

HunterDouglas

Installation • Operation • Care



Palm Beach™ Polysatin Shutters

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Contact a Customer Service representative at
1-800-727-8953.



Hunter Douglas Palm Beach™ polysatin shutters are built using the highest quality materials. When properly installed, these shutters will provide a lifetime of beauty and performance.

IMPORTANT: These installation instructions are intended for professional installers who have been certified after attending Hunter Douglas shutter training.

Installation Overview

Panel shutters come in many configurations — individually hinged, bi-fold panels, with and without T-posts, track systems comprised of from one to many panels, and with a variety of frames for inside or outside mounting.

Whatever the configuration, installation procedures are basically the same. The frame is assembled and fastened to the window at two points. Then the shutter panels are individually installed and racked, during which time frame attachment is completed. Duracatch™ lock adjustment or magnet mounting, caulking and other finish work complete the installation.

Unpacking

Carefully unpack the shutters. The package will include:

- Shutter panels
- Disassembled frames (frames for specialty shapes are typically assembled)
- Miscellaneous hardware (hinge pins, button covers, etc.)

Tools and Materials Needed

Tools

- Flat blade, Phillips, and Robertson #1 and #2 screwdrivers
- Measuring tape
- Power drill and drill bits, including a 2" drill bit
- Level
- Rubber mallet
- Awl
- Miscellaneous tools for non-typical installations (jig saw, hack saw, Dremmel tool, etc.)

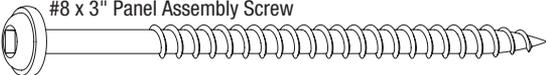
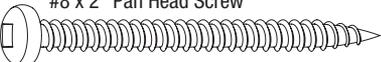
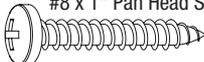
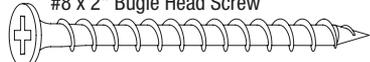
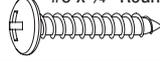
Materials

- Canvas drop cloth large enough for unpacking and frame assembly
- Clean fabric cloth and a mild cleaning spray solution
- Shim materials
- Finishing supplies (caulk, sealant, etc.)
- Instant adhesive for frame miters
- Silicone adhesive or doubled-sided tape for Decorative Sill Cover installation

GETTING STARTED

Fasteners

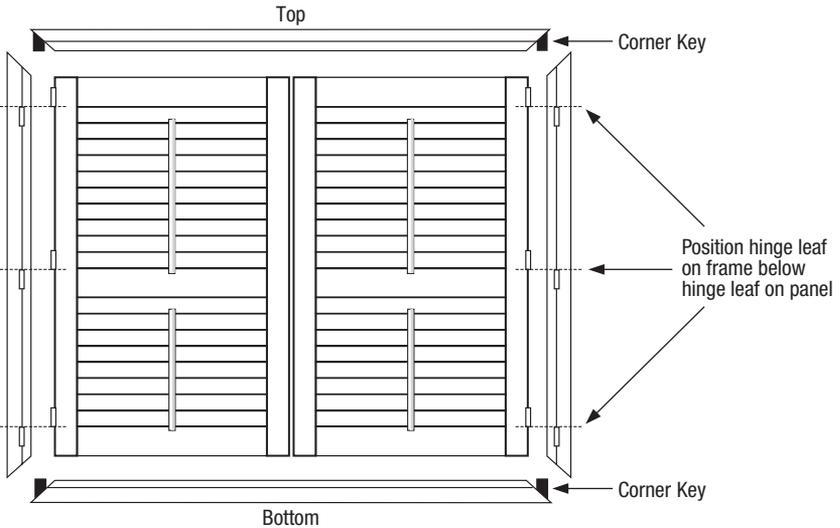
Screws of varying lengths and types are required to install shutters. The chart below shows the standard fasteners, what each is used for, and the tool or driver needed to secure them. Other types of fasteners may be needed if mounting into concrete, metal, or similar surfaces.

 <p>#8 x 3" Panel Assembly Screw</p>	<p>Attaches stiles to rails; also used as an installation screw #2 Robertson drive</p>
 <p>#8 x 2" Pan Head Screw</p>	<p>Installation screw #1 Robertson drive</p>
 <p>#8 x 2" Pan Head Screw</p>	<p>Attaches Bi-fold or Bypass bracket to wall #2 Phillips drive</p>
 <p>#8 x 1 1/2" Pan Head Screw</p>	<p>Installation screw #1 Robertson drive</p>
 <p>#8 x 1" Pan Head Screw</p>	<p>Attaches Bi-fold and Bypass carrier hardware to panels #2 Phillips drive</p>
 <p>#8 x 3/4" Pan Head Screw</p>	<p>Attaches Bi-fold and Bypass track to frame or opening, as well as track system brackets to frame #2 Phillips drive</p>
 <p>#8 x 2" Bugle Head Screw</p>	<p>Attaches T-post to frame #2 Phillips drive</p>
 <p>#8 x 3/4" Flat Head Screw</p>	<p>Attaches Bi-fold pivot bracket to frame #2 Phillips drive</p>
 <p>#6 x 1 3/4" Round Head Screw</p>	<p>Attaches T-post block to frame #1 Robertson drive</p>
 <p>#6 x 3/4" Round Head Screw</p>	<p>Attaches magnets #2 Phillips drive</p>
 <p>#6 x 1/2" Pan Head Screw</p>	<p>Attaches Bi-fold bottom track pivot bracket to bottom track #2 Phillips drive</p>
 <p>#6 x 3/8" Pan Head Screw</p>	<p>Attaches L-bracket to Bi-fold or Bypass frame and valance #2 Phillips drive</p>
 <p>#6 x 5/8" Flat Head Screw</p>	<p>Attaches hinges to frames and T-posts, as well as magnet strike plates to panels #1 Robertson drive</p>
 <p>#6 x 3/8" Flat Head Screw</p>	<p>Attaches metal corner key to frame #1 Robertson drive</p>

Assemble the Frame – Panel Systems

Prepare the work area. Lay the shutter panels on your drop cloth face up as they will appear in the window. Then follow the procedure below.

1. Lay the side frames beside the panels, so that the panel hinges are above the frame hinges. If one or more T-posts are used, lay them in the proper position, as well.



2. With the Colonial Z-frame only, install 90-degree metal brackets on the ends of the top and bottom frames prior to corner assembly.



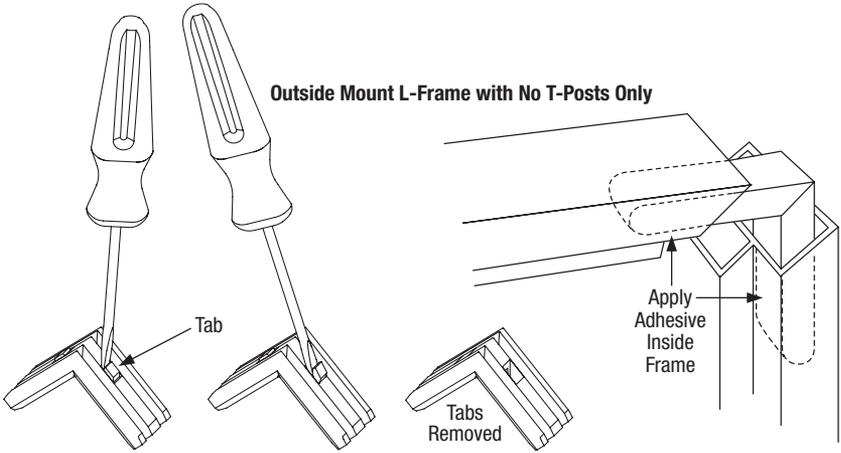
3. Insert the plastic corner keys into the ends of the top and bottom frames.
 - The Deluxe Casing frame, Colonial Z-frame, Classic Z-frame and Standard Z-frame receive both the corner keys **and** metal brackets.
 - Insert the side frame pieces onto the corner keys (and metal brackets, if applicable) of the **top frame**.

IMPORTANT: With outside mount L-frames that have no T-posts, glue the corner keys in position as described in Step 4.

4. Outside mount L-frames with no T-posts: Glue the corner keys in position as illustrated. This prevents the frame from bowing.

- First remove the tabs off the corner key with a flat blade screwdriver.
- Then apply a small amount of instant adhesive or contact cement to the inside of the frame.
- Insert the corner key into the end of the frame and hold firmly until set.

IMPORTANT: Be sure the frames match before gluing. The corners cannot be detached after the adhesive has set.



5. With the Deluxe Casing frame, Colonial Z-frame, Classic Z-frame and Standard Z-frame, secure the top frame metal brackets to the side frames using the provided screws.



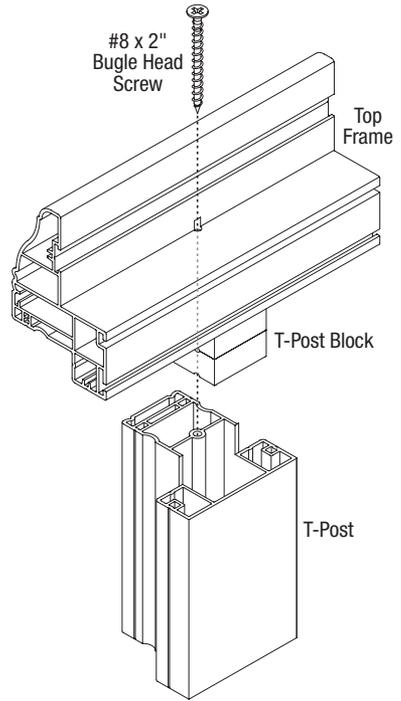
6. Frames with T-posts: Attach the T-post to the **top frame**.

- T-post blocks will be pre-attached to the top and bottom frame pieces.
- Slide the T-post onto the T-post block on the top frame piece and secure the T-post to the block using a #2 Phillips bit to drive the provided bugle head screw.

IMPORTANT: A long driver bit is required to get enough access to drive the screw.

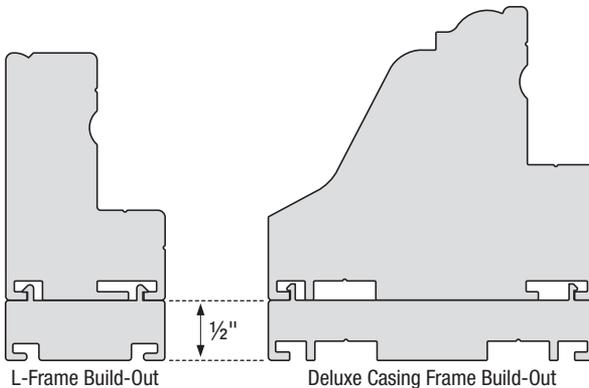
NOTE: See Step 9 on page 6 if T-post blocks were not provided, or for three-sided frames or inside mounts with no frames.

7. Attach the bottom frame to the side frames and T-post, repeating the methods described in Steps 3 through 6.



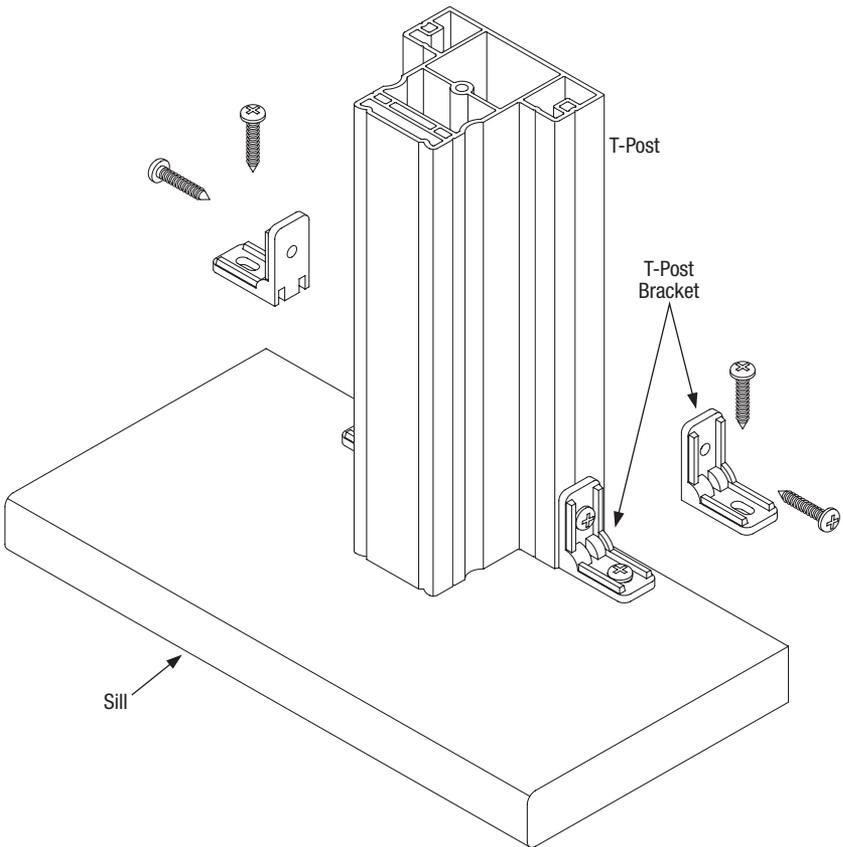
8. Deluxe Casing frame and outside mount L-frame only: If build-out is needed for additional clearance, install the build-out onto the back of the frame.

