

KOLBE
WINDOWS & DOORS

Heritage Series



We're for the visionaries.®

**We're for people
who take building
to new levels.**



We're for people who are passionate about design, who care about the big picture and the smallest detail. We're for people who aren't satisfied with mainstream choices... who push the limits of what's possible with the options and innovations that can only be found in Kolbe windows and doors.



We're for quality craftsmanship.

We're for a tradition of excellence that outlasts the latest design trend. The Kolbe story began with a family and a vision. More than 70 years after the Kolbe brothers began their commitment to producing premium quality windows and doors, products bearing their family name can be found in some of North America's most impressive homes and businesses.

We're for expertise.

We're for people who dream of a personalized design experience. That's why you can't find Kolbe windows and doors in the aisles of a home center. Our products are only available through a Kolbe dealer, because they are as passionate about windows and doors as you are about bringing your vision to life. And they will work with you to make your dream a concrete reality.



We're for possibilities.

We're for people who won't settle for "standard." We're for limitless options and custom solutions that can only be found in Kolbe's made-to-order products. Our team members are craftspeople who focus on building one window or door at a time, to create distinctive products that fulfill your unique vision.

We're for innovation.

We're for people who want to take building to new levels, with advancements in not only extraordinary sizes and shapes, but also ground-breaking products. We're for creative thinking that redefines what's possible, constantly reimagining our windows and doors to elevate style, performance and functionality.



**Let us bring
your vision
to life.**



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Photo courtesy of Kenneth M. Wyner Photography, Inc.



Photo courtesy of Kenneth M Wyner Photography, Inc.



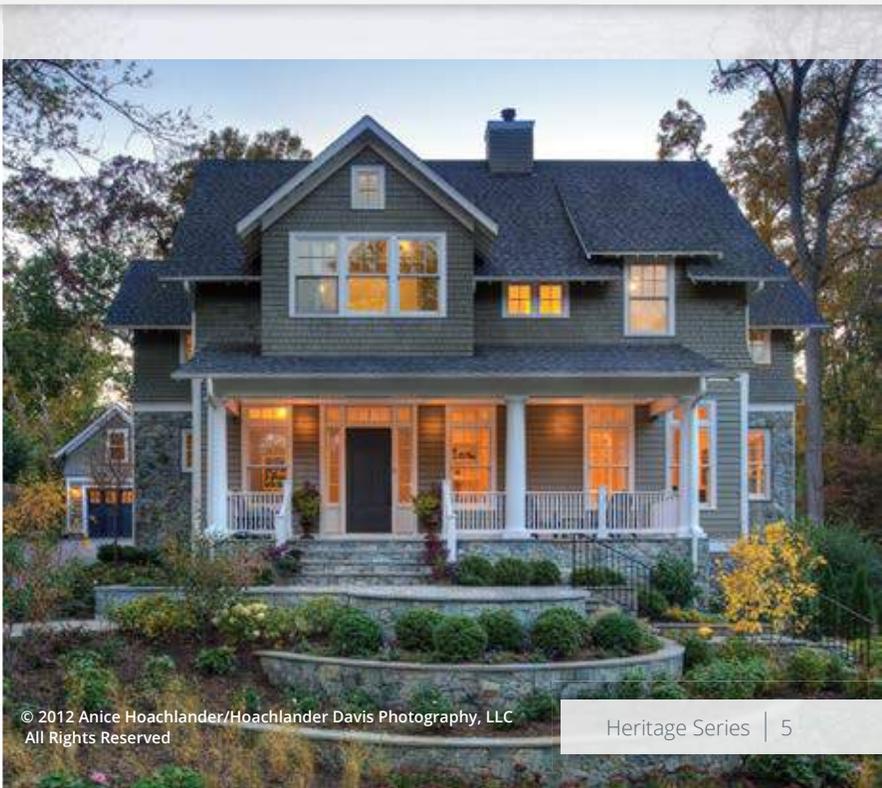
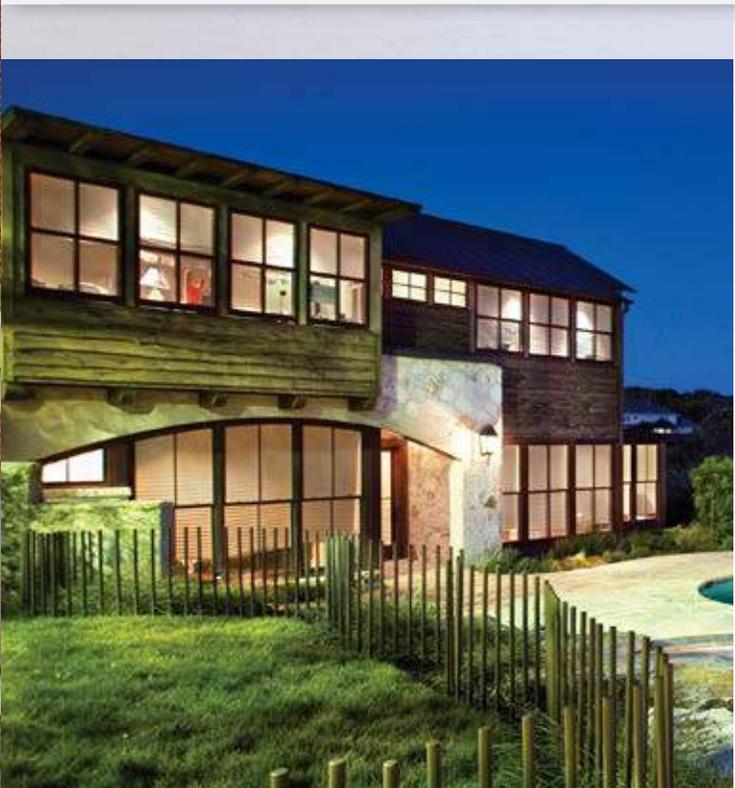


