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About Springs Window Fashions

Welcome to Springs Window Fashions

We offer a complete selection of window coverings, shutters and drapery hardware under various national brand names. Our window fashions business began in 1939 and has grown to a global level, servicing a Dealer network, major retailers and commercial contractors.

Springs Window Fashions employs over 7,000 associates in 9 locations in the U.S. and Mexico with nearly two million square feet under roof, assembling over 28,000 custom products every day.

“Our mission is to bring self-expression to consumers through thoughtful design by simplifying their experience and personalizing their living spaces”.

A Tradition of Quality Product

Springs Window Fashions has a tradition of providing quality window covering products. All six manufacturing facilities are equipped with state-of-the-art equipment. We are an ‘original equipment manufacturer’ (OEM), converting raw materials such as raw lumber, coil steel, aluminum and fabrics into finished window covering components through value-added processes.

For instance, in our vertically-integrated basswood business, we rough cut & kiln dry and shape & finish our own wood.

Since we also custom assemble our own blinds and shutters, we control the entire manufacturing process from source to completion — producing quality products with a competitive advantage.

Our Business Culture of Best Experience

At Springs Window Fashions, we do things differently. It’s up to us to make things easy - to provide the “best experience” - for everyone we work with. We’re positive and respectful to the core. We always find a way to make good things happen—for our customers, our consumers, our associates, and our planet.

Best Experience, empowers associates at all levels to strengthen relationships through trust, excellence, keeping promises, integrity and responsiveness. The results are fair treatment, open communication, high-level service and growth. We believe our Best Experience strategy is one of the main reasons for our success.
Shutter Product Resource Manual Introduction

How To Use This Product Resource Manual

Designed With Your Skill Level In Mind
This shutter product resource manual is designed for the full spectrum of shutter skill levels. Whether you’re new to the shutter category or a veteran installer, this manual will support you at your current skill level and guide you to higher levels of understanding.

This is a singular product resource manual, loaded with photos, drawings and charts; incorporating three main areas; 1) product knowledge training concepts, 2) product specifications and 3) the full price list with extra notations throughout on chargeable and no-charge features and options.

You’ll continue to find separate Resource Manuals for the wood shutter product and the composite/faux wood shutter product.

Begin Your Journey With the ‘Start Here’ Chapter
We’ve included a ‘Start Here’ chapter, which provides you with a solid product-knowledge foundation for general understanding of the shutter category. ‘Start-Here’ topics include an overview of shutter terminology, types of shutters, types of windows you’ll encounter, how to specify the correct frame, how to treat big windows and basic measuring techniques.

Begin Each Chapter With ‘Quick Start’ Basics
We’ve also included a ‘Quick Start Basics’ section at the beginning of each shutter type and shutter option chapter. These product knowledge ‘briefs’ will help you make better product choices by understanding both the product/feature/option benefits and various special considerations. This knowledge will in turn, help you align consumer expectations with actual product performance.

Evaluating Your Own Shutter Skill Level and Identifying Your Role In the Sale

Information Tailored to Your Role
Depending on whether you play a sales role or an installer role — or both, each shutter type or option type chapter is formatted with sub-sections that speak to either selling, specifying, measuring, the highly technical side of things or general installing. Look to find which sections will support you in your role.

The Non-Technical Sales Person
You’re likely to be primarily interested in knowing how to specify the proper frame and how to measure in order to accurately price the job for selling purposes. The sub-sections on Quick-Start, Selling, Application, Measuring Basics and the Price List pages are designed for you.

Novice Installers or Accomplished Installers
New to Shutters
All the sections, especially the sub-sections on Quick-Start, How to Measure and Installation Basics are keys to your learning foundation.

The Veteran Installer or Highly Technical Person
The Technical section contains all the charts, parts drawings, application diagrams and cautionary notes you’ll need in order to deliver the highest degree of fit, finish and product operating standards.

Who To Call For Support

Industry-Leading Customer Service
Springs Window Fashions’ Customer Service group is based out of its PA facility. There are over 200 Customer Service and related support staff, dedicated to providing accurate answers and prompt solutions.

All associates have access to an extensive system of on-line catalogs and help screens, making job order records available in an instant.

Industry-Leading Customer Service
Our Customer Service group is respected as the best in the industry. Each new customer service representative goes through a minimum of eight weeks of product and procedural training before taking their first call.

You’ll always find a friendly voice and a knowledgeable person when you call.
Shutter Types — The Materials Used For Making Shutters

Wood Shutters

The main benefits of wood materials are:

- The natural beauty of wood
- Light weight allows for wider panels and easier operation than heavier materials
- Can be offered in stained colors, painted colors, as well as custom colors.

Composite Shutters

Our composite product is made from a combination of resins, polymers and PVC's. The material doesn’t contain any wood product whatsoever.

The benefits of composite material are:

- The shutters look like painted wood
- The shutters have the same substantial feel of wood
- The material actually insulates better than wood
- The material is totally impervious to water or moisture of any kind
- The shutters have a durable finish
- They are easy to clean
- Composite shutters are value priced

The Springs Window Fashions Wood Story

Quality of Wood Defines a Shutter’s Quality

We use only 100% North American hardwood in the construction of our wood shutters because of its light weight, consistent color, hardness, structural stability and attractive grain.

Sound Forestry Techniques

We work only with foresters who practice “sustained yield forest management” — nearly twice as much hardwood grows as is harvested in the U.S. each year. The volume of hardwoods in American forests today is 90% larger than it was 50 years ago.

Preserving Our Natural Resources

Our SWF Wood facility in Grayling, Michigan, consumes recycled sawdust and wood shavings, generating the heat required to dry lumber, for a completely self-sufficient manufacturing process. Our Reynosa, Mexico, fabrication and finishing facility is 99.7% pollution-free, above any U.S. standard.

SWF Wood Facility in Grayling, Michigan

We have control over the quality of wood used, we control the process from green lumber to finished shutters. Hardwoods used in crafting our wood shutters are kiln-dried and molded at our SWF Wood facility. The wood is dried slowly to strict wood shutter specifications because structural change can occur when moisture is removed. Molding and sanding operations provide the highest quality surface, free of defects.
SWF Wood Fabrication and Finishing in Reynosa, Mexico

At our state-of-the art finishing plant in Reynosa, Mexico, components are carefully sorted prior to fabrication for color uniformity and wood characteristics. We sort wood as an end user, rather than as a finishing vendor, taking out defects in a climate-controlled building. Each shutter is handmade by craftsmen to your client’s custom needs. To finish the shutter, we use only high quality paints and stains; on-site certified color technicians provide both application and quality control.

What Makes Springs Window Fashions Shutters Different From the Rest?

- Wood shutters are made from 100% North American hardwoods – the premier wood used in the construction of shutters
- SWF Wood facilities provide state-of-the-art technologies and processes
- Expanded finish choices with unique staining process that showcases the natural grain of the wood
- An outstanding selection of styles, louvers (including 4½” size), frames and arches
- The best Customer Service team in the industry —
- Limited lifetime warranty (see warranty section)
Wood used to manufacture wood shutters has many natural characteristics that make it truly unique; no two pieces of hardwood are alike. The following are all natural characteristics of wood, and we do not consider them to be defects:

- **Grain**—The direction, size and appearance of wood fibers vary greatly depending on where the wood is cut within the tree
- **Mineral Marks**—Dark or discolored areas caused by minerals which the tree extracts from the soil, they can be either streaks or stains, usually blackish blue
- **Tiger Striping**—Directional change in grain pattern
- **Burl**—Formed from an irregular growth on the outer edge of the tree
- **Bird’s Eye**—Small area on the surface of the board where fibers are contorted to form circular figures that resemble bird’s eyes
- **Knots**—Vary in size, shape structure and color (only solid knots less than 3/8” diameter are allowed)

Natural variations in color and grain effect are inherent in the beauty of wood. These variations are within established industry guidelines and should be expected. In addition, shutters may stain slightly darker or lighter than the samples shown.
### 4 Basic Ways to Attach A Shutter To a Windows

There are only 4 ways to attach a ‘standard’ shutter to a window --- yes, it’s that simple.

#### Direct Mount
Hinge is mounted directly to the window jamb.

#### Hang Strip
Hinges are mounted to the hang strip. It’s the hang strip that’s installed to the window jamb.

#### Z-frame
This frame mounts inside the window, but decorative edging also wraps around the wall surface of the opening.

#### Surface Mount
L-frame and Deco-frame are mounted directly onto the window trim surface or wall surface surrounding the opening.
Various Ways Windows Operate

Confirm how the window operates and ask the following questions:

• Does the window tilt in for cleaning?
• If mounting inside, is the window deep enough to hold a shutter inside while also allowing the louvers to tilt?
• If mounting the shutter outside the window, will extra frame build out be needed so the louvers tilt freely?

4 Basic Types of Residential Window Finishes

2 Types of Wood Trimmed Windows

Without a Window Sill

With a Window Sill

2 Types of Drywall Wrapped Windows
(or no window trim)

Without a Window Sill

With a Window Sill

When choosing frame type,
the two structural conditions to recognize are:

1. the type of window finish
2. the way the window operates.
Chapter 1: Start Here! — Shutter Product Knowledge Basics

A Simple Guide For Selecting the Most Appropriate Frame To Use

Wood Trimmed Window

**Without a Window Sill**

Inside Mount
- Verify sufficient window depth

Direct Mount: IDEAL for windows that are shallow or tilt in for cleaning.

Hang Strip: IDEAL if window is deep enough

Z-Frame: Good to consider if window is deep and does not tilt in for cleaning. Specify sill frame.

Tilt-Z Frame: IDEAL if window tilts in for cleaning and is not out of ‘square’. Specify sill frame and make own deductions.

L-Frame: More difficult to measure, but can be considered if window is deep and does not tilt in for cleaning. Specify sill frame.

Outside Mount
- L-Frame: Mount on window trim as either 1) edge-to-edge or by 2) exposing outer reveal or 3) mount on wall beyond window trim using extended L-frame (or build-out). Specify 4-sided frame.

**With a Window Sill**

Inside Mount
- Verify sufficient window depth

Direct Mount: IDEAL for windows that are shallow or tilt in for cleaning.

Hang Strip: IDEAL if window is deep enough

Z-Frame: Good to consider if window is deep and does not tilt in for cleaning. Specify sill frame.

Tilt-Z Frame: IDEAL if window tilts in for cleaning and is not out of ‘square’. Specify sill frame and make own deductions.

L-Frame: More difficult to measure, but can be considered if window is deep and does not tilt in for cleaning. Specify sill frame.

Outside Mount
- L-Frame: Mount on window trim as either 1) edge-to-edge or by 2) exposing outer reveal or 3) mount on wall beyond window trim using extended L-frame (or build-out). Specify sill frame.

Drywall Wrapped Window

**Without a Window Sill**

Inside Mount
- Verify sufficient window depth

Direct Mount: Can be considered for windows that are shallow or tilt in for cleaning. A less decorative treatment.

Hang Strip: Can be considered for windows that are deep enough. A less decorative treatment.

Z-Frame: IDEAL for a decorative look, if window is deep enough and does not tilt in for cleaning. Easy to measure and install.

Outside Mount
- L-Frame: IDEAL for a decorative look. Mount on wall beyond edge of window. Easy to measure and install.

**With a Window Sill**

Inside Mount
- Verify sufficient window depth

Direct Mount: Can be considered for windows that are shallow or tilt in for cleaning. A less decorative treatment.

Hang Strip: Can be considered for windows that are deep enough. A less decorative treatment.

Z-Frame: IDEAL for a decorative look, if window is deep enough and does not tilt in for cleaning. Specify sill frame. Easy to measure and install.

Outside Mount

Chapter 1: Start Here! — Shutter Product Knowledge Basics

General Shutter Terminology

Astragal Stile — Covers clearance gap between two panels for the purpose of eliminating light gap. Integral to stile.

Bi-fold - Two panels are hinged together to lie flush against the window or wall.

Bottom Panel Guide—Components part used with bypass configurations to lead the panels so that they do not project into the room.

Box-out Frame - Track system frame option that creates an outside mount application consisting of a three-sided frame.

Buildout - Used in conjunction with L-Frames and Deco Frames to move panels away from window, allowing additional clearance for louvers to open.

Bypass Track System - Two or more panels on two overhead tracks that slide and pass each other.

Café Aligning Catch - Concealed magnet and catch plate on back top side of the café panels. Used to provide a flush panel alignment.

Café Style Shutters—Cover the lower portion of an opening. They can be made to any height within product specifications.

Direct Mount - Mounting the shutter panels directly to the window casing.

Divider Rail - A rail that divides the shutter panel into two horizontal sections. It is used to add strength to a tall panel or add a decorative touch.

Double Mouse Hole - Recess on the top and bottom rail allowing for the louvers to be completely closed in either direction. Close in upward position for optimal closure.

Hang Strip - The mounting frame that is used for inside mount shutter panels. A rear-mounting hang strip.

Inside Mount - A shutter that is mounted on the inside of an opening.

Light Block - Square rail that blocks light between the window sill and the shutter panel, used with direct mount, hang strip, 2 sided frames and 3 sided frames.

Louvers - The movable fins inside the shutter panel.

Mouse Hole - Recess in the top rail of the panel that the lift rod rests in when the louvers are completely closed. Standard is single mouse hole.

Outside Mount - A shutter that is mounted on the outside of an opening.

Panel - The part of the shutter that consists of a set of louvers, two rails and two stiles.

Rabbet Stile - A special cut on the stiles that allows the panels to overlap. Helps control light penetration between the panels.

Rails - The top and bottom solid portions of a panel that frame the louvers.

Square Window—Diagonal measurements must be within ¼” difference. Windows that are not square will need to have the shutter mounted to the outside of the window opening.

Stackback - Configuration that allows the panels of the bypass or Bi-fold track system to completely slide beyond the window opening.

Stile - The vertical portion of the panel frame to which the louvers are anchored.

Tilt Bar - A vertically mounted bar located on the front of the shutter used to open and close the louvers.

T-Post - A vertical post that divides the shutter into multiple sections (used with wider shutters).

Window Depth - The distance from the surface of the wall to the closest part of the window (examples: latch, crank, frame, etc.).

Other Order Form Terminology

Frame Configuration — The number of sides of the shutter treated with framing, plus any reference to which sides also use sill frame or sill cap.

Hidden Tilt — Tilt mechanism attached to the back of the panel.

Measure Type — Specific to the type of frame. Determines measure reference points and any factory adjustments.

Panel Configuration — The number of panels and T-posts incorporated within the shutter unit, including references to each panel’s hinge direction and which panels are hinged together.

Shutter Style — Shutter shape or mechanism; i.e. arch, French door, standard rectangular, bypass, etc.

Shutter Type — The type of material used; wood or composite

Split Tilt — The splitting of a tall set of louvers into separate upper and lower, independently operated sets, without the use of a divider rail.

Product Illustration
How Shutters Are Made For WIDER Windows

Concepts That Define the Building of Wider Shutter Units

Key Points:
- There are limits to how narrow and to how wide panels can be made.
- Panel width limits also vary between wood and composite due to weight issues that affect shutter operation.
- Panel width limits change even further when panels are hinged together in a bi-fold set (again, due to weight issues).
- Wider single panels, bi-folded panel sets* and T-posts are all used to increase shutter unit width.
- T-posts can be requested even when not required, but desired for design purposes or to off-set panel widths within a symmetrical configuration.

* Minimum and maximum panel sizes are reduced when two panels are hinged together into a bi-fold panel set.

Find the answers you need in the ‘Min and Max Order Width’ charts within this Resource Manual.

How Shutters Are Made for TALLER Windows

Concepts That Define the Building of Taller Shutter Units

Key Points:
- There are limits to how short and to how tall panels can be made.
- At designated maximum heights, a horizontal support (a Divider Rail) must be built into the panel for lateral strength.
- Divider rails are used to increase panel height.
- Panel height limits vary between wood and composite due to weight issues that affect shutter operation.
- Up to two divider rails are available. Divider rails are also available when not required, but desired for privacy or design purposes.
- There’s never a charge for divider rails.
- Maximum order height will also vary by type of frame that is specified.

Find the answers you need in the ‘Min and Max Order Height’ charts within this Resource Manual.
Shutter Design Considerations

In Rooms With Multiple Windows of Different Widths

When working with multiple windows of different widths in the same room, attempt to keep panel widths within the same general size range and symmetry. If feasible, modify number of panels in each shutter unit to help bring about more consistent panel width throughout the same room.

In Rooms With Multiple Windows of Similar Heights

When working with a bank of windows, all window sizes must be ordered at the exact same height. This will ensure 1) the same louver count, 2) same size top & bottom rails, 3) the same placement of divider rail and 4) the same number of hinges.

If window heights vary slightly, modify height measurements or choose another frame application to ensure exact same order height.

Shutter Operation Considerations

Obstructions Within the Window

When initially inspecting the window, always take note of whether the window tilts in for cleaning. It’s always advised to choose a frame type that allows for the window to freely tilt in for cleaning.

Also be sure to take note of any obstruction within the window that may inhibit full frame placement, full panel closure and louver tilt.

Panel Radius (Swing)

All hinged shutter panels require floor area to swing open. The larger the width of the panel, the greater the floor space required. Always consider panel radius, furniture placement, panel width, general panel configuration and hinge position when designing a shutter treatment.

Over-Sized Panels and Weight Factors

Every window covering product has its optimum operating size-range. When approaching the minimum production size or the maximum production size, certain operating characteristics and idiosyncrasies begin to emerge.

Shutters built within spec, but near the maximum width, height or allowable square footage, will sag to some degree. Shutters built to within spec are warrantied for proper functioning. However, maximum-sized shutters will also require special care and handling when swinging the panels open and closed.
Traditionally, the sales person takes responsibility for choosing design elements while the installers take responsibility for verifying the specs will work and for proper fit.

The Shutter Order form column headings have been entered in the chart to the right. These specifications have been identified as either ‘Design’ related or ‘Installation’ related — or both.

Ideally, as many of the design elements are confirmed with the consumer before the sales person hands off the project to a qualified installer for final measure and ordering.

### ‘How-to-Measure’ Basics for Pricing To Sell and Handing Off For Final Measure

If you’re a sales person who intends to hand off the project to a qualified installer for final measurement before ordering, then only rough measurements are needed in order to price the job to sell. Use the measuring techniques outlined in this section to achieve good estimated sizes for pricing purposes.

#### Direct Mount, Hang Strip, Z-Frame and Tilt Z-Frame

Direct mount, hang strip, Z-frame and Tilt Z-frame all require a net window opening measurement (referred to as WO).

- Measure window width at three points and height at three points.
- Use the smallest width and smallest height measurements for price estimation and for handing off for final measure by a qualified installer.

#### L-Frame and Deco-Frame

L-frame and Deco-frame both require measurements of the finished frame size, after assembly (referred to as F-F).

- Frame-to-frame size is the total ‘footprint’ of the frame as it sits on the window trim or the wall surface.
- Place a sample of the frame on the window trim or wall to determine frame placement and mark those points.
- Measure frame-to-frame width at three points and height at three points.
- Use the largest width and largest height measurements for price estimation and for handing off for final measure by a qualified installer.
Addressing Other Common Consumer Expectations

Aligning Consumer Expectations with Product Characteristics and Site Conditions

Consumer expectations can be high regarding the performance of shutter product in their home. This is especially true for consumers who are completely unfamiliar with shutters, having never owned or operated them in the past. Due to the nature of the product itself or the material with which the product was made, various shutter functionality characteristics may be present in certain settings. Anticipating the presence of these characteristics and aligning the consumer’s expectations to these conditions is critical to the success of any shutter job.

Below you’ll see listed some shutter operational aspects that can apply to certain jobs and warrant discussion with the consumer during the sales process. This manual contains references to many noteworthy circumstances and you’ll often find them discussed in the ‘Conditions to Consider’ paragraph of each feature, option and specialty section.

General Product Characteristics

- Shutters are not a complete room ‘blackout’ product. There will be some light leakage around the panels and between the louvers and panel side stiles.
- Large shutters can be heavy and may require special handling to swing open and to close the panels into the shutter framing or window opening.
- Wide panels require a lot of floor area in which to swing open. This may affect furniture placement.

Characteristics Unique to Each Specialty Product

As you read through each specialty section of this manual, take note of the mention of unique inherent operational characteristics of each specialty. Just a few examples would be:

- Some louvers on arch-top shutters may not operate along with the main body of louvers.
- Louvers need to be operated individually on Sunburst arches
- Louvers need to remain closed when bypass panels pass one another.
- Special handling may be needed with bi-fold shutters on track due to shift in the center of gravity when folded open.

Matching Specs Between Multiple Shutters

- Sometimes window heights vary between similar windows in rooms with multiple windows. As a general rule, a common height must be established for all the windows in a series, when in the same room.
- Also under certain conditions, the factory may shift the specified divider rail location up or down by as much as 2-inches to achieve uniform louver spacing.
- Study this manual to understand how to achieve a uniform look between windows in these instances.

Mounting Conditions

- Some window systems have been designed to tilt in for cleaning. Always look for this feature when initially inspecting the window. Inside mount shutters will typically restrict these windows from being tilted in. A written release would be appropriate for those consumers who still insist on inside mounting when restriction of tilt-in is anticipated.
- Wide shutter louvers require sufficient window depth to fully tilt. Always verify adequate window depth for mounting and operating the shutter.
- Some shutter frames are for mounting to the face of certain window trims. Be sure to demonstrate to the consumer, how the frame will be positioned on the window trim.
- When planning for shutter application to a window over a kitchen sink, be sure to consider panel fold. Verify adequate room to swing out the panel without hitting the kitchen sink faucet.

Out of Square Windows and Uneven Surfaces

- Some window openings are out-of-square to the degree that inside mounting of certain frames would result in excessive perimeter light gaps.
- Some walls surfaces are so irregular that surface mounting (without deforming the flat shutter unit) would result in excessive side gaps behind the shutter frame.
- Some degree of these two conditions mentioned above can be corrected by using caulk. Discuss all site conditions with the consumer and how you plan to address or remedy these irregularities.
Quick-Start Product Knowledge Basics

SHUTTER TYPE: Wood and Composite
SHUTTER STYLE: Standard Rectangular

Choosing Your Shutter Options

The main ‘design element’ to grasp in this chapter is frame type. Ideally, frame choice is finalized with the consumer before handing off to a qualified installer for final measure.

- Frame choices will be influenced by window finish and window operation. Refer to the ‘Frame Selection Guide’.
- Certain frames can be used on a wider variety of window types, but the frame’s decorative value will also vary depending on how the frame is used.

Additional Design Elements to be chosen later:
- Panel configuration choices will be subject to window size and symmetry. See Chapter 4.
- Louver size can be influenced by window depth, but is normally more about matching louver size in proportion with window size relative to the view to the outdoors. See Chapter 8.
- Panel overlap style, tilt option and color are personal preference and not subject to window type. See Chapters 6, 9 and 19 respectively.
Chapter 2: Standard Rectangular Shutters

Key Selling Features

**Wood**

### Quality of the Wood Material
- We use 100% North American hardwood because of its light weight, consistent color, hardness, structural stability and attractive grain.
- We control the entire quality process through our own facilities, from green lumber to finished shutters.
- We slowly dry the wood to strict standards, mold and sand to the highest quality and sort each wood piece for its best use. For instance, the clearest grains are selected for the lightest stains.

