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Introduction

Marvin Windows and Doors is an industry leader in providing high quality and energy efficient windows and doors. To obtain these results, Marvin windows and doors need to be properly installed and maintained. Failure to review and utilize these construction methods can result in poor product performance, premature failure and unnecessary call backs. It is the responsibility of the architect, builder, installer, and subcontractors to comply with code requirements for their area and to utilize the best method for attachments and fastener selections.

This chapter covers the water seal requirements of the window and door installation and provides visual detail in drawing format of our installation instructions.

The water seal method can be thought of as primary and secondary methods and systems;
- **Primary water seal**: window exterior seal to the exterior coating or finish of the building
- **Secondary water seal**: window seal to the wall weather resistive barrier so that any leakage within the wall is managed and controlled.
- **Window panning system**: drains the RO area to the wall resistive barrier
- **RO air area seal**: prevents RO pressurization and air movement through the RO
- **Wall thermal barrier**: provides continuity of the wall system by installation placed around the window in the RO gap. Marvin has two systems for this; (1) batten installation system and (2) spray foam
- **Vapor seal**: is the least important of the seal systems. The vapor barrier provides continuity across the RO with the wall vapor barrier.

Units must be shimmed in the opening, true, level, and square. Shim a minimum of 3/8" above sill plate to provide unit clearance over panning.

Contact your Marvin representative if you have questions or need further technical assistance at 1-800-346-3363.

**NOTE**: Details shown not typical and subject to change without notice. Always refer to your local code for proper construction and rough opening preparation.

**Important!** Details are shown with small spaces between items for clarity, visualization, and illustrative purposes. Actual assembly details may vary. Contact Marvin Architectural for project specific aids.

Step by step instructions with color illustrations on Marvin’s recommended rough opening preparation can be found at [http://www.marvin.com/roprep/](http://www.marvin.com/roprep/)
Ultimate Direct Glaze Polygon - 2x6 Frame Wood Siding

Scale: 3" = 1"0"

Head Jamb and Sill

Jamb

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Ultimate Wood Direct Glaze Polygon - 2x6 Frame with Wood Siding

Scale: 3" = 1"0"

1/2" (13)

Frame Size

Rough Opening

Accommodate for sill panning systems. Adjust rough opening height to allow for 1/8" (13) clearance at the head jamb.
Ultimate Direct Glaze Polygon - 2x4 Frame with Stucco

Scale: 3" = 1'0"

NOTE: Engineered water management stucco product. See stucco manufacture for specific details required by water management system.
Ultimate Wood Direct Glaze Polygon - 2x4 Frame with Stucco

Scale: 3" = 1'0"

Wall System WRB

Drainage Plane Gap
Self-Adhesive Flashing
Backer Rod
Rigid Head Flash
Continuous Sealant

Non-Continuous Plastic Sloped Shims
Use Plastic Shims to Level

Continuous Sealant X 4
(2 Under Sloped Shim)
Continuous Sloped Shim

Backer Rod
Drainage Plane Gap
Rain Skirt (Optional)
Self-Adhesive Flashing or Metal Panning

Sill Plate

Sealant
Backer Rod
Loose Fill Fiberglass Insulation or Minimal Expansion Foam
Continuous Support

Accommodate for sill paning systems. Adjust rough opening height to allow for 1/2" (13) clearance at the head jamb.

Head Jamb & Sill

Jamb

Rough Opening
Frame Size
1/2" (13)
1/2" (13)

Sealant
Backer Rod
Loose Fill Fiberglass Insulation or Minimal Expansion Foam
Backer Rod if Minimal Expansion Foam is Used
Sealant

Wall System WRB
Furring Strips
Self-Adhesive Flashing
Backer Rod
Continuous Sealant
Ultimate Direct Glaze Polygon - 2x4 Steel Stud with Brick Veneer

Scale: 3" = 1'0"

Wall System WRB
Drainage Plane
Self-Adhesive Flashing
Continuous Sealant X 3

Backer Rod
Rigid Head Flash

Non-Continuous Plastic Sloped Shims
Use Plastic Shims to Level

Continuous Sealant
Back Dam W/ Backer Rod if Over 3/4" (6)

Continuous Sloped Shim

Rain Skirt (Optional)

Sill Plate

Continuous Sealant Under Sloped Shim X 2

Head Jamb and Sill

Sealant
Backer Rod
Loose Fill Fiberglass Insulation or Minimal Expansion Foam
Backer Rod if Minimal Expansion Foam is Used

Accommodate for sill panning systems. Adjust rough opening height to allow for 1/2" (13) clearance at the head

Rough Opening
Frame Size
1/2" (13)
1/2" (13)

Jamb
Masonry Opening
1/4" (6)
1/4" (6)

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Ultimate Wood Direct Glaze Polygon - 2x4 Steel Stud with Brick Veneer

Scale: 3" = 1'0"

- Wall System WRB
- Drainage Plane
- Self-Adhesive Flashing
- Backer Rod
- Rigid Head Flash
- Continuous Sealant

Non-Continuous Plastic Sloped Shims
Use Plastic Shims to Level

Continuous Sealant X 4 (2 Under Sloped Shim)
Continuous Sloped Shim

Backer Rod Drainage Plane
Rain Skirt (Optional)
Self-Adhesive Flashing or Metal Panning

Head Jamb & Sill

Accommodate for sill panning systems. Adjust rough opening height to allow for 1/2" (13) clearance at the head jamb.
Ultimate Direct Glaze Polygon - Concrete Block with Brick Veneer

Scale: 3" = 1'0"

Head Jamb and Sill

Non-Continuous Plastic Sloped Shims
Use Plastic Shims to Level
Continuous Sealant Back Dam W/ Backer Rod if Over 1/2" (6)
Continuous Sealant Under Sloped Shim X 2
Continuous Sloped Shim

