with VSS   |
|  |  | EDM - Single installation with metal roofing panels.   |
|  |  | ECB - Site-built curb counter flashing for low sloped applications.  |
|  |  | EKL/EKX - Side by side and/or over and under combinations with thin roofing material.<br><b>NOTE: VSS units in combi application must be placed as lower units only. VSS units can not be placed above other skylight units in combi applications.</b>         |
|  |  | EKW/EKX - Side by side and/or over and under combinations with high profile roofing material.<br><b>NOTE: VSS units in combi application must be placed as lower units only. VSS units can not be placed above other skylight units in combi applications.</b> |
|  | Interior Accessories   | FSCH Solar room darkening double pleated for VS/ VSS/ VSE  |
|  |  | FSLH Solar light filtering pleated blind for VS/ VSS/ VSE  |
|  |  | PAH manually operated venetian blind for VS  |
|  | Exterior Accessories   | None available   |
| Installation Products  | ZOZ 216 - Adhesive skylight underlayment.                          |  |
|  | VSS is provided with four filler pieces, pre-cut to proper length. |  |
| <b>Materials</b>   | Wood   | Ponderosa pine frame and sash, finished white in the factory; or, as a special order, natural wood with a short term colorless wood preservative (base treatment). For select markets, wood is finished with a clear coat in the factory                       |
|  | Cladding   | Lacquered aluminum, neutral gray color with a Kynar® 500 top finish to prevent fading. 0.65mm thick.   |
| Copper - VS / VSE available with copper - call for lead time.<br><b>NOTE: VSS not available in copper.</b> |  |  |

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| <b>Materials,<br/>Cont'd.</b>              | Glazings  | <b>NOTE: Verify model-specific glazing availability with local VELUX sales companies.</b>   |
|  |   | Type 05 - LoE3 tempered over tempered - Double-pane sealed insulating glass units with warm edge stainless steel spacer, filled with 95% Argon gas and coated with three layers of spectrally selective microscopic silver particles. Overall pane thickness is 17.2mm. (NOT available with VSE or VSS) |
|  |   | Type 04 - LoE3 tempered over laminated with NEAT coated exterior - All the benefits of Type 05 but with a laminated interior heat-strengthened glass lite for safety and better protection from both heat gain and fading. Overall pane thickness is 17.6mm.  |
|  |   | Type 06 - "Impact" - Laminated heat strengthened with tempered LoE3 with NEAT coated exterior. Overall pane thickness is 18.2mm.  |
|  |   | Type 08 - White laminated - Laminated heat strengthened with tempered LoE3. Same as 04 but a white inner layer. Over all pane thickness is 17.6mm.  |
|  |   | Type 10 - "Snow load" - Tempered over laminated tempered LoE3 with Neat coated exterior. Overall pane thickness is 18.2mm.  |
|  | Gaskets   | Patented, engineered rubber gaskets to prevent air infiltration and water penetration.  |
| Deck Sealing Mounting Bracket              | Pre-engineered Deck Seal mounting system with a corrosion-resistant coating. The Deck Seal mounting system is pre-attached all the way around the perimeter of the skylight and has a durable closed cell foam that seals the skylight to the roof deck. Deck seal size: 1 1/4" up the frame and 1 1/4" away from the skylight frame. |   |
| Operator Cover                             | White PVC   |   |
| <b>Operation</b>                           | Sash  | VSE is pre-wired for electric sunscreen accessories and the Pick&Click™ sunscreen mounting brackets are preinstalled.   |
|  |   | In case of power failure the VSE sash operator chain can be disconnected from the sash by removing the plug and turning the provided Allen wrench counter clockwise.  |
|  | Operators   | VSE electrical operator is available in one variant and is used with all skylight markets. Power requirements: 100-240v, 50-60 Hz, 18w. A 2.4 GHz remote control is a standard component with each VSE and VSS.   |
|  |   | VSS solar charged battery operator is available in one variant. Battery pack is a 9 cell Panasonic NiMH 10.8V, 2100 mA. Battery is charged by a 14-cell PV panel.   |
|  |   | VS manual operator by Truth is comprised of a gear driven system that is controlled by a closed loop or an in reach crank handle.   |
|  |   | A robust chain with one point of contact is used to open and close the sash a full 11 inches. One chain size for all venting skylights.   |
|  | Rain Sensor   | Electric operators are equipped with an integral rain sensor that automatically closes the skylight, provided the rain sensor gets wet, when there is power to the skylight.  |
|  | VSE Electric Controls   | KLB 100 - Battery backup  |
|  |   | KLI 110 - Wall mounted keypad   |
|  |   | KLR 200 - Radio frequency remote  |
|  |   | KLF 100 - Home automation integration kit and signal repeater   |
|  | VS Manual Controls  | ZCT 100 - 3' Extension to ZCT 300 and ZMT 300   |
|  |   | ZCT 300 - Manual telescopic rod   |
|  |   | ZZZ 201 - Manual crank handle   |
| ZZZ 202 - Replacement hook                 |   |   |
| ZZZ 203 - Angle adaptor for chain operator |   |   |