### Quality of the Wood Panel Finish
- Our facilities provide state-of-the-art color matching, staining and painting technologies.
- Painted shutters are finished with 3 primer coats, 2 color coats and 5 sanding procedures.
- Primer coats are UV cured and the paints are environmentally-friendly.
- Stained shutters are finished with 1 stain coat, 2 coats of lacquer and 3 buffing procedures.
- Stains are environmentally-friendly.
- See Chapter 6 for standard colors and other color options.

**Composite**

### Quality of the Composite Material
- Our composite/faux product is made from a combination of resins, polymers and PVC's. The material doesn’t contain any wood product whatsoever.
- The benefits of composite material are that they look like wood, have the same substantial feel of wood, they insulate better than wood, they are impervious to moisture, have a durable finish, they are easy to clean and are value priced.

### Quality of Panel Construction
- Our shutter panel thickness meets or exceeds all shutter industry quality standards.
- Double-dowel construction provides superior strength of the panel stile and rail joints.
- Inset top and bottom rails eliminated paint cracking where joined with panel stile.
- The quality of the wood, combined with high-strength construction techniques, allow single panels to be constructed up to 36” wide.

### Many Standard ‘No-Charge’ Options
- No additional charge for astragal panel overlap.
- No additional charge for divider rails, whether one is required or not.
- No additional charge for Split Tilt feature, whether using front tilt bar or when purchasing Hidden Tilt.

### Easy To Measure & Easy to Price
- Our measuring system aligns easily with customary blind & shade (IB and OB) measuring conventions.
- Each frame style uses either a net window opening measurement or a finished frame size measurement.
- Each frame’s ‘measure-type’ is clearly marked throughout this resource manual.
- When measure-type is used properly, your measure size is also the same as your order size and your pricing size. You’ll never need to remember to add dimension for framing.
Chapter 2: Standard Rectangular Shutters

Direct Mount Applications

Direct Mount is designed to be used as inside mount only into shallow, wood trimmed windows, especially those that tilt-in for cleaning. Used mostly with wood trimmed windows, this type of shutter mounting can also be used on a drywall-wrapped windows in a less decorative treatment. Shutter hinge plates remain hidden when panels are closed. If the window has adequate depth and does NOT tilt in for cleaning, consider using hang strip mount, as it offers an easier installation and the identical finished look when the shutter panels are closed. See the ‘Frame Selection Guide’.

INSTALLER NOTE:
- Factory will automatically make deductions for proper fit off your net window opening sizes (WO).
- FACTORY DEDUCTION: Width: 3/16”, Height: 1/4”
- If the window diagonal measurements (the ‘X’ measurements) vary by more than 1/4” from one another, use an outside mount frame.
- Panels are pre-hinged and hinges are designed with 2-sets of oblong holes for easy panel adjustment.
- Light block for all four sides are included with the order.

Hang Strip Applications

Hang Strip mount is designed to be used as inside mount, typically with wood trimmed windows. However, this frame can also be used with drywall-wrapped windows, in a fully-functional but less decorative treatment. Shutter hinge plates and mounting hang-strip remain hidden when shutter panels are closed. Hang strip cannot be used on windows that tilt-in for cleaning, as the hang strip will permanently obstruct the window from tilting in. See the ‘Frame Selection Guide’.

INSTALLER NOTES:
- Factory will automatically make deductions for proper fit off your net window opening sizes (WO).
- FACTORY DEDUCTION: Width: 3/16”, Height: 1/4”
- If the window diagonal measurements (the ‘X’ measurements) vary by more than 1/4” from one another, use an outside mount frame.
- Panels are pre-hinged and hang strips are pre-drilled.
- Hinges are designed with 2-sets of oblong holes for easy panel adjustment in any direction.
- Light block for top and bottom are included with the order.
- Hinge shims are included with the shipment.
**Z-Frame Applications**

**Z-Frame** is mainly designed for drywall-wrapped windows, providing a highly decorative value with the outer frame edge surrounding the previously bare window. In addition, the 1½” Z-frame can also sometimes be used on openings trimmed with standard Colonial window trim.

**INSTALLER NOTES:**
- Factory will automatically make deductions for proper fit off your net window-opening sizes (WO).
- **FACTORY DEDUCTION:** Width: 5/16”, Height: 5/16”
- If the window diagonal measurements (the 'X' measurements) vary by more than 1/4” from one another, use an outside mount frame.
- Panel and frame are pre-hinged. Frame is not pre-drilled. Shipment includes 3” X #8 self-tapping (#1-tipped Roberts head) ‘trim-head’ screws.

---

**Standard 1½” Z-Frame**

*Wood* | *Composite*  
---|---

**Signature 2½” Z-Frame**

*Wood* | *Composite*  
---|---

**Bullnose Z-Frame**

*Wood* only  

**Craftsman Z-Frame**

*Wood* only  

**Legacy 3½” Z-Frame**

*Wood* only
Chapter 2: Standard Rectangular Shutters

Tilt-In Z-Frame Application For Tilt-In Windows

Wood Tilt-Out Z-Frame
MUST BE ORDERED USING WINDOW OPENING SIZE (WO)

Tilt-Out Z frame is designed to be used with windows that tilt-in for cleaning (or have casement window lever locks) and that are also finished with certain styles of window trim (i.e. Standard Colonial molding). The ‘shoe’ of the Tilt-Z frame is meant to nest perfectly over the set-back (reveal) of the trim around the window. Measuring properly for Tilt-Z is more difficult than any other frame type. The measurer must know the precise measure reference points. See the drawings below.

INSTALLER NOTES:
• Tilt-out Z frame must be ordered as “Window Opening” (WO) size.
• FACTORY DEDUCTIONS: Width: 0", Height: 0" No factory deductions are made when using this frame. So, installer MUST make own deductions for proper fit.
• If no deductions are made, the assembled frame may be too tight and not compress into the opening. Deduct too much and the frame may not have enough overlap to nest properly. Your height & width deduction should be either 1/16" or 1/8" depending on whether the window is out-of-square at all.
• If the diagonal measurements (the ‘X’ measurements) vary by more than 1/8" from one another, use other outside mount frame.
• Panel and frame are pre-hinged. Frame is not pre-drilled. Shipment includes self-tapping ‘trim-head’ screws.
• Installer should pre-drill frame prior to installation to achieve proper screw angle depicted in the drawing below.

When mounting on window trim, measure the order width from these points and make the appropriate deduction for fit.
L-Frame Applications

L-Frame is mainly designed for mounting on the bare wall of drywall-wrapped windows to provide a decorative look with its frame face surrounding the shutter panels. L-frame is also routinely used to treat wood trimmed windows, mounted either on the window trim from edge-to-edge or at some mid-point compatible with the trim design. Lastly, L-frame is sometimes used as an inside mount on both these window types. Inside mount L-frame can be a method to help hide window irregularity but is typically much more difficult to measure and install than the more conventional treatments of the same window type. See the ‘Frame Selection Guide’.

INSTALLER NOTES:

- L-frame must be ordered as Frame-to-Frame (F-F) size only, meaning the size includes the frame. If using in a tight spot, installer MUST make own deductions for proper fit.
- FACTORY ADDITIONS TO YOUR ORDER SIZE:: Width: 0", Height: 0"
- For bullnose edge drywall-wrapped windows, allow ample space beyond window opening for the back of the frame to sit fully on flat wall.
- Inside mount L-frame is NOT compatible with windows that tilt in for cleaning.
- Panel and frame are pre-hinged. Frame is not pre-drilled. Shipment includes 3” X #8 self-tapping (1-tipped Roberts head) ‘trim-head’ screws.
Chapter 2: Standard Rectangular Shutters

Deco-Frame Applications

Deco-Frames MUST BE ORDERED USING FRAME-TO-FRAME SIZE (F-F)

Deco-Frame is designed for mounting on the bare wall of drywall-wrapped windows to provide a highly decorative look with its frame face surrounding the shutter panels. See the ‘Frame Selection Guide’.

INSTALLER NOTES:
- Deco-frame must be ordered as frame-to-frame (F-F) size only, meaning the size includes the frame. If using in a tight spot, installer MUST make own deductions for proper fit.
- FACTORY ADDITIONS TO YOUR ORDER SIZE:: Width: 0”, Height: 0”
- Panel and frame are pre-hinged. Frame is not pre-drilled. Shipment includes 3” X #8 self-tapping (#1-tipped Roberts head) ‘trim-head’ screws.
- For bullnose edge drywall-wrapped windows, allow ample space beyond window opening for the back of the frame to sit fully on flat wall.
- Deco-Frame is not available for French doors.

3” Traditional Deco

3½” Curved Deco

3½” Beaded Deco

3½” Craftsman Deco
Chapter 2: Standard Rectangular Shutters

FRAME SELECTION GUIDE: Determining the Most Appropriate Frame To Use

**Wood Trimmed Window**

*Without a Window Sill*

- **Inside Mount** Verify sufficient window depth
  - Direct Mount: IDEAL for windows that are shallow or tilt in for cleaning.
  - Hang Strip: IDEAL if window is deep enough
  - Z-Frame: Good to consider if window is deep and does not tilt in for cleaning. Specify sill frame.
  - Tilt-Z Frame: IDEAL if window tilts in for cleaning and is not out of ‘square’. Specify sill frame and make own deductions.
  - L-Frame: More difficult to measure, but can be considered if window is deep and does not tilt in for cleaning. Specify sill frame.

*With a Window Sill*

- **Inside Mount** Verify sufficient window depth
  - Direct Mount: IDEAL for windows that are shallow or tilt in for cleaning.
  - Hang Strip: IDEAL if window is deep enough
  - Z-Frame: Good to consider if window is deep and does not tilt in for cleaning. Specify sill frame.
  - Tilt-Z Frame: IDEAL if window tilts in for cleaning and is not out of ‘square’. Specify sill frame and make own deductions.
  - L-Frame: More difficult to measure, but can be considered if window is deep and does not tilt in for cleaning. Specify sill frame.

**Drywall Wrapped Window**

*Without a Window Sill*

- **Inside Mount** Verify sufficient window depth
  - Direct Mount: Can be considered for windows that are shallow or tilt in for cleaning. A less decorative treatment.
  - Hang Strip: Can be considered for windows that are deep enough. A less decorative treatment.
  - Z-Frame: IDEAL for a decorative look, if window is deep enough and does not tilt in for cleaning. Easy to measure and install.

*With a Window Sill*

- **Inside Mount** Verify sufficient window depth
  - Direct Mount: Can be considered for windows that are shallow or tilt in for cleaning. A less decorative treatment.
  - Hang Strip: Can be considered for windows that are deep enough. A less decorative treatment.
  - Z-Frame: IDEAL for a decorative look, if window is deep enough and does not tilt in for cleaning. Specify sill frame. Easy to measure and install.

**Outside Mount**

- L-Frame: Mount on window trim as either 1) edge-to-edge or by 2) exposing outer reveal or 3) mount on wall beyond window trim using extended L-frame (or build-out). Specify 4-sided frame.

*Without a Window Sill*

- L-Frame: Mount on window trim as either 1) edge-to-edge or by 2) exposing outer reveal or 3) mount on wall beyond window trim using extended L-frame (or build-out). Specify sill frame.

*With a Window Sill*

- L-Frame: Mount on wall beyond edge of window. Easy to measure and install.

*Without a Window Sill*

- L-Frame: IDEAL for a decorative look. Mount on wall beyond edge of window. Easy to measure and install.
Sill Cap Application

- Sill cap is designed to be used with windows that have no trim, have a marble sill, but no lower sill apron.
- Sill cap may not be compatible with wood trimmed windows or window sills that have a lower apron.
- Measuring properly requires providing the factory with sill width and sill depth.
- Factory will calculate sill cap extension beyond outside of frame, based on shutter order size.
- The sill cap is made with wood, but can be used with composite frame types and will be painted to match.

ORDERING AND INSTALLATION NOTES:
- Existing window sill width measurement must be provided when ordering a sill cap. This is to ensure that sill cap will fit over the top of your existing window sill.
- No factory additions are made when using this cap. FACTORY DEDUCTIONS: Width: 0”, Height: 0”
- No mounting hardware included. Adhesive should be used to attach sill cap to the window sill.
- For inside mount frames (direct mount, hang strip and Z-frame) a 1 5/8” wide X 1/2” thick buildout (filler strip) will be provided to take up the gap between the existing sill and the inside mount frame. The buildout will be butted up to the back edge of the sill cap to extend the new surface back into the window opening.
## Chapter 2: Standard Rectangular Shutters

### Wood Sill Cap: Minimum and Maximum Order Height By Frame Type and Configuration

<table>
<thead>
<tr>
<th>Frame Type</th>
<th>Frame Configuration</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Frames</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>16 3/4”</td>
<td>21 3/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Narrow Colonial L-Frames</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>16 1/2”</td>
<td>21 1/2”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Z-Frames</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>16 5/8”</td>
<td>21 5/8”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Tilt-Out Z-Frame</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Curved, Beaded And Craftsman Deco Frames</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>19 1/4”</td>
<td>24 1/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Traditional Deco Frame</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>18 11/16”</td>
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<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>21 1/8”</td>
</tr>
<tr>
<td>Direct Mt, Hang Strip</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>20 3/4”</td>
</tr>
</tbody>
</table>

### Composite Sill Cap: Minimum and Maximum Order Height By Frame Type and Configuration

<table>
<thead>
<tr>
<th>Frame Type</th>
<th>Frame Configuration</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite L-Frame</td>
<td>4-sided with sill cap bottom</td>
<td>16 3/4”</td>
<td>97 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>97 1/8”</td>
</tr>
<tr>
<td>Composite Z-Frame</td>
<td>4-sided with sill cap bottom</td>
<td>16 5/8”</td>
<td>97 5/8”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>97 1/8”</td>
</tr>
<tr>
<td>Composite Tilt-Out Z-Frame</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
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<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>97 1/8”</td>
</tr>
<tr>
<td>Composite Deco Frame</td>
<td>4-sided with sill cap bottom</td>
<td>19 1/16”</td>
<td>99 1/16”</td>
</tr>
<tr>
<td></td>
<td>3-sided inverted with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
</tr>
<tr>
<td></td>
<td>4-sided with sill frame top and sill cap bottom</td>
<td>16 1/8”</td>
<td>97 1/8”</td>
</tr>
<tr>
<td>Direct Mt, Hang Strip</td>
<td>4-sided with sill cap bottom</td>
<td>15 3/4”</td>
<td>96 3/4”</td>
</tr>
</tbody>
</table>
# Chapter 2: Standard Rectangular Shutters

## Minimum and Maximum Panel Sizes

<table>
<thead>
<tr>
<th>Wood Shutter Panel Minimum and Maximum Widths</th>
<th>2 ½”, 3 ⅝” and 4 ⅞” Louvers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Single Panel Width</td>
<td>*9”</td>
</tr>
<tr>
<td>Bi-Fold Panel Width</td>
<td>*9”</td>
</tr>
<tr>
<td>Panel Height</td>
<td>*15”</td>
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</tbody>
</table>

*Actual factory minimum and maximum sizes (both width and height) will vary slightly depending on frame type selected.

Refer to the various ‘Minimum & Maximum Order Width (and Height) By Frame Type’ charts throughout this resource manual.

## Wood Minimum and Maximum Order Height

<table>
<thead>
<tr>
<th>Frame Configuration</th>
<th>Frame Type</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2⅞”</td>
<td>3⅞”</td>
</tr>
<tr>
<td>2 Sided</td>
<td>Hang Strip / Direct Mount</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>3 Sided and 3 Sided Inverted</td>
<td>Z-Frames (except Tilt-Out)</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>3 Sided Sill Top or Bottom</td>
<td>Z-Frames (except Tilt-Out)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>Z-Frames (except Tilt-Out)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>Z-Frames (except Tilt-Out)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided</td>
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<td>2 Sided</td>
<td>Tilt-Out Z-Frame</td>
<td>15½”</td>
<td>20½”</td>
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<td>3 Sided and 3 Sided Inverted</td>
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<td>20¾”</td>
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<tr>
<td>3 Sided Sill Top or Bottom</td>
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<td>16½”</td>
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</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>Tilt-Out Z-Frame</td>
<td>16½”</td>
<td>21½”</td>
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<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>Tilt-Out Z-Frame</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>Tilt-Out Z-Frame</td>
<td>17¼”</td>
<td>22¼”</td>
</tr>
<tr>
<td>2 Sided</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>3 Sided and 3 Sided Inverted</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>3 Sided Sill Top or Bottom</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>L-Frames (except Narrow Colonial L-Frame)</td>
<td>17¼”</td>
<td>22¼”</td>
</tr>
<tr>
<td>2 Sided</td>
<td>Narrow Colonial L-Frame</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>3 Sided and 3 Sided Inverted</td>
<td>Narrow Colonial L-Frame</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>3 Sided Sill Top or Bottom</td>
<td>Narrow Colonial L-Frame</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>Narrow Colonial L-Frame</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>Narrow Colonial L-Frame</td>
<td>16½”</td>
<td>21½”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>Narrow Colonial L-Frame</td>
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<td>21½”</td>
</tr>
<tr>
<td>2 Sided</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>15¼”</td>
<td>20¼”</td>
</tr>
<tr>
<td>3 Sided and 3 Sided Inverted</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>18½”</td>
<td>23½”</td>
</tr>
<tr>
<td>3 Sided Sill Top or Bottom</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>18½”</td>
<td>23½”</td>
</tr>
<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>16”</td>
<td>21”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>3.5” Deco Frame (Curved, Beaded, Craftsman)</td>
<td>21”</td>
<td>26”</td>
</tr>
<tr>
<td>2 Sided</td>
<td>3” Traditional Deco Frame</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>3 Sided and 3 Sided Inverted</td>
<td>3” Traditional Deco Frame</td>
<td>17½”</td>
<td>22½”</td>
</tr>
<tr>
<td>3 Sided Sill Top or Bottom</td>
<td>3” Traditional Deco Frame</td>
<td>15½”</td>
<td>20½”</td>
</tr>
<tr>
<td>4 Sided Sill Top or Bottom</td>
<td>3” Traditional Deco Frame</td>
<td>17½”</td>
<td>22½”</td>
</tr>
<tr>
<td>4 Sided Sill Top and Bottom</td>
<td>3” Traditional Deco Frame</td>
<td>16”</td>
<td>21”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>3” Traditional Deco Frame</td>
<td>19½”</td>
<td>24½”</td>
</tr>
<tr>
<td>4 Sided</td>
<td>Sidelight</td>
<td>16¼”</td>
<td>N/A</td>
</tr>
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</table>
## Composite Minimum and Maximum Panel Sizes

<table>
<thead>
<tr>
<th>Composite Shutter Panel Min and Max Widths</th>
<th>2 ¼” and 3 ½” Louvers</th>
<th>4 ⅞” Louvers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Min</strong></td>
<td><strong>Max</strong></td>
<td><strong>Min</strong></td>
</tr>
<tr>
<td>Single Panel Width</td>
<td>*9”</td>
<td>*30”</td>
</tr>
<tr>
<td>Bi-Fold Panel Width</td>
<td>*9”</td>
<td>*24”</td>
</tr>
<tr>
<td>Panel Height</td>
<td>*15”</td>
<td>*96”</td>
</tr>
</tbody>
</table>

*Actual factory minimum and maximum sizes (both width and height) will vary slightly depending on frame type selected.

Refer to the various ‘Minimum & Maximum Order Width (and Height) By Frame Type’ charts throughout this resource manual.

## Composite Minimum and Maximum Order Height

<table>
<thead>
<tr>
<th>Frame Configuration</th>
<th>Frame Type</th>
<th>Composite</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 sided</td>
<td>Hang strip/direct mount</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>2 sided</td>
<td>Z-Frames (Standard and Signature)</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>3 sided &amp; 3 sided invert</td>
<td>Z-Frames (Standard and Signature)</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>3 sided sill top or bottom</td>
<td>Z-Frames (Standard and Signature)</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top or bottom</td>
<td>Z-Frames (Standard and Signature)</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top &amp; bottom</td>
<td>Z-Frames (Standard and Signature)</td>
<td>16”</td>
<td>97”</td>
<td></td>
</tr>
<tr>
<td>4 sided</td>
<td>Z-Frames (Standard and Signature)</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>2 sided</td>
<td>Tilt-Out Z-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>3 side and 3 side invert</td>
<td>Tilt-Out Z-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>3 side sill top or bottom</td>
<td>Tilt-Out Z-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top or bottom</td>
<td>Tilt-Out Z-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top and bottom</td>
<td>Tilt-Out Z-Frame</td>
<td>16”</td>
<td>97”</td>
<td></td>
</tr>
<tr>
<td>4 sided</td>
<td>Tilt-Out Z-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>2 sided</td>
<td>L-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>3 sided &amp; 3 sided invert</td>
<td>L-Frame</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>3 sided sill top or bottom</td>
<td>L-Frame</td>
<td>16½”</td>
<td>97½”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top or bottom</td>
<td>L-Frame</td>
<td>16”</td>
<td>97”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top &amp; bottom</td>
<td>L-Frame</td>
<td>17¼”</td>
<td>98½”</td>
<td></td>
</tr>
<tr>
<td>4 sided</td>
<td>L-Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>2 sided</td>
<td>Deco Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>3 sided &amp; 3 sided invert</td>
<td>Deco Frame</td>
<td>17¼”</td>
<td>98½”</td>
<td></td>
</tr>
<tr>
<td>3 sided sill top or bottom</td>
<td>Deco Frame</td>
<td>15¼”</td>
<td>96¼”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top or bottom</td>
<td>Deco Frame</td>
<td>17¼”</td>
<td>98½”</td>
<td></td>
</tr>
<tr>
<td>4 sided with sill top &amp; bottom</td>
<td>Deco Frame</td>
<td>16”</td>
<td>97”</td>
<td></td>
</tr>
<tr>
<td>4 sided</td>
<td>Deco Frame</td>
<td>19¼”</td>
<td>100¼”</td>
<td></td>
</tr>
</tbody>
</table>
**Deductions For Frame Allowances**

**Direct Mount**
- Automatically taken at factory
- Width deduction - \( \frac{3}{16} \)"
- Height deduction - \( \frac{1}{4} \)"

**L-Frames and Sidelights**
- No deductions taken at factory
- If using for inside mount or in a tight spot, installer must make own deduction for proper fit

**Hang Strip**
- Automatically taken at factory
- Width deduction - \( \frac{3}{16} \)"
- Height deduction - \( \frac{1}{4} \)"

**Deco Frame**
- No deduction taken at factory
- If using in a tight spot, installer must make own deduction for proper fit

**Z-Frame (Standard, Signature, Legacy, Bullnose, Craftsman)**
- Automatically taken at factory

<table>
<thead>
<tr>
<th>Z-Frame Configuration</th>
<th>Frame Width Deduction</th>
<th>Frame Height Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Sided</td>
<td>- 0.1875&quot;</td>
<td>No deduction*</td>
</tr>
<tr>
<td>3-Sided or 3-Sided Inverted</td>
<td>- 0.1875&quot;</td>
<td>- 0.03125&quot;</td>
</tr>
<tr>
<td>3-Sided Sill Top or Bottom</td>
<td>- 0.1875&quot;</td>
<td>- 0.03125&quot;</td>
</tr>
<tr>
<td>4-Sided</td>
<td>- 0.1875&quot;</td>
<td>- 0.03125&quot;</td>
</tr>
<tr>
<td>4-Sided Sill Top or Bottom</td>
<td>- 0.1875&quot;</td>
<td>- 0.03125&quot;</td>
</tr>
<tr>
<td>4-Sided Sill Top and Bottom</td>
<td>- 0.1875&quot;</td>
<td>- 0.03125&quot;</td>
</tr>
</tbody>
</table>

*Using this deduction, panel clearance on open ends of frame will automatically be \( \frac{1}{8} \)".

