

Sunland® Shutters



Product Manual

We Manufacture the World's Finest Shutters

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Polycore® shutter are the only fully aluminum reinforced shutters available in the world today. After nearly 12 years of research and development, a co-extrusion process was perfected that allowed us to manufacture aluminum reinforced shutter components and fabricate them into shutter panels.

All Polycore® shutters have a conveniently located tilt rod that provides easy access to light control and privacy. The self-tensioned louver pins eliminate the need for tension screws and constant adjustment. A removable pin in the two-part hinge makes removing panels from the frame effortless. A wide array of specialties and options allows the Polycore® shutter line cover virtually any window opening.

Polycore® components are finished with a state of the art baked on water borne paint. This ensures that the shutter finish will never warp, crack, chip or peel. Polycore® shutters are moisture and UV resistant, making them impervious to the elements. Finally, the innovative aluminum core provides unprecedented strength and durability that allows our panels to be safely fabricated up to 36” wide for an unparalleled viewing area.

Our Lexwood® Premium, Advantage and Plus shutters are made from 100% premium basswood. Each shutter is hand built utilizing a unique process that combines old world craftsmanship with cutting edge technology to offer precision design and consistent quality control. This allows Sunland Shutters to create the finest and the most elegant looking custom wood shutter on the market today.

Our selection of 20 stain colors, 20 white colors and our custom color match service combined with a wide choice of frames, options and specialties allows these Lexwood shutter lines to match any décor and window opening.

Our Lexwood® Premium, Advantage and Plus shutters and our Polycore® shutters have received the GREENGUARD Indoor Air Quality and the coveted GREENGUARD Children & Schools certifications. This means that our shutters have passed an extensive series of tests to ensure that they meet stringent third-party standards for low chemical emissions based on established health standards.

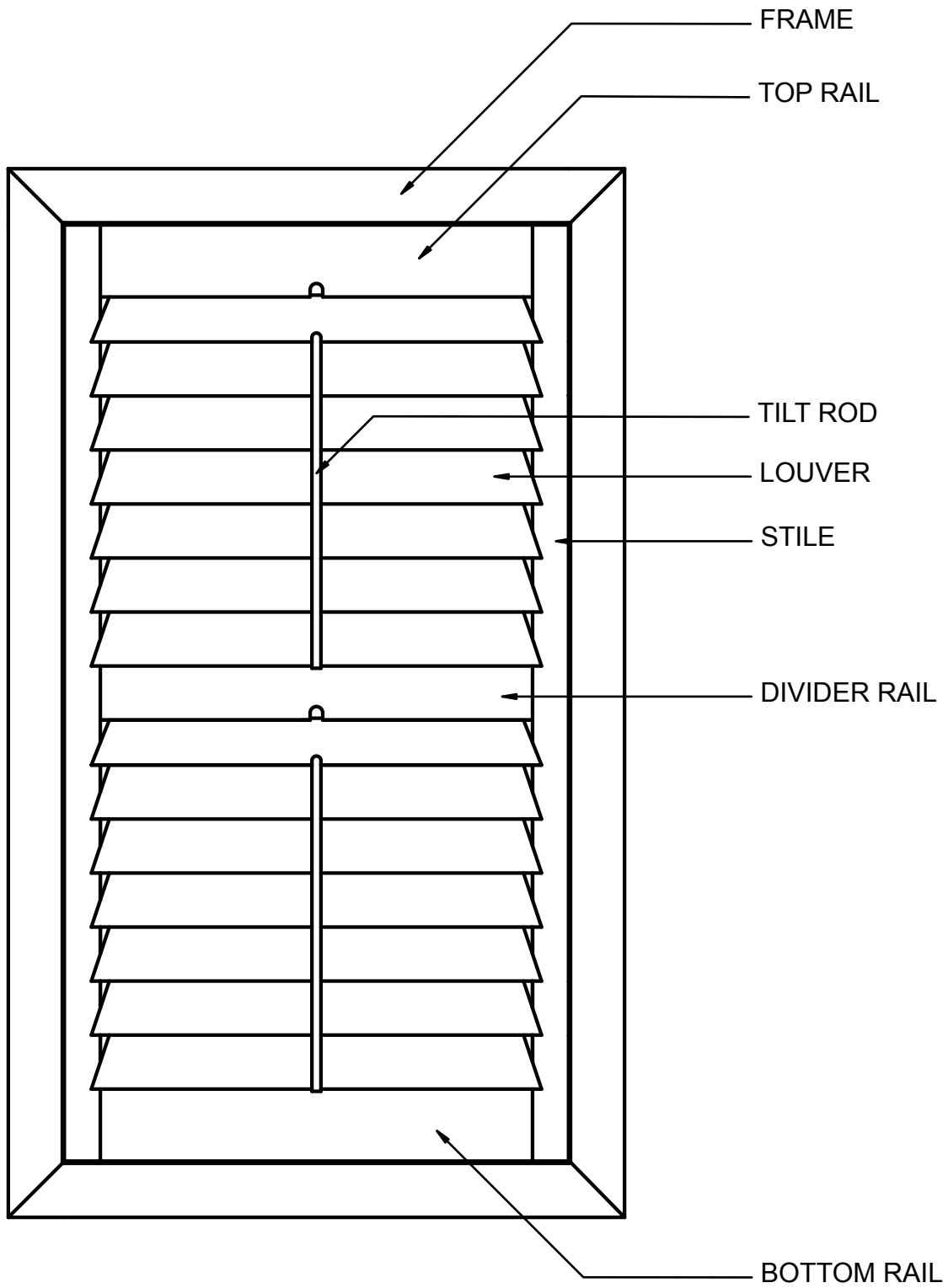
Shutter Features Comparison

Revised: July, 2023

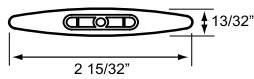
	<i>LexWOOD</i> [®]			<i>PolyCORE</i> [®]
	Premium	Advantage	Plus	Polycore
Delivery *	~6 Weeks	~5 Weeks	~5 Weeks	~4 Weeks
# Of Colors	20 Stains	20 Whites	20 Whites	5 Whites
Primer	UV Water based	UV Water based	Gesso	UV Water based
Paint	UV Water based	UV Water based	UV Water based	UV Water based
Panel Width	36"	36"	36"	36"
Specialties	Yes (1 wk longer)	Yes (1 wk longer)	Yes (1 wk longer)	Yes (1 wk longer)
French Doors	Yes	Yes	Yes	Yes
Sliders	Yes	Yes	Yes	Yes
Material	Premium Basswood	Premium Basswood	Premium Basswood	PVC w/ Co-Extruded Aluminum Cores
Louver Size	2.5", 3.5", 4.5"	2.5", 3.5", 4.5"	2.5", 3.5", 4.5"	2.5", 3.5", 4.5"
# Of Frames	12	12	12	10
Double Hung	Yes	Yes	Yes	Yes
Café Style	Yes	Yes	Yes	Yes
Warranty	4 Years on Finish, Limited Lifetime on Materials & Workmanship	4 Years on Finish, Limited Lifetime on Materials & Workmanship	3 Years on Finish, Limited Lifetime on Materials & Workmanship	25 Year Limited

* Delivery time to the Port of Los Angeles. Additional time is required for customs, unloading, shipping, etc. Some features require an extra charge. See your sales rep for details.

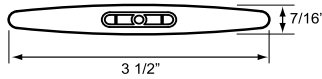
Shutter Components



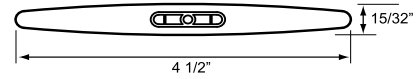
Louvers



2.5" ALUMINUM CORE LOUVER

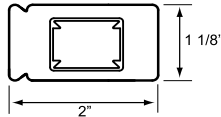


3.5" ALUMINUM CORE LOUVER

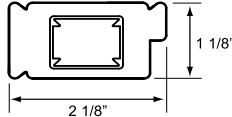


4.5" ALUMINUM CORE LOUVER

Stiles

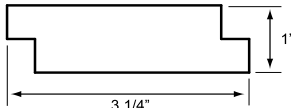


ALUMINUM REINFORCED STILE

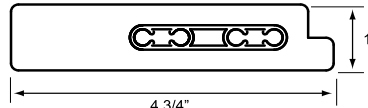


RABBITTED STILE

Rails

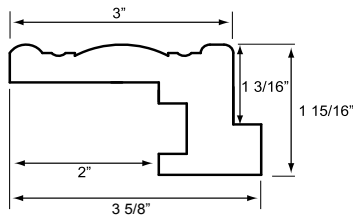


DIVIDER RAIL

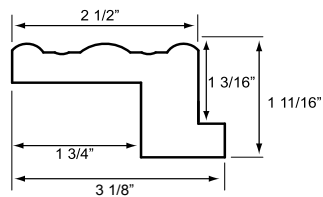


ALUMINUM REINFORCED RAIL

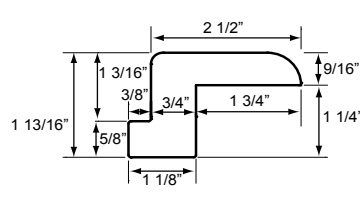
Frames



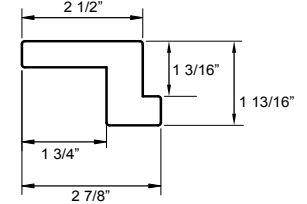
LARGE Z-FRAME
LGZ



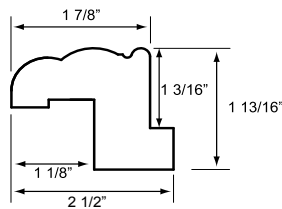
MEDIUM Z-FRAME
MDZ



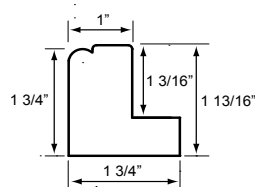
2" BULLNOSE FLAT Z-FRAME
2FZ



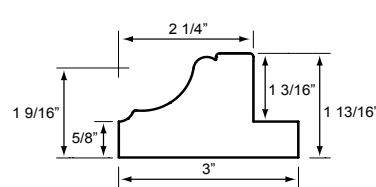
MEDIUM SQUARE FLAT Z-FRAME
SQZ



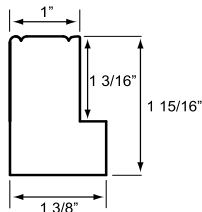
MALIBU Z-FRAME
MAZ



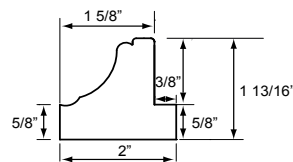
Deco Sill Frame
DSO



Deco Frame
DFO

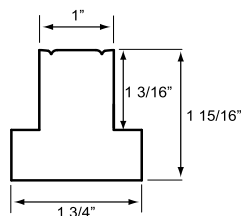


L-FRAME
LFI/LFO

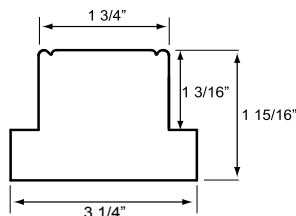


2" Deco FRAME
D2O

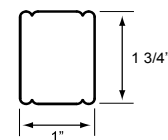
Others



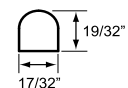
T-POST



LARGE T-POST



BUILD OUT
(1/4" min)

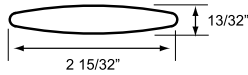


TILT ROD

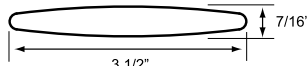
* Surcharge refer to order reference chart

Lexwood Components

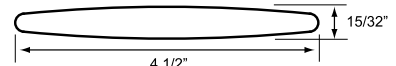
Louvers



2.5 LOUVER

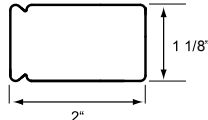


3.5 LOUVER

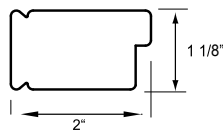


4.5 LOUVER

Stiles

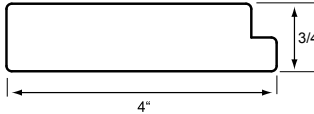


STILE



RABBETED STILE

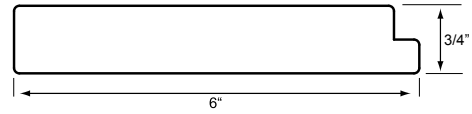
Rails



4" RAIL

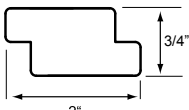


5" RAIL



6" RAIL

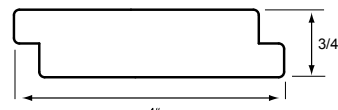
Divider Rails



2" DIVIDER RAIL

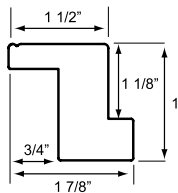


3" DIVIDER RAIL

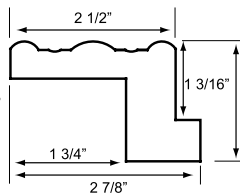


4" DIVIDER RAIL

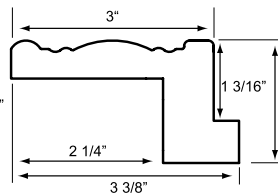
Frames



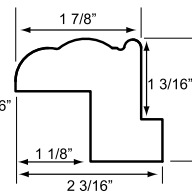
**SINGLE BEADED Z-FRAME
SBZ**



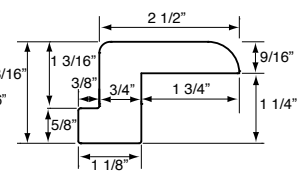
**MEDIUM Z-FRAME
MDZ**



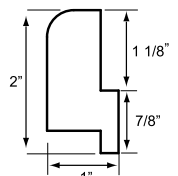
**LARGE Z-FRAME
LGZ**



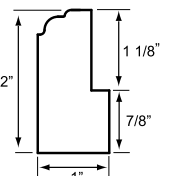
**MALIBU Z-FRAME
MAZ**



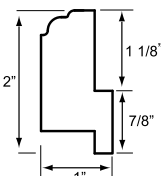
**2" BULLNOSE FLAT Z-FRAME
2FZ**



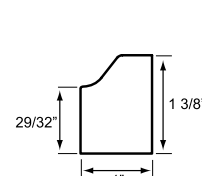
**CHICAGO Z-FRAME
CZF**



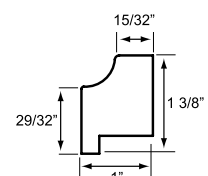
**ATLANTA FLAT
AFL**



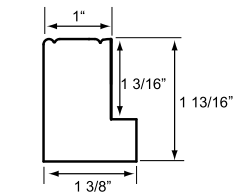
**ATLANTA Z-FRAME
AZF**



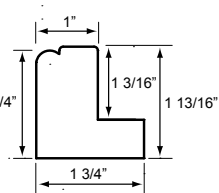
**HOWE CASE FLAT
HCF**



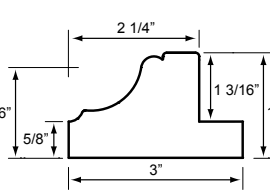
**HOWE CASE
HCA**



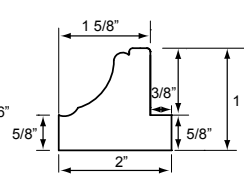
**L-FRAME
LFI/LFO**



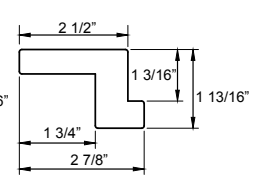
**Deco Sill Frame
DSO**



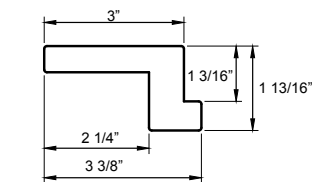
**Deco Frame
DFO**



**2" Deco FRAME
D2O**

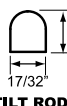


**Medium Flat Z Frame
MFZ**

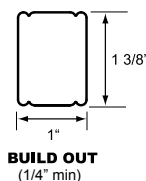


**Large Flat Z Frame
LFZ**

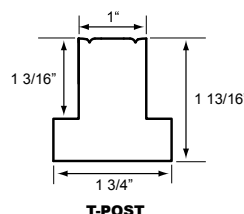
Others



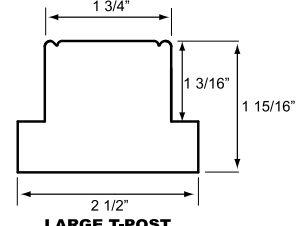
TILT ROD



**BUILD OUT
(1/4" min)**



T-POST



LARGE T-POST

Base

The base is used exclusively in fan top shutters. It refers to a durable aluminum (in Polycore) or wooden (in Lexwood) bottom frame that is used in wide openings to prevent panel sag. It is also commonly used to maintain a flush and uniform look when mounting a fan top shutter on top of a standard rectangular shutter.

Bi-fold Panels

Bi-fold panels are two panels that are hinged together and fold up adjacent to one another.

By-pass Panels

By-pass panels are two or more panels mounted on an overhead track system that slide past one another.

Build Out

A build out is a profile that is used to extend a frame away from the wall. Typically, it is used to move a shutter beyond an obstruction, such as protruding window sill, tiled wall, or crank handle. This profile is also used to project the shutter away from the window pane when taking louver clearance into account. The minimum thickness on both Lexwood and Polycore is 1/4".

Butt Hinge

A butt hinge is used to connect two or more panels together in a bi-fold design. Butt hinges are surface mounted on the back to join the panels.

Divider Rail

A divider rail is sometimes placed between the top and bottom rail to add structure and integrity to the panel. The divider rail also enables the louvers in the upper section to move independently from those in the lower section.

Fascia

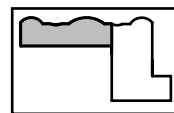
A decorative trim used to hide the track in a track system.

Filler Strip

A filler strip is a profile used to return a Z-frame back to the wall when it is necessary for the frame to not be fully recessed into the opening.

Flange

The flange is the part of the Z-frames that overlaps the wall.



Hanging Strip

A hanging strip is a simple rectangular frame piece that is typically mounted to a window opening to support the hanging of panels.

Hidden Tilt

The term Hidden Tilt refers to a hidden aluminum rod along the back of a shutter that connects and coordinates the movements of the louvers. With this design, there is no need for a tilt rod. This gives the front of the shutter a clean look. The shutters can still be easily opened by rotating an individual louver.

Hinges

Hinges are metal mechanisms that are attached to the stile and connect the panel to the frame. Hinges enable the panel to open and close.

Hub

The hub is responsible for giving fan top shutters their unique shape and look. It is a circular piece of material located in the center of the shutter. The louvers connect from the hub directly to the frame, creating a sunburst effect.

Louvers

Louvers are the panel components that rotate to offer control over the light and view.

N. W. F. (Net With Frame)

With this method of taking dimensions the measurements correspond to the finished size of the shutter, including the frame measured from the front of the shutter.

Net Panel

This refers to the exact size of the panel(s). No deductions are taken for hinges or clearances, even in multiple panel units, when specifying net panel. On Polycore panels the stile cap is NOT included in the height.

Opening Size

With this method of taking dimensions, the measurements correspond to the size of the window opening.

Shutter Frame

The shutter frame is a profile used to frame the shutter panels. Frames provide a square and even mounting structure for the panels, can compensate for an out of square openings, offer superb light blockage, and add a decorative trim to the window opening.

Split Rod

This refers to a divided tilt rod. Instead of one continuous tilt rod, the rod is split so that sections of louvers can operate independently of each other. This achieves the same purpose of a divider rail, without the insertion of the divider rail. Please be advised, in this application, for both regular and hidden tilt rod shutters, the tilt rod/hidden tilt on the upper tier and bottom tier might rub each other only when louvers are tilted at certain angles. Sunland Shutters does not hold liability for any dissatisfaction on louver operation and parts damage in this application.

Stiles

Stiles are the vertical side pieces of a panel that are secured to the horizontal rails. The stiles hold the louvers into place and keep them evenly spaced for proper operation.

T-Post

The T-post is a vertical component that is inserted into a shutter frame to separate the individual panels and also add structural support. It is required once a shutter surpasses Sunland's maximum width (see p.12) , though it can also be used for decorative purposes or to cover a window mullion.

Tilt Rod

A tilt rod is located in the center of the panel and coordinates the movement of the louvers by connecting them to one another. When opening the louvers, pull down on a louver but do not pull on the tilt rod.

Top and Bottom Rails

The rails are the horizontal components of a shutter panel assembly. They are attached to the vertical stiles and add structure to the panel. Typically, top and bottom rails will have equal heights. However, rail height can vary depending on the panel height.

Overview of Shutter Options

Component	Polycore	Lexwood
Louver	2 1/2" 3 1/2" 4 1/2"	2 1/2" 3 1/2" 4 1/2"
Color	Bright White Dull White Ultra White Off White Pearl White	Advantage: 20 Standard Whites Premium: 20 Standard Stains (Refer to Lexwood Color Deck)
Hinge	Bright White Dull White Off White Bright Brass Antique Brass Nickel *Stainless Steel Oil Bronze	Bright White Dull White Off White Bright Brass Antique Brass Nickel *Stainless Steel Oil Bronze
Frame	**Large Z-frame Medium Z-frame Malibu Z-frame Medium Square Flat Z-Frame 2" Bullnose Flat z-Frame **L-frame Deco Frame Deco Sill Frame	**Large Z-frame Medium Z-frame Single Beaded Z-frame Malibu Z-frame **L-frame Chicago Z-frame Atlanta Z-frame Atlanta Flat Howe Case Flat Howe Case Deco Frame Deco Sill Frame 2" Deco Frame 2" Bullnose Flat Z-Frame
System	Standard Shutter Specialty Track System	Standard Shutter Specialty Track System

*With Surcharge

** Refer to component diagrams for slight dimension differences that exist in some products.

Panel Size Limitations

A shutter panel is a fully assembled shutter that does not have a frame attached. Panels are typically mounted with a frame but can also be mounted independently.

Maximum & Minimum Panel Size

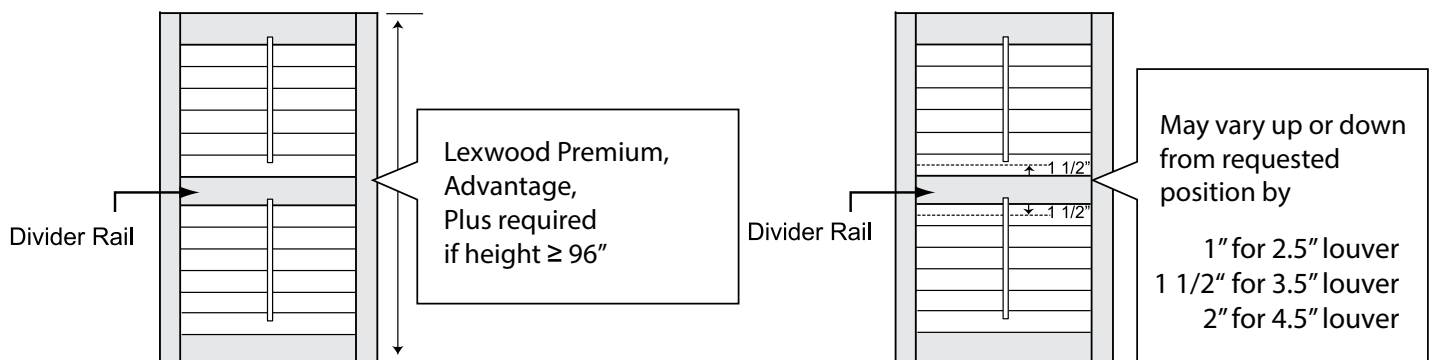
	Louver Size	PolyCORE®	LexWOOD®	
			Premium	Advantage / Plus
Maximum Panel Width	N/A	36"	36"	36"
Maximum Panel Height	N/A	144"	120"	144"
Minimum Panel Width	N/A	7"	7"	7"
Minimum Panel Height with Two Louvers	2.5"	9"	9"	9"
	3.5"	11"	11"	11"
	4.5"	13"	13"	13"

PANEL HEIGHT	HINGE QUANTITY
UNDER 48"	2
48"-72"	3
72"-96"	4
OVER 96"	5

Divider Rail Requirements & Limitations

Divider rails provide structural integrity to a shutter and also divide the top louvers from bottom louvers. Sunland shutters can build Polycore, Lexwood Premium, Lexwood Advantage and Lexwood Plus shutters up to 96" in height without a divider rail, but we recommend a divider rail for shutters over 72" in height.

We require a waiver against sagging for shutter panels that are both over 32" in width and 72" in height or larger. Split rods are not considered as a divider rail. Please be advised, with the application of split tilt, for both regular and hidden tilt rod shutters, the tilt rod/hidden tilt on the upper tier and bottom tier might rub each other only when louvers are tilted at certain angles. Sunland Shutters does not hold liability for any dissatisfaction on louver operation and parts damage in this application.



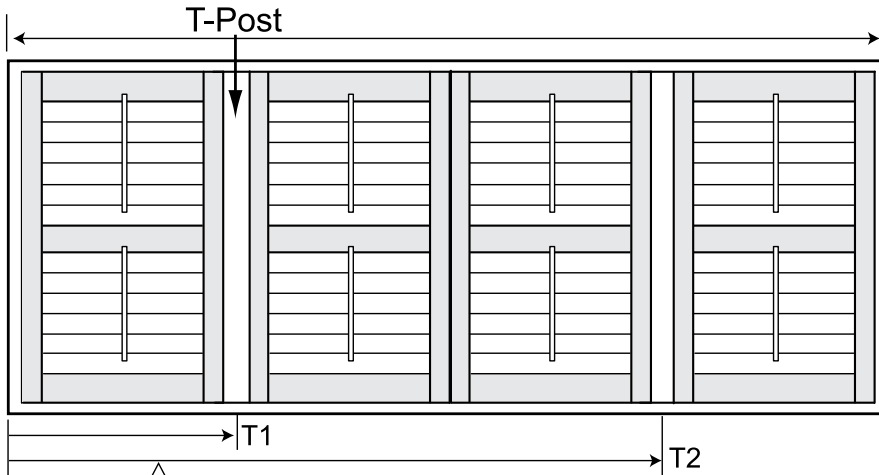
(The customer will be informed if the difference is over 1")

Requirements & Limitations

T-Post Requirements & Limitations

T-Post are vertical frame members that divide the shutter unit into multiple sections.

T-Posts are required for total panel width greater than 84” for Polycore, 96” for Lexwood Advantage and Lexwood Plus.



T-Post waiver is required with limitations below:

Product	Panel Width	Sq-ft Limitation
<i>Poly</i> CORE®	> 84”	≤ 44 sq-ft
<i>Lex</i> WOOD®	> 96”	≤ 68 sq-ft

Please provide T-Post location from left to right.
 ex:T1 at 24”(from left of the opening to center of the first T-Post)
 T2 at 64”(from left of the opening to center of the second of the T-Post)

If not specified, T-Posts will be placed to divide shutter unit equally

T-Posts Size

T-Posts have 1” face, although on panels greater than 24” in width or 60” in length, a large T-Post will be used with a 1 3/4” face for greater stability.

When a fax order has mixed T-Post, we will default all openings to Large T-Post for consistency.

T-Post SIZE		PANEL WIDTH	
		less than 24”	over 24”
PANEL HEIGHT	less than 60”	1”	1 3/4”
	over 60”	1 3/4”	1 3/4”

3-Sided Shutter Limitation

We do not recommend a 3-sided shutter to be installed on a window, especially a sliding door, at the size of 66” x 78” or larger. To avoid sagging issue and /or structure failure, we highly recommend using the track system, either a bi-pass with track, a bi-fold with track, or add at least one large T-post and hinge panels to the T-post.

