Unit Features

Ultimate Double Hung Insert G2: UDHIN G2
Ultimate Single Hung Insert G2: USHIN G2
Ultimate Double Hung Insert Picture G2: UDHIN P G2
Ultimate Double Hung Insert Transom G2: UDHIN TR G2

Frame:
- Frame depth: 3 1/4" (83) pocket depth, 4 29/32" (125) overall jamb
- Head and side jamb thickness: 11/16" (17)
- Sill thickness:
  - 0 degree: 1 13/32" (36)
  - 8 degree: 31/32" (25)
  - 14 degree: 19/32" (15)

Sash:
- Operating / Stationary Sash (Single Hung, Double Hung, Transom):
  - Sash thickness: 1 3/4" (44), corner slot and tenoned
  - Top rail height: 2 13/32" (61)
  - Stiles width: 1 21/32" (42)
  - Bottom rail height (operating): 3 1/4" (83)
  - Bottom rail height (transom): 2 3/4" (70)
- Stationary Picture Sash:
  - Sash thickness: 1 3/4" (44), corner slot and tenoned
  - Top rail height: 2 13/32" (61)
  - Stile width: 2 13/32" (61)
  - Bottom rail height: 3 1/4" (83)
- Standard exterior cope profile: Putty
- Standard interior wood cope sticking: Ogee
- Optional interior wood cope sticking: Square

Hardware:
- Locking system that provides locking, unlocking, balancing, and tilting of the sash members. Lock automatically locks when both sash are closed.
- Lock Actuator Assembly:
  - Material
    - Zinc die cast
  - Colors: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, or Satin Nickel
  - Design features or components
    - To unlock the unit, turn the handle 135°
    - To lock the unit, both sash must be moved to the closed position
    - To tilt the bottom sash for wash-mode, the bottom sash must be open; push the button on top of lock handle and rotate the handle 180°
    - To tilt the top sash for wash-mode, the bottom sash must be tilted and/or removed from frame; lower the top sash to a good working height, retract the tilt latches on the top rail and tilt sash out of the frame
  - Options
    - Non-tilt hardware
    - Custodial hardware colors: satin taupe, white, bronze, matte black
- Lift Lock (Option for Single Hung Only)
  - Available with one or two locks
  - Lift lock handle assembly is integrated into the bottom rail of the sash and controls locking, unlocking and facilitates operation of the bottom sash.
  - Two locks are not available on sash less than CN26 width
  - Material
    - Zinc die-cast
  - Finishes
    - Lift and Escutcheon components - Bronze, Satin Taupe, White, Matte Black, Oil Rubbed Bronze, Antique Brass, Brass, Polished Chrome, Satin Chrome, Satin Nickel
    - Sill Strike: White, Black, Beige
Unit Features

- **Latches**
  - Bottom sash latch, top sash tilt latch. Color: Beige
  - Latches accommodate locking/un-locking, travel of sash in frame, and tilting into wash-mode
  - Bottom sash tilt latched operated for Lock Handle
  - Manual bottom tilt latch option - only available with Lift Lock. Color: White, Black, Beige
- **Cord guide assembly**
  - Injection-molded plastic and die-cast zinc
  - One cord guide inserted into bottom check rail
  - Cord guide is driven by standard check rail lock handle, accounts for cord travel to retract latches
  - Plunger drives auto-lock feature to lock position when both sash are closed
- **Strike Assembly**
  - Zinc die-cast strike plate and injection-molded Acetal housing and button
  - Strike assembly accommodates locking/unlocking with standard check rail lock
- **Balance system**
  - Block & tackle balance
  - Hybrid spiral balance

**NOTE:** Balance type is dependent on sash weight. Unit size, glass type, and options can all impact sash weight. General balance selection is as follows (some exceptions exist based on unit size):

<table>
<thead>
<tr>
<th>Sash</th>
<th>Sash Weight</th>
<th>Balance Tube Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>up to 35 lbs</td>
<td>Block and Tackle</td>
</tr>
<tr>
<td></td>
<td>&gt;35 lbs</td>
<td>Hybrid Spiral</td>
</tr>
<tr>
<td>Bottom</td>
<td>up to 30.6 lbs</td>
<td>Block and Tackle</td>
</tr>
<tr>
<td></td>
<td>&gt;30.6 lbs</td>
<td>Hybrid Spiral</td>
</tr>
</tbody>
</table>

