Ultimate Tilt-Turn/Hopper

Unit Features........................................................................................................................................................................ 1
Standard Divided Lites ......................................................................................................................................................... 2
Optional Interior Square Simulated Divided Lites.............................................................................................................. 3
Minimum and Maximum Measurements / Certified Sizes and Ratings.......................................................................... 4
Unit Operation ................................................................................................................................................................. 5
Measurement Conversions ............................................................................................................................................... 6
Section Details: Operating .................................................................................................................................................. 7
Section Details: Casing Options ......................................................................................................................................... 8
Section Details: Mullions .................................................................................................................................................... 9
Unit Features

Ultimate Tilt Turn: UTT
Ultimate Tilt Turn Hopper: UTT HOP

NOTE: Ultimate Tilt Turn Hopper not available with CE mark.

Frame:
- Frame thickness: 3 1/16" (78).
- Sill thickness: 1 11/16" (43).
- Frame width: 2 13/32" (61), 4 9/16" (116).

Sash:
- Sash, Stile and Rail thickness: 2 1/4" (57).
- Interior glazed.

Hardware:
- Tilt Turn: Multi-point locking hardware with Bronze pistol grip handle.
  - Optional Hardware Color: White, Satin Chrome, Solid Brass, Bronze keyed or White keyed handle.
  - Optional Features: turn restrictor, security key or additional scissor stay.
- Tilt Turn Keyed Stationary: Key operated lock allows authorized swing only.
- Hopper: Bronze pistol grip handle.
  - Optional Hardware Color: White, Satin Chrome, or Solid Brass.
  - Tilt Stay - Limiter on Hopper.

Weather Strip:

Insect Screen:
- Standard screen frame is roll formed aluminum
- Aluminum surround to match exterior frame clad color
- Screen Mesh:
  - Standard: Charcoal Fiberglass
  - Optional: Charcoal High Transparency Fiberglass Mesh, Charcoal Aluminum Wire, Black Aluminum Wire, Bright Aluminum Wire, or Bright Bronze Aluminum Wire

Glass and Glazing:
- Glazing Seal: Silicone glazed.
- Glazing Type: Clear glass, optional glass types: Low E2 Argon, Low E3 Argon, Low E2/ERS Argon or air, Low E3/ERS Argon or air, Laminated, Tempered, Obscure, Bronze tint, Gray tint, and Reflective Bronze.
- Optional Glazing available: Low E1 Argon, Low E3 Argon, 1" Tripane Low E1 outer piece and Low E1 Argon inner piece, 1" Tripane Low E2 outer piece and Low E2 Krypton-argon inner piece, 1" Tripane Low E3 outer piece and Low E1 Krypton-argon, clear, tints, tempered, obscure, decorative glass options and others.
- Insulating glass will be altitude adjusted with capillary tubes for higher elevations.

CE Optional Glazing:
- Glazing Method: Insulating
- Glazing Seal: Silicone glazed
- Standard glass is 7/8" (22) 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, clear, laminated clear and tints, tempered, sandblasted
- Optional 1" 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
Standard Divided Lites

- Insulating Glass
- Aluminum 23/32" Contour GBG
- 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 15/16" SDL
- 1 15/16" SDL W/One Spacer Bar
- 1 15/16" SDL W/Two Spacer Bars
- 2 13/32" SDL
- 2 13/32" SDL W/One Spacer Bar
- 2 13/32" SDL W/Two Spacer Bars
Optional Interior Square Simulated Divided Lites

- 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
## Minimum and Maximum Measurements / Certified Sizes and Ratings

### Minimum and Maximum Guidelines

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>Min Frame Size Unit</th>
<th>Max Frame Size Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width</td>
<td>Height</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>mm</td>
</tr>
<tr>
<td>Ultimate Tilt Turn Hopper</td>
<td>23 (584)</td>
<td>19 1/2 (495)</td>
</tr>
</tbody>
</table>

### Product Air Tested, Water Tested, Structural Tested, Certification Rating, Design Pressure (DP), Max Overall Width, Max Overall Height

<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>Max Overall Width</th>
<th>Max Overall Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Tilt Turn Hopper</td>
<td>1.57</td>
<td>6.06</td>
<td>60.19</td>
<td>CW-PG40-AP</td>
<td>40</td>
<td>65 (1651)</td>
<td>49 (1245)</td>
</tr>
<tr>
<td>Ultimate Tilt Turn</td>
<td>1.57</td>
<td>6.06</td>
<td>60.19</td>
<td>CW-PG40-DAW</td>
<td>40</td>
<td>49 (1245)</td>
<td>73 (1854)</td>
</tr>
</tbody>
</table>

### Product Air Tested, Wind Load Resistance to psf, Certification Rating, Design Pressure (DP), Max Overall Width, Max Overall Height

<table>
<thead>
<tr>
<th>Product</th>
<th>Air Tested to psf</th>
<th>Wind Load Resistance to psf</th>
<th>Certification Rating</th>
<th>Design Pressure (DP)</th>
<th>Max Overall Width</th>
<th>Max Overall Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimate Tilt Turn Inswing Casement Inswing Casement</td>
<td>1.57</td>
<td>4.18</td>
<td>62.66</td>
<td>CW-PG40-C</td>
<td>40</td>
<td>49 (1245)</td>
</tr>
</tbody>
</table>

