Classic style and durability ensures years of performance with minimal care.
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## SELLING

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<td>Frame Sizes and Applications</td>
<td>A3-5</td>
</tr>
</tbody>
</table>
Panel Lock Jamb Cap

Shutter Panel Parts

Molded and/or Aluminum Jamb Inserts for added support and strength.

Vertical Jamb (Stile) Cap

Vertical Jamb (Stile)

Top Rail

Tilt Bar Cap

Louver

Tilt Bar

Tilt Bar Connectors

Divider Rail

Tilt Bar Attached

Hinge

Bottom Rail

Interlock

Panel Lock Jamb Cap
**Louver Sizes**

- 2 ½” Louver
  - Reinforcement added at 20”

- 3 ½” Louver
  - Reinforcement added at 19”

- 4 ½” Louver
  - Reinforcement added at 22”

**Divider Rail Sizes**

Used to divide top louvers from bottom louvers within the same panel

**Regular**

![Divider Rail Diagram]

*Note: Divider rail must be used on panels 66” and longer. Two Divider Rails must be used on panels 90” and longer, with less than 66” between rails.*
**Bullnose Z Frame with Flex (BZ Frame) & Sill**

Used for inside mounts in openings with drywall returns and without trim and includes a $\frac{3}{8}$" standard IM deduction. May be ordered with Sill Frame at bottom for openings with a window sill. Because the extended leg has been removed, the bottom frame will sit flat on window sill. The Sill Frame will be positioned at the bottom unless otherwise specified.

**Deluxe Trim Frame (D Frame) & Sill**

Used for inside mounts in openings with drywall returns and without trim and includes a $\frac{1}{4}$" standard IM deduction. May be ordered with Sill Frame at bottom for openings with window sill. Because the extended leg has been removed, the bottom frame will sit flat on the window sill. The Sill Frame will be positioned at the bottom unless otherwise specified.

**Trim Frame with Flex (T Frame) & Sill**

Used for inside mounts in openings with drywall returns and without trim and includes a $\frac{3}{8}$" standard IM deduction. May be ordered with Sill Frame at bottom for openings with a window sill. Because the extended leg has been removed, the bottom frame will sit flat on window sill. The Sill Frame will be positioned at the bottom unless otherwise specified.

**Z-Frame & Sill**

Used for inside mount applications only. Blends well with all types of trim and includes a $\frac{1}{4}$" standard IM deduction. Excellent for slightly out of square windows because the extended leg covers many imperfections. Jamb depth required is a minimal $1\frac{3}{8}$". May be ordered with Sill Frame at the bottom for openings with a window sill. Because extended leg has been removed, the bottom frame will sit flat on a window sill. The Sill Frame will be positioned at the bottom unless otherwise specified.
Frame Sizes and Applications

L-Frame
May be used for inside mounts if window openings are square (a ⅛” IM deduction standard), or outside mounts directly on top of trim or beside trim. For an inside mount, on out-of-square openings caulking or the optional L-Frame Cover Strip may be necessary to cover any uneven gaps. The optional L-Frame Cover Strip may be ordered on the Order Form. The Cover Strip is glued to the face of the L-Frame.

L-Frame with ½” extension added
Used for outside mount installations with the 2 ½” louver. Usually used when the frame is installed beside the trim or to clear any obstructions. Additional extensions may be requested on the Order Form if required.

L-Frame with two ½” extensions added
Used for outside mount installations with the 3 ½” louver. Usually used when the frame is installed beside the trim or to clear any obstructions. Additional extensions may be requested on the Order Form if required.

Note: Casing Sill Frame can be used in place of L-Frame. The Casing Sill Frame is ⅛” taller, has a decorative face and accepts the L-Frame extension when additional projection is needed.
**Casing Frame (C-Frame)**

Used for outside mount only. Installed on the wall or directly on top of an existing trim. When installing on top of an existing trim, an optional C-Frame Cover Strip may be requested on the Order Form. The C-Frame Cover Strip covers the gap created between the back of the frame and the front of the trim. The Cover Strip is inserted into the C-Frame. The Casing Frame Extension adds ¾” projection to the shutter.

**Casing Sill Frame**

Used in conjunction with the Casing Frame in outside mount applications, the Sill Frame will sit flat on a window sill. The Sill Frame will be positioned at the bottom unless otherwise specified. May also be used as a stand alone frame. Use the casing sill as an alternative to the L Frame in both inside and outside mount applications.

**Mounting Strip**

Used in conjunction with adjustable bent-leaf hinges for inside mounts without frames or as a light block mounted on the inside of panels which are installed without frames. It is not visible from inside the room. Unless requested otherwise, ¾” x ¾” will be supplied.

**T-Post**

Used to separate and hinge multiple panels in wide openings. Usually placed directly in front of any existing window dividers. It is notched to fit into the frames, or can be installed to existing opening with L brackets.
### PANEL CONFIGURATIONS AND HINGING

<table>
<thead>
<tr>
<th>Panel Type</th>
<th>Code</th>
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<tbody>
<tr>
<td>Single Panel Shutters</td>
<td>B1</td>
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<tr>
<td>Two Panel Shutters</td>
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<td>B4-5</td>
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<td>B6-7</td>
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<td>Six Panel Shutters</td>
<td>B8-11</td>
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**P1-L** (left hinge) two, three, or four sided frame

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<td>4 1/4&quot;</td>
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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

**P1-R** (right hinge) two, three, or four sided frame

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<td>3 1/4&quot;</td>
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<td>36”</td>
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<td>120”</td>
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<td>4 1/4&quot;</td>
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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
P2-LR  two, three, or four sided frame

NOTE: Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

P2-LTR  two, three, or four sided frame

NOTE: Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
Two Panel Shutters

P2-LL  Two left bi-fold, two, three, or four sided frame

![Diagram of P2-LL Shutters]

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NOTE: Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

P2-RR  Two right bi-fold, two, three, or four sided frame

![Diagram of P2-RR Shutters]

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NOTE: Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
**P3-LLR**  two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

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**P3-LRR**  two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
Three Panel Shutters

**P3-LTRTR** two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

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**P3-LTLTR** two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
**P4-LLRR** two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

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**P4-LLTRR** two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

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**P4-LRTL** two, three, or four sided frame

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
**Four Panel Shutters**

**P4-LTLRTR** two, three, or four sided frame

- **Left** T-post **Left**
- **Right** T-post **Right**

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

---

**P4-LTLLTR** two, three, or four sided frame

- **Left** T-post **Left**
- **Left** T-post **Right**

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

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**P4-LTRRRTR** two, three, or four sided frame

- **Left** T-post **Right**
- **Right** T-post **Right**

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**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
**P6-LRTLRTLR** two, three, or four sided frame

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<td>4 1/2&quot;</td>
<td>60&quot;</td>
<td>120&quot;</td>
</tr>
</tbody>
</table>

**P6-LTLRTLRTR** two, three, or four sided frame

<table>
<thead>
<tr>
<th>Width</th>
<th>Height</th>
<th>Square Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 1/2&quot;</td>
<td>60&quot;</td>
<td>120&quot;</td>
</tr>
<tr>
<td>3 1/2&quot;</td>
<td>60&quot;</td>
<td>120&quot;</td>
</tr>
<tr>
<td>4 1/2&quot;</td>
<td>60&quot;</td>
<td>120&quot;</td>
</tr>
</tbody>
</table>

**NOTE:** Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.
Six Panel Shutters

**P6-LTLLRTR** two, three, or four sided frame

Left T-post Left Left Right Right T-post Right

2 1⁄2" 3 1⁄2" 4 1⁄2"

- Minimum Width: 60" 60" 60"
- Maximum Width: 168" 168" 168"
- Minimum Height: 16" 16" 16"
- Maximum Height: 120" 120" 120"
- Maximum Square Ft.: 60 60 60

**NOTE:** Panels less than 18" in height are not recommended, due to the excessive louver overlap that may occur.

---

**P6-LTLLTRRTR** two, three, or four sided frame

Left T-post Left Left T-post Right Right T-post Right

2 1⁄2" 3 1⁄2" 4 1⁄2"

- Minimum Width: 60" 60" 60"
- Maximum Width: 168" 168" 168"
- Minimum Height: 16" 16" 16"
- Maximum Height: 120" 120" 120"
- Maximum Square Ft.: 60 60 60
**Six Panel Shutters**

**P6-LLTLTRR**  two, three, or four sided frame

- Minimum Width: 60” 60” 60”
- Maximum Width: 144” 144” 144”
- Minimum Height: 16” 16” 16”
- Maximum Height: 120” 120” 120”
- Maximum Square Ft.: 60 60 60

*NOTE:* Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

---

**P6-LLTRTRRR** two, three, or four sided frame

- Minimum Width: 60” 60” 60”
- Maximum Width: 144” 144” 144”
- Minimum Height: 16” 16” 16”
- Maximum Height: 120” 120” 120”
- Maximum Square Ft.: 60 60 60

---

**LEVOLOR SHUTTERS**
**Six Panel Shutters**

**P6-LLRTLRR** two, three, or four sided frame

NOTE: Panels less than 18” in height are not recommended, due to the excessive louver overlap that may occur.

<table>
<thead>
<tr>
<th></th>
<th>2 1/2”</th>
<th>3 1/2”</th>
<th>4 1/2”</th>
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<tbody>
<tr>
<td>Minimum Width</td>
<td>60”</td>
<td>60”</td>
<td>60”</td>
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<tr>
<td>Maximum Width</td>
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<tr>
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<td>16”</td>
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<tr>
<td>Maximum Height</td>
<td>120”</td>
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<td>120”</td>
</tr>
<tr>
<td>Maximum Square Ft.</td>
<td>60</td>
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## Operating And Depth Clearance

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Inside Mount with Mounting Strip and Bent-leaf Hinge</td>
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</tr>
<tr>
<td>Recessed Inside Mount with L-Frame</td>
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</tr>
<tr>
<td>Inside Mount with Casing Sill Frame</td>
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<tr>
<td>Inside Mount with Z-Frame</td>
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<tr>
<td>Inside Mount with Trim Frame with Flex</td>
<td>C6</td>
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<tr>
<td>Inside Mount with Bullnose Z Frame with Flex</td>
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<tr>
<td>Inside Mount with Deluxe Trim Frame</td>
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<td>Outside Mount with L-Frame</td>
<td>C9</td>
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<td>Outside Mount Beside Trim with L-Frame</td>
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<tr>
<td>Outside Mount with Casing Frame</td>
<td>C11</td>
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<tr>
<td>Outside Mount on Existing Trim with Casing Frame</td>
<td>C12</td>
</tr>
<tr>
<td>Frame Deduction Summary</td>
<td>C13</td>
</tr>
</tbody>
</table>
Inside Mount with No Frame (direct mount)

**Depth Clearance**

With Tilt Bar or Gear Closure System

- 2 ½” Louver = 1 ¾”
- 3 ½” Louver = 2 ¾”
- 4 ½” Louver = 2 ¾”

**NOTE:** With optional 1 ¼” extended leaf hinges, the depth clearance for shutters with tilt bar can be reduced by ½” to 1 ¾” for 2 ½” louver, 1 ¾” for 3 ½” louver, and 2 ¾” for 4 ½” louver.

**NOTE:** Motorized Tilt is not available with No Frame application.
Inside Mount with 3/4” x 3/4” Mounting Strip and Bent-leaf Hinge

**Depth Clearance**
With Tilt Bar or Gear Closure System

- 2 1/2” Louver = 2 1/8”
- 3 1/2” Louver = 2 3/8”
- 4 1/2” Louver = 2 7/8”

**NOTE:** Depth clearance can be reduced to 1” if mounting strip is installed closer to the inside of opening. However, hinges will project into the room by 1”.

**NOTE:** Motorized Tilt is not available with Mounting Strip application.
Clearance Charts

Recessed Inside Mount with L-Frame

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

2 ½” Louver = 2 ⅛”
3 ⅓” Louver = 2 ⅜”
4 ½” Louver = 3”

**NOTE:** For recessed mounts the depth clearance is measured from the front of L-Frame. Only L-Frame can be used in a recessed mount application. Recessed distance can vary.
Recessed Inside Mount with Casing Sill Frame

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

- 2 ¼" Louver = 2 ½"
- 3 ¼" Louver = 2 ½"
- 4 ½" Louver = 3"

**NOTE:** Depth clearance is the minimum window opening depth required for shutters to operate without interference.
**Inside Mount with Z-Frame**

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

2 1/2” Louver = 1 1/4”
3 1/2” Louver = 1 5/8”
4 1/2” Louver = 2 1/8”

**NOTE:** Depth clearance is the minimum window opening depth required for shutters to operate without interference.

C5 LEVOLOR SHUTTERS
Inside Mount with Trim Frame with Flex

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

- 2 1/2” Louver = 1 1/8”
- 3 1/2” Louver = 1 1/2”
- 4 1/2” Louver = 2”

**NOTE:** Depth clearance is the minimum window opening depth required for shutters to operate without interference.
Inside Mount with Bullnose Z Frame with Flex

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorization

NOTE: Depth clearance is the minimum window opening depth required for shutters to operate without interference.