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| <b>Installation Products</b>         | Miscellaneous                       | ZOZ 216 - Adhesive skylight underlayment   |                         |             |                      |
|                                      |                                     | VSS skylight is provided with four filler pieces pre-cut to proper length, that allow the drywall groove to be filled for use in retrofit installations  |                         |             |                      |
| <b>Sizes</b>                         | Standard Sizes                      | C01, C04, C06, C08, M02 <sup>1</sup> , M04, M06, M08, M25 <sup>2</sup> , S01, S06  |                         |             |                      |
|                                      |                                     | <sup>1</sup> VS / VSS Only; <sup>2</sup> Not available for US market.  |                         |             |                      |
|                                      | Rough Opening Dimensions            | <b>Size</b>  | <b>Width</b>            | <b>Size</b> | <b>Height</b>        |
|                                      |                                     | C01, C04, C06, C08   | 21"                     | M25         | 21 9/16"             |
|                                      |                                     | M02, M04, M06, M08, M25  | 30 1/16"                | C01, S01    | 26 7/8"              |
|                                      |                                     | S01, S06   | 44 1/4"                 | M02         | 30"                  |
|                                      |                                     |  | C04, M04                | 37 7/8"     |                      |
|                                      |                                     | C06, M06, S06  | 45 3/4"                 |             |                      |
|                                      |                                     | C08, M08   | 54 7/16"                |             |                      |
| <b>Product Data</b>                  | Ventilation Area and Daylight Area  | <b>Size</b>  | <b>Ventilation Area</b> | <b>Size</b> | <b>Daylight Area</b> |
|                                      |                                     | C01  | 2.60 sq. ft.            | C01         | 2.27 sq. ft.         |
|                                      |                                     | C04  | 3.56 sq. ft.            | C04         | 3.50 sq. ft.         |
|                                      |                                     | C06  | 4.14 sq. ft.            | C06         | 4.38 sq. ft.         |
|                                      |                                     | C08  | 4.71 sq. ft.            | C08         | 5.34 sq. ft.         |
|                                      |                                     | M25  | 2.81 sq. ft.            | M25         | 2.55 sq. ft.         |
|                                      |                                     | M02  | 2.80 sq. ft.            | M02         | 4.11 sq. ft.         |
|                                      |                                     | M04  | 4.17 sq. ft.            | M04         | 5.48 sq. ft.         |
|                                      |                                     | M06  | 4.75 sq. ft.            | M06         | 6.86 sq. ft.         |
|                                      |                                     | M08  | 5.32 sq. ft.            | M08         | 8.36 sq. ft.         |
| S01                                  | 4.31 sq. ft.                        | S01  | 5.57 sq. ft.            |             |                      |
| S06                                  | 5.84 sq. ft.                        | S06  | 10.73 sq. ft.           |             |                      |
| <b>Certification</b>                 | General                             | For U.S. market, exceeds International Building Code (IBC), International Residential Code (IRC), and International Energy Conservation Code (IECC). Certification information for specific markets is available from the market-specific sales companies. |                         |             |                      |
|                                      |                                     | Electric is UL Listed. UL File E82681  |                         |             |                      |
|                                      | Air, Water, Structural              | For U.S. market, certified to WDMA/Hallmark standards. Certification information for specific markets is available from the market-specific sales companies.   |                         |             |                      |
|                                      | Thermal                             | For U. S. market, NFRC certified and labeled to exceed Energy Star U-value and Solar Heat Gain (SHGC) requirements for all climate zones.  |                         |             |                      |
| <b>Warranty</b>                      | Frame                               | For 10-years from the date of purchase, VELUX warrants that the skylight will be free from defects in material and workmanship.  |                         |             |                      |
|                                      | Glass                               | For 20-years from the date of purchase, VELUX warrants that the insulated glass pane will not develop a material obstruction of vision due to a failure of the glass seal.   |                         |             |                      |
|                                      | Installation                        | For 10-years from the date of installation, provided the skylight is installed with the three layers of protection, per the manufacturer's instructions.   |                         |             |                      |
|                                      | Manual, Solar and Electric Controls | For 5-years from the date of purchase, VELUX warrants manual, solar and electric controls will be free from defects in material and workmanship.   |                         |             |                      |
| <b>Changes from Earlier Versions</b> | Exterior                            | New product design to match the skylight product family. New neutral gray color, lower profile and smoother look from the exterior.  |                         |             |                      |
|                                      | Interior                            | Factory finished white with a 10 year maintenance free frame and sash. Smaller operator and operator cover. The PVC white plastic operator cover now snaps into without the need for screws.   |                         |             |                      |
|                                      | Operator                            | New and improved solid state operator with integral rain sensor. Very quiet.   |                         |             |                      |

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| <b>Changes from Earlier Versions,</b><br>Cont'd. | Rain Sensor | VSS - Piezo electric sensor that is sensitive to the mechanical impact (vibration) of raindrops. Sensitivity depends heavily on size and speed of the raindrops, as well as angle of impact. |
|  |             | VSE - Rain sensor is located at corner of side frame and bottom frame, between sash and frame.   |
| <b>Type Sign</b>                                 | Example     | VSE C04 2004 AX 08A  |
|  | Location    | On the top left corner of the wooden frame if viewing from the inside.   |