**Tilt-Out Z Frame**
- Factory makes no deductions on Tilt-Out Z-Frames. You must take your own deductions for proper fit.

**Installation Hardware**

**Included with order**
- Hinge pins
- Installation screws (hinge, mounting, etc.)
- Touch up paint dabber – paints only
- Due to top coat process, touch-up bottles are not provided with stains but can be requested
- Hoffman keys

**Available upon request – contact Customer Service**
- Hinge shims
- Louver pins
- Screw caps (cover exposed screw heads)
- Screws

**Installation Accessories**

- Use hinge shims for minor width adjustments. NOTE: Must be requested from Customer Service.
- Hoffman keys are used to join the frame corners.
- Use screw caps to cover exposed screw heads. NOTE: Must be requested from Customer Service.
Chapter 2: Standard Rectangular Shutters

Basic Installation Instructions for Standard L-Frame (4-sided frame on drywall-wrapped window)

1) Box label includes “Room” name used on your order form

2) Job number and line number are hand-stamped on the bottom of shutter panels and on all frame parts. The panel numbers are always done in configuration sequence from left to right.
   (Note: The numbers on panels shown above have been touched-up with marker to enhance viewing in the photo)

3) First, fully drive rounded-end of key into one side. Use neoprene hammer (or equivalent) and slightly padded surface when driving in Hoffman Keys.

4) Then, drive the frame assembly (with inserted key) into the remaining side. Assemble the complete 4-sided unit.

5) This L-frame shipment would include #8 Robert’s Head (square drive) screws.

6) Prepare your drill by attaching a #1 Square drive drill adapter.
6) Position the frame up to the window, gauging the amount of overlap on all sides and locate frame evenly over the window.

7) First, drive screw into the L-frame approximately 2” from upper corner.

8) Level the unit and drive the next screw on opposite side at precisely the same height.

9) Insert shim behind the frame (if needed) to plumb and square the frame. Repeat for the opposite corners.

10) With only the upper mounting screws fastened at this point, hang the panels by aligning the hinges and inserting the hinge pins.

11) To achieve consistent gaps between panel and frame around the unit, adjust position of frame hinge as needed. Simply loosen and re-tighten the screws in the hinge (slotted) holes.

12) With panels hung, ‘rack’ the shutter by shifting the bottom of the frame left and right. **Proper alignment occurs when the heights of panel tops match up and gap between panels is consistent.**

13) Verify that the shutter is plumb vertical.
Chapter 2: Standard Rectangular Shutters

Installation Basics for Standard L-Frame (4-sided frame on drywall-wrapped window)

14) Drill in all screws to a precise uniform depth --- just beneath the surface of the material. Caution: Do not allow the screws to go in so deep that it becomes impossible to locate or reach them. This is important in the event the screws need to be extracted in the future to remove or adjust the shutter unit.

15) Finish placing main (side) mounting screws. Use at least one mounting screws per the number of hinges on each side.

16) Make any final adjustments to panel heights by loosening the screws in the hinge slots. Retighten when optimum panel height is achieved.

17) Once optimum panel height is achieved, install ‘set screws’ into the round holes of the hinge to lock in place.

18) Install all set screws into hinges.

19) Set mounting screws into top and bottom frames after removing any remaining shims.

20) Position all screws in a symmetrical pattern.

21) At a minimum, use one large mounting screw per the number of hinges on that side. Use an additional screw as needed.
Chapter 2: Standard Rectangular Shutters

Installation Basics for Standard L-Frame (4-sided frame on drywall-wrapped window)

22) Caulking is optional for outside mount shutters, but becomes mandatory for all units if one unit requires it.

23) When applying caulk, use a very small hole at the tip of applicator and use a damp cloth for keeping the area wiped clean. Rinse the cloth frequently (in a utility sink) as needed.

24) The use of wood putty over screw heads is optional. Care must be taken to allow for future access to screw heads if shutter adjustment or removal is needed. Symmetrical screw placement at uniform screw depths or the use of screw caps are both acceptable alternatives to puttying over screw heads.

25) Clean smudges off with a dampened soft cloth.

26) Factory supplies a small amount of extra paint with each order. Use applicator that is built into to the ‘dabber bottle’ for applying the paint.

27) Use color-matched touch-up crayons for wood color. Gently wipe excess off with dry soft cloth.
### Commonly Accepted Frame Applications: Wood Trimmed Window with No Sill

#### Direct Mount or Hang Strip
- Allows for showing all the window trim
- Requires sufficient window depth for louvers to fully tilt
- Order as 2-sided frame

#### 1½" Z-Frame
- This smallest Z-frame normally rests nicely into the inner edge of Standard Colonial window trim
- Cannot be used on windows that tilt-in for cleaning
- Order as 4-sided frame

#### Tilt-Out Z-Frame
- This frame is designed to be used with windows that tilt in for cleaning
- Requires precision measuring
- Frame requires pre-drilling to install
- Order as 4-sided frame

#### Inside Mount L-Frame
- Clean look, easy to install
- Requires sufficient window depth for louvers to fully tilt
- Cannot be used on windows that tilt in for cleaning
- Always requires caulking around the perimeter of the frame to hide light leakage
- Order as 4-sided frame

#### Outside Mount L-Frame On Trim
- This frame can align with outer edge of window trim or placed mid-way on the trim to expose the outer flat edge
- Order as 4-sided frame

#### Outside Mount L-Frame On Wall
- This frame will require extended L-frame or build-out to compensate for window trim thickness
- Verify louvers will not hit window trim or show window trim through the louvers when tilted open
- Order as 4-sided frame
### Commonly Accepted Frame Applications: Wood Trimmed Window with Window Sill

#### Direct Mount or Hang Strip
- Allows for showing all the window trim
- Requires sufficient window depth for louvers to fully tilt
- Order as 2-sided frame

#### 1½" Wood Z-Frame
- Compatible with Standard Colonial window trim
- Order with sill frame as ‘4-sided with sill bottom’ frame configuration
- Cannot be used on windows that tilt-in for cleaning
- Wood frame uses miter at sill bottom

#### 1½" Composite Z-Frame
- Compatible with Standard Colonial window trim
- Order with sill frame as ‘4-sided with sill bottom’ configuration
- Composite frame uses but & pass joining style for sill frame

#### Tilt-Out Z-Frame
- This frame is designed to be used with windows that tilt in for cleaning
- Requires precision measuring
- Order with sill frame as ‘4-sided with sill bottom’ frame configuration
- Composite tilt-in Z frame not offered with sill bottom option
- Frame requires pre-drilling the frame to install

#### Inside Mount L-Frame
- Requires sufficient window depth for louvers to fully tilt
- Cannot be used on windows that tilt in for cleaning
- Order with sill frame as ‘4-sided with sill bottom’ frame configuration
- More difficult to measure to reduce gap between frame and window opening
- Always requires caulking around the frame to hide light leakage

#### Outside Mount L-Frame On Trim
- This frame can align with outer edge of window trim or placed mid-way on the trim to expose the outer flat edge
- Order with sill frame as ‘4-sided with sill bottom’ frame configuration
Direct Mount or Hang Strip
- Caution: Drywall windows are often out-of-square, causing excessive perimeter light gaps.
- Requires sufficient window depth for louvers to fully tilt
- A less-decorative look for windows with no wood trim
- Order as 2-sided frame
- Easy to install

1½”, 2¼” and 3½” Z-Frames
- Square edge drywall windows are compatible with 1½”, 2¼” and 3½” Z-frames
- Cannot be used on windows that tilt-in for cleaning
- Order as 4-sided frame
- Easy to install

Tilt-In Windows
- Drywall-wrapped windows are not compatible with Tilt-in Z-Frame
- Requires mounting on the wall beyond the window edge using L-frames or Deco-frames
- Easy to measure and install

Bullnose Edge Windows
- Bullnose edge drywall windows are compatible only with 2¼” and 3½” Z-frames. The 1½” Z-frame lacks the overlap needed to hide the bullnose edge around the window.
- Cannot be used on windows that tilt-in for cleaning
- Easy to install

Outside Mount L-Frame On Wall
- When measuring, plan for the frame to sit completely on flat wall, beyond the bullnose edge of the window.
- Easy to install

Outside Mount Deco-Frame On Wall
- All L-frames and Deco-frames are ideal for mounting on the wall with untrimmed windows. Perfect for a more decorative look.
- Easy to install
Commonly Accepted Frame Applications: Drywall-Wrapped Window with Window Sill

Direct Mount or Hang Strip
- Caution: Drywall windows are often out-of-square, causing excessive perimeter light gaps.
- Requires sufficient window depth for louvers to fully tilt
- A less-decorative look for windows with no wood trim
- Order as 2-sided frame

1½”, 2½” and 3½” Z-Frames
- Square edge drywall windows are compatible with 1½”, 2½” and 3½” Z-frames
- Cannot be used on windows that tilt-in for cleaning
- Order with sill frame as ‘4-sided with sill bottom’ configuration

Outside Mount Deco-Frame
- All L-frames and Deco-frames are ideal for mounting on the wall for a more decorative look.
- When treating windows with a window sill, always order with sill frame as ‘4-sided with sill bottom’ configuration

Bullnose Edge Windows
- Bullnose edge drywall windows are compatible only with 2½” and 3½” Z-frames. The 1½” Z-frame lacks the overlap needed to hide the bullnose edge around the window.
- Cannot be used on windows that tilt-in for cleaning
- Order with sill frame as ‘4-sided with sill bottom’ configuration
- Easy to install

Outside Mount L-Frame
- When measuring, plan for the frame to sit completely on flat wall, beyond any bullnose edge of the window.
- When treating windows with a window sill, always order with sill frame as ‘4-sided with sill bottom’ configuration
- Easy to install

Inside Mount L-Frame
- Requires sufficient window depth for louvers to fully tilt
- Cannot be used on windows that tilt in for cleaning
- Order with sill frame as ‘4-sided with sill bottom’ frame configuration
- More difficult to measure to reduce gap between frame and window opening
- Always requires caulking around the frame to hide light leakage
Choosing Your Frame Configuration

The term ‘frame configuration’ refers to the number of sides that surround a set of shutter panels with framing, whether the framing is a primary frame or a narrower sill frame.

Frame configuration allows a shutter to adapt to structural or architectural window conditions and these various combinations of main frames and sill frames create a variety of treatment solutions.

Although not considered a critical ‘design element’, salespeople are encouraged to learn about the flexibility offered in the wide variety of choices. Customarily, a qualified installer would take responsibility for specifying the most appropriate frame configuration during final measure.

Frame configuration choice will be influenced by a combination of the following conditions:

- The type of frame chosen. For example, Direct Mount and Hang Strip are always coded at 2-sided (only).
- The type of shutter style chosen. For example, Café shutter framing is offered in a variety of ways.
- Whether the window has a window sill.
- Whether the top of the window butts up to a drop ceiling.
- Whether the shutter is being inside or outside mounted.

Reminder Notes:

- Frame configurations must be chosen from those displayed in this resource manual. There are no custom configurations offered.
- Sill frame configurations are not offered when using buildout as the back edge of the sill frame will not match up to the wall surface.
- Factory automatically furnishes light block for the sides not treated with the main frame, in order to finish all four sides of the unit.

Important: Avoid this Common Misconception

- This program defines the number of sides in a frame configuration as the TOTAL number of sides that surround a set of shutter panels with framing, whether the frame is the primary frame or a narrower sill frame.
- Be aware that some other shutter brands may use a different or more complex system of labeling the various configurations.
- Refer to the chart on the following page when selecting your frame configuration.

Key Selling Features

**Important Easy-to-Price ‘No-Charge’ Option**

- There’s no additional charge for any of the standard frame configurations, regardless of the number of sides.

**Unique Frame Configuration Option**

- Wood sill cap is a chargeable option. See price page.

**Sill Frame Features & Benefits**

- The low profile of sill frame provides a quality finished appearance against the window sill.
- Greatly simplifies installation (compared to a 3-sided unit) by securely connecting the bottom ends of the vertical side frames.
Frame Configurations Must Be Selected From This Chart

### Frame Configuration Offering

#### Wood

- **2-Sided**
  Hang strip and direct mount with inside mount is available only in 2-sided frame (vertical). We will provide the light block at no charge for hang strip with inside mount.

- **3-Sided**
  Light block included at no charge.

- **3-Sided Inverted**
  Light block included at no charge.

- **3-Sided with Sill Top**
  Light block included at no charge.

- **3-Sided Inverted with Sill Frame Bottom**
  Light block included at no charge.

#### Composite

- **4-Sided with Sill Bottom**

- **4-Sided with Sill Frame Top**

- **4-Sided**

- **4-Sided with Sill Frame Top and Bottom**

- **4-Sided with Sill Frame Top and Sill Cap Bottom**

- **4-Sided with Sill Cap Bottom**

- **E**

- **C**
Choosing Your Panel Configuration

Panel configuration describes the number shutter panels and the combination of single panels, bi-folded panels and T-posts engineered together into one single shutter unit to treat a window. Ideally, panel configuration is finalized with the consumer before handing off to a qualified installer for final measure.

Panel configuration will be influenced by a combination of the following conditions:
- Overall window opening width
- The number of individual windows within the larger opening
- The width of the individual windows
- Placement of the posts (or mullions) between the individual windows within the larger opening

Other Conditions to Consider:
- **Symmetry:** Does the number of panels in your chosen configuration match with the number of sections within the opening?
- **Proportion:** Will the resulting panel sizes look in proportion to the louver size selected?
- **Uniform Look:** Will I need to adjust the number of shutter panels in certain windows to help balance panel sizes with other windows in the same room?
- **Within Spec:** Referring to the chart for Min & Max Order Width by Frame Type, and confirm that your order size is within spec.

Reminder Notes:
- Panel configuration must be chosen from those displayed in this resource manual. The same set of panel configurations apply to both wood shutters and to composite shutters.
- Custom configurations are not offered.
- In configurations without T-posts, all panels will always be the same width.
- The only method for creating different panel sizes within the same panel configuration is by using a T-post to shift the panel sections within the unit.

Key Selling Features

A Wide Range of Panel Configurations
- There’s a wide variety of configurations from which to choose, ranging from a single panel to as many as eight panels per opening.
### Panel Configuration Offering for Standard Rectangular Shutters

Panel Configurations Must Be Selected From This Chart

<table>
<thead>
<tr>
<th>Single Panel</th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>L</td>
<td>R</td>
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<table>
<thead>
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<th>Two Panels</th>
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<tr>
<td>LR</td>
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<td>LTRA</td>
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<tr>
<td>LLR</td>
<td>LRA</td>
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<td>LRTLR</td>
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<thead>
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<thead>
<tr>
<th>Eight Panels</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LRTTLTLR</td>
<td>LRTTLTLTLR</td>
<td></td>
</tr>
<tr>
<td>LLTLTAR</td>
<td>LLTLTAR</td>
<td></td>
</tr>
</tbody>
</table>

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Shutter Product Resource Manual
# Chapter 5: Panel Configurations and T-Posts

## Wood: Min. & Max. Order Width By Panel Configuration: 2½", 3½” and 4½” Louvers

<table>
<thead>
<tr>
<th>NUMBER OF PANELS</th>
<th>PANEL CONFIGURATIONS</th>
<th>DIRECT MOUNT, HANG STRIP, TILT-OUT Z-FRAMES</th>
<th>Z-FRAMES</th>
<th>L-FRAMES</th>
<th>NARROW COLONIAL L-FRAME</th>
<th>3&quot; TRADITIONAL DECO FRAME</th>
<th>3½” CURVED/BEADED/ CRAFTSMAN DECO FRAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimum Width</td>
<td>Maximum Width</td>
<td>Minimum Width</td>
<td>Maximum Width</td>
<td>Minimum Width</td>
<td>Maximum Width</td>
</tr>
<tr>
<td>1 Panel</td>
<td>L, R</td>
<td>9¾&quot;</td>
<td>36¾&quot;</td>
<td>11&quot;</td>
<td>38&quot;</td>
<td>11¾&quot;</td>
<td>38¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LR</td>
<td>18¾&quot;</td>
<td>72¾&quot;</td>
<td>19¾&quot;</td>
<td>73¾&quot;</td>
<td>20⅛&quot;</td>
<td>74¾&quot;</td>
</tr>
<tr>
<td>2 Panels</td>
<td>LTR, LTL, RTR, RTL</td>
<td>19¾&quot;</td>
<td>73¾&quot;</td>
<td>21⅛&quot;</td>
<td>75¾&quot;</td>
<td>21⅛&quot;</td>
<td>75¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LL, RR</td>
<td>18⅛&quot;</td>
<td>52¾&quot;</td>
<td>19¾&quot;</td>
<td>53¾&quot;</td>
<td>20⅛&quot;</td>
<td>54¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LLR, LRR</td>
<td>27⅛&quot;</td>
<td>88¾&quot;</td>
<td>29¾&quot;</td>
<td>90¾&quot;</td>
<td>29¾&quot;</td>
<td>90¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LLTR, LTRR</td>
<td>28⅛&quot;</td>
<td>89⅜&quot;</td>
<td>30¾&quot;</td>
<td>91¾&quot;</td>
<td>30¾&quot;</td>
<td>91¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTLR, LTRR</td>
<td>28¾&quot;</td>
<td>109¾&quot;</td>
<td>30¾&quot;</td>
<td>111¾&quot;</td>
<td>30¾&quot;</td>
<td>111¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTLTR, LTLTRR</td>
<td>29¾&quot;</td>
<td>110¾&quot;</td>
<td>31⅞&quot;</td>
<td>112¾&quot;</td>
<td>31⅞&quot;</td>
<td>112¾&quot;</td>
</tr>
<tr>
<td>3 Panels</td>
<td>LLRR</td>
<td>36⅛&quot;</td>
<td>104⅜&quot;</td>
<td>38¾&quot;</td>
<td>106¾&quot;</td>
<td>38¾&quot;</td>
<td>106¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LLTR</td>
<td>37⅛&quot;</td>
<td>105¾&quot;</td>
<td>38⅜&quot;</td>
<td>106¾&quot;</td>
<td>39⅞&quot;</td>
<td>107¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LRTL</td>
<td>37⅛&quot;</td>
<td>145⅜&quot;</td>
<td>38⅜&quot;</td>
<td>146¾&quot;</td>
<td>39⅞&quot;</td>
<td>147¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTLR</td>
<td>38⅞&quot;</td>
<td>146¾&quot;</td>
<td>40⅛&quot;</td>
<td>148¾&quot;</td>
<td>40⅛&quot;</td>
<td>148¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTRL</td>
<td>39⅞&quot;</td>
<td>147¾&quot;</td>
<td>41⅜&quot;</td>
<td>149¾&quot;</td>
<td>41⅜&quot;</td>
<td>149¾&quot;</td>
</tr>
<tr>
<td>4 Panels</td>
<td>LTLRTR</td>
<td>47⅞&quot;</td>
<td>162¾&quot;</td>
<td>51⅛&quot;</td>
<td>166¾&quot;</td>
<td>51⅛&quot;</td>
<td>166¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTRLTLR</td>
<td>47⅞&quot;</td>
<td>182¾&quot;</td>
<td>50¾&quot;</td>
<td>185¾&quot;</td>
<td>50¾&quot;</td>
<td>185¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LTRLTLTR, LTRRTLTR</td>
<td>49¾&quot;</td>
<td>184¾&quot;</td>
<td>53⅞&quot;</td>
<td>188¾&quot;</td>
<td>53⅞&quot;</td>
<td>188¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LLTRAR, LLLRAR</td>
<td>56⅜&quot;</td>
<td>178¾&quot;</td>
<td>58¾&quot;</td>
<td>180¾&quot;</td>
<td>58¾&quot;</td>
<td>180¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LRLTLR</td>
<td>56¾&quot;</td>
<td>218¾&quot;</td>
<td>58⅜&quot;</td>
<td>220⅜&quot;</td>
<td>58⅜&quot;</td>
<td>220⅜&quot;</td>
</tr>
<tr>
<td></td>
<td>LTRLTRTR, LLTRLTRR</td>
<td>57⅞&quot;</td>
<td>179⅜&quot;</td>
<td>59⅞&quot;</td>
<td>181¾&quot;</td>
<td>59⅞&quot;</td>
<td>181¾&quot;</td>
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<td></td>
<td>LTRTLTLTRLR</td>
<td>60⅞&quot;</td>
<td>222¾&quot;</td>
<td>61⅞&quot;</td>
<td>223¾&quot;</td>
<td>62⅞&quot;</td>
<td>224¾&quot;</td>
</tr>
<tr>
<td>5 Panels</td>
<td>LTRLLRRTLTR</td>
<td>73¼&quot;</td>
<td>249¾&quot;</td>
<td>75¾&quot;</td>
<td>251¾&quot;</td>
<td>75¾&quot;</td>
<td>251¾&quot;</td>
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<tr>
<td></td>
<td>LLTLRLLTRR</td>
<td>73¼&quot;</td>
<td>209¾&quot;</td>
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<td>211¾&quot;</td>
<td>75¾&quot;</td>
<td>211¾&quot;</td>
</tr>
<tr>
<td></td>
<td>LRTLRLRLLTR</td>
<td>75⅜&quot;</td>
<td>291⅜&quot;</td>
<td>77⅜&quot;</td>
<td>293¾&quot;</td>
<td>77⅜&quot;</td>
<td>293¾&quot;</td>
</tr>
</tbody>
</table>
## Composite: Min. & Max. Order Width By Panel Configuration: 2½” and 3½” Louvers

Below are some examples of how the shutter unit can be configured using various combinations of panels and T-posts.