- 2 ½” Louver = 1 ⅝”
- 3 ½” Louver = 1 ⅞”
- 4 ⅝” Louver = 2 ¼”
Inside Mount with Deluxe Trim Frame

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

- 2 ½” Louver = 1 ⅛”
- 3 ½” Louver = 1 ⅝”
- 4 ¾” Louver = 2”

**NOTE:** Depth clearance is the minimum window opening depth required for shutters to operate without interference.
Outside Mount with L Frame

Depth Clearance
With Tilt Bar, Gear Closure System, or Motorized

2 1\(\frac{1}{2}\)" Louver = 0"
3 1\(\frac{1}{2}\)" Louver = 1⁄2"
4 1\(\frac{1}{2}\)" Louver = 7⁄8"

Note: Depth clearance is the minimum window opening depth required for shutters to operate without interference.
Outside Mount Beside Trim with L Frame

Depth Clearance
With Tilt Bar, Gear Closure System or Motorized

Note: Depth clearance is the minimum window opening depth required for shutters to operate without interference.

- 2 ½” Louver = 0
- 3 ½” Louver = 0”
- 4 ½” Louver = 0”

Clearance Charts
## Clearance Charts

### Outside Mount with Casing Frame

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

- 2 ½" Louver = 0"
- 3 ½" Louver = 0"
- 4 ½" Louver = ⅛"

**NOTE:** Depth clearance is the minimum window opening depth required for shutters to operate without interference.

<table>
<thead>
<tr>
<th>Depth Requirement</th>
<th>Tilt Bar, Gear Closure System, or Motorized Depth Requirement</th>
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</thead>
<tbody>
<tr>
<td>0&quot;</td>
<td></td>
</tr>
<tr>
<td>⅛&quot;</td>
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</tbody>
</table>

![Diagram of Outside Mount with Casing Frame](image-url)
Outside Mount on Top of Existing Trim with Casing Frame

**Depth Clearance**
With Tilt Bar, Gear Closure System, or Motorized

2 ½” Louver = 0
3 ½” Louver = 0”
4 ½” Louver = 0”

NOTE: Depth clearance is the minimum window opening depth required for shutters to operate without interference.
# Frame Deduction Summary

## Width

<table>
<thead>
<tr>
<th></th>
<th>IM Deduction No Sill</th>
<th>IM Deduction With Sill</th>
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<tbody>
<tr>
<td>Deluxe Trim Frame</td>
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<td>1/8&quot;</td>
</tr>
<tr>
<td>Bullnose Z Frame with Flex</td>
<td>3/16&quot;</td>
<td>1/4&quot;</td>
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<tr>
<td>Trim Frame with Flex</td>
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<td>1/4&quot;</td>
</tr>
<tr>
<td>Z Frame</td>
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<tr>
<td>Casing Sill Frame</td>
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<tr>
<td>L Frame</td>
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## Height

<table>
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<th>IM Deduction No Sill</th>
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<td>Bullnose Z Frame with Flex</td>
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<td>Trim Frame with Flex</td>
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<td>1/4&quot;</td>
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<tr>
<td>Z Frame</td>
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<td>1/8&quot;</td>
</tr>
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## OM Deduction

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<td>L Frame</td>
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## Height

<table>
<thead>
<tr>
<th></th>
<th>OM Deduction No Sill</th>
<th>OM Deduction With Sill</th>
</tr>
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<tr>
<td>Casing Frame</td>
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<tr>
<td>Casing Sill Frame</td>
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<td>Helpful Hints</td>
<td>D1</td>
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<td>-------------------------------</td>
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<tr>
<td>Options</td>
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<tr>
<td>Obstructions</td>
<td></td>
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<tr>
<td>Depth Clearances</td>
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<tr>
<td>Single Panel</td>
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<tr>
<td>Bi-fold Panels</td>
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<td>Shutters with Uneven Panel Widths</td>
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<tr>
<td>Uneven Panel Widths without a T-Post</td>
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<tr>
<td>Uneven Panel Widths with T-Posts</td>
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<tr>
<td>Importance of Height Consistency</td>
<td>D3</td>
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<tr>
<td>Locating Divider Rails</td>
<td>D4</td>
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<tr>
<td>Measurement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matching Divider Rail Locations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Helpful Hints

- Follow the general rules below when choosing a shutter style.
- **Record all details on an Order Form** to ensure accurate record.
- Use a steel measuring tape to take measurements.

Options
Before measuring, look over the various options available:
- louver size
- frame options
- color
- color of hinges
- inside or outside mount
- frame options
- divider rails
- Tilt Options: Tilt Bar, Gear Closure System, or Motorized Tilt
- shutter configuration

**NOTE:** Shutters are room darkening but not black-out.

Obstructions
When measuring, account for obstructions such as protruding window cranks and window sills. Protruding cranks may be replaced with T-handles, or can be accommodated with projection mounts or outside mount (refer to Section C- Clearance Charts). Shutters may be installed on top of sills using either three or four sided frames, or using four sided L-Frames with added extensions.

Depth clearances
This is the depth of window jamb required for trouble free louver operation. Measure the clearance required for desired application (refer to Section C- Clearance Charts).

Single panels
The minimum single panel width is 6” and the maximum single panel width is 36”.

**NOTE:** Warranty is void on oversized panels.

Bi-fold panels
(shown as LL [Left Bi-fold] or RR [Right Bi-fold])
A maximum of two panels may be hinged together. The combined widths may not exceed 48”.

T Post
The 1¼” T Post
Uneven Panel Widths without a T-Post
1. Drawing a sketch of the opening can help when recording measurements.
2. Measure total width and height.
   O.M. = Outside frame to outside frame
   I.M. = Opening size
3. Record number of panels and hinge style (i.e., P4-LLRR).
4. Measure from the left side:
   A. From the left edge of the frame to the right edge of the first panel for an outside mount or from the left inside opening to the right edge of the first panel for an inside mount.
   B. For any middle panels measure from the left edge to the right edge of each panel.
   C. For the right panel, measure from the left edge of the last panel to the right edge of the frame for an outside mount, or to the right inside opening for inside mount.
5. Record these measurements in the “Uneven Panel Widths Section” of the Order Form. The panel widths added together should equal the total overall width.

Uneven Panel Widths with T-Posts
1. Draw a sketch of the window.
2. Measure total width and height.
   O.M. = Outside frame to outside frame
   I.M. = Opening size
3. Record number of panels and hinge style (i.e., P3-LTLTR).
4. All T-Post distances are measured starting from left side of opening frame to center of each T-Post.
5. Record these measurements on the Order Form.
Importance of Height Consistency

- Shutter height is made up of a unique combination of:
  1) a top rail
  2) a bottom rail
  3) a number of evenly spaced louvers
  4) a divider rail if over 66” tall

- To achieve a uniform appearance, divider rail placement, as well as maintain an equal number of louvers in adjacent shutters, all shutters must be ordered the same height.

If the height measurements differ, apply one of the three options below:

1. For inside mount without frame or L-Frame, reduce taller height measurement by ¼” max.;
   **order shutters same height.**

2. For inside mount with Z Frame, Bullnose Z Frame, Trim Frame, or Deluxe Trim Frame, reduce ½” max. from tallest height measurement;
   **order shutters same height.**

3. For height adjustments of more than ½”, go to an outside mount;
   **order shutters same height.**
Divider rail is required if shutter panel height is over 66". A second divider rail is required if panel height is over 90". Distance between rails must be less than 66". Although added strength is the main feature of a divider rail, it also allows bottom louvers to be fully closed for privacy and top louvers open for light. Due to excessive louver overlap that may occur, there should be no less than 18" between dividers or a divider rail and top/bottom rail.

OUTSIDE MOUNT
“Distance-up” is the distance from the bottom frame to the center of where you would like the divider rail located.

INSIDE MOUNT
“Distance-up” is the distance from the top of the sill to the center of where you would like the divider rail located.

NOTE: Center line location of divider rails may vary up or down by a maximum of 1 1⁄2". For adjacent openings to have same divider location the height must be same.

Matching Divider Rail Locations

When divider rails are desired at a similar height from the floor, from window to window, or from room to room, measure height of center of divider rail from the floor up to the same point on the second window, then measure down to the bottom of the shutter. This measurement down is the “distance-up.” If you require a specific divider rail location, please specify in the remarks section on the order form. If it is not possible, we will contact you with the options.

Divider Rail Width
• 2 ¾"
MEASURING GUIDE

Inside Mount E1
Outside Mount E2
1. CHOICE OF FRAME & LOUVER
- The appropriate frame will be affected by the mount type, depth clearance, existing trim, etc.
- Make sure that the chosen frame and louver size will function properly once installed into the opening.
- Ensure the chosen application will overcome any possible obstructions such as latches, cranks or windows that open into the room.
- Number of frame sides is based on the configuration and type of shutter. Four sided frames are recommended for most standard shutters.
- Frame Extensions are not available for inside mount applications.

2. INSIDE MOUNT vs. OUTSIDE MOUNT
- Check for squareness by measuring the diagonal and/or use a sample panel and place at each corner.
- If the diagonal measurements are not identical, a framed application is recommended for inside mounts. An unframed application will result in uneven light gaps.
- If the diagonal measurements are out more than 3⁄8”, then an outside mount is recommended.
- If the proper clearance is not available, an outside mount may be necessary.

3. MEASURE INSIDE WIDTH
- Measure the width in three places (top, middle & bottom) and record the smallest measurement to 1⁄8”.
- For windows with vertical mullions, match the panel widths to each section of the window with or without T Posts. (See Page D2 for measuring instructions)

4. MEASURE INSIDE HEIGHT
- Measure the height in three places (left, middle & right) and record the smallest measurement to 1⁄8”.

5. DIVIDER RAILS
- Measure from the bottom of the sill to the middle of the divider rail location.
- One divider rail is required for panels over 66” in height with a maximum 50” between the middle of the divider rail and either top or bottom rail.
- Two divider rails are required for panels over 90” in height with a maximum 50” between any two rails.
- Refer to Page D4 for additional divider rail measuring instructions.
- Due to excessive louver overlap that may occur, there should be no less than 18” between dividers or a divider rail and top/bottom rail.
# Outside Mount

## Casing Frame or L-Frame

### 1. CHOICE OF LOUVER & FRAME
- Make sure that the chosen frame and louver size will function properly once installed into the opening.
- Ensure the chosen application will overcome any possible obstructions such as latches, cranks or windows that open into the room.
- The minimum width of trim required for Casing Frame is 2 5/8", L-Frame is 1 3/8". If the trim width is less than the frame width, then the frame should extend outside of the trim, not inside the opening.
- Number of frame sides is based on the configuration and type of shutter. Four sided frames are recommended for most standard shutters.
- Depth clearance and obstructions can prevent louvers from operating properly. In order to overcome these obstacles, add the necessary frame extensions to the appropriate frame.
- Frame Extensions are available for outside mount applications. Up to (3) 1/2" extensions can be added to either frame for greater protection.

### 2. INSIDE MOUNT vs. OUTSIDE MOUNT
- Outside mount shutters may be necessary for larger louvers.
- If windows include trim, outside mount shutters may be installed on top of, or next to the trim.
- If windows do not include trim, then the shutters are mounted where the trim would be.

### 3. MEASURE OUTSIDE WIDTH
- **If on top of trim**
  - Measure from outside of trim to outside of trim in three places (top, middle & bottom). Ensure the frame does not extend into the opening. Record the largest measurement to 1/8”.
  - If the chosen frame extends past the edge of the trim, then measure the width from outside of trim to outside of trim in three places (top, middle & bottom). Add it to the measurement that the frame extends past the trim on each side.
- **If no trim**
  - Measure the inside width in three places (top, middle & bottom). Take the largest measurement to 1/8” and add 2 5/8" per frame side for Casing Frame, 1 3/8" per side for L-Frame.
- **If installing around trim**
  - Measure from outside of trim to outside of trim in three places (top, middle & bottom). Add 1 3/8" per frame side for L-Frame only. Record the largest measurement to 1/8”.

### 4. MEASURE OUTSIDE HEIGHT
- **If on top of trim**
  - Measure from outside of trim to outside of trim in three places (left, middle & right). Ensure the frame does not extend into the opening. Record the largest measurement to 1/8”.
  - If the chosen frame extends past the edge of the trim, then measure the height from outside of trim to outside of trim in three places (top, middle & bottom). Add it to the measurement that the frame extends past the trim on each side.
- **If no trim**
  - Measure the inside height in three places (left, middle & right). Take the largest measurement to 1/8” and add 2 5/8" per frame side for Casing Frame, 1 3/8" per side for L-Frame.
- **If installing around trim**
  - Measure from outside of trim to outside of trim in three places (left, middle & right). Add 1 3/8" per frame side for L-Frame only. Record the largest measurement to 1/8”.