Sealant Backer Rod
Loose Fill Fiberglass Insulation or Minimal Expansion Foam

Backer Rod if Minimal Expansion Foam is Used

Accommodate for sill panning systems. Adjust rough opening height to allow for 1/4" (13) clearance at the head.
Ultimate Wood Direct Glaze Polygon - Concrete Block with Brick Veneer

Scale: 3" = 1'0"

Accommodate for sill panning systems. Adjust rough opening height to allow for ½" (13) clearance at the head jamb.
Ultimate Direct Glaze Poly - Wood Siding Combination Wall Sheathing, WRB and Air Barrier

Scale: 3" = 1'0"

Note: In some wall systems, the proprietary seam tape can be used as an alternative to self-adhesive flashing.
Ultimate Direct Glaze Polygon - Foam Plastic Insulated Sheathing (FPIS) over WRB

Scale: 3" = 1'0"

- Wall System WRB
- 1" Extended Foam
- Drainage Plane
- Self-Adhesive Flashing
- Continuous Sealant X 3
- Backer Rod
- Rigid Head Flash

- Non-Continuous Plastic Sloped Shims
- Use Plastic Shims to Level

- Continuous Sealant Under Sloped Shim X 2
- Continuous Sloped Shim

- Wall System WRB

- Sill Plate

- Backer Rod
- Drainage Plane
- Self-Adhesive Flashing or Metal Panning Rain Skirt (Optional)
- 1" Extended Foam

- Continuous Sealant Under Sloped Shim X 2
- Continuous Sloped Shim

- Frame Size

- Head Jamb and Sill
  - Sealant Backer Rod
  - Loose Fill Fiberglass Insulation or Minimal Expansion Foam
  - Backer Rod if Minimal Expansion Foam is Used
  - Accommodate for sill panning systems. Adjust rough opening height to allow for 1/2" (13) clearance at the head jamb.

- Jamb
  - Sealant Backer Rod
  - Loose Fill Fiberglass Insulation or Minimal Expansion Foam
  - Backer Rod if Minimal Expansion Foam is Used
Ultimate Wood Direct Glaze Polygon - Foam Plastic Insulated (FPIS) under WRB

Scale: 3" = 1'0"

Note: The wall system WRB could be the outer surface of the foam if the edges and seams are sealed and taped.
Ultimate Inswing French Door - Frame with Steel Siding

Scale: 3" = 1'0"

Wall System
WRB
Drainage Plane
Self-Adhesive Flashing
Continuous Sealant
Backer Rod
Rigid Head Flash

Loose Fill Fiberglass Insulation
Minimal Expansion Foam
Backer Rod

Head Jamb and Sill

Rough Opening
Frame Size
1/2” (13)

Jamb

Rough Opening
Frame Size
1/2” (13)
Ultimate Wood Inswing French Door - 2x6 Frame with Steel Siding

Scale: 3" = 1'0"

Wall System
WRB
Drainage Plane
Self-Adhesive Flashing
Backer Rod
Continuous Sealant
Rigid Head Flash

Head Jamb and Sill

Jamb

1/2" (13)
Frame Size
Rough Opening

1/2" (13)
Frame Size
Rough Opening

Sealant
Backer Rod
Loose Fill Fiberglass Insulation
Minimal Expansion Foam
Backer Rod
Minimal Expansion Foam
Loose Fill Fiberglass Insulation
Backer Rod
Sealant

Loose Fill Fiberglass Insulation
Minimal Expansion Foam
Backer Rod
Sealant

Rigid Head Flash
Continuous Sealant
Self-Adhesive Flashing
Backer Rod
Drainage Plane
Wall System WRB
Structural Support Options

NOTE: For structural support options, please contact your Marvin representative.
Modern Casement - 2x6 Frame with Stucco

Scale: 3" = 1'0"

1. Use Plastic Shims to Level Rough Opening Frame Size.
3. Non-Continuous Plastic Sloped Shims.
4. Continuous Sealant Back Dam W/ Backer Rod if Over 3/4" (6).
5. Continuous Sealant X 3.
7. Self-Adhesive Flashing or Metal Panning.
8. Wall System WRB.

Rigid Head Flash

Rain Skirt (Optional)

Backer Rod

Self-Adhesive Flashing

Continuous Sealant

Head Clip (Optional)

Minimal Expansion Foam

Sealant

Backer Rod

Accommodate for sill panning systems. Adjust rough opening height to allow for 3/4" (19) clearance at the head jamb.
Modern Casement - 2x6 Frame with Wall Sheathing

Scale: 3" = 1'0"

Wall System WRB
Drainage Plane Gap
Self-Adhesive Flashing
Continuous Sealant X 3
Backer Rod
Rigid Head Flash

Head Jamb and Sill

Non-Continuous Plastic Sloped Shims
Use Plastic Shims to Level Continuous Sealant Back Dam W/ Backer Rod if Over 1/2" (6)

Continuous Sealant X 3
Continuous Sealant Under Sloped Shim X 2
Continuous Sloped Shim

Head Clip (Optional)
Minimal Expansion Foam
Sealant Backer Rod

Head Jamb

Accommodate for sill panning systems. Adjust rough opening height to allow for 3/4" (19) clearance at the head jamb.

Frame Size
Rough Opening

Jamb

Wall System WRB
Furring Strips
Drainage Plane Gap
Self-Adhesive Flashing or Metal Panning
Backer Rod Continuous Sealant

3/4" (19)
3/4" (19)
3/4" (19)
3/4" (19)

Sill Plate

Continuous Sealant
Backer Rod

Minimal Expansion Foam
Sealant Backer Rod