The Heritage Series

Kolbe's Heritage Series windows and doors are carefully crafted with a wood interior and exterior, making it possible to create architecturally intricate and historically accurate details. Choose from an extensive palette of exterior colors, interior wood species and finishes, divided lite profiles and patterns, and more.

The Heritage Series provides:

- Endless capabilities to replicate intricate architectural details
- Divided lite profiles & patterns; aesthetic & efficient glass choices
- Wood interior & exterior in familiar to exotic wood species
- K-Kron II exterior coating provides a high performance finish
- A palette of 40+ exterior & 20 interior pre-finish choices



Residential Construction

Years of innovation at Kolbe have led to products with great design flexibility for residential construction. Whether it's renovation or new construction, we offer products that add your signature style into your home. Your design reflects not only an architectural style, but also your individualism – from colonial to contemporary, Kolbe has the products to help you express yourself.



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Commercial Capabilities

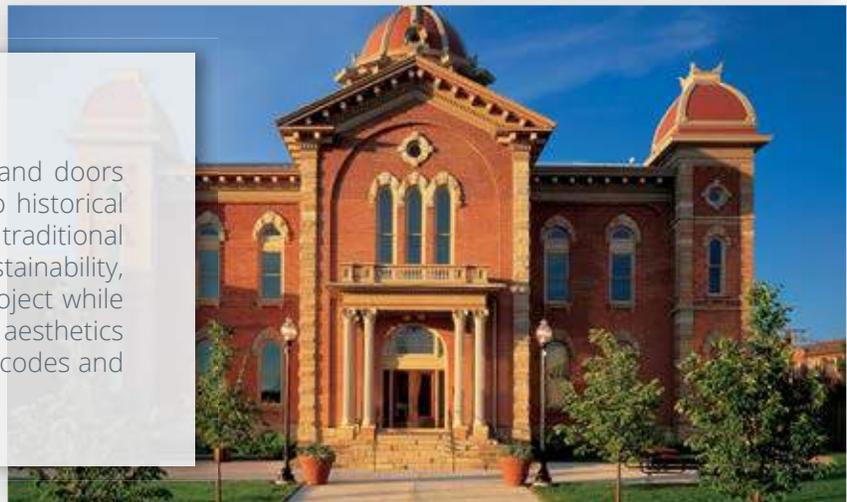
Each of our windows and doors are built-to-order. Uniquely crafted to each project's specifications, Kolbe provides endless options and design solutions in configurations suitable for commercial projects. Our technical specialists can help provide support on various aspects of your commercial project.