- **Sash Limiter**
  - Bottom sash limiter:
    - Available on all operator configurations
    - Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)
    - Non-tilt hardware is default, and a sash removal tool is required in order to by-pass the Sash limiter for sash removal (tilt wash mode)
    - Standard application is factory applied. Available for retrofit applications.
    - Color: Will align with the Interior Weather Strip Package selection
  - Top Sash Limiter
    - Available on all operator configurations, with the exception Single Hung configurations.
    - Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)
    - Standard application is factory applied. Available for field applications
    - Color: Will align with the Exterior Weather Strip Package selection
- **Optional factory applied Window Opening Control Device is available on operating units.**
  - Two devices will be applied to each window and will default color match the lock handle color.
  - WOCD is a device consisting of a zinc lever housed in a zinc shell on the top sash stile of the secondary sash and an acetal stop on the bottom check rail of the primary sash.
  - Color: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, and Satin Nickel.
  - This device works in accordance to ASTM F2090-10 standard specification for window fall prevention devices with emergency escape.
- **Exterior Sash Lugs - Standard Option**
  - Standard Profile: Ogee
  - Available on Top Sash
  - Color: Available in all exterior clad color options
    - Color shall be the same as top sash clad color
  - Standard application is factory applied. Available for field applications
- **Optional Finger Pull**
  - Single or double (not available on units less than Glass size 26: Frame OM 31 11/32" (796)
  - Not available with Lift Lock
- **Optional Sash Lifts**
  - Zinc die-cast.
  - Not available with Lift Lock
Unit Features

Weather Strip:
- Operating units:
  - Jambs: Foam-filled bulb
    - Color: beige, black, and white
  - Head Jamb: Continuous dual leaf
    - Color: beige, black, and white
  - Check rail: Hollow bulb
    - Color: beige, black, and white
  - Bottom rail: Hollow bulb
    - Color: black
- Stationary units:
  - Jambs: Foam (picture), foam-filled bulb (transom)
    - Color: beige, black, white
  - Header and bottom rail: Hollow bulb
    - Color: black

Insect Screens:
- Standard screen frame is roll formed aluminum
- Aluminum screen: Full screen standard, half screen optional
- Aluminum surround to match exterior frame clad color
- Units with a glass height of 20" (508) or greater will have a center cross bar
- Screen mesh:
  - Standard: Charcoal Fiberglass
  - Optional: Charcoal High Transparency Fiberglass Mesh, Charcoal Aluminum Wire, Black Aluminum Wire, or Bright Bronze Aluminum Wire
- Optional Double Hung Magnum screen, extruded aluminum

Retractable Screen:
- Screen and its associated hardware shall fit within the frame, minimal exposure and shall not interfere with common window dressings
- Pull bar will protrude beyond the interior plane of the window
- Standard screen mesh: stiffened high transparency mesh
- Not available with Lift Lock option
- Optional pull bar latch hardware shall be available in beige, white, or black
  - Standard for Bare/Non Finger-Jointed Pine shall be beige
  - Standard for Prime and Painted Interior Finish shall be white
  - Standard for Mahogany and Cherry wood species shall be black
  - Standard for stained finish of Wheat or Honey shall be beige
  - Standard for stained finish of Hazelnut, Leather, Espresso, Cabernet shall be black
  - Pull bar fin is available in beige or black
  - Mesh retention pile is available in white or black
  - The standard is black unless PIF, Prime or Bare is chosen