<table>
<thead>
<tr>
<th>Panel Configuration</th>
<th>Composite</th>
<th>Direct Mount</th>
<th>Tilt Z</th>
<th>Z-Frames</th>
<th>Deco-Frame</th>
<th>L-Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Hang Strip</td>
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<td>1 Panel</td>
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<td>9½ₜₜ</td>
<td>30½ₜₜ</td>
<td>11</td>
<td>31½ₜₜ</td>
<td>14½ₜₜ</td>
</tr>
<tr>
<td>2 Panel</td>
<td><img src="image2" alt="Diagram" /></td>
<td>18½ₜₜ</td>
<td>60</td>
<td>19½ₜₜ</td>
<td>61½ₜₜ</td>
<td>24½ₜₜ</td>
</tr>
<tr>
<td>2 panel, 1 T-Post</td>
<td><img src="image3" alt="Diagram" /></td>
<td>19½ₜₜ</td>
<td>61½ₜₜ</td>
<td>21½ₜₜ</td>
<td>63½ₜₜ</td>
<td>25½ₜₜ</td>
</tr>
<tr>
<td>1 Bi-fold</td>
<td><img src="image4" alt="Diagram" /></td>
<td>18½ₜₜ</td>
<td>48</td>
<td>19½ₜₜ</td>
<td>49½ₜₜ</td>
<td>22½ₜₜ</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold</td>
<td><img src="image5" alt="Diagram" /></td>
<td>27½ₜₜ</td>
<td>78½ₜₜ</td>
<td>29½ₜₜ</td>
<td>80</td>
<td>24½ₜₜ</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold, 1 T-Post</td>
<td><img src="image6" alt="Diagram" /></td>
<td>28½ₜₜ</td>
<td>79½ₜₜ</td>
<td>30½ₜₜ</td>
<td>80½ₜₜ</td>
<td>35½ₜₜ</td>
</tr>
<tr>
<td>3 Panel, 1 T-Post</td>
<td><img src="image7" alt="Diagram" /></td>
<td>28½ₜₜ</td>
<td>91½ₜₜ</td>
<td>30½ₜₜ</td>
<td>92½ₜₜ</td>
<td>35½ₜₜ</td>
</tr>
<tr>
<td>3 Panel, 2 T-Post</td>
<td><img src="image8" alt="Diagram" /></td>
<td>29½ₜₜ</td>
<td>92½ₜₜ</td>
<td>31½ₜₜ</td>
<td>94½ₜₜ</td>
<td>36½ₜₜ</td>
</tr>
<tr>
<td>2 Bi-Fold</td>
<td><img src="image9" alt="Diagram" /></td>
<td>36½ₜₜ</td>
<td>95½ₜₜ</td>
<td>38½ₜₜ</td>
<td>97½ₜₜ</td>
<td>43½ₜₜ</td>
</tr>
<tr>
<td>2 Bi-Fold, 1 T-Post</td>
<td><img src="image10" alt="Diagram" /></td>
<td>37½ₜₜ</td>
<td>97</td>
<td>38½ₜₜ</td>
<td>98½ₜₜ</td>
<td>45½ₜₜ</td>
</tr>
<tr>
<td>4 Panel, 1 T-Post</td>
<td><img src="image11" alt="Diagram" /></td>
<td>37½ₜₜ</td>
<td>121</td>
<td>38½ₜₜ</td>
<td>122½ₜₜ</td>
<td>45½ₜₜ</td>
</tr>
<tr>
<td>4 Panel, 2 T-Posts</td>
<td><img src="image12" alt="Diagram" /></td>
<td>38½ₜₜ</td>
<td>122½ₜₜ</td>
<td>40½ₜₜ</td>
<td>124½ₜₜ</td>
<td>46½ₜₜ</td>
</tr>
<tr>
<td>4 Panel, 3 T-Posts</td>
<td><img src="image13" alt="Diagram" /></td>
<td>39½ₜₜ</td>
<td>123½ₜₜ</td>
<td>41½ₜₜ</td>
<td>125½ₜₜ</td>
<td>47½ₜₜ</td>
</tr>
<tr>
<td>3 Panel, 1 Bi-fold, 2 T-Post</td>
<td><img src="image14" alt="Diagram" /></td>
<td>47½ₜₜ</td>
<td>140½ₜₜ</td>
<td>51½ₜₜ</td>
<td>143½ₜₜ</td>
<td>60½ₜₜ</td>
</tr>
<tr>
<td>5 Panel, 4 T-Posts</td>
<td><img src="image15" alt="Diagram" /></td>
<td>50½ₜₜ</td>
<td>154½ₜₜ</td>
<td>51½ₜₜ</td>
<td>156½ₜₜ</td>
<td>60</td>
</tr>
<tr>
<td>2 Panel, 2 Bi-Fold, 2 T-Post</td>
<td><img src="image16" alt="Diagram" /></td>
<td>56½ₜₜ</td>
<td>158½ₜₜ</td>
<td>58½ₜₜ</td>
<td>160½ₜₜ</td>
<td>66½ₜₜ</td>
</tr>
<tr>
<td>6 Panel, 2 T-Posts</td>
<td><img src="image17" alt="Diagram" /></td>
<td>56½ₜₜ</td>
<td>182</td>
<td>58</td>
<td>183½ₜₜ</td>
<td>66½ₜₜ</td>
</tr>
<tr>
<td>2 Panel, 2 Bi-Fold, 3 T-Posts</td>
<td><img src="image18" alt="Diagram" /></td>
<td>57½ₜₜ</td>
<td>159½ₜₜ</td>
<td>59½ₜₜ</td>
<td>161½ₜₜ</td>
<td>67½ₜₜ</td>
</tr>
<tr>
<td>6 Panel, 5 T-Posts</td>
<td><img src="image19" alt="Diagram" /></td>
<td>60½ₜₜ</td>
<td>186½ₜₜ</td>
<td>62½ₜₜ</td>
<td>187½ₜₜ</td>
<td>70½ₜₜ</td>
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<tr>
<td>8 Panel, 5 T-Posts</td>
<td><img src="image20" alt="Diagram" /></td>
<td>75½ₜₜ</td>
<td>243½ₜₜ</td>
<td>77½ₜₜ</td>
<td>245½ₜₜ</td>
<td>79½ₜₜ</td>
</tr>
</tbody>
</table>
## Chapter 5: Panel Configurations and T-Posts

### Composite: Min. & Max. Order Width By Panel Configuration: 4½” Louvers

Below are some examples of how the shutter unit can be configured using various combinations of panels and T-posts.

<table>
<thead>
<tr>
<th>Panel Configuration</th>
<th>Composite</th>
<th>Direct Mount</th>
<th>Tilt Z</th>
<th>Z- Frames</th>
<th>Deco-Frame</th>
<th>L-Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Order W-O</td>
<td></td>
<td>Order W-O</td>
<td>Order F-F Size</td>
<td>Order F-F Size</td>
</tr>
<tr>
<td>1 Panel</td>
<td></td>
<td>9½&quot;</td>
<td>26¾&quot;</td>
<td>11</td>
<td>27¾</td>
<td>14½</td>
</tr>
<tr>
<td>2 Panel</td>
<td></td>
<td>18½&quot;</td>
<td>52</td>
<td>19%</td>
<td>53¾</td>
<td>24½</td>
</tr>
<tr>
<td>2 Panel, 1 T-Post</td>
<td></td>
<td>19%</td>
<td>53%</td>
<td>21%</td>
<td>55½</td>
<td>25%</td>
</tr>
<tr>
<td>1 Bi-fold</td>
<td></td>
<td>18½&quot;</td>
<td>48</td>
<td>19%</td>
<td>49½</td>
<td>24½</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold</td>
<td></td>
<td>27¾</td>
<td>74%</td>
<td>29%</td>
<td>76</td>
<td>34½</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold, 1 T-Post</td>
<td></td>
<td>28½</td>
<td>75¾</td>
<td>30%</td>
<td>76%</td>
<td>35%</td>
</tr>
<tr>
<td>3 Panel, 1 T-Post</td>
<td></td>
<td>28½</td>
<td>79¾</td>
<td>30%</td>
<td>74%</td>
<td>35%</td>
</tr>
<tr>
<td>3 Panel, 2 T-Post</td>
<td></td>
<td>29¾</td>
<td>80%</td>
<td>31%</td>
<td>82½</td>
<td>36%</td>
</tr>
<tr>
<td>2 Bi-Fold</td>
<td></td>
<td>36¾</td>
<td>95%</td>
<td>38%</td>
<td>97½</td>
<td>43½</td>
</tr>
<tr>
<td>2 Bi-Fold, 1 T-Post</td>
<td></td>
<td>37%</td>
<td>97</td>
<td>39½</td>
<td>98½</td>
<td>45%</td>
</tr>
<tr>
<td>4 Panel, 1 T-Post</td>
<td></td>
<td>37%</td>
<td>105</td>
<td>38½</td>
<td>106½</td>
<td>45½</td>
</tr>
<tr>
<td>4 Panel, 2 T-Posts</td>
<td></td>
<td>38½</td>
<td>106¾</td>
<td>40%</td>
<td>108½</td>
<td>46½</td>
</tr>
<tr>
<td>4 Panel, 3 T-Posts</td>
<td></td>
<td>39%</td>
<td>107%</td>
<td>41%</td>
<td>109½</td>
<td>47%</td>
</tr>
<tr>
<td>3 Panel, 1 Bi-fold, 2 T-Post</td>
<td></td>
<td>47%</td>
<td>128½</td>
<td>51½</td>
<td>131½</td>
<td>60½</td>
</tr>
<tr>
<td>5 Panel, 4 T-Posts</td>
<td></td>
<td>50½</td>
<td>142½</td>
<td>51%</td>
<td>144%</td>
<td>60</td>
</tr>
<tr>
<td>2 Panel, 2 Bi-Fold, 2 T-Post</td>
<td></td>
<td>55%</td>
<td>150½</td>
<td>58%</td>
<td>152%</td>
<td>66%</td>
</tr>
<tr>
<td>6 Panel, 2 T-Posts</td>
<td></td>
<td>56%</td>
<td>158</td>
<td>58</td>
<td>159½</td>
<td>66%</td>
</tr>
<tr>
<td>2 Panel, 2 Bi-Fold, 3 T-Posts</td>
<td></td>
<td>57½</td>
<td>151½</td>
<td>59%</td>
<td>153½</td>
<td>62%</td>
</tr>
<tr>
<td>6 Panel, 5 T-Posts</td>
<td></td>
<td>60½</td>
<td>162½</td>
<td>62½</td>
<td>163½</td>
<td>70%</td>
</tr>
<tr>
<td>8 Panel, 5 T-Posts</td>
<td></td>
<td>75%</td>
<td>211%</td>
<td>77½</td>
<td>213%</td>
<td>79%</td>
</tr>
</tbody>
</table>
Chapter 5: Panel Configurations and T-Posts

Measuring T-Post Locations

Always start from the left point of measure type to the center of the desired T-Post location.

To measure frame-to-frame, measure from the left of the shutter frame to the center of the desired T-Post location.

To measure the window opening, measure from the left inside of the window opening to the center of the desired T-Post location.

If there is more than one T-Post, measure from the left of measure type to the center of first T-Post location, then measure from the left of measure type over to the center of the second T-Post location etc.

EXAMPLE: A-B, A-C, A-D

Always measure from the same point the frame was measured.

EXAMPLE: If measuring for L-Frame, frame-to-frame measure type, A is the outside edge of the L-Frame.
Chapter 6: Panel Overlap Options

Quick-Start Product Knowledge Basics - for Standard Rectangular Shutters

SHUTTER ORDER FORM COLUMN HEADINGS

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHUTTER TYPE: Wood and Composite | SHUTTER STYLE: Standard Rectangular |

Choosing Your Style of Panel Overlap

Panel overlap is defined by the manner in which adjacent panels align with one another. There are two styles; of overlap; rabbet style (or abutting one another) and astragal style (or overlapping one another). Ideally, this is finalized with the consumer before handing off to a qualified installer for final measure.

The desirable benefit of the astragal style overlap is that it hides the gap where any panels meet. This is especially helpful when you anticipate moderate gaps due to window irregularities. Astragal overlap may provide a higher degree of panel gap adjustment than the rabbet style during installation. Since your installer is ultimately responsible for achieving the best fit and appearance, they may be a strong proponent of astragal style overlap.

The desirable benefit of the rabbet style overlap is its sleek, traditional appearance.

Panel overlap type will be influenced by a combination of the following conditions:
- Whether there’s a critical need for the left panel to swing out first (Example: kitchen sink faucet obstruction). The Rabbet style overlap is not available as left-over-right.
- Your design preference
- If the window is out-of-square
- Your installer’s preference

Key Selling Features

| Wood | Composite |

Important Easy-to-Price ‘No-Charge’ Option
- There’s no additional charge for astragal panel overlap

Astragal Overlap Features & Benefits
- Astragal overlap hides the gap where panels meet.
- Astragal is used where panels meet in the center of the window and where panels are hinged together in a bi-fold set.

Rabbit Style Panel Overlap
- Factory standard
- Right-over-left overlap only
- Left-over-right not available

Astragal Style Panel Overlap
- No charge option
- Right-over-left overlap standard
- Left-over-right overlap optional
- Astragal will automatically be used between center and bi-fold panels
Chapter 7: Divider Rail Options

Quick-Start Product Knowledge Basics - for Standard Rectangular Shutters

SHUTTER ORDER FORM COLUMN HEADINGS

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

SHUTTER TYPE: Wood and Composite

SHUTTER STYLE: Standard Rectangular

Working With Divider Rails

Divider rails are horizontal rails, required at certain panel heights for panel strength. By design, the divider rail splits the larger (full panel height) louver set into two individually operated louver sets. Ideally, this spec is finalized with the consumer before handing off to a qualified installer for final measure.

Three Conditions Prompting the Use of a Divider Rail:

- **When required:** Divider rails are required for panel strength, but only beyond a certain ‘order height’. Essentially, they are used as a method to allow shutters panels to be made at taller heights. The threshold for when a divider rail is required, varies by shutter material type.

- **For privacy purposes:** One large louver set can be split into two separately operating upper and lower louver sets. One example of this setting is a bathroom where the lower louver set can be closed for privacy, while the upper louver set remains open for light and view.

- **For design purposes:** Some rooms feature a dominant horizontal architectural line. In some cases, placing a divider rail at a complimentary height will help carry this same continuous line through the shutter treatments as well.

Reminder Notes:

- The divider rail requirement height *threshold* is set according to actual ‘order height’, not actual panel height. (Recall that for outside mount frames, order height includes the frame.)

- Two divider rails within the same panel is available for wood shutters only, but two rails are never required within the same panel. Two rails are a design preference only.

Key Selling Features

**Important Easy-to-Price ‘No-Charge’ Options**

- There’s never an additional charge for divider rail, whether one is required or not.
Chapter 7: Divider Rail Options

Divider Rail Requirements

<table>
<thead>
<tr>
<th>Condition</th>
<th>Wood</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divider Rail Required</td>
<td>Over 84” order height</td>
<td>Over 72” order height</td>
</tr>
<tr>
<td>Divider Rail Face-Height</td>
<td>3” for 2½” and 3½” Louvers</td>
<td>3” for 2½”, 3½”, and 4½” Louvers</td>
</tr>
<tr>
<td>Minimum Louver Set in Each Section</td>
<td>2 louvers</td>
<td>2 louvers</td>
</tr>
<tr>
<td>Other Divider Rails Options</td>
<td>Available when not required at no charge</td>
<td>Available when not required at no charge</td>
</tr>
<tr>
<td></td>
<td>Up to 2 divider rails available, but never required</td>
<td>Only 1 divider rail available</td>
</tr>
<tr>
<td>Divider Rail Placement for 2½” and 3½” Louvers</td>
<td>Will be located as specified on the order</td>
<td>Will be located as specified on the order</td>
</tr>
<tr>
<td>Divider Rail Placement for 4½” Louvers</td>
<td>Factory may shift up or down as much as 2” to achieve uniform louver spacing</td>
<td>Factory may shift up or down as much as 2” to achieve uniform louver spacing</td>
</tr>
</tbody>
</table>

Helpful Hints

In Rooms With Multiple Windows of Similar Heights

When working with a bank of windows, all window sizes must be ordered at the **exact same height**. This will ensure 1) the same louver count, 2) same size top & bottom rails and 3) same placement of divider rail.

If window heights vary, modify height measurements or choose another frame application to ensure exact same order height.

If not ordered according to a uniform height, divider rail locations may not match and the sizes of the panel’s top and bottom rails may vary as much as 3”.

Measuring Divider Rail Location

Frame type determines measure format (WO or F-F). So, method for measuring for divider rail location also varies by frame type. Use same measure reference point as used for the larger unit itself.

For Direct Mount, Hang Strip and Z-frames:
Measure from the bottom of the window opening up to the center of the divider rail.

For L-frames and Deco-frames:
Measure from the bottom of the bottom frame up to the center of the divider rail.
Chapter 8: Louver Options

Quick-Start Product Knowledge Basics - for Standard Rectangular Shutters

SHUTTER ORDER FORM COLUMN HEADINGS

<table>
<thead>
<tr>
<th>Column Heading</th>
<th>Design Element</th>
<th>Installation Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shutter Style</td>
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<td>X</td>
</tr>
<tr>
<td>Color Number</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Louver Size</td>
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<td>X</td>
</tr>
<tr>
<td>Frame Type</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Build Out Quantity</td>
<td>X</td>
<td>X</td>
</tr>
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<td>Measure Type</td>
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<td>X</td>
</tr>
<tr>
<td>Width</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Height</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Café Panel Height</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Café Aligning Catch</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Frame Configuration</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Sill Cap Option</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Hidden Tilt</td>
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<tr>
<td>Astragal</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Astragal Overlap</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Panel Configuration</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>T-Post Locations</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Div. Rail or Split Tilt</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Div. Rail or Split Tilt Location</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hinge Color</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Mouse Hole</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

SHUTTER TYPE: Wood and Composite
SHUTTER STYLE: Standard Rectangular

Choosing Your Louver Size

Louver size can dramatically impact the overall appearance of a shutter but the larger the louver, the more clearance is required from the back surface of the panel to insure tilting is not obstructed. Ideally, louver size is finalized with the consumer before handing off to a qualified installer for final measure.

Louver size will be influenced by a combination of the following conditions:

- Panel size
- Type of view to the outside of the home
- Window depth (relevant to both inside & outside mounts).

Other Conditions to Consider:

- **Proportion:** Consider the size of the panels in relation to louver size, to determine the most appropriate proportion.
- **Uniform Look:** Consider keeping louver sizes the same throughout the job. This ensures a uniform look from the outside of the home.
- **Within Spec:** In certain circumstances, minimum and maximum height requirements may vary by louver size. Refer to *Min & Max Order Height by Frame Type chart* to confirm that your order sizes are within spec.

Reminder Notes:

- Larger louvers require more window depth.
- Hide-a-Tilt mechanism requires an additional 3/8” clearance than louvers connected with a front tilt bar.
- See next page for louver clearance chart.
- No additional charge for any louver size

### Key Selling Features

- **2½” Louver**
  - Traditional in style
  - Minimal window depth needed
  - Shutters are focal point of the room

- **3½” Louver**
  - Most popular louver size
  - Offers more visibility and light control

- **4½” Louver**
  - Provides the greatest visibility through the open louvers
  - Looks most proportionate in a larger window, view beyond the window becomes more important
  - Louvers almost disappear when open
Louver Clearance

Louver Clearance Diagram for
STANDARD FRONT TILT BAR
(add 3/8" more clearance when using Hide-a-Tilt)

<table>
<thead>
<tr>
<th>Louver Size</th>
<th>Standard Tilt</th>
<th>Hide-a-Tilt™</th>
</tr>
</thead>
<tbody>
<tr>
<td>2½&quot;</td>
<td>¾&quot;</td>
<td>1⅛&quot;</td>
</tr>
<tr>
<td>3½&quot;</td>
<td>1⅛&quot;</td>
<td>1⅝&quot;</td>
</tr>
<tr>
<td>4½&quot;</td>
<td>1¾&quot;</td>
<td>2⅛&quot;</td>
</tr>
</tbody>
</table>
Tips For Replacing a Louver in a Shutter With Front Tilt Bar

1. Start the process by identifying which louver is being replaced and pull the staple out of the back side of the tilt bar, approaching it from the back of the shutter panel. This will disconnect the selected louver from the tilt bar. A good pair of needle nose pliers are ideal for this procedure.

2. The next step is to close the louver and insert the blade of your utility knife (between the louver and the style) and tap down on the knife to gently cut through (to cut off) the plastic louver pin. Once the louver pin has been cut, the louver simply pulls out of the hole on the other end.

3. Unlike the original louver pin, the replacement louver pin is spring-loaded. This feature is what will enable you to re-insert the replacement louver. The next step is to insert the new spring-loaded louver pin into the stile hole on either side of the panel.

4. Inspect the replacement louver to make sure it has a louver pin already in position on its opposite end. Insert that 'fixed' pin into the other end of the stile first. Then, raise the replacement louver into position near the spring loaded pin and compress the spring loaded pin so that the louver end will pass over the compressed pin. Gently move the louver around until the spring loaded louver pin snaps into place.

5. The final step is to re-insert the tilt bar staple that connects the louver staple to the back side of the tilt bar itself. Again, this work would be accomplished from the back side of the shutter panel and the ideal tool to use is a quality pair of needle nose pliers.
Tips For Replacing a Louver in a Shutter With Hidden Tilt

1. Start the process by identifying which louver is being replaced and pull the screw or the nail out of the louver where it’s attached at the tilt bar. A small flat-blade screw driver and pliers are ideals tools for this procedure.

2. The next step is to close the louver and insert the blade of your utility knife (between the louver and the style) and tap down on the knife to gently cut through (to cut off) the plastic louver pin. Once the louver pin has been cut, the louver simply pulls out of the hole on the other end.

3. Unlike the original louver pin, the replacement louver pin is spring-loaded. This feature is what will enable you to re-insert the replacement louver. The next step is to insert the new spring-loaded louver pin into the stile hole on either side of the panel.

4. Inspect the replacement louver to make sure it has a louver pin already in position on its opposite end. Insert that ‘fixed’ pin into the other end of the stile first. Then, raise the replacement louver into position near the spring loaded pin and compress the spring loaded pin so that the louver end will pass over the compressed pin. Gently move the louver around until the spring loaded louver pin snaps into place.

5. The final step is to re-insert the nail or screw through the hidden tilt mechanism to secure the louver to it.
Quick-Start Product Knowledge Basics - for Standard Rectangular Shutters

Choosing Your Tilt Type

There are two types of mechanisms used for tilting the angle of the inter-connected louvers; one style that’s outfitted on the front of the panel and one that’s hidden out of view, on the back side of the panel. Both types of mechanisms are also offered with a common set of options.

Ideally, tilt type (and the options related to each type of tilt) are all finalized with the consumer before handing off to a qualified installer for final measure.

Tilt type will be influenced by a combination of the following conditions:

- Traditional or Contemporary design preferences
- Quality of the view to the outdoors
- Window depth (if inside mounting or if window is shallow).
- Cost

Other Conditions to Consider:

- Material Type: Wood and composite programs have different maximum height specifications for Hide-a-Tilt, before a divider rail or split tilt is required.

Reminder Notes:

- The proper technique for tilting louvers open and closed is to operate a single louver toward the center of the louver set. The front tilt bar is not designed to be used as a grip or a handle, while tilting the louvers.
- See pricing page for charges relating to Hide-a-Tilt and Split Tilt.
Chapter 9: Tilt Options

Front Tilt Bar Options

6 Combinations of Available Options Using Front Tilt Bar:

**SINGLE LOUVER SETS**

1. Without Double Mouse Hole
2. With Double Mouse Hole

**TWO LOUVER SETS Using Divider Rail**

3. Without Double Mouse Holes
4. With Double Mouse Hole

**TWO LOUVER SETS Using Split Tilt**

5. Without Double Mouse Holes
6. With Double Mouse Hole

**Front Tilt Bar ‘Mouse Holes’**

A mouse hole is a recess in the top or bottom rail designed to allow the tilt bar to rest below the panel surface for full louver closure.

- **Single Mouse Hole is Factory Standard:** A single mouse hole in the top rail, allowing the louvers to fully close in the upward direction only. A more traditional approach.

- **Double Mouse Hole Option:** Mouse holes placed in both the upper and lower panel rails, allowing for full louver closure in either the upward or downward direction.

**Front Tilt Bar with ‘Split Tilt’ Option**

Split Tilt is an option where one large louver set is split into two individually operating louver sets without the use of a divider rail. The front tilt bar is cut at a specified location.

- The front tilt bar can be cut at a specified location.
- Available with 3½” and 4½” louvers.
  - For 3½” louvers, split will be placed as specified
  - For 4½” louvers, split may shift up or down as much as 2” from specified location.

Front Tilt bar Split Tilt is not offered with 2½” louvers.

**Reminder Notes:**

- **Maximum Height:** When using Split Tilt with front tilt bar, each louver set cannot exceed:
  - 84” on Wood or 72” on Composite.
- **Special Handling Required:** With Split Tilt, the upper and lower louver set can accidentally be positioned at opposing angles where the edges of the louvers touch.
- **Matching Other Shutters in Same Room:** If shutters are not ordered at the exact same height with exact same split, the top and bottom rail sizes may vary between shutter units by as much as 3”.