**NOTE:** For CE ratings, please refer to CE Performance Section.
## Unit Operation

### Tilt-Turn Handle Location

<table>
<thead>
<tr>
<th>Frame Size Height</th>
<th>Handle Height from Bottom of Sash</th>
</tr>
</thead>
<tbody>
<tr>
<td>24&quot; - 27 7/8&quot;</td>
<td>7 7/16&quot; (189)</td>
</tr>
<tr>
<td>27 15/16&quot; - 35 3/4&quot;</td>
<td>11 1/16&quot; (281)</td>
</tr>
<tr>
<td>35 13/16&quot; - 43 5/8&quot;</td>
<td>17&quot; (432)</td>
</tr>
<tr>
<td>43 11/16&quot; - 51 1/2&quot;</td>
<td>20 15/16&quot; (532)</td>
</tr>
<tr>
<td>51 9/16&quot; - 75 1/8&quot;</td>
<td>22 7/8&quot; (581)</td>
</tr>
<tr>
<td>75 3/16&quot; - 96&quot;</td>
<td>40 1/16&quot; (1018)</td>
</tr>
</tbody>
</table>

### Hardware Size Chart

![Diagram of hardware size chart](image)

**NOTE:** All operations viewed from exterior.
**Measurement Conversions**

Scale: 1 1/2" = 1' 0"

<table>
<thead>
<tr>
<th>UNIT WITH 2 13/32&quot; JAMB</th>
<th>From</th>
<th>To</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OM of Frame</td>
<td>Rough Opening</td>
<td>+ 1</td>
<td>+ 1</td>
</tr>
<tr>
<td></td>
<td>Masonry Opening w/out BMC</td>
<td>Rough Opening</td>
<td>+ 1/2</td>
<td>+ 1/4</td>
</tr>
<tr>
<td></td>
<td>Masonry Opening w/CBMC</td>
<td>Rough Opening</td>
<td>-2 1/8</td>
<td>-1 11/16</td>
</tr>
<tr>
<td></td>
<td>Masonry Opening w/Flat Casing</td>
<td>Rough Opening</td>
<td>-5 1/2</td>
<td>-3 3/8</td>
</tr>
<tr>
<td></td>
<td>Masonry Opening w/BMC (all sides)</td>
<td>Rough Opening</td>
<td>-2 1/8</td>
<td>-2 3/8</td>
</tr>
<tr>
<td></td>
<td>Masonry Opening w/Flat Casing (all sides)</td>
<td>Rough Opening</td>
<td>-5 1/2</td>
<td>-5 1/4</td>
</tr>
<tr>
<td>Glass Size - IG</td>
<td>Rough Opening</td>
<td>+ 9</td>
<td>(229)</td>
<td>(216)</td>
</tr>
<tr>
<td>Glass Size - SG</td>
<td>Rough Opening</td>
<td>+ 8 13/16</td>
<td>(224)</td>
<td>(211)</td>
</tr>
<tr>
<td>OM of Sash</td>
<td>Rough Opening</td>
<td>+ 3 13/16</td>
<td>(97)</td>
<td>(84)</td>
</tr>
<tr>
<td>Sash</td>
<td>OM of Frame</td>
<td>-2 13/16</td>
<td>(71)</td>
<td>(71)</td>
</tr>
<tr>
<td>Daylight Opening</td>
<td>OM of Sash</td>
<td>+ 6 5/16</td>
<td>(160)</td>
<td>(160)</td>
</tr>
<tr>
<td>Aluminum Frame Screen / Energy Panel</td>
<td>OM of Frame</td>
<td>-6 5/8</td>
<td>(168)</td>
<td>(135)</td>
</tr>
<tr>
<td></td>
<td>Daylight Opening</td>
<td>-8 3/4</td>
<td>(222)</td>
<td>(210)</td>
</tr>
</tbody>
</table>

**Net Clear Opening:**

Rough Opening Width - 7 1/8" (181)
Rough Opening Height - 6" (152)
Section Details: Operating

Scale: 3" = 1' 0"

Operating - 2 13/32" Jambs

NOTE: Handle location shown is for Ultimate Tilt Turn. Handle is centered on the top rail for Hopper operation.

Operating - 4 9/16" Jambs

Head Jamb and Sill

Frame Size

Daylight Opening

Head Jamb and Sill

Frame Size

Daylight Opening

Jambs

Daylight Opening

Frame Size

Jambs

NOTE: Handle location shown is for Ultimate Tilt Turn. Handle is centered on the top rail for Hopper operation.
Section Details: Casing Options

Scale: 3" = 1' 0"

4 9/16" Jambs

Head Jamb and Sill
with Clad Brick Mould Casing

Head Jamb and Sill
with Clad Flat Casing
Jamb Extension Policy for Multiples Assemblies

To provide the necessary structural integrity for multiple width and height assemblies, 4 9/16" (116) exterior jamb extensions must be applied around the perimeter and between the shortest intermediate mulls.

Total assembly Rough Opening or Masonry Opening must be specified to assure individual unit sizes will be appropriately calculated.

**CE Mulling Options will match UCA family mulling rules:**
- Mulled assemblies up to 64" (1626) x 71 1/8" (1807) as 1H x multi-width
- Mulled assemblies with 1" (25) LVL or 3/8" (10) aluminum mull reinforcement up to 122" (3099) x 104 1/4" (2648) as a multi-wide or multi-high assembly