Marvin Awaken Stationary Skylight

Note: Turn on Hidden text to review Specifier Notes.

NOTES TO SPECIFIER: Select product options per 01 62 00

1. **GENERAL**
	1. SECTION INCLUDES:
		1. Marvin Awaken Skylight window complete with glazing, and standard or specified anchors, trim and attachments.
	2. RELATED SECTIONS
		1. 01 33 00: Submittal Procedures: Shop Drawings, Product Data and Samples
		2. 01 33 26: Source Quality Control Reporting
		3. 01 62 00: Product Options
		4. 01 65 00: Product Delivery Requirements
		5. 01 66 00: Storage and Handling Requirements
		6. 01 71 00: Examination and Preparation
		7. 01 73 19: Installation
		8. 01 74 23: Final Cleaning
		9. 01 76 00: Protecting Installed Construction
		10. 07 92 00: Joint Sealants
	3. REFERENCES
		1. ASTM International (ASTM):
			1. **C1036**: Standard Specification for Flat Glass
			2. **E2190**: Standard Specification for Insulating Glass Unit Performance and Evaluation
			3. **E283**: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
			4. **E330**: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
			5. E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtian Walls by Cyclic Static Air Pressure Difference
		2. American Architectural Manufacturer’s Association/Window & Door Manufacturer’s Association/Canadian Standards Association (AAMA/WDMA/CSA):
			1. AAMA/WDMA/CSA 101/I.S.2/A440: North American Fenestration Standard (NAFS)/Specification for Windows, Doors and Skylights
		3. WDMA I.S.4: Industry Specification for Preservative Treatment for Millwork
		4. Window & Door Manufacturer’s Assocation (WDMA): WDMA Hallmark Certification Program
		5. Insulating Glass Manufacturer’s Alliance/Insulating Glass Certification Council (IGMA/IGCC)
		6. American Architectural Manufacturer’s Association (AAMA): 2605: Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix)
		7. National Fenestration Rating Council (NFRC):
			1. 101: Procedure for Determining Thermophysical Properties of Materials for Use in NFRC-Approved Software
			2. 200: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visibile Transmittance at Normal Incidence
		8. Window Covering Manufacturer’s Association
			1. A100.1: Standard for safety of corded window covering products
	4. SUBMITTALS
		1. Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.
		2. Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).
		3. Samples:
			1. Submit corner section under provision of CSI MasterFormat Section 01 33 00.
			2. Specified performance and design requirements under provision of CSI MasterFormat Section 01 33 00.
	5. QUALITY ASSURANCE
		1. Requirements: Consult local code for International Building Code (IBC) and International Residential Code (IRC) adoption year and pertinent revisions
		2. Performance Grade as certified by AAMA/WDMA/CSA 101/I.S.2/A400
			1. Venting
				1. PG30 NOTE TO SPECIFIER: Glass pane thickness varies per size and performance level

CN Sizes 4836, 4848 tested to 1.57 psf Air, 4.60 psf Water, +60/-45 psf Structural

* + - * 1. PG40

CN Sizes 1636, 1648, 1660, 1690, 2436, 2448, 2460, 2490, 3236, 3248, 3260 tested to 1.57 psf Air, 6.00 psf Water, +80/-60 psf Structural

* + - 1. Fixed
				1. PG50 NOTE TO SPECIFIER: Glass pane thickness varies per size and performance level

Maximum CN Size 4890 tested to tested to 1.57 psf Air, 7.50 psf Water, +100/-75 psf Structural

* + 1. NFRC Certified U-Value:
			1. Gateway tested frame size of 47” (1194 mm) by 47 (1194 mm) NOTE TO SPECIFIER: Refer to the Certified Performance Directory at [www.NFRC.org](http://www.nfrc.org/) for U-Value ratings with various glass typesNOTE TO SPECIFIER: Refer to the Certified Performance Directory at [www.NFRC.org](http://www.nfrc.org/) for U-Value ratings with various glass types
	1. DELIVERY, STORAGE, AND HANDLING
		1. Comply delivery, storage and handling per Section 01 65 00
		2. Deliver in original packaging and protect from weather
		3. Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of Section 01 66 00
	2. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within the limits recommended by the manufacture for optimum results. Do not install products under environmental conditions outside of manufacture’s recommended limits.
	3. WARRANTY

# Complete and current warranty information is available at [www.marvin.com/warranty](http://www.marvin.com/warranty). The following summary is subject to the terms, condition, limitations and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:

* + 1. Glass Components:
			1. Glass warranties apply to factory-installed glass or Marvin supplied glass installed by Marvin-authorized service personnel. Standard insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years. All other glass and glass features are provided with the same warranties, limitations, and exclusions Marvin receives from its supplier; contact Marvin for further details.
		2. Exterior Finish:
			1. Marvin’s standard exterior composite cladding finish is warranted against manufacturing defects per AAMA 624, Section 5, for ten (10) years.
		3. Interior Finish:
			1. Factory applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.
		4. Non-Glass Components:
			1. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years. Stainless steel hardware and hardware with PVD finishes installed in coastal environments are warranted to be free from manufacturing defects that result in abnormal deterioration of the finish for a period of ten (10) years. Other hardware finishes are not warranted in coastal environments. Electric operators and other motorized accessories are provided with the same warranties, limitations, and exclusions Marvin receives from its supplier; contact Marvin for further details.
		5. Flashing Deflector:
		6. Electronics:
1. **PRODUCTS**
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Marvin, West Fargo, North Dakota, [www.marvin.com](http://www.marvin.com/)
	2. FABRICATION
		1. Frame:
			1. Fiberglass reinforced pultrusion
				1. Wood backers inserted into frame
			2. Dimensions: 2.843” (XX) wide x 4.995” (XX) tallNOTES TO SPECIFIER
		2. Sash:
			1. Fiberglass reinforced pultrusion
				1. Wood backers inserted into frame
			2. Dimensions: 2.180” (XX) wide x 3.465” (XX) tall

Glazing General:

* Specifier: Select the applicable glazing type and configuration, refer to the Architectural Detail Manual or Marvin Representative for additional information.