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Historical Renovation

Our reputation for producing custom-crafted windows and doors with attention to intricate details lends itself perfectly to historical renovation projects. Our products are designed to marry traditional design aesthetics with advanced technology and sustainability, and we offer many options to restore beauty to your project while maintaining historic character. In addition to providing aesthetics and efficiency, Kolbe can work with you to meet building codes and historical district requirements.



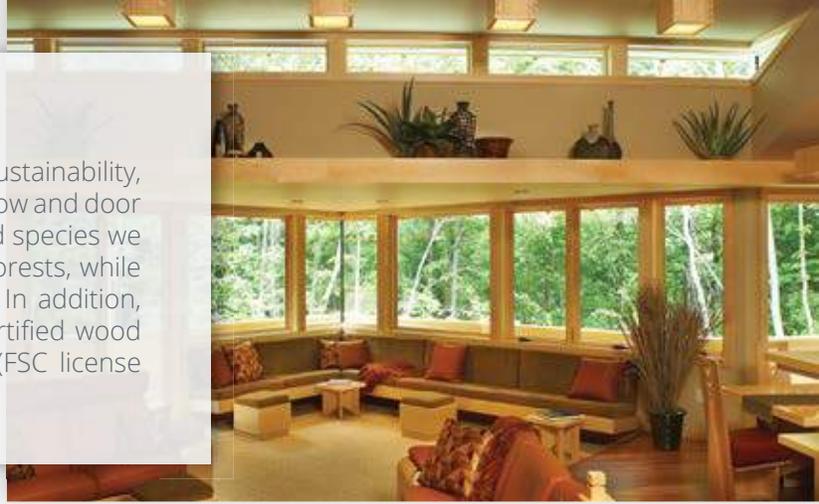
Energy Efficiency

Kolbe windows and doors are available with a wide variety of glass options to meet your energy needs in any climate. In fact, many Kolbe products meet or exceed ENERGY STAR® guidelines in most climate zones while reducing energy costs for home and business owners.



Sustainable Design

Due to our commitment to maintaining ecological sustainability, Kolbe sources most of the components used in our window and door products from within 500 miles of our factory. The wood species we use are renewable resources sourced from managed forests, while our standard glass contains 25-30% recycled content. In addition, we can provide Forest Stewardship Council® (FSC®)-certified wood species for many of our window and door products (FSC license code FSC-C019541).



Impact Certification

Impact modifications are available on a number of Kolbe windows and doors. Our products are specially designed with the strength and durability to withstand hurricane force winds and flying debris, and are independently tested to meet or exceed strict building codes in coastal regions. There are no unsightly rods or extra locks to fasten, so Kolbe's impact-certified products offer the same beautiful appearance as non-impact products.