Lock Status Sensor (Optional):
- Refer to Lock Status Sensor Installation Instructions for requirements.
- The Lock Status Sensor detects an open or closed status on Clad Ultimate Insert Double Hung - Next Generation 2.0 units and Clad Ultimate Insert Single Hung - Next Generation 2.0 units. A "locked" status is inferred from the presence of the Auto-Lock feature, which activate the locking mechanism when the operating panel is closed. It allows easy integration with home automation systems through a wired or wireless connection.
  - For wired option, check with local codes on potential contractor requirements for low voltage networking connections.
  - Wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
- Wireless Lock Status Sensor is located within the width and height of the frame.
- Sensor Location
  - Will always be located on the right-hand side of the check rail (from the exterior) for the bottom sash. For the top sash, the sensor will be located in the header parting stop of the frame on the right side (from the exterior).
  - For Wired or Wireless, Black or White Magnet Covers only visible on secondary surface. Cover color dependent upon interior finish.
  - White: Prime and White Painted Interior Finish
  - Black: Bare and all other finish options
Unit Features

Glass and Glazing:
- Glazing method: Insulating - Dual Pane or Tri Pane
- Glazing seal: Silicone glazed
- Standard glass is Insulating Low E2 Argon or air
- Optional dual-pane glass make-ups:
  - Low E1 Argon or Air,
  - Low E3 Argon or Air,
  - Low E2/ERS Argon or Air,
  - Low E3/ERS Argon or air, Laminated, Tempered, Obscure, Bronze tint, Gray tint, Green tint, Reflective Bronze and decorative glass options
- Optional Tri Pane glass make-ups:
  - Low E2/E1 Argon or Krypton-Argon, or Air
  - Low E3/E1 Argon or Krypton-Argon, or Air
  - Low E1 Argon, Krypton-Argon, or Air
- Available glass types:
  - Laminated
  - Tempered
  - Obscure
  - Clear
- Tints
  - Bronze
  - Gray
  - Green
  - Reflective Bronze
- Decorative glass options:
  - Frost
  - Reed
  - Narrow Reed
  - Rain
  - Sandblasted
  - Glue Chip
- Glazing will be altitude adjusted for higher elevations with capillary tubes. Argon, Argon-Krypton, and Krypton gas not included
- Egress may be affected when selecting specialty glass, please contact your Marvin representative
- For additional specialty glazing options, please contact your Marvin representatives.

CE Optional Glass
- Glazing method: Insulating
- Glazing seal: Silicone glazed
- Standard Glass is insulating Low E2 Argon or air
- Optional dual glazing available: Low E1 Argon or air, Low E3 Argon or air, Low E2/ERS Argon or air, Low E2/ERS Argon or air, Clear, Laminated Clear, tints, tempered and sandblasted
- Optional Tripane glass types: Low E1/E1 Argon or Krypton-Argon, Low E2/E2 Argon or Krypton-Argon, Low E3/E1 Argon or Krypton-Argon
- Glass panes available in 3, 4, and 6 mm thicknesses
- Laminated panes available in 7.0 and 7.8 mm thicknesses
- Glazing will be altitude adjusted for higher elevations, Argon, Argon-Krypton, and Krypton gas not included

Installation Features:
- Installation Accessories
  - Factory installed vinyl sill fin
  - Integrated jamb adjustment screws
  - Six (ten for larger sizes) #8 x 3" T20 Torx pan head installation screws
  - Two (four for larger sizes) color matched clad jamb plugs (exterior)
- Aluminum Extrusions (Field-applied only)
  - Profiles: Brick mould casing, flat casing, and various special casing. Frame expander, jamb extender, mullion cover, and mullion expander, subsill, subsill end cap and lineal cap.
  - Finish: Fluoropolymer modified acrylic topcoat applied over primer. Available in all exterior aluminum clad colors. Meets AAMA 2605 requirements.
Ultimate Double Hung Insert G2

Standard Divided Lite Option

- Insulating Glass
- Aluminum 23/32” Contour GBG
- 5/8” SDL
- 7/8” SDL
- 1 1/8” SDL
- 1 15/16” SDL
- 2 13/32” SDL
- 5/8” (16)
- 7/8” (22)
- 1 1/8” (29)
- 1 15/16” (49)
- 2 13/32” (61)

W/Spacer
W/Spacer Bar
W/One Spacer Bar
W/Two Spacer Bars

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UDHIN G2-5
Marvin Architectural Detail Manual
Optional Interior Square Simulated Divided Lite