- The build-out snaps onto the back of the frame.
- The Deluxe Casing frame build-out is also screwed into the back of the frame.



9. With 3-sided frames or inside mounts with no frame, T-post brackets are used to attach the T-post to the sill or casement after the frame has been installed. Refer to the illustration below.
- Attach the brackets to the sill or casement using the slotted hole on the bracket to allow for side-to-side adjustment.
 - Be sure to square the T-post before tightening the brackets.
 - T-post brackets can also be used to attach T-posts to frames when T-post blocks are not provided.

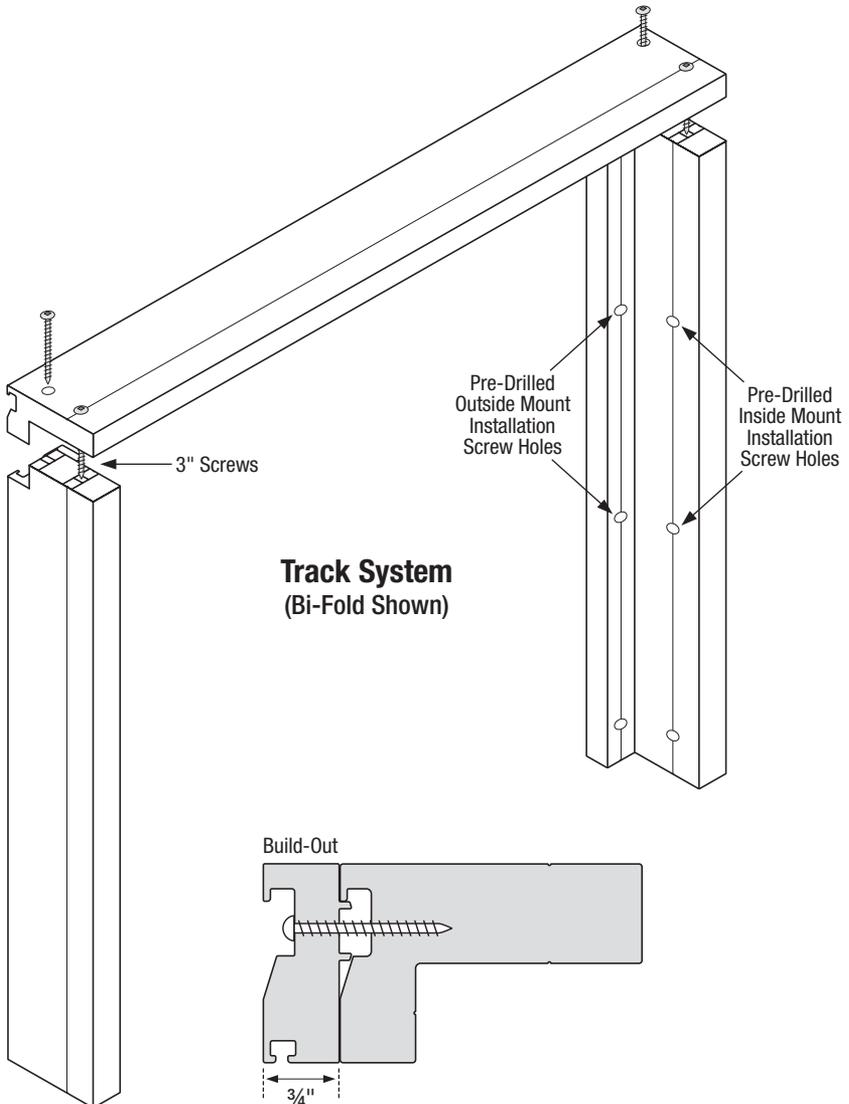
IMPORTANT: When a Decorative Sill Cover is used, it must be placed between the window sill and T-post before attaching the T-post.



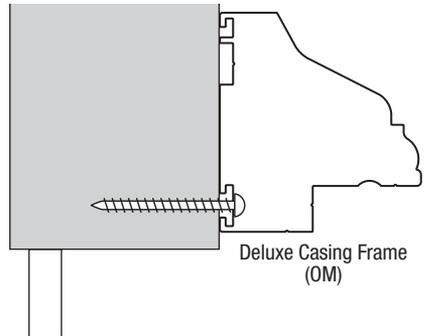
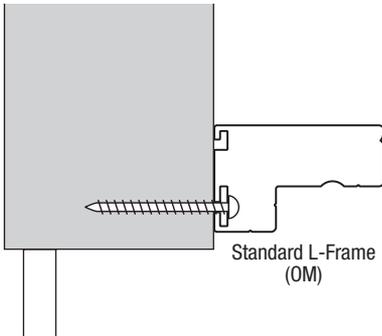
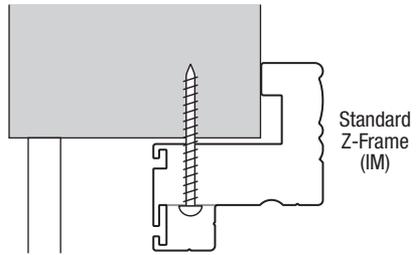
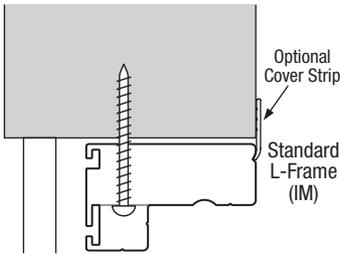
Assemble the Frame – Track Systems

Prepare the work area. Lay the frame pieces on your drop cloth in their proper orientation. Then follow the procedures below.

1. Use four screws to attach the top frame to the side frames.
 - With four-sided systems, attach the bottom frame to the side frames in the same way.
2. If build-out is needed for additional clearance, secure the build-out onto the back of the frame with screws, as shown below.



Framed Standard Panel Systems



NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

Step A. Install the Frame

1. Position the frame for mounting.

- **Outside (OM) Mount.** Center the frame over the opening. There should be a ¼" reveal on all four sides (or an equal reveal if a larger or smaller reveal was specified on the original order).
- **Inside (IM) Mount.** Center the frame in the opening. Insert temporary shims between the shutter frame and the window to hold the frame centered.

2. Attach the **side frames** at the top corners through the pre-drilled holes.

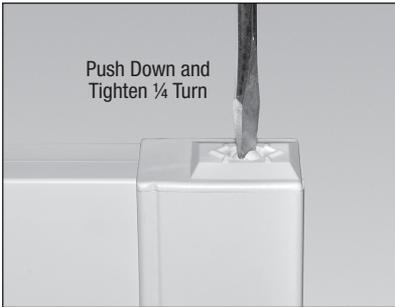
IMPORTANT: Tighten the screws snugly, but do not overtighten.



Step B. Mount the Panels

1. First, retract the Duracatch™ locks on the top and bottom of the panels.

- The Duracatch lock system is designed to help level the panels within the frame. Retracting the locks makes it possible to rack the shutter.
- Using a flat blade screwdriver, push down on the Duracatch lock and tighten the screw a quarter-turn.



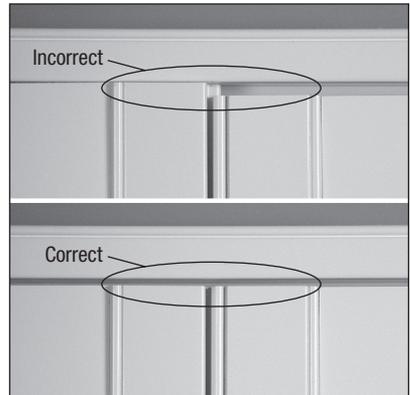
2. Align the panel and frame hinges, and insert the hinge pins.

3. Close the panels and check for proper alignment.

- If panels are misaligned, rack the shutter by grasping the frame at the bottom corners and moving it from side to side until proper alignment is achieved.

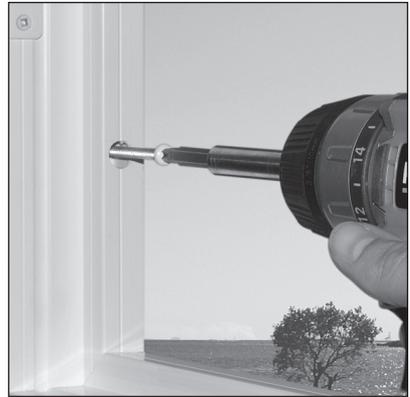
NOTE: In the following procedures, after each fastener is placed, close the panels and check the alignment. If the alignment is lost, remove the fastener, re-align the panels, and then re-install the fastener.

IMPORTANT: For installations with multiple T-posts, it is recommended that you begin your racking at the center most section and work your way out to each end.



4. Hold the frame in the aligned position.

- **Outside (OM) Mount.** Use a fastener to secure the center of the bottom frame. Check alignment, and then secure the side frames at the bottom corners.
- **Inside (IM) Mount.** Use fasteners to secure the side frames at the bottom corners.



5. Insert screws into the remaining holes and check that the panels are still aligned after each screw has been tightened. Re-adjust if necessary.

6. Release all Duracatch™ panel lock assemblies by loosening the lock screws a quarter-turn.

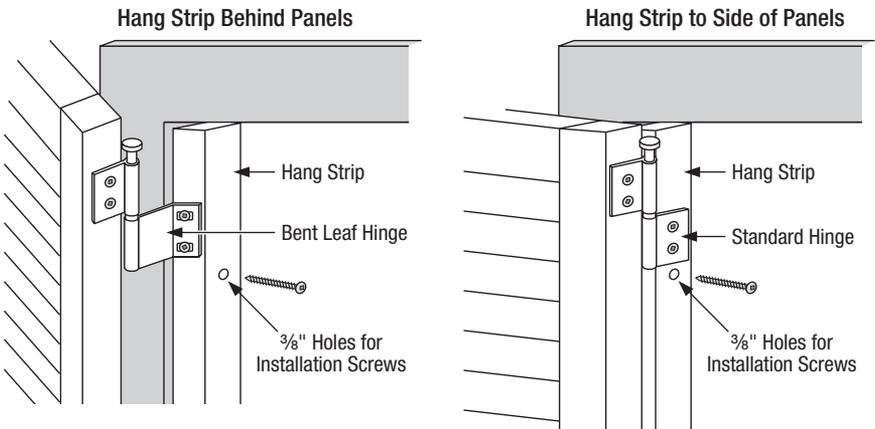
7. Close the panels and, if needed, adjust the Duracatch locks with a flat blade screwdriver so that all doors close easily yet stay firmly shut.

- If necessary, install panel lock ramps on the sill or casement (see page 40).
- If necessary, install magnets and plates (see page 41).

8. Perform any other necessary finish work to complete the installation (see page 42).

NOTE: If necessary to drill more installation holes in the frame, drill 3/8" holes **through the first layer of vinyl only**. Drill through the light block for both inside and outside mounts. (For sample drilling locations, see the illustrations at the top of page 8.)

