



LOUVERSTAR SHUTTERS

Poly Collection by



CACO, INC.
WINDOW FASHIONS

Product Guide

Table of Contents

Introduction	1
Shutter Terminology	2
Shutter Types	3
Louvers, Hinge & Tilt Options	4
Frames – Z & Deco	5
Frames – L	6
Louver & Style Profiles	7
Rail & Tilt Bar Profiles	8
Mounting Requirements & Panel Limitations	9
Panel Configuration	10
Divider Rail Specifications	11
French Door Cutouts	12
T-Post & Double Hung Shutters	13
Track Shutters	14-15
Specialty Shapes	16-17
Measuring	
Window Type	18
Outside Mount	19
Inside Mount	20
T-Post, Bay & Corner Windows	21
Surcharges	22
Square Feet Calculation	23
Ordering Policies	24
Shipping Policies	25
RGA Policies	26
Warranty	27

Louverstar Shutters blends the strength, stability and precision of man-made materials with the beauty, character, and elegance of real wood. This one aspect allows Louverstar Shutters to be among the most functional and durable shutters offerings on the market today.

CACO, Inc. guarantees total satisfaction in every home and application.

- More durable, energy efficient, and low maintenance compared to wood shutters
- Engineered Poly material resists yellowing, weathering, and corrosion
- Poly material insulates better than any wood shutters
- Protected by a high UV inhibitor to ensure lifetime durability
- Will not rot, absorb moisture, delaminate, split, chip, crack, or promote mold
- Offers all the benefits of Poly with the look of real wood
- Larger panel stiles and louvers are reinforced, co-extruded with aluminum.
- Consumer Assurance Guarantee: Best Warranty in the industry helps cover you on issues once the shutters are properly installed. Once the shutters are in the window (properly) our warranty protects the product from any issues, yes any issues, let me say it again, ANY ISSUES!!! Dogs, kids, or I got mad at the shutter, it is covered, No Questions Asked! We want everyone to know we have the best product in the industry and stand behind it 1000%.

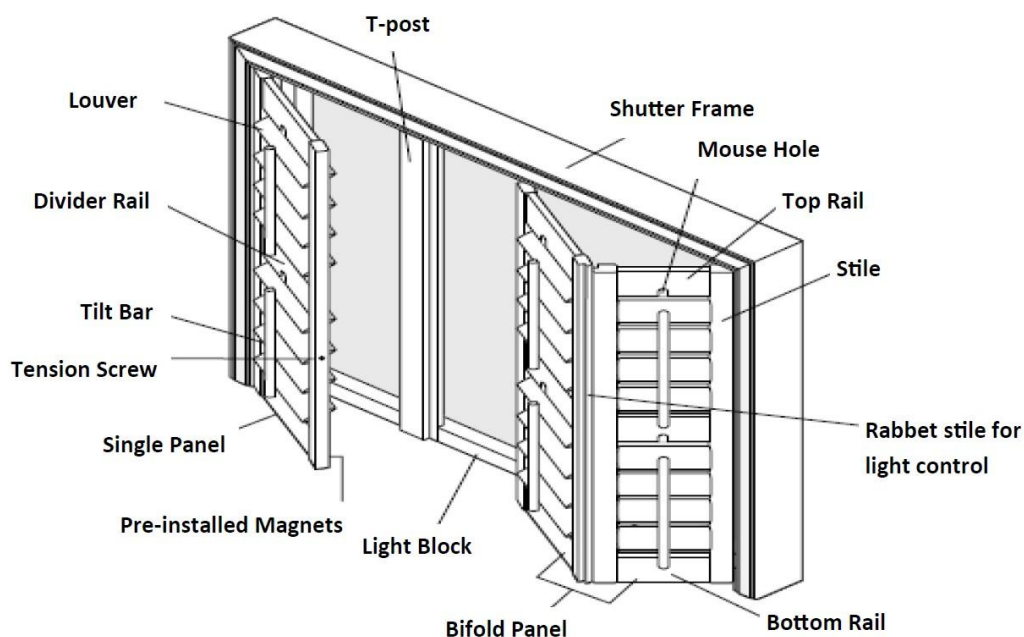
Louverstar Poly Shutters are available in two "styles", Louverstar – North America and Louverstar – Asia Import. Both styles are built using the same quality materials, however the Asia import option has additional option with a longer lead time.

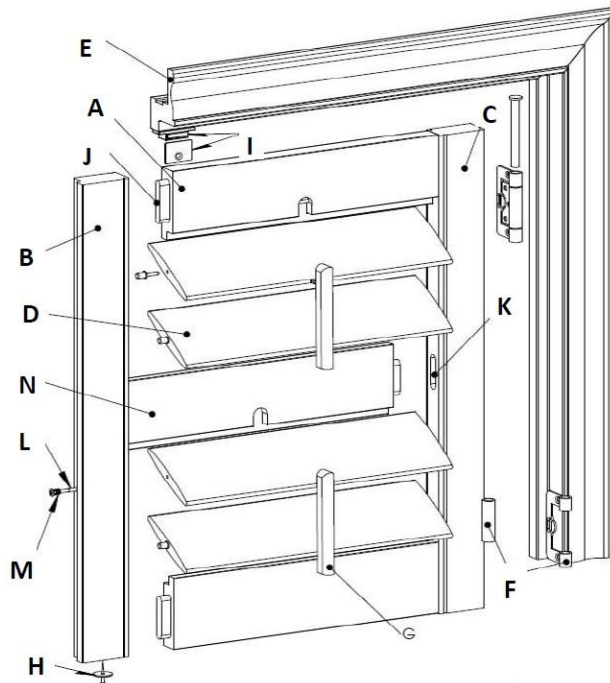
Louverstar – North America

- Made in North America
- 3 week delivery lead time
- Available in 3 colors
- Reduced Frame Options
- Single French Door options
- Not available for Specialty Shapes

Louverstar – Asia Import

- Made in Asia
- 10-12 week delivery lead time
- Available in 10 colors
- All Frame options
- All French Door options
- All Specialty Shapes available





A. Top Rail

B. Rabbeted Stile

C. Standard Style

D. Louver

E Frame (Z Shown

F. Hinge

G. Tilt Rod

H. Stile Cap

I. Magnet & Catch

J. Tenon

K. Mortise

L. Tension Screw

M. Tension Spring

N. Divider Rail

INSIDE MOUNT

For windows that are square, the frame is mounted or partially mounted inside the recessed portion of the window opening.

OUTSIDE MOUNT

A mounting method where the frame is mounted to the wall or outside casing of the window opening.

REVEAL

The distance between the inner-most edge of an outside mount frame and the outside edge of the window opening.

LOUVER

A solid cellular profile that rotates for light and privacy control. Louvers are available in 2 1/2", 3 1/2" and 4 1/2 widths.

STILE

The vertical sides of the shutter panel

ASTRAGAL STILE

The vertical sides of the panel designed to cover the light-gap where two panels meet. Small lip offers superior light control.

RABBETED STILE

The vertical sides of the better panel designed to cover the light-gap where two panels meet.

TILT ROD

The center pole to the shutter panel louvers that rotates the louvers open or closed.

FRAMES

Profiles used to frame the window.

BI-FOLD

Shutter panels where two panels are hinged together in order to fold up together.

CAFÉ FRAME

A standard frame style where shutters cover the bottom half of the window and the top half are open. Café frames are available in 3-sided or 4-sided.

DIVIDER RAIL

A horizontal shutter panel component that separates a single panel into two or more sections that may be opened individually.

RAILS TOP & BOTTOM

The top and bottom horizontal framework of the shutter panel

DOUBLE HUNG (Asia Import Only)

Shutter configuration where two panels or groups of panels are mounted separately so they can be opened independently from each other.

T-POSTS & TRANSOM BEAMS

Profiles used for extra support within a frame system. T- horizontal t-post are horizontal supports.

MOUSE HOLE

The round cutout in the top shutter panel rail designed to fit the tilt rod. This hole allows complete closure of the louvers.



Standard Panel

Rectangular-shaped panel door that can be installed using any frame style. The panel covers the entire window opening



Café Shutter

Shutter panel(s) that cover part of a window opening leaving the rest of the window opening uncovered.



Double Hung*

Rectangular cutout to complement door handles or traditional door knobs

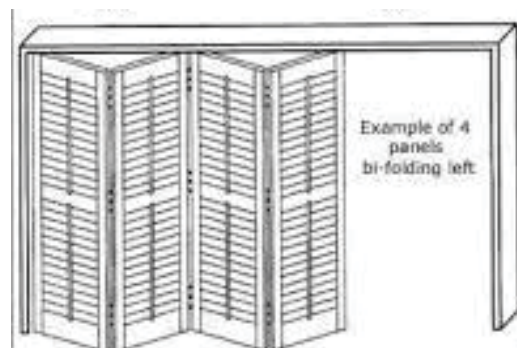
Available in Asia Import Only



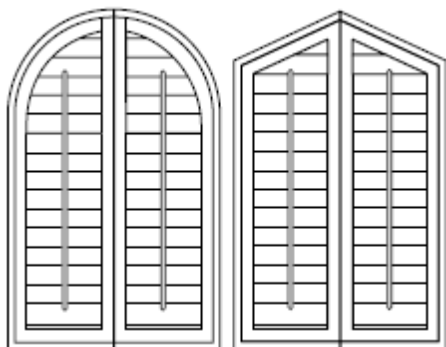
Bypass Shutters

Bypass or Bifold Track

Panels slide on top track to open and close. Bypass panels slide left to right. Bifold panels fold accordion style. Ideal for patio or closet doors



Bifold Shutters



Arch or Angle Top*

Shutters that fit the rounded shape of full arch windows. Angled shutters accommodate slanted or angled windows.

Available in Asia Import Only



Sunburst Arch

Sunburst patterned louvers cover silhouettes such as eyebrows, elongated and elliptical arches.

Available in Asia Import Only



French Door Cutout*

Rectangular or Curved* cutout to complement door handles or traditional doorknobs.

Curved cutout available in Asia Import Only

Louver Options

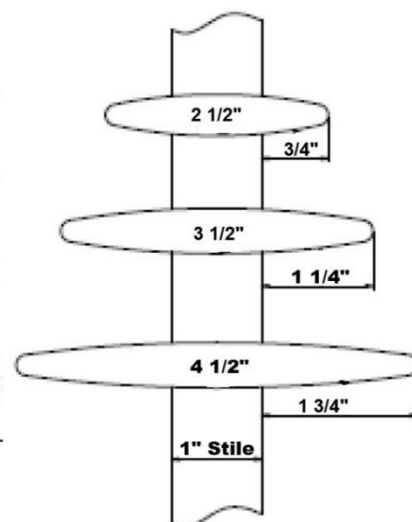
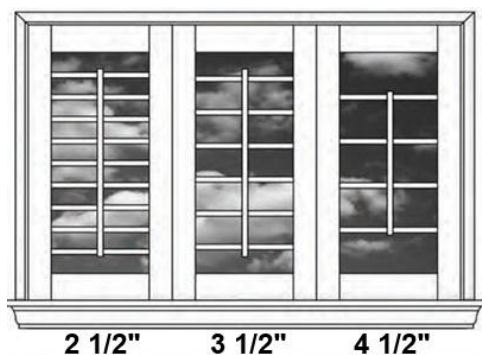
Louver Sizes: 2 1/2", 3 1/2" or 4 1/2"

Available Colors**:

- (110) Bright White
- (001) Pure White
- (003) Silk White
- (009)* Steamed Milk
- (006)* Pearl
- (301)* Phantom
- (302)* Moonlit
- (303)* Lunar
- (304)* Armory

**Sample Louver color chips are only guaranteed for 1 year

* Color only available in Asia Import



Hinge Options

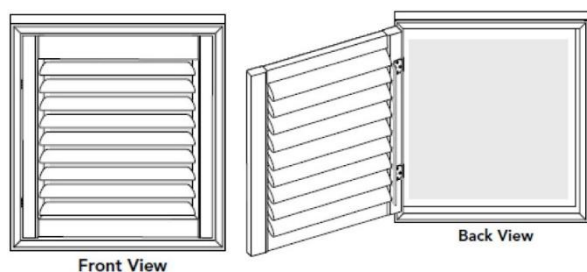
Available Colors: Stainless Steel, Oil Rubbed Bronze, Polished Brass, White and Off White (Left to Right)

Default hinge color will be color coordinated. All other colors are available for no additional charge except for the Stainless Steel which has an additional 10% upcharge



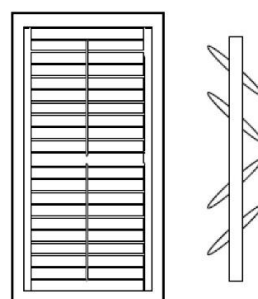
Panel Height	# of Hinges
Up to 44"	2
44 1/16" to 72"	3
72 1/16" to 96"	4
Over 96"	5

Additional Tilt Options



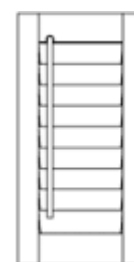
Hidden Tilt

- The tilt mechanism is on the back of the shutter panel, eliminating the traditional tilt bar and creating an unobstructed view.
- A thin, color coordinated steel bar is attached to the louvers in the rear of the panel.
- No mouse hole in the panel.
- Hidden tilt bar will be split by the factory if the panel is over 52" tall. Surcharge applies.