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Design Options

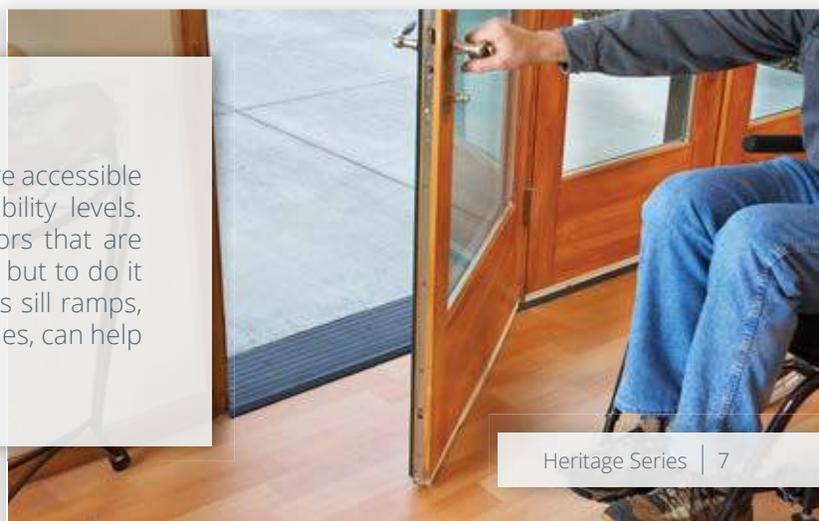
For over 70 years, Kolbe products have been all about customization. We offer many options for our windows and doors, including wood species, custom divided lite patterns, unique shapes, and many interior and exterior finishes to complement the design aesthetic of any project. We're known worldwide for our custom solutions and have worked closely with architects to build distinctive windows and doors that help bring your most innovative ideas to life.



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Universal Design

Universal design is the concept of creating spaces that are accessible and comfortable for individuals of diverse physical ability levels. Kolbe offers options for a variety of windows and doors that are not only designed to make independent living possible, but to do it with quality, style and flexibility. Kolbe's options, such as sill ramps, motorized operators, larger cranks and lever door handles, can help make independent living easier.







Casements

Offering convenience and plenty of daylight, Heritage Series casements provide excellent energy efficiency. Easy-to-operate handles, corrosion-resistant hardware, and a secure, concealed multi-point locking system on most products contribute to the integrity of these windows. A multitude of styles are available, including French, push-out, inswing, segment head and half-circle top casements.

*Crank-Out Casements | French Casements | Push-Out Casements | Inswing Casements | Picture & Transom Units
Picture Combination Units | Bow & Bay Units | Segment Head & Half-Circle Top Units*



Crank-Out Casements

Kolbe's crank-out casements combine a simple cranking operation with many options for customization to create a uniquely crafted window with an unobstructed view of the outdoors. By opening and closing easily and effectively, they provide excellent ventilation. Crank handles fold down when not in use to prevent interference with blinds.



Crank-Out Casement Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16"
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Interior screens with clay-colored aluminum frames and BetterVue® fiberglass mesh
- ▶ Clay-colored folding handles, operator covers and multi-point locks
- ▶ Corrosion-resistant dual-arm operators with concealed, adjustable hinges (*single-arm operators with concealed, adjustable hinges on "S" Series casements; single-arm operators with Euro hinges for added support on segment head and half-circle top units*)

NOTE: All measurements are nominal.

Hardware

- ▶ Folding handles with standard Clay-colored finish. Also available in White, Beige, Bright Brass, Antique Brass, Satin Nickel, Antique Nickel, Rustic Umber and Matte Black.
- ▶ Multi-point locking system* (*standard*) with up to three locking points to quickly and securely lock units from one convenient location. Multi-point locking levers will match operator handle colors.

*Not available on French casements.

Folding Handle
(shown in Clay)



Folding Handle with Custodial Lock
(shown in Matte Black)



Multi-Point Locking Lever
(shown in Clay)





Crank-Out Casement Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned-, bronze-, or gray-lite
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4" or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Screens with White, Beige, Dark Bronze Anodized, Clear Anodized and Coal Black frames
- ▶ Screens with aluminum or UltraVue® fiberglass mesh
- ▶ Wood wrapped screens (not available on radius top or "S" series units)
- ▶ Retractable screen kit
- ▶ Retractable screen covers available as beveled (standard) or square

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ French casements
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Prep for stool
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Universal design casement handle and lock in White or Clay (pg. 189)
- ▶ Factory-installed Window Opening Control Device (WOCD) (pg. 188)
- ▶ Motorized window system
- ▶ Single-arm operators with Euro hinges
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ Galvanized steel installation clips
- ▶ Bow and bay options: insulated platforms, support brackets and oak-veneered head and seat boards
- ▶ High performance modifications

Push-Out Casements

Kolbe's push-out casements have a uniquely simple operation. Simply unlock a handle to push open or pull closed. Combining ease-of-operation with authentic style, push-out casements offer old-world aesthetics with today's energy efficiency.