Standard Panel Systems with Hang Strip



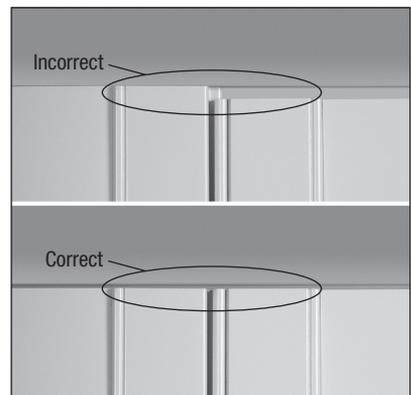
NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

Step A. Install the Hang Strips

1. Attach the side hang strips inside or outside the opening.
 - With outside mounts, be sure the hang strips are positioned the correct width apart and at the correct height.
 - Insert a Robertson screw into the top and bottom holes only, then set the screws into the mounting surface.
 - Tighten the screws snugly, but do not overtighten.

Step B. Mount the Panels

1. Hang the panels by fitting the pin end of the hinges into the hinge barrels.
2. Square and align the panels to the opening.
 - **Hang Strip Behind Panels.** If necessary, adjust the bent-leaf hinges by loosening the hinge screws and moving the hinge left or right.
 - **Hang Strip to Side of Panels.** If necessary, place hinge shims between the hinge and hang strip.
 - Re-tighten the hinge screws once the panels are square and aligned.



- 3.** Insert screws into the remaining holes and check that the panels are still level after each screw has been tightened. Re-adjust if necessary.
- 4.** With inside mounts, install Duracatch™ panel lock ramps (see page 40).
- 5.** With outside mounts, install magnets and plates (see page 41).
- 6.** Perform any other necessary finish work to complete the installation (see page 42).

Unframed Standard Panel Systems

Unframed inside-mounted shutters may be installed flush with the opening or projected out from the opening using extended leaf hinges, which are $\frac{5}{8}$ " wider.

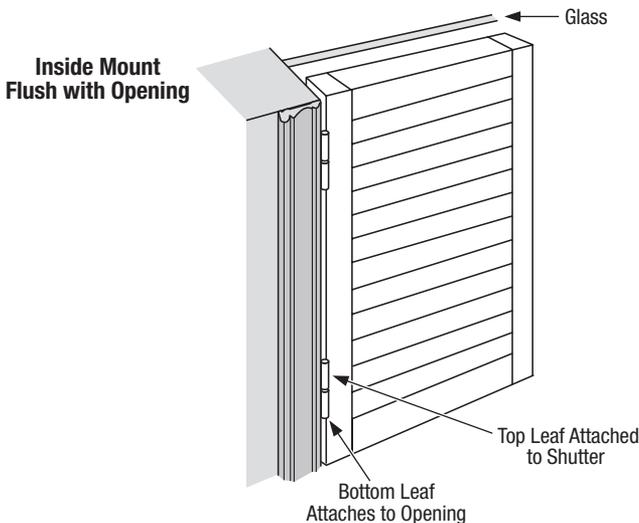
NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

Step A. Install the Bottom Leaf of the Top Hinge

1. Position the left panel in the opening so that it has equal clearance at the top and bottom. Mark where the bottom of the top hinge is located.
2. Align the top of the bottom leaf with the mark and attach it using **one** screw.
3. To check for accurate placement, install the panel by its top hinge, inserting a hinge pin to hold the panel in place. Adjust placement of the hinge, if necessary.
 - If placement is accurate, remove the panel and install the second screw into the bottom leaf of the top hinge.

Step B. Install the Bottom Leaf of the Bottom Hinge

1. With the panel placed in the top hinge, mark where the bottom of the bottom panel hinge is located.
2. Align the top of the bottom leaf of the hinge with the mark and attach it using **one** screw.
3. To check for accurate placement, install the panel into the two hinges. Adjust placement of the bottom hinge, if necessary.
 - If placement is accurate, install the second screw into the bottom hinge.
4. Repeat steps A and B for the right panel, if applicable. Be sure to align the right panel to the left panel.



Step C. Install the Remaining Bottom Leafs of the Hinges

1. Once the panels are level and square in the opening, install the remaining bottom leafs while the panels are hanging.
 - Open the panels and install the bottom leafs onto the top leafs using the hinge pins.
 - Screw the bottom leafs in place.
 - If necessary, shim using the provided hinge shims.
2. Install Duracatch™ panel lock ramps (see page 40) or magnets and plates (see page 41).
 - When the Duracatch panel lock system is used, turn the adjustable plunger if minor support or leveling is required.
3. Perform any other necessary finish work to complete the installation (see page 42).

Bi-Fold Track Systems

Typically, bi-fold track systems have three-sided frames; however, they may also be two-sided or four-sided. The basic installation procedure is the same whatever the configuration. (If you haven't already assembled the bi-fold frame, refer to page 7.)

Step A. Prepare the Frame

1. Installation screw holes are pre-drilled. If you need additional attachment points, drill $\frac{3}{8}$ " holes in the frame **through the first layer of vinyl only**.
 - Drill through the screw indicator groove on the light block for outside mounts and through the side of the frame for inside mounts.
 - With outside mounts (unless mounting into the header), the top frame should be mounted into studs wherever possible.



2. If an aluminum track is attached to the top frame, remove it before proceeding.

Step B. Install the Frame

IMPORTANT: Tighten the mounting screws snugly, but do not overtighten.

Inside Mount

1. Center the frame in the opening.
2. Using the provided screws, attach the top of the frame to the opening and level. Use shims as needed to ensure a level installation.
3. Secure the pivot side frame, using a level to make sure the frame piece is plumb. Again, use shims as needed.
 - If there are two pivot sides (split stack), secure only **one** of the side frames.

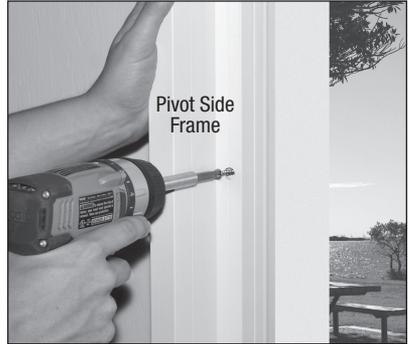
Outside Mount

1. Center the frame over the opening at the desired height.
2. Attach the **top frame** first, starting with one fastener at the highest corner.

IMPORTANT: Install all mounting screws into studs or the window header.

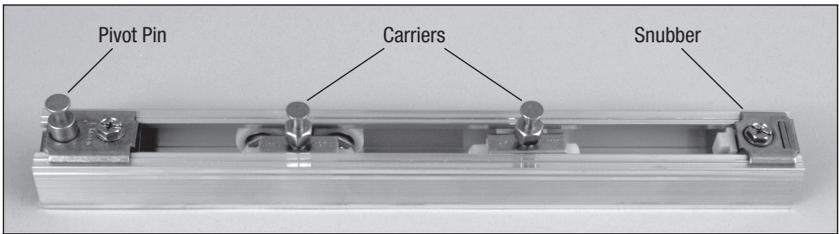


3. Place a four foot level on the top frame and secure the second fastener in the top frame at the other corner, ensuring the top frame is level.
4. Finish attaching the top frame by securing one screw at each stud, 16" to 24" apart, depending on the type of construction.
 - Space screws no more than 30" apart if mounting into the header.
5. Secure the pivot side frame, using a level to make sure the frame piece is plumb. Again, use shims as needed.
 - If there are two pivot sides (split stack), still secure only **one** of the side frames.

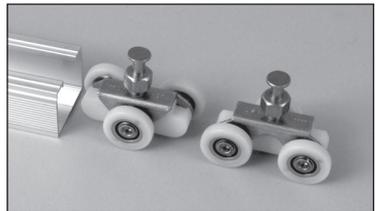


Step C. Attach the Aluminum Track to the Frame

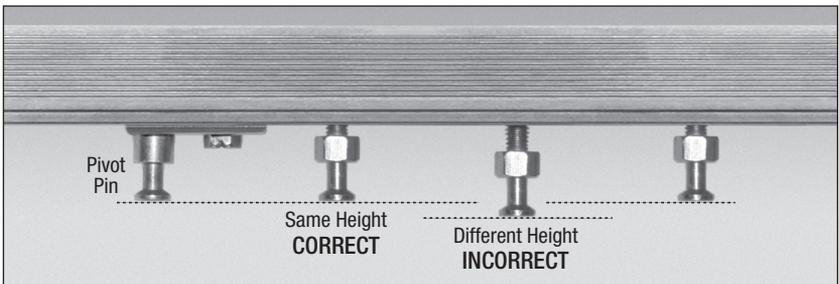
1. Before attaching the track, make sure that you have inserted the correct number of carriers and top pivot pins. For one way operation, one pivot pin and one snubber are required. For split operation, two pivot pins are required, but no snubber.



IMPORTANT: Carriers have three wheels. Each carrier can be loaded into the track with one wheel to the front or two wheels to the front.



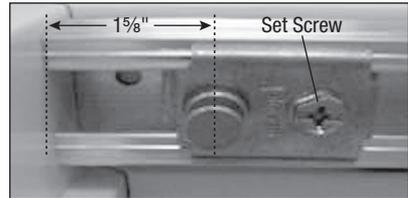
2. After inserting the carriers, check that the carrier heights are the same as the pivot pin height, as shown below. Adjust as necessary.



3. If the track arrived attached, use the same holes and re-attach the aluminum track to the top frame with the screws supplied. Be sure the holes line up correctly.
 - If the track did not arrive attached, use the screw indicator groove in the frame to align the track screws.

Step D. Attach the Shutter Panels

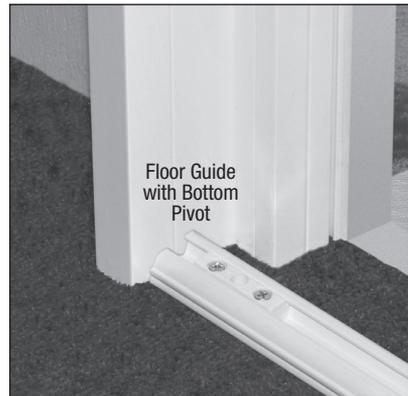
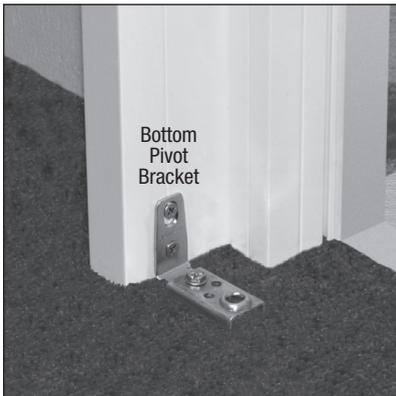
1. Set the pivot pin(s) in the track so that the center of the pivot pin is $1\frac{5}{8}$ " from the side frame.



2. Mount the bottom pivot bracket(s) or floor guide with bottom pivot(s).

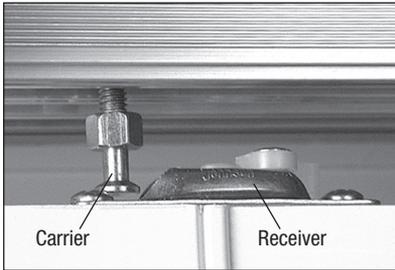
IMPORTANT: The pivot pin receiver(s) must be directly under the top pivot pin(s). The center of the pivot pin receiver(s) should be $1\frac{5}{8}$ " from the side frame(s).

- **Bottom Pivot Bracket.** Mount the bottom pivot bracket(s) centered on the screw indicator groove in the side frame(s).
- **Floor Guide with Bottom Pivot.** Insert the bottom pivot(s) into the floor guide and tighten the screws with the pivot pin receiver(s) in the correct position. Attach the floor guide to the floor, centered on the screw indicator groove in the side frame(s).



3. Mount the first panel per side into the bottom pivot pin receiver first and then onto the top pivot pin. Rotate the lever on the receiver to lock the top pivot pin in place.
 - When both sides have pivot pin receivers, install the first panel on the other side as well.
 - If adjustment is necessary, mark the correct position of the top and/or bottom receiver(s) to correctly re-position the component(s).

4. Insert the remaining shutter panels into the hinges and receivers.
 - Using labels and hinges for correct panel positioning, lock all panels into place by rotating the lever on the receiver.
 - If panels are uneven make any minor adjustments with the carrier bolts.



Step E. Finalize the Adjustment

1. **For one-way operation:** Secure the stile channel.
 - Attach the stile channel on the same side as the snubber, approximately 3" from the bottom of the frame, on the screw indicator groove.
 - Close the panels and locate the unsecured frame so that the snubber contacts the panel and the panel fits into the stile channel. Secure the frame in this position.