- 5/8" SDL
- 5/8" SDL W/Spacer

- 7/8" SDL
- 7/8" SDL W/Spacer Bar

- 1 1/8" SDL
- 1 1/8" SDL W/Spacer Bar

- 1 3/4" SDL
- 1 3/4" SDL W/One Spacer Bar
- 1 3/4" SDL W/Two Spacer Bars

- 1 15/16" SDL
- 1 15/16" SDL W/One Spacer Bar
- 1 15/16" SDL W/Two Spacer Bars
**Egress and Vent Openings**

<table>
<thead>
<tr>
<th>Inside Opening Width</th>
<th>Inside Opening Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 in (660)</td>
<td>85 3/16 in (2164 mm)</td>
</tr>
<tr>
<td>28 in (711)</td>
<td>78 15/16 in (2005 mm)</td>
</tr>
<tr>
<td>30 in (762)</td>
<td>73 11/16 in (1872 mm)</td>
</tr>
<tr>
<td>32 in (813)</td>
<td>69 1/8 in (1756 mm)</td>
</tr>
<tr>
<td>34 in (864)</td>
<td>65 1/4 in (1657 mm)</td>
</tr>
<tr>
<td>36 in (914)</td>
<td>61 13/16 in (1570 mm)</td>
</tr>
<tr>
<td>38 in (965)</td>
<td>58 3/4 in (1492 mm)</td>
</tr>
</tbody>
</table>

**Egress Unit Minimum Openings and Conversions from Frame Size**

<table>
<thead>
<tr>
<th>Desired Dimension</th>
<th>Formula</th>
<th>Minimum Value for Net Clear Opening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egress Opening Width (inches)</td>
<td>= UDHN G2 frame OM width - 3.680</td>
<td>20 inches</td>
</tr>
<tr>
<td>Egress Opening Height (inches)</td>
<td>= (UDHN G2 frame OM height - 7.168) / 2 - 1.313 (B&amp;T)</td>
<td>24 inches</td>
</tr>
<tr>
<td></td>
<td>= (UDHN G2 frame OM height - 7.168) / 2 - 1.614 (UL)</td>
<td>24 inches</td>
</tr>
<tr>
<td>Egress Opening Area (sq. ft.)</td>
<td>= (Egress Width X Egress Height) / 144</td>
<td>5.7 sq. ft.</td>
</tr>
</tbody>
</table>

**NOTE:** Units with an inside opening width greater than 38" wide and inside opening height greater 58 7/16" meet minimum egress requirements.
### Minimum and Maximum Guidelines, Certified Sizes and Ratings

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Minimum Measurements</th>
<th>Glass Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IO Width</td>
<td>IO Height</td>
</tr>
<tr>
<td>UDHING2 / UDHING2</td>
<td>Equal Sash</td>
<td>14 5/8</td>
</tr>
<tr>
<td>UDHING2 / UDHING2</td>
<td>Cottage</td>
<td>14 5/8</td>
</tr>
<tr>
<td>UDHING2 / UDHING2</td>
<td>Reverse Cottage</td>
<td>14 5/8</td>
</tr>
<tr>
<td>UDHING2 / UDHING2</td>
<td>Retractable Screen</td>
<td>21 23/32</td>
</tr>
</tbody>
</table>

**NOTE:** Some restrictions may apply, contact your Marvin representative with questions. There will be no Extended units.

### Product Performance

<table>
<thead>
<tr>
<th>Product</th>
<th>Air Tested to psf</th>
<th>Water Tested to psf</th>
<th>Structural Tested to psf</th>
<th>Certification Rating</th>
<th>Design Pressure (DP)</th>
<th>Overall Width</th>
<th>Overall Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in</td>
<td>mm</td>
<td>in</td>
<td>mm</td>
<td></td>
<td>in</td>
<td>mm</td>
</tr>
<tr>
<td>UDHING2</td>
<td>1.57</td>
<td>7.5</td>
<td>75</td>
<td>LC-PG50</td>
<td>50</td>
<td>45 11/32</td>
<td>(1152)</td>
</tr>
<tr>
<td>UDHING2</td>
<td>1.57</td>
<td>7.5</td>
<td>52.5</td>
<td>LC-PG35</td>
<td>35</td>
<td>55 11/32</td>
<td>(1406)</td>
</tr>
<tr>
<td>UDHING2</td>
<td>1.57</td>
<td>7.5</td>
<td>75</td>
<td>LC-PG50</td>
<td>50</td>
<td>71 11/32</td>
<td>(1812)</td>
</tr>
<tr>
<td>UDHING2</td>
<td>1.57</td>
<td>7.5</td>
<td>75</td>
<td>LC-PG50</td>
<td>50</td>
<td>75 5/8</td>
<td>(1921)</td>
</tr>
</tbody>
</table>