Push-Out Casement Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16" (*basic box width is 3-1/2" on wood units, plus extensions*)
- ▶ Constructed of pine, with pine interior stops and wood mull casings on muller units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Single-point lever handle in an Oil-Rubbed* finish
- ▶ Concealed hinges (*segment head and half-circle top units use Tri-Euro hinges for added support*)

NOTE: All measurements are nominal.

Hardware

- ▶ Single-point lever handles in Oil-Rubbed* (*standard*), Natural Brass and Satin Nickel finishes.
- ▶ Multi-point handles available in Oil-Rubbed*, Natural Brass and Satin Nickel finishes.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.



(shown in Oil-Rubbed*)



Lever Handle with Single-Point Lock
(shown in Natural Brass)



(shown in Satin Nickel)



(shown in Oil-Rubbed*)





Push-Out Casement Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

NOTE: All measurements are nominal.

Screens

- ▶ Wood frame hinged/swinging screen or retractable screen with BetterVue® fiberglass mesh (segment head and half-circle top casements are only available with a hinged/swinging screen)
- ▶ Retractable screen covers available as beveled (standard) or square
- ▶ Screens with UltraVue® fiberglass mesh (hinged/swinging screen only)

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

Other Options (custom options are also available)

- ▶ French push-out casements
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Prep for stool
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

Lever Handle with Multi-Point Lock

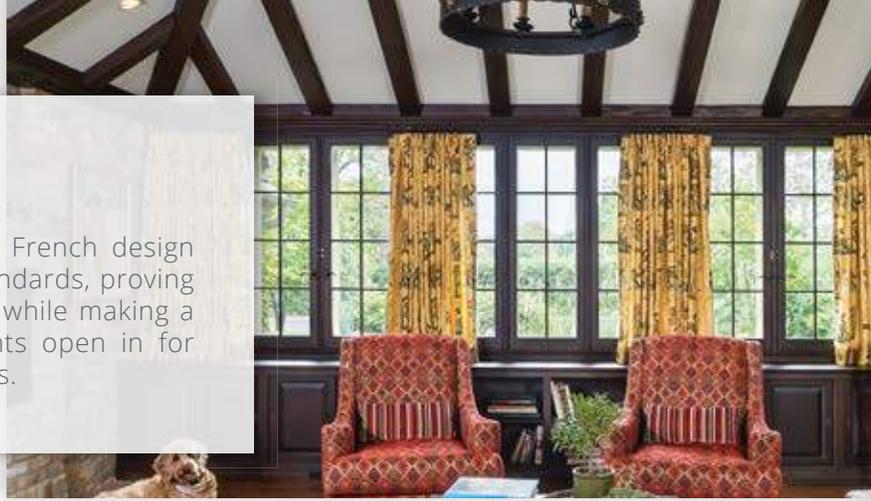
(shown in Natural Brass)

(shown in Satin Nickel)



Inswing Casements

Kolbe's inswing casements are inspired by classic French design with modern updates to meet energy efficiency standards, proving it's possible to honor traditionally beautiful design while making a modern architectural statement. Inswing casements open in for ventilation and are available in single or French units.



Inswing Casement Standard Features

- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ 1-3/4" thick sash
- ▶ Bottom rail height is 3-1/2"
- ▶ Overall jamb width is 4-9/16"
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ A drip-lip applied to the bottom exterior of the sash and a weep channel system on the sill
- ▶ Exterior screens with BetterVue[®] fiberglass mesh and aluminum screen frames in a variety of colors
- ▶ Bright Brass handle set as standard
- ▶ Sash hang on 3-1/2" x 3-1/2" butt hinges in a Bright Brass finish
- ▶ Multi-point locking hardware secures the unit

NOTE: All measurements are nominal.