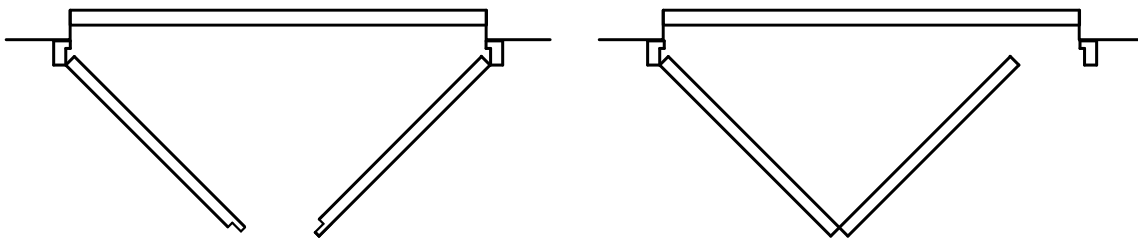
If you insist to order and install a 3-sided shutter beyond above limitation, we will send you a recommendation waiver and the warranty will be waived on this shutter.

Standard Shutters

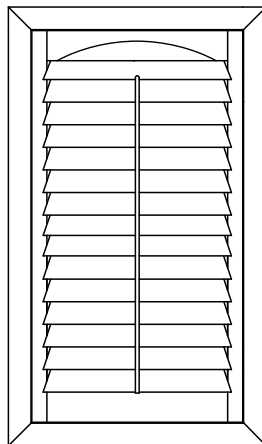
Sunland Shutters builds all panels so that the **top rail** and the **bottom rail** are as close to the **same size** as possible. When ordering adjacent shutters in the same room, to achieve uniform appearance (divider rails and louver numbers) you must specify that all adjacent shutters and their divider rails be built exactly the same height. If the measurements of the shutters differ slightly, apply one of the three options (keeping in mind that adjacent shutters and their divider rails must always be ordered exactly the same height):

- 1) For outside mounts, increase the ordered height of the smaller shutters to equal the taller shutters.
- 2) For inside mounts with Z frames, reduce the ordered height of the taller shutters to equal the smaller shutters.
- 3) For inside mounts with height differences of ½” or more, change to an outside mount.

Standard rectangular shutters can consist of one or more panels hinged in a variety of configurations. Single panels can be individually hinged, or two panels may be hinged together in a bi-fold design. All bi-fold panels are butted together and have a butterflyed butt hinge attached on the back of the stiles. Maximum width for 2 panels bi-fold, 2L or 2R is 42” on Polycore, 48” on Lexwood. Premium / Advantage / Plus.



Remember, because of the unprecedented panel height we recommend panels over 96” in height to have a divider rail so that louvers will not need to be hand pressed to close. Panels over 96” in height will require a divider rail to ensure structural integrity.

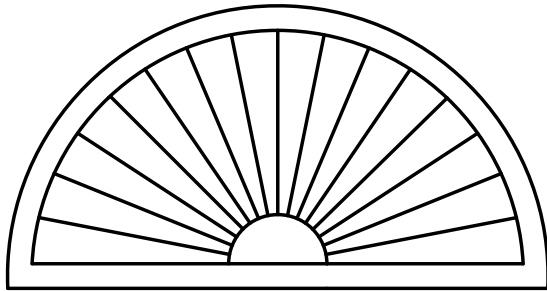


* Liberty panel is available upon request
(Lexwood Premium, Advantage & Plus)
with surcharge

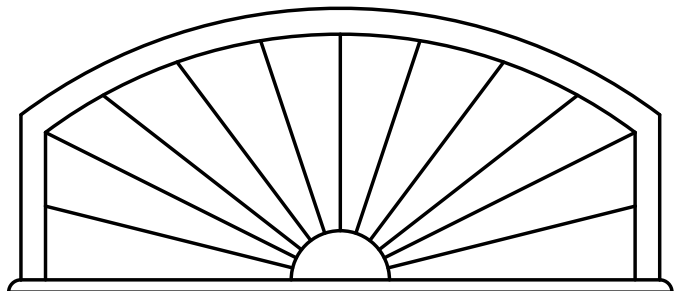
Fan Top Shutters

Fan top shutters show shutters in their best light. Either alone or on top of a rectangular shutter, fan top shutters provide the finishing touch to any decorating scheme. Fan top shutters are manufactured in the frame of your choice. The movable louvers are connected from the hub directly into the frame. These fan top shutters are generally attached to the opening permanently. In order for them to be removable they will need to be installed with magnets or button catches. Fan top shutters are available as a ½ circle or as an eyebrow. The bottom of the fan top shutter can be manufactured as bottom with frame or bottom with a base.

Note: The base extends past the width of the frame.

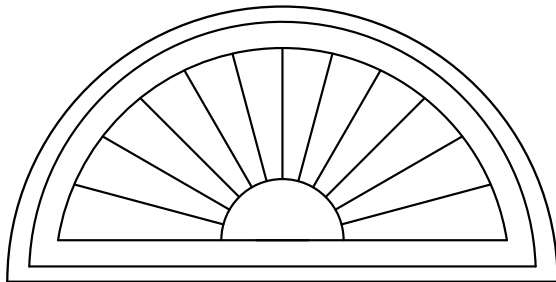


½ circle shutters as bottom with frame

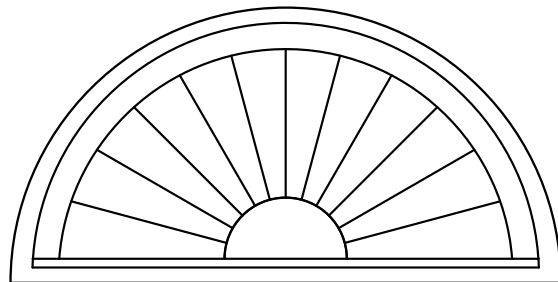


Eye brow shutters as bottom with base

If you require a flat frame fan top shutter with a wrap around frame, it is always magnet mount and there is a surcharge.



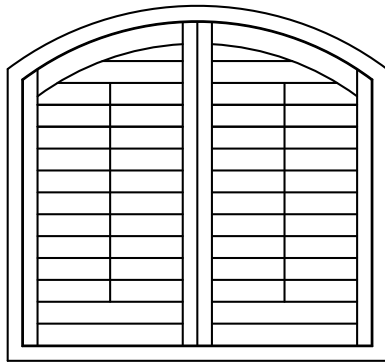
Sunburst Bottom with Frame



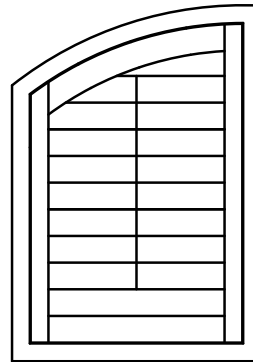
Sunburst Bottom with Base

Arch Shutters

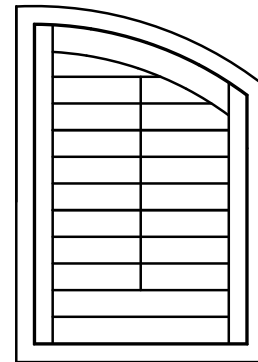
Arch shutters are another way to cover an arched opening. The shutter panels are manufactured with a curved top rail to conform to the desired opening. They are available as a full circle or an eyebrow. We provide a full frame on all arch shutters. Hidden Tilt rod cannot reach the louvers in the top arch area on a single panel arch. These unreachable louvers will be connected with a tilt rod in the back as spare operating control.



2 Panel Arch

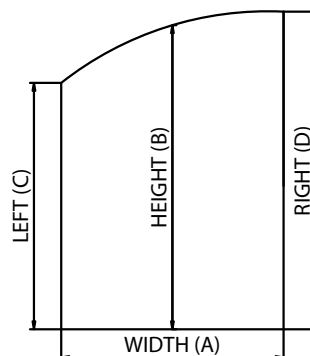
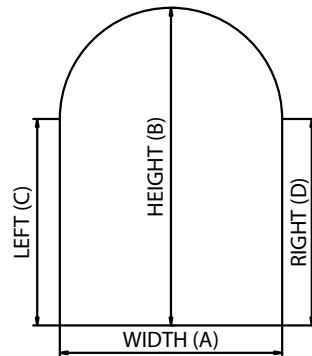


1/2 Arch-left



1/2 Arch-right

Please provide the width, overall height, and shoulder heights on each side.



Arch Shutter Template Requirement

All arch top shutter orders without template will be manufactured as half circle or continuous slope.

If the arch shutter ordered is not a half circle or continuous slope, **Cutout** template is required for manufacturing purpose. Two templates are recommended, one for Sunland Shutters and one for the dealer's records. Marked lines on templates are not acceptable to avoid mis-line determination only cutout templates should be sent.

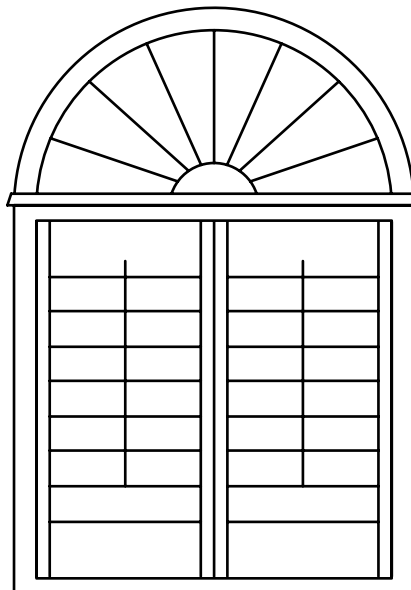
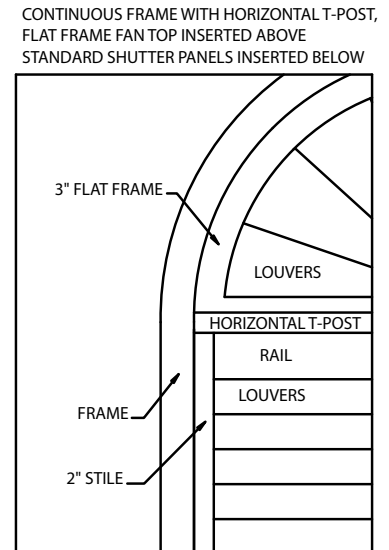
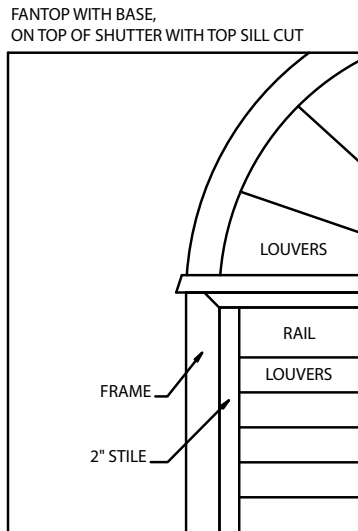
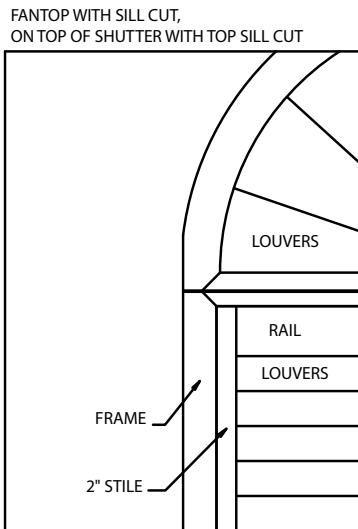
All orders that require a template must MAILED IN with the order form (via USPS or UPS or Fed Ex) for that opening with the template attached. Sunland Shutters will not accept any order for openings requiring a template via online order or fax order.

Orders that have openings requiring templates—that ENTIRE order should be submitted via PHYSICAL MAIL along with the associated templates. Order where only 1 or 2 openings require templates—the openings that DO NOT require templates should be submitted online or via fax. The 1 or 2 openings requiring templates should be submitted via PHYSICAL MAIL. Please make sure the side mark is the same on both submissions.

Mail Instruction: Sunland Shutters 5855 Obispo Ave. Long Beach, CA 90805 Attention: Design – Template

Arched openings can also be covered using a standard shutter with a fan top mounted on top. There are three ways of accomplishing this: Using separate frames with a base, using separate frames without a base, and using a continuous frame. For an example of each please see the diagrams below.

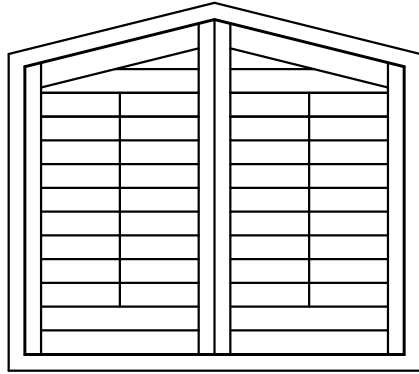
*There is a **surcharge for the continuous frame.**



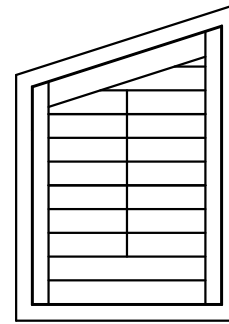
(A complete fan top shutter using separate frames with a base)

Rake Shutters

Raked top shutters, are shutters that have a straight angled top. The shutters are manufactured with an angled top rail to conform with the opening. We provide a full frame on all rake shutters.

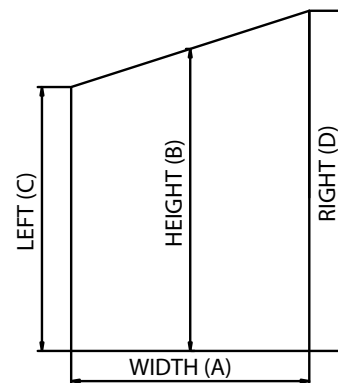
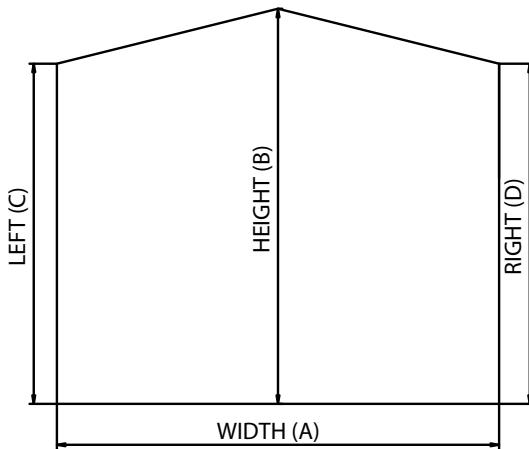


Rake



1/2 rake-left

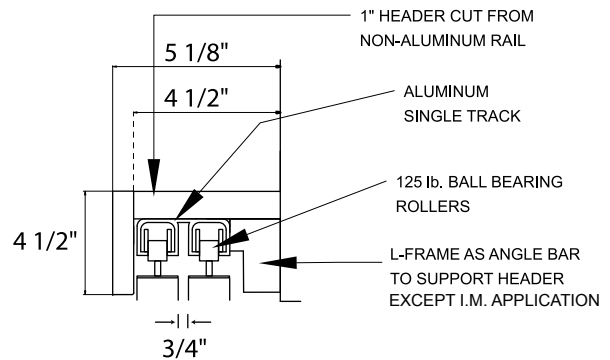
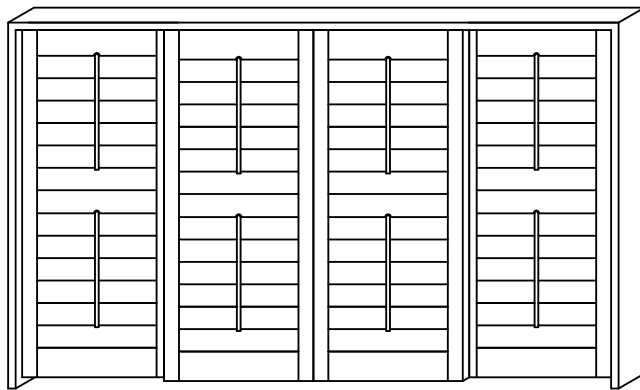
Rake shutters require the same dimensions as an arched shutter. Please provide the width, height, and height of both the left and right sides.



Track System

By-pass track

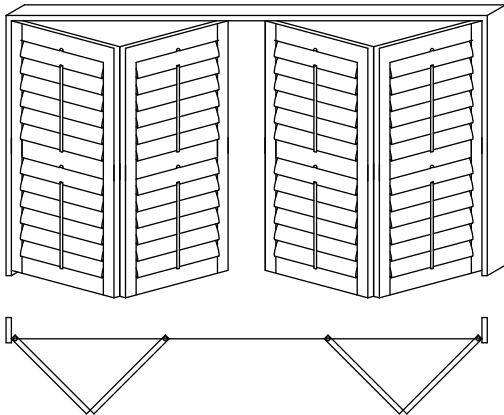
When two or more panels on an overhead track slide past each other, it is called a by-pass track system. Two single tracks are required so that the panels can slide past each other. When sliding past another panel, **the louvers must be closed**. If the panel width exceeds 38", two panels will be hinged together on the back with butt hinges and move as one piece. Rabbed stile are used where the two panels meet in a center opening unit. The top fascia is 4 1/2". The rollers hold up to 125 lbs. per roller. The header and side legs are made out of 1" rail material. A 1 1/2" overlap for panels is built into all by-pass shutters. A 5/8" floor clearance is also provided. Corner fascias (return) are included on O.M. and N.W.F. order only. Bottom runner is included on all 2-way track applications. These runner pieces are meant to keep the panels apart so that the tilt rods do not interfere with the movement of the panels, as well as keep the panels together.



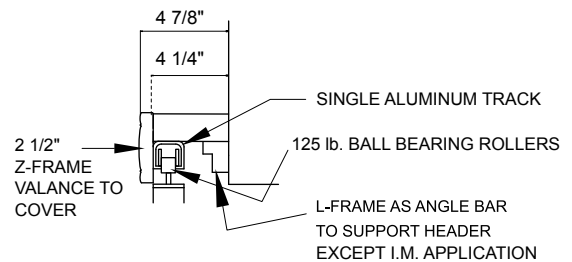
Side Fascia to Cover Side Legs
← 1 5/8" Side Fascia

Bi-fold track

When two or more panels are hinged together to fold up adjacent to each other, they are called bi-fold panels. A single track system is used for Bi-fold track system. Panels must be hinged together in multiples of two. The top fascia is 2 1/2", the same as Medium Z-frame. The header and side legs are made of 1" rail material. A standard 1" floor clearance is also provided and cannot be modified. Corner fascias are included on O.M. and N.W.F. orders only.



Max Panel width is 25"



WE DO NOT RECOMMEND 6 PANELS CONFIGURATION.



All fascia over 8' (= 96") are provided in two pieces with 45 degree miter joint for both Polycore and Lexwood.

French Door

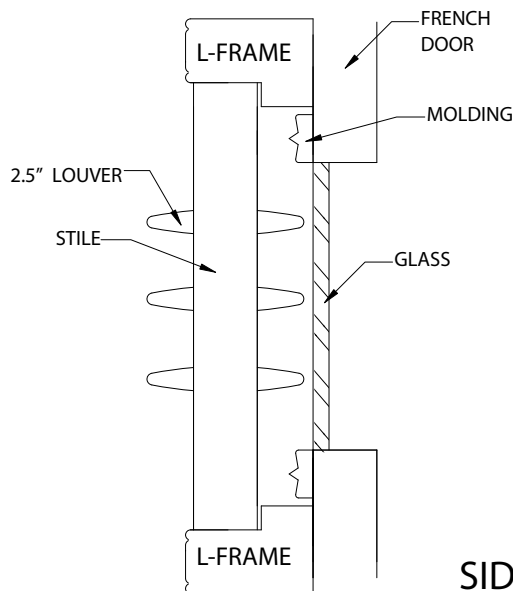
The french door cut out shutter is an excellent way to cover a difficult situation. French doors come with or without molding. If molding is present the shutter will need to be built around it to ensure error free operation. Remember, a build out is often needed for French door applications so the louvers will not come into contact with the glass. Study the diagrams below to find the application that is right for you. We recommend the L-frame as the best frame for french doors because of its appearance, mounting type, and ease of adding build out.

Build out

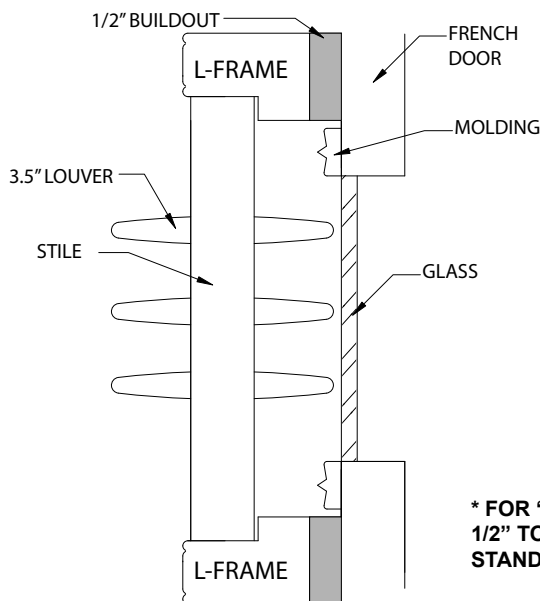
- 2.5 louver → no build out
- 3.5 louver → 1/2" build out
- 4.5 louver → 1" build out

French Door with Molding

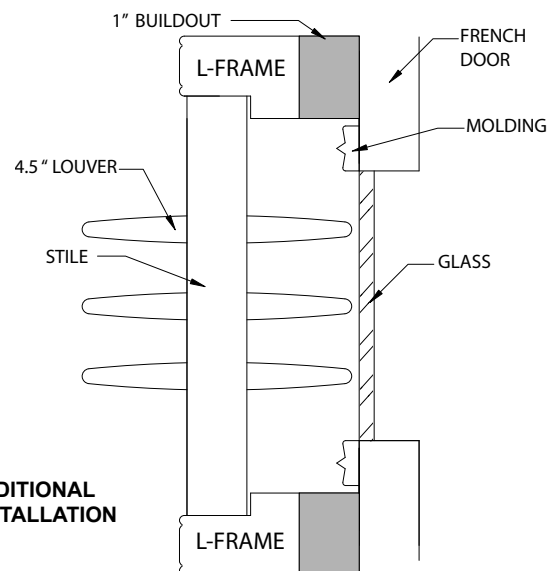
SIDE VIEW



SIDE VIEW



SIDE VIEW

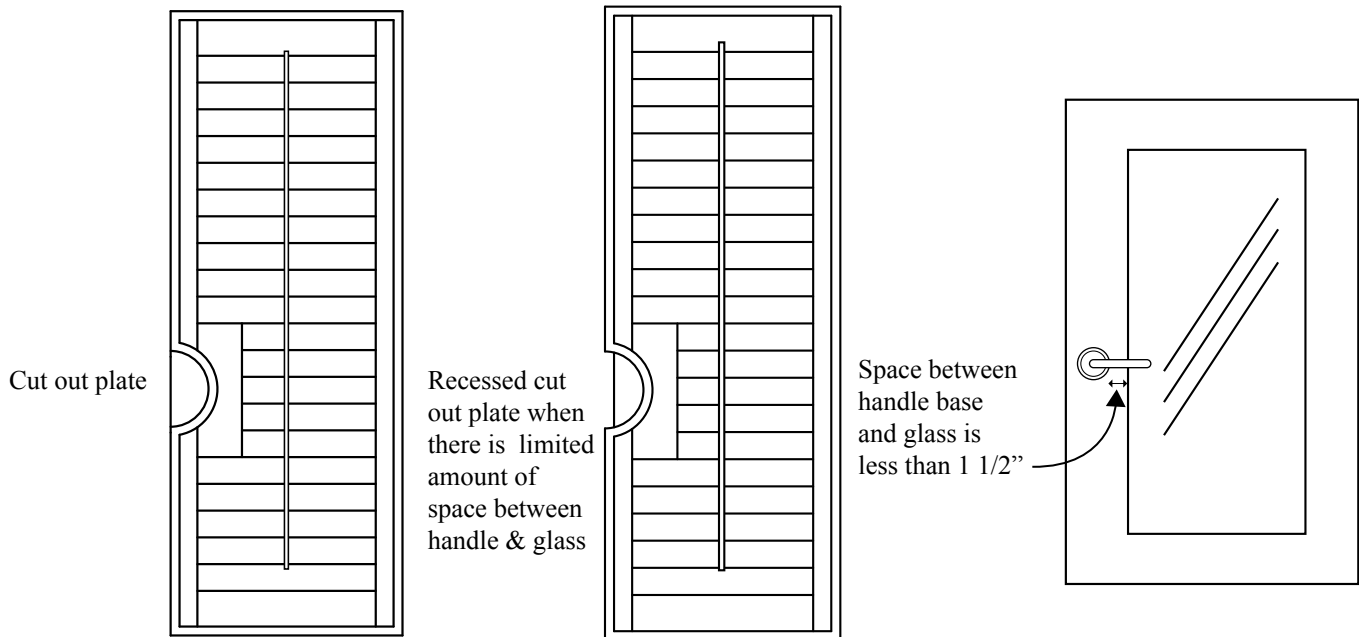


* FOR "HIDDEN TILT" ADD AN ADDITIONAL 1/2" TO LOUVER CLEARANCE INSTALLATION STANDARD OPENING.

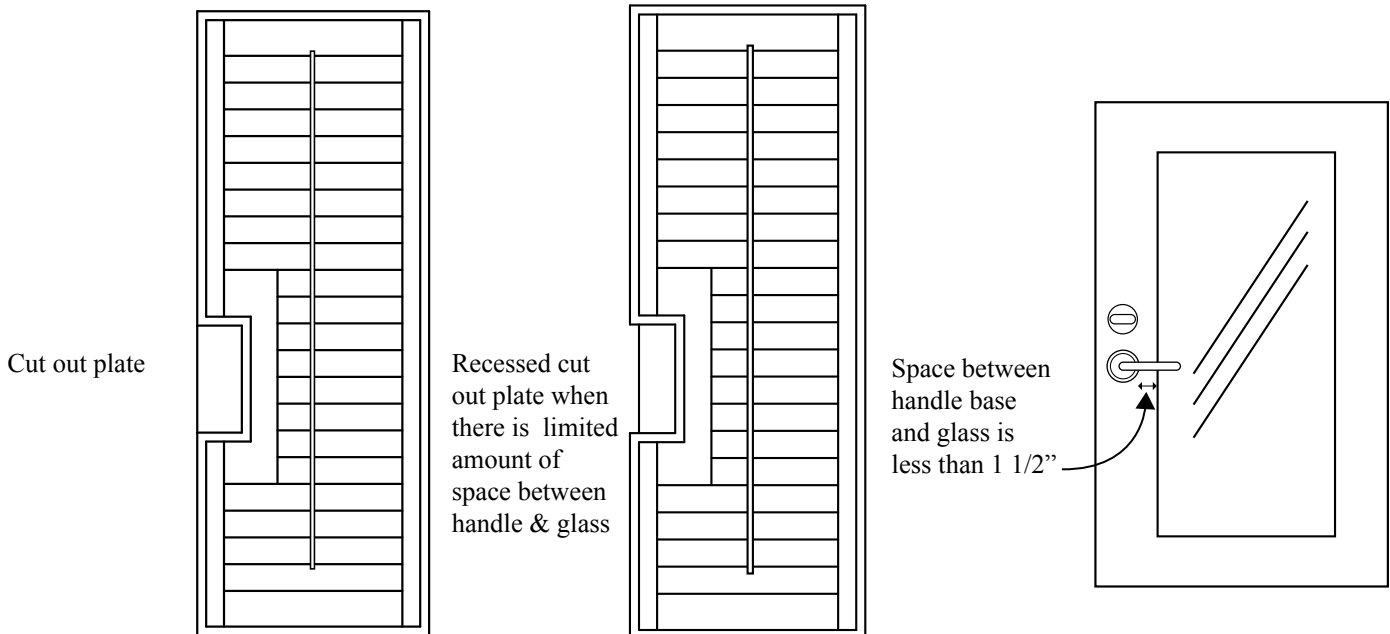
French Door with Cut Out

French doors occasionally come with a lever type of handle which protrudes into the glass section of the door. In these situations, the French door will need a cut out. We offer a half circle and rectangular cut out. Typically a standard 4 1/4" half circle cut out is enough to accommodate most levers, though we also offer a 5 1/4" and 6 1/4". Study the diagrams below to find your particular application.