2. **For two-way operation:** Hold the loose side frame so the center split panels come together. Then adjust the carriers, if necessary. Finally, mark the position of the side frame and secure it.

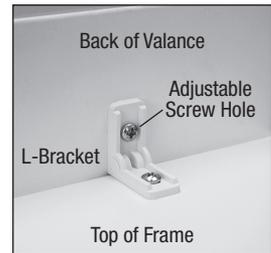
Step F. Attach the Optional Valance

IMPORTANT: Two valances are available, standard (3½") and decorative (5"), and both are mounted in a similar manner.

1. Attach the valance returns. Glue the miter joints and attach with L-brackets.
2. There should be approximately ¼" space between the bottom of the valance and the top of the panels. A simple way to achieve this clearance is to place two stacked ¼" wood slat shims onto the open panels in several places to support the valance during installation.
3. **Standard valance:** There are two options for installing the standard valance.
 - Drill ⅜" installation holes through the first layer of vinyl only. Space the holes 20" apart and cover them with button plugs after securing the valance.
 - Attach the valance with double-sided tape.
4. **Decorative valance:** Secure the valance with L-brackets, as shown. Space the L-brackets every 20".

Step G. Complete the Installation

- Perform any necessary finish work to complete the installation (see page 42).



Bypass Track Systems

Typically, bypass track systems have three-sided frames; however, they may also be two-sided or four-sided. The basic installation procedure is the same whatever the configuration. (If you haven't already assembled the bypass frame, refer to page 7.)

If installing the bypass track system as an **Inside Mount Without Frame**, skip to Step C. After installing the carriers, set the tracks with 2¼" between centers to allow ⅝" between tracks.

Step A. Prepare the Frame

1. Installation screw holes are pre-drilled. If you need additional attachment points, drill ⅜" holes in the frame **through the first layer of vinyl only**.

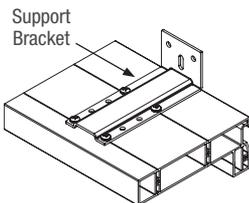
- Drill through the screw indicator groove on the light block for outside mounts and through the side of the frame for inside mounts.
- With outside mounts (unless mounting into the header), the top frame should be mounted into studs wherever possible.



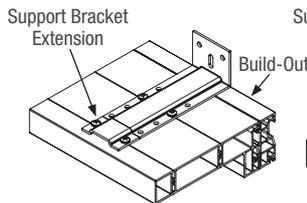
2. If aluminum tracks are attached to the top frame, remove them before proceeding.

3. **Outside mounts (OM) only:** Attach support brackets to the top of the frame.

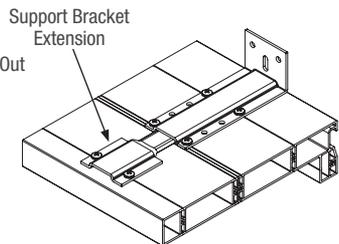
- Position the brackets where they will be mounted into studs. If stud spacing is 24", attach support brackets to each stud. If stud spacing is 16", attach the brackets to every other stud, so that they will be spaced 32" apart.
- Screw the brackets into the frame at the screw indicator grooves, with the back of the bracket **flush with the back of the frame**.
- Use support bracket extensions with Open Bypass and Triple Track systems, or if Bypass frame extension (build-out) is attached to the frame when greater projection or louver clearance is needed.



Bypass Frame



Bypass Frame with Frame Extension (Build-Out)



Open Louver/Triple Track Frame

IMPORTANT: Be careful not to place support bracket screws where they will interfere with the track screws.

Step B. Install the Frame

IMPORTANT: Tighten the mounting screws snugly, but do not overtighten.

Inside Mount

1. Center the frame in the opening.
2. Using the provided screws, attach the top of the frame to the opening and level. Use shims as needed to ensure a level installation.

Outside Mount

1. Center the frame over the opening at the desired height.
2. Attach the **top frame** first, starting with one fastener at the highest corner.

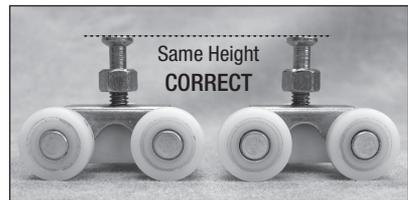
IMPORTANT: Install all mounting screws into studs or the window header.

3. Place a four foot level on the top frame and secure the second fastener in the top frame at the other corner, ensuring the top frame is level.
4. Finish attaching the top frame by securing one screw at each stud, 16" to 24" apart, depending on the type of construction.
 - Space screws no more than 30" apart if mounting into the header.



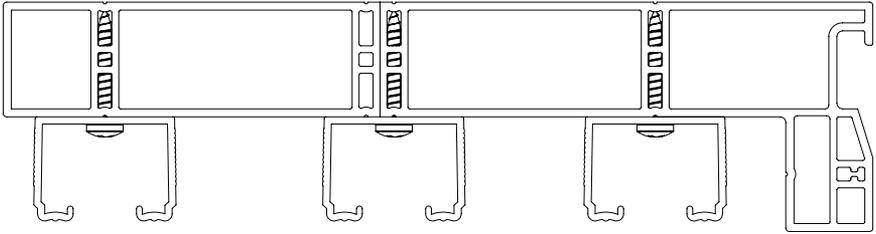
Step C. Attach the Tracks to the Frame

1. Before attaching the tracks, make sure that you have inserted the correct number of carriers (two carriers for each panel) into the appropriate track.
2. Prior to inserting the carriers, check that the carrier heights are consistent from carrier to carrier (see photos below). Adjust as necessary.



3. If the tracks arrived attached, use the same holes and re-attach the aluminum tracks to the top frame with the screws supplied. Be sure the holes line up correctly. If the tracks did **not** arrive attached:

- **Standard Bypass and Open Bypass:** Center the tracks over the screw indicator grooves and secure with screws through the pre-drilled holes in the tracks.
- **Triple Track Systems:** Install the tracks in the screw ports indicated in the illustration below.

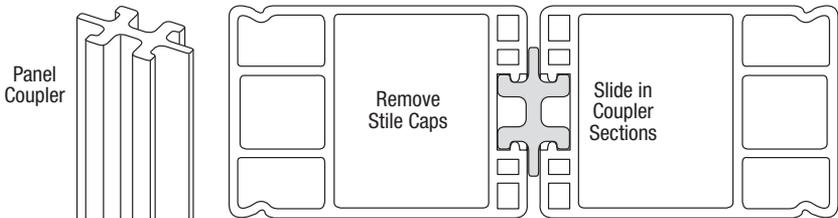


Step D. Prepare the Shutter Panels

IMPORTANT: If optional floor guides will be used, refer to Step G on page 25 before proceeding. Two of the three floor guide options require mounting components to the bottom of the shutter panels before they are hung from the carriers. In addition, privacy strips are included with the floor guide options that should be installed on the front panels before hanging them.

1. **Double panels only:** If panels are designed to be operated in pairs, marry the pairs together.

- Lay the pair of panels next to each other on a flat surface, with the front side up.
- At the top of the panels, remove the stile caps from the abutting stiles.
- Insert the panel couplers.



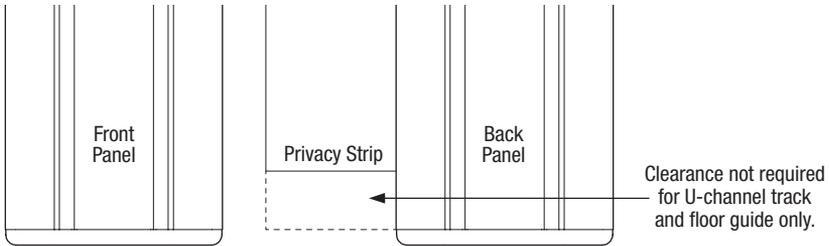
NOTE: The panels must lie flat to allow the couplers to slide into the stiles.

- Place the stile caps back onto the stiles.

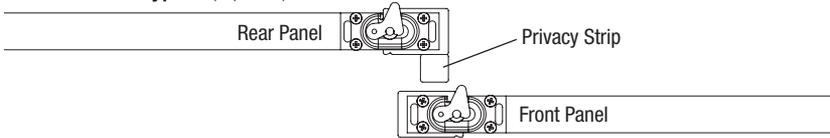
2. If optional floor guides will be used: Mount any required components to the bottom of the shutter panels.

3. If optional floor guides will be used: Attach privacy strips.

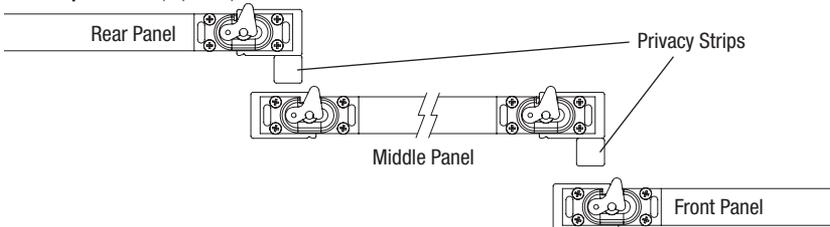
- Remove the liner from the adhesive on the privacy strips.
- Position the privacy strips on the panels as needed for the opening (see bottom illustrations).
- Press each privacy strip firmly against the stile. Be sure to apply pressure at several places along the full length of the privacy strips.



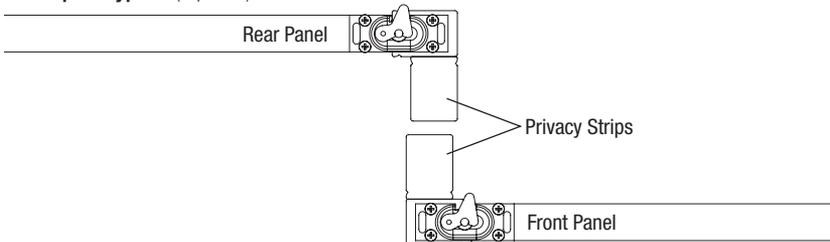
Standard Bypass (Top View)



Triple Track (Top View)

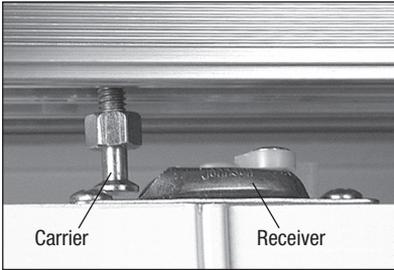


Open Bypass (Top View)



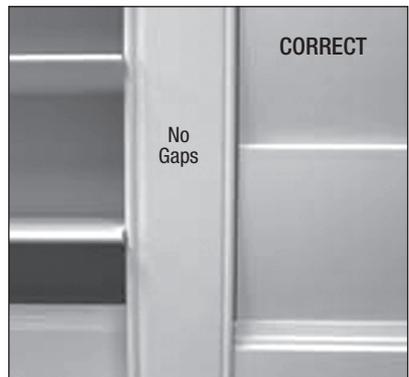
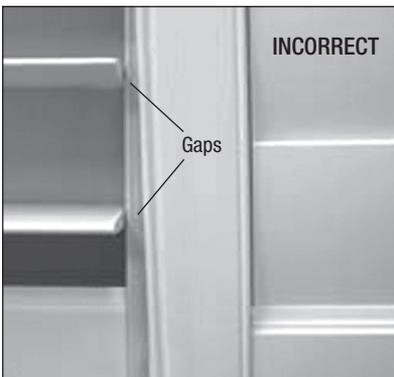
Step E. Mount the Shutter Panels

1. Mount the panels onto the carriers and lock them in place by rotating the lever on the receiver. Continue until all panels are secure.
2. Check that floor clearance is acceptable. If not, lower or raise panels by adjusting both carrier bolts the same amount.



Step F. Check for Alignment

1. If necessary, adjust the carrier bolts so that all panels are at the same height.
2. Open the louvers of the back panel where panels overlap and slide the front panel until the stile is adjacent to or touching the open louvers. If gaps appear between the front panel stile and the open louvers at the top or bottom, adjust the carrier bolts until no gaps appears.