<table>
<thead>
<tr>
<th>Front Tilt Bar</th>
<th>Order height cannot exceed:</th>
<th>Each louver set cannot exceed:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Divider Rail</td>
<td>With Divider Rail</td>
</tr>
<tr>
<td>WOOD</td>
<td>84”</td>
<td>84”</td>
</tr>
<tr>
<td>COMPOSITE</td>
<td>72”</td>
<td>72”</td>
</tr>
</tbody>
</table>
Chapter 9: Tilt Options

Hide-a-Tilt Options (rear tilt mechanism)

3 Combinations of Available Options Using Hide-a-Tilt:

Hide-a-Tilt Description
Hide-a-Tilt option transfers the tilt mechanism to the back of the shutter panel, replacing the traditional front tilt bar and effectively removing it as a visual obstruction. The results are improved view and a clean linear appearance. The Hide-a-Tilt mechanism uses a thin stainless steel tilt bar that is attached to the ends of each louver on the back side of the panel. Operation of the shutter is as simple as gently gripping and positioning one louver; all of the other louvers will follow.

- Hide-a-Tilt is mounted on the hinge side of standard shutters.
- No mouse hole in the panel as there is no front tilt bar.
- Hide-a-Tilt allows the louvers to be fully closed either upward or downward.
- Hide-a-Tilt is built using an unpainted stainless steel color only.

Reminder Notes:
- When using Hide-a-Tilt without divider rail or Split Tilt, the maximum order height and louver set height is:
  - 60” for WOOD or 72” for COMPOSITE

Hide-a-Tilt with ‘Split Tilt” Option
Split Tilt is an option where one large louver set is split into two individually operating louver sets without the use of a divider rail. In other words, Split Tilt is an alternative to using a divider rail.

- The rear tilt mechanism can be cut at a specified location.
- Available with 2¼”, 3½” and 4½” louvers.
  - For 2¼” & 3½” louvers, split will be placed as specified
  - For 4½” louvers, split may shift up or down as much as 2” from specified location.
- When using Split Tilt with Hide-a-Tilt, each louver set cannot exceed:
  - 60” on Wood or 72” on Composite

Reminder Notes:
- Special Handling Required: With Split Tilt, the upper and lower louver set can accidentally be positioned at opposing angles where the edges of the louvers touch.
- Matching Other Shutters in Same Room: If shutters are not ordered at the exact same height with exact same split, the top and bottom rail sizes may vary between shutter units by as much as 3”.

<table>
<thead>
<tr>
<th>Hide-a-Tilt</th>
<th>Without Divider Rail</th>
<th>With Divider Rail</th>
<th>With Split Tilt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order height</td>
<td>60”</td>
<td>60”</td>
<td>60”</td>
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<tr>
<td>Each louver set</td>
<td>60”</td>
<td>60”</td>
<td>60”</td>
</tr>
<tr>
<td>cannot exceed</td>
<td>WOOD</td>
<td>COMPOSITE</td>
<td></td>
</tr>
</tbody>
</table>

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Shutter Product Resource Manual
Chapter 10: Café Shutters

Quick-Start Product Knowledge Basics - for Café Shutters

SHUTTER ORDER FORM COLUMN HEADINGS

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Cafe Style</td>
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<tr>
<td>B</td>
<td>Color Number</td>
</tr>
<tr>
<td>C</td>
<td>Louver Size</td>
</tr>
<tr>
<td>D</td>
<td>Frame Type</td>
</tr>
<tr>
<td>E</td>
<td>Build Out Quantity</td>
</tr>
<tr>
<td>F</td>
<td>Measure Type</td>
</tr>
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<td>n/a Width</td>
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<tr>
<td>H</td>
<td>n/a Height</td>
</tr>
<tr>
<td>I</td>
<td>Café Panel Height</td>
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<tr>
<td>J</td>
<td>Café Aligning Catch</td>
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<tr>
<td>K</td>
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<td>L</td>
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<tr>
<td>M</td>
<td>Panel Configuration</td>
</tr>
<tr>
<td>N</td>
<td>T-Post Location</td>
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<tr>
<td>O</td>
<td>Sill Cap Order Option</td>
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<td>Café Panel Height</td>
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<td>Y</td>
<td>Café Aligning Catch</td>
</tr>
<tr>
<td>Z</td>
<td>Hidden Tilt</td>
</tr>
</tbody>
</table>

SHUTTER TYPE: Wood and Composite

SHUTTER STYLE: Café

Working With Café Shutters

- Café shutters are panels that use any of the available frames, but don’t cover the entire height of a window. Café shutters are used for either decorative purposes or in areas where full privacy is not needed.
- Pricing is based on width X café panel height.

Other Café Treatment Conditions to Consider:

- **Type of Mount**: Café shutters can be mounted either inside or outside and are available in both wood and composite materials.
- **Frame Height**: There are two options for frame height in relation to the panel height; Frames can either be specified to stop at the height of the panel or they can be made as ‘full-height frames’, wrapping around the entire outer perimeter of window. The column on the Standard shutter order form called “Café Panel Height”, is where you clarify any difference between the height of the frame and the height of the shutter panel. It’s where you want the top of the panel to stop.

Composite Shutter Notes:

- Composite material is not recommended for café shutters in certain settings, as the top of the panel is not finished. The composite material is very porous and won’t finish as smoothly as wood.
- If the café panels are short or the consumer is tall enough to see the panel tops, consider wood café shutters, rather than composite.

T-Post Reminder Notes:

- Configurations with a T-post are not available with the café option. That’s because it looks awkward when the T-post goes the full-height of the window, while the panels only treat a partial height of the window.

Key Selling Features

Frame Height Can Match Café Panel Height

- Provides a decorative treatment in areas where full privacy is not needed.

Frame Height Can Match Window Height

- Provides a finished look for stand-alone units or to match full-height units in an adjacent room.
- Refer to pricing page for full-height frame charge.
Café is available in a variety of frames, both inside and outside mount.

- Measure format depends on frame type selected
- For **direct mount**, use ‘window opening’ size (WO) and no frame is furnished. (NOTE: Panel will be 1/8” smaller than café panel height, to allow for bottom panel clearance.)
- For **hang strip**, use ‘window opening’ size (WO) and hang strip will be same height as café panel. (NOTE: Panel will be 1/8” smaller than café panel height, to allow for bottom panel clearance.)
- For **Z-frame**, use ‘window opening’ size (WO) and frame can be made at same height as café panel or be made at window height for ‘full-height frame’. (NOTE: The café panel height ordered will include whatever frame configuration ordered for the bottom. Café panel height is considered the top of the shutter panel.)
- For **L-frame and Deco frame**, use ‘frame-to-frame’ size (F-F) and frame can be made at same height as café panel or be made at window height for ‘full-height frame’. (NOTE: The café panel height ordered will include whatever frame configuration ordered for the bottom. Café panel height is considered the top of the shutter panel.)
- **Note**: Faux wood is not recommended for café shutters as panel top will not be finished.

**Measuring for Divider Rail Placement**

- Use the same measure format for measuring divider rail placement as you would for the larger unit itself.
- For frames requiring window-opening (WO) size: Direct mount, hang strip and Z-frames: Measure from bottom of window up to center of divider rail.
- For frames requiring frame-to-frame (F-F) size: L-frame and Deco-frames: Measure from bottom of frame to center of divider rail.

**Ordering Tip:**

- Refer to the four frame configurations below. When ordering these open-top configurations (when panel and frame height are the same) simply place the order as ‘Standard’ shutters.
- The ‘Café Panel Height’ column on the order form is reserved for 4-sided configurations (those with a top frame).

**Café Aligning Catch (optional feature)**

- **Café aligning catch** is a magnet assembly designed to hold the two panel together in the center of the window.
- The device is offered as an option since there may not be a top shutter frame or window frame surface for the shutter panels to rest against.
- When shutters are specified as café, the usual round, imbedded magnet at the top of the panel will not be furnished.
Chapter 11: Arch Shutters

Quick-Start Product Knowledge Basics - for Sunburst Style Arch Shutters

**SHUTTER TYPE:** Wood and Composite

**SHUTTER STYLE:** Arch

**Working With Sunburst Style Arch Shutters**

Sunburst style arch shutters are curved panels where the louvers fan out from a center hub and louvers are individually operated. The sunburst style arch is designed to treat a standalone opening that is not connected to the window below. However, a highly-skilled installer can adapt this style panel to other treatment scenarios.

**Treatment Conditions to Consider:**

- **Type of Mount:** Arch shutters can be mounted either inside or outside and are available in both wood and composite materials.

  ![Wood Composite](image)

- **Arch Shape:** Arch shutters are available in a variety of curvatures; eyebrow, elongated, elliptical and quarter arch. However, there are restrictions on height and width and ratios of height-to-width. See following pages.

- **Adjusting Louver Angle:** The arch has no tilt bar, but the louvers are operable individually. Consider how the consumer will reach the window to operate and how often the louvers may require adjustment. Some consumers never adjust the louver angle, while others prefer seasonal adjustment.

**Reminder Notes:**

- **Louvers** fan out from center hub and will be tapered in shape due to the geometry inherent in the unit. They will not match the shape in standard rectangular units.

- **Louver shape** of wood and composite are different
  - Wood louvers have beveled edges
  - Composite louvers are rabbeted

- **Template** is always required for elliptical arches
  - See the following pages for other template requirements.

- **Buildout** is available for outside mount framed arches only. Buildout not available with sill frame bottom.

- Some **frame styles** not available with quarter arches.

- **Sill Cap** available on framed WOOD arch only.

**Key Selling Features**

**Designed to Match Standard Rectangular Shutters**

- Offered in curvatures to fit most arch openings
- All wood and composite colors are available
- Some frame types are not offered.
- Available with and without framing.
### Wood and Composite Sunburst Arch: Panel Specs for Frameless & Framed

#### Panel Specifications
- Sunburst pattern—no horizontal louvers
- Wood sunburst arch louvers have a beveled style
- Composite sunburst arch louvers have rabbeted style
- Louver sizes will vary based on height and width of arch
- The arch has no tilt bar; the louvers open individually and are spring loaded at the bottom pin
- Wood panel is 1” thick and composite panel is 1 1/16” thick.
- *Arches wider than 80” will be built with a non-movable center (vertical) louver for stability.

<table>
<thead>
<tr>
<th>Sunburst Arch Base Width</th>
<th>WOOD</th>
<th>COMPOSITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Rail Size</td>
<td>Bottom Rail Size</td>
<td>Top Rail Size</td>
</tr>
<tr>
<td>20” to less than 24”</td>
<td>2”</td>
<td>1”</td>
</tr>
<tr>
<td>24” to less than 45”</td>
<td>3”</td>
<td>2”</td>
</tr>
<tr>
<td>45” to less than 72”</td>
<td>3”</td>
<td>3”</td>
</tr>
<tr>
<td>72” to less than 80”</td>
<td>3”</td>
<td>3”</td>
</tr>
<tr>
<td>*80” to 108”</td>
<td>4”</td>
<td>4”</td>
</tr>
</tbody>
</table>

#### Wood and Composite Sunburst Arch: Frameless - Minimum and Maximum Sizes

<table>
<thead>
<tr>
<th>Frameless Sunburst Arch Specs</th>
<th>WOOD</th>
<th>COMPOSITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build-outs are not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order arch as frame-to-frame</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If mounting arch inside, take own deductions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If mounting outside, allow sufficient wall surface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frameless panel may not match projection of other outside mount framed standards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perfect Sunburst Arch</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order as Eyebrow arch</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Height = 50% of width</td>
<td>20”</td>
<td>108”</td>
<td>20”</td>
<td>72”</td>
</tr>
<tr>
<td>No template required</td>
<td>10”</td>
<td>54”</td>
<td>7”</td>
<td>36”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eyebrow Sunburst</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height minimum = no less than 33% of width</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Height maximum = no greater than 66% of width</td>
<td>20”</td>
<td>108”</td>
<td>20”</td>
<td>72”</td>
</tr>
<tr>
<td>Template required if height exceeds 54% of width</td>
<td>7”</td>
<td>54”</td>
<td>7”</td>
<td>36”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elongated Sunburst</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height minimum = no less than 33% of width</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Height maximum = no greater than 66% of width</td>
<td>20”</td>
<td>108”</td>
<td>20”</td>
<td>72”</td>
</tr>
<tr>
<td>Template required if ordered height minus ordered leg height exceeds 54% of width</td>
<td>10”</td>
<td>71¼”</td>
<td>10”</td>
<td>47½”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elliptical Sunburst</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch without a constant radius</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Template is always required</td>
<td>20”</td>
<td>108”</td>
<td>20”</td>
<td>72”</td>
</tr>
<tr>
<td></td>
<td>7”</td>
<td>54”</td>
<td>7”</td>
<td>36”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Palladian</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height minimum = no less than 33% of width</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Height maximum = no greater than 66% of width</td>
<td>20”</td>
<td>108”</td>
<td>20”</td>
<td>72”</td>
</tr>
<tr>
<td>Additional measurements required</td>
<td>7”</td>
<td>71¼”</td>
<td>7”</td>
<td>47½”</td>
</tr>
<tr>
<td>See order form</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>¼ Eyebrow Sunburst Arch</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leg height min = no less than 33% of width</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Leg height max = no greater than 108% of width</td>
<td>15”</td>
<td>54”</td>
<td>15”</td>
<td>36”</td>
</tr>
<tr>
<td></td>
<td>7”</td>
<td>54”</td>
<td>7”</td>
<td>36”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>¼ Elongated Sunburst Arch</th>
<th>Width</th>
<th>Height</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leg height min = no less than 33% of width</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Leg height max = no greater than 132% of width</td>
<td>15”</td>
<td>54”</td>
<td>15”</td>
<td>36”</td>
</tr>
<tr>
<td></td>
<td>10”</td>
<td>71¼”</td>
<td>10”</td>
<td>47½”</td>
</tr>
</tbody>
</table>
# Chapter 11: Arch Shutters

## Wood Sunburst Arch—Framed Options

<table>
<thead>
<tr>
<th>Frame Options</th>
<th>Z-Frames*</th>
<th>L-Frames</th>
<th>Narrow Colonial L-Frame</th>
<th>Deco Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount</td>
<td>Inside Mount Only</td>
<td>Outside Mount Only</td>
<td>Outside Mount Only</td>
<td>Outside Mount Only</td>
</tr>
<tr>
<td>Order Size</td>
<td>Window Opening (WO)</td>
<td>Frame-to-Frame (F-F)</td>
<td>Frame-to-Frame (F-F)</td>
<td>Frame-to-Frame (F-F)</td>
</tr>
<tr>
<td>Projection</td>
<td>Wood: 3/8”</td>
<td>Wood: 2”, 2½”, 3”</td>
<td>Wood: 15/16”</td>
<td>Wood: 1 11/16” or 1 13/16”</td>
</tr>
</tbody>
</table>

* Framed arches are not available with Tilt-Out Z-frame.
- Sill Cap available on framed wood arch only
- All frame types are available with sill bottom

### Wood Framed Full and ¼ Sunburst Arches

<table>
<thead>
<tr>
<th>Arch Type</th>
<th>Frame Options</th>
<th>Minimum Width</th>
<th>Maximum Width</th>
<th>Minimum Height</th>
<th>Maximum Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfect Sunburst Arch (Height = 50% of width)</td>
<td>Z-Frame</td>
<td>21 1/2”</td>
<td>109 5/16”</td>
<td>11 13/16”</td>
<td>55 5/16”</td>
</tr>
<tr>
<td>Eyebrow Sunburst (Height Minimum = no less than 33% of width)</td>
<td>L-Frame</td>
<td>22 1/4”</td>
<td>110 1/16”</td>
<td>12 3/8”</td>
<td>56 1/4”</td>
</tr>
<tr>
<td>Elongated Sunburst (Height Minimum = no less than 33% of width)</td>
<td>Narrow Colonial L-Frame</td>
<td>21 1/16”</td>
<td>105 1/16”</td>
<td>11 1/16”</td>
<td>56 1/16”</td>
</tr>
<tr>
<td>Elliptical Sunburst (arch without a constant radius)</td>
<td>L-Frame</td>
<td>22 1/4”</td>
<td>110 1/16”</td>
<td>12 3/8”</td>
<td>56 1/4”</td>
</tr>
<tr>
<td>Palladian (Height Minimum = no less than 33% of width)</td>
<td>Narrow Colonial L-Frame</td>
<td>21 1/16”</td>
<td>105 1/16”</td>
<td>11 1/16”</td>
<td>56 1/16”</td>
</tr>
<tr>
<td>¼ Eyebrow Sunburst Arch (Leg minimum = 33% of width)</td>
<td>L-Frame</td>
<td>22 1/4”</td>
<td>110 1/16”</td>
<td>12 3/8”</td>
<td>56 1/4”</td>
</tr>
<tr>
<td>¼ Elongated Sunburst Arch (Leg minimum = 33% of width)</td>
<td>3/4 Deco Frame</td>
<td>24 1/16”</td>
<td>112 1/16”</td>
<td>14 7/16”</td>
<td>78 3/16”</td>
</tr>
</tbody>
</table>

**NOTE:** The following frame types are not available ¼ arches:
- Narrow Colonial L-Frame
- Bullnose Z-Frame
- Craftsman Deco and Z-Frame
- 2½” and 3” Extended Standard L-Frame
- 2½” and 3” Extended Narrow Colonial L-Frame

*Build-outs are available on L-Frame and Deco frame arches, but not also available with sill bottom.*
## Chapter 11: Arch Shutters

### Composite Sunburst Arch—Framed Options

<table>
<thead>
<tr>
<th>Frame Options</th>
<th>Z-Frames*</th>
<th>L-Frames</th>
<th>Deco Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount</td>
<td>Inside Mount Only</td>
<td>Outside Mount Only</td>
<td>Outside Mount Only</td>
</tr>
<tr>
<td>Order Size</td>
<td>Window Opening (WO)</td>
<td>Frame-to-Frame (F-F)</td>
<td>Frame-to-Frame (F-F)</td>
</tr>
<tr>
<td>Projection</td>
<td>Composite: 3/8”</td>
<td>Composite: 2”</td>
<td>Composite: 1 11/16”</td>
</tr>
</tbody>
</table>

- Framed arches are not available with Tilt-Out Z-frame
- All frame types are available with sill bottom
- Build-outs are available on L-Frame and Deco frame arches, but not also available with sill bottom.

### Composite Framed Full and ½ Sunburst Arches

<table>
<thead>
<tr>
<th>Framed Full and ½ Sunburst Arches</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Perfect Sunburst Arch</td>
<td>Z-Frame</td>
<td>21 ¾”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>22⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>24 ⅝”</td>
</tr>
<tr>
<td>Eyebrow Sunburst</td>
<td>Z-Frames</td>
<td>21 ¾”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>22⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>24⅝”</td>
</tr>
<tr>
<td>Elongated Sunburst</td>
<td>Z-Frames</td>
<td>21 ¾”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>22⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>24⅝”</td>
</tr>
<tr>
<td>Elliptical Sunburst</td>
<td>Z-Frames</td>
<td>21 ¾”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>22⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>24⅝”</td>
</tr>
<tr>
<td>Palladian</td>
<td>Z-Frames</td>
<td>21 ¾”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>22⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>24⅝”</td>
</tr>
<tr>
<td>½ Eyebrow Sunburst Arch</td>
<td>Z-Frames</td>
<td>16⅟”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>17 ⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>21⅝”</td>
</tr>
<tr>
<td>½ Elongated Sunburst Arch</td>
<td>Z-Frames</td>
<td>16⅟”*</td>
</tr>
<tr>
<td></td>
<td>L-Frame</td>
<td>17 ⅝”</td>
</tr>
<tr>
<td></td>
<td>Deco Frame</td>
<td>21⅝”</td>
</tr>
</tbody>
</table>

---

*All measurements are in inches.*
Chapter 11: Arch Shutters

How to Make a Template

Templates are recommended for inside mount and are required for elliptical arches.

1. Tape paper over the window opening, allowing plenty of overlap. See below for template material information.

2. When ordering an arch using frame styles that requires a frame-to-frame measure format (L-frames, Deco frames) please provide a finished frame-to-frame template that exactly matches the finished arch size needed. No deductions or additions will be taken relative to the exact size of the template you furnish the factory. For example, if using for an inside mount application or a tight fit, make your own deductions.

When ordering an arch using frame styles that requires a window open size measure format (direct mount, hang strip, Z-frames) please provide a template of the window opening size only. The factory will take proper deductions for fit using these frames.

3. Remove the paper from the window opening and cut out the arch shape.

4. Place the template back on the window opening to verify size.

5. Mark the template with the following:
   - Room Side
   - Purchase Order Number
   - Customer’s Name
   - Company Name and Account Number
   - If applicable, please also include the frame-to-frame measurement (width) of shutter panels below the arch.

6. Attach a copy of the purchase order to the template.

7. Roll the template and place it in a mailing tube.

8. DO NOT FOLD THE TEMPLATE!

9. MAIL TO:
   Springs Window Fashions
   8467 Route 405 South
   P.O. Box 500
   Montgomery, PA 17752
   Attn: Shutter Department

Acceptable Materials for Making a Template*
- Kraft type paper
- Butcher paper
- Lightweight poster paper that can be rolled without creasing

Non-Acceptable Materials for Making a Template
- Newspaper
- Wrapping paper
- Tissue paper
- Fabrics
- Wood
- Wax paper

If the material used to make a template stretches, tears easily, will not lay flat after being rolled, or will mark the product in any way, Springs Window Fashions will refuse to use the template and will require a new one.

*Use adhesive tape that has been designed to not pull off paint or wallpaper.

NOTE: Comment on Purchase Order if a template is being sent, otherwise order will be processed without.

Manufacturer will not add to template size. Provide finished size for frameless arches or a framed arch that requires a FF measurement. Manufacturing will deduct from Z-Frame window opening template size.

Must note on template:
- Purchase Order Number
- Customer’s Name
- Job Number
- Store Number/Account Number

Provide frame-to-frame measurement (width) of shutter panels below the arch if applicable.
Chapter 11: Arch Shutters

Framed Arch Installation Options

Arches arrive with the louvers not installed and packed separately. Louvers are numbered on bottom edge from right to left on the bottom as you look at the interior (room) side.

Framed Arch – Installing Panel to Frame

Button catch (imbedded) is standard. Panels are attached to frame via button catch. The frame itself installs as a standard L, Z or Deco frame.

Frameless Arch Installation Option

Bulldog Catch

Bulldog catch works best with window openings that have a square edge. Allows arch panel to be removed for cleaning. Available in White.

Suggested quantity usage: Less than 36” – 3
36” to 72” – 5
72” to 108” – 7

L-Bracket

L-bracket works best with windows that have a bull-nosed edge. Long-throw on the L-bracket allows you to reach past the curved window edge to a flat surface. L-bracket is available in zinc color only.