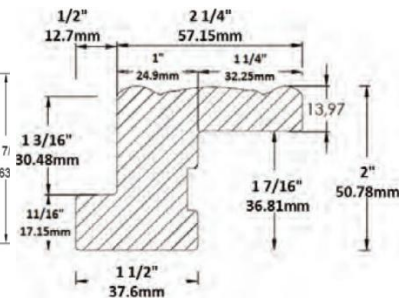
Split Tilt

- Split a large louver bank into two individually operated louver banks by cutting the tilt bar without having to add a divider rail.
- Available for all louver sizes.
- Split can be ordered at custom location.
- Upper and lower sections cannot be positioned at opposing angles because the edge of the louvers will touch.
- Available for hidden tilt

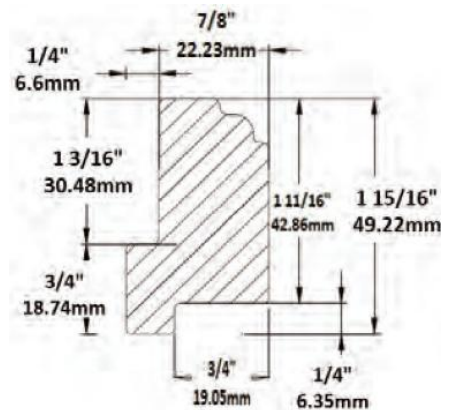


Offset Tilt*

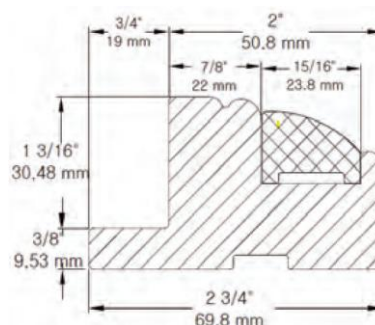
- Offset 1" from edge of louver, allowing a more open view when louvers are open.
- Offset location default is towards the hinge side.
- Available for all louver sizes
- Split tilt option is available along with offset tilt.
- Surcharge applies
- ***Only available in Asia Import**



2.25" Crown Z Frame (CZ22)

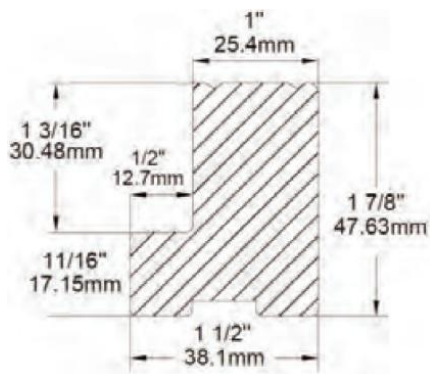


Colonial Tilt-Out Z Frame (TZ88)

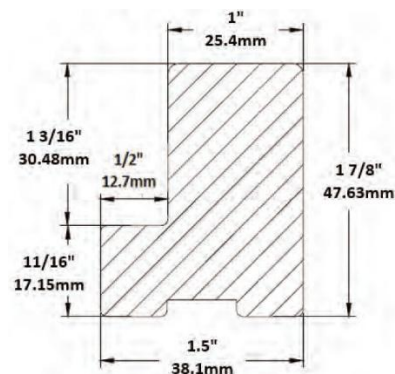


**2" Camber Insert Deco
Frame***

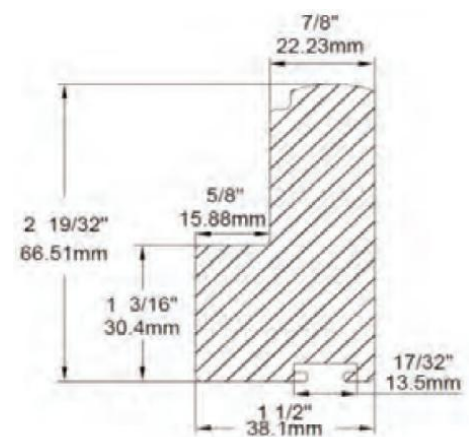
For added frame support,
Deco and Z frame shutters
over 25 sqft are supplied with
support L-bracket.



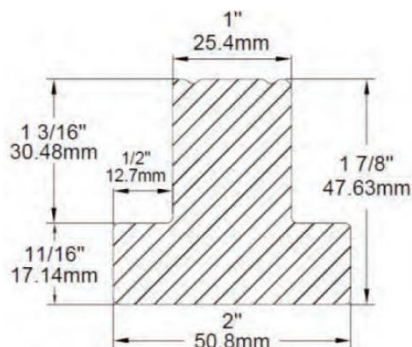
1" L Frame (SL10)



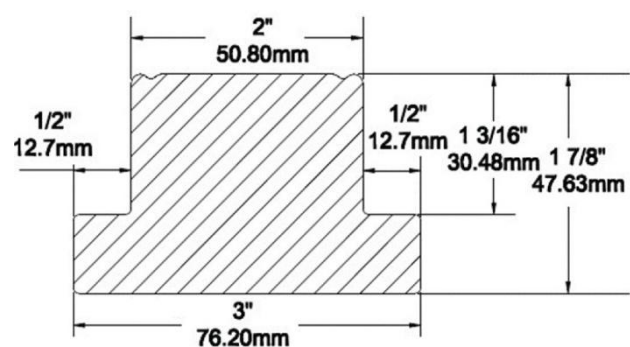
Flat L Frame (FL10)



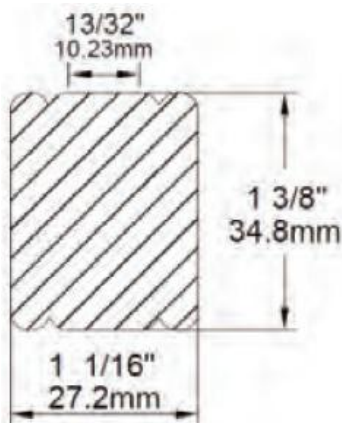
French Dool L Frame (FLF88)



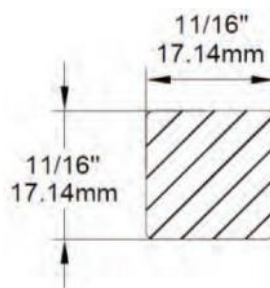
1" T-Post



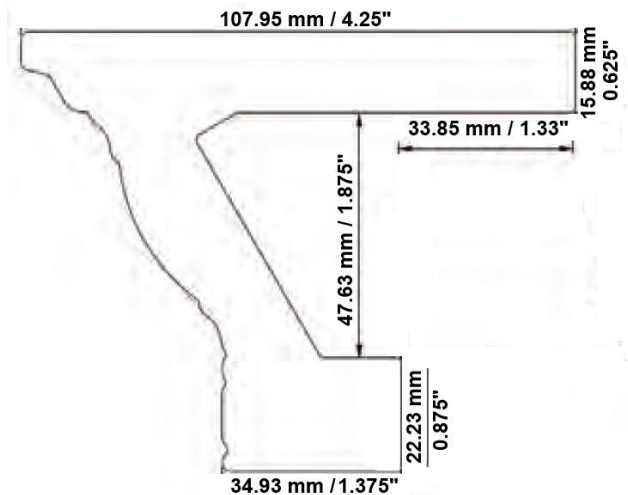
2" T-Post



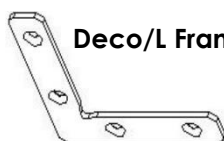
Hanging Strip



Light Strip

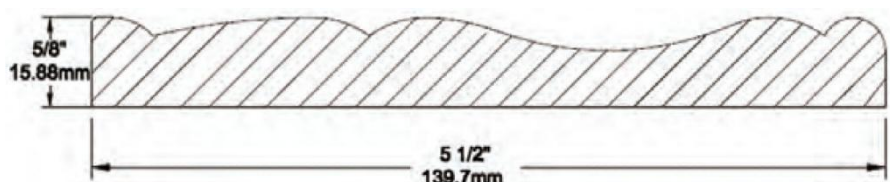


Sill Cap



Deco/L Frame Bracket

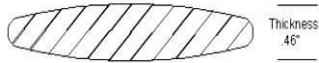
For added frame support, Deco and L frame shutters over 25 sqft are supplied with support L-bracket.



5.5" Bypass Valance

Louvers Standard

SL 25
2 1/2" (63.5 mm)



Thickness
.46"

SL 35
3 1/2" (88.9 mm)



Thickness
.46"

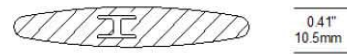
SL 45
4 1/2" (114.3 mm)



Thickness
.46"

Louvers Reinforced

AL25H
2 1/2"



0.41"
10.5mm

AL35H
3 1/2"



0.41"
10.5mm

AL45H
4 1/2"

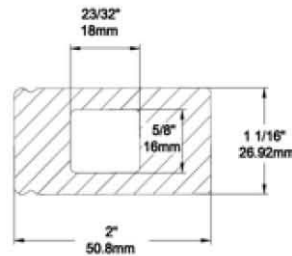
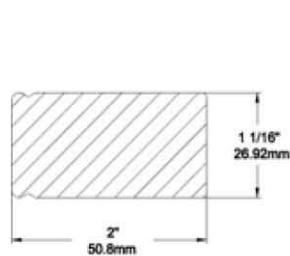


0.46"
11.68mm

STILE

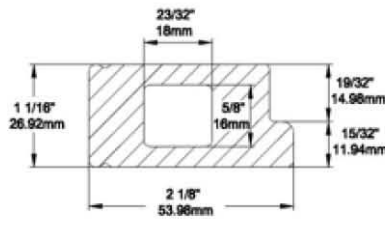
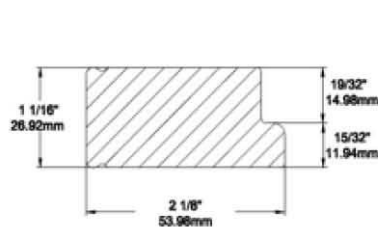
[SS20] Standard solid stile