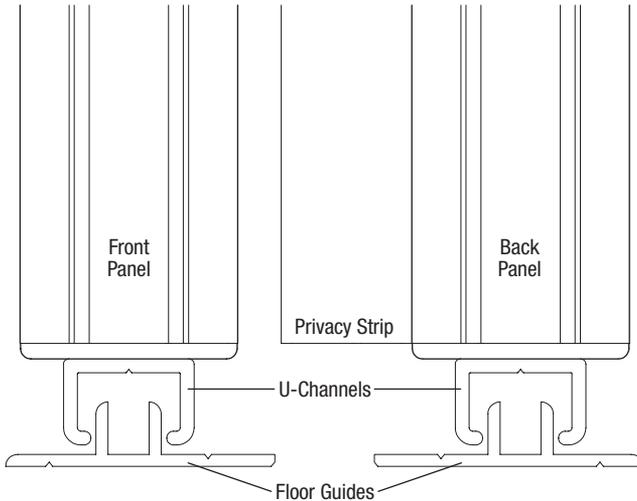


3. Finalize alignment by locating the side frames to their adjacent panel and secure to the wall with fasteners.

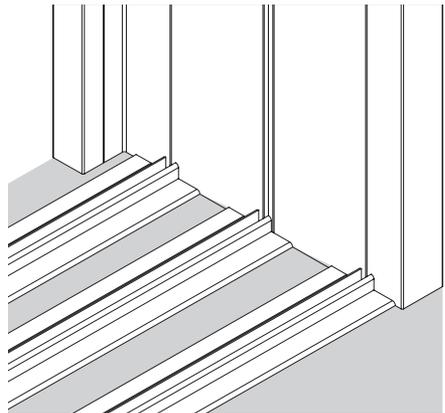
Step G. Install Optional Floor Guides

Floor guides prevent the shutter panels from swinging forward into the room or backward into the opening. There are three floor guide options for bypass track systems.

Option 1: U-Channel Track and Floor Guide



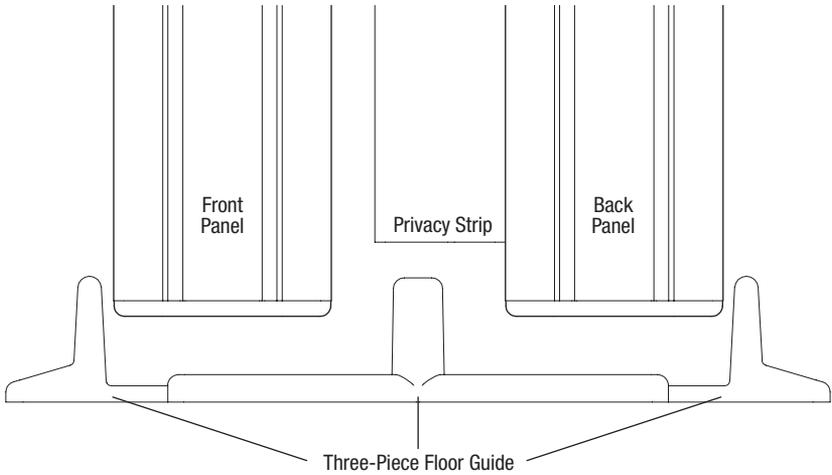
1. **Before mounting the shutter panels:** Center the U-Channel on the bottom of each panel and attach it using screws or double-sided tape.
2. **After mounting the shutter panels:** Attach one or more floor guides to the floor with screws.
 - Align the bottom tracks with the score lines on the frame, as shown at right.
3. After attaching the floor guide(s), align the U-Channel into the guide(s), as shown in the illustration above.



Triple Track shown

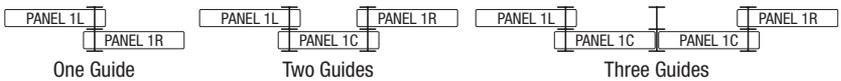
NOTE: A $\frac{5}{8}$ " height deduction is taken at the factory to ensure proper clearance.

Option 2: Three-Piece Bypass Floor Guide



- 1. After mounting the shutter panels:** Attach one or more center pieces of the floor guides to the floor. Refer to the diagram below for placement.

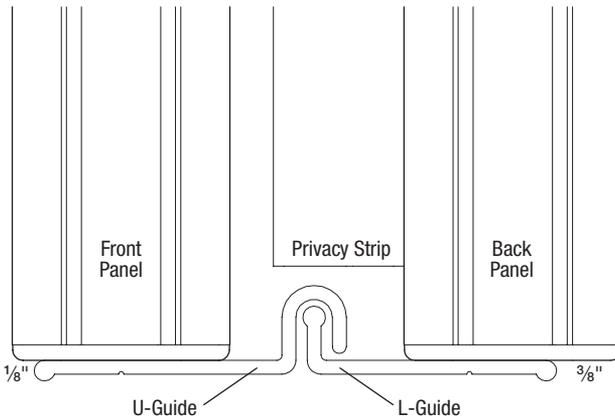
Floor Guide Attachment – Top View



- Align the center piece of the guide directly under the shutter panel overlap.
 - Position the center piece(s) so that each panel will always be over at least one of them.
 - Set the center piece(s) in place with a screw.
- 2.** After attaching the center piece(s), slide the two smaller side pieces in place.
 - Adjust for the overall width from the front and back panels.
 - Set the center piece(s) in place with a screw.

NOTE: A 1/2" height deduction is taken at the factory to ensure proper clearance.

Option 3: Hidden Panel Bypass Guides (U-Guide and L-Guide)

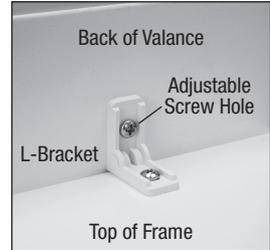


1. **Before mounting the shutter panels:** Attach the U-Guides and L-Guides to the bottom of the shutter panels using screws or double-sided tape.
 - These hidden guides eliminate the need to attach anything to the floor.
 - Attach the U-Guide(s) to the bottom of the **front panel(s)** as illustrated above. Position the front of the U-Guide $\frac{1}{8}$ " from the front of the stile or flush with the front edge of the bottom rail.
 - Attach the L-Guides to the bottom of the **back panel(s)**. Position the rear of the L-Guide $\frac{3}{8}$ " from the back of the of the stile or $\frac{1}{4}$ " from the back edge of the bottom rail.
2. **When mounting the shutter panels:** Mount the back panel(s) first, then fit the U-Guide over the L-Guide when mounting the front panels.

NOTE: A $\frac{1}{2}$ " height deduction is taken at the factory to ensure proper clearance.

Step H. Attach the Optional Valance

1. Attach the valance returns. Glue the miter joints and attach the returns with L-brackets.
2. Position the valance so that it covers the hardware and attach it to the top frame.
3. **Standard valance:** There are two options for installing the standard valance.
 - Drill 3/8" installation holes through the first layer of vinyl only. Space the holes 20" apart and cover them with button plugs after securing the valance.
 - Attach the valance with double-sided tape.
4. **Decorative valance:** Secure the valance with L-brackets, as shown. Space the L-brackets every 20".

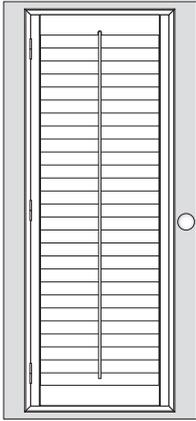


Step I. Complete the Installation

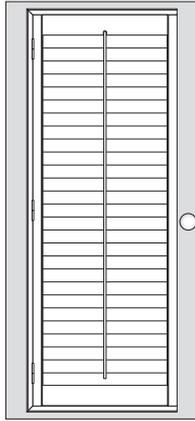
- Perform any necessary finish work to complete the installation (see page 42).

French Door Shutters

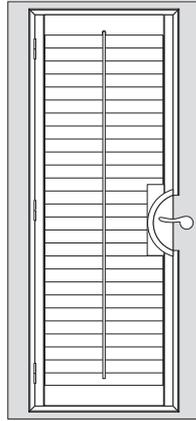
French door shutters are mounted using the L-frame, either 3-sided or 4-sided. Installation procedures for French door cut-outs are the same as those for full panel French door shutters. (If you haven't already assembled the French door frame, refer to page 3.)



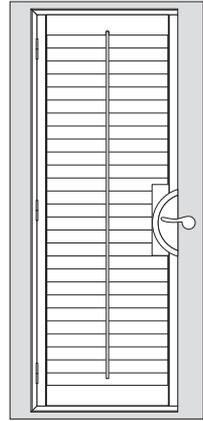
French Door Shutter with 4-Sided Frame (FD)



French Door Shutter with 3-Sided Frame (FD)



French Door Cut-Out with 4-Sided Frame (FDC)



French Door Cut-Out with 3-Sided Frame (FDC)

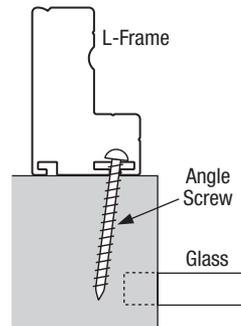
Step A. Install the Frame

- Center the frame over the opening. Handle three-sided frames very carefully to avoid placing stress on the corner joints. Be sure the corner keys have been glued into position as described on page 4.
 - Check that the overlap (if any) is the same in the middle, top, and bottom. This will assure that the vertical line of the door will match the vertical line of the shutter.
 - **Four-sided frames:** Secure the side frame next to the knob. Place the first screw by the door knob, second screw near the top, and third screw near the bottom.
 - **Three-sided frames:** Secure the hinged side frame. Place the first screw in the top installation hole, second screw near the bottom, and third screw in the center.
 - Tighten the screws snugly, but do not overtighten.

IMPORTANT: Angle the screws to avoid breaking the glass.

IMPORTANT: With French door cut-outs, make sure the cut-out is centered on the door knob.

- Most frames have pre-drilled holes for ease of installation. If additional installation holes are needed, drill $\frac{3}{8}$ " holes in the frame **through the first layer of vinyl only**.



Step B. Mount the Panels

1. If the shutter uses the Duracatch™ lock system, first retract the Duracatch locks on the top and bottom of the panels. Refer to the procedures in Step 1 on page 9.
2. Place the panel into the frame by fitting the pin end of the hinges into the hinge barrels.

IMPORTANT: Carefully support the frame while inserting the panel into the hinges. Use supports under the hinged side of the frame to support the weight of the panel.

Step C. Racking and Securing

Four-Sided Frames

1. Close the panel and check for proper alignment.
 - If panels are misaligned, grasp the hinged side of the frame and rack up and down until proper alignment is achieved.
 - Open the panel and insert a screw above the top hinge in the pre-drilled hole.
 - Close the panel and check alignment. If misaligned, remove the screw and re-align.
 - If proper alignment is maintained, proceed to step two.
2. Secure the bottom of the side frame through the pre-drilled holes.
3. Close the panel and adjust the center of the hinged side frame so that the gap between the other side frame and the panel is consistent. Mark the proper position of the frame, open the panel, and attach the frame through the pre-drilled hole.
4. Attach all remaining fasteners.

IMPORTANT: With each fastener that is placed, close the panel and check the alignment. If the alignment is lost, remove the fastener, re-align the panel, and re-install the fastener.

Three-Sided Frames

1. Close the panel. Check that the vertical line of the door matches the vertical line of the shutter panel and frame. Loosen and adjust the frame or hinge attachment, as necessary.
2. Align the top and bottom frames with the shutter panel and secure their ends.
3. Attach all remaining fasteners.

All frames

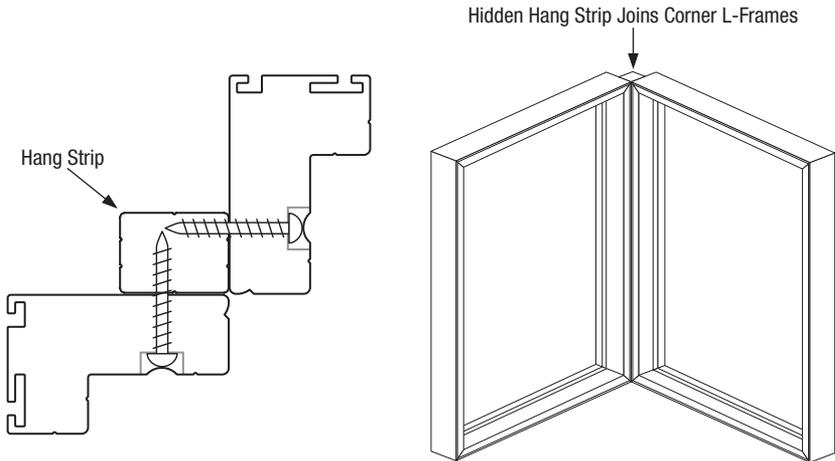
1. Release all Duracatch panel lock assemblies by loosening the lock screws a quarter-turn.
2. Close the panels and, if needed, adjust the Duracatch locks with a flat blade screwdriver so that all doors close easily yet stay firmly shut.
3. If necessary, install magnets and plates (see page 41).
4. Perform any other necessary finish work to complete the installation (see page 42).

