Unit Features

Ultimate Double Hung Tilt Pac: UDHTP
Ultimate Double Hung Magnum Tilt Pac: UDHMP

Sash:
- Ultimate Double Hung Tilt Pac
  - Sash thickness: 1 5/16" (33)
  - Top rail width: 2 15/32" (63)
  - Bottom rail width: 3 3/4" (95)
  - Stile width: 1 25/32" (45)
- Ultimate Double Hung Magnum Tilt Pac
  - Sash thickness: 1 3/4" (44)
  - Top rail width: 2 1/4" (57)
  - Bottom rail width: 3 7/8" (98)
  - Stile width: 2 1/4" (57)
  - Bottom rail bevel 14 degrees
- Removable exterior glazing stops

Hardware:
- Lock: high pressure zinc die-cast cam lock and keeper
  - Optional keyed lock
  - Two locks on glass sizes of 36" (914) and wider
  - Color: Satin Taupe
    - Optional: Bronze, White, Plated Brass, Antique Brass, Satin Chrome, Oil Rubbed Bronze, Satin Nickel, Polished Chrome
- Ultimate Double Hung Tilt Pac Balance System: coil spring block and tackle with nylon cord and fiber filled nylon clutch
- Ultimate Double Hung Magnum Tilt Pac: double coil spring block and tackle with nylon cord and fiber filled nylon clutch
- Jamb track: vinyl extrusion, foam backing
  - Color: Beige or White
- Sash retainer plate: standard for magnum units, optional for double hung - polycarbonate theroplastic
  - Color: Bronze or White
  - Optional sash lifts: high pressure zinc die-cast
    - Color: Satin Taupe
    - Optional color: Bronze, White or Brass

Weather Strip:
- Double Hung weather strip: Dual durometer double leaf at check rail; bulb type dual durometer weather strip at bottom rail
- Double Hung Magnum weather strip: Continuous leaf weather strip at head jamb parting stop which seals against top sash; dual durometer double leaf at check rail; bulb type dual durometer weather strip at bottom rail
- Color: beige for both product types

Insect Screens:
- Full sized extruded aluminum screen is standard
  - Optional half screen
  - Aluminum surround to match the exterior cladding
  - All screens are shipped loose
- Screen Mesh: Charcoal fiberglass
  - Optional Screen Mesh: Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, Bright Bronze Wire or Charcoal High Transparency (CH Hi-Tran) fiberglass
Unit Features

Glass and Glazing:

- Glazing method: Insulating - Dual 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,
- 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.
Divided Lite

- Insulating Glass
- Aluminum 23/32" Contour GBG

- 5/8" SDL (16)
- 5/8" SDL W/Spacer

- 7/8" SDL (22)
- 7/8" SDL W/Spacer Bar

- 1 1/8" SDL (29)
- 1 1/8" SDL W/Spacer Bar
## Min and Max Glass Size

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Min Glass Size</th>
<th>Max Glass Size</th>
<th>Max Glass Size</th>
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<tbody>
<tr>
<td></td>
<td>Width</td>
<td>Height</td>
<td>Width</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>mm</td>
<td>in</td>
</tr>
<tr>
<td>UDHTP</td>
<td>8 (203)</td>
<td>8 (203)</td>
<td>44 (1118)</td>
</tr>
<tr>
<td>Insulating Glass</td>
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<tr>
<td>UDHTP</td>
<td>8 (203)</td>
<td>8 (203)</td>
<td>44 (1118)</td>
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<tr>
<td>UDHMTJP</td>
<td>12 (305)</td>
<td>12 (305)</td>
<td>60 (1524)</td>
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<td>Insulating Glass</td>
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### Ultimate Double Hung Tilt Pac

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>to</td>
<td></td>
</tr>
</tbody>
</table>

#### Glass Size:

- **Daylite Opening**
  - Glass size: -1 1/16 (27) in → +1 1/16 (27) mm
  - Sash Opening: +4 (102) mm → 2 in
  - Outside Measurement Bottom Sash: +2 1/2 (64) mm → 4 1/2 (114) mm
  - Outside Measurement Top Sash: +2 1/2 (64) mm → 3 3/32 (79) mm

- **Daylight Opening**
  - Glass size: +5 1/16 (129) mm → 2 in + 8 1/8 (206) mm
  - Sash Opening: +3 9/16 (90) mm → 1 1/2 (38) mm
  - Outside Measurement Bottom Sash: +3 9/16 (91) mm → 2 5/16 (59) mm
  - Outside Measurement Top Sash: +3 9/16 (91) mm → 2 5/16 (59) mm

- **Outside Measurement**
  - Top Sash: +1 1/2 (38) mm → 2 in -3/16 (05) mm
  - Bottom Sash: +1 1/2 (38) mm → 2 in -3 (76) mm