[AS20] Standard stile with Aluminum insert



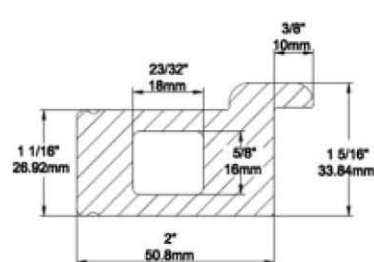
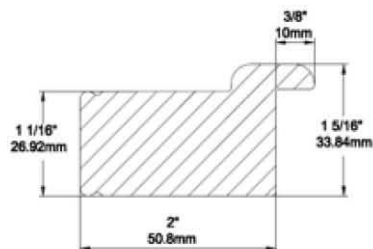
[SSR21] Rabbeted solid stile

[ASR21] Rabbeted stile with Aluminum insert



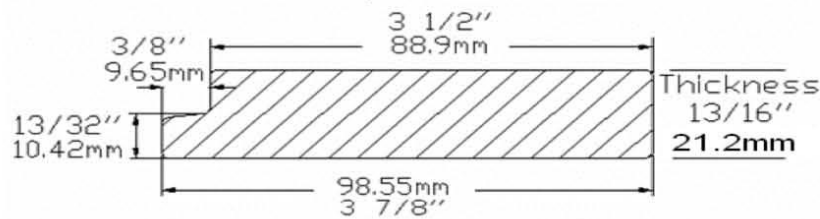
[SA20] Astragal solid stile

[AA20] Astragal stile with Aluminum insert

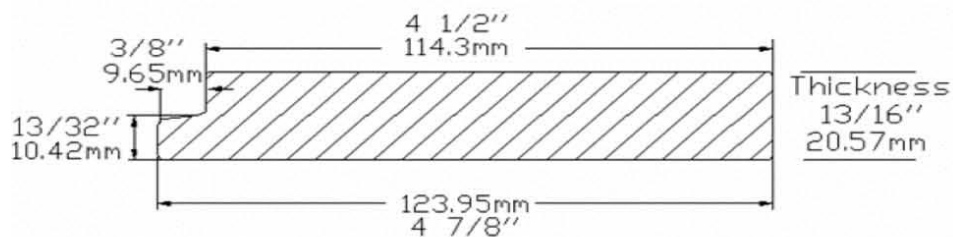


Top / Bottom Rail

SR 35 3 1/2" Wide (88.9mm)



SR 45 4 1/2" Wide (114.3mm)

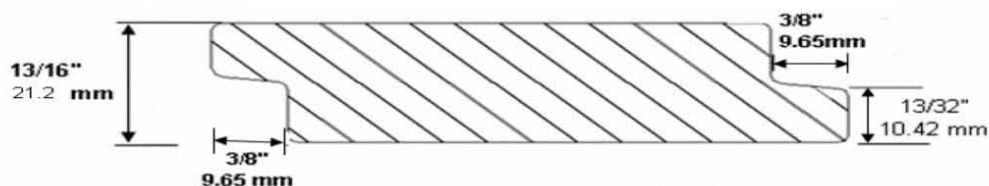


SR 60 6" Wide (152.4mm)



Divider Rail

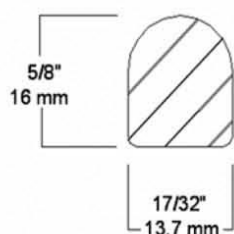
SD 24 2 2/5" Wide (80.3 mm)



TILT BAR

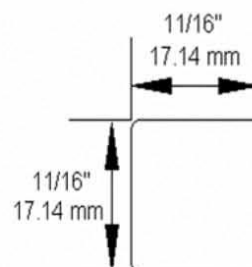
ST 58

17/32" x 5/8" (13.7 mm x 16 mm)



STOP LIGHT STRIP

SS 58 11/16" WIDE (17.14 mm)



Depth Requirements

Inside Mount Application Depth Requirements				
Frame Type	2.5" Louver	3.5" Louver	4.5" Louver	Notes
Std. 1" L, Flat L	1 7/8"	2 5/16"	2 13/16"	
Bullnose Z, Flat Z	1 5/16"	1 11/16"	2 13/16"	
2.25" Crown Z	1 5/8"	2 1/8"	2 5/16"	
2.5" Deluxe Z	1 5/8"	2 1/8"	2 5/16"	
3" Elegant Z	1 3/8"	1 7/8"	2 3/8"	
Hang strip next to panel	1 13/16"	2 5/16"	2 13/16"	Gap between window and top/ bottom panels are 1/8"
Hang strip behind panel	1 3/4"	1 13/16"	2 5/16"	Gap between window and top/ bottom panels are 1/8"
Direct Mount *	1 13/16"	2 5/16"	2 13/16"	All hardware & Light Stops provided on all sides

**For Table above, add 0.5" for Hidden Tilt*

Outside Mount Application Depth Requirements				
Frame Type	2.5" Louver	3.5" Louver	4.5" Louver	Notes
Std. L, Flat L	0	7/16"	15/16"	
Deco Frames	1/4"	11/16"	1 3/16"	Outside mount only
Hang Strip next to panel	7/16"	15/16"	1 7/16"	Gap between window and top/ bottom panels are 1/8"
Hang Strip behind panel	0	5/8"	9/16"	Gap between window and top/ bottom panels are 1/8"
Direct Mount	5/8"	1 1/8"	1 5/8"	Light Blocks provided for all 4 sides

**For Table above, add 0.5" for Hidden Tilt*

Panel Size Limitations

Panel Size Limitations	Louver Size	Single Panel	Bi-fold Panels
Max. Panel Width		36"	20"
Min. Panel Width		9"	
Max. Panel Height		120"	
Min. Panel Height	2.5"	20"	
	3.5"	20"	
	4.5"	24"	

Minimum Rail Height based on Panel Height		
Louver Size	Under 36"	36" & Greater
2.5" Louver	2.625	2.875
3.5" Louver	2.625	2.875
4.5" Louver	2.625	3.125

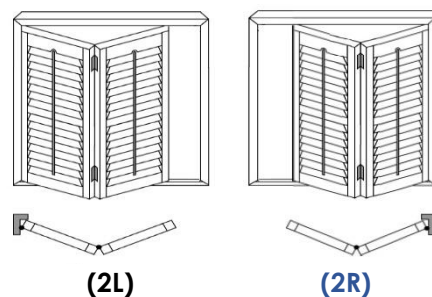
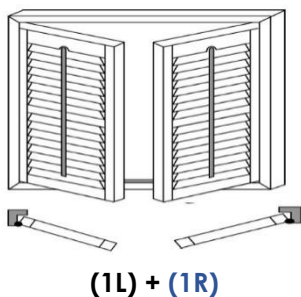
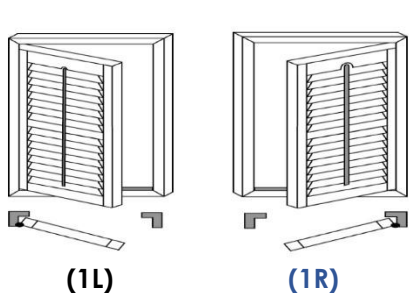
- Divider rail NOT required for panels smaller than 74" tall. Divider rail required for panels taller than 74".
- All shutter panels are built with 100% poly components except for panels over 24" x 50" or over 72" tall. In these situations, poly stiles and louvers are co-extruded with aluminum for strength and durability.

(xL) Number of Left Panels

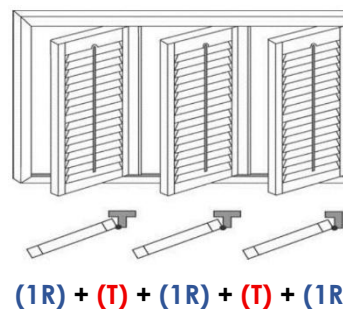
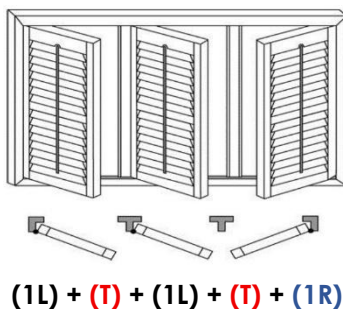
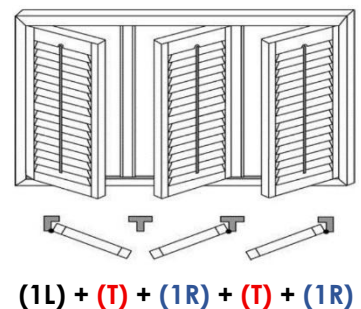
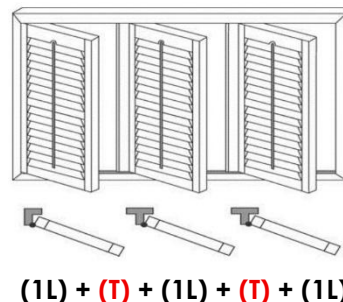
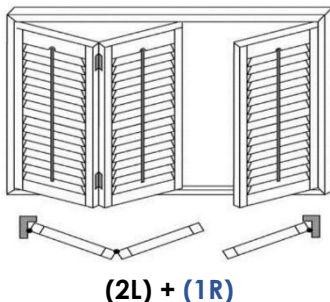
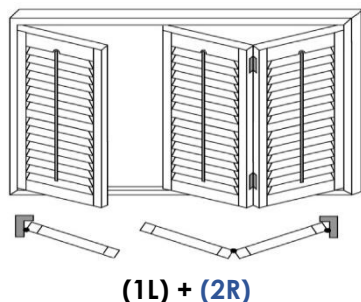
(T) T-Post

(xR) Number of Right Panels

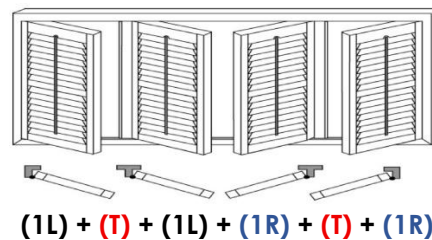
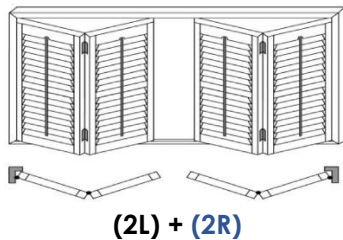
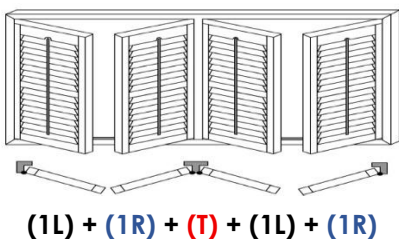
1 and 2 Panels



3 Panels



4 Panels



Measuring

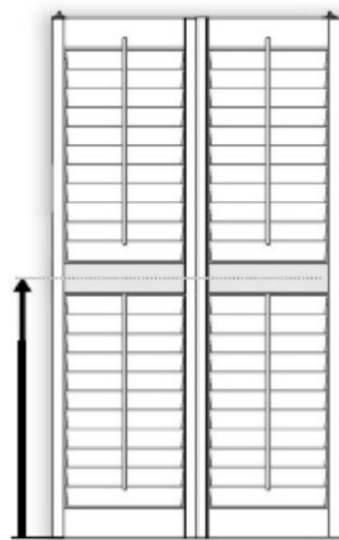
Window Opening

Measure from the bottom of the window opening to the center of the desired divider rail location.