Suggested quantity usage: Less than 36” – 5
36” to 72” – 7
72” to 108” – 9

Trim Head Screw

If using trim head screws to mount, pilot a hole diagonally from underside of curved frame and exit through rear of frame. Place screw hole near louver pin to help hide hole from view.
Chapter 12: Arch-Top and Angle-Top Shutters

Quick-Start Product Knowledge Basics - for Wood Arch-Top and Angle-Top Shutters

SHUTTER TYPE: Wood and Composite
SHUTTER STYLE: Arch-Top and Angle-Top

Working With Arch-Top and Angle-Top Shutters

Arch-top and angle-top panels are modified rectangular shutter panels where the louvers run horizontally. The windows treated by these specialty shutters are distinguished by having a rectangular area beneath the upper arch area. Nearly all the options offered to rectangular shutters are also available with arch-top and angle-top shutters.

Treatment Conditions to Consider:

- **Type of Mount:** Arch-top and angle-top shutters can be mounted either inside or outside and are available in both wood and composite materials.

- **Arch Shape:** Arch-top and angle-top shutters are available in a variety of top rail curvatures; full and quarter arch and angles.

- **The same height and width restriction apply as those for standard shutters. However, beyond a certain ratios of height-to-width in the arch area, templates are required. See following pages.**

- **Adjusting Louver Angle:** Depending on arch or angle, some top louvers will be operated independent of the lower louvers in the same louver set. Consider how the consumer will reach the window to operate the top louvers. Some louvers may only open up to 90 degrees and not tilt beyond that point.

Reminder Notes:

- **Some frame styles** not available with quarter arches.

Key Selling Features

- **Designed to Match Standard Rectangular Shutters**
- Offered in curvatures to fit most arch openings
- **Full arch and quarter-arches** available
- Full angle and half-angles available
- Available with and without framing.
- Tilt-Z frame not offered for arch-top or angle top shutters
- Limited frames offered for 1/4 arches (see technical pages)
- All wood and composite colors are available
- All standard shutter panel configurations are available
- Hide-a-Tilt available
- Refer to pricing page for arch-top and angle-top surcharges.
Chapter 12: Arch-Top and Angle-Top Shutters

Arch-Top and Angle-Top Frame Styles

Arched Top and Angle Top Shutter Frames: Choose from these frame options:
In addition to direct mount and hang strip, the following frames are available.

- **5 Styles of Wood Z-Frames***
- **2 Styles of Composite Z-Frames***
- **Framed Arch - Inside Mount Only**
  - Order using (W-O) Window Opening size; use Arch Order Form. Projection: 3/8”

- **4 Styles of Wood L-Frames**
- **1 Style of Composite L-Frame**
- **Framed Arch - Outside Mount Only**
  - Order using (F-F) Frame-to-Frame size; use Arch Order Form. Projection: 2”

- **4 Styles of Wood Deco-Frames**
- **1 Style of Composite Deco-Frame**
- **Framed Arch - Outside Mount Only**
  - Order using (F-F) Frame-to-Frame size; use Arch Order Form. Projection: 1 11/16” or 1 13/16”

![Frame Styles Diagram]

- **FRAME CONFIGURATIONS:**
  - 2-sided (for Direct Mount and Hang Strip only)
  - 3-sided and 4-sided
  - 4-sided with sill bottom
  - 4-sided with sill cap (wood only)

- **BUILD OUT:** Frame build-out available for L-frames and Deco-frames, except when using sill bottom.

- **TEMPLATES:** Template is required if ordered height minus ordered leg height exceeds 54% of width.

- **FRAME EXCLUSIONS:** The following frames are NOT available for 1/4 arch panel, full-angle, 1/2 angle or when using any panel configuration with a T-post:
  - Narrow Colonial L-frame
  - Bullnose Z-frame
  - Craftsman Deco and Craftsman Z-frame
  - 2½” and 3” extended standard L-frame
  - 2½” and 3” Narrow Colonial L-frame
  - *Tilt-Out Z-frame
  - Sill Cap

Arch-Top and Angle-Top Panel Specifications

- **LOUVERS:** 2½”, 3¾” and 4½” louvers are available
- **COLORS:** All wood colors available. Wood arched or angled panels can be matched to composite colors.
- **OVERLAP:** Astragal option available
- **PANEL CONFIGURATIONS:** All panel configurations offered in the standard rectangular shutter line are available
- **TILT OPTIONS:** Hidden Tilt and Split Tilt available. Hidden Tilt only tilts louvers upwards. Split Tilt and divider rails may have a +/-2° tolerance from desired location
- **DIVIDER RAILS:** Divider rail requirements are the same as standard shutters. Only one divider rail available on arch-top and angle-top shutters.
- **TEMPLATES:** Template is required if ordered height minus ordered leg height exceeds 54% of width.

![Panel Specifications Diagram]

**Caution:**

Louver tilt is restricted up to 90° (degrees) due to the curvature (or slope) at the top of the panel.

**HELPFUL TIP:** A divider rail can be used to separate the upper arch portion from the lower rectangular portion. This will allow for full louver rotation of the louvers below the divider rail.
## Wood Arch-Top and Angle-Top Shutters: Height Limitations

<table>
<thead>
<tr>
<th>Window Opening</th>
<th>Frame Configuration</th>
<th>Frame type</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-sided</td>
<td>Hang strip/direct mount</td>
<td>15⅛&quot;</td>
<td>20⅛&quot;</td>
<td>120⅛&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>Z-Frames</td>
<td>16¼&quot;</td>
<td>21¼&quot;</td>
<td>121¼&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Z-Frames</td>
<td>16½&quot;</td>
<td>21½&quot;</td>
<td>121½&quot;</td>
</tr>
<tr>
<td>4-sided with sill bottom</td>
<td>L-Frame</td>
<td>17⅛&quot;</td>
<td>22⅛&quot;</td>
<td>122⅛&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>Narrow Colonial L-Frame</td>
<td>16&quot;</td>
<td>21&quot;</td>
<td>121&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Narrow Colonial L-Frame</td>
<td>16⅛&quot;</td>
<td>21⅛&quot;</td>
<td>121⅛&quot;</td>
</tr>
<tr>
<td>4-sided with sill bottom</td>
<td>Deco Frame (Curved/ Beaded/Craftsman)</td>
<td>18½&quot;</td>
<td>23½&quot;</td>
<td>123½&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Deco Frame (Curved/ Beaded/Craftsman)</td>
<td>18⅛&quot;</td>
<td>23⅛&quot;</td>
<td>123⅛&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>Traditional Deco Frame</td>
<td>17¾&quot;</td>
<td>22¾&quot;</td>
<td>122¾&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Traditional Deco Frame</td>
<td>17⅝&quot;</td>
<td>22⅝&quot;</td>
<td>122⅝&quot;</td>
</tr>
</tbody>
</table>

- Minimum leg height is 13” on arch-top and angle top shutters.
- Template required if ordered height minus ordered leg height exceeds 54% of width.
- All frames are available, except Tilt-Z.

## Composite Arch-Top and Angle-Top Shutters: Height Limitations

<table>
<thead>
<tr>
<th>Frame Configuration</th>
<th>Frame type</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-sided</td>
<td>Hang strip/direct mount</td>
<td>15¼&quot;</td>
<td>96⅛&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>Z-Frames</td>
<td>16⅜&quot;</td>
<td>97⅛&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Z-Frames</td>
<td>16½&quot;</td>
<td>97½&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>L-Frame</td>
<td>16⅜&quot;</td>
<td>97⅛&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>L-Frame</td>
<td>17½&quot;</td>
<td>98½&quot;</td>
</tr>
<tr>
<td>3-sided</td>
<td>Deco Frame</td>
<td>17¾&quot;</td>
<td>99¾&quot;</td>
</tr>
<tr>
<td>4-sided</td>
<td>Deco Frame</td>
<td>19½&quot;</td>
<td>100½&quot;</td>
</tr>
</tbody>
</table>

- Minimum leg height is 13” on arch-top and angle top shutters.
- Template required if ordered height minus ordered leg height exceeds 54% of width.
- All frames are available, except Tilt-Z.
Chapter 12: Arch-Top and Angle-Top Shutters

Using Window Opening Measurements: Measuring for Leg Height and Divider Rails

Frames requiring Window Opening (WO) measurement:
Z-Frame, Hang Strip and Direct Mount

Measuring leg height:
Measure from bottom of window up to the arch ‘break point’. Minimum leg height is 13”.

Measuring divider rail height:
Measure from bottom of window up to the center of the divider rail.

Using Frame-to-Frame Measurements: Measuring for Leg Height and Divider Rails

Frames requiring Frame-to-Frame (F-F) measurement:
L-Frames and Deco Frames

Measuring leg height:
Measure from the bottom of the bottom frame, up to the arch ‘break-point’ (at outside edge of frame). Minimum leg height is 13”.

Measuring divider rail height:
Measure from bottom of the bottom frame up to the center of the divider rail.
1) Use blue painter’s tape to create a drawing surface.
2) Position the frame to mark the outside frame edge as it runs vertically above the window.
3) Then, position the frame to mark the top frame edge as it would arch above the curvature of the window.
4) The point at which the OUTSIDE of the frame ends its arching and becomes straight vertical (or the break-point), is the actual 'top measure reference point' for the leg height on that side.
5) Measure from the bottom of the bottom frame, up to the arch 'break-point' (at outside edge of frame) to determine leg height order size.

NOTE: Inside mount frames use inside window 'break point' as the measure reference point.
**Chapter 13: French Doors**

**Quick-Start Product Knowledge Basics - for Wood and Composite French Door Shutters**

**SHUTTER TYPE:** Wood and Composite  
**SHUTTER STYLE:** French Door

### Working With French Door Shutters

French door units are modified rectangular shutter panels incorporating a back-plate into the outer frame. This back plate portion is designed to provide privacy by covering the area of the door glass surrounding the door lever as it pivots during operation. French door shutters are always single-panel and outside mount L-frames only.

### Treatment Conditions to Consider:

- **Type of Material:** French door shutters are available in both wood and composite materials.

  ![Wood Composite](image)

- **Frame Type:** French door shutters are only available with L-frame. This should be considered when selecting the frame style for other shutter units in the same room and the larger project.

- **Side-By-Side French Doors:** See the section in this chapter called ‘Treating Side-by-Side French Doors’ for tips on working with multiple French doors.

- **Clearance:** Also see the section in this chapter called ‘Checking For Clearance’ for two challenging, but less common mounting conditions.

### Reminder Notes:

- All French door shutters that are part of a set should be ordered at the same time to ensure rail size and louver counts will match.

### Key Selling Features

**Designed to Match Standard Rectangular Shutters**

- Offered in rectangular and curved styles to accommodate the wide variety and types of door hardware
- All wood and composite colors are available
- The following L-frames styles are offered:
  - Standard L-frame
  - Extended Standard L-frame (wood only)
  - Narrow Colonial L-frame (wood only)
  - Extended Narrow Colonial L-frame (wood only)
  - Build-Out (composite only)
- Hide-a-Tilt and Split Tilt options are available
- Special button catches with magnets are a standard feature and designed to provide extra secure closure of the shutter unit when the main door is being operated.
- Refer to pricing page for French door surcharges.
Chapter 13: French Doors

Wood and Composite Minimum & Maximum Wood French Door Sizes

<table>
<thead>
<tr>
<th></th>
<th>Wood</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Width</td>
<td>16¾”</td>
<td>38¼”</td>
</tr>
<tr>
<td>Height</td>
<td>37¾”</td>
<td>90¾”</td>
</tr>
</tbody>
</table>

Wood and Composite French Door Framing and Build-Out Notes

**FRAMING NOTES:**
- All French doors are build with L-frame.
- The following L-frames styles are offered:
  - Standard L-frame
  - Extended Standard L-frame (wood only)
  - Narrow Colonial L-frame (wood only)
  - Extended Narrow Colonial L-frame (wood only)
  - Build-Out (composite only)
- Measurements are always Frame-to-Frame (F-F), meaning the size includes the frame.
- **Wood French Doors:** The factory will automatically use a larger extension L-frame according to the ordered louver size and tilt option. Additional buildout can also be request.
- **Composite French Doors:** The factory automatically furnishes the proper amount of build out for L-frame according to the ordered louver size and tilt option. Additional buildout can also be requested.
- Factory will also automatically adjust the back-plate elevation based on glass trim projection, L-frame projection and extra build out requested with the order.

<table>
<thead>
<tr>
<th>Projection Based</th>
<th>Wood</th>
<th>Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2&quot; L-frame</td>
<td>Standard L-frame</td>
</tr>
<tr>
<td></td>
<td>2½&quot; L-frame</td>
<td>Standard L-frame with No Build Out</td>
</tr>
<tr>
<td></td>
<td>3½&quot; L-frame</td>
<td>Standard L-frame with ½” Build Out</td>
</tr>
<tr>
<td></td>
<td>4½&quot; L-frame</td>
<td>Standard L-frame with 1” Build Out</td>
</tr>
</tbody>
</table>

French Door Tilt Options

**No Charge options:**
- Front tilt bar—standard
- Split tilt—optional
- Double mouse hole—optional

French Door Divider Rail Notes

- No divider rail is available.
- No divider rail is ever required.
- Minimum of two (2) louvers are required between the cutout and the top or bottom panel rails.
Chapter 13: French Doors

French Door Specifications

- 2½”, 3½” and 4½” louvers
- Hidden Tilt, Split Tilt and Double Mouse Hole available
- All wood colors available, Wood French Doors can be matched to composite colors
- Single panels hinged on the same side as the door
- Wood L-Frames include: Standard, Extended Standard. Narrow Colonial and Extended Narrow Colonial
- Composite L-Frames include: Standard (uses build-out)
- Side Light frame not available
- Order using frame-to-frame measurement
- Outside mount only
- Divider rails are not available
- Additional build-outs can be requested at time of order
- Button catches and magnets are standard. They are provided for secure closure.

NOTE: All French Door shutters for cut-out and no cut-out should be ordered at the same time to ensure rail size and louver counts will match.

Selecting the Cut Out Style, Measuring and Ordering

Correctly Ordering French door units is a 4-Step process.

STEP 1
Selecting the best cut-out style to use.

STEP 2
Plan for placement of L-frame so that it rests flat on the door.
L-frame does not mount to the surface of the trim around the glass.

STEP 3
Determine whether a recessed back plate is required.

STEP 4
Accurately record specifications and measurements on the order form.

FRENCH DOOR CUT-OUT MEASUREMENT WORKSHEET - SIDE A

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Shutter Product Resource Manual
Chapter 13: French Doors

STEP 1: Selecting the Best Cut-out Style

**No Cut Out (No Surcharge)**

Choose ‘no cut-out’ *only when* you have no hardware or you have a door knob (as opposed to a door lever) and ALL 3 of the following conditions are also true:

1. The door in question is a mate to a pair of doors; the door does not sit alone. (Single door ‘no cut-outs’ (not part of a pair of French doors) should be treated with standard rectangular shutters.)
2. There’s ample space between the door knob, the base of the door hardware and the window trim to place an L-frame completely flat onto the door surface.
3. AND there’s enough room between the L-frame and the door knob to comfortably operate the door knob.

**OTHER VERY IMPORTANT NOTES: (Also refer to page 13-7)**

4. FOR ‘NO CUT-OUT’ ON A SINGLE DOOR (not part of a pair and no other French doors ‘with cut-out’ on the job): Always treat with standard rectangular shutters, not French door with ‘no cut-out’. This will shorten delivery time on both original orders and remakes.
5. FOR ‘NO CUT-OUT’ ON A DOOR THAT IS PART OF A PAIR:
   - When both doors do not require a cut-out: Order both as standard rectangular shutters
   - When one door requires a cut-out: Order both as French door units, one with cut-out, one with ‘no cut-out’.
4. When using ‘Standard Rectangular’ shutters for French doors, order build-out as needed. Build out is not furnished automatically unless the order is placed as an actual French Door shutter.
5. Bottom corner cut outs are not available.

**Rectangular Cut Out (Cut Out Surcharge Applies)**

1. Choose a rectangular cut out for aesthetic reasons when the base plate of the door hardware is rectangular.
2. Installer specifies their own ‘custom’ width and height of the cut-out. There are NO set standard sizes to conform to.
3. **There are NO templates to use.**
4. Also choose a rectangular cut-out for rounded based door hardware to help minimize the width of the cut-out itself. Due to design characteristics, curved and half-circle cut-outs naturally have wider profiles.
5. Bottom corner cut outs are not available.

**Curved Cut Out (Cut Out Surcharge)**

1. Choose a ‘curved’ cut out when the base (escutcheon) of the door handle or knob is round.
2. There are five (5) standard cutout sizes are available; three (3) half-circles and two (2) half-ovals.
3. Other custom sizes of curved cutouts are NOT available.
4. Installer is furnished full-size templates to demonstrate curved cutout sizes and placement for the consumer.
5. Bottom corner cut outs are not available.

Measuring template is available for use with Curved cut-outs only.
Chapter 13: French Doors

STEP 2: Planning for Placement of the L-Frame

L-frame always sits outside of the trim, never on the trim. If no raised trim, place the L-frame far enough beyond the glass to rest totally flat on the door and to avoid risk of breaking the glass when driving the mounting screws in place. Use caution when placing screws, as the glass often extends under the trim and could easily crack.

![Example of Raised Trim](image1)

Always use frame-to-frame measure format for French doors

![Example of Flush Trim](image2)

Always use frame-to-frame measure format for French doors

STEP 3: Determine Whether a Recessed Back Plate is Required

A “recessed back plate” is required when there is insufficient space between the base of the door hardware and the glass trim, to place L-frame flat on the door surface. The recess amount is the width of the L-frame. Custom recess sizes are not available.

This is an example of a door not requiring a recessed back plate. The outer edge of the back plate matches the outer edge of the L-frame.

This is an example of a door requiring a recessed back plate. The next photo shows how a French door unit is built using a recessed back plate. The recess is always the width of the L-frame.

This image is taken from the backside of the French door order form

![R=Recessed Back Plate](image3)

If measurement between the base of the hardware and the window trim is greater than 1 1/8", (L-Frame does not fit between hardware and trim) Back plate does not need to be recessed.

If measurement between the base of the hardware and the window trim is less than 1 1/8" (L-Frame does fit between hardware and trim) Back plate does need to be recessed.

If recessed back plate is required, the edge of back plate will align with inside edge of L-frame. Installer does not specify amount of recess.

*1 5/8” required for Standard L-frame and only 1” is required for Narrow Colonial L-frame.

Caution:
1. When measuring (F-F) with and height, be sure that L-frame can rest flat on the door surface and not be obstructed by the glass trim.
2. If, ‘yes’ is selected, (meaning you are requesting a recessed back plate) the edge of the recessed back plate will be built to align with the inside edge of the L-frame (as shown by the dotted line in the drawing above).
### STEP 4: Accurately Record Specifications and Measurements on the Order Form

<table>
<thead>
<tr>
<th>Definition</th>
<th>Rectangular Cut Out</th>
<th>Curved Cut Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Finished shutter width:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation and Tips</td>
<td>French doors can only be ordered using frame-to-frame dimensions.</td>
<td></td>
</tr>
<tr>
<td>B Finished shutter height:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explanation and Tips</td>
<td>Frame-to-frame</td>
<td></td>
</tr>
<tr>
<td>C Bottom of L-frame up to (note the different point for rectangular versus curved cut out)</td>
<td>For Rectangular cut out: Bottom of the bottom L-frame, up to the bottom of the cut out. Minimum &quot;C&quot; distance: 12&quot;</td>
<td>For Curved cut out: Bottom of the bottom L-frame, up to the center of the cut out. Minimum &quot;C&quot; distance varies by cut out style:</td>
</tr>
<tr>
<td>D Cut out width</td>
<td>For Rectangular cut out: Custom width of cut out (installer specifies) Minimum &quot;D&quot; width: 2&quot;</td>
<td>For Curved cut out: Choose between 5 available “stock” sizes.</td>
</tr>
<tr>
<td>E Cut out height</td>
<td>For Rectangular cut out: Custom height of cut out (installer specifies) Minimum “E” height: 3”</td>
<td>For Curved cut out: Height will correspond with chosen “stock” size.</td>
</tr>
<tr>
<td>R Recessed back plate</td>
<td>Determine if recessed back plate is required (circle “yes” or “no” on order form)</td>
<td></td>
</tr>
<tr>
<td>T Trim projection</td>
<td>Height of glass trim. Maximum “T” height: 15/16&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**Rectangular Cut-out**

A = Shutter Width
- Frame-to-frame

B = Shutter Height
- Frame-to-frame

C = Bottom of shutter frame to bottom of cut-out

D = Width of Cut-out

E = Height of Cut-out

**Curved Cut-out**

A = Shutter Width
- Frame-to-frame

B = Shutter Height
- Frame-to-frame

C = Bottom of shutter frame to center of cut-out

Note: Letter ‘C’ measure reference points are different for Rectangular cut-outs and Curved cut-outs.
Treating Side-by-Side French Doors

- When French doors are side-by-side, order shutters in pairs and order both shutters as French door style. This is especially important if one shutter does not require a cut-out.
- Ordering as pairs ensures both units will be made to the same height, using the same top and bottom rail size and with the same louver count. Ordering both as French doors will also eliminate any questions about divider rails.
- Single French doors not requiring a cut-out and not part of a pair, should be treated as a standard rectangular shutter.

The order form has a field for you to confirm (with the factory) which French door shutters on the job — with ‘no cut-out’ — are part of a pair or set.

Checking For Clearance

Be Alert to These Two Treatment Scenarios

1. Door Wall Door
2. Door Wall

Check for ample clearance for 1) door to swing without hitting adjacent wall and 2) door to swing without hitting adjacent shutter unit. Verify that the door will fully open.

A traditional pair of French doors.

Garden French doors. Check frame placement and projection to confirm the French door shutters will not collide when the exterior door to the home is opened.

Use a separate French Door order form for each shutter unit.
Measuring For Rectangular Cut Out

Marking the Measure Reference Points (Width & Height):

1) Select your style of L-frame and place a sample piece on the French door (outside the trim) to mark the planned frame position. Never plan to mount on the trim around the glass. Make a mark on the outside of the frame as your measure reference point. Do the same on the other side of the window. Your order width will be your mark-to-mark measurement. Do the same as #1 to determine your order height.

You may want to add an extra 1/8" 'wiggle room' for both width and height.

2) If you don't have enough space to fit your sample piece of L-frame totally flat on the door surface between the glass trim and the door hardware, you'll need to specify what's called a 'recessed back plate'. As you can see in photo #6, the recess size always equals the width of the L-frame. Custom recess sizes are not available.

3) Rectangular cut-outs are always ordered to your custom width and height. You determine the size, as long as the cut-out is at least 2-inches wide and 3-inches tall. Design a size that allows enough opening to comfortably surround the deadbolt and for full operation of the door-lever or knob.

4) You need to provide the factory with the measurement from the bottom of the rectangular cut-out to the bottom of the bottom frame. This is measurement 'C' on the order form. This distance cannot be any less than 12-inches.

5) The trim around the glass may rise above the surface of the door. You need to provide the factory with this projection amount. Make sure your measurement is as precise as possible to minimize the gap between the back plate and the trim around the glass. This is measurement 'T' on the order form.

6) This door example does not have elevated trim around the glass. Note the back plate fits snug to the door surface.
Measuring For Curved Cut Out Using a Template

Marking the Measure Reference Points (Width & Height):

1) Select your style of L-frame and place a sample piece on the French door (outside the trim) to mark the planned frame position. Never plan to mount on the trim around the glass. Make a mark on the outside of the frame as your measure reference point. Do the same on the other side of the window. Your order width will be your mark-to-mark measurement. Do the same as #1 to determine your order height.

You may want to add an extra 1/8" 'wiggle room' for both width and height.

