# Part 1 General

# Section Includes

## Ultimate Wood Casement/Awning Crank Out: Operators, Stationary and Picture units complete with hardware, glazing, weather strip, insect screen, removable screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim and attachments

## Ultimate Wood Casement/Awning Crank Out Bow and Bay units: Operators, Stationary and Picture units complete with hardware, glazing, weather strip, insect screen, removable screen, grilles-between-the-glass, simulated divided lite, jamb extension, head/seat board and standard or specified anchors, trim and attachments

## Ultimate Wood Casement Polygon (Stationary Units only) units complete with glazing, weather strip, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim and attachments

# Construction Specification Institute (CSI) MasterFormat Numbers and Titles

## Section 01 33 00 – Submittal Procedures; Shop Drawings, Product Data and Samples

## Section 01 62 00 – Product Options

## Section 01 65 00 – Product Delivery

## Section 01 66 00 – Storage and Handling Requirements

## Section 01 71 00 – Examination and Preparation

## Section 01 73 00 - Execution

## Section 01 74 00 – Cleaning and Waste Management

## Section 01 76 00 – Protecting Installed Construction

## Section 06 22 00 – Millwork: Wood trim other than furnished by window manufacturer

## Section 07 92 00 – Joint Sealant: Sill sealant and perimeter caulking

## Section 09 90 00 – Painting and Coasting: Paint and stain other than factory-applied finish

# References

## American Society for Testing Materials (ASTM):

### E283: Standard Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors

### E330: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Door by Uniform Static Air Pressure Difference

### E547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential

### E2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights

### E2190: Specification for Sealed Insulated Glass Units

### C1036: Standard Specification for Flat Glass

### F2090: Standard Specifications for Windows Fall Prevention Devices with Emergency Escape (egress) Release Mechanisms

## American Architectural Manufacturer’s Association/Window and Door Manufacturer’s Association (AAMA/WDMA/CSA):

### AAMA/WDMA/CSA 101/I.S.2/A440-05, Standard/Specification for window, doors and unit skylights

### AAMA/WDMA/CSA 101/I.S.2/A440-08, North American Fenestration, Standard/Specification for window, doors and skylights

### AAMA/WDMA/CSA 101/I.S.2/A440-11,NAFS 2011 – North American Fenestration, Standard/Specification for windows, doors and skylights

## WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork

## Window and Door Manufacturer’s Association (WDMA): 101/I.S.2 WDMA Hallmark Certification Program

## Sealed Insulating Glass Manufacturer’s Association/Insulating Glass Certification Council (SIGMA/IGCC)

## American Architectural Manufacturer’s Association (AAMA): 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels

## National Fenestration Rating Council (NFRC):

### 101: Procedure for Determining Fenestration Product Thermal Properties

### 200: Procedure for Determining Solar Heat Grain Coefficients at Normal Incidence

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.

## 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).

## Samples:

### Submit corner section under provision of CSI MasterFormat Section 01 33 00.

### Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

# Quality Assurance

## Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:

### Egress, emergency escape and rescue requirements

### Basement window requirements

### Windows fall prevention and/or window opening control device requirements

# Delivery

## Comply with provisions of CSI MasterFormat Section 01 65 00

## Deliver in original packaging and protect from weather

# Storage and Handling

## Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation

## Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01 66 00

# Warranty

# **Complete and current warranty information is available at 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:**

## Clear 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 from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.

## 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.

## Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

# Part 2 Products

# Manufactured Units

## Description: Factory-assembled Ultimate Wood Casement/Awning, operating exterior swing window on Casement and a top pivoting awning (stationary or picture units) as manufactured by Marvin Windows and Doors, Warroad, Minnesota.

## Description: Factory-assembled Ultimate Wood Casement Polygon (stationary only) as manufactured by Marvin Windows and Doors, Warroad, Minnesota.

## Description: Factory-assembled Ultimate Wood Casement Bow Assemblies as manufactured by Marvin Windows and Doors, Warroad, Minnesota.

### Available in 3, 4, 5, and 6 wide assemblies

### 6-degree angle

### With and w/out head and seat board

## Description: Factory-assembled Ultimate Wood Casement Bay Assemblies as manufactured by Marvin Windows and Doors, Warroad, Minnesota.