Corner Windows

Corner window shutters are two framed shutters connected together at a 90-degree angle. Before performing a corner window installation, you should be familiar with the framed shutter installation procedures described on pages 8–10. (If you haven't already assembled the shutter frames, refer to page 3.)

Step A. Connect the Two Assembled Frames

1. Position the provided hang strip flush with the front of the right side of the left frame. Attach it with screws through the frame, on the screw indicator line.
2. Attach the left side of the right frame to the hang strip in a similar fashion.



Step B. Install Frames (Inside or Outside Mount)

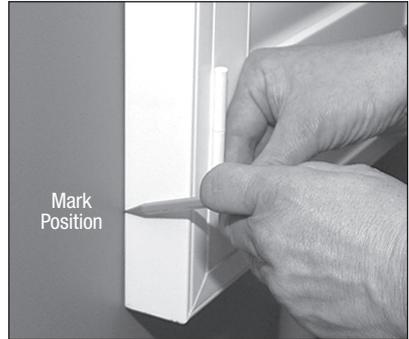
1. Center the attached frames (L-frame and Z/L-frame combinations) over or into the openings and even out your reveal.
2. Secure the top and bottom inside corners of the left and right frame.

Step C. Mount the Left Corner Panel(s)

1. First, retract the Duracatch™ locks on the top and bottom of the panels. Refer to the procedures in Step 1 on page 9.
2. Support the left side of the frame with support blocks (OM) or shims (IM) before inserting the panel(s).
3. Place the panel(s) into the left frame by fitting the pin end of the hinges into the hinge barrels.

Step D. Rack and Secure the Left Corner Panel(s)

1. After mounting the panel(s), close the panel(s) and check for proper alignment.
 - If misaligned, grasp the left side of the left frame at the top and bottom and move the frame up and down until proper alignment is achieved.
 - Mark the position of the frame on the wall and open the panel.
2. Attach the bottom of the frame through the pre-drilled holes. Be sure the frame lines up with your mark.
3. Close the panel(s) and check alignment.
4. Secure the balance of the frame. There should be one screw within 3" of each corner and no more than 30" between fasteners.



IMPORTANT: With each fastener that is placed, close the panels and check the alignment. If the alignment is lost, go back to the fastener, remove, re-align, and re-install.

Step E. Mount the Right Corner Panel(s)

- Repeat Step C for the right panel(s).

Step F. Rack and Secure the Right Corner Panel(s)

- Repeat Step D for the right panel(s).

Step G. Complete the Installation

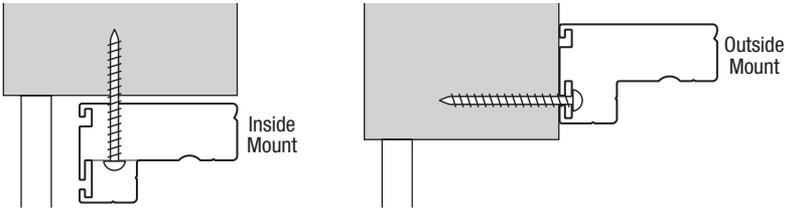
1. Release all Duracatch™ panel lock assemblies by loosening the lock screws a quarter-turn.
2. Close the panels and, if needed, adjust the Duracatch locks with a flat blade screwdriver so that all doors close easily yet stay firmly shut.
3. If necessary, install magnets and striker plates (see page 41).
4. Perform any other necessary finish work to complete the installation (see page 42).

Bay Windows

If you haven't already assembled the bay window shutter frames, refer to page 3.

Step A. Install the Middle Bay Frame (Inside or Outside Mount)

1. Center the frame of the middle bay over (OM) or into (IM) the opening.
2. Attach the top frame at the top corners with Robertson screws through the pre-drilled holes. Tighten snugly, but do not overtighten.

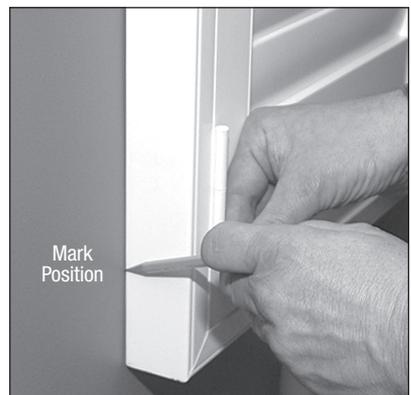
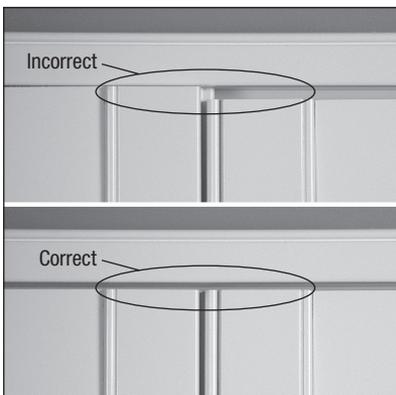


Step B. Mount the Middle Bay Panel(s)

1. First, retract the Duracatch™ locks on the top and bottom of all panels. Refer to the procedures in Step 1 on page 9.
2. Place the panel(s) into the middle bay frame by fitting the pin end of the hinges into the hinge barrels.

Step C. Rack and Secure the Middle Bay Panel(s)

1. After mounting the panel(s), close the panel(s) and check for proper alignment.
 - If misaligned, grasp the bottom frame and move it side-to-side until proper alignment is achieved.
 - Mark the position of the frame on the wall and open the panel(s).



2. Attach the frame at the bottom corners, making sure the frame lines up with your mark.
3. Close the panel(s) and check alignment.
4. Secure the balance of the frame. There should be one screw within 3" of each corner and no more than 30" between fasteners.

IMPORTANT: With each fastener that is placed, close the panels and check the alignment. If the alignment is lost, go back to the fastener, remove, re-align, and re-install.

Step D. Install the Left Bay Frame

1. Align the right side of the left bay with the left side of the middle bay frame.

IMPORTANT: Make sure that the tops are flush, and the bead edge of the butting L-frames are aligned properly and **do not** overlap.

2. Attach the top and bottom of the frame within 3" of the right corners.

Step E. Mount the Left Bay Panel(s)

1. Support the left side of the frame with support blocks (OM) or shims (IM) before inserting the panel(s).
2. Place the panel(s) into the left frame by fitting the pin end of the hinges into the hinge barrels.

Step F. Rack and Secure the Left Bay Panel(s)

1. After mounting the panel(s), close the panel(s) and check for proper alignment.
 - If misaligned, grasp the left side of the left frame at the top and bottom and move the frame up and down until proper alignment is achieved.
 - If necessary, mark the position of the frame on the wall and open the panel.
2. Attach the frame at the left-side top and bottom corners, making sure the frame lines up with your mark.
3. Close the panel(s) and check alignment.
4. Secure the balance of the frame. There should be one screw within 3" of each corner and no more than 30" between fasteners.

IMPORTANT: With each fastener that is placed, close the panels and check the alignment. If the alignment is lost, go back to the fastener, remove, re-align, and re-install.

Step G. Install the Right Bay Frame

- Repeat Step D for the right frame.

Step H. Mount the Right Bay Panel(s)

- Repeat Step E for the right panel(s).

Step I. Rack and Secure the Right Bay Panel(s)

- Repeat Step F for the right panel(s).

Step J. Complete the Installation

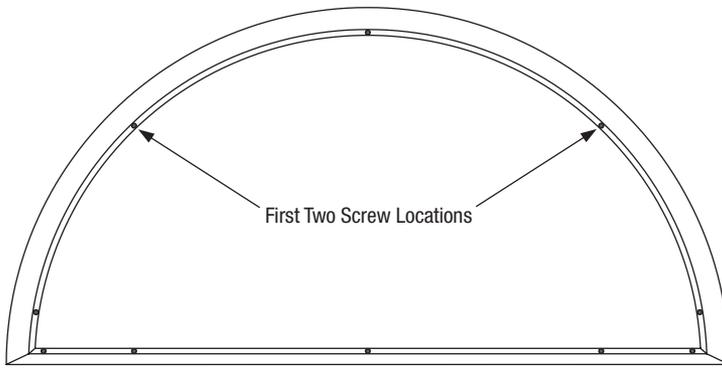
1. Release all Duracatch™ panel lock assemblies by loosening the lock screws a quarter-turn.
2. Close the panels and, if needed, adjust the Duracatch locks with a flat blade screwdriver so that all doors close easily yet stay firmly shut.
3. If necessary, install magnets and striker plates (see page 41).
4. Perform any other necessary finish work to complete the installation (see page 42).

Framed Stand-Alone Specialty Shapes

NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

Stand-alone specialty shape shutters are installed independently of standard shutters.

1. Place the frame in or over the opening and center. Make sure the bottom frame is level.
2. Attach the frame with two screws through the curved portion of the frame.
 - Screws should be placed in the top left and top right of the curve as illustrated below.
 - Do not overtighten the screws — doing so could distort the shape.



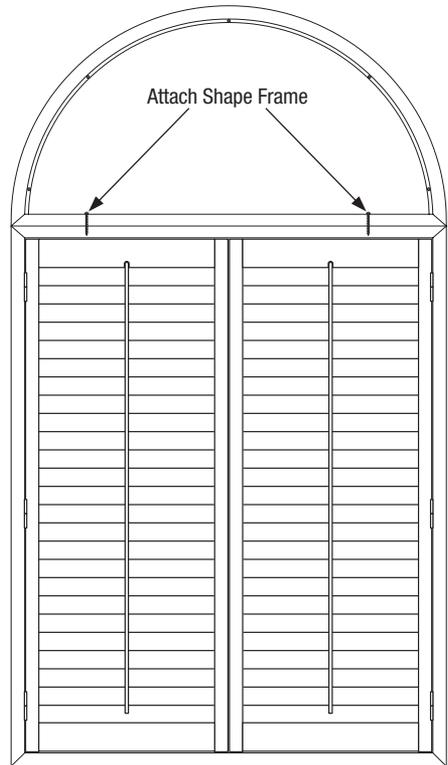
3. Place the panel into the frame. Spring-loaded plungers around the panel snap into grooves in the frame.
4. Move the bottom of the frame left or right to create the proper gaps around the panel.
 - Mark the bottom frame location where the proper gaps are created.
 - Remove the panel from the frame.
5. Move the bottom frame to align it with the mark, and screw through the middle of the bottom frame to hold it in the correct position.
6. Place the panel back into the frame and double-check that it fits properly.
7. Remove the panel from the frame and set all remaining screws, being careful not to overtighten.
8. Place the panel into the frame. Adjust plunger depth if necessary to provide a good fit in the frame.
 - If fit is too tight, push in on the plunger and rotate clockwise to recess the plunger.
 - If fit is too loose, push in and rotate the plunger counterclockwise to extend it.
9. Perform any necessary finish work to complete the installation (see page 42).

Framed Specialty Shapes Over Standard Shutter

When a specialty shape is over a standard shutter, the bottom of the shape's frame is attached to the top of the standard shutter's frame. The standard shutter is always installed before the specialty shape.

NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

1. Place the frame in or over the opening. Align the bottom frame of the shape with the top frame of the standard shutter.
2. Set two installation screws through the bottom frame of the shape into the top frame of the standard shutter. Do not overtighten the screws.
3. Place the shaped panel into the frame. Spring-loaded plungers on the bottom and top of the shape snap into grooves on the frame.
4. Move the top of the shaped panel's frame left or right to create the proper gaps around the shape.
 - Mark the top frame location where the proper gaps are created.
 - Remove the shaped panel from the frame.
5. Move the top of the frame to align it with the mark, and screw through the top center to hold the frame in the correct position.
6. Place the shaped panel back into the frame and double-check that it fits properly.
7. Remove the shaped panel from the frame and set all remaining screws; do not overtighten.
8. Place the shaped panel into the frame. Adjust plunger depth if necessary to provide a good fit in the frame.
 - If fit is too tight, push in on the plunger and rotate clockwise to recess the plunger.
 - If fit is too loose, push in and rotate the plunger counterclockwise to extend it.
9. Perform any necessary finish work to complete the installation (see page 42).

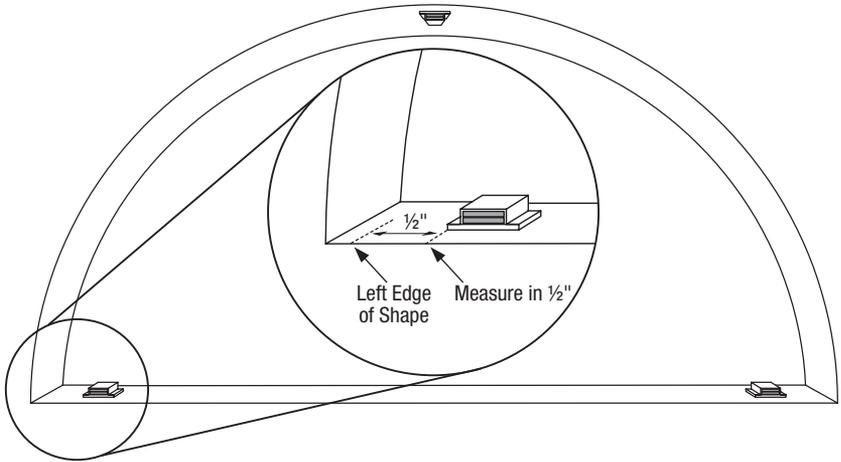


Unframed Specialty Shapes

Unframed specialty shape shutters are always inside mounted and attached with magnets.

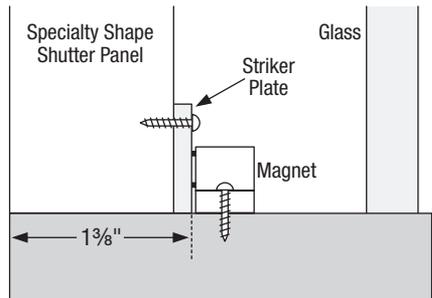
NOTE: If a Decorative Sill Cover was ordered, refer to page 39.

1. Place the shaped panel in the opening and center it.
2. Mark the position of the left and right edges of the shape on the bottom of the opening.
3. Measure in from each mark $\frac{1}{2}$ " , and make another mark. The second marks indicate where the outside edges of the magnets will be installed.



4. At the second set of marks, measure and mark $1\frac{3}{8}$ " back from the front edge of the opening. The front of the magnet will be located here.

- Measure for magnet position at the top center of the shape in the same way.
- If more than three magnets are provided, space them evenly in the opening.

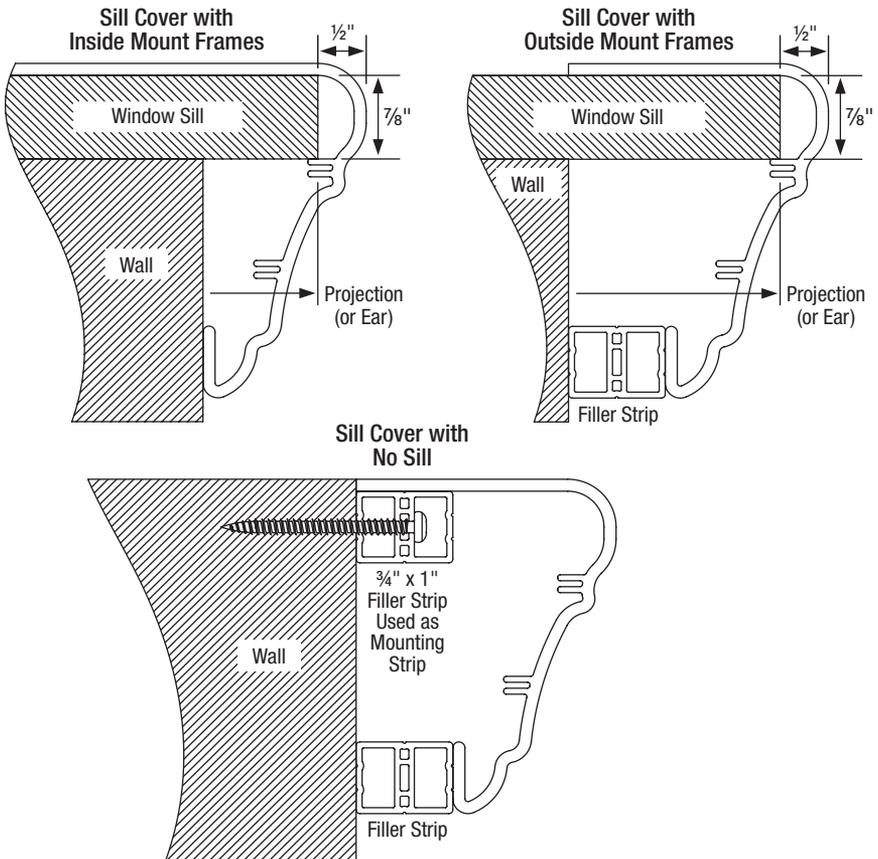


5. Attach all magnets to the opening using the supplied magnet screws.
6. Attach striker plates to the shape so that they will align with the magnets when the shaped panel is installed.
7. Install the unframed specialty shape panel and center from side to side.
 - Check that each magnet makes good contact with the striker plates.
 - Make any necessary adjustments to magnets that do not hold securely.
8. Perform any necessary finish work to complete the installation (see page 42).

Decorative Sill Cover

For details about the Decorative Sill Cover, see the Palm Beach section of the Hunter Douglas Reference Guide.

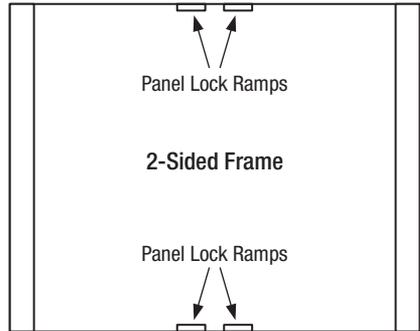
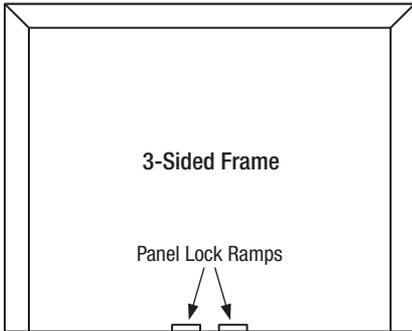
1. Dry fit the Decorative Sill Cover before installing. Minor adjustments may be required.
2. For standard applications, the rear of the Decorative Sill Cover is flush with the back of the shutter frame.
3. Attach the Decorative Sill Cover. The following products may be used to secure it: silicone adhesive, caulk, double-sided tape, or screws that are concealed by the shutter frame. Select the one that is best for your installation.
4. If provided, attach light stop to the Decorative Sill Cover.
5. Outside mount applications may require a filler strip that should be attached to the inside bottom lip of the Decorative Sill Cover to fill the space between the sill cover and the wall.
6. For outside mount applications without an existing sill, attach a section of filler strip to the wall to provide a support or mounting surface for the Decorative Sill Cover.



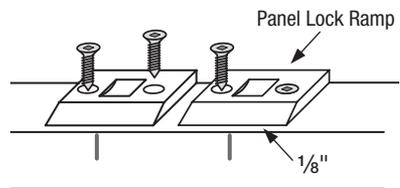
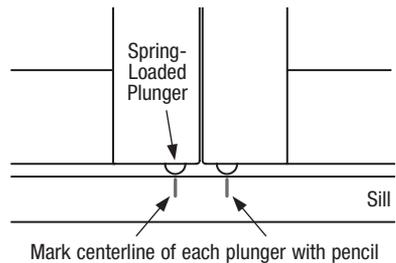
Finish Work

Install Duracatch™ Panel Lock Ramp(s), If Applicable

The Duracatch™ Panel Lock System with spring-loaded plunger is installed on panels and frames during fabrication. If your panel configuration is a 3-sided frame application, install panel lock ramps on the bottom sill. If a 2-sided frame, install the panel lock ramps on both the top and bottom sills.



1. With the shutter panel(s) closed, make a pencil mark on the sill to show where the center of each spring-loaded plunger is located.
2. Mark where to drill pilot holes for the screws.
 - Open the shutter panel(s). Place the panel lock ramp on the sill with the sloped edge facing front. The front edge of the ramp should be 1/8" behind the front edge of the panel.
 - Center the panel lock ramp on the line marking the plunger location.
 - Mark the center of the ramp's screw holes. Repeat for all panel lock ramps.

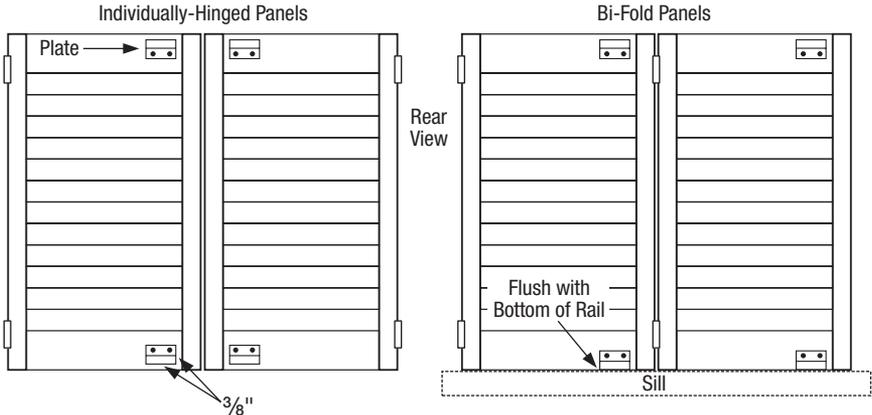


3. Drill pilot holes for each panel lock ramp using a 3/32" drill bit.
4. Attach the panel lock ramps to the sill using the Robertson screws provided.
5. Close the shutter panels to check function and closure.
6. The spring-loaded plungers can be adjusted using a flat blade screwdriver.
 - If closure is too tight, push in on the plunger and rotate clockwise to recess the plunger.
 - If closure is too loose, push in and rotate the plunger counterclockwise to extend it.
 - Rotate the plunger in one-half turn increments to maintain alignment with the stile cap.

Install Magnets and Plates, If Applicable

If the shutter panels do not have panel locks, you may need to install magnets and plates if they are not already installed.

1. Review the diagrams below. Plates are installed at the top and bottom of all shutter panels. Magnets are installed behind the plates to the frame or sill.



2. Using a pencil, mark the frame (top and bottom) where the stile meets the top and bottom rails, on the side where the shutter closes against the frame.

- With three-sided frames, mark the sill at the bottom.

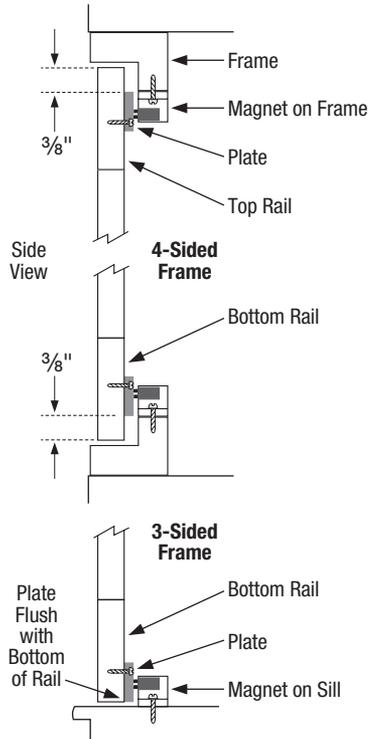
3. Install the magnets to the frame's light block so that the magnets are $\frac{3}{8}$ " in from the mark, toward the center of the shutter panel.

- With three-sided frames, install the magnet to the sill $\frac{3}{8}$ " in from the mark. Align the magnet with the frame's light block.