Hardware

- ▶ Inswing casement handle sets are available in Bright Brass (*standard*), White, Antique Brass, Bronze-colored, Satin Nickel, Antique Nickel, Brushed Chrome, Oil-Rubbed* and Matte Black.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

**Handle style available in White and Bronze-colored only.

Inswing Casement Handle
(Shown in standard Bright Brass)



Inswing Casement Handle**
(Shown in Bronze-colored)





Inswing Casement Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-airspace
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Screens will match exterior color
- ▶ Screens with aluminum or UltraVue® fiberglass mesh

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ French inswing casements
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Prep for stool
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Extension jambs (up to 7")
- ▶ Galvanized steel installation clips

Casements | Elevation Charts

Casements | Single Units

U.D.	1'-6 1/2"	1'-10 1/2"	2'-2 1/2"	2'-6 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"
R.O.	1'-4 1/2"	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"
G.S.	11 1/4"	15 1/4"	19 1/4"	23 1/4"	25 1/4"	27 1/4"	31 1/4"
G.S.**	9 13/16"	13 13/16"	17 13/16"	21 13/16"	23 13/16"	25 13/16"	29 13/16"
2'-2"							
2'-8"							
3'-2"							
3'-8"							
4'-2"							
4'-8"							
5'-2"							
5'-8"							
6'-2"							

* Units meet most national emergency escape and rescue requirements

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/2"	-2"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 5/8"	-3 9/16"
3-1/2" casing and backband; U.D. to F.S.	-7 1/8"	-4 5/16"

F.S. to Sash O.S.M.	-1 15/16"	1 15/16"
Sash O.S.M. to G.S.	-2 13/16"	2 13/16"
G.S. to D.L.O.	-1"	-1"
G.S. to Screen O.S.M.	+1 9/16"	+1/2"
U.D. to G.S. (for push-outs)	-8 11/16"	-8 3/16"

Note: Clear opening dimensions can be found on pgs. 194-196.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "S" Series (1' - 4" Wide)

U.D.	1'-6 1/2"	2'-10 1/2"	4'-2 1/2"	5'-6 1/2"	6'-10 1/2"
R.O.	1'-4 1/2"	2'-8 1/2"	4'-0 1/2"	5'-4 1/2"	6'-8 1/2"
G.S.	11 1/4"	11 1/4"	11 1/4"	11 1/4"	11 1/4"
G.S.**	9 13/16"	9 13/16"	9 13/16"	9 13/16"	9 13/16"
2'-2"					
2'-8"					
3'-2"					
3'-8"					
4'-2"					
4'-8"					
5'-2"					
5'-8"					
6'-2"					

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "N" Series (1' - 8" Wide)

U.D.	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"	6'-10 1/2"	8'-6 1/2"
R.O.	1'-8 1/2"	3'-4 1/2"	5'-0 1/2"	6'-8 1/2"	8'-4 1/2"
G.S.	15 1/4"	15 1/4"	15 1/4"	15 1/4"	15 1/4"
G.S.**	13 13/16"	13 13/16"	13 13/16"	13 13/16"	13 13/16"
2'-2"					
2'-0 1/2"					
2'-8"					
2'-6 1/2"					
2'-4"					
3'-2"					
3'-0 1/2"					
3'-8"					
3'-6 1/2"					
3'-4"					
4'-2"					
4'-0 1/2"					
4'-8"					
4'-6 1/2"					
4'-4"					
5'-2"					
5'-0 1/2"					
5'-8"					
5'-6 1/2"					
5'-4"					
6'-2"					
6'-0 1/2"					
6'-4"					
6'-8"					

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "W" Series (2' - 0" Wide)