### Ultimate Double Hung Magnum Tilt Pac

<table>
<thead>
<tr>
<th>Unit Measurements</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>to</td>
<td></td>
</tr>
</tbody>
</table>

#### Glass Size:

- **Daylite Opening**
  - Glass size: +1 1/16 (27) mm → 1 1/16 (27) mm
  - Sash Opening: +5 3/4 (146) mm → 2 in + 5 7/8 (149) mm
  - Outside Measurement Bottom Sash: +3 7/16 (87) mm → 3 7/16 (87) mm
  - Outside Measurement Top Sash: +3 7/16 (87) mm → 3 7/16 (87) mm

- **Daylight Opening**
  - Glass size: +6 13/16 (173) mm → 2 in + 8 (203) mm
  - Sash Opening: +4 1/2 (114) mm → 4 1/2 (114) mm
  - Outside Measurement Bottom Sash: +4 1/2 (114) mm → 3 1/32 (101) mm
  - Outside Measurement Top Sash: +4 1/2 (114) mm → 3 1/32 (101) mm

- **Outside Measurement**
  - Top Sash: +2 5/16 (59) mm → 2 in -1/16 (02) mm
  - Bottom Sash: +2 5/16 (59) mm → 2 in -3 3/16 (81) mm
Tilt Pac Measurements

Scale: 3" = 1'0"

Instructions:

Follow these steps to measure an opening for Tilt Pac Replacement Sash

1. To find the sash opening height:
   If the old window has wood blocks holding the top sash in place, remove them. Lower the top sash for measuring clearance, then measure the height of the window from where the top sash meets the head jamb to where the bottom sash meets the sill when the bottom sash is fully closed.

2. To find the sash opening width:
   Take an inside measurement of the frame from jamb to jamb.

3. To find the sill angle:
   Raise the bottom sash and place a carpenter's protractor on the sill, the angle will register. Marvin's standard bottom rail angle is 14 degrees, other angles must be specified.

NOTE: Double Hung sash shown above. Instructions and measuring locations apply to Single Hung, Magnum Double / Single Hung sash.

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Marvin Architectural Detail Manual
Instructions:
To insure a proper screen fit, it is recommended to order a screen after the Tilt Pac installation.

1. To find the screen opening height:
   Measure from the top casing to the edge of where the screen will rest at the sill, minus 3/32" (2) for the outside measurement (OSM) of the screen height.

2. To find the screen opening width:
   Measure from the inside edge of the side casing to the inside edge of the opposite side casing, minus 1/8" (3) for the outside measurement (OSM) of the screen width.

NOTE: Double Hung sash and screen are shown above. Instructions and measuring locations apply to Single Hung, Magnum Double / Single Hung sash. Screen measuring instructions also apply to combination storm / Screen measurements. Standard angle on combination bottom rails is 14 degrees, other angles must be specified.
## Standard Unit Measurements

### Tilt Unit Measurements

<table>
<thead>
<tr>
<th>CN</th>
<th>Sash Opening</th>
<th>Daylight Opening</th>
<th>Double Hung Tilt Pac</th>
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<td></td>
<td>ft - in</td>
<td>mm</td>
<td>ft - in</td>
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<td>(508)</td>
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<tr>
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<td>2-4</td>
<td>(711)</td>
<td>1-10 15/16</td>
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<tr>
<td>26</td>
<td>2-6</td>
<td>(762)</td>
<td>2-0 15/16</td>
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<tr>
<td>28</td>
<td>2-8</td>
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<td>(711)</td>
<td>1-10 15/16</td>
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<td>30</td>
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<td>(864)</td>
<td>2-4 15/16</td>
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<tr>
<td>36</td>
<td>3-4</td>
<td>(1016)</td>
<td>2-10 15/16</td>
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<td>(762)</td>
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<tr>
<td>36</td>
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<td>(1981)</td>
<td>2-10 15/16</td>
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**Ultimate Double Hung Tilt Pac Parts Lists**

**Ultimate Double Hung Tilt Pac**

A. Top Sash  
B. Bottom Sash  
C. Cam Pivots  
D. Left Vinyl Jamb Liner  
E. Right Vinyl Jamb Liner  
F. Head Jamb Part Stop  
G. Two Plastic Sash Stops  
H. Metal Brackets  
  (Quantity varies)  
I. Two foam gaskets  
J. Extruded Aluminum Sash Exterior  

**Ultimate Double Hung Magnum Tilt Pac**

A. Top Sash  
B. Bottom Sash  
C. Cam Pivots  
D. Left Vinyl Jamb Liner  
E. Right Vinyl Jamb Liner  
F. Head Jamb Part Stop  
G. Two Plastic Sash Stops  
H. Metal Brackets  
  (Quantity varies)  
I. Two foam gaskets  
J. Two Top Sash Stays  
K. Two Sash Retainer Plates  
  (NOTE: Only on Magnum Tilt Pacs)  
L. Extruded Aluminum Sash Exterior