### 5. DIVIDER RAILS
- Measure from the bottom of the bottom frame to the middle of the divider rail location.
- One divider rail is required for panels over 66” in height with a maximum 50” between the middle of the divider rail and either top or bottom rail.
- Two divider rails are required for panels over 90” in height with a maximum 50” between any two rails.
- Refer to Page D4 for additional divider rail measuring instructions.
- Due to excessive louver overlap that may occur, there should be no less than 18” between dividers or a divider rail and top/bottom rail.
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
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</thead>
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<td>French Door Cutout Configurations</td>
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<td>French Door Cutout Clearance Charts</td>
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<tr>
<td>French Door Cutout Measuring Instructions</td>
<td>F9-10</td>
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<tr>
<td>French Door Cutout Installation Instructions</td>
<td>F11</td>
</tr>
<tr>
<td>Ordering Instructions</td>
<td>F12-13</td>
</tr>
</tbody>
</table>
French Door Shutters

Features:

- Available in 2 1⁄2", 3 1⁄2" and 4 1⁄2" louver sizes
- 4-sided L-frame only
- Optional divider rail centered on cutout
- Shutter may grow in height in order to ensure the cutout is located properly on the door handle
- Multiple frame plates to work with L-frame and multiple extensions

Dimensions:

- L-frame plate (front edge) 15 1⁄8”
- Main body (overall height varies based on configuration)
- Main body (width) 4 1⁄2”
French Door Shutters

French Door with Cutout (No Divider Rail)

P1FD-L Left

P1FD-R Right

- Minimum Width: 18” 18” 18”
- Maximum Width: 36” 36” 36”
- Minimum Height: 36” 38” 40”
- Maximum Height: 96” 96” 96”
- Maximum Square Ft.: 15 15 15
- Minimum Cutout Height: 17 ¾” 18 ¾” 19 ¾”

NOTE: 4-sided frame only

NOTE: Minimum Cutout Height measured from bottom of shutter frame

French Door with Cutout (With Divider Rail)

P1FD-L Left

P1FD-R Right

- Minimum Width: 18” 18” 18”
- Maximum Width: 36” 36” 36”
- Minimum Height: 36” 38” 40”
- Maximum Height: 96” 96” 96”
- Maximum Square Ft.: 15 15 15
- Minimum Cutout Height: 17 ¾” 18 ¾” 19 ¾”

NOTE: 4-sided frame only

NOTE: Minimum Cutout Height measured from bottom of shutter frame
Outside Mount French Door With Cutout

Depth Clearance (No Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
2 1/2" Louver = (0) L Frame Extensions Required
Outside Mount French Door With Cutout

Depth Clearance (With Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
2 1/2” Louver = (1) L Frame Extension Required
French Door Shutters

Outside Mount French Door With Cutout

Depth Clearance (No Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
3 ½” Louver = (1) L Frame Extension Required
Outside Mount French Door With Cutout

Depth Clearance (With Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
3 ½” Louver = (2) L Frame Extension Required
Outside Mount French Door With Cutout

Depth Clearance (No Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
4 ½” Louver = (2) L Frame Extension Required
Outside Mount French Door With Cutout

Depth Clearance (With Molding Around Glass)
With Tilt Bar, Gear Closure System, or Motorized
4 1/2” Louver = (3) L Frame Extension Required
## French Door Extension Requirement Summary

### No Molding Around Glass

<table>
<thead>
<tr>
<th>Cutout</th>
<th>P1FD-CR</th>
<th>P1FD-L</th>
<th>P1FD-R</th>
<th>P1FD-R</th>
<th>P1FD-L</th>
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<tbody>
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<tr>
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<td>N/A</td>
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<tbody>
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### Molding Around Glass

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<td>N/A</td>
<td>L Frame + 3 Ext</td>
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</table>
Outside Mount - Four Sided L-Frame on Top or Around the Molding

1. CHOICE OF LOUVER & FRAME
   - Make sure that the chosen frame and louver size will function properly once installed into the opening.
   - Ensure the chosen application will overcome any possible obstructions.
   - Four sided L-Frame is used for this French Door application.
   - Depth clearance and obstructions can prevent louvers from operating properly. In order to overcome these obstacles, add the necessary number of L-Frame Extensions.
   - L-Frame Extensions are available for outside mount applications only. Up to (4) ½” extensions can be added to the L-Frame.

2. MEASURE OUTSIDE WIDTH (A)
   - If mounting on top of molding, then measure outside of molding to outside of molding in three places (top, middle & bottom). Molding should be a minimum of 1 ¾” so that it is wider than the shutter frame. Record the largest measurements to ¼”.
   - If mounting around the molding, then measure the outside width of the molding. Add 2 ¾” to the width and record the measurements to ¼”.

3. MEASURE OUTSIDE HEIGHT (B)
   - If mounting on top of molding, then measure outside of molding to outside of molding in three places (left, middle & right). Molding should be a minimum of 1 ¾” so that it is wider than the shutter frame. Record the largest measurements to ¼”.
   - If mounting around the molding, then measure the outside width of the molding. Add 2 ¾” to the height and record the measurements to ¼”.

4. MEASURE HEIGHT OF MOLDING
   Measure the height or projection of the molding that protrudes from the door, and note on the order form.

5. CUTOUT HEIGHT (C or D)
   - Measure from the bottom of the molding to the middle of the desired cutout location, then add 1 ¾” for the L Frame at the bottom of the shutter.
   - The cutout can be centered on the door handle (“C”) or centered between the door handle and the deadbolt (“D”).
   - An optional divider rail may be ordered. The divider rail will be positioned on center of the cutout.

6. FRAME EXTENSIONS
   - Refer to the clearance charts for the appropriate number of extensions based on the louver size, tilt mechanism, and whether or not there is molding around the glass that protrudes into the room.

NOTE: Actual shutter height may be increased. This allows the shutter to be moved up or down in order to center the cutout as needed.
French Door Shutters Installation Instructions

French Door Shutters with Cutouts

1. FRAME ASSEMBLY
- In order to prevent shipping damage, the panel and frame should ship as a fully assembled unit.
- The frame will be completely assembled and ready to install, including the frame plate located on the cutout side of the shutter.

2. FRAME INSTALLATION
- Partially set an installation screw into the upper cutout side frame and upper hinge side frames.
- Set the frame against the door to check position of the frame and the alignment of the cutout to the handle or between the handle and the deadbolt.
- Level the top frame and set the cutout side screw. Ensure the centerline of the frame plate will align with the handle and the outside edge of the frame plate will cover the glass but not interfere with the handle.
- Set the top hinge side screw, making sure the top frame is level.
- Set the panel in the frame and verify location and operation. Move the bottom frame left or right to achieve best possible operation of the panel.
- Install screws on the lower frame side below the cutout and check operation of panel.
- Continue setting screws and checking operation of panel.
- Install button plugs once all screws have been set.

3. SIDE BY SIDE FRENCH DOORS
- The installation method remains the same for both shutters in a side by side installation.
- Begin by installing the shutter on the door with an operational handle. If both handles operate choose either door.
- Install the first shutter as described above.
- Once the first shutter is complete, place a long level on the top frame of the installed shutter. Allow the level to hang across the face of the second door.
- Begin installing the second frame and make sure the top frame aligns with the level, and thus the first shutter.
- Finish installing second shutter as described above.
GUIDELINES FOR FILLING OUT THE FRENCH DOOR CUTOUT ORDER FORM

1. LINE
The line number is shown on all product labels to make installation easier.

2. ROOM
Room location where product is being installed.

3. FRENCH DOOR TYPE
French Doors can be specified as an “FD” (P1FD).

4. HINGE STYLE
Select the desired hinge configuration (Hinge left-cutout right or Hinge right-cutout left).

5. WIDTH & HEIGHT
Measure the width in inches to the 1⁄8 in. 36 in. wide maximum panel width.
Measure the height in inches to the 1⁄8 in. 120 in maximum panel height.

6. LOUVER SIZE
3 sizes are offered 2 ½ in., 3 ½ in., and 4 ½ in.

7. COLOR
Choose between white, ivory, and vanilla.

8. CONTROL TYPE
Select between Tilt Bar, Gear Closure System and Motorized Tilt.

NOTE: Motorized Tilt can be ordered with or without a tilt bar for aesthetics. If tilt bar is desired please note in special instructions. If not, the motorized default option is no tilt bar.

9. FRAME TYPE
All French Doors come with a standard L frame.

10. NUMBER OF FRAME SIDES
4 sided is the only option for cutout.

11. PROTRUDING MOLDING
Mark YES, if there is molding around the glass that impacts the depth clearance of the louvers.

12. MOLDING DEPTH
Measure the depth of molding around glass, as applicable.

13. FRENCH DOOR CUTOUT
All French Doors include a cutout.

14. CUTOUT HEIGHT
Enter the distance up in inches from bottom of frame to center of where the cutout will be located.

15. DIVIDER RAIL
Select YES, to include a divider rail (divider rails will be centered to the cutout).

16. HINGES
Available in color coordinating or stainless steel. Stainless steel is recommended for high moisture environments.

17. REMOTE TYPE & QUANTITY (Motorized Tilt Only)
Specify type and quantity (3-channel or 6-channel) or 0 (zero) if not needed.
Remote quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

18. SPECIAL INSTRUCTIONS
Enter the special instructions that need to be added specific to the order.

19. SUBMIT FRENCH DOOR FORM AND SHUTTER ORDER FORM TOGETHER
### FRENCH DOOR ORDER FORM

<table>
<thead>
<tr>
<th>LINE</th>
<th>ROOM</th>
<th>TYPE</th>
<th>HINGE STYLE*</th>
<th>WIDTH X HEIGHT</th>
<th>LOUVER SIZE</th>
<th>COLOR</th>
<th>CONTROL TYPE</th>
<th>FRAME TYPE</th>
<th># OF FRAME SIDES</th>
<th>PROTRUDING MOLDING</th>
<th>MOLDING DEPTH</th>
<th>FRENCH DOOR CUTOUT</th>
<th>REMOTE TYPE &amp; QUANTITY</th>
<th>REMOTE TYPE</th>
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<tbody>
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<td>PIDF</td>
<td>(L) Left Hinge</td>
<td>Outside Mount = Largest Opening Size</td>
<td>2-1/2-in.</td>
<td>White</td>
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<td>L Frame</td>
<td>4</td>
<td>Yes</td>
<td>Depth of molding around glass, as applicable</td>
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<td></td>
<td>PIDF</td>
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<td>PIDF</td>
<td>PIDF</td>
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<td>M-Motorization</td>
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</table>

*Note: Cutout will be located opposite of hinges

Outside Mount = Largest Opening Size

2-1/2-in. 3-1/2-in. 4-1/2-in.

White Ivory Vanilla

Tilt-Tilt Bar GS=Gear Closure System M=Motorization

# OF FRAME SIDES

4

PROTRUDING MOLDING

Yes

MOLDING DEPTH

No

FRENCH DOOR CUTOUT

Depth of molding around glass, as applicable

Yes

Distance Up in inches

Yes or No

C or D

DIVIDER RAIL

Yes or No

Hinges

Color Coordinated or Stainless Steel

### Remote Type & Quantity (Motorized Tilt only)

Specify remote type and quantity or 0 (zero) if not needed. Remote (type and quantity) on this form will be in addition to any remote quantity ordered with any other shutter order.

Remote Type

Remote Quantity

### Special Instructions

NOTE: Submit French Door Form and Shutter Order Form together.

See back page for instructions.
## STANDARD AND OPEN BY-PASS TRACK SYSTEM

<table>
<thead>
<tr>
<th>Section</th>
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<tbody>
<tr>
<td>By-Pass Track System Diagrams</td>
<td>G1-2</td>
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<tr>
<td>Two Panel By-Pass</td>
<td>G3</td>
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<tr>
<td>Three Panel By-Pass/Four Panel By-Pass</td>
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<tr>
<td>Six Panel By-Pass/Eight Panel By-Pass</td>
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<tr>
<td>By-Pass Measuring Instructions</td>
<td>G7</td>
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<td>By-Pass Installation Instructions</td>
<td>G10-17</td>
</tr>
<tr>
<td>Track System Ordering Instructions</td>
<td>G18-19</td>
</tr>
</tbody>
</table>
*Louvers must be in the closed position in order to operate panels.
*Louvers can be opened fully and the panels will still operate.
Two Panel By-Pass

- Minimum Width: 24"
- Maximum Width: 72"
- Minimum Height: 20"
- Maximum Height: 120"

NOTE: Both panels will operate allowing access to the window or door.
Three Panel By-Pass

**P3BP-LCR**

- Center panel opens over left or right panel.

**P3OB-LCR**

- Minimum Width: 36"  
- Maximum Width: 108"  
- Minimum Height: 20"  
- Maximum Height: 120"

Four Panel By-Pass

**P4BP-LCCR**

- Left center panel opens over left panel, Right center panel opens over right panel.

**P4OB-LCCR**

- Minimum Width: 48"  
- Maximum Width: 144"  
- Minimum Height: 20"  
- Maximum Height: 120"
Four Panel By-Pass

**P4BP-2L2R**

Two right panels open over two left panels.

- Minimum Width: 48"
- Maximum Width: 144"
- Minimum Height: 20"
- Maximum Height: 120"

**P4OB-2L2R**

- Minimum Width: 48"
- Maximum Width: 144"
- Minimum Height: 20"
- Maximum Height: 120"

**P4BP-2R2L**

Two left panels open over two right panels.

- Minimum Width: 48"
- Maximum Width: 144"
- Minimum Height: 20"
- Maximum Height: 120"

**P4OB-2R2L**

- Minimum Width: 48"
- Maximum Width: 144"
- Minimum Height: 20"
- Maximum Height: 120"
Six Panel By-Pass

- **P6BP-2L2C2R**
  - Minimum Width: 72"
  - Maximum Width: 180"
  - Minimum Height: 20"
  - Maximum Height: 120"
  - Two center panels, open over either two left or two right panels.

- **P6OB-2L2C2R**
  - Minimum Width: 72"
  - Maximum Width: 180"
  - Minimum Height: 20"
  - Maximum Height: 120"
  - Two center panels, not joined, open over either two left or two right panels.

Eight Panel By-Pass

- **P8BP-2L2C2C2R**
  - Minimum Width: 96"
  - Maximum Width: 192"
  - Minimum Height: 20"
  - Maximum Height: 120"
  - Two left center panels open over two left panels, two right center panels open over two right panels.

- **P8OB-2L2C2C2R**
  - Minimum Width: 96"
  - Maximum Width: 192"
  - Minimum Height: 20"
  - Maximum Height: 120"
  - Two left center panels open over two left panels, two right center panels open over two right panels.