	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"	8'-2 1/2"	10'-2 1/2"	12'-2 1/2"
U.D.	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"	8'-2 1/2"	10'-2 1/2"	12'-2 1/2"
R.O.	2'-0 1/2"	4'-0 1/2"	6'-0 1/2"	8'-0 1/2"	10'-0 1/2"	12'-0 1/2"
G.S.	19 1/4"	19 1/4"	19 1/4"	19 1/4"	19 1/4"	19 1/4"
G.S.**	17 13/16"	17 13/16"	17 13/16"	17 13/16"	17 13/16"	17 13/16"
2'-2"						
2'-8"						
3'-2"						
3'-8"						
4'-2"						
4'-8"						
5'-2"						
5'-8"						
6'-2"						

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "L" Series (2' - 4" wide)

	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"	9'-6 1/2"	11'-10 1/2"	14'-2 1/2"
U.D.	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"	9'-6 1/2"	11'-10 1/2"	14'-2 1/2"
R.O.	2'-4 1/2"	4'-8 1/2"	7'-0 1/2"	9'-4 1/2"	11'-8 1/2"	14'-0 1/2"
G.S.	23 1/4"	23 1/4"	23 1/4"	23 1/4"	23 1/4"	23 1/4"
G.S.**	21 13/16"	21 13/16"	21 13/16"	21 13/16"	21 13/16"	21 13/16"
2'-2"						
2'-8"						
3'-2"						
3'-8"						
4'-2"						
4'-8"						
5'-2"						
5'-8"						
6'-2"						

* Units meet most national emergency escape and rescue requirements when modified with single-arm operators and Euro hinges.

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "X" Series (2' - 6" wide)

U.D.	2'-8 1/2"	5'-2 1/2"	7'-8 1/2"	10'-2 1/2"	12'-8 1/2"
R.O.	2'-6 1/2"	5'-0 1/2"	7'-6 1/2"	10'-0 1/2"	12'-6 1/2"
G.S.	25 1/4"	25 1/4"	25 1/4"	25 1/4"	25 1/4"
G.S.**	23 13/16"	23 13/16"	23 13/16"	23 13/16"	23 13/16"
2'-2"	X12†	X22†	X32†	X42†	X52†
2'-8"	X126†	X226†	X326†	X426†	X526†
3'-2"	X13	X23	X33	X43	X53
3'-8"	X136	X236	X336	X436	X536
4'-2"	X14*	X24*	X34*	X44*	X54*
4'-8"	X146*	X246*	X346*	X446*	X546*
5'-2"	X15*	X25*	X35*	X45*	X55*
5'-8"	X156*	X256*	X356*	X456*	X556*
6'-2"	X16*	X26*	X36*	X46*	X56*

* Units meet most national emergency escape and rescue requirements.

** Glass size for push-out casements

† Push-out units are only available with single-point hardware

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "C" Series (2' - 8" Wide)

	U.D.	2'10 1/2"	5'6 1/2"	8'2 1/2"	10'10 1/2"	13'6 1/2"
	R.O.	2'8 1/2"	5'4 1/2"	8'0 1/2"	10'8 1/2"	13'4 1/2"
	G.S.	27 1/4"	27 1/4"	27 1/4"	27 1/4"	27 1/4"
	G.S.**	25 13/16"	25 13/16"	25 13/16"	25 13/16"	25 13/16"
2'2"	20 1/2"					
	19 1/4"	C12	C22	C32	C42	C52
2'8"	26 1/2"					
	25 1/4"	C126	C226	C326	C426	C526
3'2"	30 1/2"					
	31 1/4"	C13	C23	C33	C43	C53
3'8"	36 1/2"					
	37 1/4"	C136	C236	C336	C436	C536
4'2"	40 1/2"					
	41 1/4"	C14*	C24*	C34*	C44*	C54*
4'8"	46 1/2"					
	47 1/4"	C146*	C246*	C346*	C446*	C546*
5'2"	50 1/2"					
	51 1/4"	C15*	C25*	C35*	C45*	C55*
5'8"	56 1/2"					
	59 1/4"	C156*	C256*	C356*	C456*	C556*
6'2"	60 1/2"					
	65 13/16"	C16*	C26*	C36*	C46*	C56*

* Units meet most national emergency escape and rescue requirements.