Half circle cut out



Rectangular cut out

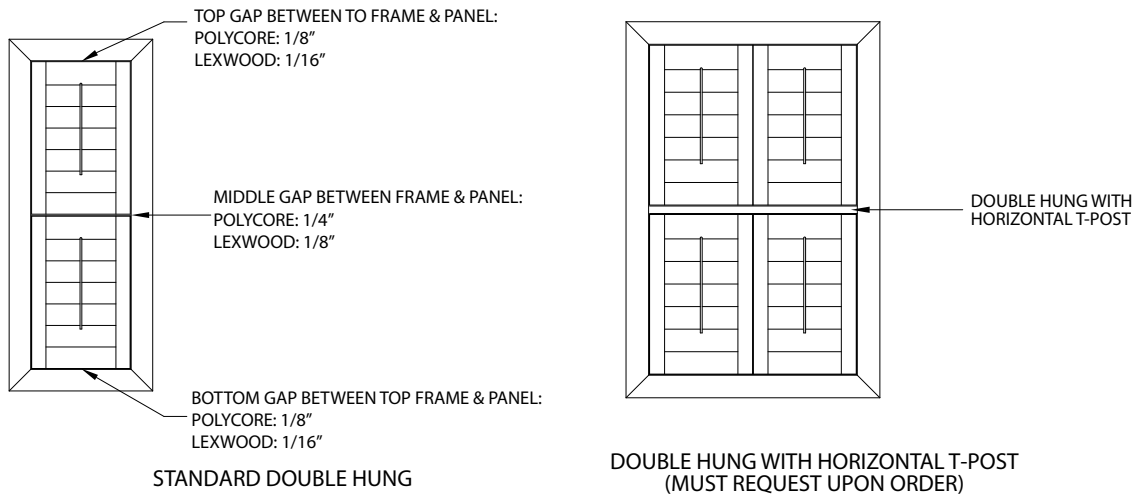


The cut out plate is 1/2" thick. Custom cut outs are available (such as an oval) with a surcharge.

Double Hung

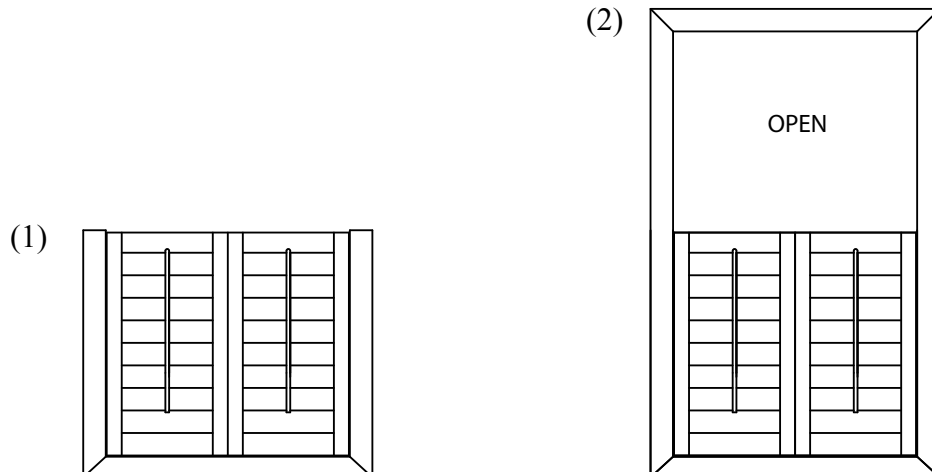
Double hung is when there is continuous frame and multiple panels vertically hinged to it. Customers to decide where the break point locates vertically and to be made with or without a horizontal T-post. A standard double hung has top and bottom panel tiers, operate individually and does not have a horizontal T-post. A double hung with horizontal T-post shutter comes with a horizontal T-post that goes across top and bottom panel tiers. You can choose either a 1” standard T-post or a 1 3/4” large T-post.

Double hung shutters must be designed the panel height greater than the panel width due to leverage factor. We highly recommend a bifold (2L2R) double hung shutter with 4-sided frame and should be ordered with a height dimension more than the width to avoid sagging. There is a surcharge for double hung shutters.



Café Style

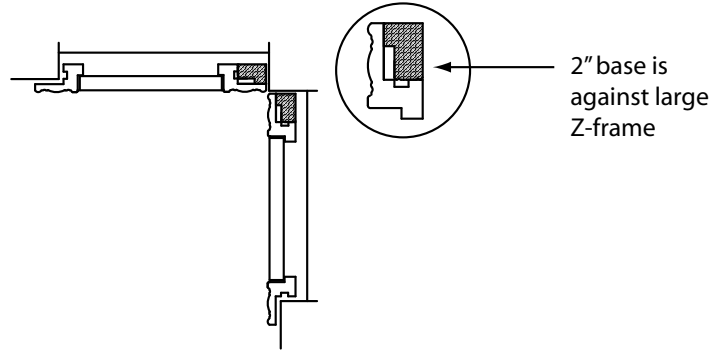
Café Style is a standard panel configuration in which a window opening has shutters on the bottom half, and the top half is left open. The café style shutter can have either an (1) inverted three-sided frame (top will have a smooth finish) or a (2) four-sided frame with the top section open (**with a surcharge**).



Corner Windows

There are two ways to install shutters on corner windows. The most popular frame is the large Z-frame.

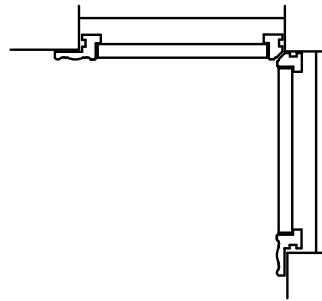
Measure the width of each opening. The factory will take a deduction for the frame and will provide a filler strip to support the back of the frame.



Corner window with frame cut

Measure the width of each opening. The frames will be miter cut in our factory so that the corners of the two will meet. We do not recommend the Malibu Z-frame for this application.

There is an additional charge for the miter cut.



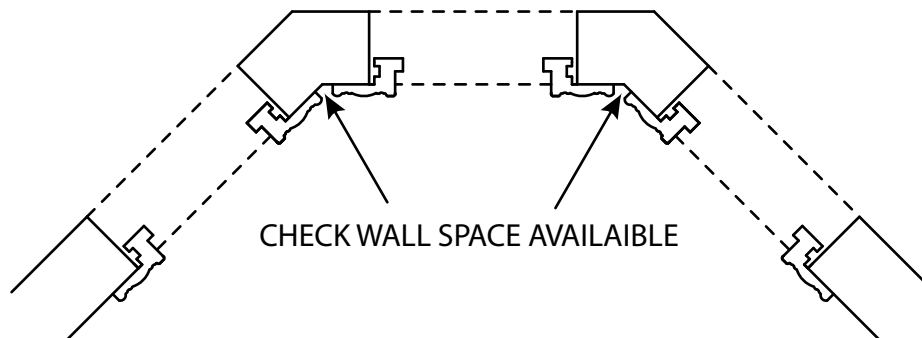
Bay Windows

Bay windows present interesting options for shutter installations. Choosing the proper installation provides the best insurance against unforeseen problems.

From experience we have learned that walls at the top of bay or bow windows are rarely plum and parallel with those at the bottom. As a result, the best and easiest installation is a semi-inside mounted Z-frame. The return flange allows for most out of plumb openings.

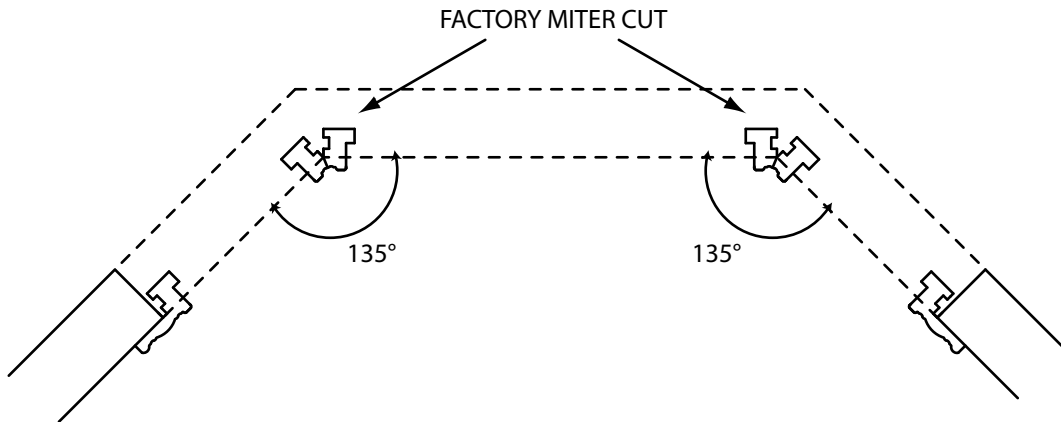
If wall space is available, bay windows can be framed just like a normal window opening.

Bay window with Z-frame semi-inside mount

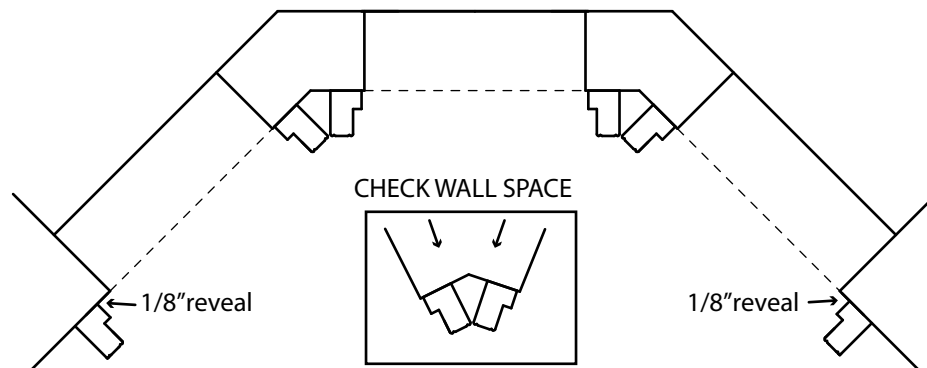


Bay window with Z-frame semi inside mount mitre cut

If there is not enough wall space for a standard Z-frame semi inside mount as on the previous page, the shutter can be made with a standard factory miter cut at 135° to reduce the size of the flange for easy installation.



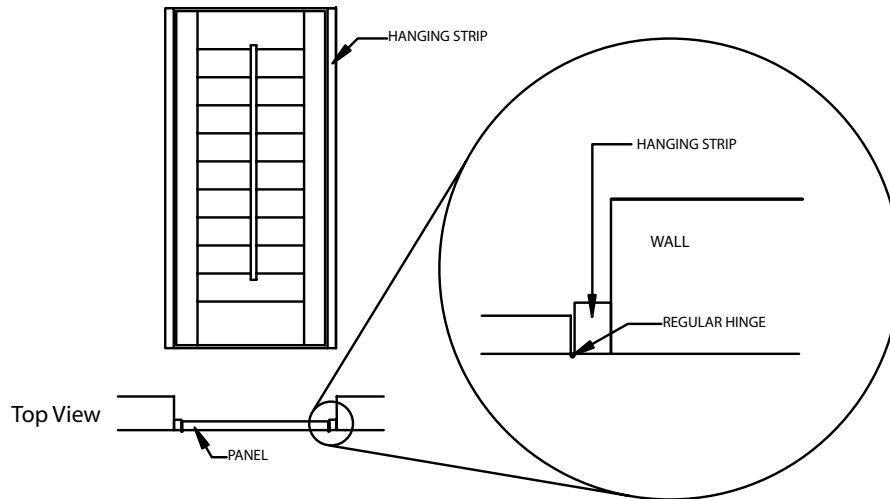
Outside mount bay windows look great with shutters. While uneven walls are more easily accommodated with inside mount Z-frames, outside mount frames are a viable option when space limitations preclude inside mount frame clearances. For a clean design we recommend that the sills be surrounded with a four side frame and notched on the job. A four sided frame could also sit on top of the sill.



Hanging Strip

Side Mount Hanging Strip

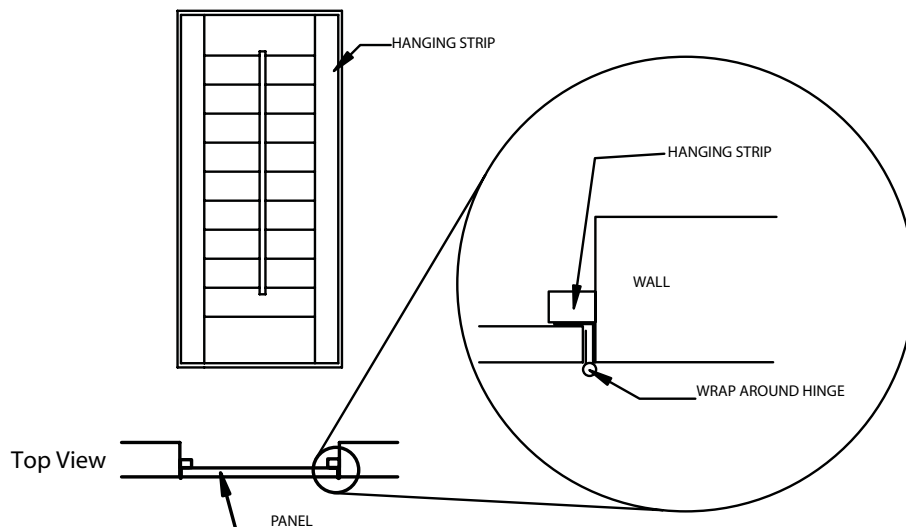
Shutters mounted with a hanging strip on the side use the standard non-mortised hinge. The factory will provide a hanging strip for both sides and a light block for the top and the bottom. For each panel, two magnets and a regular hinge are included. (The hinges are attached to the panel at the factory, however hanging strips, light blocks, and magnets come separately)



Lexwood Hanging Strip: 1" x 1 3/8"
Polycore Hanging Strip: 1" x 1 3/4"

Rear Mount Hanging Strip

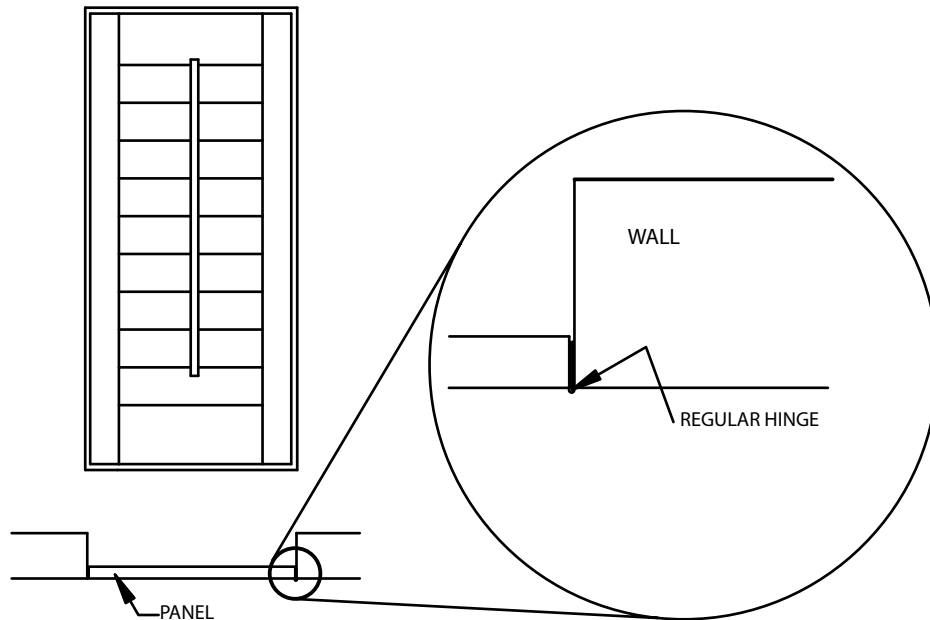
Shutters mounted with a hanging strip behind use the non-mortise **wrap around hinge** and factory deductions are once again the same as a direct mount shutter. The factory will provide a hanging strip for both sides and a light block for the top and bottom. For each panel, two magnets and a wrap around hinge are included. (The hinges are attached to the panel at the factory, however hanging strips, light blocks, and magnets come separately)



Lexwood Hanging Strip: 1" x 1 3/8"
Polycore Hanging Strip: 1" x 1 3/4"

Direct Mount Shutters

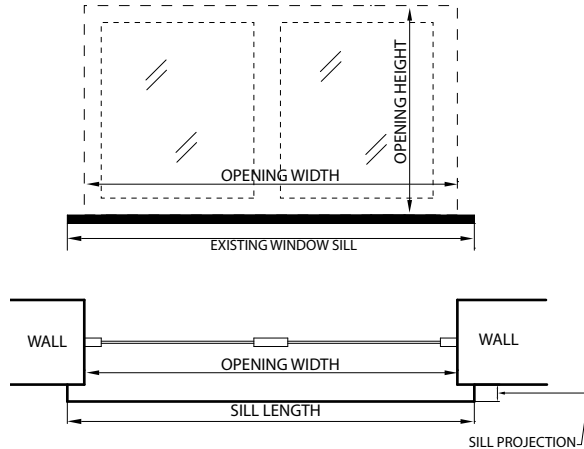
Direct mount shutters are hinged to jam with no frame or hanging strip. If you order a direct mount shutter with opening dimensions, the factory will deduct 1/4" for Polycore and 1/8" for Lexwood from the height and 3/16" in width for both. Multiple panels will have a 1/4" deduction on width. Magnets and light blocks for four sides are not attached.



* Please remember that our Polycore stile cap is not included in the Net Panel size measurement. The stile caps as the bottom margin.

Sill Cap

Sill cap is designed to cover the existing window sill to give a shutter a consistent look. This application is available on Lexwood and Polycore shutters. When you choose this application, must be aware of following situations: We default the finished sill cap length 1 1/4" wider than the existing window sill each side. Please refer to the frame overlap table on page 30, to determine the best edge of the sill cap. (There is a surcharge for sill cap).

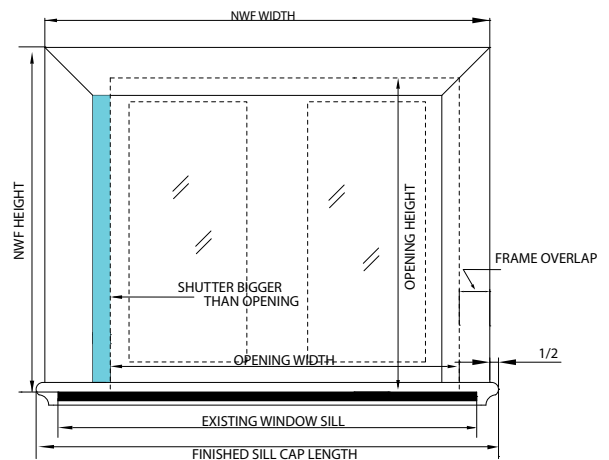
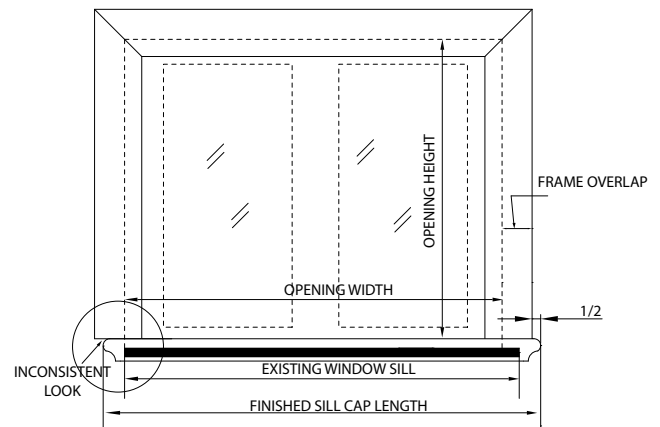
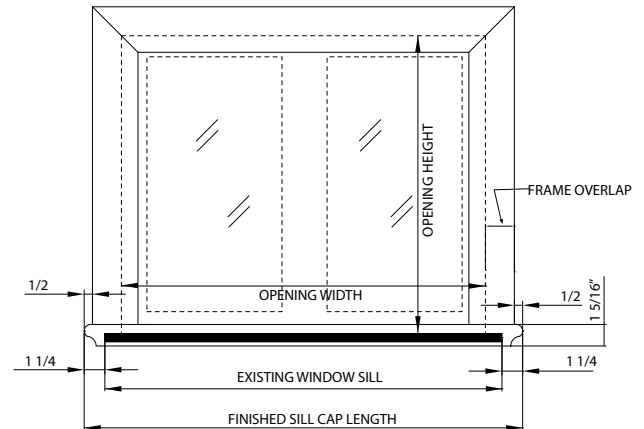


When you order with opening size, please make sure the finished shutter frame will stay within the finished sill cap. Please see right side illustration for example. It is very important to make sure the finished sill cap is long enough to meet the frame. We build still cap base on your provided window still length. Please advise if you need additional length on the sill cap.

Right side - shutter frame is perfectly within the sill cap. Left side - shutter frame extends past the sill cap that creates a drop. In this case, you would need to request extra length to avoid the drop. Please advise upon order.

When you order with NWF size, please make sure not only the sill cap fits existing window sill, the shutter has to fit the window opening, too. Please see right side illustration for example. It is very important make sure the shutter will fit the window opening not only line up with the sill cap. NWF height is from top of existing window sill to top of shutter frame.

Right side - shutter frame is perfectly semi-inside mounted in the window opening and it also falls within the sill cap. Left side - sill cap fits the existing window sill perfectly, but the shutter is too wide to fit in the window opening.



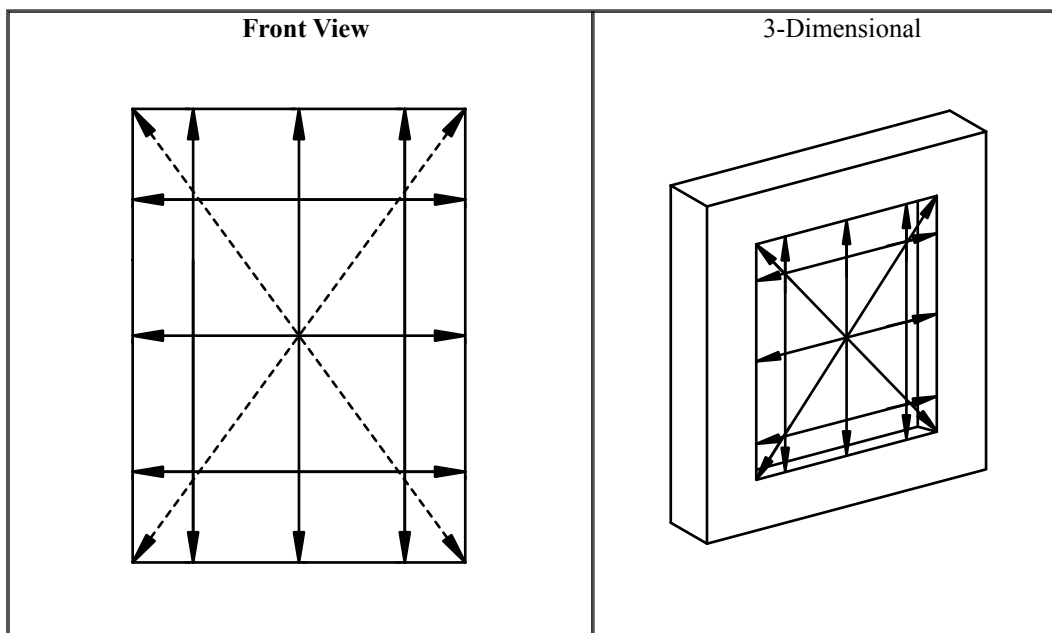
Measuring Instructions

Always take care when measuring plantation shutters and be sure to look for any obstruction that may interfere with the operation of the panels or louvers. Please refer to our louver clearance diagrams for further clarification (pages 30-31).

Measurement for shutters can be taken in two distinct ways. The first and most common is referred to as “opening size”. Opening size dimensions are literally the measurements (width and height) of the window opening. Because of variations in window construction, when measuring for width and height always measure in three places. The width should be measured along the top, middle, and bottom. The height should be measured on the left, center, and right. When ordering a shutter with an inside or semi-inside mount, please use the smallest of the measurements. For outside mount shutters, use the largest.

When an order with opening size dimensions is processed the factory will automatically take the necessary deductions. These deductions may be found on our reference chart for the various frames that are available. This chart is also found on our web site (www.sunlandshutters.com). **Inside mount applications require diagonal measurements to check if the opening is square.** If the two diagonal measurements differ by 1/2” or more, we recommend an outside mount.

Opening Size Measurements

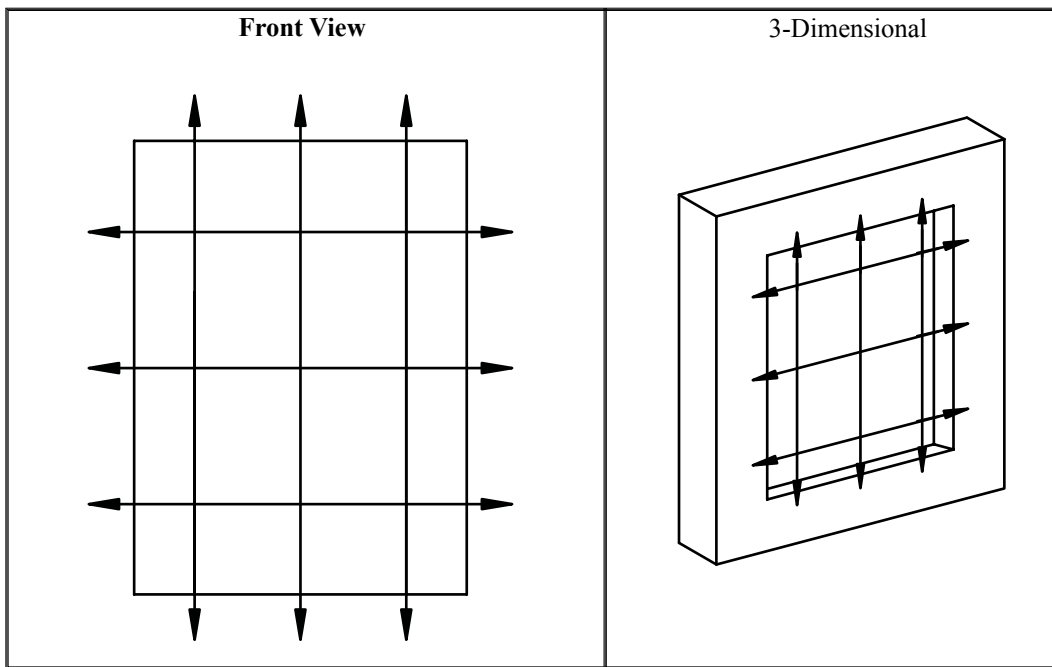


Measuring Instructions

The other way to take measurements is “net with frame” (NWF), also known as finished size. When ordering a shutter with NWF dimensions the factory will build the shutter unit (panels and frames) to your exact width and height specifications to the outside edge of the frame. NWF dimensions are normally reserved for individuals with fairly advanced knowledge, as the face of the frame will need to be added to the opening size measurement. For frame dimensions, please see Frame Specification section in this manual (pages 3-5).

It is important that exact measurements are taken before ordering. Once the order is confirmed, the order may not be cancelled. Orders are only accepted on the Sunland Shutters order form or through our online order system, both can be found on our web site at www.sunlandshutters.com.

Net With Frame (NWF) Measurements



Divider Rails

Divider rails are an integral part of shutter design. Divider rails provide structural integrity to a shutter and also divide the top louvers from bottom louvers. Sunland shutters can build Polycore, Lexwood Premium, Lexwood Advantage and Lexwood Plus shutters up to 96" in height without a divider rail, but we recommend a divider rail for shutters over 72" in height.