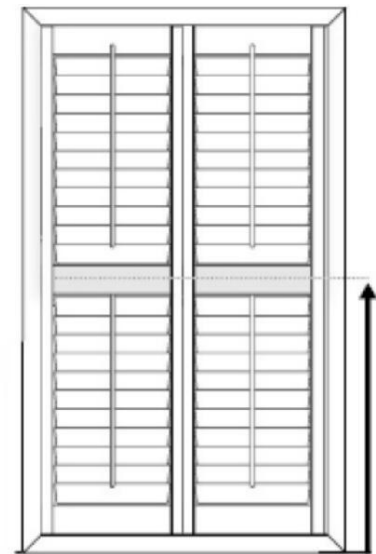
Frame to Frame

Measure from the bottom of the shutter frame up to the center of the desired divider rail location.

Note: Always measure from the bottom up to the center of the desired divider rail location.



Window Opening



Frame-to-Frame

Additional Divider Rail Information

- Divider Rails are 3.5" wide
- Divider rails can be requested even though not required by specifications
- Can be centered (evenly split) or placed at desired location
- To ensure divider rail locations match, order the same height and specify if shutters are in the same room or side by side
- When exact divider rail location is requested, top and bottom rails may be unequal and larger than normal.
- Solid Poly stiles are provided on all shutter panels except panels over 24" x 50" or 72" tall. In these situations, poly stiles are co-extruded with aluminum for strength and durability.

Divider Rail Requirements

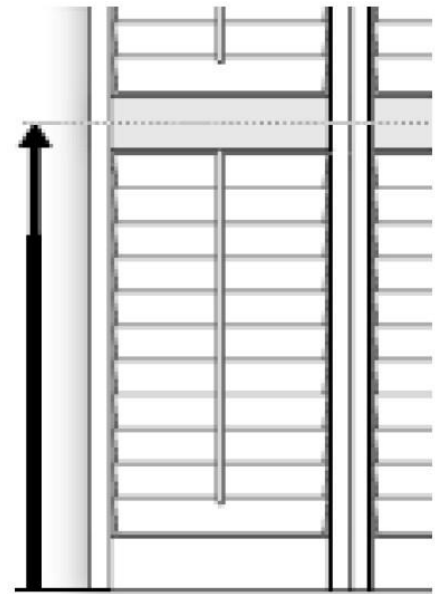
Panel Height	# of Divider Rails
Up to 74"	0
74 1/16" to 96"	1
96 1/16" to 120"	2

Top and Bottom Rail Heights

Louver Size	Rail Height
2.5"	3" to 4" Rails
3.5"	3" to 4.5" Rails
4.5"	3.5" to 5.5" Rails

Allowable Divider Rail Deviations

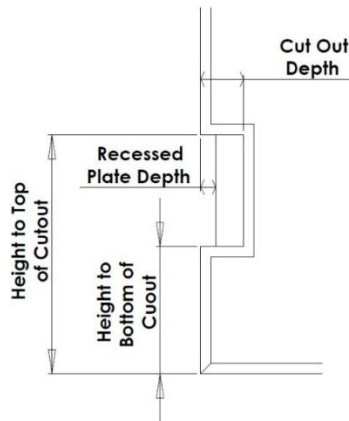
Louver Size	Deviation (+/-)
2.5"	1"
3.5"	1.5"
4.5"	2"



French Door Frames

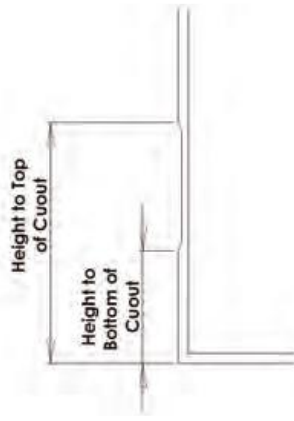
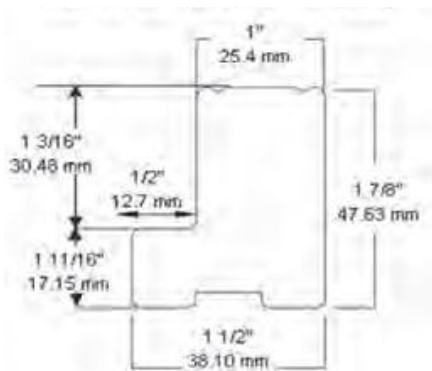
When placing your order please note the following measurements in the special instruction section of the line item online or at the bottom of the order form.

- Height to bottom of the cutout
- Height to top of the cutout
- Cutout width
- Recess plate depth
- Door trim thickness (Projection)
-



Rectangular Cut Out

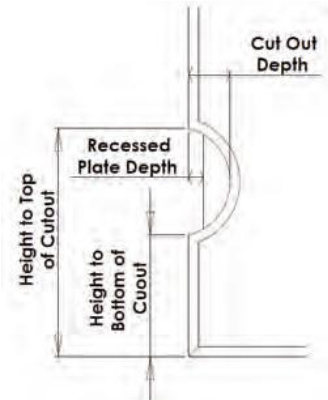
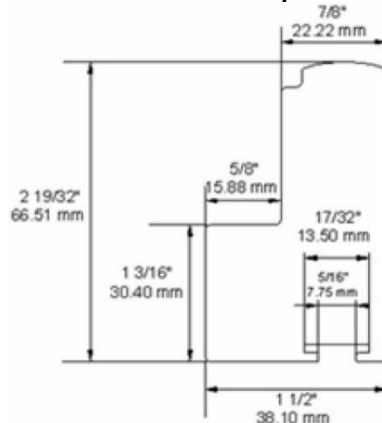
- Generally needed to accommodate handles on French doors.
- A custom rectangular cutout is made to the frame and shutter panel.
- French Door L Frame will clear most 2.5" and 3.5" louver situations. Hidden tilt needs 0.5" additional depth
- Surcharge applies.



Routed Notch Out*

- A rounded notch is made on the frame to accommodate a knob handle that is too close to the shutter frame.
- Notch can be between .25" to 3.75". Specify the top and bottom notch from the bottom of the shutter.
- Height of the notch is made to order.
- Surcharge applies.

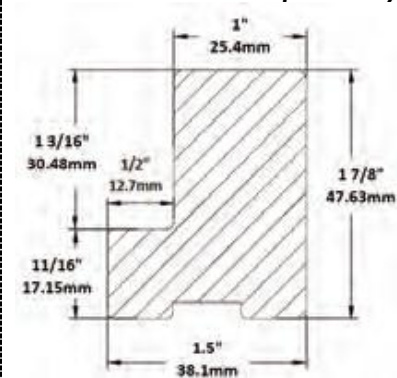
***Available in Asia Import Only**



Curved Cut Out*

- Generally needed to accommodate handles on French doors.
- A custom rectangular cutout is made to the frame and shutter panel.
- French Door L Frame will clear most 2.5" and 3.5" louver situations. Hidden tilt needs 0.5" additional depth
- Surcharge applies.

***Available in Asia Import Only**



T-Post

Standard T-Posts

Used to match the design of a window that has natural breaks or is required in situations with wider window openings that are beyond the panel specifications.

Window Opening

Measure from the left side of the window to the center of the first desired T-Post location (as shown right). For more than one T-post, measure from the far left of the window to the center of the T-Post as shown right for Position 2.

Frame to Frame

Instructions for Frame to Frame measuring is similar to the window opening instructions, however measure for the left edge of the frame to the center of the

Horizontal T-Posts*

Used in situations with taller window openings that are beyond the panel specifications.

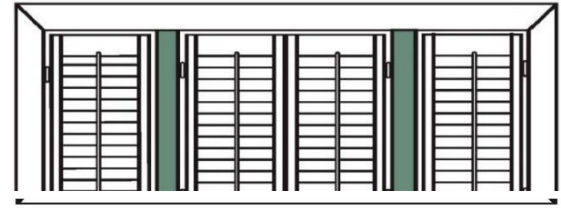
***Only available in Asia Import**

Window Opening

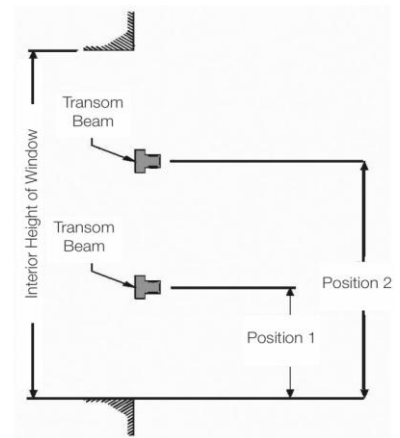
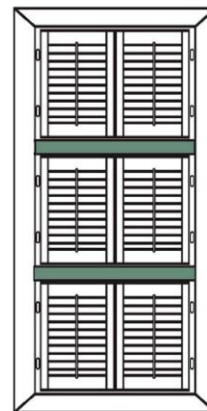
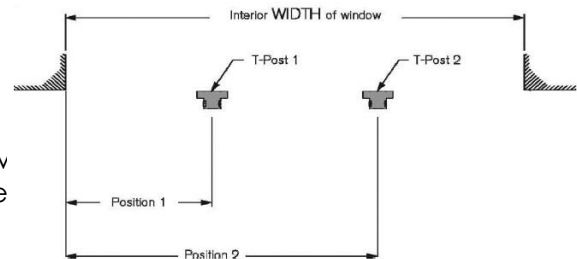
Measure from bottom window edge to desired location. For more than one T-post, measure from the bottom of the window to the center of the T-Post as shown right for Position 2.

Frame to Frame

Instructions for Frame to Frame measuring is similar to the window opening instructions, however measure for the bottom edge of the frame to the center of the desired location for the T-Post.



Two T-Posts

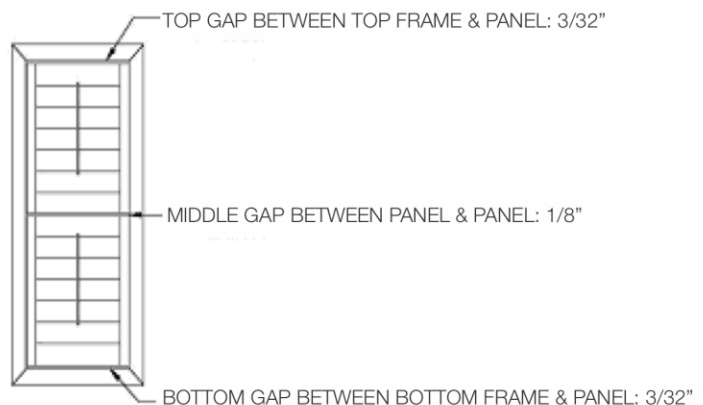
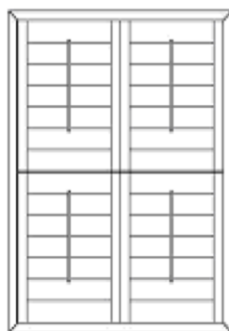


Double Hung*

Double hung shutters allow for the panels to operate independently of each other.

- For double hung bi-fold shutters the width of the panels is less than the height of the panels to minimize sagging.
- Horizontal T-Post is recommended.

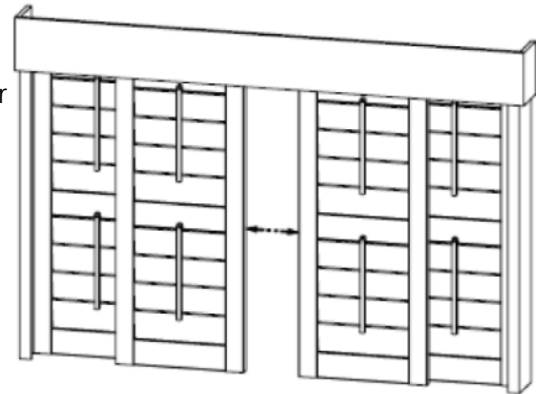
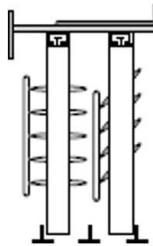
***Only available in Asia Import**



By-pass

Best Shutter options for patio doors, sliding glass doors or large Windows.