4. Install the plates on the rear of the panels so that they align with the magnets. The corner of the plates should be $\frac{3}{8}$ " in from the stile and the edge of the top or bottom rail.

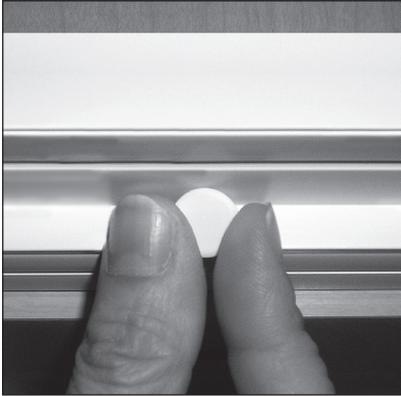
- With three-sided frames, install the bottom plates flush with the edge of the bottom rail.

5. Close the shutter panels to check function and closure. Adjust magnet or plate position, if necessary.



Touch-Up and Inspection

1. If you have not done so already, cap all screw holes with the provided button plugs. For easy installation, first insert the button plug foot with the tab on it, and then slide the remaining feet into the installation hole.
2. If you have not done so already, on inside-mounted L-frame applications glue L-frame cover strips to the front of the L-frame to fill gaps between the frame and window jamb.
3. Apply sealant as needed to fill gaps between frames and window jambs or between mitered corners.



4. Wash any dirt or grease from the shutter using a clean cloth and mild detergent solution. Never use ammonia-based products.
5. Invite the home owner to inspect the installation. Give the home owner the Hunter Douglas warranty card and explain the added protection provided by the Palm Beach™ Promise, which covers shutter panel and frame members against warping, cracking, fading, chipping, peeling, or discoloration. Demonstrate proper operation of the shutters and show the customer the location of their individual authenticity plate serial number.

PALM BEACH™
P R O M I S E

**CUSTOM CRAFTED
SHUTTERS**

Serial No. PB30005

HunterDouglas
PALM BEACH™

Operation

- Tilt the louvers by grasping one louver and moving it.
- Open the shutter panel by grasping the stile through open louvers and pulling out. **Do not** use the tilt bar to open the shutter panel.

IMPORTANT: To open the panels on a bi-fold track system, collapse the first set of panels at the pivot side followed by each successive set of panels until all panels are collapsed.

IMPORTANT: When using floor guides with a bypass track system, use caution when operating panels to avoid panel damage where the guides contact the stiles.

Care

- Clean using a dry and soft feather duster, clean cloth, dust cloth or dusting mitt. A vacuum with the soft brush attachment can also be used.
- Palm Beach™ polysatin shutters may be washed using a mild detergent solution. Never use ammonia-based products.
- Ultrasonic cleaning or use of chemical solvents and scrubbing cleansers are not recommended. This will damage the product.
- Palm Beach polysatin shutters may accumulate static buildup during the shipping and installation process. If static does accumulate, the shutter can attract dust. To reduce static cling and help repel dust, wipe the product with a soft, clean towel moistened with mild soap and water or a fabric dryer sheet. Never use ammonia-based products or abrasive cleaners as they may scratch or damage the surface.

Problem: Panels Won't Stay Closed

- **Check the Duracatch™ panel lock.** Check to ensure that the panel lock plunger is seated properly in the panel lock ramp. Possible problems include:
 - The panel lock plunger is too far inside the panel. Adjust the plunger as described in step 6 on page 40.
 - The plunger does not sit in the “dip” in the panel lock ramp. Reposition the ramp, if necessary. Refer to steps 1 through 5 on page 40.
 - Check plunger and stile cap alignment. The plunger is designed to lock into grooves on the stile cap to prevent unwanted rotation. If they are not aligned, the plunger will remain inside the cap. To adjust, use a flat blade screwdriver to rotate the plunger until it is properly aligned and able to extend beyond the stile cap.
- **Check the number of magnets.** If magnets are used for closure, check that there are two per panel, one at the top and one at the bottom. Refer to the magnet installation section on page 41. (Note: Café style shutters use only one magnet.)
- **Check magnet contact.** If magnets are used for closure, check that the magnets and magnet plates have full contact with each other. Possible problems include:
 - The magnet and plate are not aligned. The magnet or magnet plate may need to be moved to achieve proper alignment. Refer to the magnet installation section on page 41.
 - The magnet is at a slight angle, with only one side of the magnet touching the plate. Loosen one of the screws on the magnet to allow it to be straightened so that it makes full contact with the plate.
 - The magnet plate is not flush with the panel, so that only one side touches the magnet. Adjust the screws so that the magnet plate becomes flush with the panel.
- **Check panel load.** Load is created when the installation is not square. This places load on the stile, which can force the panel to open with a spring-back effect. If the load is excessive, the louvers may be difficult to close, as well. Possible solutions include:
 - If load is detected with framed applications, tighten or loosen 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, checking for load after each one.
 - If there is load on a bi-fold panel, remove the second bi-fold panel and resolve the problem with the first hinged panel as described above. Then re-attach the second panel and check that the problem has been resolved.
 - If load is detected with unframed applications, shim the hinges to square the panels. Remove all hinge pins except for the top and bottom. Shim those hinges as needed until the problem is resolved. Continue with the other hinges, one at a time, checking for load after each one.

Problem: Panels Won't Stay Closed (continued)

- **Check for obstructions that prevent panels from closing.** Possible problems include:
 - Window cranks can prevent panels from closing. Take the crank off the rotator and see if the panel is still obstructed. If the panel closes, replacing the window crank with a T-crank can often solve the problem. Otherwise, build-out may be required to add clearance. For panels without a frame, an extension hinge may be used to bring the panel into the room an extra $\frac{5}{8}$ ".
 - Window locks are other possible obstructions. Add clearance as described above.
 - Patio door handles can prevent louvers from opening. If a handle stops a panel from closing, the shutter must be built-out.
 - Bowed sills or casements can prevent inside-mounted shutter panels from closing if the narrowest height and width measurements were not ordered. Double-check the inside measurements and compare them with the measurements ordered and received.
- **Check for a twisted panel.** Panel stiles can sometimes be twisted by weight leaned against it or by extreme heat. Fortunately, the polysatin material can be "tweaked" back to its original shape with gentle force. To do this, use your hand to support the middle of the panel's outside stile and bend the top or bottom back into position until the panel remains closed.

Problem: Panels Are Too Tight

- **Check that the frame is installed properly.** If the frame is not installed correctly, it may cause the inside opening of the frame to be too narrow at a specific point, causing the panels to be too tight. To check if the installation screws have been tightened the correct amount, measure the top or bottom frame width and compare it to the width where the panel appears to be too tight. Adjust the installation screws to square the frame.
- **Check that the panel is in the correct opening.** When multiple windows are of similar size, panels can sometimes be placed into the wrong opening or with the incorrect panel grouping. Check the labels and order form instructions to ensure that the panels are in the correct opening and with the correct panel group.
- **Classic Z-frame with rubber flex: remove the rubber flex from one side of the frame.** If the opening is smaller than expected and installation screws do not pull the frame straight, it may be necessary to remove the rubber flex from the back of one or more sides of the frame. This can be done easily and safely by making a small cut into the rubber flex material at one end of the frame, then peeling the rubber flex off the frame.

Problem: Louvers Are Not Working Properly

- **Check panel load.** Review the procedures at the bottom of page 44.
- **Check connectors.** With Palmetto™ shutters, connectors attach the louvers to the tilt bar.

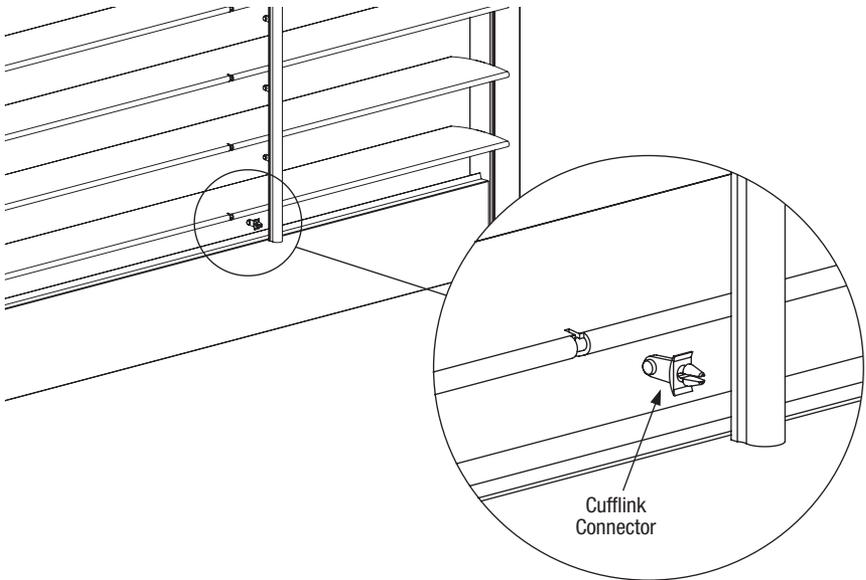
- Duralink™ cufflink connectors attach the louvers to the tilt bar at the front of the panel. Check that the connectors are securely attached. Snap them back into place if they are detached.

IMPORTANT: To ensure the long life of shutters, the front tilt bar should not be used to open the panel.

- With rear tilt bars, rear connectors attach the louvers to the tilt bar at the back of the panel. Check that the connectors are securely attached.

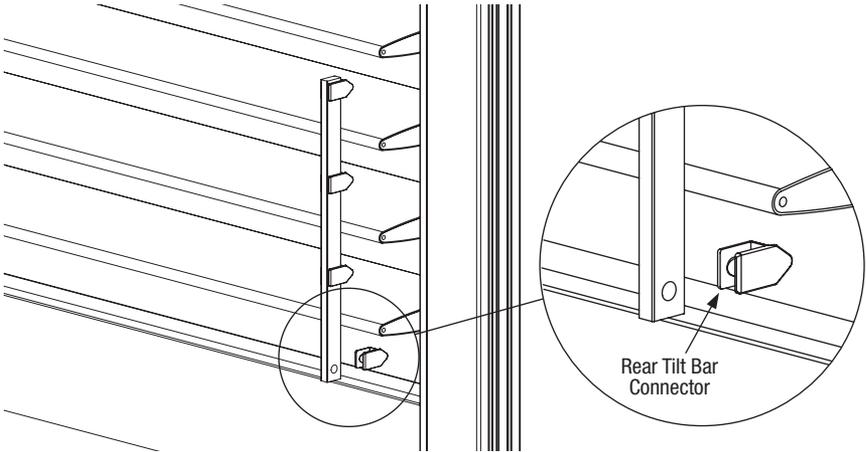
- **Replace Duralink cufflink connectors (front tilt).** Follow this procedure:

1. Pull the tilt bar from the louvers.
2. Remove the broken connector(s).
3. Replace the broken connector(s). Snap the new connector(s) into the hole on the tilt bar.
4. Replace the tilt bar. Insert the connectors into the louvers by holding the louvers in place and firmly pressing the connector into the notch on the louver.



■ **Replace rear tilt bar connectors.** Follow this procedure:

1. Remove the broken connector(s).
2. Snap the new connector(s) into the rear tilt bar.
3. After all the broken connectors have been replaced, connect the tilt bar to the louvers by snapping the connectors back onto the ends of the louvers.



Problem: Shutter Is Discoloring

- **Check for residue build-up.** The polysatin material has UV stabilizers to prevent discoloring. Any situation of discoloration is a direct result of residue from a cleaner or natural build-up (smoke, dust or oil furnace). Clean the shutter with soap and water. Never use ammonia-based products.

Problem: Shutter Is Scratched

- **Remove scratches.** Scotch-Brite™ 7448 light gray hand pads can be used to remove minor scratches. Gently rub the Scotch-Brite pad over the scratch in the direction of the extrusion. Apply minimal pressure when rubbing to avoid dulling the finish. Using very light pressure, carefully blend the repair area into the surrounding material. The entire piece may need to be treated.
- **Remove deeper scratches.** If a scratch cannot be removed using Scotch-Brite, a more aggressive approach may be required. Start with 1200 grit wet or dry sandpaper first, and then finish with the Scotch-Brite 7448 pad to blend.