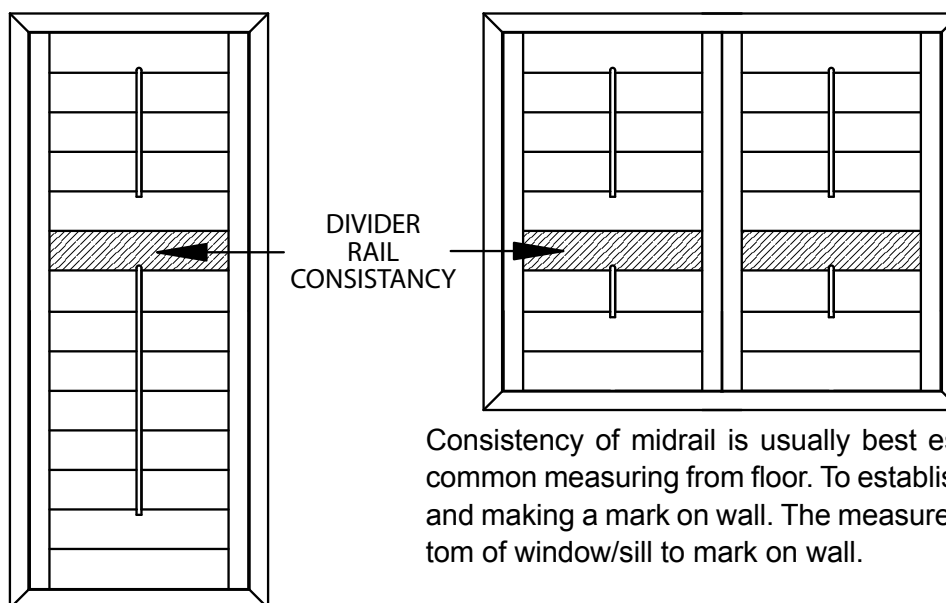
We require a waiver against sagging for shutter panels that are both over 32" in width and 72" in height or larger. Split rods are not considered as a divider rail.

Divider rails are measured from the bottom up. Measure from the bottom of the opening/sill when ordering with opening size, or bottom of the shutter frame when ordering with NWF size to the center line of the desired divider rail location.

Divider rail locations will vary depending on louver size, and opening height. Therefore divider rails may vary up or down by 1" for 2.5" louver, 1.5" for 3.5" louver, and 2" for 4.5" louver. If you would like to lock the divider rail location, please apply uneven rail and accept the fact the top and bottom rail heights will be different. We highly recommend you to review all shutter diagram before you confirm a job to ensure the louver count and divider rail locations are to your satisfaction.

To achieve a uniform appearance (divider rails and louver numbers) on adjacent shutters, you must specify that all adjacent shutters and their divider rails be built exactly the same height. If the height measurements of the shutters differ slightly, apply one of the three options (keeping in mind that adjacent shutter and their divider rails must always be ordered exactly the same height):

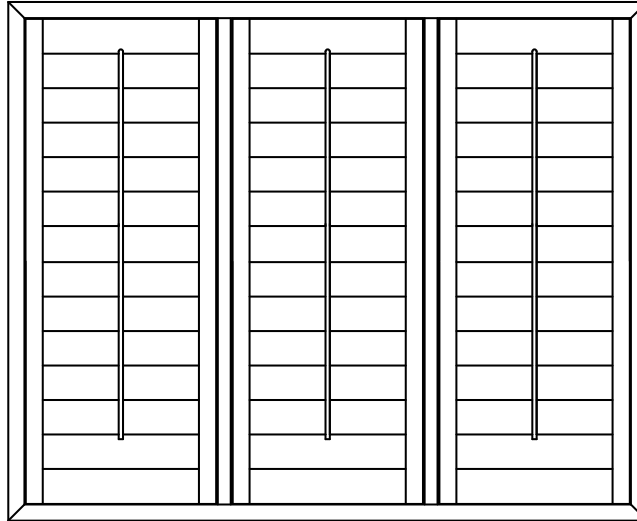
1. For outside mounts, increase the ordered height of the smaller shutter to equal the taller shutters.
2. For inside mounts with Z frames, reduce the ordered height of the taller shutter to equal the smaller shutter.
3. For inside mounts with height differences of 1/2" or more, change to outside mount.



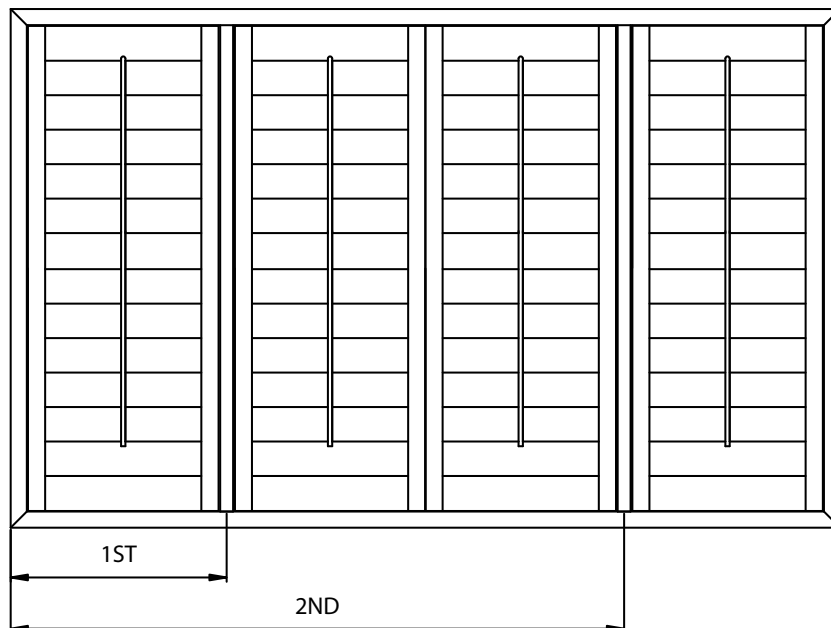
Consistency of midrail is usually best established with a common measuring from floor. To established midrail point and making a mark on wall. The measurement is from bottom of window/sill to mark on wall.

T-Post

T-posts are 1" vertical frame components. T-posts give added strength to wider openings. They are inserted vertically into shutter frames to separate shutter sections. This allows for placement of additional panels within the same opening. The large T-posts (1 3/4" face) are used when panels exceed 24" in width or 60" in height. T-post placement is usually evenly placed within the frame. When ordering a shutter with a T-post, if not indicated, it will be placed so that all sections are the same width.



To order unequal T-post placement when ordering with opening size, always measure from the left point of your overall width to the center of the first vertical mullion. Then measure from the left point of your overall width to the center of the second vertical mullion. (Same logic applies to order with NWF size. First T-Post is always from the left edge of the frame to the center of the desired T-Post location) Repeat for any additional T-posts needed.

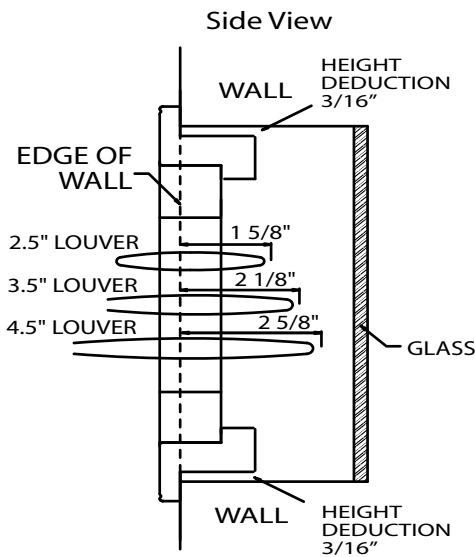


Polycore and Lexwood Louver Clearance Diagrams

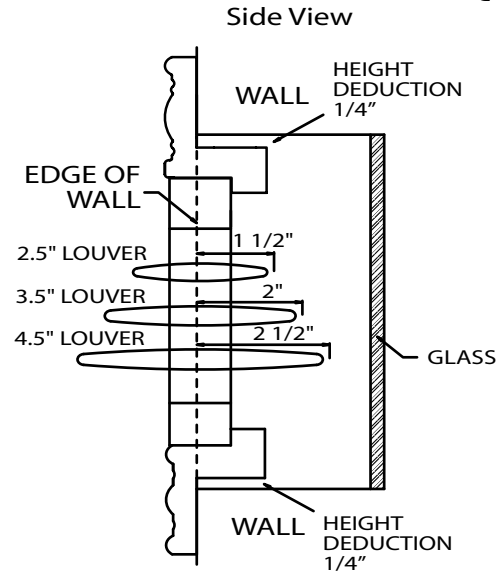
The following diagrams outline the amount of clearance needed so that the louvers will be able to function without coming into contact with the window pane. If there is not enough clearance available you will need to either change the louver size or order the shutter with a build out. Please take these into account when measuring your opening. These dimensions apply to both Polycore and Lexwood frames.

The following diagrams are referring to the minimum clearance numbers.

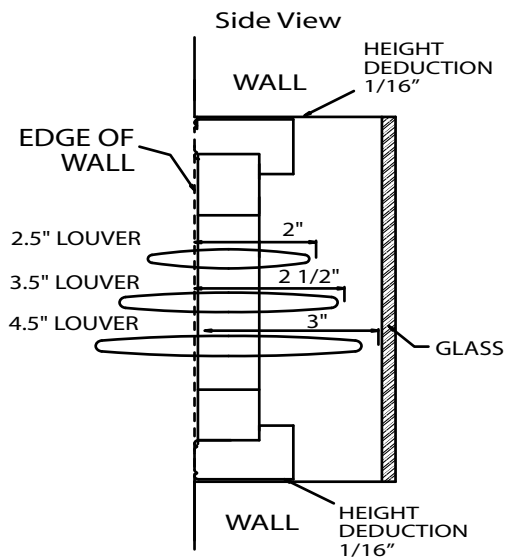
Small Z-frame / Single Beaded Z-frame (Frame Code: SMZ / Code: SBZ)



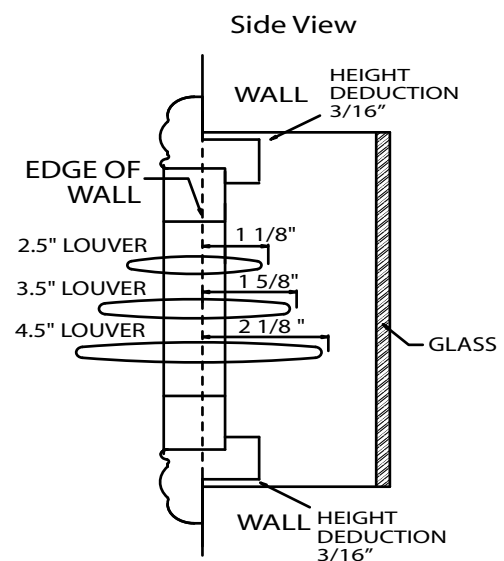
Large Z-frame / Medium Z-frame / 2" Bullnose Flat (Frame Code: LGZ / MDZ / 2FZ / SQZ)



L-frame Inside Mount (Frame Code: LFI)



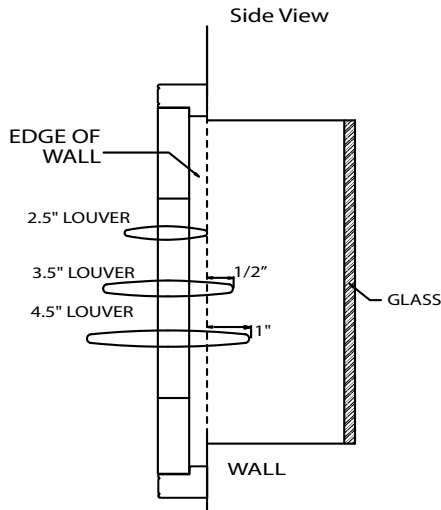
Malibu Z-frame (Frame Code: MAZ)



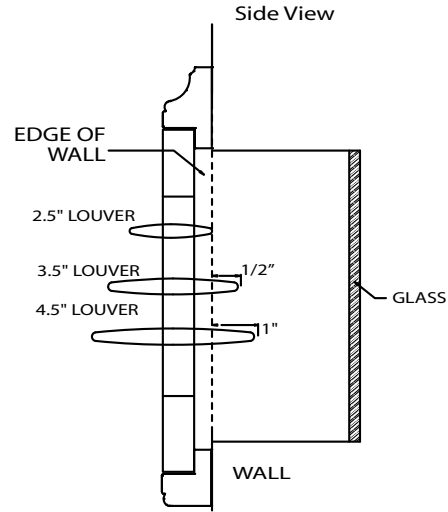
* For "Hidden Tilt" add an additional 1/2" to louver clearance Installation – Standard Opening

Measuring Information

L-frame O.M (Frame Code: LFO)



Deco frame / Deco sill frame O.M. / 2" Deco frame (Frame Code: DFO / DSO / D2O)



Please refer to the chart below to determine the louver clearance needed.

To check to see if buildout is needed lookup the required minimum window depth in the chart. Subtract your actual measured window depth. If the answer is larger than zero, then you need that thickness of buildout.

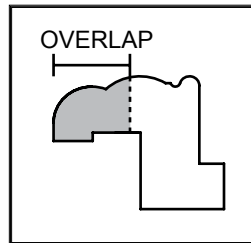
For example: A LFO shutter with 4.5" louvers with an actual window depth of 1/2". $1" - 1/2" = 1/2"$.

Frame Type		Min. Window Depth for all 3 Louver Sizes (hidden tilt add an addition 1/2")		
		2.5 Louver	3.5 Louver	4.5 Louver
Semi-I.M.	LGZ	1 1/2	2	2 1/2
	MDZ	1 1/2	2	2 1/2
	MAZ	1 1/8	1 5/8	2 1/8
	SMZ	1 5/8	2 1/8	2 5/8
	SBZ	1 5/8	2 1/8	2 5/8
	2FZ	1 1/2	2	2 1/2
	SQZ	1 1/2	2	2 1/2
I.M.	LFI	2	2 1/2	3
O.M.	LFO	0	1/2	1
	DFO	0	1/2	1
	DSO	0	1/2	1
	D2O	0	1/2	1
	MFO	0	1/2	1
	LLO	-1 1/2	-1	- 1/2

Frame Overlap Table

This table shows how much frame will overlap the drywall. Please see the drawing below for an example.

Overlap for Malibu Z-frame (MAZ)



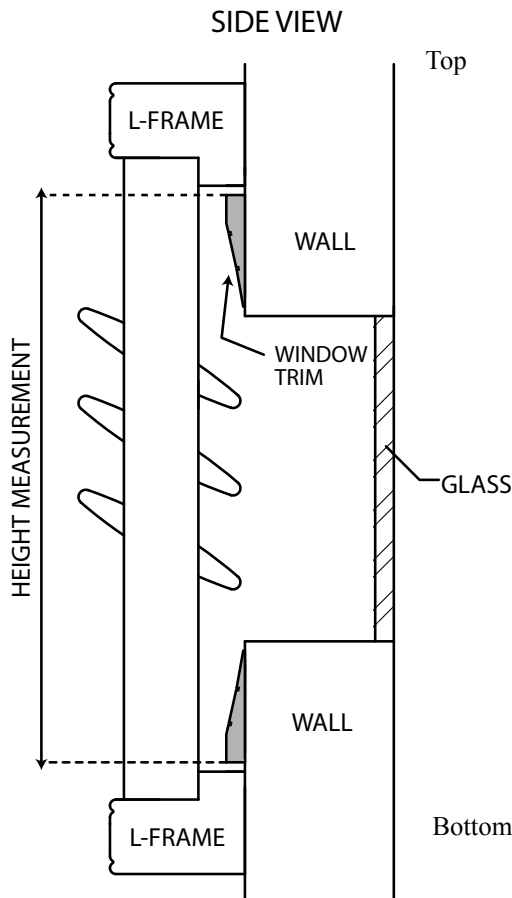
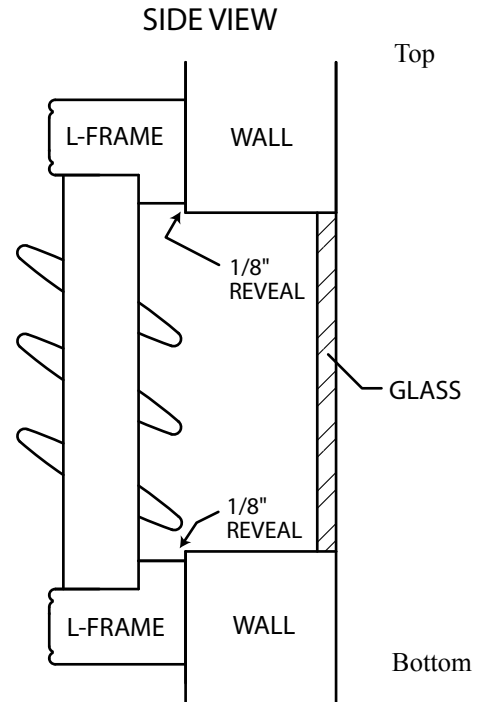
	Frame Type	Amount of Overlap on the Wall (Each Side)
Polycore	LGZ	1 3/4"
	MDZ	1 1/2"
	MAZ	1"
	2FZ	1 1/2"
	SQZ	1 1/2"
	LFO	1 1/2"
	FFO	1 1/2"
	DFO	3 1/4"
	DSO	2"
	D2O	2 1/8"
Lexwood	LGZ	2"
	MDZ	1 1/2"
	SBZ	9/16"
	MAZ	1"
	2FZ	1 1/2"
	LFO	1 1/2"
	DFO	3 1/4"
	DSO	2"
	D2O	2 1/8"

Measuring Instructions - Outside Mount

This section gives a brief walkthrough for the most common mounting and application types.

L-frame Outside Mount

1. Measure the inside width and height in three places, record the largest measurements.
2. Check for louver clearance.
3. Specify L-frame Outside Mount (Frame Code: LFO) for frame type.
4. Factory will make appropriate additions.

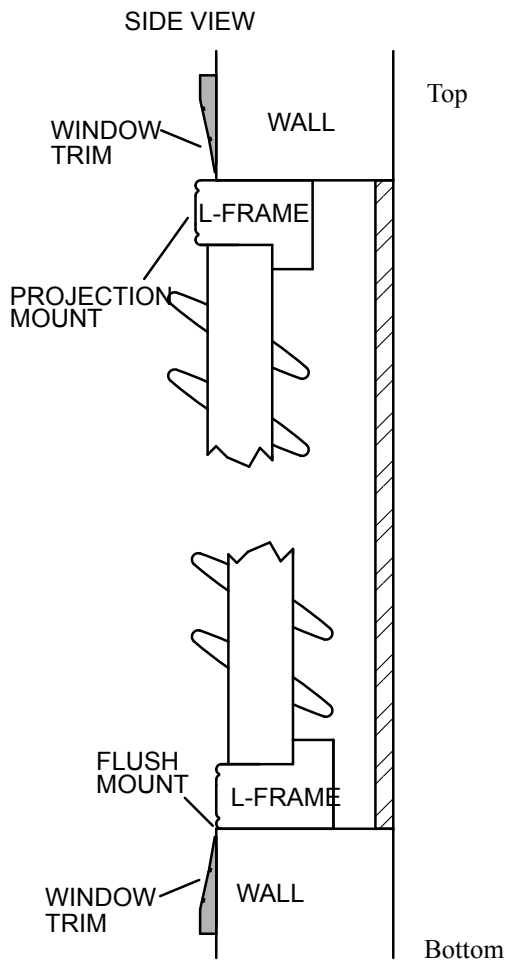
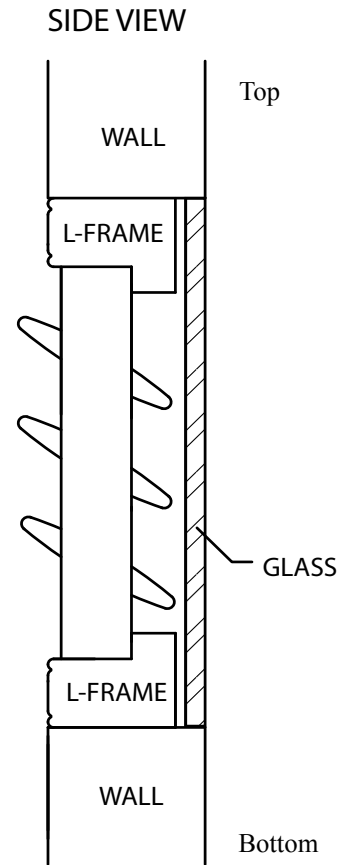


L-frame Outside Mount Around Trim or Moulding

1. Measure the outside width and height to the edge of the trim in three places, record the largest measurements.
2. Check for louver clearance.
3. Specify L-frame Outside Mount (Frame Code: LFO) for frame type.
4. Factory will make appropriate additions.

L-frame Inside Mount

1. Measure the inside width and height in three places, record the smallest measurements.
2. Check for frame.
3. Specify L-frame Inside Mount (Frame Code: LFI) for frame type.
4. Verify depth amount of window box for louver clearance.



L-frame Inside Mount with Trim or Moulding

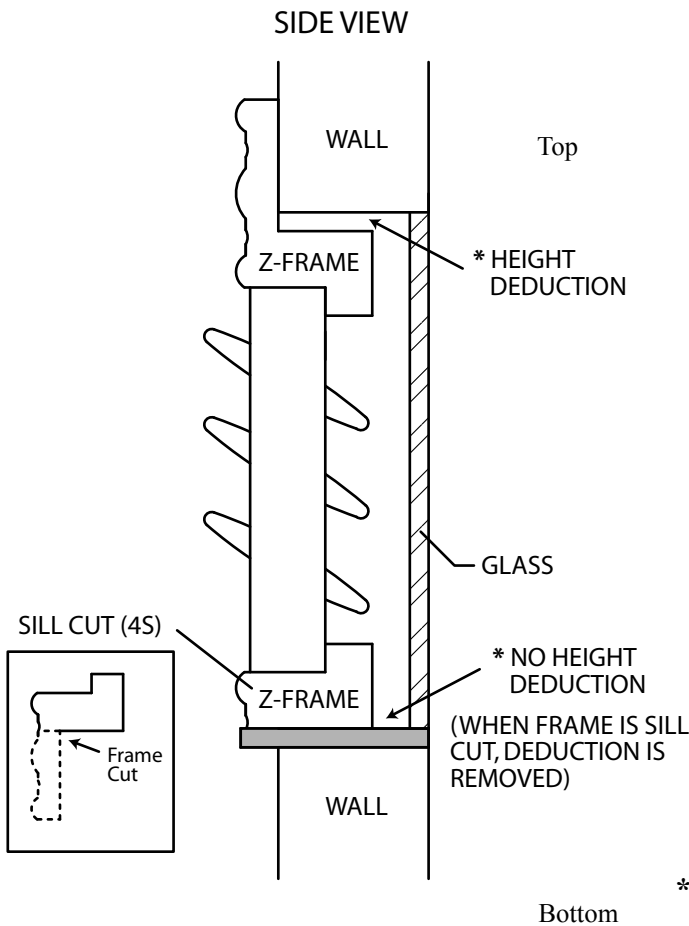
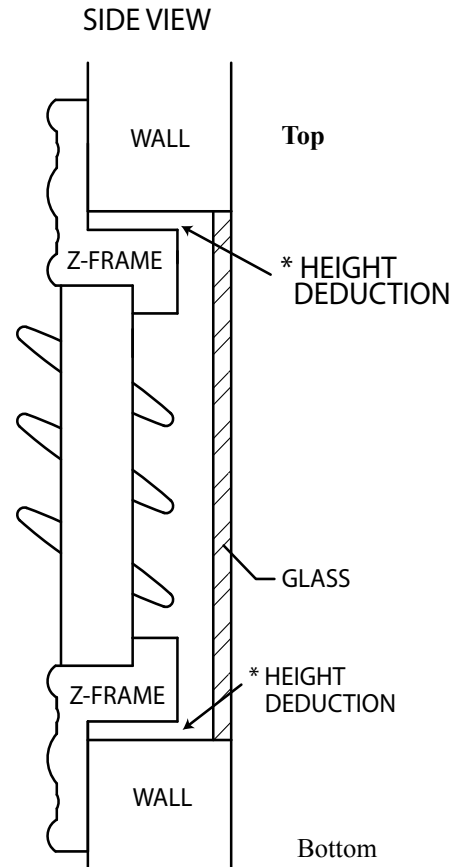
1. Measure inside width and height in three places, use the smallest measurement.
2. Check for frame and louver clearance .
3. Specify L-frame Inside Mount (Frame Code: LFI) for frame type.

* Depending on the height and style of the trim or moulding the shutter can be installed with a **projection mount** (the frame flush with the trim) or a **flush mount** (the frame flush with the wall) as shown.

Measuring Instructions - Semi Inside Mount

Z-frame Semi Inside Mount

1. Measure the inside width and height in three places, record the smallest measurement.
2. Check for louver clearance.
3. Specify the appropriate size Z-frame (Frame Code: LGZ for Large Z-frame, MDZ for Medium Z-frame, SMZ for Small Z-frame, SBZ for Single Beaded Z-frame, MAZ for Malibu Z-frame, SQZ for Medium Square Flat Z-frame).



Z-frame inside mount on sill

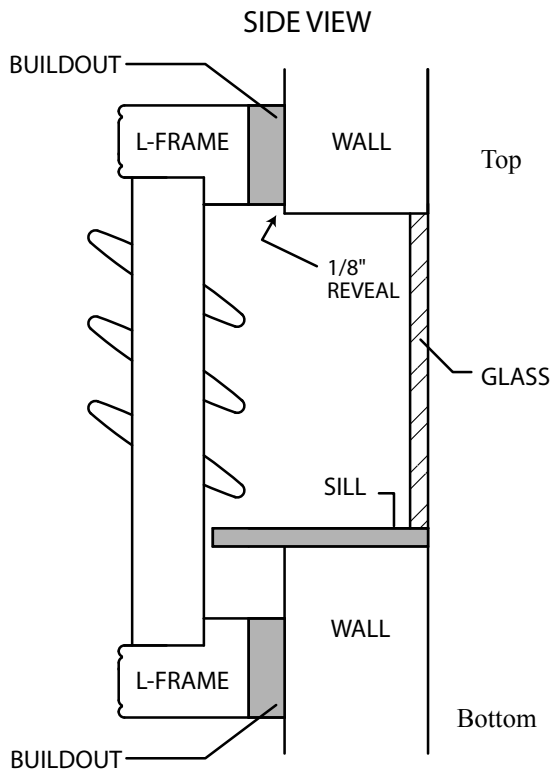
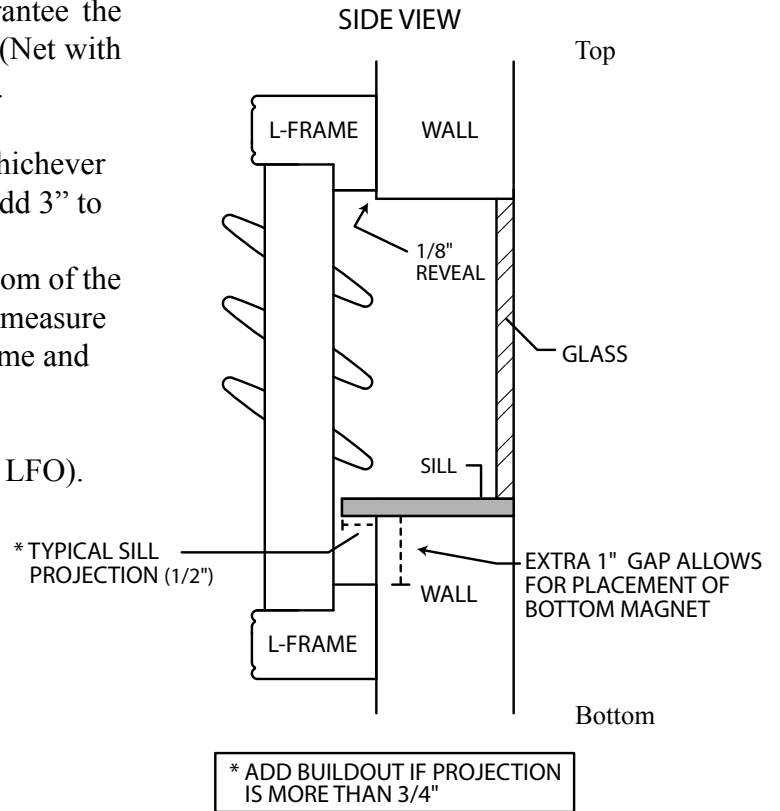
1. Measure the inside width and height in three places, record the smallest measurement.
2. Check for louver clearance.
3. Specify the appropriate size Z-frame (Frame Code: LGZ for Large Z-frame, MDZ for Medium Z-frame, SMZ for Small Z-frame, SBZ for Single Beaded Z-frame, MAZ for Malibu Z-frame, SQZ for Medium Square Flat Z-frame.)
4. Record 4S (4 sided frame with a sill cut) for frame sides. Please see the order reference chart for more frame side options.