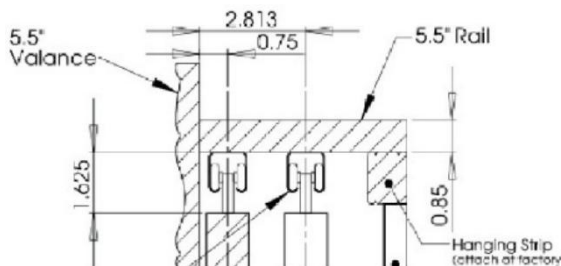
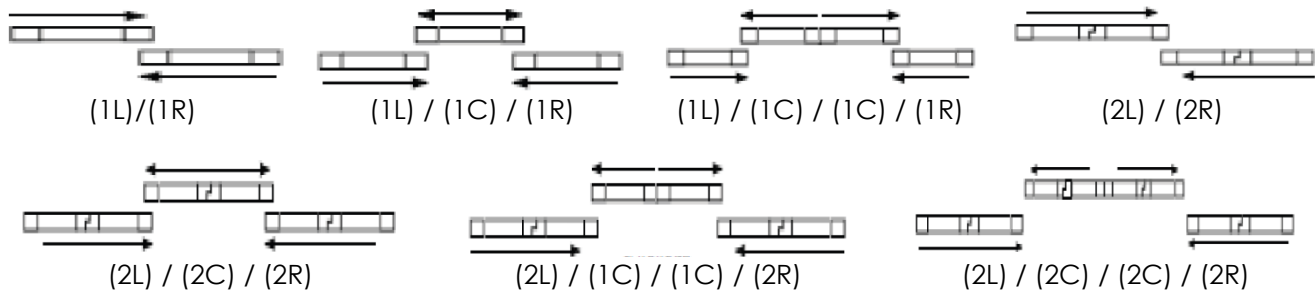
- Panels ride on two overhead tracks with wheel carriers
- Available in 2, 3, 4, 6, 8 panels.
- If spliced decorative valance will be off-center
- Bottom guide strip and center support brackets provided for all By-pass shutter types
- Closed By-pass is the default with louvers needing to be closed before panels slide past each other.
- Open By-pass is available allowing panels to slide without closing louvers, however 7.5" box out is need when this option is ordered.



By-Pass Single Panel Specs		
	Min	Max
Panel Width	9"	36"
Panel Width with Center Stile	9"	40"
Panel Height	9"	120"

By-Pass Boxout Size			
Track Position	Louver Size		
	2.5"	3.5"	4.5"
2 Tracks Closed	5.5"	5.5"	5.5"
3 Tracks Closed	6.5"	6.5"	6.5"
2 Tracks Opened	6.5"	7.5"	N/A

By-pass Configurations



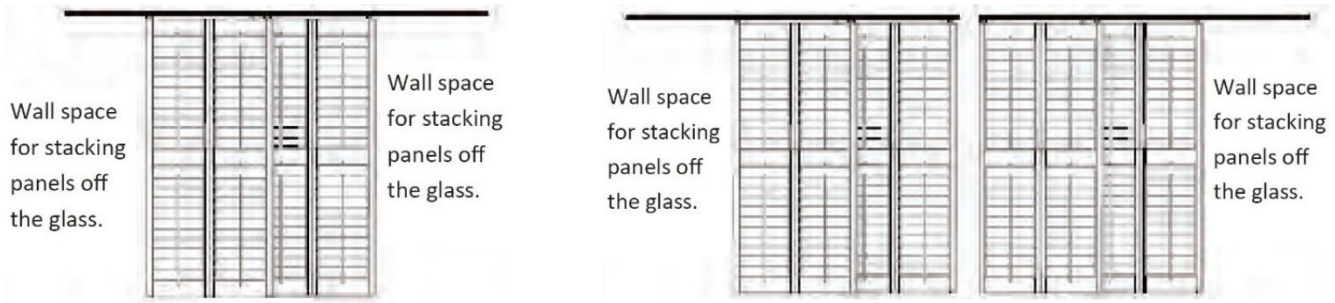
Center Support Brackets



5.5" Decorative Valance

Stack Back

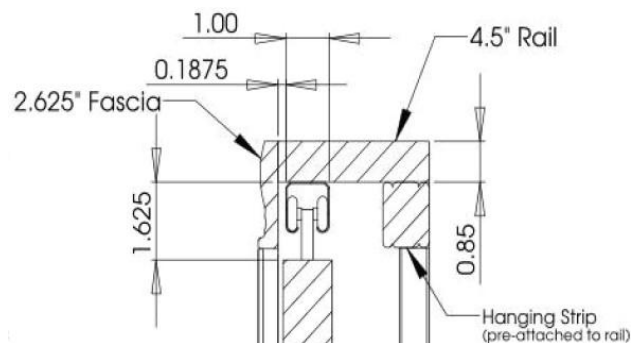
- Available outside mount only.
- This option allows for shutter panels to clear the window opening, creating an unobstructed view
- Panels are built to cover the window, header and tracks are made wide so panels stack off the glass
 - For 2, 4 or 8 panels add 50% of window opening size so panels clear the window opening
 - For 3 or 6 panels add 66% of window opening size so panels clear the window opening



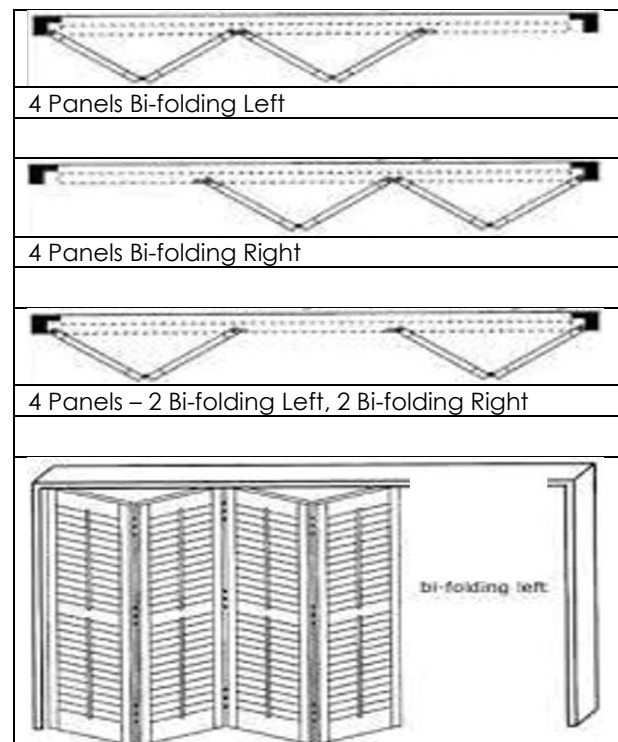
Bi-fold

Best Shutter options for patio doors, sliding glass doors or large Windows.

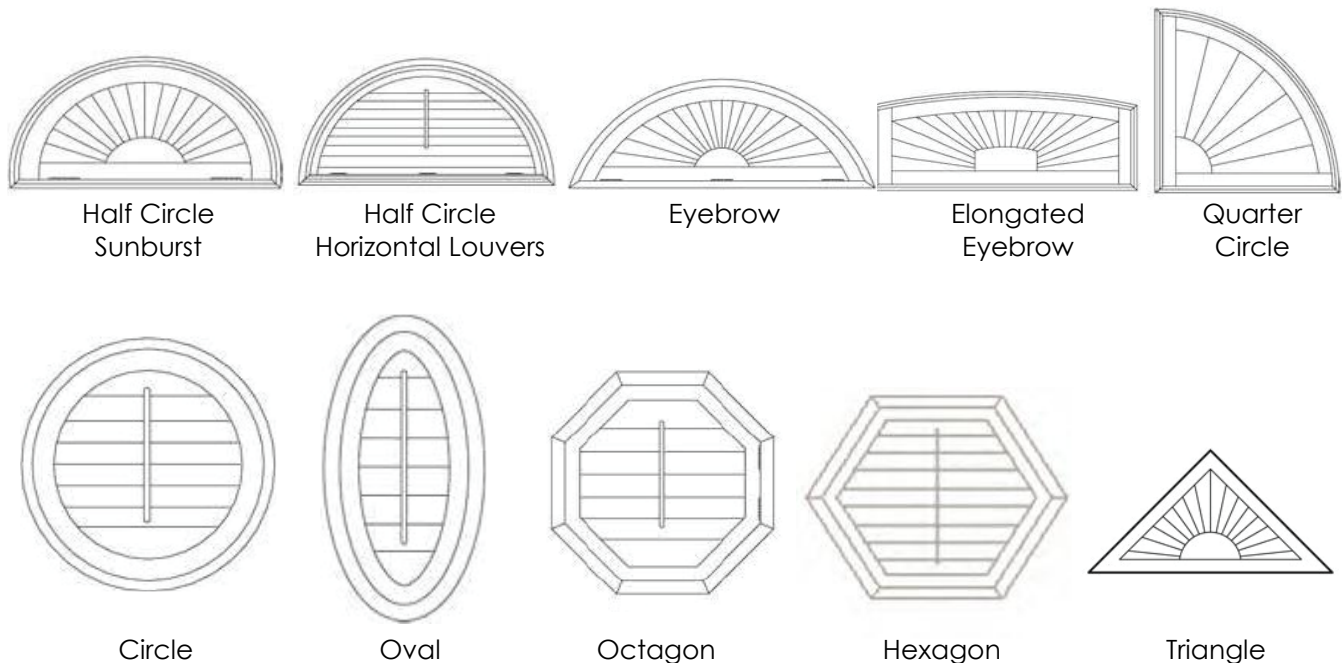
- Panels ride on two overhead tracks with wheel carriers and panels pivot into the room.
- Available in 2, 4, 6, 8 panels.
- If spliced decorative valance will be off-center



Bi-Fold Track Panel Fold Configuration			
2 Panels	4 Panels	6 Panels	8 Panels
(2L)	(4L)	(6L)	(8L)
(2R)	(2L) / (2R)	(4L) / (2R)	(6L) / (2R)
	(4R)	(2L) / (4L)	(4L) / (4R)
		(6R)	(2L) / (6R)
			(8R)



***All options on this page are only available in Asia Import**



Specification

Notes for perfect half circles in Z Frame

- If less than 35" wide, available only in 2.5" Deluxe Z, Bullnose and Flat Z Frames.
- If less than 30" wide, available only in Bullnose or Flat Z Frames.

