# Part 1 General

# Section Includes

## Ultimate Panel Inswing / Outswing French Door 2 ¼” Arch Top and Frame complete with glazing, weather strip, hardware, simulated divided lites, screens, jamb extension, and standard or specified anchors, trim, and accessories

# Related Sections

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

## Section 01 62 00 – Product Options

## Section 01 63 00 – Product Substitution Procedures

## Section 01 65 00 – Product Delivery

## Section 01 66 00 – Product 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 75 00 – Starting and Adjusting

## Section 01 76 00 – Protecting Installed Construction

## Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer

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

## Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer

## Section 09 90 00 – Paints and Coatings: Paint and stain other than factory applied finish

# References

## American Society for Testing and 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 Doors by Uniform Static Air Pressure Difference

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

### E2190: Specification for Sealed Insulated Glass Units

### C1036: Standard Specification for Flat Glass

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

## 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 windows, doors, and unit skylights

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

### AAMA/WDMA/CSA 101/I.S.2/A440-11: NAFS - 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 Gain Coefficients at Normal Incidence

## Window Covering Manufacturer’s Association

### A100.1: Standard for safety of corded window covering products

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# 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:

1. Submit corner section under provision of CSI MasterFormat Section 01 33 00.
2. 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.

# 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. Seal unfinished top and bottom edges of door if doors are stored at the job site more than one (1) week.

## Store door panels flat on a level surface in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01660

## Condition doors to local average humidity before hanging

# Warranty

# **Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, conditions, 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.

## Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade and loss of adhesion (peel) per the American Architectural Manufacturer’s Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) 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 Inswing/Outswing French Door 2 ¼” Arch Top and related stationary units as manufactured by Marvin, Ripley, Tennessee.

# Frame Description

## Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Mixed Grain Douglas Fir or finger-jointed core with non finger-jointed Mixed Grain Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry 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 time of fabrication

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

## Frame exterior aluminum clad with 0.050” (1.3mm) thick extruded aluminum

## Frame width: 4 9/16” (116mm); 6 9/16” (167mm)

## Frame thickness: 1 1/16” (27mm)

## Inswing French Door Sill: A single pultrusion of Fiber Reinforced Plastic (FRP), also known as Ultrex®, provides superior thermal performance

### An integral weep system is part of a water management system that directs any incidental moisture to the exterior

### Sill depth is 5 5/8” (143mm) for 4 9/16” (116mm) wall application and 7 5/8” (194mm) for 6 9/16” (167mm) jambs

### Standard finish is beige with an option for bronze

### Interior sill liner available in Oak

## Outswing French Door Sill: A single pultrusion of Fiber Reinforced Plastic (FRP), also known as Ultrex®, provides superior thermal performance

### Sill depth is 5 21/32” (144mm) for 4 9/16” and 6 9/16” (116mm) wall application

### Standard finish is beige with any option for bronze

## Wood Trim for Arch Top Doors: Standard is Pine, optional Red Oak interior radius trim

# Panel Description

## Interior for arch top panels: Top rail finger-jointed, edge-glued, Douglas Fir, White Oak, Cherry, Mahogany, Vertical Grain Douglas Fir cores with non finger-jointed Pine, White Oak, Cherry, Mahogany, and Vertical Grain Douglas Fir veneer. Stiles and bottom rails constructed of a laminated veneer core (LVL) with non finger-jointed Pine, White Oak, Cherry, Mahogany, and Vertical Grain Douglas Fir veneers.

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

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

## Sash exterior aluminum clad with 0.055” (1.4mm) thick extruded aluminum

## Panel thickness: 2 ¼” (57mm)

## Top rail and stile width: 6” (152mm)

## Bottom rail height: 8 1/8” (206mm)

## All rails and stiles utilize LVL material. Top rail is solid for arch top doors. Intermediate rail is sold face laminate.

## Panel corners glued and fastened with 5/8 inch x 4 inch (16mm by 102mm) fluted hardwood dowels. Removable interior vinyl glazing stops with non finger-jointed wood covers. No visible fasteners.

# Glazing

## Select quality complying with ASTM C 1036. Shall comply with 16 CFR 1201 Safety Standard for Architectural Glazing Materials.

## Glazing Method: Tempered Insulating glass

## Dual-pane thickness: 15/16”; Tri-pane thickness: 1 1/4"

## 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 E3/E1/ERS, Triple-Pane E2/E1/ERS, 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

## Glazing Seal: Wood interior glazing stops fastened with 1 3/8” nails, sealed with silicone beads at perimeter

# Finish

## Exterior: Aluminum Clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.

### Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)

### Custom colors: Contact your Marvin representative

## Interior Finish Options:

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

### 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, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, White Oak, Walnut.

