Inspections Division
Date: 05/05/14

VELUX®
Skylights

Residential skylight

Tested performance information

Inspections Division
Date: 05/05/14

VSE/VSS Tested Performance Information

Glass	04	06**	08	10	99 94
Air infiltration/exfiltration * [max. @ 75 Pa (1.57 lbs/ft²) differential pressure]					
l/s/m²	0.2	0.4	0.2	0.3	0.2
cfm/ft²	0.03	0.07	0.03	0.06	0.03
Water resistance @ 3.4 L/m²/min (5 Usgal/ft²/hr) * [max. tested differential pressure with no leakage]					
Pascals	720	720	720	720	720
lbs/ft²	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 on the last page.					
U-Factor (Btu/hr·ft²·°F)	0.42	0.40	0.42	0.41	0.37
SHGC	0.23	0.23	0.22	0.23	0.23
VT	0.53	0.52	0.39	0.52	0.52
UV protection, %					
(300-380 nm)	99.9	99.9	99.9	99.9	99.9
Fading protection, % (Kroelmann damage function)					
(300-500 nm)	83.1	84.6	88.4	83.2	85.1
Structural Performance [Performance Grade or DP]					
Tested Size	**Uplift (lbs/ft²)**				
S06	65	65	65	80	65
M08	105	65	105	85	105
C06	n.r.	n.r.	n.r.	90	n.r.
Tested Size	**Download (lbs/ft²)**				
S06	370	300	370	860	370
M08	440	360	440	1090	440
C06	n.r.	n.r.	n.r.	1200	n.r.

* Tested in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-11 (**NAFS 2011**)
** 06 variant is tested and WDMA Hallmark certified for Wind-Borne debris impact, in accordance with **ASTM E 1886** and **ASTM E 1996**.
Rated for **Wind Zone 3, Missile Level C, Cycle Pressure +50/-50**
Structural performance ratings also apply to sizes smaller than the Tested Size
VSE and **VSS** skylights are WDMA Hallmark certified: **Products 426-H-670,-678,-679,-682**
(not applicable to copper-clad variants)

04 glass: Tempered over laminated HS (0.030" interlayer)
05 glass: Tempered over tempered
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)
99 94 glass: Same as **04**, with i89 coating on interior surface

Inspections Division
Date: 05/05/14

Table of Casement and Transom Window Sizes

Scale 1/8" (3) = 1'-0" (305) – 1:96

Window Dimension	1'-5" (432)	1'-8 1/2" (521)	2'-0 1/8" (613)	2'-4 3/8" (721)	2'-7 1/2" (800)	2'-11 15/16" (913)	2'-9 3/4" (857)	3'-4 3/4" (1035)	4'-0" (1219)	4'-8 1/2" (1435)
Minimum Rough Opening	1'-5 1/2" (445)	1'-9" (533)	2'-0 5/8" (625)	2'-4 7/8" (733)	2'-8" (813)	3'-0 1/2" (927)	2'-10 1/4" (870)	3'-5 1/4" (1048)	4'-0 1/2" (1232)	4'-9" (1448)
Unobstructed Glass (casement, single sash only)	12 5/8" (321)	16 1/8" (410)	19 3/4" (502)	24" (610)	27 1/8" (689)	31 9/16" (802)	12 5/8" (321)	16 1/8" (410)	19 3/4" (502)	24" (610)
Unobstructed Glass (transom, single sash only)	12 3/16" (310)	15 11/16" (398)	19 5/16" (491)	23 9/16" (599)	26 11/16" (678)	31 1/8" (791)	28 15/16" (735)	35 15/16" (913)	43 3/16" (1097)	51 11/16" (1313)

- "Window Dimension" always refers to outside frame to frame dimension.
- **"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.**
- Dimensions in parentheses are in millimeters.
- ◊ Meet or exceed clear opening area of 5.7 sq.ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610) with appropriate hardware, straight or split arm operator, specified.
- *Meet clear opening width of 20" (508) using sill hinge control bracket with split arm operator specified (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) with straight arm operator specified.
- **Available with straight arm operators only.