**LEVOLOR SHUTTERS**

G6
By-Pass Clearance Chart

Track System Depth Requirements
Tilt Bar, Gear Closure System, or Motorized

- 2 ½" Louver
- 3 ½" Louver
- 4 ½" Louver

G7 LEVOLOR
SHUTTERS
Track System Depth Requirements
Tilt Bar, Gear Closure System, or Motorized

- 2 ½" Louver
- 3 ½" Louver
- 4 ½" Louver

Open By-Pass Clearance Chart

LEVOLOR
S H U T T E R S
By-Pass Measuring Instructions

- Inside mounts must have a jamb depth of 2”.
- Inside mounts may be ordered without side frames (jamb depth must be 4” minimum).
- Outside mount standard by-pass will project 6 5⁄8” from the wall and open louver by-pass will project 9 3⁄4” from the wall.

NOTE: Shutter louvers cannot open when panels are in front of one another, unless open louver by-pass is ordered.

1. **CHOICE OF FRAME SIDES AND LOUVER**
   Check that your chosen louver will overcome any obstruction by placing the frame and panel in front of the obstructions. It is recommended that an inside mount have a minimum jamb depth of 2”. A one sided frame (top) can be ordered for this application. Indicate BP (Standard By-Pass) or OB (Open By-Pass) in the frame options section of the Order Form. If additional projection is required, request BP extension. Each extension is 3⁄4”.

2. **MEASURE INSIDE WIDTH**
   Measure in three places (top, middle, bottom) and record the smallest measurement onto an Order Form if the application is for an inside mount. For an outside mount, a minimum of 2 3⁄8” is required to be added to each side that a frame is required.

3. **CHECK FOR SQUARENESS**
   Measure on the diagonal (see Diagram B). If the diagonal measurements are not identical, an inside mount is not recommended. An alternative way to check for a perfectly square window, simply place your panel in each of the four corners. If you find the panels are not flush in all corners, the window opening is not square.

4. **ONLY IF A DIVIDER RAIL IS BEING USED**
   The measurement recorded is determined from the bottom sill to the middle of where the divider rail is to be located. One divider rail is required for panels over 66” with a maximum 66” between the middle of the divider rail and either top or bottom rail. Two divider rails are required for panels over 90” in height with a maximum 66” between any two rails.

5. **MEASURE INSIDE HEIGHT**
   Measure in three places (left, middle, right) and record the smallest measurement onto an Order Form if the application is for an inside mount. For an outside mount a minimum of 2 3⁄8” is required to be added to the top and/or bottom that a frame is required.

6. **CHOICE OF PANEL CONFIGURATION**
   Determine from pages G2 to G5. Complete the remainder of the Order Form. Sill Frames are not applicable with the By-pass Systems.

7. **ORDER VALANCE**
   Choose between the 3 1⁄2” Standard Valance or 5” Crown Valance and select the appropriate valance returns on the track system order form. See page G15-16.
1. FRAME ASSEMBLY
If this is a 2, 3 or 4 sided application, then refer to Diagram C (See page G9) for frame assembly instructions. Once the frames are assembled, installation holes are required by using a 3⁄8” drill bit. Track/Frame Spacers should be placed at the ends of any top frame in which side frames are present. The spacer is located in the frame recess. The assembly screw will pass through the spacer and into the side frame.

A) For an inside mount, drill a 3⁄8” hole through the first layer of vinyl, within the mounting area every 10” starting at each end of the frames.

B) For an outside mount, drill a 3⁄8” hole through the first layer of vinyl at the front edge of the reveal of the frame every 10”.

2. TOP FRAME INSTALLATION
A) For an inside mount, fasten the top frame to the opening, making sure it is level; shim to level if necessary.

B) For an outside mount, set the frame against the wall. Level the top and fasten the top frame to the wall with the provided installation screws.

3. WHEEL CARRIERS
Insert wheel carriers inside each aluminum track. Two carriers are assigned to each panel so check the panel configuration to determine the correct number of carriers in each track.

4. ALUMINUM TRACKS
Mount aluminum tracks to the extreme left of the opening of the frame by screwing through the pre-drilled holes in the track to the extrusion lines on the underside of the top frame (See Diagram D on page G9 and Diagram E on page G10). Make sure Track/Frame Spacers are placed between the track and the top frame at each track screw location.

5. ATTACH DOUBLE PANELS IF APPLICABLE
When two panels are to be attached, lay panels face up and side by side on the floor. Remove the two interior top jamb caps. Insert the panel joiner by sliding it into the two interior jams (See Diagram I on G14). Place the jamb caps back onto the top jambs.

6. ATTACH OPTIONAL LIGHTBLOCK BETWEEN PANELS
For Standard By-pass, an optional ¾” x ¾” mounting strip is mounted at the back of the interior edge of each front panel. If requested, Open By-pass requires (2) pieces of vertical jamb.

One piece of vertical jamb is mounted at the back of the interior edge of the front panel, while the second piece is mounted at the front interior edge of the rear panel. For either option, drill a ¼” hole starting at the top, every 20” through the first two layers of vinyl.

Screw the mounting strip or the vertical jamb to the panel and cap holes with button plugs. Refer to page G15 for illustration.

NOTE: Mounting strips and vertical jambs are 1” shorter than the panels so that there is no interference with the floor guides.

Note: For Open By-pass shutters, only a gap of ½” will remain once mounting strips have been installed.

7. HANG SHUTTERS
Push the door plates onto the adjustable nut of the wheel carriers. Lock the panels in place by rotating the plastic slide around the neck of the wheel carrier adjustable nut. To level the panels, turn the adjustable nut of the wheel carrier with the provided wrench tool.

8. SECURE SIDE FRAMES IF APPLICABLE
Mount each side frame with the mounting screws provided so that the frames are plumb to the hanging panel. Cover the 3/8” holes with the button plugs.

9. ATTACH VALANCE IF APPLICABLE
Attach valance brackets to the front of the frame using the included #8 x 1” screws, the installation holes should be pre-drilled. Once all brackets are secure, position the channel on the back of the valance so that it rests on the bracket. The valance will need to be on a 45 degree angle, with the bottom of the valance farther into the room. Rotate the valance down to a vertical orientation until locked into all brackets.

10. OPTIONAL FLOOR GUIDE(S)
Install floor guide(s) in-between each set of moving panels. The guides prevent the doors from swinging forward into the room or back into the opening. Two sizes are available depending on type of by-pass.
Diagram C – Frame Assembly

1. Insert the provided 3” screws though the top frame
2. Line up the screw through the screw ports inside the side frames (fasten tightly)
Diagram D – Inside Mount Application

NOTE: With track secured to the frame, remove every other track screw. Replace each with a #8 x 3 screw.
NOTE: With track secured to the frame, remove every other track screw. Replace each with a #8 x 3 screw.
Diagram F – Outside Mount Application

- Installation Screws
- Outside Mount Frame Support Bracket
- Standard 5” By-Pass Frame
- Valance Bracket
- Track/Frame Spacer
- Aluminum Track
- Optional 5” Crown Valance
- Wheel Carriers
- Door Bracket
- Shutter Panels
- Small Floor Guide
- Floor Guide Installation Screw
Diagram H – Frame Extension

1. The Track Frame Extension is used for By-Pass frame systems.
2. Track Frame Extension increases the projection of the shutter by ¾”.
3. Orient the extension so that it mates with the back of the frame. Use an installation screw to attach the extension to the frame, as shown below.

Open By-Pass Frame with Extension

Diagram I - Panel Joiner

The panel joiner slides into the grooves on the side of the Vertical Jamb. This joiner connects two panels so that they move as a single unit in the opening.
**Diagram J – Light Block Between Panels**

1. Orient the vertical jamb as shown (left)
2. Drill 3/8" holes every 20" from the top through the first two layers
3. Set #8 x 1" By-pass screw
4. Cap holes with button plugs

**NOTE:** Optional light block installs to the front of the rear panel(s) to prevent interference with the tilt bar.

**Diagram K - Assembly of Light Block Between Panels**

Top view - assembly of light block between Open By-Pass panels

1. Orient the vertical jamb as shown (left)
2. Drill 3/4" holes every 20" from the top through the first two layers
3. Set #8 x 1" By-pass screw
4. Cap holes with button plugs

---

**Standard or Triple By-Pass**

**Open By-Pass**
### LEVOLOR®

**BY-PASS TRACK SYSTEM ORDER FORM**

*Louvers cannot be opened when stacked*

<table>
<thead>
<tr>
<th>LINE</th>
<th>ROOM</th>
<th>TYPE</th>
<th>PANEL STYLE</th>
<th>WIDTH X HEIGHT</th>
<th>LOUVER SIZE</th>
<th>COLOR</th>
<th>CONTROL TYPE</th>
<th>MOUNT</th>
<th># OF FRAME SIDES</th>
<th>FRAME EXTENSIONS</th>
<th>DIVIDER RAIL</th>
<th>VALANCE TYPE</th>
<th>RETURNS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Example: Kitchen</td>
<td>P2BP, P3BP, P4BP, P6BP</td>
<td>Inside Mount = Smallest Opening Size</td>
<td>2-½-in.</td>
<td>White</td>
<td>Tilt Bar</td>
<td>IM=Inside Mount</td>
<td>3</td>
<td>0 1 2 3</td>
<td>Yes  or No</td>
<td>Distance Up in Inches</td>
<td>3-½-in Standard 5-in Crown None</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-½-in.</td>
<td>Ivory</td>
<td>GS=Gear Closure System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4-½-in.</td>
<td>Vanilla</td>
<td>M=Motorization</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3</td>
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</tr>
</tbody>
</table>

**REMOTE TYPE & QUANTITY (Motorized Tilt only)**
Specify remote type and quantity or 0 (zero) if not needed. Remote type and quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

<table>
<thead>
<tr>
<th>Remote Type</th>
<th>Remote Quantity</th>
</tr>
</thead>
</table>

**SPECIAL INSTRUCTIONS**

See back page for instructions.
GUIDELINES FOR FILLING OUT THE BY-PASS TRACK SYSTEM ORDER FORM

1. **LINE**
The line number is shown on all product labels to make installation easier.

2. **ROOM**
Room location where product is being installed.

3. **TYPE**
Choose the applicable shutter type.

4. **PANEL CONFIGURATION**
Choose the panel configuration and copy on to the order form.

5. **WIDTH AND HEIGHT**
Measure width and height to the nearest 1/8 in.

6. **LOUVER SIZE**
3 sizes are offered 2 1/2 in., 3 1/2 in., and 4 1/2 in.

7. **COLOR**
Choose between white, ivory, and vanilla.

8. **CONTROL TYPE**
Select between Tilt Bar, Gear Closure System, and Motorized Tilt.

**NOTE:** Motorized Tilt can be ordered with or without a tilt bar for aesthetics. If tilt bar is desired please note in special instructions. If not, the motorized default option is no tilt bar.

9. **MOUNT**
IM indicates an inside mount that can be within the opening, fully or partially recessed.
OM indicates an outside mount in which the frame is attached to the face of the wall or trim.

10. **NUMBER OF FRAME SIDES**
No selection needed.

11. **FRAME EXTENSIONS**
Extends the frame into the room for an outside mount only. The track frame extension is ¾ in. Enter the number of frame extensions required, to gain the proper amount of depth clearance based on the louver size and tilt option. 0-3 extensions are available.

12. **DIVIDER RAIL**
A divider rail adds support to the panel to prevent sagging. A divider rail is required on any shutter over 66-inches in height. A second divider rail is required for heights 90-inches or greater.

13. **VALANCE TYPE**
3 1/2 in. Standard Valance is the default for By-pass track systems. A 5-in Crown Valance is optional.

14. **VALANCE RETURN**
Valance returns can be “Square” cut if the frame and valance are mounted inside the opening. Standard returns for outside mounts are cut so they are in line with the back of the frame.

15. **REMOTE TYPE & QUANTITY** (Motorized Tilt Only)
Specify type and quantity (3-Channel or 6-Channel) or 0 (zero) if not needed
Remote quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

16. **SPECIAL INSTRUCTIONS**
Enter the special instructions that need to be added specific to the order.

**IMPORTANT!** Shutter louvers cannot open when panels are stacked in front of one another.
# TRACK SYSTEM VALANCES

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valance Diagram</td>
<td>J1</td>
</tr>
<tr>
<td>Valance Options</td>
<td>J2</td>
</tr>
<tr>
<td>Valance Installation</td>
<td>J3-4</td>
</tr>
<tr>
<td>Valance Return Options</td>
<td>J5-7</td>
</tr>
</tbody>
</table>
FEATURES AND BENEFITS
1. Two valance options available:
   • 5" Crown Valance
   • Bypass Valance (3 1/2"
2. Corner keys can be used to assist in the assembly of valance returns.
3. Valance brackets used to attach valance assembly to frame.

VALANCE RETURN OPTIONS
1. Square cut no returns.
2. Standard valance return extends to back of frame.
3. Custom valance return (provide amount to be deducted from standard valance return length).
See pages I5-7 for additional details and dimensions.
Valance Options

5” Crown Valance
Optional for all track systems

3 ½” Standard Valance
Standard for all by-pass track systems
Valance Installation

1. Attach valance brackets to the front of the frame using the included #8 x 1” bypass screws, the installation holes should be pre-drilled. Brackets should be 6” from each end of the frame and spaced no more than 18” apart.