**NOTE:** For CE ratings, please refer to CE Performance Section.
## Measurement Conversions: Operating Units

### Operating Units

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daylight Opening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Sash OM</td>
<td>+ 3 11/32 (85)</td>
<td>+ 4 31/32 (126)</td>
</tr>
<tr>
<td>Top Sash OM</td>
<td>+ 3 11/32 (85)</td>
<td>+ 4 1/4 (108)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>+ 1 17/64 (32)</td>
<td>+ 1 1/4 (32)</td>
</tr>
<tr>
<td>Screen OM</td>
<td>+ 4 3/4 (121)</td>
<td>+ 8 15/64 (209)</td>
</tr>
<tr>
<td>Grille</td>
<td>Order by DLO</td>
<td>Order by DLO</td>
</tr>
</tbody>
</table>

### Operating Units - 0 Degree Sill

<table>
<thead>
<tr>
<th>Inside Opening</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>0 Degree Bottom Sill</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inside Opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-7 27/64 (188)</td>
</tr>
<tr>
<td>Top Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-7 27/64 (188)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>-6 63/64 (177)</td>
<td>-9 59/64 (252)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>-5 23/32 (145)</td>
<td>-7 27/64 (188)</td>
</tr>
<tr>
<td>Screen OM</td>
<td>-2 15/64 (57)</td>
<td>-1 43/64 (43)</td>
</tr>
<tr>
<td>Frame OM @ Interior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
<tr>
<td>Frame OM @ Exterior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
</tbody>
</table>

### Operating Units - 8 Degree Sill

<table>
<thead>
<tr>
<th>Inside Opening</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8 Degree Bottom Sill</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inside Opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-6 29/32 (175)</td>
</tr>
<tr>
<td>Top Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-6 29/32 (175)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>-6 63/64 (177)</td>
<td>-9 13/32 (239)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>-5 23/32 (145)</td>
<td>-6 29/32 (175)</td>
</tr>
<tr>
<td>Screen OM</td>
<td>-2 15/64 (57)</td>
<td>-1 11/64 (30)</td>
</tr>
<tr>
<td>Frame OM @ Interior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
<tr>
<td>Frame OM @ Exterior</td>
<td>-3/8 (10)</td>
<td>+ 17/64 (07)</td>
</tr>
</tbody>
</table>

### Operating Units - 14 Degree Sill

<table>
<thead>
<tr>
<th>Inside Opening</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14 Degree Bottom Sill</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inside Opening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-6 33/64 (166)</td>
</tr>
<tr>
<td>Top Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-6 33/64 (166)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>-6 63/64 (177)</td>
<td>-9 1/64 (229)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>-5 23/32 (145)</td>
<td>-6 33/64 (166)</td>
</tr>
<tr>
<td>Screen OM</td>
<td>-2 15/64 (57)</td>
<td>-25/32 (20)</td>
</tr>
<tr>
<td>Frame OM @ Interior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
<tr>
<td>Frame OM @ Exterior</td>
<td>-3/8 (10)</td>
<td>+ 41/64 (16)</td>
</tr>
</tbody>
</table>
### Measurement Conversions: Transom and Picture

#### Transoms

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height (not affected by sill)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>in</td>
</tr>
<tr>
<td><strong>Daylight Opening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sash OM</td>
<td>+ 3 11/32 (85)</td>
<td>+5 2/16 (131)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>+ 1 17/64 (32)</td>
<td>+1 4/16 (32)</td>
</tr>
<tr>
<td>Grille</td>
<td>order by DLO</td>
<td>order by DLO</td>
</tr>
</tbody>
</table>