*** Height Deduction: 1/4" for Large and Medium Z-frames
3/16" for Small, Single Beaded, and Malibu Z-frames**

L-Frame Outside Mount Around a Sill

With this mounting application the shutter will need to be ordered larger than the window opening to guarantee the shutter will clear the window sill, therefore NWF (Net with Frame) dimensions are needed to ensure proper fit.

1. Measure the width of the sill or the opening (whichever is wider), record the largest measurement and add 3" to the width to account for the width of the frame.
2. Measure the height in three places from the bottom of the sill to the top of the opening, record the largest measurement and add 4" to account for width of the frame and allow room for the bottom magnet.
3. Check for louver clearance.
4. Specify L-Frame Outside Mount (Frame Code: LFO).
5. If sill projects more than 3/4", order build out.



Adding build out to L-Frame

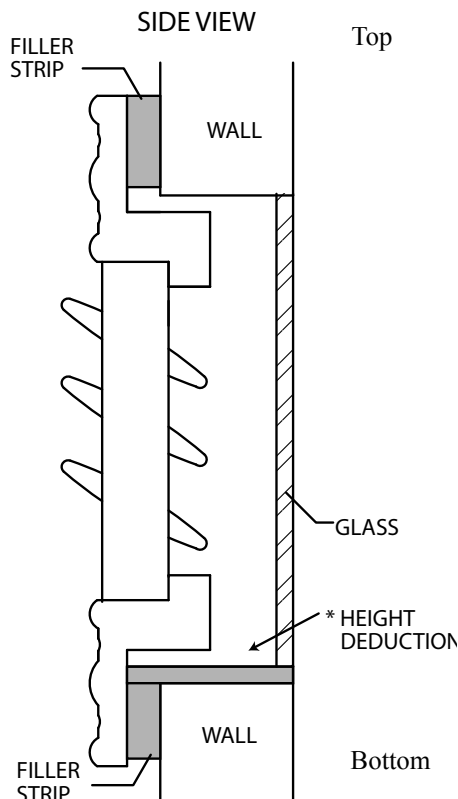
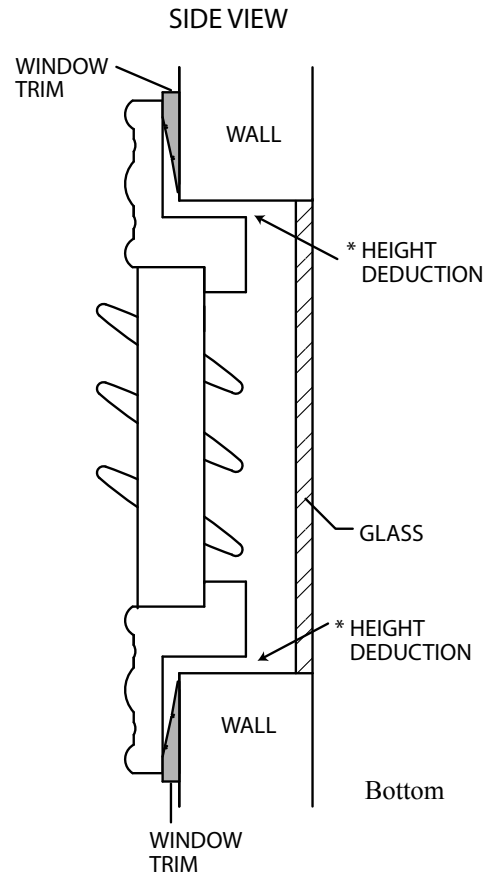
When a window sill protrudes into a room more than 3/4", a build out will be necessary so that the shutter panel can clear the window sill.

There is a surcharge to have the build out attached to the frame.

Measuring Instructions - Special Cases

Z-frame semi inside mount with trimmed opening

1. Measure inside width and height in three places, use the smallest measurement.
2. Check for louver clearance.
3. Specify the appropriate size Z-frame (Frame Code: LGZ for Large Z-frame, MDZ for Medium Z-frame, SMZ for Small Z-frame, SBZ for Single Beaded Z-frame, MAZ for Malibu Z-frame, SQZ for Medium Square Flat Z-frame). Some Z-frames will blend nicely with existing trims.



Z-frame semi inside mount with sill and filler strip

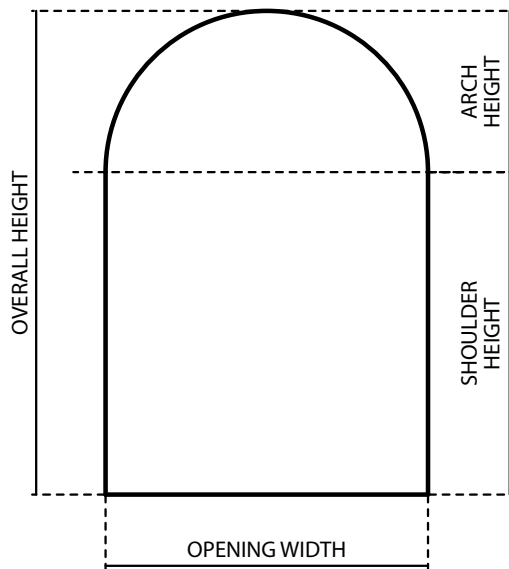
Although somewhat unusual, a filler strip can be used so that a Z-frame can be mounted on a window opening with a protruding sill without the need for a sill cut. A filler strip is used to return a Z frame to the wall on both sides and the top to hide the protruding frame.

There is a surcharge for the filler strips.

*** Height Deduction: 1/4" for Large and Medium Z-frames, Medium Square Flat Z-frame
3/16" for Small, Single Beaded, and Malibu Z-frames**

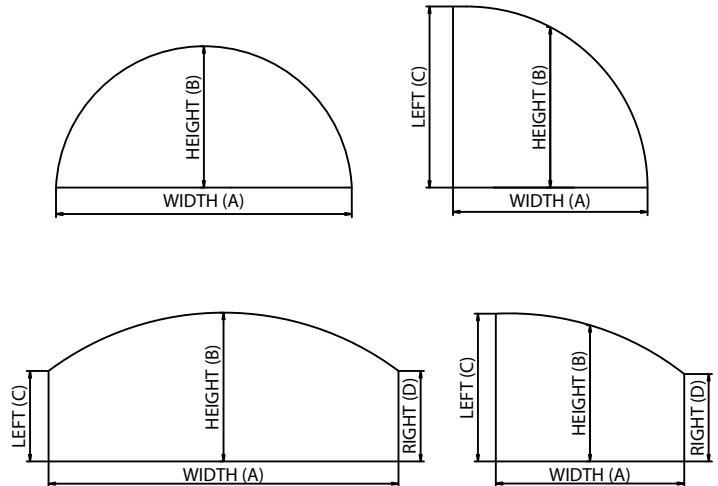
Arch Top Panels

Measuring for arch top panels requires determining the shoulder height on each side of the opening. The shoulder height measurement is the highest point on each side that is not part of the radius. These measurements vary from side to side, if they vary more than 1/8", establish a medium with level, mark these points, and make a template of the arched opening.



Fan Top Shutters

For 1/2 circle fan top shutters please provide the width at the bottom of the opening along with the height in the center. For eyebrow fan top shutters, you must also provide the shoulder height (C/D) on each side.



Height (B) is measured from the midpoint of width (A).

Arch Shutter Template Requirement

All arch top shutter order without template will be manufactured as half circle or continuous slope.

If the arch shutter ordered is not a half circle or continuous slope, **Cutout** template is required for manufacturing purpose. Two templates are recommended, one for Sunland Shutters and one for the dealer's records. Marked lines on templates are not acceptable to avoid mis-line determination only cutout templates should be sent.

All orders that require a template must MAILED IN with the order form (via USPS or UPS or Fed Ex) for that opening with the template attached. Sunland Shutters will not accept any order for openings requiring a template via online order or fax order.

Orders that have openings requiring templates—that ENTIRE order should be submitted via PHYSICAL MAIL along with the associated templates. Order where only 1 or 2 openings require templates—the openings that DO NOT require templates should be submitted online or via fax. The 1 or 2 openings requiring templates should be submitted via PHYSICAL MAIL. Please make sure the side mark is the same on both submissions.

Mail Instruction: Sunland Shutters 5855 Obispo Ave. Long Beach, CA 90805 Attention: Design – Template

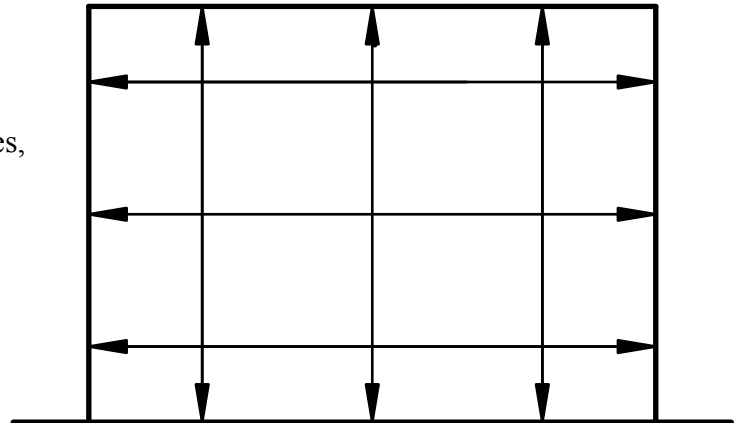
Track System Measuring Instructions

By-pass and Bi-fold track systems

Inside Mount

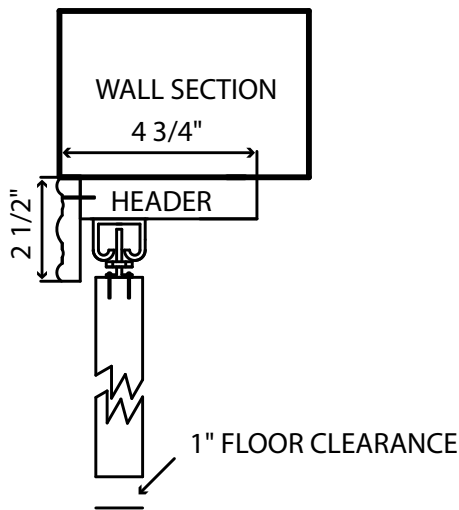
1. Measure inside width and height in three places, use the smallest measurement
2. Check for louver clearance
3. Specify by-pass or bi-fold
4. Specify panel configuration
5. Specify IM on order form

Front View

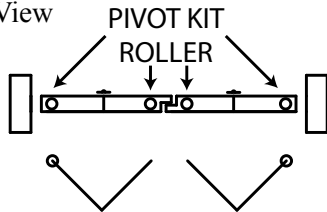


Bi-fold

Side View

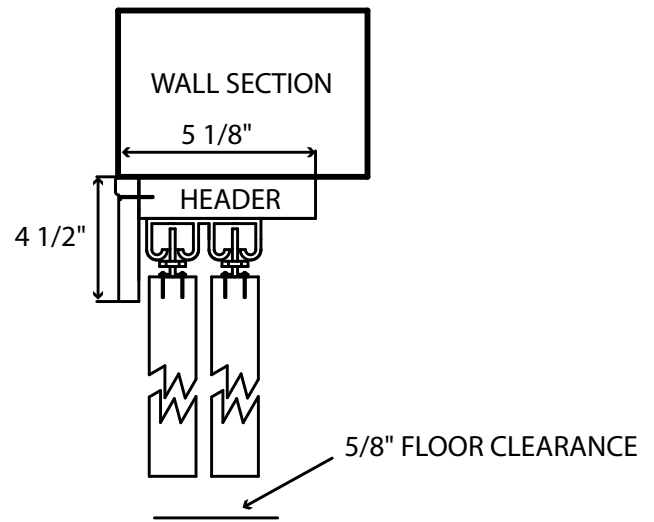


Top View

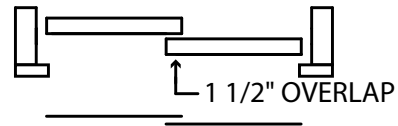


By-pass

Side View



Top View



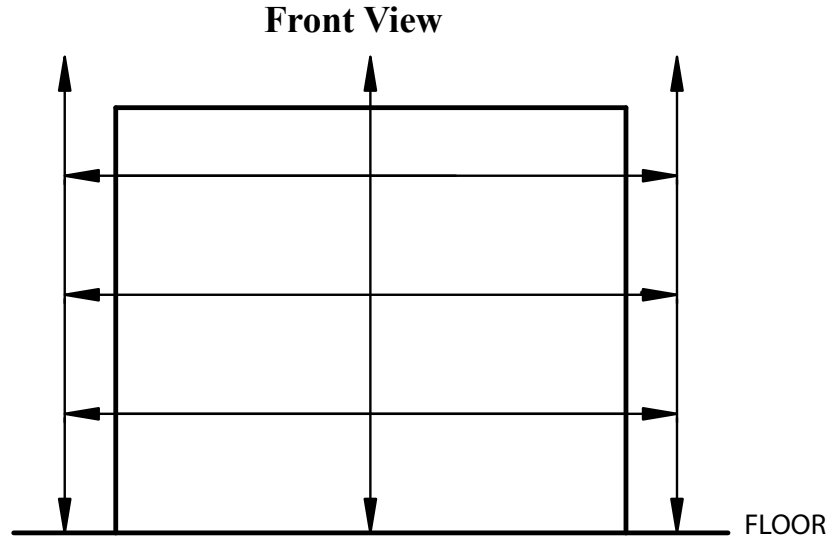
All fascia over 8' (= 96") are provided in two pieces with 45 degree miter joint for both Polycore and Lexwood.

Track System Measuring Instructions

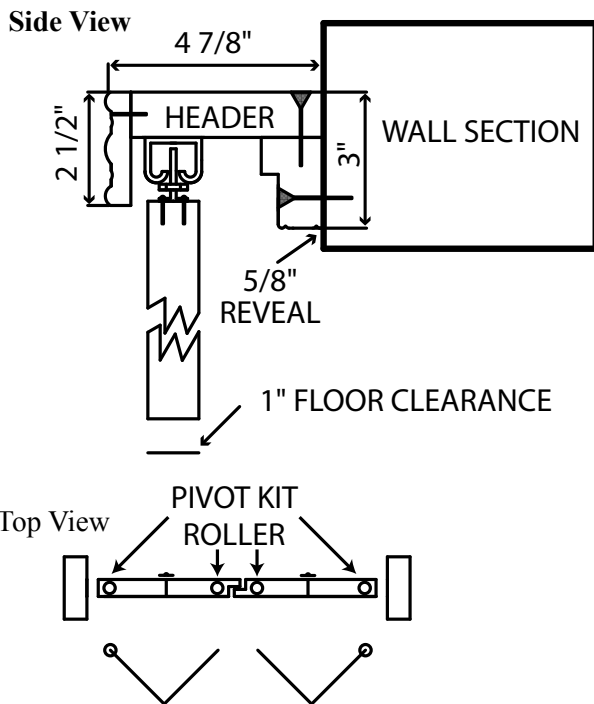
Revised: July, 2023

Outside Mounts

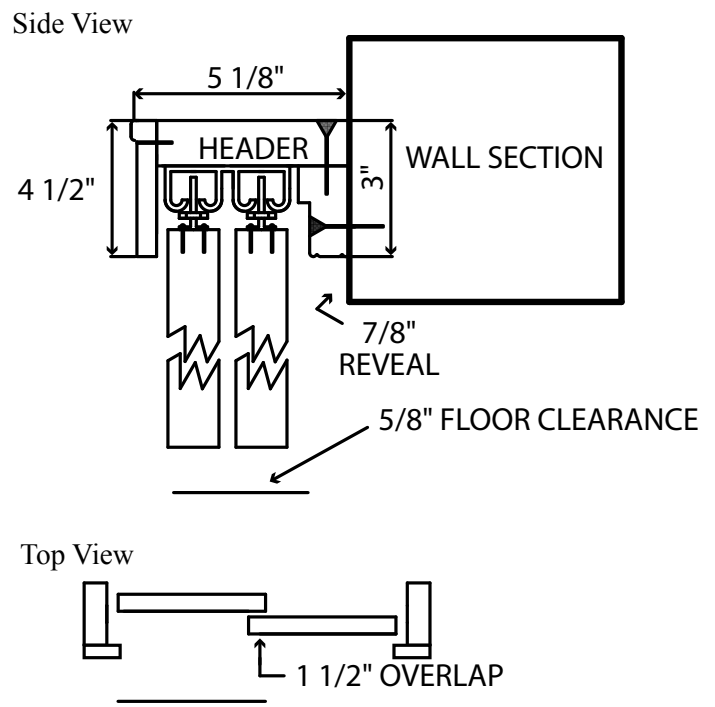
1. Measure inside width in three places, record the largest measurement.
2. Measure inside height in three places, record the largest measurement
3. Check for louver clearance
4. Specify by-pass or bi-fold
5. Specify OM, factory will make necessary additions



Bi-fold



By-pass



All track systems are three-sided frames

Floor clearance on by-pass system is 5/8", unless specified otherwise.

Floor clearance on bi-fold systems is 1" and cannot be changed.

All fascia over 8' (= 96") are provided in two pieces with 45 degree miter joint for both Polycore and Lexwood.

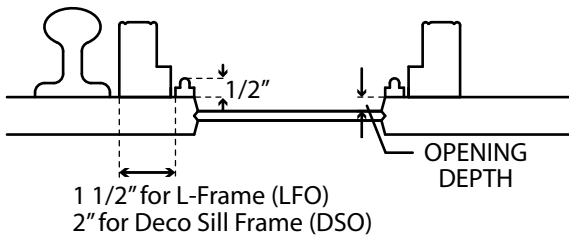
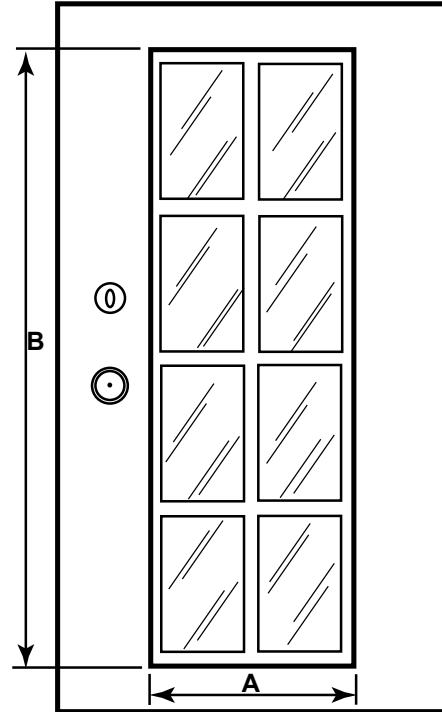
To ensure louver clearance, we recommend additional 1/2" build out to the bypass header and side legs for 4.5" louver, 1" build out to bypass header and side legs for hidden tilt 4.5" louver. Dealer can make the request depends on the window condition when needed.

French Door Measuring Instructions

When measuring for French doors, the trim strips used to hold the glass panels in place are considered part of the opening.

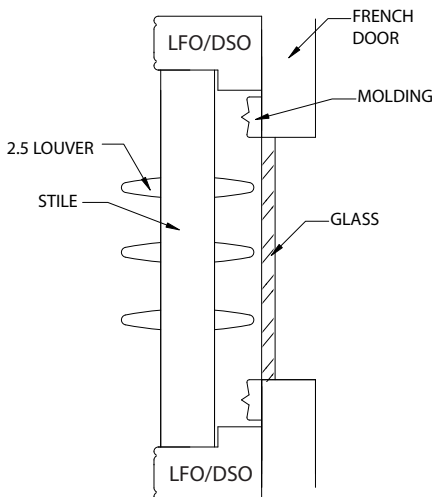
1. Measure the width in three places, use the largest measurement and add 3" to the width if you use L-frame, or add 4" if you use Deco Sill frame.
2. Measure the height in three places, use the largest measurement and add 3" to the height if you use L-frame, or add 4" for Deco Sill frame.
3. Check for louver clearance, build out is generally required
4. Specify 4 sided frame, NWF.

Ideally there is 1-1/2" of mounting surface between the opening and the base of the handle for L-frame, or at least 2" of mounting surface for Deco Sill frame. The trim normally does not project more than 1/2". Also consider the opening depth when selecting a louver size (refer to Clearance Diagrams).

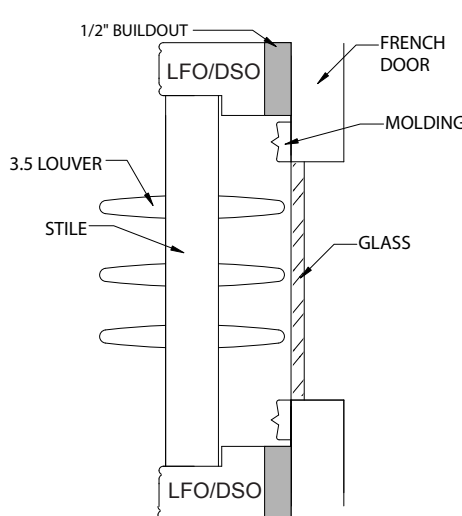


Always remember to check for louver clearance

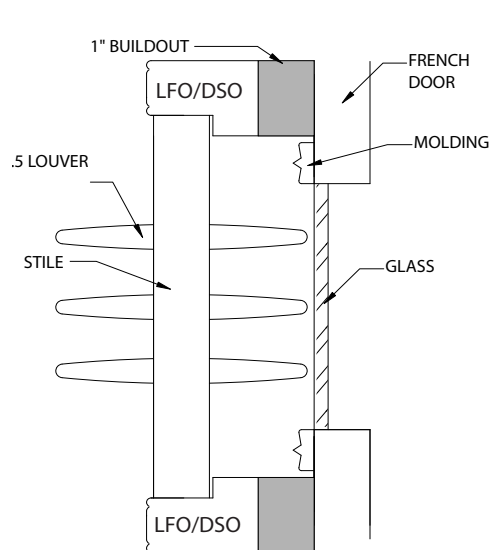
*** SIDE VIEW**



SIDE VIEW



SIDE VIEW

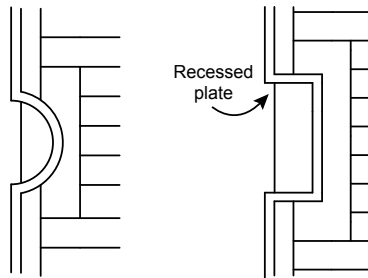


***WARNING:**
In this type of application, the magnets will hit molding/casing using standard L-frame and/or Deco Sill frame.

French Door Measuring Instructions

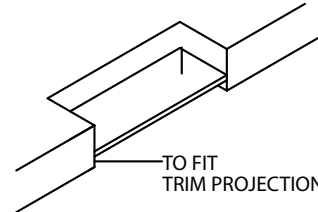
Revised: July, 2023

In the event there is not enough mounting space, using a cut out is the best solution. The cut out plate can be recessed when the mounting surface is less than 1-1/2" and the plate can be raised to avoid the trim projection.



HALF CIRCLE CUT OUT WITH STANDARD
4 1/4", 5 1/4", OR 6 1/4" RADIUS

TRIM PROJECTION
PLATE INSIDE OF THE CUT OUT WILL BE RAISED TO AVOID TRIM

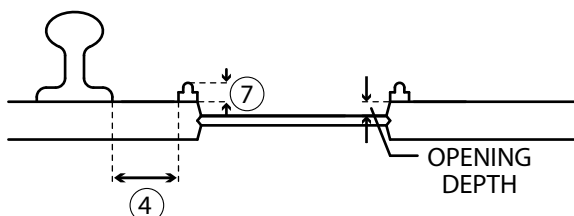
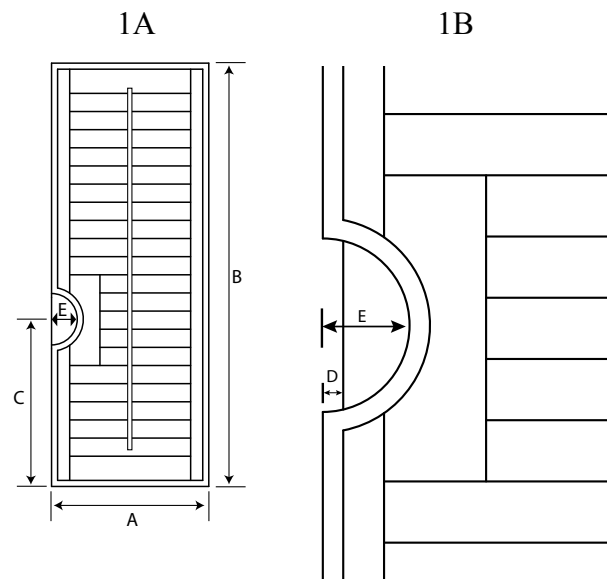


French Doors with Knob or Lever handle only, (Half Circle Cut Out) using L-frame/Deco Sill frame

When measuring for French doors, the trim strips used to hold the glass panels in place are considered part of the opening.

1. Measure the width of the opening in three places, use the largest measurement and add 3" to width if you use L-frame, or add 4" if you use Deco Sill frame. This will be (A).
2. Measure the height in three places, use the largest measurement and add 3" to height if you use L-frame, or add 4" for Deco Sill frame. This will be (B).
3. Measure from the center of the lever handle to the bottom of the opening and add 1 1/2" for LFO or add 2" for DSO. This will be (C).
4. Measure from the opening to the base of the handle and subtract this amount from 1 1/2" for LFO or 2" for DSO. This will be (D).
5. Measure the length of the lever handle (E), and select the proper radius for the half circle cut out.
6. Check the louver clearance, build out is generally required, specify build out.
7. Measure trim projection and specify on order form.

* Please note this instruction is for an NWF form.



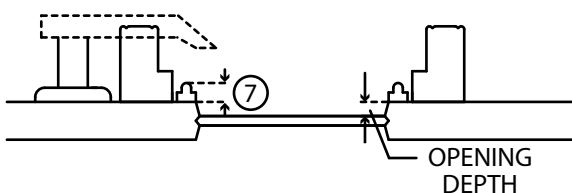
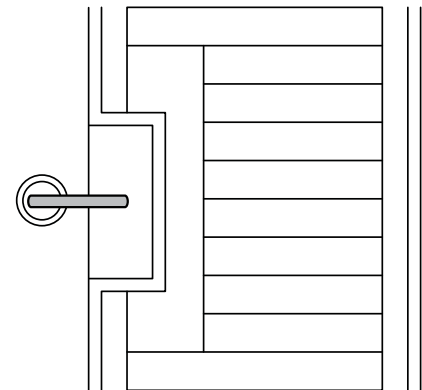
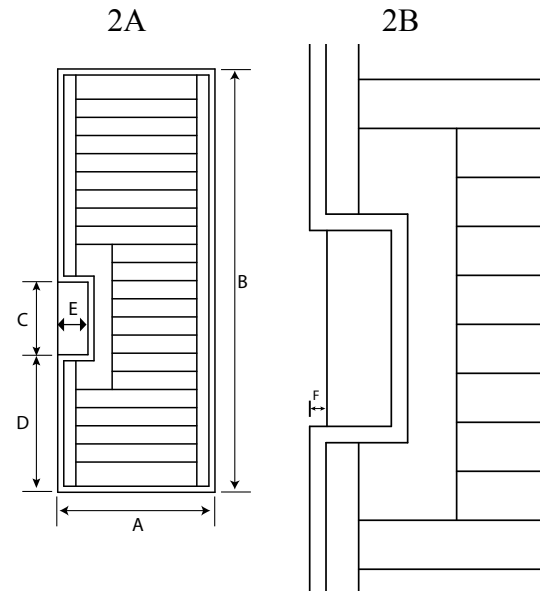
French Door Measuring Instructions

French Doors with Knob or Lever handle and dead bolt lock, (Rectangular Cut Out) using L frame/Deco Sill frame

When measuring for French doors, the trim strips used to hold the glass panels in place are considered part of the opening.