2. Once all brackets are secure, position the channel on the back of the valance so that it rests on the bracket. The valance will need to be on a 45 degree angle (the bottom of the valance farther into the room).
3. Rotate the bottom of the valance down and back to a vertical orientation until locked into all brackets.

4. To remove the valance, use a flat head screwdriver or similar, push up on the plastic tab located at the bottom of the valance bracket. Repeat this for each bracket while holding the valance. Once all brackets are released, rotate the valance up and out to remove.
Inside Mount
Fully recessed frame - square cut valance

<table>
<thead>
<tr>
<th>By-pass Frame</th>
<th>5° Crown Valance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.125&quot;</td>
<td>1.25&quot;</td>
</tr>
<tr>
<td>3 1/2&quot; Standard Valance</td>
<td></td>
</tr>
<tr>
<td>6.25&quot;</td>
<td>6.375&quot;</td>
</tr>
<tr>
<td>5.00&quot;</td>
<td>5.00&quot;</td>
</tr>
</tbody>
</table>
Outside Mount
Standard full length valance returns

By-pass Frame

- 5.00"
- 6.25"

1.125" 3 1/2" Standard Valance

5" Crown Valance 1.25"

6.375" 5.00"
Custom Returns
Optional for IM or OM Track Systems

Note the amount to deduct for custom return length on the Eclipse Shutters Track System Order Form
<table>
<thead>
<tr>
<th>Ordering Procedure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling Out a Regular Order Form</td>
<td>L1-2</td>
</tr>
<tr>
<td>Filling Out a French Door Order Form</td>
<td>L3-4</td>
</tr>
<tr>
<td>Filling Out a By-Pass Order Form</td>
<td>L5-6</td>
</tr>
<tr>
<td>Panel Configurations</td>
<td>L7</td>
</tr>
</tbody>
</table>
### SHUTTERS ORDER FORM

<table>
<thead>
<tr>
<th>LINE</th>
<th>ROOM</th>
<th>SIZE</th>
<th>COLOR</th>
<th>MOUNT</th>
<th>CONTROL TYPE</th>
<th>LOUVER SIZE</th>
<th>HINGE</th>
<th>FRAME OPTIONS</th>
<th>FRAME CONFIG</th>
<th>TRIM FOR SILL BOTTOM</th>
<th>PANEL CONFIGURATION</th>
<th>L FRAME EXTENSIONS</th>
<th>DIVIDER RAIL</th>
<th>1ST DIVIDER RAIL LOCATION</th>
<th>2ND DIVIDER RAIL LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>White</td>
<td>IM=Inside Mount</td>
<td>OM=Outside Mount</td>
<td>2 1/2-in.</td>
<td>Color Coordinated or Stainless Steel</td>
<td>M=Mounting Strip Z=Z Frame L=L Frame D=Décor Trim Frame B=Bullnose Frame T=Trim Frame C=Casing Frame</td>
<td>4</td>
<td>Yes or No</td>
<td>P1-L, P1-R, P2-LL, P2RR, P3-LLR, P3-LRR, P4-LLRR</td>
<td>No 1</td>
<td>No 1</td>
<td>Required on shutters 66-in or taller Measure from bottom to center of divider rail</td>
<td>Required on shutters 90-in or taller Measure from bottom to center of divider rail</td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td>Ivory</td>
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<td>3 1/2-in.</td>
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<td>3</td>
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<td>Vanilla</td>
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<td>4 1/2-in.</td>
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**Example:** Kitchen Width x Height

**LINE ROOM SIZE COLOR MOUNT CONTROL TYPE LOUVER SIZE HINGE COLOR FRAME OPTIONS FRAME CONFIG TRIM FOR SILL BOTTOM PANEL CONFIGURATION L FRAME EXTENSIONS DIVIDER RAIL 1ST DIVIDER RAIL LOCATION 2ND DIVIDER RAIL LOCATION**

### REMOTE TYPE & QUANTITY (Motorized Tilt only)
Specify remote type and quantity or 0 (zero) if not needed. Remote (type and quantity) on this form will be in addition to any remote quantity ordered with any other shutter order.

<table>
<thead>
<tr>
<th>LINE</th>
<th>1ST T-POST</th>
<th>2ND T-POST</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

### SPECIAL INSTRUCTIONS

- **NOTE:** Submit French Door Form and Shutter Order Form together. See back page for instructions.
GUIDELINES FOR FILLING OUT THE SHUTTERS ORDER FORM

1. **LINE**
The line number is shown on all product labels to make installation easier.

2. **ROOM**
Indicate the room location.

3. **SIZE**
Always indicate width first, height second. Width and height should be in 1/8 in. increments. For inside mount, always use the smallest measurement and for outside mount use the largest measurement. 36 in. wide maximum panel size for single panels. 48 in. wide maximum panel size when 2 panels are bi-folded. 120 in. maximum panel height.

4. **COLOR**
Choose between white, ivory and vanilla.

5. **MOUNT**
Enter “IM” for inside mount (inside the window) or “OM” for outside mount (outside the window).

6. **CONTROL TYPE**
Select between Tilt Bar, Gear Closure System, and Motorized Tilt.

**NOTE:** Motorized Tilt can be ordered with a tilt bar for aesthetics. If tilt bar is desired please note in special instructions. If not, the motorized default option is no tilt bar.

7. **LOUVER SIZE**
3 sizes are offered 2 1/2 in., 3 1/2 in., and 4 1/2 in.

8. **HINGES**
Available in color coordinating or stainless steel. Stainless steel is recommended for high moisture environments.

9. **FRAME OPTIONS**
Indicate which frame will be used for the opening. The mounting strip, L frame, Z frame, trim frame, décor trim frame and bullnose frame are inside mount options. The L frame and casing frame are outside mount options.

10. **FRAME CONFIGURATION**
- **4-Sided (no sill):** Chosen frame style will be on all 4 sides of opening. Recommended for most windows.
- **3-Sided (3T):** Chosen frame style will be across the top and sides. For windows with a bottom sill where you do not want to drill a sill frame into the window sill. Will leave a light gap at the bottom of 3/8 in.

**NOTE:** Motorized Tilt options must be 4-sided frames.

11. **TRIM FOR SILL**
Available for the 4-sided trim, Z frame, bullnose, and décor trim frame. This option allows you to have a bottom piece of sill frame for lightblock when mounting inside your opening with an existing sill.

12. **PANEL CONFIGURATION**
This option allows you to choose how many panels you would like for your opening and how they are going to be hinged. For example, if you want one panel to open to the left, you would write P1-L. Options include: P1-L, P1-R, P2-LR, P2-LL, P2-RR, P3-LRR, P3-LRR, P4-LLRR.

13. **L FRAME EXTENSION**
L Frame extensions are used to project the shutter out and off the wall to clear anything that might interfere with louver operation like molding or crank handles. Refer to minimum Depth Clearance By Frame.

14. **DIVIDER RAIL**
The divider rail is a horizontal piece used to give you independent control of the top and bottom louver sections. A divider rail is required on any shutter over 66-inches in height. A second divider rail is required for heights 90-inches or greater.

15. **1ST DIVIDER RAIL LOCATION**
Indicate in this box the number of inches up from the bottom of the shutter to the center of the rail. If you want it centered in the shutter, you will divide the height in half and record that location.

16. **2ND DIVIDER LOCATION**
If a second divider is required, you can indicate in this box the location required. 2nd divider rail is required for heights 90-inches or greater.

**NOTE:** If two divider rails are selected for a Motorized Tilt option the middle section of louvers must operate with the top or bottom section of louvers, it cannot operate independently. Please note in special instructions preferred middle louvers operation, with the top or bottom louvers.

17. **T-POST**
Measure from the left side of the window to the center of each T-post and record the location for each T-post. Maximum of two T-posts.

18. **REMOTE TYPE & QUANTITY**
(Motorized Tilt Only)
Specify type and quantity (3-Channel or 6-Channel) or 0 (zero) if not needed.
Remote quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

19. **SPECIAL INSTRUCTIONS**
Enter the special instructions that need to be added specific to the order.

20. **SUBMIT FRENCH DOOR FORM AND SHUTTER ORDER FORM TOGETHER**

**CAUTION!** Reversing width and height measurements is the most common ordering mistake. List width first, then height.
# LEVOLOR FRENCH DOOR ORDER FORM

<table>
<thead>
<tr>
<th>LINE</th>
<th>ROOM</th>
<th>TYPE</th>
<th>HINGE STYLE*</th>
<th>WIDTH X HEIGHT</th>
<th>LOUVER SIZE</th>
<th>COLOR</th>
<th>CONTROL TYPE</th>
<th>FRAME TYPE</th>
<th># OF FRAME SIDES</th>
<th>MOLDING DEPTH</th>
<th>FRENCH DOOR CUTOUT</th>
<th>CUTOUT HEIGHT C or D</th>
<th>DIVIDER RAIL</th>
<th>HINGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>PIDF</td>
<td>(L) Left Hinge (R) Right Hinge</td>
<td>Outside Mount = Largest Opening Size</td>
<td>2-1/2-in.</td>
<td>White</td>
<td>Tilt+Tilt Bar GS=Gear Closure System M=Motorization</td>
<td>L Frame</td>
<td>4</td>
<td>Yes or No</td>
<td>Depth of molding around glass, as applicable</td>
<td>Yes</td>
<td>Distance Up in inches</td>
<td>Yes or No</td>
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<td></td>
<td></td>
<td></td>
<td>L Frame</td>
<td>4</td>
<td></td>
<td></td>
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<td></td>
<td>Yes or No</td>
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<tr>
<td>3</td>
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<td>L Frame</td>
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<td></td>
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<td>Yes or No</td>
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<td></td>
<td>L Frame</td>
<td>4</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes or No</td>
</tr>
</tbody>
</table>

**NOTE:** Submit French Door Form and Shutter Order Form together. See back page for instructions.

**Example:**

<table>
<thead>
<tr>
<th>REMOTE TYPE &amp; QUANTITY (Motorized Tilt only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify remote type and quantity or 0 (zero) if not needed. Remote (type and quantity) on this form will be in addition to any other quantity ordered with any other shutter order.</td>
</tr>
</tbody>
</table>

**Remote Type**

**Remote Quantity**

**Special Instructions**
GUIDELINES FOR FILLING OUT THE FRENCH DOOR CUTOUT ORDER FORM

1. **LINE**
The line number is shown on all product labels to make installation easier.

2. **ROOM**
Room location where product is being installed.

3. **FRENCH DOOR TYPE**
French Doors can be specified as an “FD” (P1FD).

4. **HINGE STYLE**
Select the desired hinge configuration (Hinge left-cutout right or Hinge right-cutout left).

5. **WIDTH & HEIGHT**
Measure the width in inches to the ⅛ in. 36 in. wide maximum panel width.
Measure the height in inches to the ¼ in. 120 in maximum panel height.

6. **LOUVER SIZE**
3 sizes are offered: 2 ½ in., 3 ½ in., and 4 ⅝ in.

7. **COLOR**
Choose between white, ivory, and vanilla.

8. **CONTROL TYPE**
Select between Tilt Bar, Gear Closure System and Motorized Tilt.

**NOTE:** Motorized Tilt can be ordered with or without a tilt bar for aesthetics. If tilt bar is desired please note in special instructions. If not, the motorized default option is no tilt bar.

9. **FRAME TYPE**
All French Doors come with a standard L frame.

10. **NUMBER OF FRAME SIDES**
4 sided is the only option for cutout.

11. **PROTRUDING MOLDING**
Mark YES, if there is molding around the glass that impacts the depth clearance of the louvers.

12. **MOLDING DEPTH**
Measure the depth of molding around glass, as applicable.

13. **FRENCH DOOR CUTOUT**
All French Doors include a cutout.

14. **CUTOUT HEIGHT**
Enter the distance up in inches from bottom of frame to center of where the cutout will be located.

15. **DIVIDER RAIL**
Select YES, to include a divider rail (divider rails will be centered to the cutout).

16. **HINGES**
Available in color coordinating or stainless steel. Stainless steel is recommended for high moisture environments.

17. **REMOTE TYPE & QUANTITY** (Motorized Tilt Only)
Specify type and quantity (3-channel or 6-channel) or 0 (zero) if not needed.
Remote quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

18. **SPECIAL INSTRUCTIONS**
Enter the special instructions that need to be added specific to the order.

19. **SUBMIT FRENCH DOOR FORM AND SHUTTER ORDER FORM TOGETHER**
## LEVOLOR® BY-PASS TRACK SYSTEM ORDER FORM

*Louvers cannot be opened when stacked*

<table>
<thead>
<tr>
<th>LINE</th>
<th>ROOM</th>
<th>TYPE</th>
<th>PANEL STYLE</th>
<th>WIDTH x HEIGHT</th>
<th>LOUVER SIZE</th>
<th>COLOR</th>
<th>CONTROL TYPE</th>
<th>MOUNT</th>
<th># OF FRAMESIDES</th>
<th>FRAME EXTENSIONS</th>
<th>DIVIDER RAIL</th>
<th>VALANCE TYPE</th>
<th>RETURNS</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>P2BP</td>
<td>L/R 2L/2R</td>
<td>Inside Mount = Smallest Opening Size Outside Mount = Largest Opening Size</td>
<td>2-½-in. 3-½-in. 4-½-in.</td>
<td>White Ivory Vanilla</td>
<td>Tilt=Tilt Bar</td>
<td>OM=Outside Mount</td>
<td>3</td>
<td>0 1 2 3</td>
<td>Yes or No</td>
<td>Distance Up in Inches</td>
<td>Inside Mount = Smallest Opening Size Outside Mount = Largest Opening Size</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>P3BP</td>
<td>L/R 2L/2R</td>
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</table>

### REMOTE TYPE & QUANTITY (Motorized Tilt only)
Specify remote type and quantity or 0 (zero) if not needed.
Remote (type and quantity) on this form will be in addition to any remote quantity ordered with any other shutter order.