Frame Type	Radius Chart		
	Less than 15"	15" to 17.5"	Over 17"
Bullnose, Flat Z	Yes	Yes	Yes
2.25" Crown Z	No	Yes	Yes
2.25" Deluxe Z	No	Yes	Yes
3" Elegant Z	No	No	Yes
1" L, Flat L	Yes	Yes	Yes
French Door L	Yes	Yes	Yes
Deco Frames	Yes	Yes	Yes
Hang Strip	Yes	Yes	Yes

Specialty Shapes with Sunburst Louvers

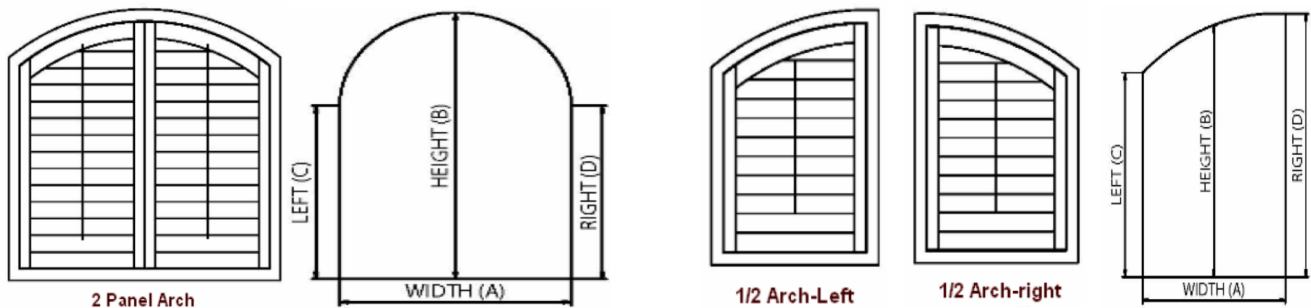
Specialty Shape Types	Panel Width		Panel Height	
	Min	Max	Min	Max
Circle	20	50	20	50
Half Circle	30	100	15	50
Quarter Circle	15	50	15	50
Eyebrow	20	100	15	50
Elongated Eyebrow	20	100	15	50
Oval	20	50	20	50
Hexagon	20	50	20	50
Octagon	20	50	20	50
Triangle	20	50	20	50

Specialty Shapes with Horizontal Louvers

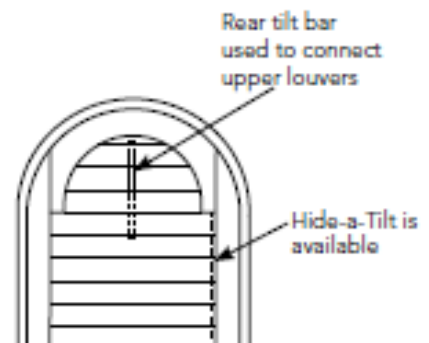
Specialty Shape Types	Panel Width		Panel Height	
	Min	Max	Min	Max
Circle	20	50	20	50
Half Circle	30	100	15	50
Quarter Circle	15	50	15	50
Eyebrow	20	100	15	50
Elongated Eyebrow	20	100	15	50
Oval	20	50	20	50
Hexagon	20	50	20	50
Octagon	20	50	20	50
Triangle	20	50	20	50

***All options on this page are only available in Asia Import**

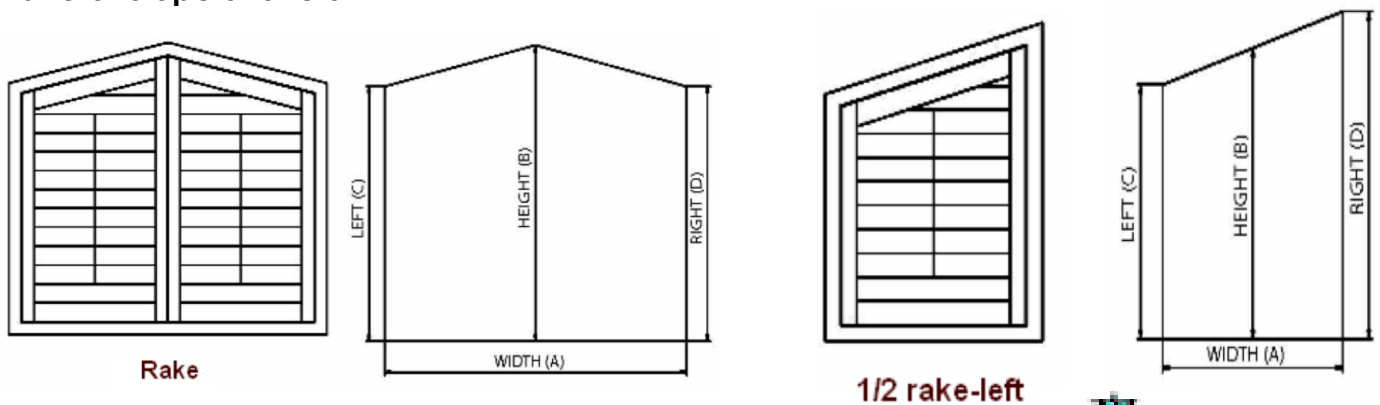
Contoured Arch Top Shutters



- Standard tilt, offset tilt or hidden tilt is available.
- When ordering hidden tilt, there may be a need to place a regular tilt bar at the center of the panel on the back side. This will happen only for the top 3 or 4 louvers because of the curved shape
- As a reminder for Z frames, if you have a perfect half circle window that is less than 30" wide, Bullnose Z frame is the only frame available.

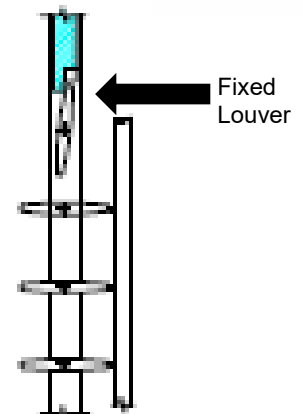


Rake or Slope Shutters



Raked or sloped top shutters, have a straight angled top. The shutters are manufactured with an angled top rail to conform with the opening.

- Standard tilt, offset tilt or hidden tilt is available.
- When ordering hidden tilt, there may be a need to place a regular tilt bar at the center of the panel on the back side. This will happen only for the top 3 or 4 louvers because of the curved shape

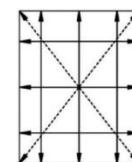


TIPS

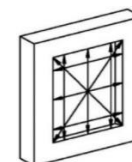
- Always use a steel measuring tape for your measurements
- Measure each opening separately, even if they appear to be the same size
- Inside mount: If no frame is required, a Hanging Strip Frame is recommended to reduce all light gaps that would otherwise be apparent around your shutter panel
- Outside mounts: Recommended for window casings that are not perfectly square
- Shutter frames must be mounted securely, into wooden studs or anchor correctly in the drywall

Measuring for Window Squareness

To determine the squareness, measure diagonally. If measurements are not equal, consider taking greater deduction on your sizes. If the two diagonal measurements vary more than 1/2" you should consider an outside mount application.



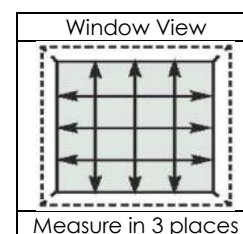
Front view



3 Dimensional

Direct Mount Squareness

For direct mount, measure diagonally between corners to determine the squareness of the window. If the difference between the two measurements is larger than 1/4" then an outside mount is recommended.



Measuring for Window Opening Size

Measure the window width and the window height in three different places.

- Inside Mount: Take the smallest of the three measurements to determine the width and the height.
- Outside Mount: Select the largest of the three measurements to determine the width and the height.

Measuring for Frame-to-Frame

For Frame-to-Frame measurements we will build the shutter unit (panels and frames) to your exact width and height you specify. Frame-to-Frame measurement should be used when trying to fit a shutter in locations with obstruction. For example, between kitchen cabinets. You will need to account for the frame for MFF.



Measuring Special Wall and Situations

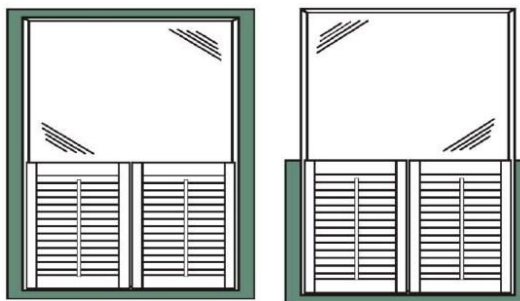
Bull nose window condition

- For inside mount measure from the flat point inside the window.
- For outside mount measure from the flat point on the wall outside of the window.
 - This is considered window size
 - The purpose is to make sure the frame will be flat on the wall surface.
- Deco frames, L frames, or hanging strips can be used as outside mount options for Bull Nose wall condition.
- Z Frames or Hanging strips can be used for inside mounts.

Special Café Window Situations

Four Sided:

If you want a Four-Sided Frame Shutter but your window has a sill, you must state the frames sides to be four-sided with sill plate. Surcharge applies if frames exceeds 5" above the top of the panel. A sill plate is used to replace the regular bottom frame piece.

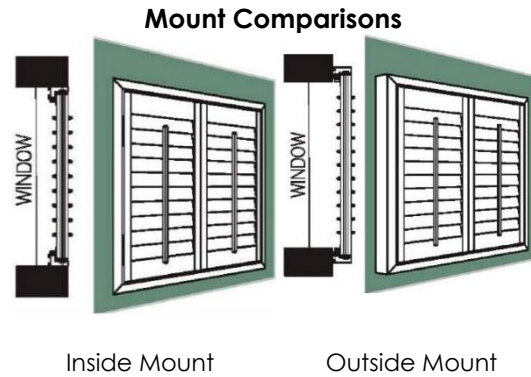


Three Sided:

If you want a three-sided Café shutter but your window has a sill, you must state the frames sides to be three-sided with sill plate. A sill plate is used to replace the regular bottom frame piece.

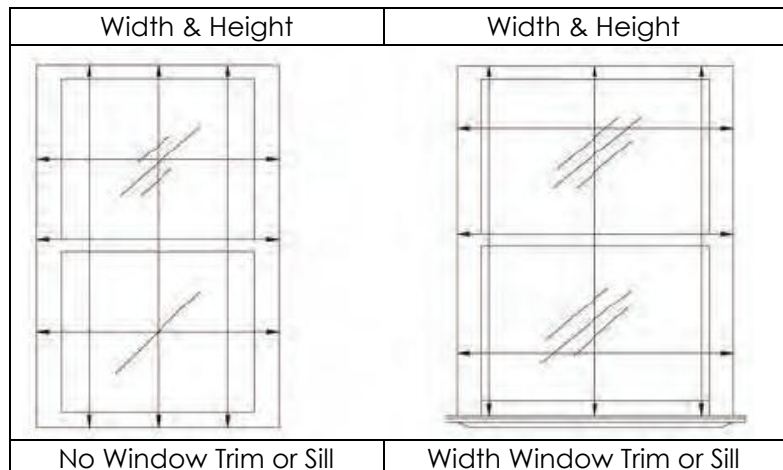
TIPS

- Always use a steel measuring tape for your measurements
- Measure each opening separately, even if they appear to be the same size
- Inside mount: If no frame is required, a Hanging Strip Frame is recommended to reduce all light gaps that would otherwise be apparent around your shutter panel
- Outside mounts: Recommended for window casings that are not perfectly square
- Shutter frames must be mounted securely, into wooden studs or anchor correctly in the drywall



Outside Mount

1. Measure the width at three different points. Measure from the outside sides of any side window trim or molding. If no side trim or molding, measure between side window casings. Write down the largest measurement.
2. Measure height at three different points. Measure from the top of the top window trim or molding to bottom edge of the bottom trim or molding. If not top or bottom trim or molding, measure from the inside of the top window casing and bottom window casing/sill. Write down the largest measurement.
3. For bullnose or radius edged openings, add 2 inches to the width and 2 inches to the height due to non-mountable space caused by curvature.



Measurements for Specific Frames				
To convert "Window Size" to "Net with Frame" for standard installation Add the following:	Standard L Frame, French Door L Frame, Flat L Frame (OM)		2.25" Deco Frame, 2" Insert Deco's (OM)	
	Width +	Height +	Width +	Height +
2 Side	3"	0"	5.5"	0"
3 Side	3"	1.5"	5.5"	2.75"
3 Sided with Bottom Sill Plate	3"	1.5"	5.5"	2.75"
4 Sided	3"	3"	5.5"	5.5"
2 Sided with Top & Bottom Sill	3"	0"	5.5"	0"

**Outside Mount Shutter
Gap Specifications**

No deductions taken.