#### Inside Opening

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>in</td>
</tr>
<tr>
<td><strong>Inside Opening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sash OM</td>
<td>-3 41/64 (93)</td>
<td>-1 23/32 (44)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>-6 63/64 (177)</td>
<td>-6 55/64 (174)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>-5 23/32 (145)</td>
<td>-5 39/64 (142)</td>
</tr>
<tr>
<td>Frame OM @ Interior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
<tr>
<td>Frame OM @ Exterior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
</tbody>
</table>

#### Pictures

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height (not affected by sill type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>in</td>
</tr>
<tr>
<td><strong>Daylight Opening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sash OM</td>
<td>+ 4 51/64 (122)</td>
<td>+ 5 41/64 (143)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>+ 1 17/64 (32)</td>
<td>+ 1 1/4 (32)</td>
</tr>
<tr>
<td>Grille</td>
<td>order by DLO</td>
<td>order by DLO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height (not affected by sill type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>in</td>
</tr>
<tr>
<td><strong>Inside Opening</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sash OM</td>
<td>-2 3/16 (56)</td>
<td>-2 23/64 (60)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>-6 63/64 (177)</td>
<td>-8 (203)</td>
</tr>
<tr>
<td>Glass OM</td>
<td>-5 23/32 (145)</td>
<td>-6 3/4 (172)</td>
</tr>
<tr>
<td>Frame OM @ Interior</td>
<td>-3/8 (10)</td>
<td>-1/4 (06)</td>
</tr>
</tbody>
</table>
### Conversion from Field Measurement to Frame OM

<table>
<thead>
<tr>
<th>Condition</th>
<th>Type of Sill</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>If blind stop width is 1/2 inch or less</td>
<td>CINDH-NG 2.0 frame OM width = inside opening width - 0.375</td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If old sill angle is less than 8 degrees</td>
<td>0 degree bottom Sill</td>
<td>UDHIN G2 frame OM height = inside opening height - 0.250</td>
</tr>
<tr>
<td>If old sill angle is 8 degrees or more but less than 14 degrees</td>
<td>8 degree bottom sill</td>
<td>UDHIN G2 frame OM height = inside opening height + 0.261 (frame OM height has a .250 clearance)</td>
</tr>
<tr>
<td>If old sill angle is 14 degrees or more</td>
<td>14 degree bottom sill</td>
<td>UDHIN G2 frame OM height = inside opening height + 0.648 (frame OM height has a .250 clearance)</td>
</tr>
</tbody>
</table>

---

**NOTE:** For additional measuring instructions see Marvin Insert Window Measuring Instructions.
Section Details: Operating

Scale: 3" = 1' 0"

14 Degree Bevel Sill Option
Installed in existing frame

8 Degree Bevel Sill Option
Installed in existing frame

0 Degree Bevel Sill Option
Installed in existing frame

Jamb
Installed in existing frame
Section Details: Operating (with Optional Lift Lock Hardware)

Scale: 3" = 1' 0"

NOTE: Shown with Traditional Design Lift Lock. Also available with a Contemporary Design Lift Lock.
Section Details: Transom

Scale: 3” = 1’ 0”

8 Degree Bevel Sill Option
Installed in existing frame

14 Degree Bevel Sill Option
Installed in existing frame

0 Degree Bevel Sill Option
Installed in existing frame

Jamb
Installed in existing frame
Section Details: Picture

Scale: 3" = 1' 0"

8 Degree Bevel Sill Option
Installed in existing frame

14 Degree Bevel Sill Option
Installed in existing frame

0 Degree Bevel Sill Option
Installed in existing frame

Jamb
Installed in existing frame
Mullions
Scale: 3" - 1' 0"

Transom/Operator
Horizontal Mullion

Operator/Picture
Vertical Mullion

Operator/Operator
Vertical Mullion
Clad Application

Scale: 3” - 1’ 0”

Frame Expander

Frame Expander With Mullion Expander

Panning-(Masonry shown)

Sill Panning

Clad Adjustable Brick Mould Casing

Panning-(BMC shown)