CITY OF PORTLAND, MAINE — RESURGAM
Inspections Division
Date: 05/05/14

5'-2 3/4" (1594)	5'-11 5/8" (1819)	5'-1" (1549)	5'-11 7/8" (1826)	7'-0 5/8" (2149)
5'-3 1/4" (1607)	6'-0 1/8" (1832)	5'-1 1/2" (1562)	6'-0 3/8" (1838)	7'-1 1/8" (2162)
27 1/8" (689)	31 9/16" (802)	16 1/8" (410)	19 3/4" (502)	24" (610)
57 15/16" (1472)	66 13/16" (1697)	56 3/16" (1427)	67 1/16" (1703)	79 13/16" (2027)

Custom-size windows are available in 1/8" (3) increments. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. **Single windows only.**

Choose left, right or stationary as viewed from the exterior. In addition to venting shown in table, other standard configurations are available for single, double and triple windows. Transom (**CTR**) windows are stationary only.

Double and triple windows shown have one continuous outer frame.

Transom (CTR) window can be used over casement or awning windows and may be rotated 90° and used as a sidelight with casement, awning or picture windows.

- "Window Dimension" always refers to outside frame to frame dimension.
- **"Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.**
- Dimensions in parentheses are in millimeters.

◊ Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m², clear opening width of 20" (508) and clear opening height of 24" (610) with appropriate hardware, straight or split arm operator, specified.
*Meet clear opening width of 20" (508) using sill hinge control bracket with split arm operator specified (bracket can be pivoted for cleaning position) and meet clear opening width of 22" (559) with straight arm operator specified.
**Available with straight arm operators only.

Andersen WINDOWS • DOORS CASEMENT/AWNING WINDOWS

400 SERI

Inspections Division

Date: 05/05/14

Custom/Replacement Window Size Range

Available in 1/8" (3) increments between minimum and maximum widths and heights. Windows can also be custom sized to match standard sizes ending in a sixteenth of an inch. Some restrictions apply, contact your Andersen supplier.

Custom sizing is available for single windows only. To achieve custom-size double or triple combinations, join custom-size single windows. For minimum rough opening dimensions for joined windows see specific joining instruction guides.

Measurement guide for custom sized windows can be found at andersenwindows.com/measure.

Minimum and maximum widths and heights.

Casement Stationary/Venting
(w) 1'-5" (432) to 2'-11 15/16" (913) X **(h)** 2'-0 1/8" (613) to 5'-11 7/8" (1826)

Casement/Awning Transom (CTR)
(w) 1'-5" (432) to 7'-0 5/8" (2150) X **(h)** 1'-0" (305)

Custom/Replacement Casement Window Opening Specifications

Clear Opg.	Width = window width – 5.81" (148) =(window width – 9.66" (245)) X 1.07 = window width – 9.70" (246) Height = window height – 4.43" (113) = window height – 4.85" (123)	*Width ≥ 24 1/8" (613) with straight arm operator* *Width ≥ 28 3/8" (721) with straight arm operator & control bracket* *Width ≥ 17" (432) with split arm operator* *Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800)* *All other window heights*	**Min. R.O.**	Width = window width + 1/2" (13) Height = window height + 1/2" (13)
Vent Opg.	Width = window width – 5.81" (148) = window width – 6.10" (155) Height = window height – 4.43" (113) = window height – 4.85" (123)	*Width ≥ 24 1/8" (613) with straight arm operator* *Width ≥ 17" (432) with split arm operator* *Height ≥ 40 13/16" (1037) and < 48" (1219); Width ≥ 28 3/8" (721) and < 31 1/2" (800)* *All other window heights*	**Unobstr.**	Width = window width – 4.40" (112) Height = window height – 4.95" (126)

- Dimensions in parentheses are in millimeters.
- Refer to andersenwindows.com/measure for detailed instructions on how to properly measure for custom-size windows.