Gap between frame/wall and panel on left or right side = 3/32"

Gap between frame/wall and panel on top or bottom = 3/32"

Gap between panels if Rabbeted and LL or RR = 3/32"

Gap between panels if Astragal and LL or RR = 3/32"

Gap between panels if Rabbeted and LR = 1/16"

Gap between panels if Astragal and LR = 1/8"

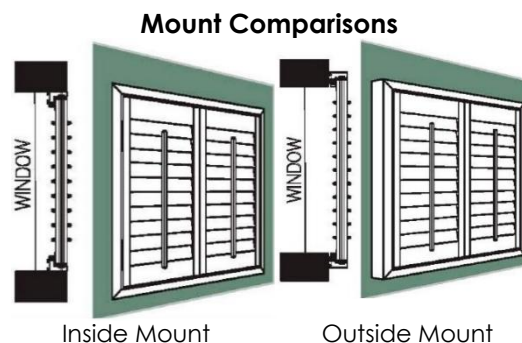
Gap between louver and rail or divider rail = 1/16"

Gap between Stile and Louver = 1/32"

Shutter Tolerances	
Item	Tolerance
Shutter Finished Size width/height	± 1/16"
Lineal Frame	± 1/16"
Lineal Louver	± 1/64"
Lineal Rail	± 1/64"
Lineal Stile	± 1/32"

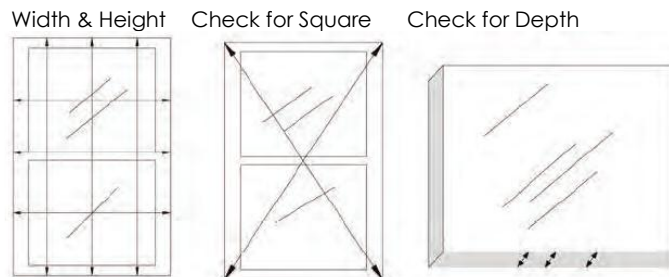
TIPS

- Always use a steel measuring tape for your measurements
- Measure each opening separately, even if they appear to be the same size
- Inside mount: If no frame is required, a Hanging Strip Frame is recommended to reduce all light gaps that would otherwise be apparent around your shutter panel
- Outside mounts: Recommended for window casings that are not perfectly square
- Shutter frames must be mounted securely, into wooden studs or anchor correctly in the drywall



Inside Mount

1. Measure the width at three different points. Measure between the side window casings. Write down the smallest measurement.
2. Measure height at three different points. Measure between inside edge of the top window casing to the bottom casing. Write down the smallest measurement.
3. Check to see if your window opening is square. Do this by measuring diagonally for the lower left corner to the upper right corner. Repeat, this time measuring from the upper left corner to the lower right corner. If the difference between the two measurements is greater than 3/8", you will have to use an outside mount installation.
4. For all inside mounts, the depth of the window opening must also be measured to make sure that there is enough clearance for proper louver movement. Check the Louver Sizes & Panel Widths page for required clearance on page.



Frame Deduction (Deductions are for each frame side)

	Width	Height	Height 2-Sided (per Side)	Height 3-Sided (per Side)	Height 4-Sided (per Side)	Height 2-Sided w/ Sill Plate (Total)	Height 3-Sided w/ Sill Plate (Total)
All Z Frames	1/8"		1/8"	1/8"	1/8"	3/16"	3/16"
All L Frames	-	-	-	-	-	-	-
Direct Mount	Hinge Gap Deduction Only	3/16" (total)					
Hanging Strip	Blind Panel = 1/4" Side Panel = None	3/16" (total)					

Inside Mount Shutter Gap Specifications

If IM, gap between wall and regular frame on left or right side = 1/8"

If IM, gap between wall and Hanging Strip (behind) on left or right side = 1/4"

To allow space for non-mortise wrap hinge, hinge is 1/4" thick

On a single panel H.S., the non-hinge side is a 3/32" deduction

If IM, gap between wall and regular frame on top or bottom = 1/8"

If between window sill and sill frame = 1/16" gap

If IM, gap between wall and panel on top or bottom = 3/32"

Gap between frame/wall and panel on left or right side = 3/32"

Gap between frame/wall and panel on top or bottom = 3/32"

Gap between panels if Rabbeted and LL or RR = 3/32"

Gap between panels if Astragal and LL or RR = 3/32"

Gap between panels if Rabbeted and LR = 1/16"

Gap between panels if Astragal and LR = 1/8"

Gap between louver and rail or divider rail = 1/16"

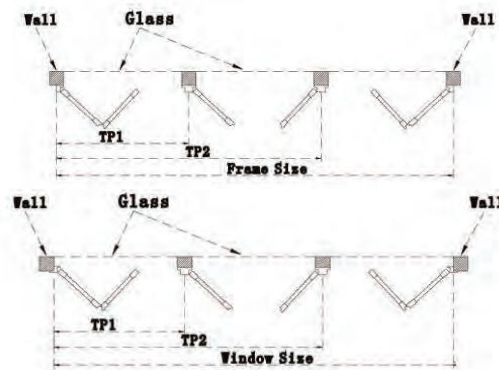
Gap between Stile and Louver = 1/32"

Shutter Tolerances	
Item	Tolerance
Shutter Finished Size width/height	± 1/16"
Lineal Frame	± 1/16"
Lineal Louver	± 1/64"
Lineal Rail	± 1/64"
Lineal Stile	± 1/32"

T-Posts

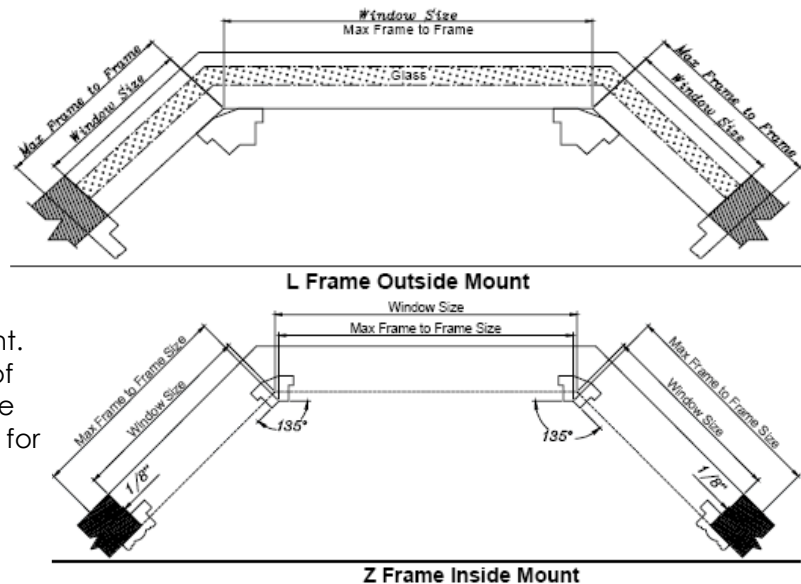
Outside Mount (Frame/Window size measurement)
Measure the frame size and identify the T-Post location from the outer edge of the left frame to the center of each T-Post.

Inside Mount (Window size measurement)
Measure the window size and identify the T-Post location from the inside edge of window opening to the center of each T-Post.



Bay Windows*

- Surcharge applies when ordering bay posts.
- Shutter is made as a single unit with the bay post to cover both windows
- Standard angle = 135 (Custom angle is available).
- Sizes will be different if ordering window size or Frame-to-Frame.
- It is advised to measure from left to right.
- For pricing take the width and height of each section of the bay window. Figure the sqft, multiply by your cost and add for surcharge.



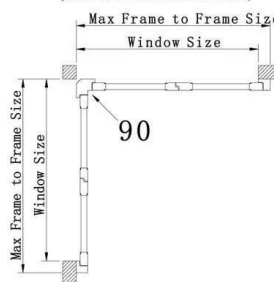
**Only available in Asia Import*

Corner Windows*

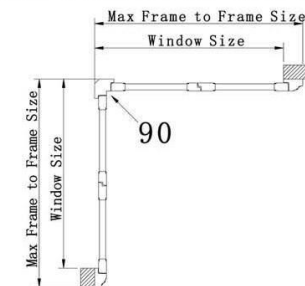
Outside Mount (Window size measurement)
Specify Corner Group Left or Right.

When installing an outside mount corner unit, the corner frames are attached to the top and bottom of window opening only. Alternatively, you can also order extra frames to mount behind corner frames for ease of installation

L Frame Outside Mount Corner Window (with break in the window)



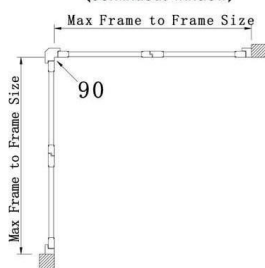
Decor Frame Outside Mount (Corner Window)



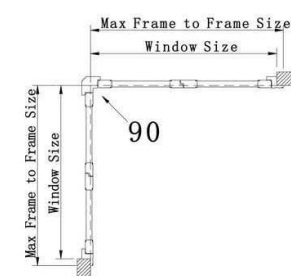
Inside Mount (Window size measurement)
Specify Corner Group Left or Right.

The factory will make deductions and supply spaces. For inside mount corner shutters, there should be no objects protruding out of the corner.

L Frame Inside Mount Corner Window (continuous window)



Z Frame Inside Mount (Corner Window)



**Only available in Asia Import*



CACO, Inc.
119 Perma R
Johnson City, TN 37604
(800) 552-5278
customerservice@cacoinc.com
cacoinc.com

Freight Policy

Per Shutter fee: Minimum \$125 per order with additional \$30 per shutter. Maximum \$695 per shutter fee.

Oversized Policy:

Shutters between 90" - 107" (width or length) add additional \$100 per shutter oversized fee will be added to the per shutter fee.
Shutters over 107" (width or length) add additional \$225 per shutter oversized fee will be added to the per shutter fee.
Maximum additional fee for oversized shutters 90" or greater is \$695.

Shutter Surcharge List

**Items with (*) are only available in the Asia Import program and will have a 10-12 week lead time*

Option Type		Additional Information	Louverstar North America (3 weeks)	Louverstar Asia Import (10-12 weeks)
Tilt Option	Hidden Tilt	Per Shutter. Tilt bar will automatically be split if panel is over 48" tall.	6%	6%
	Offset Tilt Bar*	1" from edge of louver on hinge side. Except arched shutters, default is to the interior of the panels.	n/a	10%
	Split Tilt		FREE	FREE
Extension	0.5", 1", 1.5" Std. Extension/Buildout	2" maximum extension. Wood shutter using "L" frames will have buildout as part of the frame.	5%	5%
	Custom Extension	Separate extension piece of material will be attached to the shutter frame.	10%	10%
Posts	T-posts		Free	Free
	Split T-posts		N/A	N/A
	T-post Custom Width	"Face" of t-post can be up to 6" maximum.	10%	10%
	Std. Bay / Corner Post*	Corner Post = 90° Bay Post = 135°	n/a	10%
	Custom Bay / Corner Post*	Specify degree needed for the Bay/Corner post.	n/a	15%
Specialty Shapes	Specialty Shape Types*	Circle, oval, half circle, octagon, arched top, triangle, etc. (Sunburst louvers)	n/a	\$300 Per Shape (retail)
	Specialty Shutter Types*	Arch top or sloped shutters. (Horizontal louvers)	n/a	\$300 Per Shutter (retail)
	Routed Notch Out*	Slight notch on side of frame. Refer to guide.	n/a	FREE
	French Door Cutouts	Curved* or Rectangular.	\$285 (retail)	\$285 (retail)
	Café Shutter	Applies when the frame is requested to exceeds the panel by more than 5".	30%	30%
	Double Hung*	Horizontal t-post recommended.	n/a	10%
Track Systems	Closed Bypass Track / Bifold Track	Decorative and plain boxout are the same surcharge.	\$450 (retail)	\$450 (retail)
	Open Bypass Track	Open Bypass Available for 2.5" & 3.5" louvers only.		
	Closed 3 Track Bypass			

Square/Rectangular Shutters

Inside Mount: Actual Window Opening Size

Z Frames: Includes Bullnose Z, Crown Z, Deluxe Z, Elegant Z, Tilt Out Z, & Flat Z Frame

- Width: Width of window opening +
+2" (BZ17),
+ 2.5" (CZ22),
+ 3" (DZ25),
+ 4" (EZ30),
+ 1.5" (TZ88),
+ 2.69" (FZ23)
- Height: Height of window opening
+ 2" (BZ17),
+ 2.5" (CZ22),
+ 3" (DZ25),
+ 4" (EZ30),
+ 1.5" (TZ88),
+ 2.69" (FZ23)

Deluxe Z Example:

21" x 57" added up = 24" x 60" = 10 sq.ft.