* Please note this instruction is for an NWF form.

1. Measure the width of the opening in three places, use the largest measurement and add 3" to width if you use L-frame, or add 4" if you use Deco Sill frame. This will be (A).
2. Measure the height of the opening in three places, use the largest measurement and add 3" to height if you use L-frame, or add 4" if you use Deco Sill frame. This will be (B).
3. Measure about 1" up from the top of the dead bolt base to the bottom of the handle base and add handle length or add 2" if it's a door knob, and this will be (C). Always round up (C) to the nearest 1/2".
4. Measure from the bottom of opening to the bottom of the handle base and deduct handle length then add 1 1/2" for LFO or add 2" for DSO. This will be (D). For door knob doors, measure from the bottom of the opening to the bottom of the door knob base and deduct 2" then add 1 1/2" for LFO or 2" for DSO. This will be (D).
5. Measure the length of the lever handle and determine the cut out width. This will be (E).
Note: (E) must always be a whole number.
6. Measure from the opening to the base of the handle and subtract this amount from 1 1/2" for LFO or 2" for DSO. This will be (F).
7. Check for louver clearance (build out is generally required) and specify build out.
8. Measure trim projection and specify on order form.

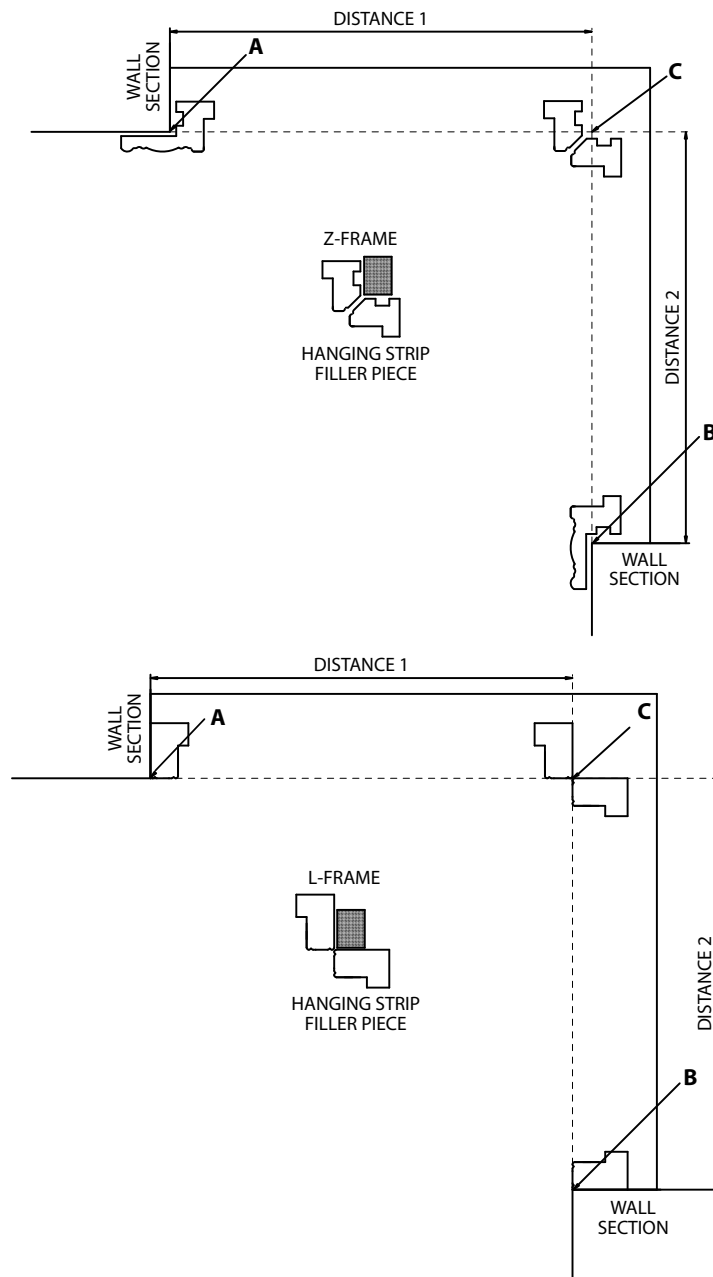


Corner Windows

Inside Mounts – using Z frame

1. Establish point C by using a straight edge
2. Measure inside width of distance 1 (A to C), and inside distance 2 (B to C)
3. Measure the height of three places, use the smallest height measurement
4. If frame is to be mounted on the sill, ask for sill cut (4S), order opening size
5. Ask for one piece of hanging strip for center, the length of opening

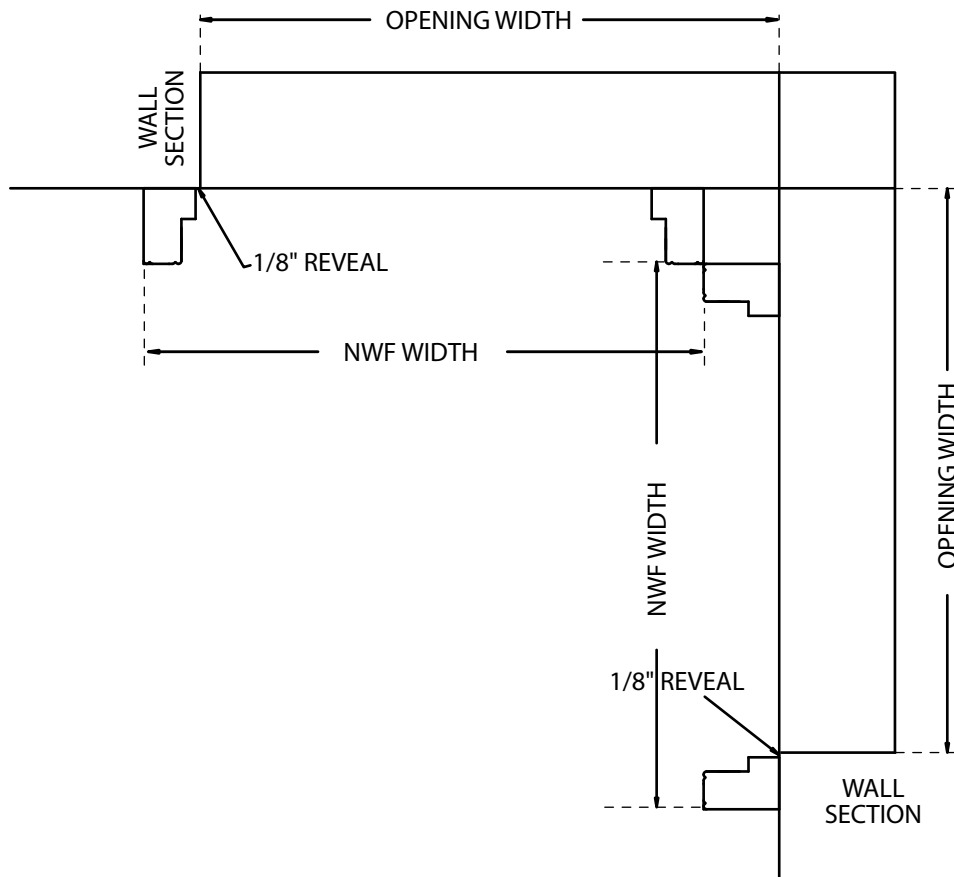
***Note - This configuration is not recommended with a Malibu Z-frame.**



Corner Window Measuring Instructions

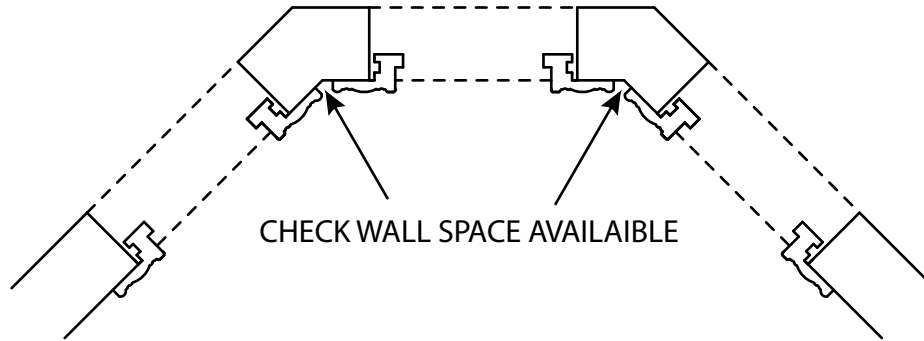
Outside Mounts

1. NWF width measurements for each opening that meet at the corner will require both a deduction for the L frame projection, as well as an additional 1/8" reveal for the area will cover on the wall.
2. Make additions or deductions to the width for the L frame selected
3. Measure the height in three places, use the largest measurement
4. Check for louver clearance
5. Specify LFO with 3 or 4 sides, order NWF



Semi-Inside Mounts – using Z-frame

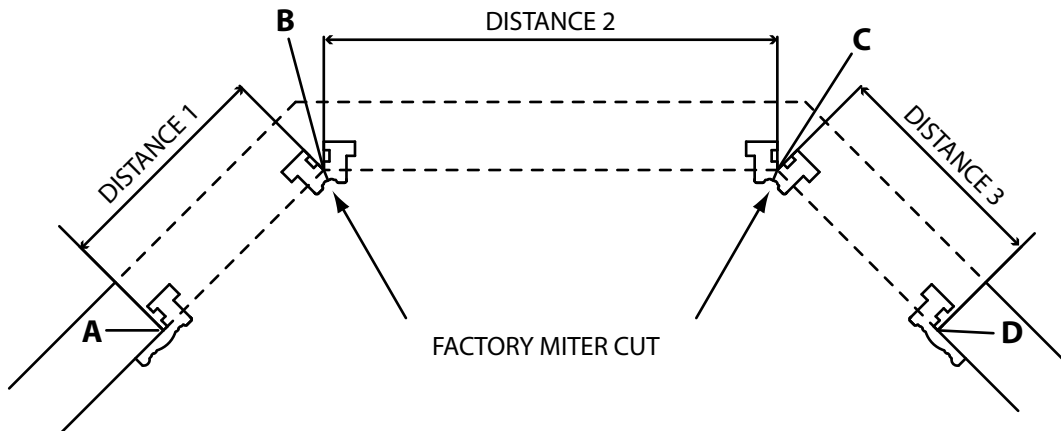
If there are intermediate wall sections, simply measure each opening as you would for semi-inside mount Z-frames, making sure there is enough room for the Z-frame selected to overlap the walls.



When there are open corners:

1. Establish points B and C by using a straight edge
2. Measure inside width of distant 1 (A to B), distant 2 (B to C), and distant 3 (C to D)
3. Measure the height in three places, use the smallest height measurement
4. Check for louver clearance
5. If the frame is to be mounted on the sill, ask for sill cut (4S), order as opening size
6. The factory will miter-cut each inside frame to 135 angle, unless you supply a template with actual angle. Templates are more accurate.

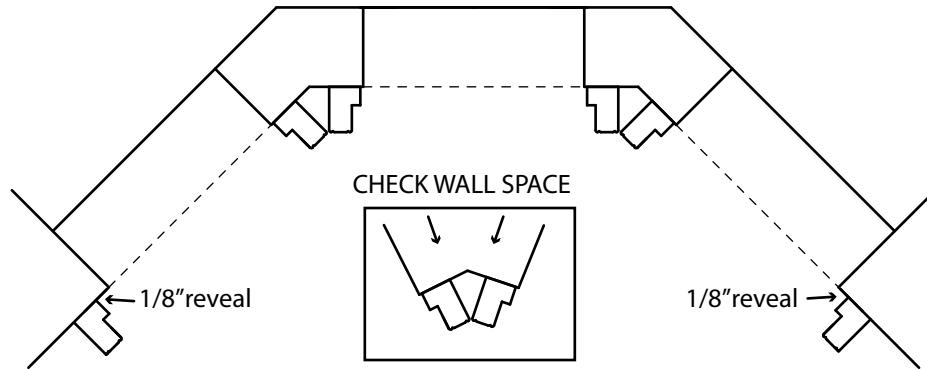
There is an additional charge for miter-cuts.



Bay Window Measuring Instructions

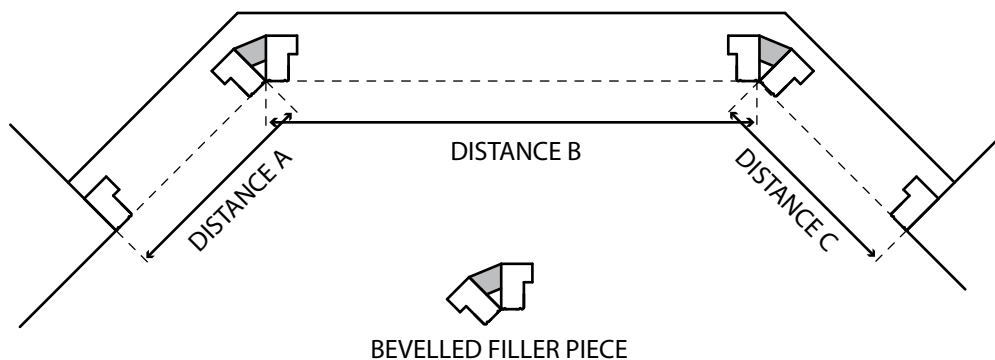
Outside Mounts using L-frame

Once again if there are intermediate wall sections, simply measure each opening as you would for an outside mounted frame, making sure there is enough wall space for your angle butted L-frames.



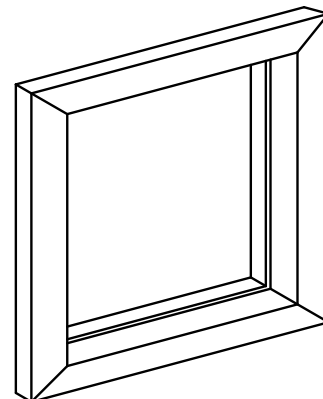
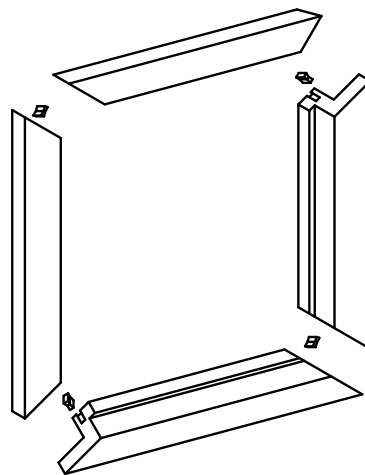
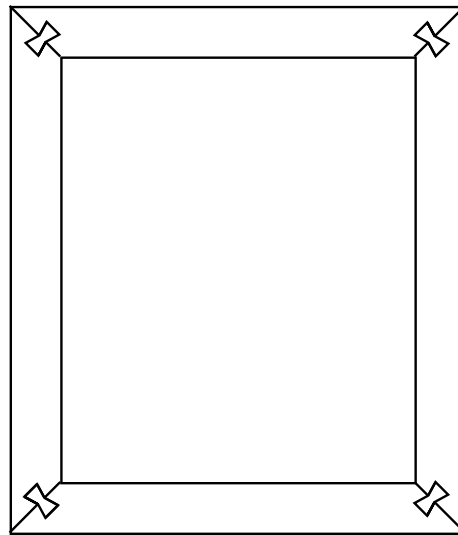
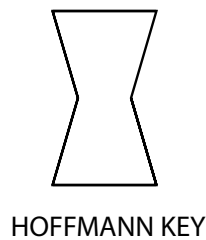
When there are open corners, start by measuring the center opening. Use a piece for frame and mark the outside of each side frame. This is your center window width. Butt a second piece of frame to each side frame. Mark the outside of each frame. Then mark outside frame (far left and far right) allowing a 1/4" reveal. If you only have one piece of frame, be careful to allow for the frame projection, which effectively makes each width smaller. A custom beveled filler piece will be provided with surcharge.

1. Record distance A as width of opening # 1
2. Record distance B as width of opening # 2
3. Record distance C as width of opening # 3
4. Measure height of opening in three places, use largest measurement and add 3" to height. If there is a sill, and you wish to go around it, measure from bottom of sill and add 4" to the height.
5. Check for louver clearance.
6. Specify LFO with 4 sided frame, order NWF.



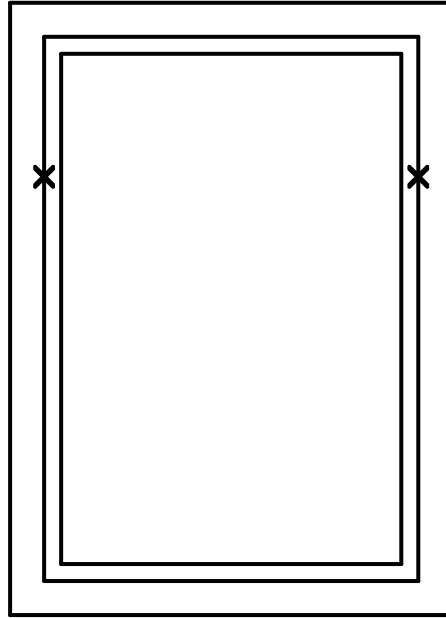
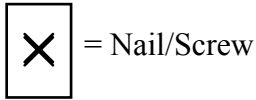
Frame Assembly

If you received the shutter disassembled, you will first have to assemble the frame. All frames are routed to accept a Hoffmann Key. Position the four frame pieces face down according to how they are marked being sure to use an installation mat to avoid damage to the face of the frame. Insert the Hoffmann Keys into the routed out frames. Gently tap in the keys with a small rubber mallet until the face of the frame is even. The next step would be to attach any T-posts that may be included through the pre-drilled holes in the T-post holes in the frame.

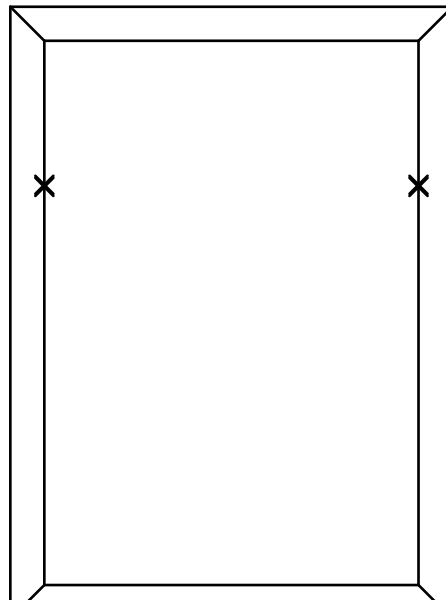
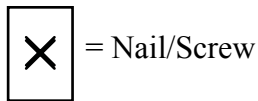


Frame Installation

On an outside mount, where the frame is to be mounted around the opening, determine where the outside edges of the frame are to be located. With the frames in position, secure the left or right side of the frame just above the top hinge using a nail or screw. Using a level on top of the frame, next secure the other side in the frame.



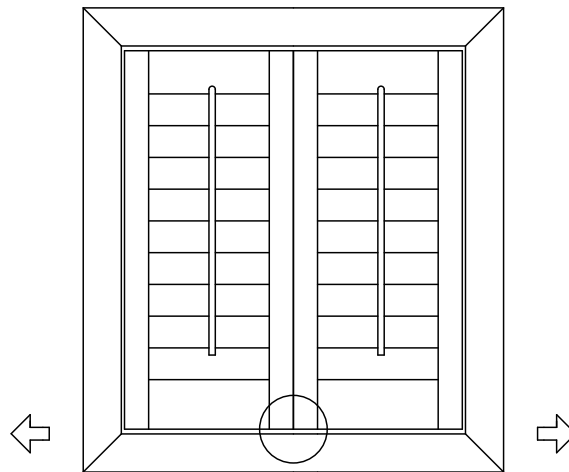
On inside mounts, place the frame inside the opening making sure there is enough clearance for the louver size selected. With the frame in position, secure the left or right side of the frame just above top hinge using a nail or screw, being sure to center the frame from side to side.



Panel Installation

The next step is to insert the panels in the appropriate locations. All hinges have been attached to the panels and frame, so the only thing that will be necessary is to gently tap in the hinge pins with a rubber mallet. The hinge pins should go in without much problem if the panels are in the right positions. If one pin seems to be tight, just loosen one part of the hinge with a small Phillips screw driver allowing the pin to slide into the other, and re-tighten the hinge screws.

Once the panels are inserted, close the panels and move the bottom of the frame left or right to align the panels. Once the panels are aligned, and all the margins are even, open one panel and secure the side of the frame just above the lowest hinge. Continue attaching the frame with nails or screws just above every hinge. On wider shutters it will be necessary to secure the top and bottom frames as well.

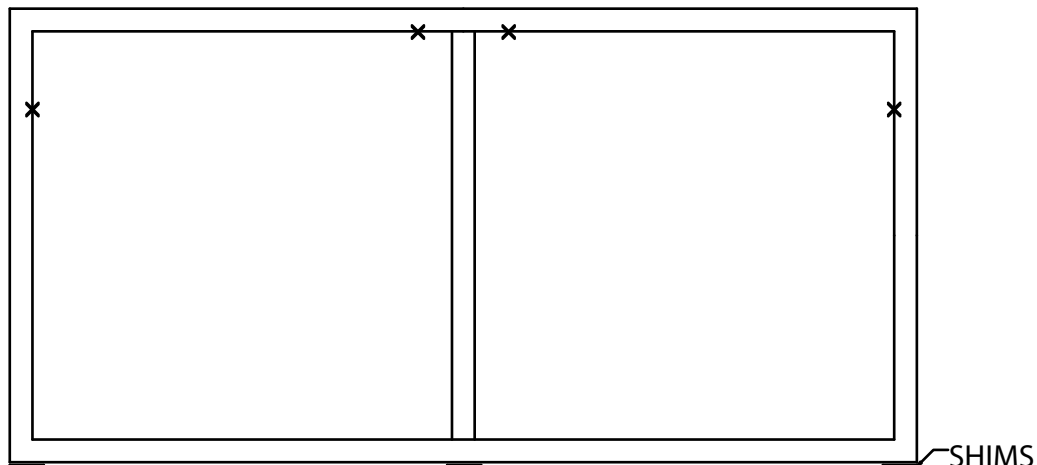


On inside mounts, if the frame has a T-post it may be necessary to place a shim under each T-post and each side of the frame before securing the sides, this way if the T-post needs to be moved down for adjustments you will have the room.



= Nail/Screw

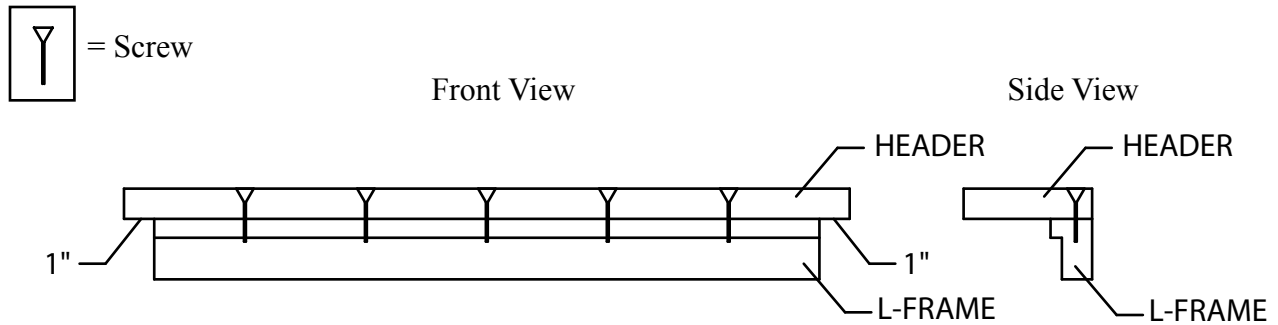
Front View



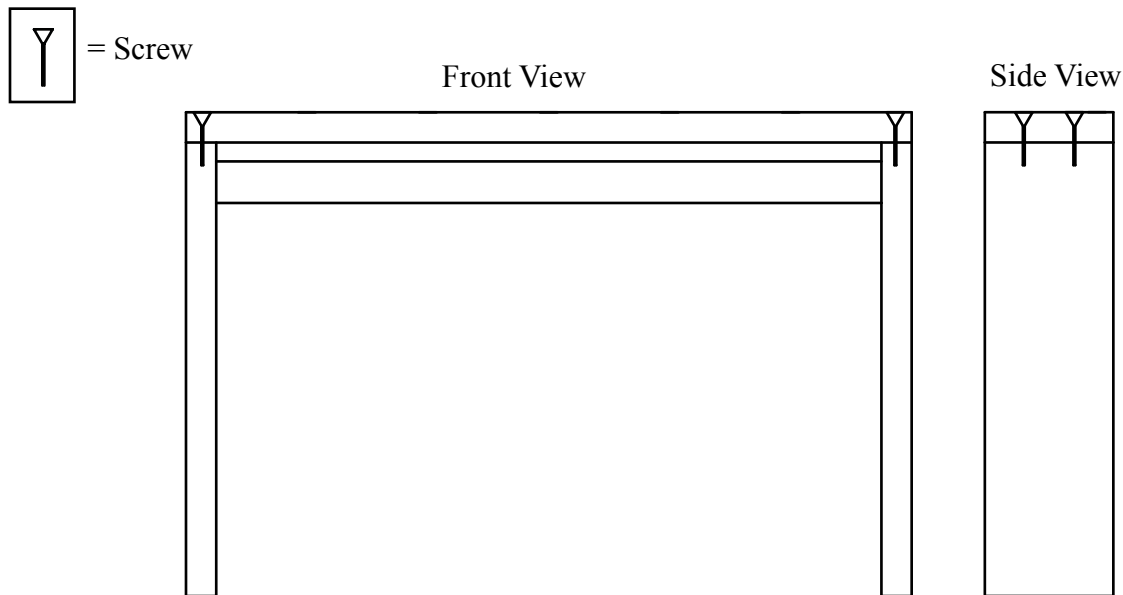
Track System Installation

The frame for the tracking system consists of: a header with two side legs, a mounting piece (L- frame), the track(s), two leg trim pieces, and a fascia piece with returns (on outside mounts).

The first step is to attach the L-frame mounting piece to the header. Center the L-frame piece as shown in the drawing, leaving 1” on each side. This can be accomplished by screwing down through the top of the header into the L-frame.



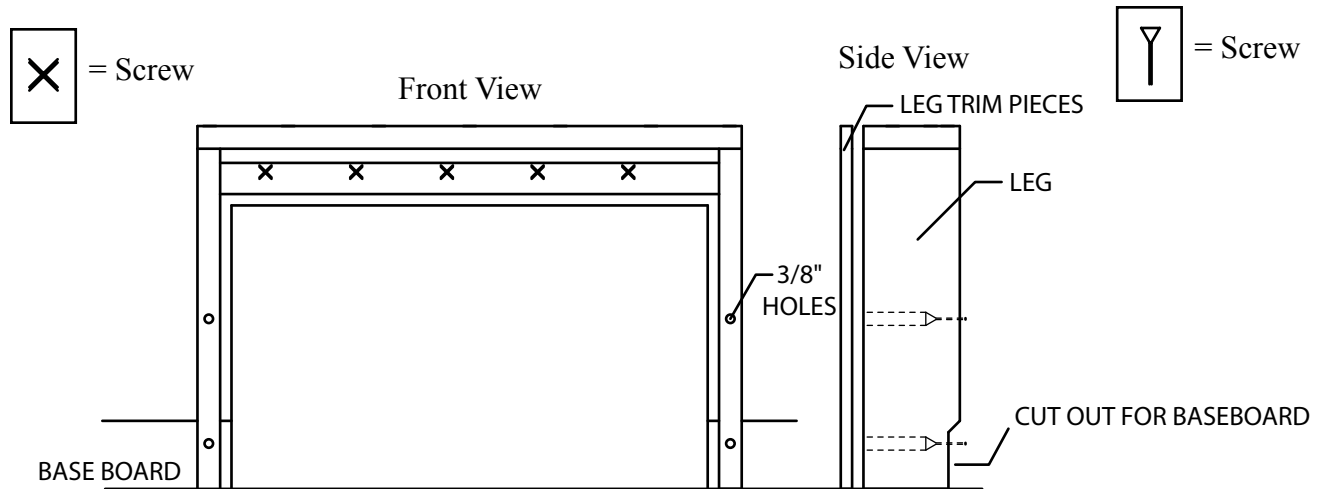
Next, attach the track to the header. If the track is the double bi-pass track, be sure to move the track back next to the L-frame. Once the track is attached insert the wheel hangers, and/or top pivot bracket(s) into the track. The next step is to secure the two legs to the header. The header is to be mounted on the top of the both legs. Screw down through the top of the header into the legs using 3” screws.