<table>
<thead>
<tr>
<th>Remote Type</th>
<th>Remote Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

### SPECIAL INSTRUCTIONS

See back page for instructions.
GUIDELINES FOR FILLING OUT THE BY-PASS TRACK SYSTEM ORDER FORM

1 LINE
The line number is shown on all product labels to make installation easier.

2 ROOM
Room location where product is being installed.

3 TYPE
Choose the applicable shutter type.

4 PANEL CONFIGURATION
Choose the panel configuration and copy on to the order form.

5 WIDTH AND HEIGHT
Measure width and height to the nearest 1⁄8 in.

6 LOUVER SIZE
3 sizes are offered 2 1⁄2 in., 3 1⁄2 in., and 4 1⁄2 in.

7 COLOR
Choose between white, ivory, and vanilla.

8 CONTROL TYPE
Select between Tilt Bar, Gear Closure System, and Motorized Tilt.

NOTE: Motorized Tilt can be ordered with or without a tilt bar for aesthetics. If tilt bar is desired please note in special instructions. If not, the motorized default option is no tilt bar.

9 MOUNT
IM indicates an inside mount that can be within the opening, fully or partially recessed.
OM indicates an outside mount in which the frame is attached to the face of the wall or trim.

10 NUMBER OF FRAME SIDES
No selection needed.

11 FRAME EXTENSIONS
Extends the frame into the room for an outside mount only. The track frame extension is 3⁄4 in. Enter the number of frame extensions required, to gain the proper amount of depth clearance based on the louver size and tilt option. 0-3 extensions are available.

12 DIVIDER RAIL
A divider rail adds support to the panel to prevent sagging. A divider rail is required on any shutter over 66-inches in height. A second divider rail is required for heights 90-inches or greater.

13 VALANCE TYPE
3 1⁄2 in. Standard Valance is the default for By-pass track systems. A 5-in Crown Valance is optional.

14 VALANCE RETURN
Valance returns can be “Square” cut if the frame and valance are mounted inside the opening. Standard returns for outside mounts are cut so they are in line with the back of the frame.

15 REMOTE TYPE & QUANTITY (Motorized Tilt Only)
Specify type and quantity (3-Channel or 6-Channel) or 0 (zero) if not needed.
Remote quantity on this form will be in addition to any remote quantity ordered with any other shutter order.

16 SPECIAL INSTRUCTIONS
Enter the special instructions that need to be added specific to the order.

** IMPORTANT! Shutter louvers cannot open when panels are stacked in front of one another.
Types and Styles of Shutter Panel Configurations

**Single Panel**

<table>
<thead>
<tr>
<th>Type</th>
<th>Hinge Styles</th>
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</thead>
<tbody>
<tr>
<td>P1</td>
<td>L</td>
</tr>
<tr>
<td>P1</td>
<td>R</td>
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**Two Panels**

<table>
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<tr>
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<tr>
<td>P2</td>
<td>LR</td>
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<tr>
<td>P2</td>
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**Three Panels**

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**Four Panels**

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**Six Panels**

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<td>LLTLTRR</td>
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<td>LTLRTRR</td>
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**Five Panels**

**Type Hinge Styles**

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<td>P5</td>
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<tr>
<td>P5</td>
<td>LLTLTRR</td>
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**Eight Panels**

**Type Hinge Styles**

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<td>LLTTLLRRTRR</td>
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<td>P8</td>
<td>LTLRLTRLTRR</td>
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</tbody>
</table>

**Uneven Panel**

- Overall Width
- Panel 1
- Panel 2
- Panel 3
- Panel 4

**Uneven T-Post**

- Overall Width
- first T-Post
- second T-Post
- third T-Post
# INSTALLATION

<table>
<thead>
<tr>
<th>Tools Required</th>
<th>M1</th>
</tr>
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<tbody>
<tr>
<td>Panel Lock Ramp Installation</td>
<td>M2</td>
</tr>
<tr>
<td>Frame Assembly for 3 or 4 sided Frames</td>
<td>M3</td>
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<tr>
<td>T-Posts</td>
<td>M4-6</td>
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<tr>
<td>Inside Mount with L-Frame</td>
<td>M7</td>
</tr>
<tr>
<td>Inside Mount with Z, Trim, Bullnose Z, Deluxe Trim Frames</td>
<td>M8</td>
</tr>
<tr>
<td>Inside Mount/Outside Mount with Mounting Strip</td>
<td>M9</td>
</tr>
<tr>
<td>Outside Mount with Casing Frame</td>
<td>M10</td>
</tr>
<tr>
<td>Outside Mount with L-Frame</td>
<td>M11</td>
</tr>
</tbody>
</table>
Installation Tools Required

- Rechargeable, variable speed 3/8” drill
- 3/8” diameter drill bit
- 3/32” drill bit
- 3” Robertson bits of #6 (green handle #1) and #8 (red handle #2) screwdrivers
- Pan-head full thread screws are provided
- Hinge shims (available if requested for no-frame applications only)
- Slot screwdriver
- Non-marring hammer with 1” head for tapping frames into position
- Jig saw, hack saw, Dremmel tool or X-acto knife if cut-outs are required
- Loctite Super Bonder® 414 Instant Adhesive or contact cement required for an outside mount L-frame
- Dap for mitered corners and gaps between the frames and window jambs
PROCEDURE

1. The Panel Lock Cap Assembly will be installed during fabrication.

2. Once the shutter and panels have been installed, make a mark on the window sill with a pencil to show where the center of the Panel Lock Plunger is located, as well as the front of the ramp.

3. Open the panel(s).

4. Place the Panel Lock Ramp on the sill so that it aligns with the indicator lines.

5. Mark the center of each screw hole of each Ramp.

6. Remove the Ramps and drill a pilot hole for each screw using a \( \frac{3}{32} \)" drill bit.

7. Place the Ramp back on the sill and set the screws. (Repeat as necessary)

8. Operate the panel(s) to ensure proper function and closure.

9. The Panel Lock Plunger can be adjusted by using a flat head screwdriver. Push in on the plunger and rotate clockwise to thread the plunger into the panel or rotate the plunger counterclockwise to extend the plunger.
Frame Assembly for 3 or 4 sided Frames

**BONDING** (for L-frame outside mount only)
- Apply Super Bonder® 414 (or Contact Cement) to outside surface of corner key.
- Slide frame over corner key. Hold firmly until it is set (10 to 20 seconds).

**ASSEMBLY**
- Lay side frames flat beside the panels, so that the panel hinges are above the frame hinges.
- Insert the plastic corner keys on the top and bottom frames first.
- Slide the top and bottom frames into the side frames (Use a small amount of Loctite only after it is determined that the frames match. It will be impossible to detach the corners after they have set.)
- If minor gaps appear, use Dap to seal the corners.
- For Casing Frames, Trim Frames, and Deluxe Trim Frames, install a 90-degree metal bracket at the back of the frames for a tight, and more secure assembly.
- If extensions are used:
  a) L-Frame Extension slides onto the back of the L-Frame.
  b) Casing Frame Extension is screwed to the frame before installation.

**NOTE:** For Casing, Bullnose Z, Deluxe Trim, and Trim frames, in addition to the corner key, install a 2 1/2” x 2 1/2” x 1/2” (90°) metal bracket for a more secure corner assembly (do not glue).
Installation

T-Posts

1. T-POSTS
   • T-Posts are used as a divider to hinge single or bi-fold panels when openings are too wide to hinge panels from the side. T-Posts can be placed directly in front of any existing window divider.

2. IF MOUNTING DIRECTLY TO THE WINDOW MULLIONS
   • Drill 3/8” holes through the first layer of poly material at the front face of the T-Post. Start approximately 2” from the top and drill hole approximately every 10-15 inches.
   • Secure the T-Post by screwing in the top and bottom holes.
   • Hang panels to the T-Post or hang panels side-by-side against T-Post to ensure even sight lines and all is level.
   • Screw in the remainder of the holes.
   • Cap with button plugs.

3. IF MOUNTING USING L-BRACKETS
   • Attach L-Brackets to the T-Posts. Ensure that brackets are placed at the back side of the T-Post so that the bracket screw goes through the screw post in the T-Post. The stop hole is positioned at the top left and bottom right side.
   • Screw brackets into position on top right and bottom left side, centering the screw into the L-Bracket. This will allow some play for leveling purposes.
   • Hang panels and adjust T-Post positioning until sight lines and leveling is achieved.
   • Lock T-Post into position by setting screws through the stop holes in the L-Bracket.

4. IF MOUNTING USING ALIGNMENT BLOCKS
   • Stack two T-Post Alignment Blocks.
   • Position on the frame so that the holes in the blocks are lined up with the pre-drilled holes in the bottom frame.
   • Using #6 x 1 3/4” screws, attach the blocks to the frame.
   • Repeat for the top frame.
   • Assemble frame.
   • After the frame is installed and the position of the T-Post is determined, set a #8 x 1 1/2” installation screw horizontally through the pre-drilled hole in the side of the T-Post at the bottom.
   • Repeat the above step and cover holes with button plugs.
   • See pages J8 and J9 for additional details.
T-Post Installation - T-Post Alignment Block with 3-sided Frame Mounting on Window Sill

1. ATTACH T-POST BLOCKS TO FRAME
   - Stack two T-Post Alignment Blocks, both with the tabs facing down. (See page J9)
   - Lay out the top frame so that the light block is facing up.
   - Two holes have been pre-drilled diagonally in the face of the top frame at each T-Post location.
   - Position the stacked blocks on the light block portion of the frame so that the holes in the block align with the pre-drilled holes in the frame. (The tabs will hang off the edge of the light block.)
   - Using (2) #6 x 1 ¾” T-Post block screws, attach the blocks to the frame. Do not completely tighten the screws down, only make them snug. This will allow some side to side adjustment of the T-Post.

2. ASSEMBLE FRAME AND T-POST
   - Insert the corner keys into the top frame.
   - Attach the left side frame to the top frame.
   - Attach the right side frame to the top frame.
   - Attach T-Post to the top frame by sliding the T-Post over the blocks on the top frame.
   - If aluminum reinforcement was requested for the T-Post, make sure it is positioned properly within the T-Post.

3. BEGIN INSTALLING THE SHUTTER
   - Begin by installing the shutter as a standard 3-sided frame but install only the top screw on each side frame and one bottom screw if necessary.
   - Test the fit and position of the panels to determine the location of the T-Post.
   - Mark the front and center of the T-Post with a pencil on the sill.
   - Mark the back of the T-Post with a pencil on the sill.
   - Remove the panels and the frame.
   - Stack two T-Post Alignment Blocks, one with the tab facing up and one with the tab facing down. (as pictured below)
   - Attach two stacked T-Post blocks to the sill so that the back of the “trough” of the block is 1 ¼” from the front center mark of the T-Post.
   - Use (2) #6 x 1 ¾” T-Post Block Screws to attach the blocks to the sill. Do not fully tighten the screws - they should only be snug.
   - Set the assembled frame back in the opening making sure the bottom of the T-Post slides over the blocks on the sill.
   - Finish installing the frame and then hang the panels.

4. ALIGN T-POST AND SECURE
   - Determine the side to side position of the T-Post, then drive a #8 x 1 ½” installation screw horizontally through the hole in the end of the T-Post.
   - The screw will then pass between the (2) T-Post Blocks, thus locking the T-Post into position.
   - Repeat for the top of the T-Post and cap installation holes with button covers.
1. ATTACH T-POST BLOCKS TO FRAME
   - Stack two T-Post Alignment Blocks, both with the tabs facing down.
   - Lay out the top frame so that the light block is facing up.
   - Two holes have been pre-drilled diagonally in the face of the top frame at each T-Post location.
   - Position the stacked blocks on the light block portion of the frame so that the holes in the block align with the pre-drilled holes in the frame. (The tabs will hang off the edge of the light block.)
   - Using (2) #6 x 1 3⁄4” T-Post block screws, attach the blocks to the frame. Do not completely tighten the screws down, only make them snug. This will allow some side to side adjustment of the T-Post.
   - Repeat the above steps for the top frame.

2. ASSEMBLE FRAME AND T-POST
   - Insert the corner keys into the top frame.
   - Attach the left side frame to the top frame.
   - Attach the right side frame to the top frame.
   - Attach T-Post to the top frame by sliding the T-Post over the blocks on the bottom frame.
   - If aluminum reinforcement was requested for the T-Post, make sure it is positioned properly within the T-Post.
   - Attach the top frame. Make sure the corner keys in each end of the top frame align with the corner key cavities in the side frames. At the same time make sure the T-Post is positioned on the blocks attached to the top frame.

3. INSTALL THE SHUTTER
   - Follow standard instructions for installing the frame.
   - Test the fit and position of the panels to determine the location of the T-Post.
   - Mark the position of the T-Post on the frame with a pencil.
   - Remove the panels.

4. ALIGN T-POST AND SECURE
   - With the bottom of the TPost in the desired position, drive a #8 x 1 ½” installation screw horizontally through the hole in the end of the TPost.
   - The screw will then pass between the (2) TPost Blocks, thus locking the TPost into position.
   - Repeat for the top of the TPost and cap installation holes with button covers.
Inside Mount with L-Frame

1. **ASSEMBLE FRAMES**
   - See page M6.