### Factory-applied water-borne 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, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, White Oak, Walnut. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, or Espresso.

* 1. **Hardware**

A.Hinges: Adjustable Hinges

### Hinges are 4 ¼” x 3 ¾” with 3/8” radius corners. Adjustment is 3/16” for horizontal and vertical panels in frame.

### Finish: Standard: Satin Taupe with a steel substrate. Optional Powder coat finish: Gold Tone, Dark Bronze, Silver Frost, White. Optional Metal Finish: Antique Brass, Satin Chrome, Oil Rubbed Bronze, Polished Chrome. Optional PVD finish: Brass PVD, Satin Nickel PVD, Oil Rubbed Bronze PVD.

### Quantity per panel: 3 hinges for panels less than or equal to 86 ½” (2197mm); 4 hinges per panels for 86 ½” (2197mm) to less than or equal to 96” (2438mm); 5 hinges for panels greater than 96” (2438mm).

## Ball Bearing Hinge

### 4 ½” (114mm) x 4 ½” (114mm) with square corners

### Finish: Standard: Satin Chrome with brass substrate. Optional finish: Solid brass, Bronze with a brass substrate or stainless steel

### Quantity per panel: 3 hinges for panels less than or equal to 86 ½” (2197mm); 4 hinges per panels for 86 ½” (2197mm) to less than or equal to 96” (2438mm); 5 hinges for panels greater than 96” (2438mm)

## Handle Set: Multi-point Lever Set

### Powder Coat finishes: Satin Taupe, White, or Dark Bronze

### Metal finishes: Brass PVD, Antique Brass, Oil Rubbed Bronze PVD, Satin Chrome, and Satin Nickel PVD

### Passive lever for inactive panels

## Locking System:

### Active and Inactive panel: Marvin exclusive concealed multi-point system. Stainless steel head and shoot bolts operated from lever set. One inch dead bolt.

#  Lock Status Sensor (Optional)

1. Lock Status Sensor
2. Unit is factory-prepared for an integrated lock status sensor system. Contact sensor mounted inside the boundaries of the operating panel. Refer to **Lock Status Sensor Installation Instructions**.
3. Lock Status Sensor wireless only.
	1. Only wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
4. For Sliding Doors, the **sensor** will always be integrated into the locking hardware system.
5. The **actuator** (keyed or thumb turn) is integrated into the locking hardware system.
	1. **Weather Strip**

## Head jamb and side jambs to have two sets of bulb weather strip maintaining contact with door panels

## Inswing or Outswing: Threshold to have bulb weather strip maintaining contact with bottom of panel

## Inswing: Vinyl panel drip applied to bottom rail

### Color: Beige or black

## Inswing: Painted aluminum watershed and weep system at sill

### Color: Beige or black

## Panel: Active panel sweep, inactive panel sweep, panel weather strip, panel cover weather strip, astragal weather strip, bulb weather strip

### Color: Beige or black

## Surface mounted aluminum panel drip mounted at bottom of panel (shipped loose for field application)

### Standard colors: Matches panel finish with matching screws

### Custom colors: Matches panel finish with stainless steel screws

# Jamb Extension

## Factory-applied, for wall thickness indicated or required (shipped loose)

## Finish: Matches interior frame finish

# Simulated Divided Lites (SDL)

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

## Sticking:

### Standard: Ogee

### Optional: Square

## Muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany, or Vertical Grain Douglas Fir

## Muntins adhere to glass with double coated acrylic foam tape

## Pattern: Rectangular, Cottage, Custom lite layout

## Finish: Match panel finish

#  Raised or Flat Panels

## 0.080” aluminum to the exterior with foam backing and laminated veneer to interior for stamped raised panel. Available bare wood or selected interior finish. Available in all aluminum clad colors for exterior. Aluminum clad colors meeting AAMA 2605 requirements.

## 0.125” aluminum to the exterior with foam backing and laminated veneer to interior for flat panel. Available bare wood or selected interior finish. Available in all aluminum clad colors for exterior. Aluminum clad colors meeting AAMA 2605 requirements.

## Utilizes 4 ¾” intermediate rail. Visible panel height is 12 1/64” (305mm).

#  Accessories and Trim

## Installation and Hardware Accessories:

### Factory installed vinyl nailing/drip cap

### Installation brackets: 6 3/8” (162mm), 9 3/8” (238mm), 15 3/8” (390mm)

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

## Aluminum Extrusions:

### Profile: brick mould casing, flat casing, stucco brick mould, stucco flat casing; frame expander, jamb extender, mullion cover, mullion expander, as indicated on drawings.

### Finish: Match exterior frame finish.

# 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 the 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