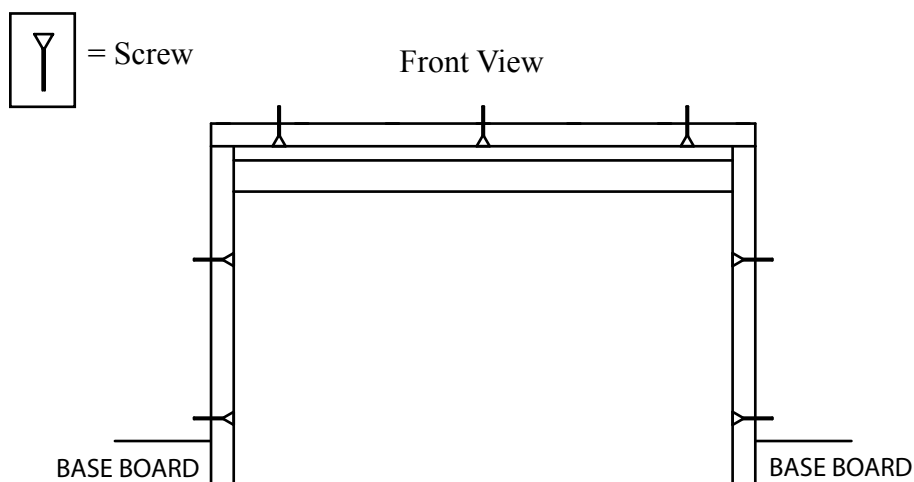
Track System Installation

Revised: July, 2023

If the installation is outside mount, you will secure the frame to the wall through the L frame as shown below. If there is baseboard you may want to scribe out the backs of the two legs before assembly. The legs can be secured to the wall by drilling a 3/8" hole 2/3 of the way through the leg, and then securing the leg with an installation screw. The leg trim pieces can be attached to the face of the legs using a small brad.

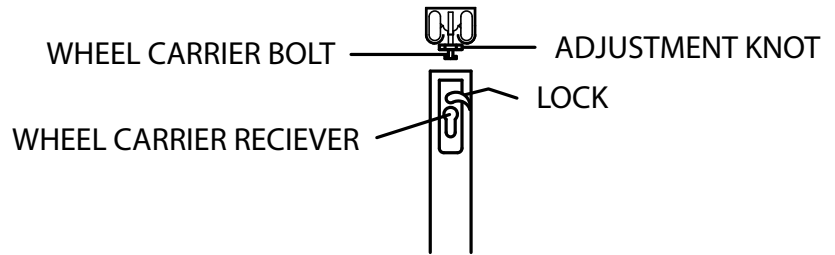
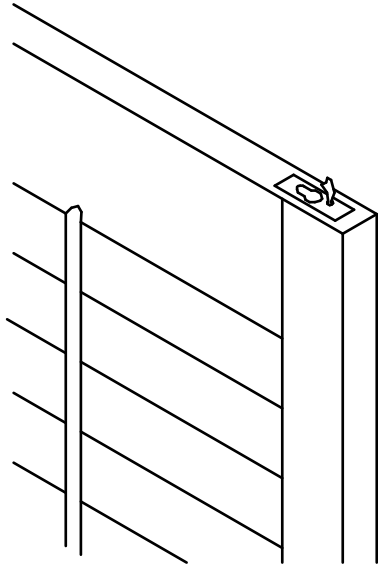


On an inside mount, you will have to remove the base board where it returns into the opening. Save the removed pieces as you may have to cut them and replace them behind the legs. Once this is done insert the frame into the opening and secure it, making sure the header is level.

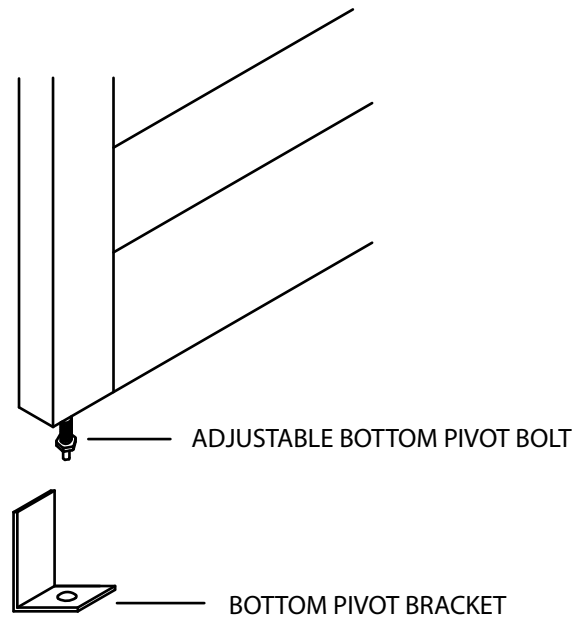
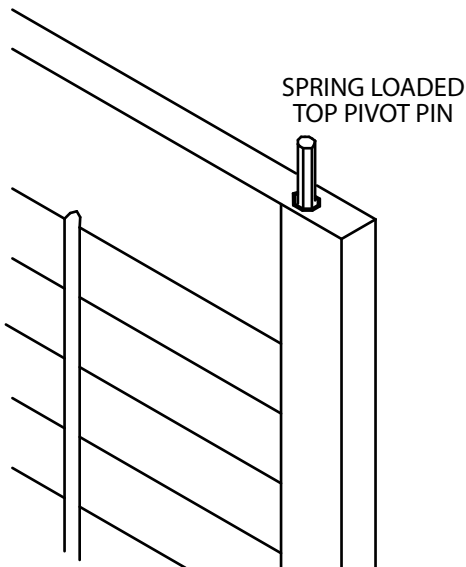


Track System Installation

Once the frame is securely installed the panels can be attached. Fasten the wheel carrier bolts into the wheel carrier receivers at the top of each panel and lock them in place. If the panels are to be connected in pairs, simply slide the hinge pins provided into the hinges.

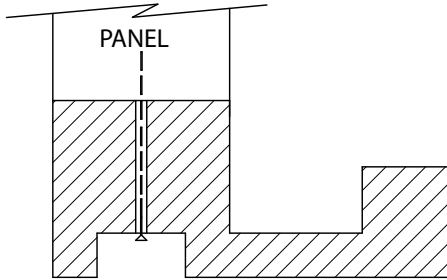


On Bi-fold systems you will need to attach the bottom pivot bracket(s) either to the side leg or the floor. Mount the bottom pivot into the bottom pivot bracket, and then push the spring loaded top pivot into the top pivot bracket.

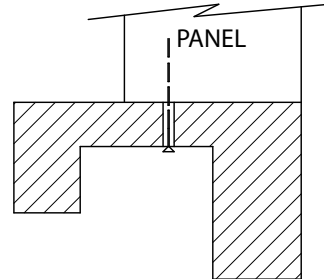


Once all the panels are attached, use the panel adjustment nut to raise or lower the panels as needed. Attach the fascias using brads.

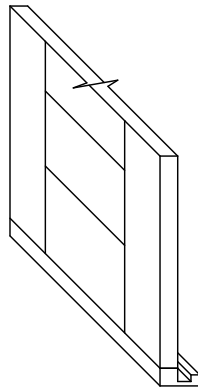
2-WAY BIPASS BOTTOM RUNNERS INSTALL INSTRUCTION



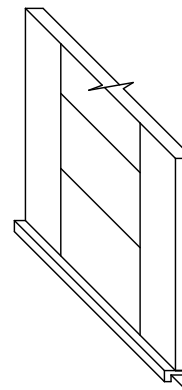
BIPASS RUNNER BOTTOM



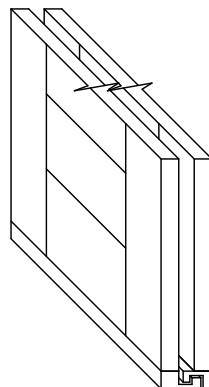
BIPASS RUNNER TOP



WITH PANELS ON THE FLOOR, ATTACH THE FRONT BOTTOM RUNNER TO ONE PANEL AS SHOWN USING 2" SCREWS.



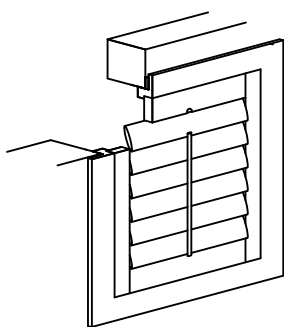
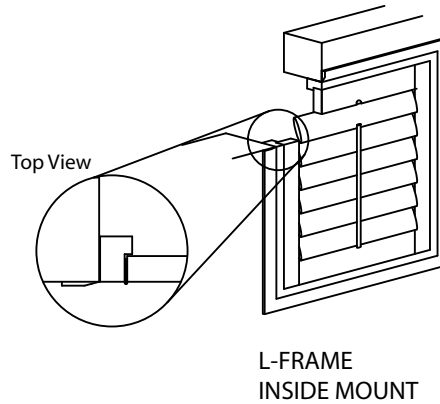
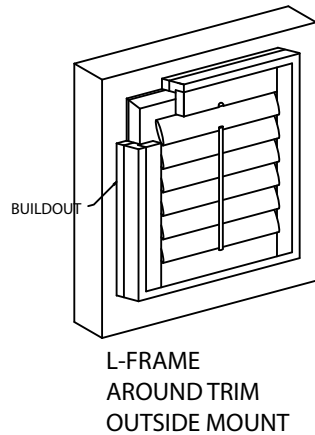
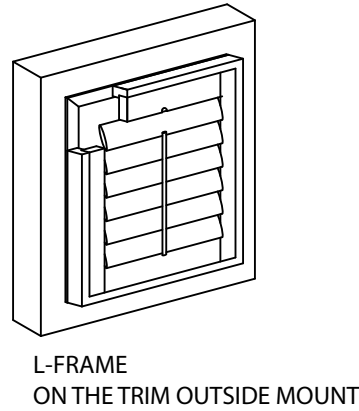
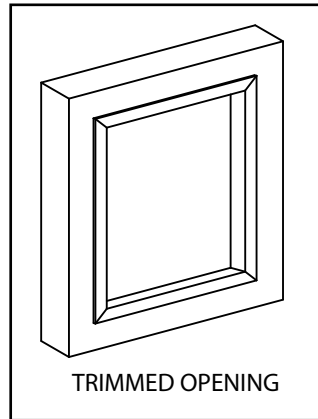
NEXT, ATTACH THE BACK BOTTOM RUNNER TO THE OTHER PANEL AS SHOWN USING 2" SCREWS.



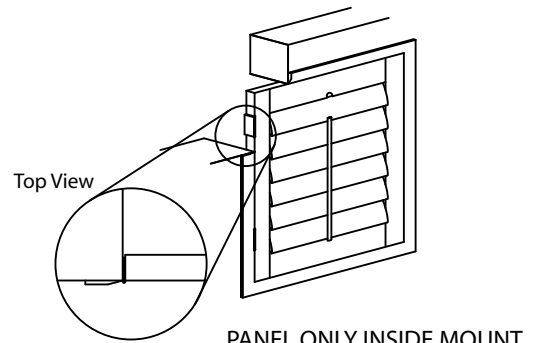
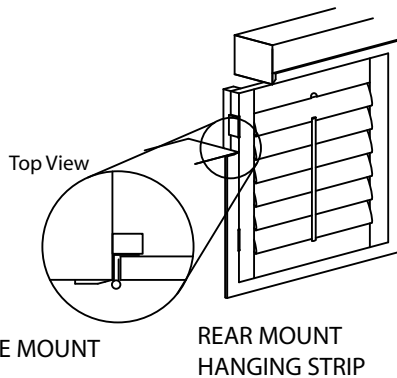
WITH THE BOTTOM RUNNERS ATTACHED, INSTALL THE BACK PANEL INTO THE TRACK FIRST AND THE FRONT PANEL SECOND.

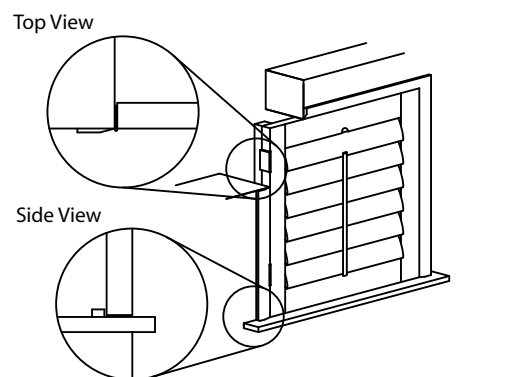
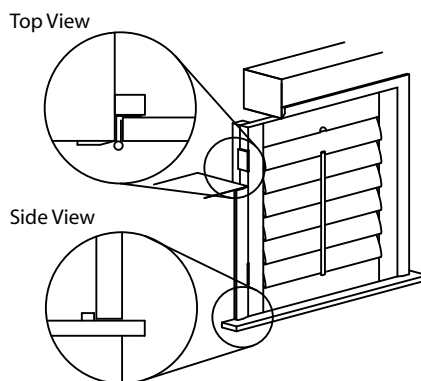
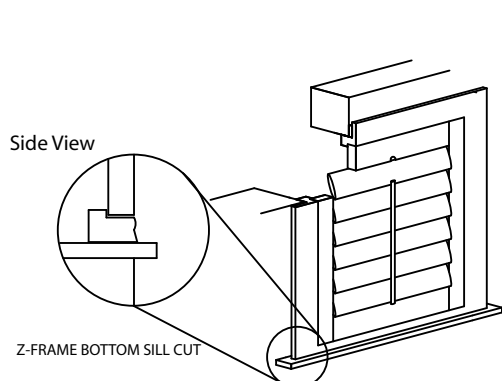
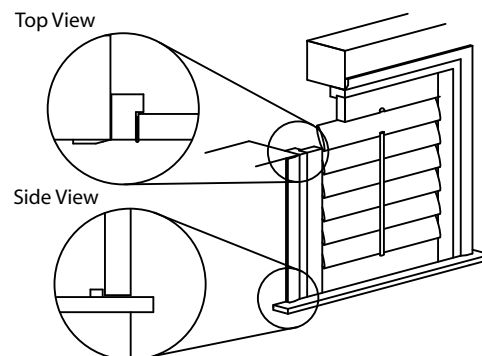
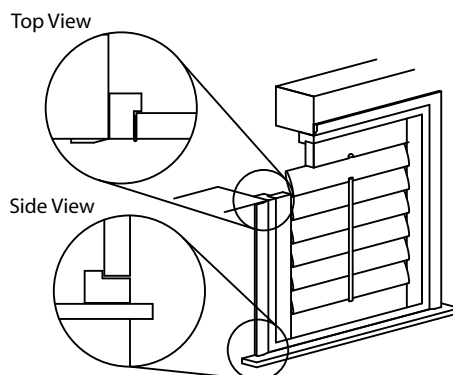
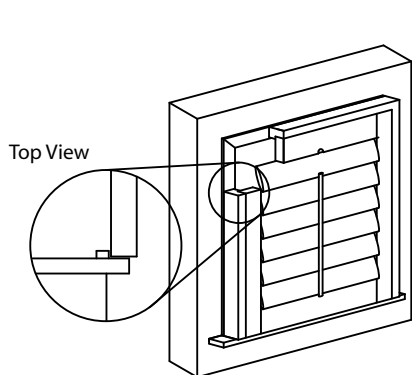
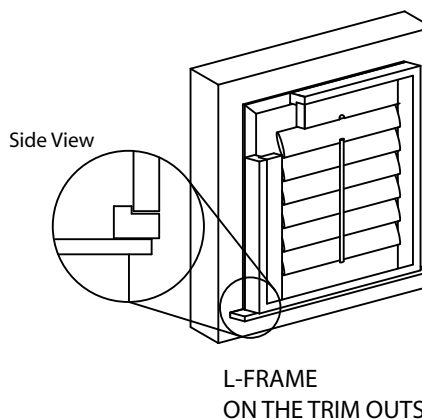
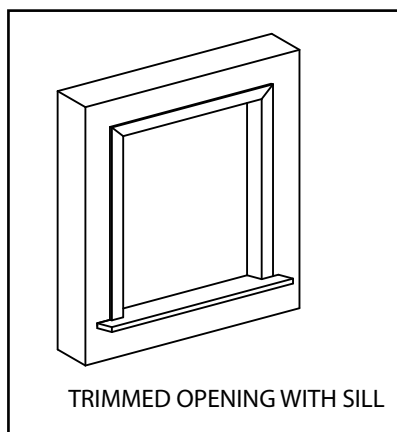
Types of Windows & Applications

Each and every window opening presents its own unique set of challenges and options when it comes to shutter design. For an idea of what is available to you by opening type please use the following pages as a reference.

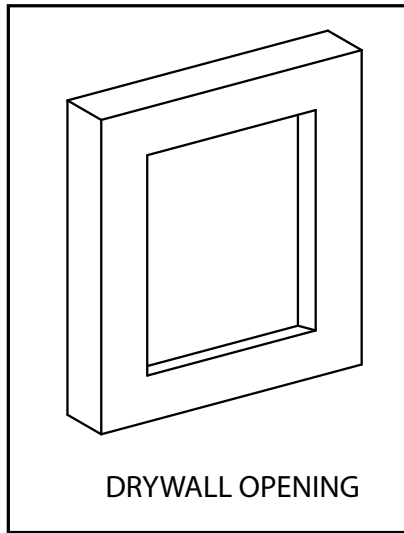


Z-FRAME ON TRIM SEMI-INSIDE MOUNT

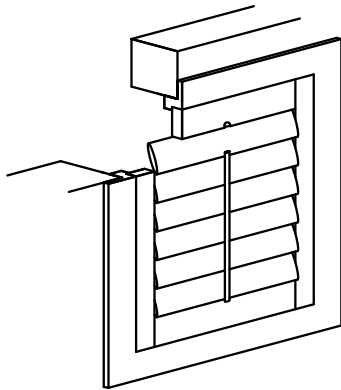




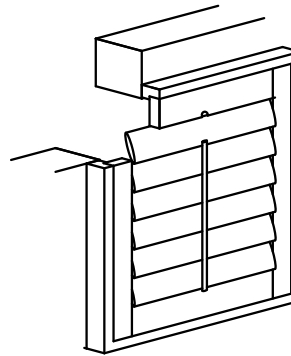
Types of Windows & Applications



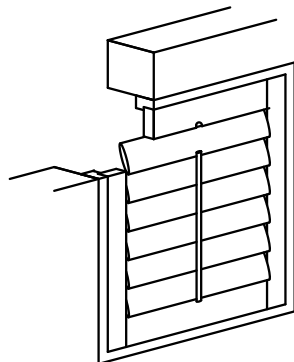
DRYWALL OPENING



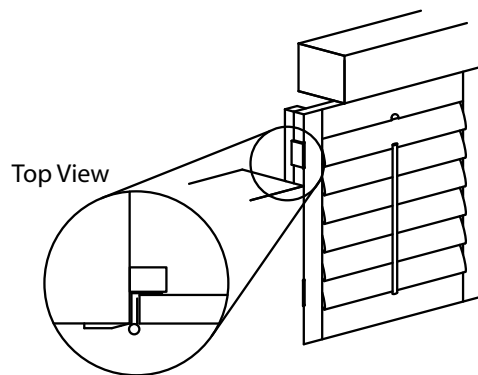
Z-FRAME SEMI-INSIDE MOUNT



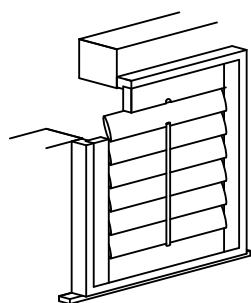
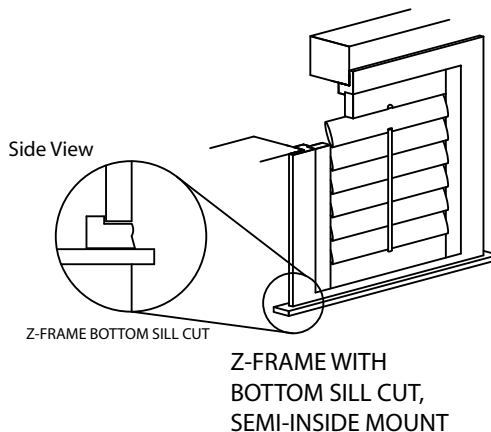
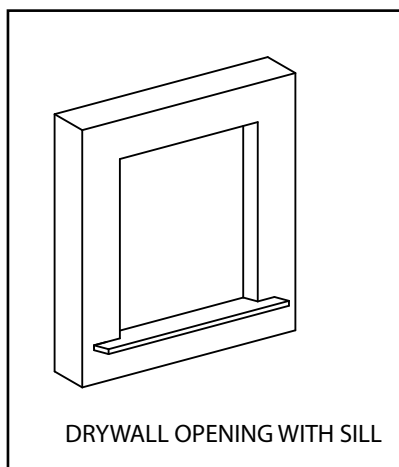
L FRAME
OUTSIDE MOUNT



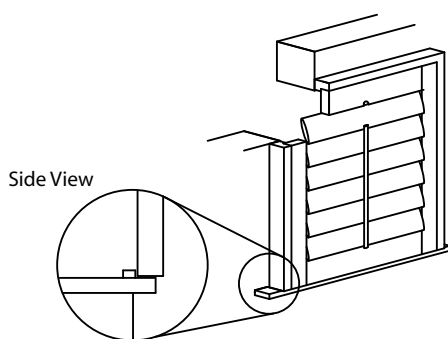
L FRAME
INSIDE MOUNT



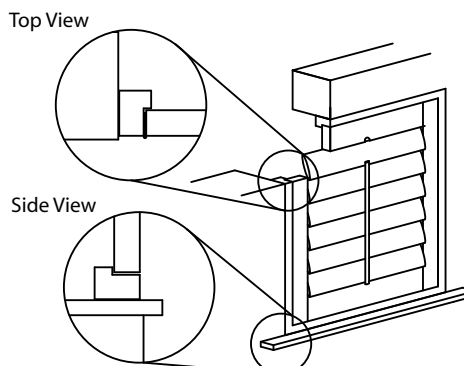
REAR MOUNT
HANGING STRIP



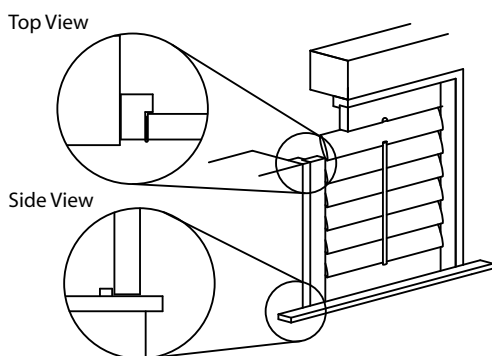
4 SIDED L-FRAME
OUTSIDE MOUNT



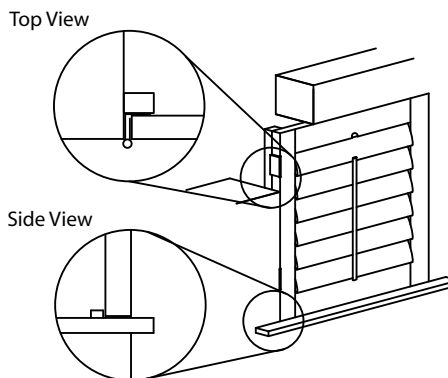
3 SIDED L-FRAME
OUTSIDE MOUNT



L-FRAME
INSIDE MOUNT

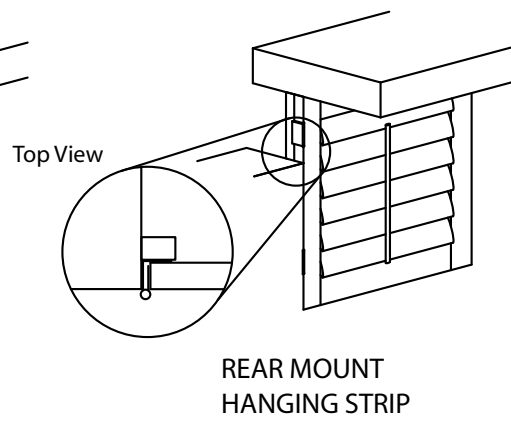
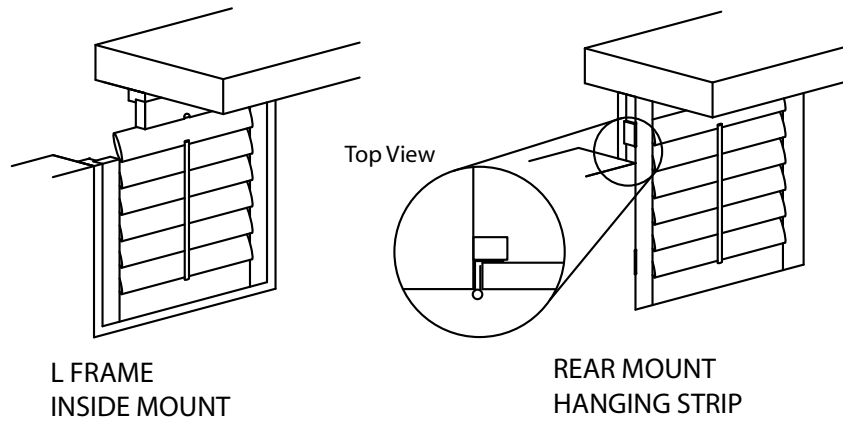
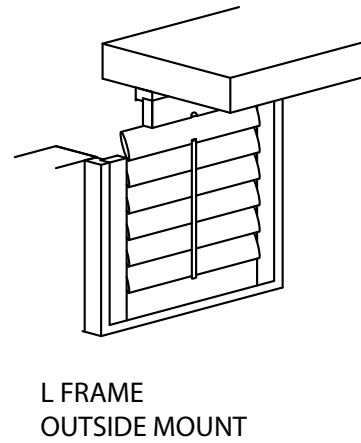
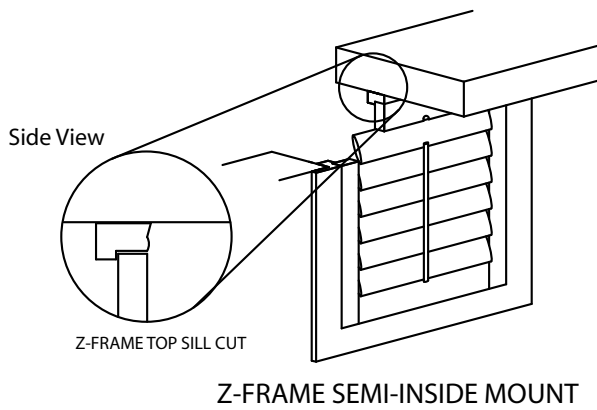
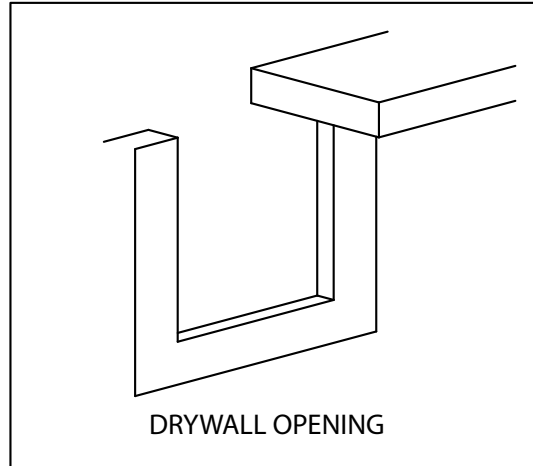