2. **PLACE FRAME IN OPENING**
   - The top part of the frame is indicated by a greater amount of distance from the top of the top hinge to the edge of the frame. The label will indicate left and right side.

3. **FASTEN FRAME**
   - Most frames have pre-drilled holes placed for ease of installation.
   - Insert a screw in both the left and right top side frame holes. Center the frame in the opening, then drill the screws into the jambs. If the screw is not in enough, the opening will be smaller than ordered. If the screw is in too far, the opening will be larger than ordered.

4. **HANG PANELS**
   - With upper and lower hinge pins only.

5. **SQUARE/LEVEL PANELS TO THE OPENING**
   - Move bottom frame left or right until the panels are level. If this does not work, then:
   - Move left frame up or down until the panels are level. If this does not work, then:
   - Move right frame up or down until the panels are level.
   - When the panels are level within the frame, hold bottom frame in position and place a screw in the middle bottom frame hole.

6. **FASTEN REMAINING SCREWS**
   - Insert screws in the remaining holes and check to ensure panels are level after every screw has been drilled into position.

7. **INSTALL PLATES OR RAMPS**
   - (if applicable)
   - See page M2 for instructions.

8. **CAP INSTALLATION HOLES**
   - Once all screws have been installed and panels checked for levelness, cap all holes with the provided button plugs.

9. **CLOSE ANY GAPS**
   - With either L-Frame Cover Strip, which is glued to the front face of the frame, or with Dap.
Inside Mount with Z, Bullnose Z, Trim, or Deluxe Trim Frames

1. ASSEMBLE FRAMES
   • See page M6.

2. PLACE FRAME IN OPENING
   • The top part of the frame is indicated by a greater amount of distance from the top of the top hinge to the edge of the frame. The label will indicate left and right side.

3. FASTEN FRAME
   • Most frames have pre-drilled holes placed for ease of installation.
   • Insert a screw in both the left and right top side frame holes. Center the frame in the opening, then drill the screws into the jambs. If the screw is not in enough, the opening will be smaller than ordered. If the screw is in too far, the opening will be larger than ordered.

4. HANG PANELS
   • With upper and lower hinge pins only.

5. SQUARE/LEVEL PANELS TO THE OPENING
   • Move bottom frame left or right until the panels are level (A). If this does not work, then:
   • Move left frame up or down until the panels are level (B). If this does not work, then:
   • Move right frame up or down until the panels are level (C).
   • When the panels are level within the frame, hold bottom frame in position and place a screw in the middle bottom frame hole.

6. FASTEN REMAINING SCREWS
   • Insert screws in the remaining holes and check to ensure panels are level after every screw has been drilled into position.

7. INSTALL PLATES OR RAMPS (if applicable)
   • See page M2 for instructions.

8. CAP INSTALLATION HOLES
   • Once all screws have been installed and panels checked for levelness, cap all holes with the provided button plugs.

9. CLOSE ANY GAPS
   • For gaps that may occur at frame corners or around frame, apply Dap as needed.

Squareness Adjustments

Fastening
Inside Mount and Outside Mount with Mounting Strip

1. **DRILL INSTALLATION HOLES**
   - ¾” diameter holes must be drilled at each hinge.

2. **PLACE SIDE FRAME IN OPENING**
   - The top part of the frame is indicated by a greater amount of distance from the top of the top hinge to the edge of the frame. The label will indicate left and right side.

3. **FASTEN SIDE FRAME**
   - Insert a screw inside the top holes first, followed by the bottom ones, keeping the panels plumb.

4. **HANG PANELS**
   - With upper and lower hinge pins only.

5. **SQUARE/LEVEL PANELS TO THE OPENING**
   - Adjust the bent-leaf hinges, if necessary, by loosening the hinge screws and moving the hinge left or right.
   - Retighten hinge screws once level.

6. **FASTEN REMAINING SCREWS**
   - Insert screws in the remaining holes and check to ensure panels are level after every screw has been screwed into position.

7. **FASTEN TOP AND BOTTOM FRAME**
   - Drill ¾” hole.
   - Center and insert screws.

8. **CAP INSTALLATION HOLES**
   - Once all screws have been installed and panels checked for levelness, cap all holes with the provided button plugs.

9. **INSTALL PLATES**
   - See page M4 for instructions.
Installation

**Outside Mount with Casing Frame**

1. **ASSEMBLE FRAMES**
   • See page M6.

2. **HOLD FRAME ON OPENING**
   • The top part of the frame is indicated by a greater amount of distance from the top of the top hinge to the edge of the frame. The label will indicate left and right side.

3. **FASTEN FRAME**
   • Most frames have pre-drilled holes placed for ease of installation.
   • Insert a screw in both the left and right top side frame holes as level as possible.

4. **HANG PANELS**
   • With upper and lower hinge pins only.

5. **SQUARE/LEVEL PANELS TO THE OPENING**
   • Move bottom frame left or right until the panels are level (A). If this does not work, then:
   • Move left frame up or down until the panels are level (B). If this does not work, then:
   • Move right frame up or down until the panels are level (C).
   • When the panels are level within the frame, hold bottom frame in position and place a screw in the middle bottom frame hole.

6. **FASTEN REMAINING SCREWS**
   • Insert screws in the remaining holes and check to ensure panels are level after every screw has been screwed into position.

7. **INSTALL PLATES OR RAMPS**
   (if applicable)
   • See page M3 for instructions.

8. **CAP INSTALLATION HOLES**
   • Once all screws have been installed and panels checked for levelness, cap all holes with the provided button plugs.

9. **CLOSE ANY GAPS**
   • For gaps that may occur at frame corners or around frame, apply Dap as needed.

---

**Fastening**

- Wall
- Screw
- Window

Optional Cover Strip (Use only if frame is flush with opening.)

**Squareness Adjustments**

- Moves Left Panel Up
- Moves Right Panel Up
- Moves Left Panel Down
- Moves Right Panel Down
- Hole Locations
- Hinges
- Left
- Right
- Moves Left Panel Down and Right Panel Up
- Moves Left Panel Up and Right Panel Down
**Outside Mount with L-Frame**

1. **ASSEMBLE FRAMES**
   - See page M6.
   - Corner key for outside mount L-Frames must be glued in place.

2. **HOLD FRAME ON OPENING**
   - The top part of the frame is indicated by a greater amount of distance from the top of the top hinge to the edge of the frame. The label will indicate left and right side.

3. **FASTEN FRAME**
   - Most frames have pre-drilled holes placed for ease of installation.
   - Insert a screw in both the left and right top side frame holes as level as possible.

4. **HANG PANELS**
   - With upper and lower hinge pins only.

5. **SQUARE/LEVEL PANELS TO THE OPENING**
   - Move bottom frame left or right until the panels are level (A). If this does not work, then:
     - Move left frame up or down until the panels are level (B). If this does not work, then:
     - Move right frame up or down until the panels are level (C).
   - When the panels are level within the frame, hold bottom frame in position and place a screw in the middle bottom frame hole.

6. **FASTEN REMAINING SCREWS**
   - Insert screws in the remaining holes and check to ensure panels are level after every screw has been screwed into position.

7. **INSTALL OR RAMPS**
   (if applicable)
   - See page M2 for instructions.

8. **CAP INSTALLATION HOLES**
   - Once all screws have been installed and panels checked for levelness, cap all holes with the provided button plugs.

9. **CLOSE ANY GAPS**
   - For gaps that may occur at frame corners or around frame, apply Dap as needed.

---

**Squareness Adjustments**

- **A**: Moves Left Panel Down and Right Panel Up
- **B**: Moves Left Panel Up and Right Panel Down
- **C**: Moves Right Panel Up and Left Panel Down

**Fastening**

- **Wall**: Pre Drilled 3/8” Diameter Hole
- **Window**: Wall

---

**LEVLOR SHUTTERS M11**
## GENERAL INFORMATION AND TROUBLESHOOTING

### General Information

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General Information

Shutter Panel Parts Diagram

- Vertical Jamb Cap
- Light Block
- Hinge
- Tilt Bar Cap
- Tilt Bar Connectors
- Tilt Bar
- Vertical Jamb
- Panel Lock
- Interlock
- Tension Rod Insert
- Louver Cap
- Louver
- Connector Groove (Notch)
- #8 x 3” Assembly Screws
- Divider Rail
- Bottom Rail
- #8 x 3” Assembly Screws

Top Rail
Divider Rail
Bottom Rail
Two Part Hinges

Pin is removable.

Top Leaf is always attached to the panels being supported.

Bottom leaf attached to frames, T-post, or supporting panels.

Available colors: White (007), Ivory (0008), or Stainless Steel

NOTE: All panels, frames and T-Posts are pre-hinged. On inside mounts without frames, the bottom hinge leaf must be installed.
Panels won’t stay closed!

Check panel lock.
Check to ensure that the panel lock plunger is seated properly in the panel lock ramp. Typical situations that could prevent this from seating properly are:

1. The panel lock plunger is too far inside the panel. Open the panel to access the panel lock plunger located at either end of the panel. Using a flathead screwdriver, push in on the plunger, then rotate 1/2 turn. Release the plunger, close panel and check closure. Repeat until panel closes properly.

2. The plunger does not sit in the “dip” in the ramp. Using a pencil, mark the center of the plunger on the frame. Open the panel to access the ramp. Remove screws and relocate ramp by aligning the center of the ramp with the mark on the frame. The back of the ramp will sit against the light block portion of the frame. Note: Previous screw holes may need to be capped or filled with Dap.

3. Check plunger and jamb cap alignment. The plunger is designed to lock into grooves on the jamb cap to prevent unwanted rotation. If they are not aligned, the plunger will sit inside the cap. To adjust, open the panel to access the panel lock plunger. Using a flathead screwdriver, rotate the plunger until the plunger and cap are in proper alignment. The plunger should now extend beyond the panel and make contact with the ramp.
Panels won’t stay closed!

Check panel load.
Load is created when the installation of a panel is not plumb. If installed out of plumb, there is pressure put on the vertical jamb, which forces the door to open with a spring back effect. If the load is excessive, there is a possibility the louvers will be difficult to close. Adjusting the load can be resolved by one of the following ways:

1. If load is detected with no frame, then shims will be required to plumb the panel installation. Start by focusing on the top and bottom hinge only. Remove all other hinge pins. Shim the top or the bottom hinge on the window jamb until the panel closes without springing back and the louvers operate without resistance. Then concentrate on shimming one hinge at a time testing for spring back and louver operation.

2. If load is detected with frame applications, then adjustments are done by tightening or loosening the installation screws on the frame. Do not use shims. Start by removing all the installation screws except for the top. Re-install the bottom installation screw until there is no load. Continue with all other installation screws, one at a time, while checking for load.

Check for obstructions.
If something is stopping the panel from closing, it is called an obstruction. Please check for the following possible obstructions:

1. Window cranks are usually located on the bottom sill. If panel is hitting the crank, there are a number of possible solutions. Take the crank off the rotator and see if the panel is still obstructed. A small hole in the bottom rail may be cut out so that the small head of the crank will fit inside the panel rail. For panels without frame, an extension hinge may be used to bring the panel into the room an extra 5/8”. For panels with frame, a build out may be required behind the frame.

2. Window locks are usually located on the vertical sides of the window to lock the window. If the lock is in the way of the panel, extend the panel into the room as discussed in the above situation.

3. Patio door handles typically create obstruction with louvers opening. If they stop the panels from closing, the product needs to be built out.

4. Bowed jambs or sills may stop a panel from closing, if the narrowest measurement was not taken in the first place. Double check inside measurements versus the measurements ordered and received to ensure the proper application.

Check for a twisted panel.
There are times when the panel is received twisted. This can occur when something was leaned against or put on top of the panel prior to installation. It can also occur if panels have been stored in an extremely hot location. An advantage of our composite material is that it allows a simple tweaking procedure to put the panel back to its original state. To tweak a panel, place a support hand in the middle of the outside jamb of the panel. Take your other hand and place it on either the top or bottom of the panel. Apply pressure to either the top or bottom (like bending it back into position) until the panel stays closed.
Panels are too tight!

Ensure the panel width is correct.
If a panel is made or ordered too wide then it can be cut down to fit. To determine a manufacturing or ordering error, check the measurement of the panel versus the measurement on the label. If the label measurements are correct then measure the inside width of the opening in three locations to verify minimum opening width was ordered.

Ensure the frame width is correct.
If the frame is manufactured too small, the panels will be too tight. To find out if the frames are narrow, measure the back installation part of the frame. To determine if the deduction was correct, check with LEVOLOR® Customer Service for specific deductions.

Ensure the frame is installed properly.
When a frame is installed as an inside mount, the installation screws initially draw the frame inside the opening. As the screw is driven towards the frame, it draws the frame towards the window frame. To check if the installation screw has been drilled in enough, simply measure the top or bottom width and compare it to the a width where the panel looks to be too wide. If the frames are not assembled correctly, they may cause the inside opening of the frame to seem too narrow hence making the panels too tight.

Is panel installed in the correct opening?
When a number of windows are of similar width, panels can be placed into the wrong opening or with the incorrect panel grouping. Check the labels to ensure they correspond with the opening, as well as the instructions given by the Order Form.
Louvers are too tight!

**Check louver widths.**
There should be some play between louvers and vertical jambs. Move the louvers side to side. If there are some louvers that appear to be tighter, measure a variety of louvers to ensure they are all the same width. If not, then contact LEVOLOR® Customer Service.