Glazing Pane Thickness:

* Glass types are dependent thickness and availability. Consult ADM or OMS for availability
* Triple-Pane IG pane thicknesses are limited to 4.7mm and below
* Low ELR are limited to pane thicknesses of 5.7mm and below
* Low ERS with other Low E coatings are limited to pane thicknesses of 5.7mm and below
* Obscure (Pattern 62) with Low E are limited to pane thicknesses of 4.7mm and below
* Frost with Low E are limited to pane thicknesses of 5.7 and 3.9 mm
* Tints are limited to pane thicknesses of 5.7mm
* Capillary tubes are required in air spaces for high elevation

Glazing Spacer:

* Stainless Steel spacers on all shapes with angles 45 degrees and larger
* Aluminum spacers on all shapes with angles less than 45 degrees
	+ 1. Glazing:
			1. Select quality complying with ASTM C1036. Insulating glass IGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
			2. [Dual-Pane] insulating tempered outboard lite, laminated annealed interior lite glass
				1. Insulating glass per ASTM E2190
				2. Glass thickness shall be sized to rated design pressure per ASTM E1300
				3. Safety glazing per CPSC 16 CFR 1201, SGCC, & CAN/CGSB
			3. Configurations:
				1. Dual-Pane insulating glass:

[13/16” (21 mm)] Overall thickness

Surface Treatment:

Low E Coating: [Low E3]

Gas Fill:

[Air with capillary tubes] [Argon]

* + - 1. Perimeter spacer material:
				1. [Black painted Stainless Steel]
				2. Seal: Black PIB with silicone sealant
		1. Hardware:
			1. 4-bar linkage hinges, creating a parallel projection operation [Venting Only]
				1. Material: Stainless Steel
			2. Two (2) chain-drive motors (one per jamb) powerd by 24VDC [Venting Only]
				1. Chain-drive motors cannot be back driven, providing operational locking
				2. Manual operation is not available
			3. Electronic Control Board powered by 24VDC (via onboard 120VAC to 24VDC power supply) operates all unit features
				1. Communication: 2.4 GHz WiFi, Bluetooth
				2. Back-up power provides power to close unit once (if open) upon AC power loss [Venting Only]
		2. Screen:
			1. Pleated screen providing continuous hoop between sash and frame
				1. Material:
				2. Dimensions: 14mm pleats, expandable to 5”
		3. Finish:
			1. Frame:
				1. Fiberglass reinforced pultrusion with an acrylic urethane coating designed to meet AAMA [624] requirements
				2. Color [Interior]: [White]
			2. Sash:
				1. Fiberglass reinforced pultrusion with an acrylic urethane coating designed to meet AAMA [624] requirements
				2. Colors:

Interior: [White]

Exterior: [Ebony] [Gunmetal]

* + - 1. Interior Frame Covers:
				1. Highly Loaded Polymer extrusion designed to meet AAMA [XXX] requirements
			2. Exterior Flashing Covers:
				1. Painted extruded aluminum covers with 70% PVDF top coat applied that meets AAMA 2603 requirements in [Ebony] [Gunmetal]
			3. Mounting Flange:
				1. Painted extruded aluminum covers with 70% PVDF top coat applied that meets AAMA 2603 requirements in [Black]
	1. FLASHING
		1. Step Flashing:
	2. ACCESSORIES
		1. LED Lighting:
			1. LED lighting system installed in head jamb and sill
				1. Color: Warm White, Cool White. 2200 K – 5300 K
				2. Control: Bluetooth Low Energy remote, digital app
				3. Power: 24VDC, powered through the Awaken onboard controller and power supply
		2. Shade:
			1. Roller shade installed onto the interior of the frame
				1. Color: [White]
				2. Options: Blackout, Sheen
				3. Control: Bluetooth Low Energy remote, digital app
				4. Power: 24VDC, powered through the Awaken onboard controller and power supply
		3. Remote Control Switch:
			1. Multi-button wireless (BLE) remote control switch, wall mounting available using mounting bracket
				1. Color: [White]
				2. Control: one (1) remote will control one (1) Awaken feature (i.e. lighting, venting, shade).
				3. Power: CR2450 3V coin cell battery

1. **EXECUTION**
	1. EXAMINATION AND PREPARATION
		1. Verification of Condition:
			1. Before installation, verify openings are plumb, square and of proper dimensions as required in Section 01 71 00
			2. Report frame defects or unsuitable conditions to the General contractor before proceeding
		2. Acceptance of Condition:
			1. Beginning of installation confirms acceptance of existing conditions
	2. INSTALLATION
		1. Assemble and install window unit(s) per manufacturer’s instruction and reviewed shop drawing
		2. Installation to comply with Section 01 73 19
		3. Install sealant and related flashing at perimeter of unit or in accordance with Section 07 92 00. Do not use expansive foam sealant.
		4. Install accessory items as required
	3. FIELD QUALITY CONTROL
		1. Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm2 (~4.87 cfm/ft2)
		2. Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 503 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using “Procedure B” – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied
	4. CLEANING AND PROTECTION
		1. Protect installed construction as required in Section 01 76 00
		2. Remove visible labels and adhesive residue per manufacturer’s instruction
		3. Leave windows and glass in a clean condition, final cleaning as required in Section 01 74 23
		4. Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage

END OF SECTION