2) If you don't have enough space to fit your sample piece of L-frame totally flat on the door surface between the glass trim and the door hardware, you'll need to specify what's called a 'recessed back plate'. The recess size always equals the width of the L-frame.

3) Curved cut-outs are only available in five stock sizes (3 half-round and 2 half-oval). There are no custom sizes in curved cut-outs. Choose a size that allows enough opening to comfortably surround the deadbolt and for full operation of the door-lever or knob. Curved cut-out templates are available to assist with this selection process.

4) You need to provide the factory with the measurement from the CENTER line of the curved cut-out to the bottom of the bottom frame.
   - This is measurement 'C' on the order form.
   - 'C' measurement cannot be any less than 16", 18", 20" or 22" inches depending on which size you select
   - You'll find this information printed on the front of the template and on the next page.

5) The trim around the glass may rise above the surface of the door. You need to provide the factory with this projection amount. Make sure your measurement is as precise as possible to minimize the gap between the back plate and the trim around the glass. This is measurement 'T' on the order form.
Template Instructions:

- 5 Standard cutouts are available. Custom sizes are not available.
- Align fold with edge of glass trim of glass opening, if there is no trim.
- If flap can lay completely flat on door surface and does not interfere with door hardware, then a recessed back plate is not necessary.
- Check handle clearance by rotating door handle.
- Measure from the outside edge of the L-frame at the bottom of your French door up to the centerline on the measuring template. This will be your ‘C’ measurement on the order form.

### TEMPLATE SIZE CHOICES

<table>
<thead>
<tr>
<th>SHAPE</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>MINIMUM ‘C’ MEASUREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round</td>
<td>4 1/4”</td>
<td>8 1/2”</td>
<td>14”</td>
</tr>
<tr>
<td>Round</td>
<td>5 1/4”</td>
<td>10 1/2”</td>
<td>18”</td>
</tr>
<tr>
<td>Round</td>
<td>6 1/4”</td>
<td>12 1/2”</td>
<td>19”</td>
</tr>
<tr>
<td>Oval</td>
<td>6 1/4”</td>
<td>14</td>
<td>20”</td>
</tr>
<tr>
<td>Oval</td>
<td>7</td>
<td>18</td>
<td>22”</td>
</tr>
</tbody>
</table>

The measuring template can be positioned to simulate Standard L-frame (1 5/8” space on door surface) or Narrow Colonial L-frame (only 1” space on door surface).
Quick-Start Product Knowledge Basics - for Wood and Composite Bypass Shutters

SHUTTER TYPE:  Wood and Composite

SHUTTER STYLE CHOICES:
- Bypass Track System
- Bypass Track System with Stackback

Working With Bypass Shutters

Bypass shutters are modified rectangular shutter panels incorporating wheeled carrier-hangers on the individual panels. The panels slide easily on an overhead track. Bypass shutters are an ideal solution for large windows and patio doors.

Treatment Conditions to Consider:
- **Type of Material:** Bypass shutters are available in both wood and composite materials.

  ![Wood Composite]

- **Closed Louver Operation:** This is a 2-track system only. The tracks are relatively close together in order to minimize the depth of the entire unit. As such, louvers must be closed in order for the panels to pass each other.
- **Stacking Space:** Since louvers must remain closed when panels are positioned over one another, the view will be blocked where the panels are stacked to the side.
  - Stacking area strategy must be considered when planning the overall unit width and the panel configuration.
  - If retaining a consumer’s view to the outside is of primary importance, consider extending the header beyond the combined width of the stacked panels. Plan to ‘stack back’ the panels onto an adjacent wall.
  - Refer to the section on ‘Stack Back’ and the section called ‘Configuration Notes’.

Key Selling Features

Designed to Match Standard Rectangular Shutters
- All wood and composite colors are available
- Hide-a-Tilt and Split Tilt options are available
- Stack-back option to allow for clear opening
- Two valance choices offered
- Refer to pricing page for Bypass shutter surcharges.
**Chapter 14: ByPass Shutters**

**Bypass Shutters: Option Overview**

**Basic Options**
- Standard rectangular shutter specs apply
- All wood and composite color options available
- All louver sizes available
- Double Mouse Hole option available when using front tilt bar
- Hide-a-Tilt and Split Tilt options are available
- Divider rail required over 84” ordered height for Wood
- Divider rail required over 72” ordered height for Composite
- Use standard rectangular shutter order form

**Track and Header Board Notes**
- Unit is designed with two parallel tracks mounted to the underside of the header board. Header board is 5½” deep and ¾” thick.
- Louvers must be closed in order for the panels to pass each other.
- System includes floor guides, no bottom track
- Tracks wider than 144” will be spliced
- Header and valances wider than 96” may be spliced
- Custom-sized header is also available. (Refer to page 14-5)

**Minimum & Maximum Order Width**
- See Minimum & Maximum order size charts in the following pages
- Factory to determine actual panel widths based on order width, the number of panels in the panel configuration and the panel configuration chosen.

**Box Out Side Frame Option**

**3 Main Benefits of Box Out Side Frame**
1. Provides substantial supporting strength to the header board and the overall installation.
2. Provides a privacy block at the ends of the units and adds a privacy fascia strip on the front edge of the box-out side frames.
3. Makes installation easier, as all the measurements are calculated for the bottom edge of the box-out side frames to rest on the floor surface. Simply assemble on the floor, then lift it up, slide the unit to the opening and fasten in place.
- Refer to pricing section for related surcharges

**Valance Options**

**4½” Decorative Valance**

**5” Standard Valance**
Chapter 14: ByPass Shutters

Bypass Panel Configuration Notes

Individually Operated Panels versus Joined-Pair Panels

Bypass shutters are offered in 2, 3, 4, 6 and 8-panel configurations. Note how some configurations have all panels individually operated (butt side-by-side) while other configurations are joined-pairs. Joined-pairs are furnished with 2½” flat bars to fasten at the top end and at the bottom end of the panels to splice them together.

- Wider panels are not necessarily better, as louvers must be closed in order for the panels to pass each other.
- Consider using joined-pairs when treating a sliding glass door. Joined-pairs allow for the splitting of wider single panels into narrower paired-panels.

1) The feature allows for the louvers of one side of a ‘front’ pair and the opposite side of a ‘rear’ pair to remain open when the front and back panels are partially overlapped. This brings more light, view and possible ventilation into the room. As an example, the consumer could slightly open their sliding glass door while retaining light and view.

2) If ordered as wider single panels, all louvers must remain closed even if front and back panels are only slightly overlapped.

With joined-pairs, the louvers of one side of the ‘front’ pair and the opposite side of the ‘rear’ pair can remain open when the front and back panels are partially overlapped.

With wider single-panels, all louvers must remain closed even though panels are only slightly overlapped.
Custom stack-back header widths are available.

1L/1R
Stack space requires 1/2 the combined width of the panels.

1L/1C/1R
Stack space requires 1/2 the combined width of the panels.

1L/1C/1R
Stack space requires 1/2 the combined width of the panels.

1L/1C/1C/1R
Stack space requires 1/2 the combined width of the panels.

2L/2R
Stack space requires 1/2 the combined width of the panels.

2L/1C/1C/2R
Stack space requires 2/3 the combined width of the panels. Custom stack-back or custom header with is recommended.

2L/2C/2R
Stack space requires 2/3 the combined width of the panels. Custom stack-back or custom header with is recommended.

2L/2C/2C/2R
Stack space requires 1/2 the combined width of the panels.
Chapter 14: ByPass Shutters

Stack Back* Option

Stack-back means that the factory calculates the actual header size required for the stacked panels to clear the opening. Choose stack-back only when you have ample wall space adjacent to the window for the panels to fully clear the opening.

Three Stack Back Options (Outside Mount Only)

<table>
<thead>
<tr>
<th>2-Sided</th>
<th>1-Sided Left</th>
<th>1-Sided Right</th>
</tr>
</thead>
</table>

- Wall Space for stacking panels off the glass.

The stack back option allows for the shutter panels to clear the window opening, creating an unobstructed view. **Panels made to cover window. Header/track made larger so panels stack off glass.**

Measure only the window opening area for outside mount with stack back. Factory will calculate the correct stack back needed for full stack back. Custom header also available.

System consists of a double-top track and floor guides

Calculating Approximate Stack Back: Factory will add additional width to ordered size for stack back. Amounts vary, depending on the number of panels. See chart below for total (approximate) amount that will be added to the window opening size. This determines the approximate overall unit width.

| % of Window Opening Size Added for Various Numbers of Panels |
|------------------|------------------|------------------|------------------|------------------|
|                  | 2                | 3                | 4                | 6                |
| 50%               | 66%              | 50%              | 66%              | 50%              |

Custom Header Size**

**Custom header size means that the measurer specifies the actual header board size desired. Choose custom header size only when you have a limited amount of extra wall space to work with.

If only limited wall space, insufficient for complete panel stack-back, a custom header size can be ordered to maximize the site conditions. The factory must be provided measurements for both the opening size and the custom header size.

- The panels will be built to cover the window size only.
- The track, header and valance will be built to your specified custom header size.
- Order must be placed using the “Outside Mount with Factory Additions” measure format only.

Setting Bracket Height

Top of bracket will be 3 7/8” above ordered height. This includes:

- 1 1/4” height of (inverted) bracket back
- 2 1/8” for track height and header board thickness
- 1/2” clearance off the floor

With box out side frame:

- Bottom edge of the box out side frame is meant to touch the floor surface.
Chapter 14: ByPass Shutters

Bypass Shutters: Mounting Options and Measuring Notes

See the 3 Different Ordering Format Options Below:
1) Outside Mount—Exact Frame-to-Frame (when using Box-out Side Frames)
2) Outside Mount with Factory Additions
3) Inside Mount with Factory Deductions

Outside Mount - Exact Frame-to-Frame: Choose this (F-F) ordering format when using box-out side frames while also not using stack-back or custom header size.

Width and Height Measure: Factory will not add or deduct from ordered size. Measure width and height as finished frame-to-frame size including the box out. This measuring format is only available when using box-out.

Other Measuring Considerations: ½” Buildout is available.
Valance Information: 5 7/8” valance returns are included and wrap around the outside of the box-out. Returns are mitered (special valance width and return width available).
Box-out Information: Required box-out side frames are 5½” deep and ¾” thick.
Stack Back Information: Stack back and custom/special header board size is NOT available.

Outside Mount - with Factory Additions: Choose this (WO) ordering format when NOT using box-out or using stack-back or custom header size, with or without box-out.

Width Measure (with box-out): If no window trim: measure window opening size. If window trim: measure outside edge of trim to outside edge of trim and record as window opening size. Regardless of ordered size, factory will add 3⅛” to your overall ordered width.
Note: when measuring, add more for bullnose drywall so that the frames mount completely on flat surface.

Width Measure (without box-out): if no window trim: measure window opening size. If window trim: measure outside edge of trim to outside edge of trim and record as window opening size. Regardless of ordered size, factory will add 1⅛” to your overall ordered width.
Note: When measuring, add more to extend beyond window edge for more privacy.

Height Measure (with or without box-out): If no window trim: measure from floor surface to top of the window opening. If window trim: measure to top of window trim. Regardless of ordered size, factory will add 2 5/8” to your overall ordered height.

Other Measuring Considerations: ½” Buildout is available.
Valance Information: 5 7/8” valance returns are included and wrap around the outside of the box-out if ordered. Returns are mitered (special valance width and return width available).
Box-out Information: Optional side frames are 5½” deep and ¾” thick.
Stack Back Information: Optional to allow shutter panels to clear the window opening, factory will calculate based on ordered size. Custom/special header board size is also available if full stack back cannot be achieved.

Inside Mount - with Factory Deductions: Choose this (WO) ordering format when mounting inside and you don’t need valance returns.

Width Measure: Order window opening width and factory will make a ½” deduction off the track for proper fit.

Height Measure: Order window opening height and factory will make a ½” deduction. The carriers are adjustable.

Other measuring Information: Minimum window depth required for 5 3/8”. No build-outs available.
Valance Information: Special valance width available. Valance returns and special return width not available.
Box-out Information: Not available.
Stack back Information: Stack back and custom/special header board size is NOT available.
### Chapter 14: ByPass Shutters

#### Wood Bypass Shutter: Minimum/Maximum Order Width Sizes By Panel Configuration

<table>
<thead>
<tr>
<th>Panel Configuration</th>
<th>Example of shutter unit configurations using various panel combinations</th>
<th>Outside Mount w/ Additions</th>
<th>Inside Mount</th>
<th>Outside Mount-Exact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimum Width</td>
<td>Maximum Width</td>
<td>Minimum Width</td>
</tr>
<tr>
<td>1L / 1R</td>
<td></td>
<td>18&quot;</td>
<td>70&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>1L / 1C / 1R*</td>
<td></td>
<td>27½&quot;</td>
<td>104&quot;</td>
<td>28½&quot;</td>
</tr>
<tr>
<td>1L / 1C / 1C / 1R</td>
<td></td>
<td>37&quot;</td>
<td>141&quot;</td>
<td>38&quot;</td>
</tr>
<tr>
<td>2L / 2R</td>
<td></td>
<td>37¾&quot;</td>
<td>141¾&quot;</td>
<td>38¼&quot;</td>
</tr>
<tr>
<td>2L / 1C / 1C / 2R*</td>
<td></td>
<td>56&quot;</td>
<td>212&quot;</td>
<td>58&quot;</td>
</tr>
<tr>
<td>2L / 2C / 2R*</td>
<td></td>
<td>57½&quot;</td>
<td>213½&quot;</td>
<td>58&quot;</td>
</tr>
<tr>
<td>2L / 2C / 2C / 2R</td>
<td></td>
<td>76½&quot;</td>
<td>284½&quot;</td>
<td>77½&quot;</td>
</tr>
</tbody>
</table>

*NOTE: Window opening is 33% with these panel configurations.*
Stack back or custom header recommended.

Same minimum/maximum sizes apply if ordered with stack back options and with or without box-out.

**NOTE:** Combinations with a 2C, 2L or 2R will be rabbeted together and move as one unit.

#### Composite Bypass Shutter: Minimum/Maximum Order Width Sizes By Panel Configuration

<table>
<thead>
<tr>
<th>Panel Configuration</th>
<th>Example of shutter unit configurations using various panel combinations</th>
<th>Outside Mount w/ Additions</th>
<th>Inside Mount</th>
<th>Outside Mount-Exact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimum Width</td>
<td>Maximum Width</td>
<td>Minimum Width</td>
</tr>
<tr>
<td>1L / 1R</td>
<td></td>
<td>18&quot;</td>
<td>58&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>1L / 1C / 1R*</td>
<td></td>
<td>27½&quot;</td>
<td>86&quot;</td>
<td>28½&quot;</td>
</tr>
<tr>
<td>1L / 1C / 1C / 1R</td>
<td></td>
<td>37&quot;</td>
<td>117&quot;</td>
<td>38&quot;</td>
</tr>
<tr>
<td>2L / 2R</td>
<td></td>
<td>37¾&quot;</td>
<td>117¾&quot;</td>
<td>38¼&quot;</td>
</tr>
<tr>
<td>2L / 1C / 1C / 2R*</td>
<td></td>
<td>56&quot;</td>
<td>176&quot;</td>
<td>58&quot;</td>
</tr>
<tr>
<td>2L / 2C / 2R*</td>
<td></td>
<td>57½&quot;</td>
<td>177½&quot;</td>
<td>58&quot;</td>
</tr>
<tr>
<td>2L / 2C / 2C / 2R</td>
<td></td>
<td>76½&quot;</td>
<td>236½&quot;</td>
<td>77½&quot;</td>
</tr>
</tbody>
</table>

*NOTE: Window opening is 33% with these configurations.*
Stack back or custom header width is recommended.

Same minimum/maximum sizes apply if ordered with stack back options and with or without box-out.

Configurations with 2L, 2R or 2C will be rabbeted together and move as one unit. Panels to be connected during installation.
1. These are basic installation instructions for treating a wood trimmed sliding glass door with a Bypass shutter. These instructions address mounting directly to the door trim.

2. Measure according to the instruction stated earlier in this chapter to have the outer edge of the box-out side match the outer edge of the door side trim and the top edge of the header board align exactly with the top edge of the door trim.

3. Measure window trim projection to determine proper position of the inverted L-bracket mounted on top of the header board.

4. Fasten inverted L-brackets along the top of the header board, allowing for door trim thickness. In this example, the installer used the valance return as a measuring gauge, as it was found to be the exact same thickness as the door trim.
5. Fasten the box-out side frames to the header board through the pre-drilled holes in the header board. Use the supplied 2-inch drywall screws. The header board fits ON TOP of the side boards as shown in the photo.

6. Place the assembled (header board and side frame) unit at the window opening, preparing to secure it to the wall. If necessary, use shimming material (plastic shims, louvers, etc.) to help align the box-out side frames to the floor surface. Box-out side frames are meant to rest directly on ‘hard’ flooring surfaces.
   Note: Do not bury the side frames into the carpeting.

7. Fasten the inverted L-brackets to the wall.
   Take note on how the header board was planned to align with top of window trim and how the inverted L-brackets extend over the top of the window trim edge to meet the wall surface.

8. Fasten the box-out side frames to the face of the window trim.
   See the addendum at the end of this chapter for additional instructions if mounting the box-out side frames on the wall beyond the window trim and OVER the contour of the baseboard.
9. If the panel configuration includes joined-pairs, fasten bottom connecting plate for these joined pairs.

10. Again, if joined pairs, fasten the top connecting plate / carrier receiver. It is designed with an integrated retainer for sharing a common wheeled carrier.
   - The carrier receivers are always installed on the outside edges of the panels. The fastening of a common carrier receiver is only required with joined-panel pairs.
   - Once joined pairs are fastened together on the floor, they must also be hung together onto the track.

11. View of the single carrier that is shared at the overlap where joined panel-pairs are joined.
12. Tracks are pre-installed to the header board at the factory. The tracks come pre-loaded with roller carriers and end stops.

13. Loosen the lock stop that held the carriers tightly stacked during transport.

14. Final adjustments of the end stops can be done to create the desired gap between the outside panels and side-frame, at both the ends of the track.

15. Hang panels making certain that locking arm securely swings into place. You may find it easier to work from one end to the other, hanging one carrier at a time.

16. The hex nut on the roller carrier can be used to adjust clearance to the floor and the plumb of the panels. An open-end wrench to fit the adjuster hex nut is supplied with every order.
17. Fasten the special valance bracket ‘receiver’ to the back of the valance by inserting and twisting into place.

18. Join the valance return to the valance fascia by inserting the supplied L-bracket into the routed groove of both pieces and then pressing together.

19. Install the box-out side frame fascia piece before installing the valance.
   - Use either double-sided tape, small brad nail or other fastener of choice.
   - The fascia piece will run the entire height of the box-out side frame and the valance fits over the fascia.

20. Insert each valance bracket into its valance bracket receiver on the back of the valance.

   Then, install the valance by fasten the valance bracket to the top of the bypass header board.
ADDENDUM - For Mounting Box-Out Onto the Wall Beyond the Window Trim

21. If the bypass shutter has been designed to mount on the wall beyond the window trim, the box-out side frame will likely need to be notched out to match the contour of the baseboard. Use a ‘contour gauge’ tool to record the baseboard contour.

22. Transfer ‘contour’ line to box-out side frame

23. Cut out the box-out side frame according to the contour line.
   - The final finish around the baseboard can be achieved using caulk.
Chapter 15: Bi-Fold Shutters

Quick-Start Product Knowledge Basics - for Wood Bi-Fold Shutters

SHUTTER TYPE: Wood

SHUTTER STYLE CHOICES:
- Bi-fold Track System
- Bi-fold Track System with 1-Sided Stackback
- Bi-fold Track System with 2-Sided Stackback

Working With Wood Bi-Fold Shutters
Bi-fold shutters are modified rectangular shutter panels incorporating wheeled carrier-hangers on the individual panels, a single overhead track and a bottom track. Panels are also hinged together. Bi-fold shutters are an ideal solution for large windows with limited stacking space.

Treatment Conditions to Consider:
- **Type of Material:** Bi-fold shutters are available in wood only due to its lighter weight panels.
- **Bottom Track:**
  - A bottom track is furnished with this system, but is not always required for proper operation. Check the building codes in your area regarding any violations against the installation of floor tracks in front of door openings (trip hazard).
- **Panel Operation:**
  - Special care is required when operating this system, especially configurations with multiple panels. When the panels are folded open to stack to the side, the center of gravity tips forward toward the operator. Extra lifting and handling is needed to assist the panels to their stacked position.
  - The wider the panels and the greater the number of panels, the more awkward the operation. Align the consumer’s expectations towards this operational characteristic.
- **Floor Space:**
  - Bi-fold shutters do require a large amount of floor space in front of the window or sliding glass door to stack the panels open. The panels need room to fold forward without the obstruction of furniture, counter space, adjacent doors, etc.
  - Panels will never swing around to lay flat on the adjacent wall and will always protrude into the room.
- **Box Out Side Frames:**
  - For outside mount: Box out is required as it offers a surface to attach the pivot socket for the main stationary end panels.
  - Box out side frame is not available for inside mount as pivot sockets are attached to the inside of the window opening
- **Light Gaps:**
  - There will be a 3/8” light gaps on the ends.
  - There will also be light gaps between the panels, as the stiles are not rabbeted. Hinges are mortise into the panel to help minimize light gaps.

Key Selling Features

Designed to Match Standard Rectangular Shutters
- Available in wood only and in all wood and composite colors.
- Available in 2½”, 3½” and 4½” louver sizes.
- Front tilt bar is standard. Double mouse hole, Hide-a-Tilt and Split Tilt options are available
- Stack-back option to allow for clear opening. Refer to pricing page for stack-back surcharge
- Box-out side frame required for outside mount. Refer to pricing page for box-out surcharge.
- Includes valance
- Refer to pricing page for general Bi-fold shutter surcharges.
Chapter 15: Bi-Fold Shutters

Bi-Fold Shutters: Options Overview

- System consists of top and bottom track and quarter-round as standard
- Available in 2¼", 3½” and 4½” louver sizes.
- All wood and composite color options are available
- Available with Hidden Tilt and Split-Tilt options
- Available with Double Mouse Hole
- Divider rails are available

Configuration Options:
- Outside mount with Box-out
- Outside mount with Stackback
- Inside Mount

Bottom Track Detail
Installer screws the track to the floor and attaches "quarter-round" up to the face of the track (and along the back of the track, if needed).

Note: Factory does not supply adhesive, trim nails or other fasteners to install quarter-round.

Note: Factory always furnishes bottom track. Installer determines whether bottom track is needed.

Valance Options

2½” Standard Valance

Bi-Fold Installation Notes

SETTING BRACKET HEIGHT (for outside mount)
For Wall Mount Bi-fold Shutter System
Top of Angle Bracket to Floor:
Top of bracket will be 5½” above ordered height.

NOTE: Side frames determine the mounting height. Bottom edge of side frame is meant to touch the floor surface.

Bi-fold Track System Divider Rail Requirements
- Divider rail required over 84” ordered height
- Tracks wider than 144” will be spliced, header and valance may be spliced over 96” wide.

Installer adds on 5 3/8” to order size to determine top of bracket. This add-on amount includes bracket, track, panel height and floor clearance.
Bi-Fold Shutters: Measuring Notes

OUTSIDE MOUNT NOTES

Width Measurement (using the required Box-out): If no window trim: measure window opening (W-O) size. If window trim: measure outside edge of trim to outside edge of trim. **Factory will add 5” to your overall ordered width.** Note: When measuring, add more for bullnose so that frames mount completely on flat surface.