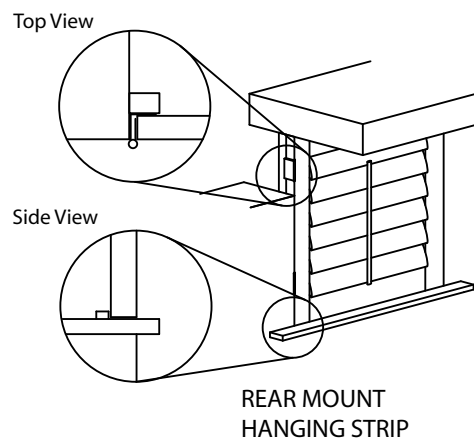
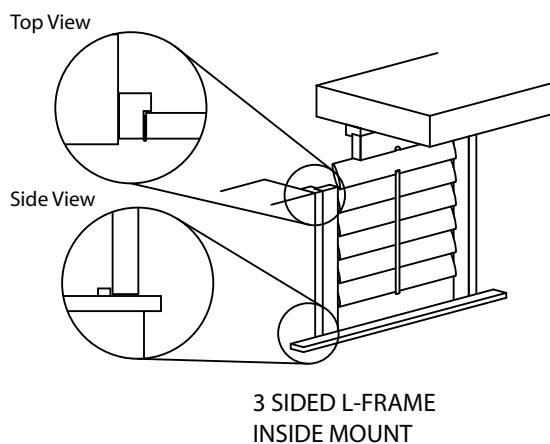
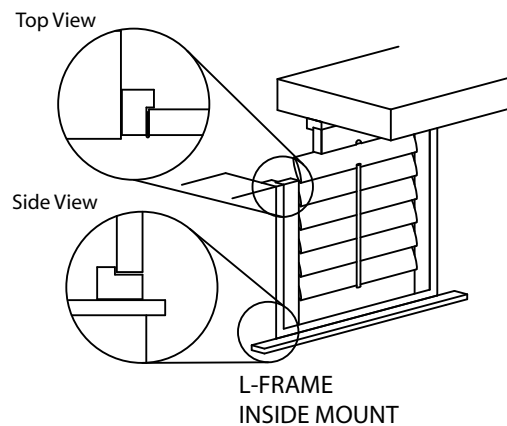
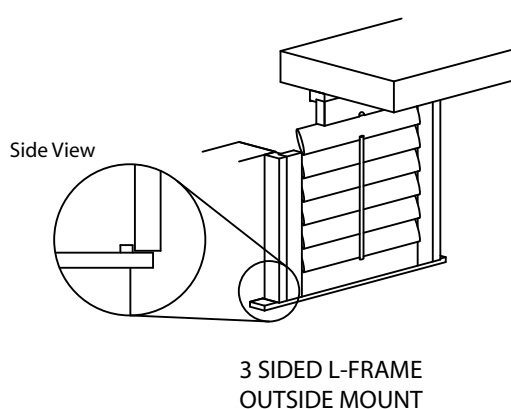
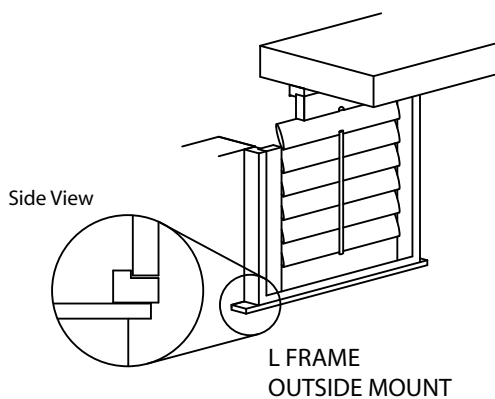
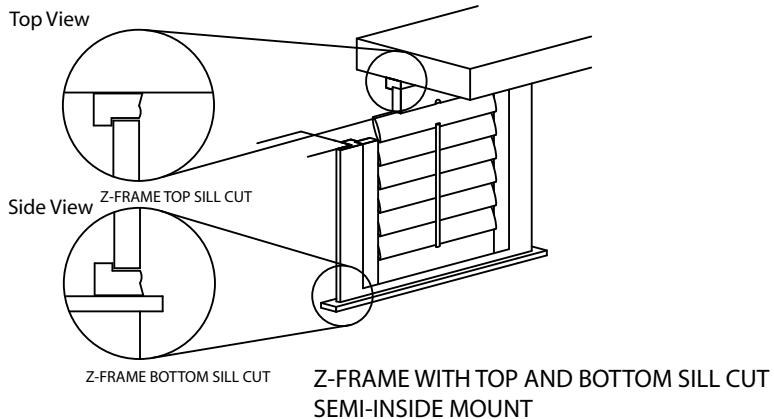
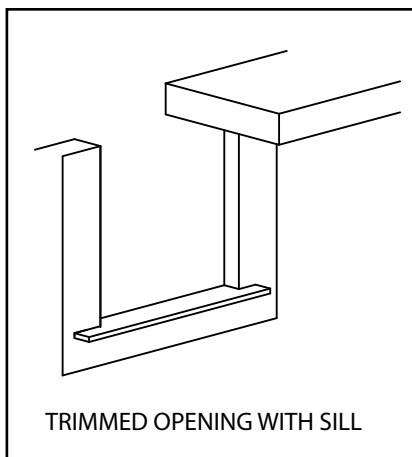
3 SIDED L-FRAME
INSIDE MOUNT



REAR MOUNT HANGING
HANGING STRIP

Types of Windows & Applications





APPLICATION

STANDARD SHUTTER

MO MOUNTING	SEMI-INSIDE MOUNT					I. M.	O. M. (* IMPORT ONLY)					SIDE MOUNT HANGING STRIP	REAR MOUNT HANGING STRIP	CASING FRAME*(N.W.F. ONLY)			
FRAME CODE	MAZ	LGZ	LFZ	MDZ	SQZ	MFZ	SBZ	SFZ	LFI	LFO	DFO	DZO	CZF	AZF	* AFL	* HCF	* HCA
<i>Reddy CORE®</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lex WOOD®</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

ARCH / RAKE SHUTTER

MO MOUNTING	SEMI-INSIDE MOUNT					I. M.	O. M.					CASING FRAME*(N.W.F. ONLY)					
FRAME CODE	MAZ	LGZ	LFZ	MDZ	SQZ	MFZ	SBZ	SFZ	LFI	LFO	DFO	DZO	CZF	AZF	* AFL	* HCF	* HCA
<i>Reddy CORE®</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lex WOOD®</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

FAN TOP SHUTTER

MO MOUNTING	SEMI-INSIDE MOUNT					I. M.	O. M.	
FRAME CODE	MAZ	LGZ	MDZ	SQZ	SBZ	2FZ	FFI	FFO
<i>Reddy CORE®</i>	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lex WOOD®</i>	✓	✓	✓	✓	✓	✓	✓	✓

FRENCH DOOR SHUTTER

MO MOUNTING	SEMI-INSIDE MOUNT					I. M.	O. M.	
FRAME CODE	MAZ	LGZ	MDZ	SQZ	SBZ	2FZ	FFI	FFO
<i>Reddy CORE®</i>	✓	✓	✓	✓	✓	✓	✓	✓
<i>Lex WOOD®</i>	✓	✓	✓	✓	✓	✓	✓	✓

SHUTTER & HINGE COLORS

SHUTTER COLOR CODE	FACTORY HINGE COLOR	SHUTTER COLOR CODE	FACTORY HINGE COLOR	SHUTTER COLOR CODE		FACTORY HINGE COLOR
				SHUTTER COLOR CODE	FACTORY HINGE COLOR	
WH100	BRI	ST401	BBS	BRI	DUL	BRI
WH101	BRI	ST402	BBS	DUL	DUL	DUL
WH102	BRI	ST403	BBS	DUL	DUL	DUL
WH103	BRI	ST404	BBS	DUL	DUL	DUL
WH104	BRI	ST405	BBS	DUL	DUL	DUL
WH105	DUL	ST406	ABS	DUL	DUL	DUL
WH106	DUL	ST407	ABS	DUL	DUL	DUL
WH107	DUL			DUL	DUL	DUL
WH108	DUL			DUL	DUL	DUL
WH109	DUL			DUL	DUL	DUL
WH110	OFF	ST501	BBS	ST601	BBS	
WH111	OFF	ST502	BBS	ST602	BBS	
WH112	OFF	ST503	BBS	ST603	BBS	
WH113	OFF	ST504	BBS	ST604	ABS	
WH114	OFF	ST505	ABS	ST605	ABS	
WH115	OFF	ST506	ABS	ST606	ABS	
WH116	OFF	ST507	ABS			
WH117	OFF					
WH118	OFF					
WH119	OFF					
WH120	OFF					

Lex WOOD®

Reddy CORE®

SHUTTER COLOR CODE	FACTORY HINGE COLOR
BRI	BRI
DUL	DUL
OFF	OFF
PRL	DUL
ULT	BRI

HINGE COLOR

BRI --- Bright White
DUL -- Dull White
OFF -- Off White
NIC --- Nickel
BBS -- Bright Brass
ABS -- Antique Brass
OLB -- Oil Bronze
STA -- Stainless (\$2 / each)
* STAINLESS STAPLE \$2/PANEL.
* WRAP AROUND HINGES ONLY
AVAILABLE IN BRI, OFF, ABS, BBS, AND OLB.

FRAME SIDES

FRAME SIDE CODE	DESCRIPTION
4	4 sided
4S	4 sided with sill cut bottom
4O	4 sided sit on sill (for L-frame only)
4ST	4 sided with sill cut on top
4STB	4 sided with sill cut on top and bottom
T3	3 sided no bottom
2	2 sided (left and right)
U	3 sided no top
US	3 sided no top with sill cut bottom
T3C	3 sided with sill cap
4C	4 sided sill cut bottom with sill cap

* ALL SILL CUTS DO NOT APPLY TO L-FRAME

Shutter square footage calculation:
Round up width and height to the nearest inch, for Inside Mount or NWF. For Outside Mount or Semi-Inside Mount, round up width and height to the nearest inch, and then add 3" for each.

IM or NWF:
(round up width x round up height)/144=sq.ft.
OM or SIM:
(round up width + 3") x (round up height + 3")/144=sq.ft.

FRAME CODES

FRAME CODE	DESCRIPTION	DIMENSION TYPE & OVERALL DEDUCTION	N.W.F.
SEMI-INSIDE MOUNT			
MAZ	= Mailbox Z	- 3/8"	0
LGZ	= Large Z	- 1/2"	0
MDZ	= Medium Z	- 1/2"	0
SBZ	= Single Beaded Z	- 3/8"	0
2FZ	= 2" FLAT Z	- 1/2"	0
LFZ	= Large Flat Z	- 1/2"	0
MFZ	= Medium Flat Z	- 1/2"	0
SQZ	= Medium Square Flat Z	- 1/2"	0
INSIDE MOUNT			
LFI	= L Frame I.M.	- 1/8"	0
FFI	= Flat Frame I.M.	- 1/8"	0
OUTSIDE MOUNT			
DFO	= Decorate Frame O.M.	+ 6 1/2"	0
DSO	= Decorate Sill Frame	+ 4"	0
LFO	= L Frame O.M.	+ 3"	0
FFO	= Flat Frame O.M.	+ 3"	0
DZO	= 2" Deco Frame	+ 4 1/4"	0
SIDE MOUNT HANGING STRIP			
SRH	= S.M. Regular Hinge		
REAR MOUNT HANGING STRIP			
RWH	= R.M. Wraparound Hinge		

TERMS AND CONDITIONS

1. Cancellations before job completion are subject to deposit; for future and other applicable costs. 2. Cancellations after job completion cannot be accepted and the full amount of the sale is due and payable. 3. Time of production is calculated from date of deposit and all pertinent information has been received. 4. This contract is subject to final office approval. 5. A deposit is required on all contracts and the balance is due and payable upon delivery and/or installation. 6. All parties executing this contract represent that they have the authority to do same for themselves or their principals. 7. All parties agree that all legal and/or collection fees pertaining to this contract or amendments to same will be paid by the prevailing party. 8. In the event of partial installation, buyer agrees to pay for all products that are installed and complete. 9. Upon installation customer has 7 days to notify Sunland Shutters in writing of any nonconforming product.

Limited 25-year warranty on Sunland® Polycore shutters
 Sunland's Polycore shutters are warranted against defects in materials that might result in the warping, cracking, or fading of the shutters for a period of 25 year from the date of initial installation. This Limited Warranty on the Polycore shutters shall remain in effect to the original end user, if and only if normal maintenance and cleaning practice are followed (see section of this Limited Warranty entitled "Maintenance Cleaning") and is prorated depending upon the length of ownership. This warranty is exclusive and in lieu of all other obligations, liabilities, or warranties. In no event shall Sunland Shutters be liable for incidental or consequential damages, or for any expense associated with such damages. Purchaser's sole remedy against under this warranty is the repair or remanufacture of the defective product by Sunland® Shutters. Repairs will be made only with like or similar parts. This warranty does not include any payment for shipping charges nor for any labor costs, including but not limited to the cost of measuring and installation.

This limited warranty automatically goes into effect 5 days after the initial completed installation of the Sunland® Polycore Shutters and will entitle the end user to the benefits of this Limited Warranty. The limited warranty stipulated in this document is the only warranty applicable to Sunland® Polycore shutters and is granted in lieu of any warranties, otherwise implied by law or equity and no such warranties shall apply to Sunland® Polycore shutters or to this limited warranty.

1. Product Use

This Limited Warranty applies only in respect to Sunland® Polycore Shutters used strictly for the purpose for which they were intended. Warranty is not applicable to commercial application, i.e. hospitals, hotels, retirement homes, any other public arenas.

2. Limited Warranty Limitations

Sunland® Shutters' liability is limited solely and exclusively to repair or replacement of the defective part at the sole option of Sunland® and under no circumstances will Sunland® be liable for any incidental or consequential damages such as, but no limited to, labor costs for any purposes, inconvenience, damage or injury to persons or to property, or any other expense or liability.

3. Replacement Parts or Repairs

Sunland® reserve the right to discontinue or change any Sunland® Polycore Shutters as currently manufactured. If Sunland® determines to make a replacement under the terms of this Limited Warranty and an exact replacement part is not available, Sunland® reserve the right to substitute a part or parts of equal quality at its sole option. Sunland's limited warranty does not cover damage to following hardware accessories / parts or minor issues generally associated with normal shutter wear and tear after a period of 12 months from the date of original installation: Tension loosening on louvers, loose or defective magnets, yellowing or cracking of plastic parts, Loose tilt rod staples, Discoloration or rusting of hardware accessories such as magnet plates and hinges.

Exclusions from Limited Warranty Coverage

The following are excluded from coverage under this Limited Warranty:

1. Any damage caused by exposure to air pollutants and normal atmosphere conditions that may cause all PVC surfaces to gradually suffer an accumulation of surface dirt or stains. These are normal occurrences and are not covered under Sunland's Limited Warranty.
2. Any defect, malfunction, or failure of the Sunland® Polycore Shutters to perform in the manner in which they are designed resulting from unreasonable use, improper installation, or original end user's failure to follow normal maintenance and cleaning practices as set forth in the section entitled "Maintenance Cleaning" below.
3. Any damage to the Sunland® Polycore Shutters or components of the shutters caused settlement or structural defects of the building in which they are installed.
4. Any damage caused by wind, hail, lightning, or other acts of God, intentional acts, accidents, or exposure to harmful chemicals or pollutants.
5. Any damage caused by improper handling or installation of Sunland® Polycore Shutters.
6. Any Sunland® Polycore Shutter that has been repaired or modified by any person other than a duly authorized representative of Sunland® Shutters.
7. Sunland® Shutter's shutters are manufactured to industry standards. Minor imperfections not noticeable from a distance of 3 ft. under ordinary lighting conditions in normal installations are not considered defects.
8. Polycore Shutters are made from PVC material and may warp or shrink if the product is not handled properly during transport or storage (i.e. transported in a locked trunk or stored in tool sheds without temperature control). Warping and shrinkage (and any product damage) resulting from improper transportation or handling will void the product warranty.
9. Warpage and shrinkage may also occur if the product is installed in an application that will result in prolonged heat exposure over 150 degrees Fahrenheit (sunlight reflecting off swimming pools or glass will magnify the heat intensity and result in temperatures exceeding 150 F). Applications where the product will be subject to prolonged heat exposure over 150 F are considered as inappropriate / application error and will void Sunland's limited warranty.

Effective Date of Limited Warranty

This Limited Warranty will take effect FIVE (5) DAYS from the date of receipt of delivery or Will Call as recorded by Sunland® Shutters.

Maintenance & Cleaning

Vinyl materials are closer to "maintenance free" than any other building material currently available. However vinyl surfaces may become dirty. Normal maintenance requires washing with mild soap and water using a soft cloth. For difficult to remove dirt and stains readily available citrus based orange cleaners can be used. Chlorine-based cleaners or other cleaners containing organic solvents could affect the surface appearance and long-term durability of the product. At no time should an abrasive be used to clean the shutters.

Procedure and Condition of Limited Warranty Remedy

In this event that Sunland's obligation under this Limited Warranty is sought, the original end user must notify the Dealer/Distributor in writing within THIRTY (30) DAYS after the defect is first detected. Such notification must contain the following:

- a. Name and address of the original end user
- b. Date of installation
- c. A brief description of the defect

Upon receipt of this information the dealer / distributor will investigate the nature of the warranty claim and if the warranty claim is accepted, dealer / distributor will notify the original end user of his share of prorated costs (where such is applicable), in accordance with the Proration Schedule below. No repair or replacement parts will be provided until Sunland's dealer / distributor has received the original end user's payment for their share of the prorated costs. The dealer / distributor will provide repair or replacement parts to the owner upon receipt of the original end user's payment. All repair work will be done at Sunland plant or facility. Shutters requiring repairs must be sent to the appropriate Sunland facility for repair. See dealer / distributor for the address of the nearest Sunland repair facility. Original end user shall be responsible for all transportation and delivery costs to and from the Sunland® facility.

Proration Schedule

The percentage of warranty repair or replacement materials costs to be share by the original end user and Sunland as stipulated on the face of this Limited Warranty Certificate are as follows:

Lapsed Time From Date of Installation	Share of Material Replacement Cost		Lapsed Time From Date of Installation	Share of material Replacement Cost	
	Sunland	Owner		Sunland	Owner
1 to 15 years	100%	0%	21 years	17%	83%
16 years	27%	73%	22 years	15%	85%
17 years	25%	75%	23 years	13%	87%
18 years	23%	77%	24 years	11%	89%
19 years	21%	79%	25 years	10%	90%
20 years	19%	81%			

Disclaimer: Sunland® Shutters reserves all rights on updating or modification of any contents within this documentation without prior notification.

Sunland® Shutters warrants that our Lexwood Premium and Advantage shutters will be free from defects in materials or workmanship for as long as the original purchaser owns the shutters. This warranty applies only to end user customers. Sunland® Shutters also includes a 4 year limited warranty on color fastness of the paints and stain on the shutter products. This warranty is expressly conditioned upon the Sunland® Shutters being properly installed without modification and containing original materials and components. Any resale or transfer of the product or any original parts and/or materials voids this warranty.

This warranty is exclusive and in lieu of all other obligations, liabilities, or warranties. In no event shall Sunland® Shutters be liable for incidental or consequential damages, or for any expense associated with such damages. Purchaser's sole remedy against under this warranty is the repair or remanufacture of the defective product by Sunland® Shutters. Repairs will be made only with like or similar parts. This warranty does not include any payment for shipping charges nor for any labor costs, including but not limited to the cost of measuring and installation. Improper, inappropriate, or unauthorized replacement parts, repairs or maintenance void this warranty. This warranty excludes all liability for removal of the shutter and reinstallation in the same or another window, or damage to the window frame, glass or other portion of the window. All other warranties, both express and implied, are expressly disclaimed. This warranty excludes all liability for consequential or incidental damages for any cause whatsoever.

Sunland® Shutters are made for indoor use only. The product is not designed for outdoor use. Any misuse or misapplication of any Sunland® Shutters product, including any use of the Sunland® Shutters product for product for outdoor use voids this warranty and Sunland® Shutters will be released from any obligations under this warranty. The Warranty does not include any conditions or damages resulting from accidents, alterations, misuse, extraordinary use, misapplication, improper handling, improper installation, improper repairs, operation or cleaning, loss of color intensity, exposure to salt air, damage from insects, or the yellowing and cracking of plastic parts with the passing time. This warranty does not cover variation in color, grain, or texture in natural wood products nor excessive warping of wood slats in high humidity areas or moisture prone applications. Sunland's limited warranty does not cover damage to following hardware accessories / parts or minor issues generally associated with normal shutter wear and tear after a period of 12 months from the date of original installation:

- Tension loosening on louvers
- Loose or defective magnets
- Yellowing or cracking of plastic parts
- Loose tilt rod staples
- Discoloration or rusting of hardware accessories such as magnet plates and hinges

You must notify Sunland® Shutters, if your order contains any discrepancies, non-conforming products, or any damage, immediately upon receipt of your shipment and before the shutters are installed or any alterations are attempted. Sunland® Shutters will then provide you with further instructions. The following incidents are excluded from coverage under this Limited Warranty.

1. Exposure to air pollutants and normal atmosphere conditions may cause all painted or stained wood surfaces to vary in color slightly. We suggest ordering at the same time for all windows in the same home.
2. Any defect, malfunction, or failure to perform which has occurred due to abuse, improper application or failure to properly maintain the product by end user or hi/her/its agents or contractors.
3. Any damage to the shutters caused by settlement or structural defects of the building in which they are installed.
4. Any damage caused by wind, hail, lightening, water damage, severe heat or sun or other acts of nature, act of God, intentional acts, accidents, exposure to harmful chemicals or pollutants.
5. Damage caused by improper installing or handling.
6. Any shutter which has been repaired or altered without proper authorization from Sunland® Shutters.
7. Sunland® Shutters will not be responsible for delivery charges or packing costs.

Maintenance & Cleaning Instructions: Wood materials are best maintained by dusting (feather or electrostatic duster). Light dusting is advised before any type of cloth, as the fine dust on shutters may be abrasive to painted or clear finish and cause scratching to finish. In cases where more aggressive cleaning is needed. Dust first, then use a cloth, slightly dampened (with water only) to wipe down shutters. DO NOT use any type of furniture polish or cleaning solvent! This will cause yellowing and/or cracking of finish on wood shutters. This will forfeit all claims to warranty regarding finish.

Sunland's Lexwood Shutters are manufactured to industry standards. Minor imperfections not noticeable from a distance of 3 feet ordinary lighting conditions in normal installations are not considered defects. Sunland® Shutters reserve the right to inspect the products prior to repair or remake. Non-defective or altered products will be returned freight collect without credit issued or repair made. Shutters will not be responsible for any unauthorized repair charges from another party. Repair or remake of any defective product will be done only to the original size and specification. Sunland® reserves the right to discontinue or change any Sunland® Lexwood Shutters as currently manufactured. If Sunland® determines to make a replacement under the terms of this Limited Warranty and an exact replacement part is not available, Sunland® reserve the right to substitute a part or parts of equal quality at its sole option.

Wood is a natural product. Due to variations in wood grain and the manner in which wood accepts finishes, your final product may vary slightly from the sample. This warranty does not imply not automatic replacement of any product. Sunland® Shutters reserves the right to repair or replace any product at our own discretion. Sunland® Shutters reserves the right to make changes and improvements in our products that may differ from products previously manufactured.

The state law in which shutters were purchased may vary from state to state which governs all other rights. Some states do not allow the exclusion or limitation of implied warranties, or incidental or consequential damages, so the above limitation may not apply to you.

Disclaimer: Sunland® Shutters reserves all rights on updating or modification of any contents within this documentation without prior notification.

Sunland® Shutters warrants that our Lexwood Plus shutters will be free from defects in materials or workmanship for as long as the original purchaser owns the shutters. This warranty applies only to end user customers. Sunland® Shutters also includes a 3 year limited warranty on color fastness of the paints on the shutter products. This warranty is expressly conditioned upon the Sunland® Shutters being properly installed without modification and containing original materials and components. Any resale or transfer of the product or any original parts and/or materials voids this warranty.

This warranty is exclusive and in lieu of all other obligations, liabilities, or warranties. In no event shall Sunland® Shutters be liable for incidental or consequential damages, or for any expense associated with such damages. Purchaser's sole remedy against under this warranty is the repair or remanufacture of the defective product by Sunland® Shutters. Repairs will be made only with like or similar parts. This warranty does not include any payment for shipping charges nor for any labor costs, including but not limited to the cost of measuring and installation.

Improper, inappropriate, or unauthorized replacement parts, repairs or maintenance void this warranty. This warranty excludes all liability for removal of the shutter and reinstallation in the same or another window, or damage to the window frame, glass or other portion of the window. All other warranties, both express and implied, are expressly disclaimed. This warranty excludes all liability for consequential or incidental damages for any cause whatsoever.

Sunland® Shutters are made for indoor use only. The product is not designed for outdoor use. Any misuse or misapplication of any Sunland® Shutters product, including any use of the Sunland® Shutters product for product for outdoor use voids this warranty and Sunland® Shutters will be released from any obligations under this warranty.

The Warranty does not include any conditions or damages resulting from accidents, alterations, misuse, extraordinary use, misapplication, improper handling, improper installation, improper repairs, operation or cleaning, loss of color intensity, exposure to salt air, damage from insects, or the yellowing and cracking of plastic parts with the passing time. This warranty does not cover variation in color, grain, or texture in natural wood products nor excessive warping of wood slats in high humidity areas or moisture prone applications. Sunland's limited warranty does not cover damage to following hardware accessories / parts or minor issues generally associated with normal shutter wear and tear after a period of 12 months from the date of original installation:

- Tension loosening on louvers
- Loose or defective magnets
- Yellowing or cracking of plastic parts
- Loose tilt rod staples
- Discoloration or rusting of hardware accessories such as magnet plates and hinges

You must notify Sunland® Shutters, if your order contains any discrepancies, non-conforming products, or any damage, immediately upon receipt of your shipment and before the shutters are installed or any alterations are attempted. Sunland® Shutters will then provide you with further instructions.

The following incidents are excluded from coverage under this Limited Warranty:

1. Exposure to air pollutants and normal atmosphere conditions may cause all painted wood surfaces to vary in color slightly. We suggest ordering at the same time for all windows in the same home.
2. Any defect, malfunction, or failure to perform which has occurred due to abuse, improper application or failure to properly maintain the product by end user or hi/her/its agents or contractors.
3. Any damage to the shutters caused by settlement or structural defects of the building in which they are installed.
4. Any damage caused by wind, hail, lightening, water damage, severe heat or sun or other acts of nature, act of God, intentional acts, accidents, exposure to harmful chemicals or pollutants.
5. Damage caused by improper installing or handling.
6. Any shutter which has been repaired or altered without proper authorization from Sunland® Shutters.
7. Sunland® Shutters will not be responsible for delivery charges or packing costs.

Sunland's Lexwood Plus Shutters are manufactured to industry standards. Minor imperfections not noticeable from a distance of 3 feet ordinary lighting conditions in normal installations are not considered defects. Sunland® Shutters reserve the right to inspect the products prior to repair or remake. Non-defective or altered products will be returned freight collect without credit issued or repair made. Sunland® Shutters will not be responsible for any unauthorized repair charges from another party. Repair or remake of any defective product will be done only to the original size and specification.

Sunland® reserves the right to discontinue or change any Sunland® Lexwood Plus Shutters as currently manufactured. If Sunland® determines to make a replacement under the terms of this Limited Warranty and an exact replacement part is not available, Sunland® reserve the right to substitute a part or parts of equal quality at its sole option.

Wood is a natural product. Due to variations in wood grain and the manner in which wood accepts finishes, your final product may vary slightly from the sample. This warranty does not imply automatic replacement of any product. Sunland® Shutters reserves the right to repair or replace any product at our own discretion. Sunland® Shutters reserves the right to make changes and improvements in our products that may differ from products previously manufactured.

The state law in which shutters were purchased may vary from state to state which governs all other rights. Some states do not allow the exclusion or limitation of implied warranties, or incidental or consequential damages, so the above limitation may not apply to you.

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