Hang Strip:

- Width: Width of window opening
 - Height: Height of window opening
- Example: 24" x 60" = 24" x 60" = 10 sqft

Outside Mount: Frame-to-Frame (Edge-to-Edge)

All Outside Mount Frames Includes: Deco, Standard L, French Door L, Flat L & Hanging Strip

- Width: Width of shutter ordered
- Height: Height of window opening

L Frame Example:

24" x 60" = 24" x 60" = 10 sq.ft.

Outside Mount: Actual Window Size

All Outside Mount Frames

Includes: Deco, Standard L, French Door L, Flat L and Hanging Strip

- Width: Width of window ordered + total frame width per frame side
- Height: Height of shutter ordered + total frame width per frame side.

4 Sided L Frame Example:

21" x 57" added up = 24" x 60" = 10 sq.ft.

Specialty Shutters

Contoured, Rake, Specialty shape or Sunburst

Inside Mount: Actual Window Opening Size

All Outside Mount Frames Includes: Deco, Z Frames: Includes Bullnose Z, Crown Z, Deluxe Z, Elegant Z, Tilt Out Z, & Flat Z Frame

- Width: Width of window opening +
+2" (BZ17),
+ 2.5" (CZ22),
+ 3" (DZ25),
+ 4" (EZ30),
+ 1.5" (TZ88),
+ 2.69" (FZ23)
- Height: Height of window opening
+ 2" (BZ17),
+ 2.5" (CZ22),
+ 3" (DZ25),
+ 4" (EZ30),
+ 1.5" (TZ88),
+ 2.69" (FZ23)

Hang Strip:

- Width: Width of window opening
- Height: Height of the top of the arch

French Door

Outside Mount: Frame-to-Frame (Edge-to-Edge)

All Outside Mount Frames Includes: Standard L, French Door L, and Flat L Frames

- Width: Width of shutter ordered
- Height: Height of window opening

By-Pass Shutter

Inside Mount: Window Size

- Width: Width of window opening
- Height: Height of top of header board

Outside Mount: Frame to Frame

- Width: Width of box out
- Height: Height of top of header board

Placing Orders

We appreciate your business and want your experience to be as easy and trouble free as possible. We highly recommend you take advantage of your online account and place orders online, however forms available on our website can be emailed to customerservice@cacoinc.com or faxed (866) 926-5836 to customer service.

Deposits

Please note a 50% deposit will be required on all Louverstar Shutters.

Cancellation and Modification

The prompt delivery of your order requires strict manufacturing scheduling. Therefore, once an order has been submitted cancellations or changes will not be accepted after 48 hours and you will be liable for the full cost of the order. Any cost and/or expenses resulting from a cancellation or an order change will be charged to your account.

Communication

All account information changes and order modifications must be made in writing and sent to CACO, Inc via fax or email. Addresses, purchase orders and sidemarks may be changed provided that the order has not shipped from our facilities. CACO, Inc reserves the right to refuse any requests made after an order is submitted.

Liability Release

Sometimes customers want what they want and are even willing to waive warranty on their product to get it. We obviously don't recommend this, but in certain, reasonable situations are willing to give in. Ask us and we can tell you if we can accommodate the customers' request or refer to the product guide to see if your request is possible.

A liability release means you understand the product may fail, but you will take that chance anyway. The liability release waives all expressed and implied warranties on the shutter(s) in question. In these situations, we are not liable for product performance. Any oral or written agreement will not modify the liability release. Payment will still be required.

CACO, Inc. will not grant a Liability Release in situations where we know for a fact the product will fail. Sorry, we need to put our foot down on this one.

Shipping & Delivery

Orders are shipped by FedEx or LTL carriers for standard ground transportation to your dedicated 'ship to' location. Unfortunately, orders being shipped outside the continental United States will need to be quoted freight on a case-by-case basis.

In rare situations where special services such as inside delivery, lift gate, re-consignment, re-delivery, or storage are needed fees may apply. Please contact your customer service for details.

Every reasonable effort will be made to meet our lead-times. We will advise you order ahead of time for potential delays during expected holidays and special events. Should any unwelcomed delays arise, we will also notify you as soon as we know about them.

Delivery

To ensure prompt delivery, CACO, Inc. ships merchandise using a common carrier for a standard ground transporting delivery. There is no additional charge for delivery to authorized locations within the United States when requirements are satisfied. However, you will incur additional charges if special services are needed such as Inside delivery, Re-Consignment, Re-Delivery, or if storage is required because you cannot be contacted. For shipments to Alaska, Hawaii and other not-conterminous locations outside the United States, you will be responsible for all freight costs and any other charges incurred.

CACO, Inc. will not be liable for any costs or losses resulting from delivery delays.

Shortage or Damage Claim

Failure to note shipping shortages or visible damages on Delivery Receipt will release CACO, Inc. from any liability thereof. For concealed damages, CACO, Inc. must be notified within five days of receipt of shipment.

Expedite Shipping

If you need to change the shipping location after the merchandise is shipped from our facilities, you will be liable for charges incurred. Charges are based on the carriers' policies. To have shipments re-consigned, you must email or fax CACO, Inc. the request to acknowledge the additional charges.

Storage Fees

You are liable for storage fees if merchandise is stored on the carriers dock or CACO, Inc. facility for any reason caused by you.

Other Charges

If you request additional services from the driver of the shipping company such as Inside Delivery you will be liable for additional charges. You must make a request in writing and acknowledge the additional costs. You are responsible for re-delivery fee, if applicable.

Shipping Claims

When receiving a delivery, always unwrap all pallets, count all boxes and not any problems before signing the delivery receipt. Upon receipt of shipments, customers are responsible for immediately inspecting the entire shipment, regardless of the final date of installation. All shipping claims must be reported within 5 business days of receipt. Failure to do so will release CACO, Inc. from any liability.

If you are filing a shipping or concealed claim, retain the damaged goods and the original packing material pending a physical inspection. The carrier reserves the right to call back the items for inspection. To expedite your claim, take digital photos of the damaged items and its packaging. If the merchandise has been re-routed to a different location other than the original address indicated on the order or the call back's pickup address is different than the ship to address, CACO, Inc. will not honor the shipping damage claim.

Visible Damages

Customers are required to note visible damages on the delivery receipt. All damages must be reported in writing within 5 business days of receipt. Failure to do so will release CACO, Inc. from any liability. Refer to the "Shipping Claims" section for more information.

Concealed Damages

Any concealed damages must be reported in writing within 5 days of receipt. Failure to do so will release CACO, Inc. from any liability. Refer to the "Shipping Claims" section for more information.

Quantity Shortages

Customers are required to take pictures and note any quantity shortages on the delivery receipt (the document you are asked to sign by the carrier). Before signing off the delivery receipt, check the entire shipment and compare the quantity received against the quantity noted on the delivery receipt and the packing slip (the document inserted in the clear pouch attached to the merchandise). Failure to do so will CACO, Inc. form any liability.

CACO, Inc. will only replace shorted items noted on the delivery receipt. CACO, Inc. will not honor submissions of quantity shortage claims that are not noted on the delivery receipt.

Claims must be reported in writing within 5 business day of receipt. Failure to do so will release CACO, Inc. from any liability. Refer to the "Shipping Claims" section for more information.

Call Backs

Based on the original RGA Claim, CACO, Inc. and the carrier reserve the right to call back components, cut-down product, or shutter (and any parts thereof) with the original packaging for inspection.

If a callback is issued, the requested item(s) need to be packed and ready for pickup. CACO, Inc. will contact you and arrange for the carrier to pick up the item(s).

If the callback inspection results show that the original order does not comply with the claim, customers will be responsible for the cost of the original order and the costs associated with the reorder including a 20% restocking fee.

If the inspection results show the original order doe comply with the claim, the RGA will be processed at no cost to you.

Important Notes:

1. Damaged goods must be held pending a physical investigation by CACO, Inc representative.
2. All RGA's must go through the customer service department for authorization and processing.
3. CACO, Inc. will not refund the cost of an order at anytime.

RGA Request Form

In order to process an RGA (Returned Goods Authorization), you will need to complete the RGA Request Form with all pertinent order information. A sales support team member will review the request and contact you to discuss.

To file a claim: Print the RGA Request form and fax to (866) 926-5836, Attn: Shutter Department.

Cancellation and Modification

The prompt delivery of your order requires strict manufacturing scheduling. Therefore, once an order has been submitted cancellations or changes will not be accepted after 48 hours and you will be liable for the full cost of the order. Any cost and/or expenses resulting from a cancellation or an order change will be charged to you account.

Communication

All account information changes and order modifications must be made in writing and sent to CACO, Inc via fax or email. Addresses, purchase orders and sidemarks may be changed provided that the order has not shipped from our facilities. CACO, Inc reserves the right to refuse any requests made after and order is submitted.

Warranty Waiver

When a shutter is ordered beyond limitations or out of spec, you can proceed with the shutter as ordered but have the warranty voided, or you can revise the shutter to be within limitations.

Our Guarantee

We offer the best warranty in the industry, so you can relax knowing that we have you covered.

CACO, Inc. Window Fashions is committed to provide a superior level of customer service and quality products. As a part of this commitment, we offer a "Consumer Assurance Guarantee" to ensure your shutters meet your expectations and are free from defects.

Under our "Consumer Assurance Guarantee" we will cover your shutters, up to two instances per order, against any damage. In the unlikely event that you require more than two repairs; you can rest assured that your shutters will still be covered under our transferable Limited Lifetime Warranty.

Our Limited Lifetime Warranty provides coverage against original defects of materials or workmanship. It is important to note that both the "Consumer Assurance Guarantee" and Limited Lifetime Warranty are activated once the product is properly installed and accepted by the consumer.

At CACO, Inc., we take pride in our products and stand behind their quality. Repair and replacement will be at our sole discretion, and we are committed to ensuring that you are satisfied with your purchase.

To Obtain Warranty Service

For assistance with warranty claims, please contact the original dealer. Should you require product manuals or technical support we invite you to visit <https://www.cacoinc.com/louverstar-shutters/>, email customerservice@cacoinc.com or call 800-552-5278.

We would like to bring to your attention that repair or replacement of defective items is the sole remedy under this warranty. Repairs shall be executed using comparable or identical parts, and shipping charges are not included in this warranty. Warranty claims must be accompanied by documented proof of purchase, photographic details, as well as specific details regarding the nature of the problem and the product's location.

This warranty is exclusive and supersedes all other obligations, liabilities and warranties. All other warranties, whether expressed or implied, are explicitly disclaimed. CACO, Inc. or distributors/dealers shall not be liable for incidental or consequential damages, nor any other direct or indirect damage, loss, cost expense or fee. Please note that products are not covered for damage resulting from natural disasters or "Acts of God."

We would like to draw your attention to the fact that some states do not allow the exclusion or limitation of implied warranties, or incidental or consequential damages. As a result, the above limitation may not apply to your state.



119 Perma R Rd • Johnson City, TN 37604

**For dealer assistance contact us at 800-552-5278 or email at
customerservice@cacoinc.com**