### Available 30 degree, 45 degree, 60 degree, and 90 degree

### Optional retrofit square jamb return – crank out units only

### With and w/out head and seat board

# Frame Description

## Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer

### Kiln-dried to moisture content no greater than 12 percent at the time of fabrication

### Water repellant, preservative treated in accordance with ANSI/WDMA I.S.4.

## Frame thickness: 1 3/16” (30mm)

## Frame depths for full frame units have an overall 5 21/32” jamb (144mm). 4 9/16” (116mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction

## Frame bevel: No bevel

## In-Sash Casement Polygon: minimum frame angle 15°, minimum short leg of Rough Opening 6” (152mm)

# Sash Description

## Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer

### Kiln-dried to moisture content no greater than twelve (12) percent at the time of fabrication

### Water repellant preservative treated with accordance with WDMA I.S.4.

## Sash thickness: 1 ¾” and 2”

## Stiles and Rails: 2 1/16” (52mm)

## Sash Options: Optional tall bottom rail: 3 9/16” (90mm)

## Interior Sash Sticking

### Standard is: Ogee

### Optional: Square sticking and Ovolo profile

# Glazing

## Select quality complying with ASTM C1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E2190.

## Glazing method: Insulating glass

## Glazing seal: Silicone bedding at interior and exterior

## Insulating glass will be altitude adjusted with capillary tubes for higher elevations. Argon gas is not available for elevations that require capillary tubes

## Glass fill: Air with capillary tubes, Argon

## Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated, Low E2, Low E3, Low E1, Low E2/ERS, Low E3/ERS

## Triple-pane glass (TG): Triple-pane Low E1, Triple-pane Low E2, Triple-pane Low E3.

## This glass type is dependent on sash thickness and availability. Consult ADM or OMS for availability.

# Finish

## Interior/Exterior: Treated bare wood

### Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.

## Interior Finish options:

### Painted Interior Finish. Factory-applied water-borne acrylic enamel. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.

### Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, and Vertical Grain Douglas Fir.

### Factory-applied water-borne urethane stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding between coats, applied over the stain. Available on Pine, Mahogany, and Vertical Grain Douglas Fir. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, and Espresso.

# Hardware

## Casement operating hardware:

### Locks: Multi-point sequential concealed locking system in the jamb opposite the hinge side for casement units. Lock handles are removable, non-handed and are available in the same finishes as the handles. Standard tie bars, cams and keepers – steel coated with E-Gard ™. Keeper features a roller for reduce average lock force and does not easily disengage with the cam even under severe loading. Stainless steel packages are available for coastal application.

### Handles: Standard operating handle is a folding handle, zinc plated with the standard folding cover being molded plastic. Available colors: standard is Satin Taupe (painted), White (painted), Bronze (painted), Matte Black (painted), Satin Chrome (plated), Satin Nickel (plated), Oil Rubbed Bronze (plated), Brass (plated), Antique (plated)

### Hinges: One at the sill to bottom rail and one at the head jamb to top rail. Hinges are steel coated with E-Gard™. Hinge track is stainless steel. Units with frame OM of 20” (508mm) and greater use an 18” (457mm) wash/egress hinge or 22” (559mm) wash/egress hinge to allow the sash to slide across the frame opening which causes the sash exterior to rotate towards the user for easy washing. Units under 20” (508mm) use dyad hinges. Using the dyad hinges means that the slide across feature, for easy washing, is no longer a feature.

### Optional Factory Installed Window Opening Control Device (WOCD): The standard operation of the WOCD limits the operation of the sash to an opening of less than 4” (102mm). The sash arm detaches from the lock housing by a two-step function actuation to allow the normal operation of the unit. The WOCD re-engages when the unit is fully closed. WOCD is Coastal-compliant. Hardware meets ASTM F2090-17.

### Minimum frame OSM 20” (508mm) x 19 1/8” (486mm);

### Maximum frame

### 44” (1118mm) width

### If the width is greater than 36” (914mm) or less than 44” (1118), then 92” (2337mm) maximum height

### If the width is less than or equal to 36” (914), then 96 1/8” (2442mm).

### The WOCD hardware is handed. The Lock Housing and Sash Arm are comprised of multiple stainless steel, injection molded components, and a single stainless steel spring. The Lock Housing fits within a pocket of the jamb. The Sash Arm will fit within a pocket between the jamb/sill cover and the locking hardware.

## Awning hardware:

### Hinges: Two hinges that connect the stiles of the sash to the jambs of the frame. Hinges are steel coated with E-Gard ™ and the hinge track is stainless steel. Hinges designed to support up to a 210 lb sash.

### Handles: The standard operating handle is a folding handle, zinc painted with the standard folding cover being molded plastic. Available colors: standard is Satin Taupe (painted), White (painted), Bronze (painted), Matte Black (painted), Satin Chrome (plated), Satin Nickel (plated), Oil Rubbed Bronze (plated), Brass (plated), Antique Brass (plated)

### Locks: Uses a multipoint sequential concealed locking system in both jambs. Lock handles are removable, non-handed and are available in the same finishes as the handles. Standard tie bars and cams – steel coated with E-Gard ™. Standard keepers – steel coated with E-Gard ™. Keeper features a roller for reduce average lock force and dies not easily disengage with the cam even under severe loading.