Height Measurement: If no window trim: measure from floor surface to top of window opening. If window trim: measure to top of window trim. **Factory will add 3½” to your overall ordered height.**

Other Measurement Considerations: If there are window moldings, factory can accommodate only up to ½” thick molding when using 3½” louvers and Hide-a-Tilt™.

Track and Header Board: Unit includes track installed to header board. Header is 3½” deep and ¾” thick.

Valances and Returns: One top treatment style is available: standard 2¾” single-bead Valance. Valance returns are included and wrap around the outside of the Box-out (frame). Returns are mitered and are 3¾” (inside measurement). Refer to the valance options.

Box-out (side frames): Sides frames are required for securing the pivot set of outermost panels. Box-out Frame is ¾” x 3½”.

Stackback available: Optional Stackback is available for outside mount bi-fold shutters. Custom Stackback widths are available.

INSIDE MOUNT NOTES

Width Measurement: Order W-O (window opening) and provide net window width. **Factory will make a ½” deduction from the track for proper fit.**

Height Measurement: Order W-O (window opening) and provide net window height. **Factory will make approximately ½” deduction. Carriers are adjustable.**

Other Measurement Considerations: Minimum window depth requirement 3¾”. Standard edge gap (edge of panel to inside of window edge) is ¾” on both sides of the units.

Track and Header Board: Unit includes track installed to header.

Valances and Returns: One top treatment style is available: standard 2¾” single-bead Valance. No returns are available. Valance ends are not mitered. Refer to the valance options.

Box-out (side frames): Box-out is not available. The pivot set of outermost panels is secured to the inside of window opening.

Stackback not available.

### Bi-Fold Shutter: Minimum/Maximum Order Width Sizes By Panel Configuration

<table>
<thead>
<tr>
<th>Panel Configuration</th>
<th>Example of shutter unit configurations using various panel combinations</th>
<th>Outside Mount (with side frame)</th>
<th>Outside Mount with Stack Back (with side frame)</th>
<th>Inside Mount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Order W-O Size</td>
<td>Order W-O Size</td>
<td>Order W-O Size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minimum Width</td>
<td>Maximum Width</td>
<td>Minimum Width</td>
</tr>
<tr>
<td>LL / RR</td>
<td><img src="image" alt="Diagram" /></td>
<td>17”</td>
<td>49”</td>
<td>14”</td>
</tr>
<tr>
<td>LLRR / LLLL / RRRR</td>
<td><img src="image" alt="Diagram" /></td>
<td>38”</td>
<td>100”</td>
<td>32”</td>
</tr>
<tr>
<td>LLLRRRR</td>
<td><img src="image" alt="Diagram" /></td>
<td>80”</td>
<td>205”</td>
<td>70”</td>
</tr>
</tbody>
</table>

#### Wood Bi-fold Minimum and Maximum Height

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside mount</td>
<td>17¾”</td>
<td>122¾”</td>
</tr>
<tr>
<td>Inside mount</td>
<td>15½”</td>
<td>120¼”</td>
</tr>
</tbody>
</table>

- Divider rail required at 84” order height.
- Divider rail also available when not required.

**Bi-fold shutters do not have rabbeted stiles as hinges are mortised.**
Quick-Start Product Knowledge Basics - for Wood Sidelight Shutters

SHUTTER TYPE: Wood
SHUTTER STYLE: Sidelight

Working With Wood Sidelight Shutters

Sidelight shutters are modified rectangular shutters designed to treat the popular narrow window to the side of many residential entry doors.

The system incorporates a special narrow style of L-frame while the panels themselves are constructed with special narrower side stiles than the standard shutter variety.

Key Selling Features

Designed to Match Standard Rectangular Shutters

- Available in wood only.
- All wood colors are available
- Special narrow profile L-frame and narrow panel side stiles
- Available as narrow as 7 3/16" (F-F) order width
- 2½" and 3½" louvers only
- Divider rail is available but never required
- Front tilt bar is standard. Double mouse hole, Hide-a-Tilt and Split Tilt options are available
Chapter 16: Sidelight Shutters

Sidelight Shutters: Minimum and Maximum Sizes

<table>
<thead>
<tr>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Order Width (F-F)</td>
<td>Maximum Order Width (F-F)</td>
</tr>
<tr>
<td>7 3/16”</td>
<td>13 3/16”</td>
</tr>
</tbody>
</table>

Frame Notes

- Low profile L-frame similar to sill frame
- Frame-to-Frame (F-F) measuring and ordering format
- Build-out is available and is automatically furnished when specifying 3½” louvers. Maximum 1-layer of build-out. Build-out is attached at the factory.
- The frame is assembled at the factory and will be shipped assembled
- 1/2” Hoffman Keys are used

Frame & Panel Configuration Notes

- 4-sided frame configuration only
- No sill frame configuration offered
- 1-panel configurations only (Left or Right)

Sidelight Build-Out
1/2” Thick

Installation Hardware Notes

- 12 each, color coordinated 2” X #6 screws will be furnished
- Hinges are attached using 1/2” screws. Hinges use six screws. Five screws are fastened at the factory. One screw is furnished to be used as the ‘set’ screw following final hinge adjustments.
Working With Bay Window Posts

Bay windows can be treated with standard shutters in two basic ways: by installing separate shutters that touch edge-to-edge or by using a special Bay Post at the angle points of the bay. When using a Bay Post, two shutters are fastened to either side of it.

Treatment Conditions to Consider

- **Type of Material:**
  - Bay window shutters are available in wood only.

- **Corner Conditions:**
  - The bay post is designed to treat corners that are angled at 135° (degrees) only. No other angles are available.

- **Frame Types:**
  - The following frame types are NOT offered with the bay window post application:
    - Tilt-out Z-frame
    - Bullnose Z-frame
    - Craftsman Z-frame
    - Narrow Colonial L-frame
    - Extended Standard L-frame
    - Extended Narrow Colonial L-frame
    - Craftsman Deco frame
    - No build-out is available

- **Frame Configurations Offered:**
  - Unframed units: Direct mount and hang strip applications are offered
  - Framed units: Only the 2-sided frame configuration is offered.
  - There are no top or bottom frame configurations in the program.
  - There are no 3-sided or 4-sided framed units available.
  - Sill cap is available

- **Panel Configurations:**
  - Available panel configurations vary between the side windows and the center window.
  - Side windows can be treated with 1 or 2 panel configurations, including some with T-posts.
  - Center windows can be treated with 1, 2, 3 and 4 panel configurations, including many with T-posts.
  - See the following pages for more detailed panel configuration information.

Key Selling Features

Designed to Match Standard Rectangular Shutters

- Bay window shutters are available in wood only.
- All louver sizes, tilt types and tilt options are offered
- Some frame types are not offered
- Direct mount, hang strip and 2-sided framed units only
- Refer to pricing page for bay post surcharges.

Consider using the Bay Post application when:

- Treating a Bay Window that features a drop ceiling (soffit) and window sill, not requiring a top frame or bottom frame.
- Selecting a frame style that does not easily align with itself in a side-by-side installation.
Chapter 17: Bay Windows

Panel Configurations By Window Location

**Left Side:** Choose from 1-panel or 2-panel configurations, including ones with one (1) T-post

1 Panel
- L
- R

2 Panels
- LR
- LL
- RR
- LTR
- RTR

**Center:** Choose from 1-panel, 2-panel, 3-panel and 4-panel configurations, including ones with as many as three (3) T-posts

1 Panel
- L
- R

2 Panels
- LR
- LL
- RR
- LTR
- RTR

3 Panels
- LLR
- LRR
- LLTR
- LTRR
- LTLTR
- LTRTR

4 Panels
- LLRR
- LLTR
- LRTR
- LTRLR
- LTLTR
- LTRTLR

**Right Side:** Choose from 1-panel or 2-panel configurations, including ones with one (1) T-post

1 Panel
- L
- R

2 Panels
- LR
- LL
- RR
- LTR
- RTR
Chapter 17: Bay Windows

Minimum and Maximum Order Width Sizes by Fold Pattern by Frame Type

<table>
<thead>
<tr>
<th>Panel Configurations Available for the Side Windows of the Bay</th>
<th>Direct Mount/ Hang Strip</th>
<th>Z-Frames</th>
<th>3&quot; Traditional Deco Frame</th>
<th>3½&quot; Curved/ Beaded Deco Frame</th>
<th>L-Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Order W-O</td>
<td>Order W-O</td>
<td>Order F-F Size</td>
<td>Order F-F Size</td>
<td>Order F-F Size</td>
</tr>
<tr>
<td>1 Panel</td>
<td>9½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>2 Panel</td>
<td>18½&quot;</td>
<td>72½&quot;</td>
<td>19½&quot;</td>
<td>73½&quot;</td>
<td>20½&quot;</td>
</tr>
<tr>
<td>2 Panel, 1 T-Post</td>
<td>20*</td>
<td>74*</td>
<td>20½&quot;</td>
<td>73½&quot;</td>
<td>22½&quot;</td>
</tr>
<tr>
<td>1 Bi-fold</td>
<td>18½&quot;</td>
<td>52½&quot;</td>
<td>19½&quot;</td>
<td>52½&quot;</td>
<td>20½&quot;</td>
</tr>
</tbody>
</table>

Panel Configurations Available for the Center Window of the Bay, Bay Post-to-Bay Post only (no frame to consider)

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Panel</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
</tr>
<tr>
<td>2 Panel</td>
<td>19½&quot;</td>
<td>73½&quot;</td>
</tr>
<tr>
<td>2 Panel, 1 T-Post</td>
<td>20½&quot;</td>
<td>73½&quot;</td>
</tr>
<tr>
<td>1 Bi-fold</td>
<td>19½&quot;</td>
<td>53½&quot;</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold</td>
<td>28½&quot;</td>
<td>89½&quot;</td>
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<tr>
<td>1 Panel, 1 Bi-fold, 1 T-Post</td>
<td>29½&quot;</td>
<td>110½&quot;</td>
</tr>
<tr>
<td>3 Panel, 2 T-Post</td>
<td>30½&quot;</td>
<td>111½&quot;</td>
</tr>
<tr>
<td>2 Bi-fold</td>
<td>37½&quot;</td>
<td>105½&quot;</td>
</tr>
<tr>
<td>2 Bi-fold, 1 T-Post</td>
<td>38½&quot;</td>
<td>106½&quot;</td>
</tr>
<tr>
<td>4 Panel, 1 T-Post</td>
<td>38½&quot;</td>
<td>146½&quot;</td>
</tr>
<tr>
<td>4 Panel, 2 T-Posts</td>
<td>39½&quot;</td>
<td>147½&quot;</td>
</tr>
<tr>
<td>4 Panel, 3 T-Posts</td>
<td>40½&quot;</td>
<td>148½&quot;</td>
</tr>
</tbody>
</table>
Bay Window Shutter Measuring and Ordering

Bay Post and Corner Post Template (shown to left)
- Template drawings simulate the ‘footprint’ of actual frame pieces. Both bay posts and corner posts are represented in the same template.
- The bay posts have been highlighted for this chapter.
  - The bay post footprint on the left side of the template is to be used with **L-frame**, **Z-frame** and **Hang Strip** applications.
  - The bay post footprint on the right side of the template is to be used with **Deco frame** applications.

Measuring Tips
- **Direct Mount, Hang Strip and Z-frame:**
  - Measure window-opening (WO) size. Measure from inner edge of window to the center point on the face of the bay post.
- **L-Frame and Deco Frame:**
  - Measure frame-to-frame (F-F) size. Measure from outside edge of outer frame to the center point on the face of the bay post.
- **For the Center Shutter:**
  - Measure from the center point of the face on the left bay post to the center point on the face of the right bay post.
- **IMPORTANT:** Verify the window seat and the bay window ceiling (soffit) is level to allow panels to swing open without rubbing at the top or bottom.

Ordering Tips
- Use the Bay and Corner Wood Shutter Order Form
- Window position is designated by the line number that is used.
- For bay window systems, designate the left side as window #1, the center window as #2 and the right side as window #3.
- See the back of the order form for explanation.
Chapter 18: Corner Windows

Quick-Start Product Knowledge Basics - for Wood Corner Shutters

SHUTTER TYPE: Wood
SHUTTER STYLE: Corner Post

Working With Corner Shutters
Corner windows can be treated with standard shutters in two basic ways; by installing separate shutters that touch edge-to-edge or by using a special Corner Post. When using a Corner Post, both shutters are fastened to it.

Treatment Conditions to Consider

- **Corner Conditions:**
  - The corner post is designed to treat ‘inside’ corners only that are angled at 90° (degrees). No other angles are available.

- **Frame Types:**
  - The following frame types are NOT offered with the corner post application:
    - Tilt-out Z-frame
    - Bullnose Z-frame
    - Craftsman Z-frame
    - Narrow Colonial L-frame
    - Extended Standard L-frame
    - Extended Narrow Colonial L-frame
    - Craftsman Deco frame

- **Frame Configurations Offered:**
  - Unframed units: Direct mount and hang strip applications are offered
  - Framed units: Only the 2-sided frame configuration is offered.
  - There are no top or bottom frame configurations
  - There are no 3-sided or 4-sided units available.
  - Sill cap is available

- **Panel Configurations:**
  - All configurations available for standard shutters are also available for corner shutters.
  - Corner posts are compatible with most 1, 2, 3, 4, 5, 6 and 8 panel configurations, including many with T-posts.

Key Selling Features

Designed to Match Standard Rectangular Shutters

- Corner posts are designed to work with wood only
- Some frame types are not offered
- Direct mount, hang strip and 2-sided framed units only
- There is a flat surcharge per corner system, not per individual window (one charge, not two).
- Refer to pricing page for corner post surcharges.

Consider using the Corner Post application when:

- Treating a corner window that features a drop ceiling (soffit), not requiring a top frame
- Selecting a frame style that does not easily align with itself in a side-by-side (corner) installation.
Chapter 18: Corner Windows

Corner Window Measuring and Ordering

Bay Post and Corner Post Template (shown to left)
- Template drawings simulate the ‘footprint’ of actual frame pieces. Both bay posts and corner posts are represented in the same template.
- The corner posts have been highlighted for this chapter.
  - The corner post footprint at the top of the template is to be used with L-frame, Z-frame and Hang Strip applications.
  - The corner post footprint at the bottom of the template is to be used with Deco frame applications.

Cut out the individual pieces from the template for use during measure. Place the template piece in the window to represent the exact intended placement of the corner post.

Measuring Tips
- Direct Mount, Hang Strip and Z-frame:
  - Measure window-opening (WO) size. Measure from inner edge of window to the center point on the face of the corner post.
- L-Frame and Deco Frame:
  - Measure frame-to-frame (F-F) size. Measure from outside edge of outer frame to the center point on the face of the corner post.

Ordering Tips
- Window position is designated by the line number that is used.
- For corner systems, designate the left side as window #1 and the right side as window #2.
- See the back of the order form for explanation.

Available Panel Configurations for Corner Windows

<table>
<thead>
<tr>
<th>Panel</th>
<th>L</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>2 Panels</td>
<td>L</td>
<td>R</td>
</tr>
<tr>
<td>3 Panels</td>
<td>LL</td>
<td>RR</td>
</tr>
<tr>
<td>4 Panels</td>
<td>LL</td>
<td>RR</td>
</tr>
<tr>
<td>5 Panels</td>
<td>LTL</td>
<td>LTR</td>
</tr>
<tr>
<td>6 Panels</td>
<td>LTL</td>
<td>LTR</td>
</tr>
<tr>
<td>7 Panels</td>
<td>LTL</td>
<td>LTR</td>
</tr>
<tr>
<td>8 Panels</td>
<td>LTL</td>
<td>LTR</td>
</tr>
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</table>
### Corner Shutters Panel Configurations

**Wood only**

#### Minimum and Maximum Order Width Sizes by Fold Pattern by Frame Type

<table>
<thead>
<tr>
<th>Panel Configurations Available for Both Windows of the Corners</th>
<th>Direct Mount/ Hang Strip</th>
<th>Z-Frames</th>
<th>3&quot; Traditional Deco Frame</th>
<th>3½&quot; Curved/ Beaded Deco Frame</th>
<th>L-Frames</th>
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<tbody>
<tr>
<td></td>
<td>Order W-O</td>
<td>Order W-O</td>
<td>Order F-F Size</td>
<td>Order F-F Size</td>
<td>Order F-F Size</td>
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<td>2 Panel</td>
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<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>2 Panel, 1 T-Post</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>1 Bi-fold</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>1 Panel, 1 Bi-fold, 1 T-Post</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
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<td>18½&quot;</td>
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<td>10½&quot;</td>
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<td>12½&quot;</td>
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<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>4 Panel, 1 T-Post</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
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<td>4 Panel, 2 T-Posts</td>
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<td>10½&quot;</td>
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<td>12½&quot;</td>
</tr>
<tr>
<td>4 Panel, 3 T-Posts</td>
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<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>3 Panel, 1 Bi-fold, 2 T-Posts</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
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<td>37½&quot;</td>
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<td>5 Panel, 4 T-Posts</td>
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<td>36½&quot;</td>
<td>10½&quot;</td>
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<td>12½&quot;</td>
</tr>
<tr>
<td>2 Panel, 2 Bi-fold, 2 T-Posts</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>6 Panel, 2 T-Posts</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
<tr>
<td>8 Panel, 3 T-Posts</td>
<td>18½&quot;</td>
<td>36½&quot;</td>
<td>10½&quot;</td>
<td>37½&quot;</td>
<td>12½&quot;</td>
</tr>
</tbody>
</table>
Quick-Start Product Knowledge Basics - for Standard Rectangular Shutters

WOOD SHUTTER ORDER FORM COLUMN HEADINGS

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S |
| Bin | Shutter Style | Color Number | Lower Sail | Frame Type | Build Out Quantity | Measure Type (in.) | Width | Height | Café Panel Height | Café Aligning Catch | Frame Configuration | Sill Cap Order Option | Hidden Tilt | Astragal | Astragal Overlap | Panel Configuration | T-Post Locations | Divter Rail or Split Tilt | Specify Divter Rail/Split Tilt Locations | Hinge Color | Mouse Hole |

SHUTTER TYPE: Wood and Composite

SHUTTER STYLE: Standard Rectangular and Specialty

Choosing Your Shutter Color

- Different color options apply to wood shutters versus composite shutters.
- Custom color options apply to wood shutters only
- Ideally, shutter color and hinge color are finalized with the consumer before handing off to a qualified installer for final measuring.

Shutter color and hinge color will be influenced by a combination of the following conditions:
- Traditional or contemporary room setting
- Window trim color; painted or stained
- Window and door hardware color
- Closeness of color match between room color (or trim color) and standard colors within the product line
- Cost

Other Conditions to Consider:
- Existing shutters: Are there any existing shutters in the home that will remain? If so, verify color match.

Reminder Notes:
- Due to the nature of manufacturing, colors may vary slightly between dye lots. Please order all shutters for the same room at the same time. Slight variations may also occur between the finished products and the color samples. See the Wood Characteristics section.

Key Selling Features

Offering An Unlimited Color Variety

Standard Paint & Stain Colors
- Wood shutters offer a wide range of standard paint colors and stain colors
- Wood shutter colors coordinate with our 2” wood horizontal blinds
- Composite shutters offer several popular painted white hues
- A wide variety of hinge colors are also available, including stainless steel
- Refer to your pricing guide for full listing of color offering

Retail Program Custom Paint & Stain Colors
- Refer to your Custom Color Selector

Designer Program Custom Paint & Stain Colors
- Requires submitting the Custom Color Match Request form
- Requires providing the factory with a color sample for factory strike-off, if the color formula is not already on file
- Requires your approval of strike-off
- Availability varies by program
- Refer to pricing guide for cost and step-by-step instructions of the sampling, approval and ordering processes
Chapter 20: Pricing, Lead-Time, Shipping and Warranty

Shutter Pricing

- Prices vary between wood shutters and composite shutters
- Price also varies between wood painted colors and wood stained colors
- Refer to your pricing guide for a full listing of charges, including options and specialty shutters

Lead Time

- Contact Customer Service or your local Field Rep regarding current delivery times or special shipping programs.

Shipping

For composite shutter jobs over 4 units or 60 square feet:
- Shutters are shipped in a vertical orientation
- Each window is individually boxed

For wood shutter jobs over 4 units or 60 square feet:
- Shutters are shipped in a vertical orientation
- Wood shutters are bulk packed and not individually boxed

If receiving large shipments is difficult, dealers can work with customer service to request certain services:
- Lift gate services
- Pick up at the carrier’s dock
- Call before delivery

2015 Warranty Information

LIMITED LIFETIME WARRANTY
Springs Window Fashions warrants your Shutters will be free from original defects in materials or workmanship for as long as the original purchaser owns the product. Under the Limited Lifetime Warranty, the obligations of Springs Window Fashions are limited to the repair or replacement of parts or product found to be defective. Springs Window Fashions is not responsible for shipping costs or labor costs for measuring and taking the product down or reinstalling the product.

Limited Lifetime Warranty
Springs Window Fashions will repair or replace any part of your Shutters that fails due to defects in materials or workmanship during the warranty period.

LIMITATION OF DAMAGES / DISCLAIMER OF WARRANTIES
THIS LIMITED WARRANTY DOES NOT COVER, AND IS INTENDED TO EXCLUDE, ANY AND ALL LIABILITY OF SPRINGS WINDOW FASHIONS, WHETHER UNDER THIS LIMITED WARRANTY OR UNDER ANY WARRANTY IMPLIED BY LAW, FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES, EXCEPT AS EXPRESSLY PROVIDED IN THIS LIMITED WARRANTY, SPRINGS WINDOW FASHIONS HEREBY DISCLAIMS ALL WARRANTIES TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES THAT CANNOT BE DISCLAIMED ARE, TO THE EXTENT PERMITTED BY LAW, LIMITED IN DURATION TO FIVE (5) YEARS.

2015 Warranty Information

Warranty claims must be accompanied by the original sales receipt as well as details regarding the nature of the problem, location of the product, etc. If your product is returned, please retain a copy of the shipping information for your records.

To obtain warranty service contact:
Customer Service Center
Springs Window Fashions, LLC
8467 Route 405 Highway South
PO Box 500
Montgomery, PA 17752-0500

You may also email to: shutters@springswindowfashions.com or call 1 (877) 675-0089

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WOOD - Shutter Product Resource Manual
Chapter 21: Product Sampling

Shutter Sampling

Our shutter sampling is designed to showcase our high quality craftsmanship and help you set the consumer’s expectations.

Contact your local Springs Window Fashions Field Rep for all your sampling needs.

Our sampling vehicles include:

1. Framed shutter sampling is designed to show the quality of craftsmanship and to set the consumer’s expectations
   - Wood shutter panel features: L-frame, 2½” louvers, stain color, standard tilt
   - Composite shutter panel features: Z-frame, 3½” louvers, painted color, hidden tilt
2. Catalog that includes inspirational photos of shutter product
3. Color selector
4. Frame samples
5. Louver samples
6. Louver and butt-stile tool
7. L-frame and sill frame tool

The ‘Louver with Butt Stile’ tool is ideal for checking louver tilt clearances.
1. First, insert the appropriate size louver into the louver pin hole of the shutter stile sample.
2. Then, fit the assembly into a sample of your frame choice.
3. Finally, hold up the component group into the window opening to test for unobstructed louver rotation.

The ‘L-Frame with Sill Frame’ tool is ideal for demonstrating how the corner miter assembly fits to the window sill.