**Check rail widths.**
Measure all horizontals rails including any divider rails to ensure that all are exactly the same width.

**Have rails been over tightened?**
If there is less play near any rail and the louver widths have been checked for deficiencies, then there is a possibility the screws that attach the vertical jambs to the rails have been over tightened. To loosen the screws, remove a jamb cap and slide the light block out. This will expose the assembly holes. Use a # 8 Robertson drill bit to release the tightness.

**Check for panel load.**
Load is created when the installation of a panel is not plumb. If installed out of plumb, there is pressure put on the vertical jamb, which forces the door to open with a spring back effect. If the load is excessive, there will be a possibility that the louvers will be difficult to close. Adjusting the load can be resolved by one of the following ways:

1. If load is detected with no frame, shims will be required to plumb the panel installation. Start by focusing on the top and bottom hinge only. Remove all other hinge pins. Shim the top or the bottom hinge on the window jamb until the panel closes without springing back and the louvers operate without resistance. Then concentrate on shimming the remaining hinges while testing for spring back and louver operation.

2. If load is detected with frame applications, the adjustments are done by tightening or loosening the installation screws on the frame. Do not use shims. Start by removing all the installation screws except for the top. Re-install the bottom installation screw until there is no load. Continue with all other installation screws, one at a time, while checking for load.
TROUBLESHOOTING

Louvers are warped!

Check tolerances.

Although a product is made within specifications, the process of fabrication can result in a slight variance of tolerances.

1. Through the fabrication process, the holes in the vertical jamb have a tolerance of \( \frac{1}{100} \) of an inch. While this may not seem to be much, it may cause slight variations in light penetration when the louvers are closed, as the louvers would overlap slightly in different locations.

2. The product is manufactured as a window covering that offers light control. While the product is extruded with reinforcement and additional louver support is provided at specified widths, the product will not overcome the natural effects of gravity and heat. Gravity will have a slight effect the wider the panel. Temperature change will naturally expand and contract the poly material. The product should never have a variation on the level of more than \( \frac{1}{16} \) “.

3. While shutters are designed to be room darkening, they are not designed to be blackout.
Panels are sagging!

**Check divider rail requirements.**
LEVOLOR® will make products up to 66” high without the need of divider rail support. If the panel is over 66” high, one divider rail is required and if the panel is over 90” high a second divider rail is necessary. If two divider rails are required, there cannot be over 50” between them. There cannot be 50” between any divider rail and head/bottom rail.

**Check for jamb reinforcement.**
Panel jambs are reinforced with either a 6” or 26” support. Panels over 20” wide require 6” supports and panel over 60” in length will require 26” supports. Check hinge side only. Lack of support requires repair.

**Check the plumb of the installation.**
If the vertical jambs are not plumb, the panels can appear to be sagging.

1. Measure the top width and the bottom width to see if there is any variation. If the variation is wider at the bottom, the distance has to be made the same as the top.
2. If the top and bottom widths are the same, check the diagonal. If uneven, an adjustment to the plumb is required to assist in leveling the panel.
Louvres are not working properly!

**Replacing Damaged Tilt Bar Connectors**

1. Remove tilt bar cap. It may be tight, so use a sharp object (e.g., screwdriver).
2. Slide tilt bar off connectors.
3. Remove broken connector(s).
4. Replace connector in slat groove by holding the louver and snapping the new connector into the T-shaped notch in the louver.

**NOTE:** replace connectors with similar length piece.

5. Slide tilt bar over connectors and replace cap. (New cap may be required).

**NOTE:** It is possible to re-insert the tilt bar connectors without damage. Simply hold the louver, place the connector in the notch and press firmly. It is not necessary to remove the tilt bar.
Louvres are not working properly!

Replacing New Tilt Bar Connectors

1. Remove tilt bar completely.
2. Using a pair of pliers, grab hold of the damaged connector.
3. Bend and/or twist the connector until it is removed from the tilt bar.
4. Set a new connector in the vacant hole.
5. Using the pliers, hold the connector as close to the base as possible.
6. Using a mallet, strike the pliers near the connector to fully seat it in the tilt bar.

NOTE: This process can be difficult, so please use caution to prevent damage and/or injury.
Troubleshooting

Louvers are discoloring!

Check for residue build-up.
The Poly material will not discolor and is warranted not to. Any situation of discoloration is a direct result of residue from a cleaner or natural build-up (smoke, dust or oil furnace). This product should be cleaned only with soap and water or a recommended vinyl cleaner. To prove discoloration is a result of build-up, an abrasive cleaner should be enough to take any build-up off the panel. If it is felt that the panels are discolored and warranted to be repaired or remade, the panels should be sent to our laboratory for analysis. Any costs related to the tests for non-warranty issues will be the responsibility of the consumer.
# MOTORIZED SHUTTERS

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**FCC Information**

U.S. Radio Frequency FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
### Specifications

<table>
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<tr>
<th>Type</th>
<th>Minimum Width</th>
<th>Maximum Width</th>
<th>Minimum Height</th>
<th>Maximum Height</th>
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Specifications for LEVOLOR shutters are not flexible and will not be waived.

- All motorized shutters require 4” top and bottom rails
- Shutters with two divider rails can be motorized but the middle section will be linked to either the bottom section or the top section (make sure to note this on the order form)
- Shutters with more than 2 panels, with or without T Posts, can be motorized, but only 2 panels can be operated with a single motor
- Panels separated by a T Post cannot be used with the panel connector option
- Do not install LEVOLOR Motorized shutters where there is direct contact with moisture (ie: inside a shower)
- The manual control button is located on the back side of the panel, so it is critical to be able to access the rear of the panel(s) to complete the remote setup
- Battery access is also located on the back side of the panel(s) - when the batteries need to be changed, it will be necessary to open the panel and remove the battery cover to change the batteries
- Eight AA alkaline batteries required for the battery wand in the panel
- Two AAA alkaline batteries required in the remote

**NOTE:** Louver rotation speed or rotation alignment - there may be some variation in the speed at which the louvers rotate from section to section or panel to panel. Likewise, there may be some slight mis-alignment of the louvers in different panels or sections as they rotate to the desired position.

**NOTE:** Shutters with two divider rails can be motorized, but the middle section will be linked to either the bottom section or the top section. Make sure to note this on the order form.
The default motor location is in the bottom rail. If there are one or two divider rails, then there is a motor in both the bottom and top rails.

**Standard Shutter**

- P1 L or R No divider rail – 1 motor located in bottom rail
- P1 L or R One divider rail – 2 motors, 1 located in bottom rail and 1 located in the top rail
- P1 L or R Two divider rails – 2 motors, 1 located in bottom rail and 1 located in the top rail
- P2 LR No divider rail – 1 motor located in bottom rail of left panel
- P2 LR One divider rail – 2 motors, 1 located in bottom rail and 1 located in the top rail of the left panel
- P2 LR Two divider rails – 2 motors, 1 located in bottom rail and 1 located in the top rail of the left panel
- P2 LL No divider rail – 1 motor located in bottom rail of the left panel
- P2 LL One divider rail – 2 motors, 1 located in bottom rail and 1 located in the top rail of the left panel
- P2 LL Two divider rails – 2 motors, 1 located in bottom rail and 1 located in the top rail of the left panel
- P2 RR No divider rail – 1 motor located in bottom rail of the right panel
- P2 RR One divider rail – 2 motors, 1 located in bottom rail and 1 located in the top rail of the right panel
- P2 RR Two divider rails – 2 motors, 1 located in bottom rail and 1 located in the top rail of the right panel

P1FD shutters will have the 1 or 2 motors located on the hinge side of the panel.

**By-Pass Shutter**

Individual panels will include motors at the bottom and/or top of the panel. Joined panels will be hinged in the same manner as bi-folding panels. This will allow the panels to be joined together and utilize the panel connector.
Measuring and Clearances

Measuring

Measuring for shutters with LEVOLOR motorized is the same process as other shutters. It is, however, more critical to review the opening for potential obstructions and out of square. Please refer to the appropriate section of the manual for additional details based on the type of shutter ordering.

- Section E - measuring for Standard shutters
- Section G - measuring for French Door shutters
- Section H – measuring for Standard By-Pass shutters

Depth Clearances

Depth clearances are critical for shutters with motorization. Even slight interference with the window, window frame, cranks, etc. can interfere with the operation of the LEVOLOR system. Please refer to the appropriate section of the manual for depth clearance charts.

- Section C – operating and depth clearances for Standard shutters
- Section G – depth clearance for French Door Shutters
- Section H – depth clearance for Standard and Open By-pass shutters
Ordering LEVOLOR® Shutters with motorization

When ordering shutters with LEVOLOR motorization, use the appropriate order form that includes the motorization option.

**Standard Available Options**

1. Available with all louver sizes
2. Available with all frame types (four-sided frame only)
3. Available with French Door cutouts
4. Available with Bypass track systems (select 1, 3 or 4-sided frame)
5. Available with none, one or two divider rails
6. 4” Beaded Rail Only
7. Panel Lock Only (No magnets)
8. Standard closure for LR panels is Left over Right
   (Right over Left must be noted in special instruction – closure for motorized shutters cannot be changed in the field)

**Motorization orders require the following information:**

1. Tilt options:
   - Tilt Bar with motorization
   - Gear with motorization
2. Shutters with two divider rails will only include two motors, not three. The center section must be connected to either the top or bottom section.
3. Select the number of remotes. One remote per room is recommended.

<table>
<thead>
<tr>
<th>2 DIVIDER RAILS/MOTORIZATION</th>
<th>MOTORIZATION REMOTES</th>
<th>MOTORIZATION EXCEPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line #</td>
<td>Distance Up (in inches)</td>
<td>Link Middle Section to Top or Bottom</td>
</tr>
</tbody>
</table>

Left over Right closure

Right over Left closure
Installation of Motorized Shutters

Installation of shutters with motorization does not differ from Standard shutters, By-pass shutters, or French Door shutters with traditional front tilt bar or gear system. The main concern is to make sure that panels joined by the panel connector (any shutter with a LR, LL or RR configuration) are installed evenly. The panel connector must make full contact to work properly. If the shutters are not installed correctly, the motor panel will operate, and the non-motor panel will incur lag in louver rotation or fail to operate. For additional information on installation, refer to the following sections.

- Section G – installation for French Door shutters
- Section H – installation for Standard By-Pass shutters
- Section M – installation for Standard framed shutters

Panel connector engaged correctly

Panel connector not engaged - too much gap between panels

Panel connector not engaged - panels not aligned vertically
**Battery Assembly Installation**

1. Lay the battery cover on a flat surface, face down with the contoured rib on the left.
2. Orient the battery wand so the contoured end is on the left, the flat end is on the right and the clear window is facing down.

3. Place the battery wand into the cover in the flat position.
4. Rotate the battery wand forward so that it snaps in behind the two vertical walls.

5. Plug the motor wire into the battery wand.
6. Place the battery assembly in the routed hole in the rail.
   a. Make sure the wire is in the rail.
   b. The “lock” symbol on the face of the battery cover will be nearest the program button side of the rail.
   c. There are four connection points, once one is aligned properly, all will be aligned.
   d. Align the gap between the “ramp” detail and the “locking” detail of the cover with the “tabs” in the rail.
   e. Slide the battery cover in the direction to lock, as indicated on the battery cover until it locks into place.
Shutter Battery Replacement

Replace batteries

1. Open the shutter panel to access the battery cover(s)
2. Slide the battery cover to unlock (slide towards the side of the panel with the program button), as indicated on the face of the battery cover, then rotate the battery cover with battery wand towards you
3. Disconnect the motor wire
4. Remove the battery wand from the battery cover
5. Pinch the tabs at the contoured end of the battery wand to release the end cap
6. Remove batteries
7. Install new batteries per the diagram on the clear housing
8. Reinstall end cap of battery wand
9. Follow battery assembly installation instructions
10. Slide the battery cover to lock (slide away from the side of the panel with the program button), as indicated on the face of the battery cover

NOTE: The above illustrations are of a right hinge panel with a motor in the bottom rail, the cover will slide in the opposite direction on a left hinge panel
Programming
1. Check batteries in remote and make sure they are oriented correctly
2. Check that batteries are installed into wand correctly
3. Verify battery wand is plugged into motor correctly

Troubleshooting LEVOLOR Motorized Shutters
If you are experiencing issues with your LEVOLOR Shutters, listed below are some suggestions to review:

1. Frame Installation – You must keep the corners tight to avoid any problems with functionality. Use L-Brackets on Trim, Bullnose, Z, L, Decor trim, and Casing Frame to prevent separation. L Frame and Z frame must have corners glued during assembly to prevent corner separation.

2. Louvers Do Not Rotate Fully – Make sure there are no obstructions in the louver section. Rotate louvers manually to determine if obstructions are preventing movement. Verify the louvers are not too tight. There should be some side to side movement of the louvers between the jambs.

3. Panel Connector – The Panel Connector must line up evenly and connect to one another. Excessive gaps between panels cannot exist. Verify the frames are square by measuring diagonally. Check the squareness of the shutters by measuring the width on the top and bottom inside of frame. If they are not the same adjust the installation of frames. Also, make sure the installation screws of the side frames have not been overtightened causing excessive gaps between panels.

4. Louver rotation speed or rotation alignment – There may be some variation in the speed at which the louvers rotate from section to section or panel to panel. Likewise, there may be some slight mis-alignment of the louvers in different panels or sections as they rotate to a desired position.
## Program Summary

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<td><strong>Louvers</strong></td>
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<td>Z Frame</td>
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<td>Mounting Strip</td>
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