### Optional: Op-O-Lock Hardware: Requires the folding handle. Minimum frame OM width is 28” (711mm). A minimum frame OM height is 15 1/8” (384mm). Maximum frame OM width is 72” (1829). Maximum frame OM height is 47 1/8” (1197mm).

### Power Drive: Is an optional remote control operating system that is applied in the field. If an op-o-lock is installed, on the Awning, the Power Drive will also engage the cam locks. IF the op-o-lock is not used, the sash locks must be manually engaged. The Power Drive is available on Awnings with a frame width of 18” or wider. Available colors: Satin Taupe, White, and Bronze.

# Weather Strip

## Weather strip at the frame is a hollow foamed material bent around 90 degree corner to allow for seamless corner joints

### Color: Beige

## Sash weather strip: Bulb shaped glass filled material

## Color: White, beige or black

# Jamb Extension

## Jamb extensions are available for various wall thickness factory-applied up to 12” (305mm) wide

## Finish: Match interior frame finish

# Insect Screen

## Aluminum frame finish is available in Satin Taupe, Bronze, Stone White, or Ebony

## Screen Mesh: Standard is Marvin Bright ViewTM. Optional: Black Aluminum Wire, Bright Aluminum Wire, Bright Bronze Aluminum Wire, Charcoal Aluminum Wire

## Optional Wood Screen Surround with Marvin Bright ViewTM. Species will match unit species.

# Simulated Divided Lites (SDL)

## 5/8” (16mm) wide, 7/8” (22mm) wide, 1 1/8” (29mm), 1 15/16” (49mm), 2 13/32” (61mm) wide with or w/out internal spacer bar.

## Muntins: Pine, Mahogany, or Vertical Grain Douglas Fir

## Muntins adhere to glass with closed-cell copolymer acrylic foam tape

## Sticking:

### Standard: Ogee

### Optional: Square

## Pattern: Rectangular, diamond, custom lite cut

## Finish: Match panel finish

# Grilles-Between-the–Glass (GBG)

## Offered on 1” glazing only

## 23/32” (18mm) contoured aluminum bar

### Exterior Colors: Stone White. The use of different types of glazing may alter the exterior GBG color appearance

### Interior Colors: Stone White, Bronze, Pebble Gray, Sierra, White, Ebony (only available with Ebony interior)

## Optional flat aluminum spacer bar. Contact your Marvin representative.

## Pattern: Rectangular, Cottage, Custom lite layout

# Authentic Divided Lites (ADL)

## 1 11/16” (38mm) insulating Pine, Mahogany, Vertical Grain Douglas Fir muntins or 7/8” (22mm) single glaze ADL with energy panel.

### Pattern: Rectangular; Custom lite layout

### Finish: Match sash finish

# Accessories and Trim

## Installation Accessories:

### Factory installed vinyl nailing/drip cap

### Installation brackets: 6 3/8” (162mm), 9 3/8” (283mm), 15 3/8” (390mm)

### Masonry brackets: 6” (152mm), 10” (254mm)

## Exterior Wood Moulding:

### Profile: Brick Mould Casing, Flat Casing, Stucco Brick Mould, Stucco Flat Casing, Special Casing 3 (SPC3), Special Casing 7 (SPC7), Special Casing (SPC21), Special Casing 18 (SPC18), Special Casing 26 (SPC26)

### Finish: Match exterior frame finish

## Cedar Dress:

### Subsill

### Brick Mould and Flat Casing

### Mull Covers

### Available on Pine frames

### Bare cedar

# Part 3 Execution

# Examination

## Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in CSI MasterFormat Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.

## Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions

# Installation

## Comply with CSI MasterFormat Section 01 73 00.

## Assemble and install window/door unit(s) according to manufacturer’s instruction and reviewed shop drawing.

## Install sealant and related backing materials at perimeter of unit or assembly in accordance with CSI MasterFormat Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.

## Install accessory items as required.

## Use finish nails to apply wood trim and mouldings.

# Field Quality Control

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## 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 (~0.45 cfm/ft2).

## Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 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.

# Cleaning

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Leave windows and glass in a clean condition. Final cleaning as required in CSI MasterFormat Section 01 74 00.

# Protecting Installed Construction

## Comply with CSI MasterFormat Section 07 76 00.

## Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section