



# Product Evaluation

SK12 | 0616

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** SK-12

**Effective Date:** May 1, 2015

**Revised:** June 1, 2016

**Re-evaluation Date:** November 2017

**Product Name:** VELUX® SUN TUNNEL™ Residential Skylights, Tubular Daylighting Devices, Non-Impact Resistant

**Manufacturer:** VELUX America, Inc.  
450 Old Brickyard Road  
P.O. Box 5001  
Greenwood, SC 29648-5001  
(864) 941-4828

### General Description:

**Note:** In the skylight identification numbers shown in the General Description table below, (\*\*\*) correlates with the appropriate skylight dimensions in the series

System	Description	Label Rating	Design Pressure Rating
1	Model TMR *** 0000; High-profile, pitched steel flashing, Rigid tunnel, 10" or 14" diameter; Dual-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
2	Model TMR *** 0000E0; High-profile, pitched steel flashing, Rigid tunnel, 10" or 14" diameter; Quadruple-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf

**General Description (Continued):**

**Note:** In the skylight identification numbers shown in the General Description table below, (\*\*\*) correlates with the appropriate skylight dimensions in the series

System	Description	Label Rating	Design Pressure Rating
3	Model TMF 014 0000; High-profile, pitched steel flashing, Flexible tunnel, 14" diameter; Dual-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
4	Model TMF 014 0000E0; High-profile, pitched steel flashing, Flexible tunnel, 14" diameter; Quadruple-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
5	Model TGR *** 0000; Low-profile, parallel steel flashing, Rigid tunnel, 10" or 14" diameter; Dual-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
6	Model TGR *** 0000E0; Low-profile, parallel steel flashing, Rigid tunnel, 10" or 14" diameter; Quadruple-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
7	Model TGF *** 0000; Low-profile, parallel steel flashing, Flexible tunnel, 14" or 22" diameter; Dual-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
8	Model TGF *** 0000E0; Low-profile, parallel steel flashing, Flexible tunnel, 14" or 22" diameter; Quadruple-glazed diffuser	Class CW-PG95 (DP = +200/-95 psf)	+200 / -95 psf
9	Model TCR *** 0000US; High-profile, curb-mount steel flashing, Rigid tunnel, 14" diameter; Dual-glazed diffuser	Class CW-PG125 (DP = +200/-125 psf)	+200 / -125 psf
10	Model TCR *** 0000USE0; High-profile, curb-mount steel flashing, Rigid tunnel, 14" diameter; Quadruple -glazed diffuser	Class CW-PG125 (DP = +200/-125 psf)	+200 / -125 psf

**Component Dimensions:**

System	Component	Component Dimensions
1-10	Dome Size (Maximum)	25-5/8"
	Flashing Neck Opening Size (Maximum)	24-3/8"
	Neck Height (Maximum)	4-5/8"
	Deck Rough Opening Size (Maximum)	23-1/2"

**Product Identification (Certification Agency Label on Skylight):**

System		
1-8	Certification Agency	WDMA
	Manufacturer's Name or Code Name	VELUX® SUN TUNNEL™
	Product Name	TGF, TGR, TMF, and TMR
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-11 AAMA/WDMA/CSA 101/I.S.2/A440-08
9-10	Certification Agency	WDMA
	Manufacturer's Name or Code Name	VELUX® SUN TUNNEL™
	Product Name	TCR 014
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-11 AAMA/WDMA/CSA 101/I.S.2/A440-08

**Product Identification (Manufacturer):** A permanent identification label is affixed to the product. The permanent label includes the manufacturer's name and the product number.

**Impact Resistance:**

System	Impact Resistant	Requirement
1-10	No	Provide an impact protective system when installing the product in areas that require windborne debris protection.

**Limitations:**

System	Model ID	Tunnel Diameter
1	TMR 010 0000 and TMR 014 0000	10" and 14"
2	TMR 010 0000E0 and TMR 014 0000E0	10" and 14"
3	TMF 014 0000	14"
4	TMF 014 0000E0	14"
5	TGR 010 0000 and TGR 014 0000	10" and 14"
6	TGR 010 0000E0 and TGR 014 0000E0	10" and 14"
7	TGF 014 0000 and TGF 022 0000	14" and 22"
8	TGF 014 0000E0 and TGF 022 0000E0	14" and 22"
9	TCR 014 0000US	14"
10	TCR 014 0000USE0	14"

**Roof Slope:**

**Systems 1-8:** The skylights may be installed on roofs with slopes between 14 degrees and 60 degrees.

**Systems 9-10:** Install the skylights on roofs with slopes between 0 degrees and 60 degrees.

**Acceptance of Smaller Assemblies:** Identically built assemblies with dome and tunnel dimensions equal to or smaller than those specified in this evaluation report are acceptable within the limitations specified in this evaluation report.

**Installation:**

**General:** Assemble and install TDD components in accordance with the manufacturer's installation instructions and this evaluation report. The manufacturer ship detailed installation instructions in the cartons, and may have additional drawings available.

**The following installation requirements apply to all tubular daylighting devices:**

1. Follow manufacturer's installation instructions unless otherwise specified by this product evaluation report. The nails, clips, screws, tape, etc., required to assemble and secure the unit to the roof or curb are included in the SUN TUNNEL carton.
2. Cut roof rafters as necessary to facilitate skylight installation. In such cases, a TDI appointed engineer as a qualified inspector must design and certify the roof framing modifications as well as the product installation. Install additional jamb and header bracing as necessary to provide support directly beneath all pre-punched SUN TUNNEL fastener locations in the flashing, or the curb for Systems 9 and 10.
3. The roof-framing members must be minimum Spruce-Pine-Fir dimension lumber ( $SG \geq 0.42$ ).
4. Secure systems 1 through 8 to the roof decking with fasteners driven through the roof decking and into the roof framing wherever possible.

**Installation (Systems 1 thru 8):** The roof deck must be minimum nominal 1/2" plywood. Secure the SUN TUNNEL flashing to the roof deck with ten (10) 1-1/2" long pan head stainless steel screws. Install the fasteners through the pre-punched holes around the outer perimeter of the flashing.

**Installation (Systems 9 and 10):** The roof framing must be minimum Spruce-Pine-Fir dimension lumber. The roof deck must be minimum nominal 1/2" plywood. A wood curb must be constructed on site prior to installing the TCR flashing. The wood curb assembly is not included with the SUN TUNNEL kits. Acquire and install the wood curb components and the roof framing fasteners separately. The wood curb must, at a minimum, consist of 2 x 4 SPF dimension lumber ( $SPG = 0.42$ ). Toenail the curb to the roof framing (minimum 2 x SPF dimension lumber) with minimum 12d galvanized common nails (3-1/4" long, 0.162" nominal smooth shank diameter). Space the fasteners approximately 3" from each corner and approximately 5" on center along the perimeter of the wood curb. Drive the nails (toenailed) through the roof deck and into the roof-framing members below (a minimum of 1 1/4" penetration).

Secure the SUN TUNNEL flashing to the wood curb with minimum No. 8 x 1 1/2" pan head stainless steel screws, two per side, approximately 3" from each end, through pre-punched holes.

**Note:** Keep the manufacturer's installation instructions on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.