** Glass size for push-out casements

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

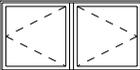
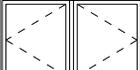
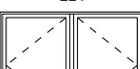
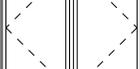
NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "E" Series (3'- 0" Wide)

U.D.	3'-2 1/2"	6'-2 1/2"	9'-2 1/2"
R.O.	3'-0 1/2"	6'-0 1/2"	9'-0 1/2"
G.S.	31 1/4"	31 1/4"	31 1/4"
G.S.**	29 13/16"	29 13/16"	29 13/16"
3'-2"			
	E13	E23	E33
3'-8"			
	E136*	E236*	E336*
4'-2"			
	E14*	E24*	E34*
4'-8"			
	E146*	E246*	E346*
5'-2"			
	E15*	E25*	E35*
5'-8"			
	E156*	E256*	E356*
6'-2"			
	E16*	E26*	E36*

* Units meet most national emergency escape and rescue requirements.

** Glass size for push-out casements

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | Rectangular Transoms & Picture Units

U.D.	1'-6 1/2"	1'-10 1/2"	2'-2 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"	3'-6 1/2"	4'-2 1/2"	4'-8 1/2"	5'-2 1/2"	6'-2 1/2"
R.O.	1'-4 1/2"	1'-8 1/2"	2'-0 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"	3'-4 1/2"	4'-0 1/2"	4'-6 1/2"	5'-0 1/2"	6'-0 1/2"
G.S.	11 1/4"	15 1/4"	19 1/4"	25 1/4"	27 1/4"	31 1/4"	35 1/4"	43 1/4"	49 1/4"	55 1/4"	67 1/4"
G.S.*	9 13/16"	13 13/16"	17 13/16"	23 13/16"	25 13/16"	29 13/16"	33 13/16"	41 13/16"	47 13/16"	53 13/16"	65 13/16"
1'-6"											
1'-8"											
1'-10"											
2'-2"											
2'-8"											
3'-2"											
3'-8"											
4'-2"											
4'-8"											
5'-2"											
5'-8"											
6'-2"											

** Glass size for units to match operating push-out casements
 U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

French Casements

U.D.	3'-6 1/2"	4'-2 1/2"	5'-2 1/2"
R.O.	3'-4 1/2"	4'-0 1/2"	5'-0 1/2"
G.S.	16 1/8"	20 1/8"	26 1/8"
G.S.**	14 11/16"	18 11/16"	24 11/16"
3'-2"			
3'-0 1/2"			
3'-1 1/8"			
3'-8"			
3'-6 1/2"			
3'-7 1/8"			
3'-13/16"			
4'-2"			
4'-0 1/2"			
4'-3 1/8"			
4'-13/16"			
4'-8"			
4'-6 1/2"			
4'-9 1/8"			
4'-13/16"			
5'-2"			
5'-0 1/2"			
5'-5 1/8"			
5'-13/16"			
5'-8"			
5'-6 1/2"			
6'-1 1/8"			
5'-13/16"			
6'-2"			
6'-0 1/2"			
6'-7 1/8"			
6'-13/16"			

* Units meet most national emergency escape and rescue requirements.

** Glass size for push-out casements

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

Inswing Casements

Single Unit

U.D.	2'-2 3/4"
R.O.	2-1"
G.S.	19 13/16"
3'-1 3/4"	
3'-0 1/2"	
29 1/8"	
3'-7 3/4"	
3'-6 1/2"	
35 1/8"	
4'-1 3/4"	
4'-0 1/2"	
41 1/8"	
4'-7 3/4"	
4'-6 1/2"	
47 1/8"	
5'-1 3/4"	
5'-0 1/2"	
53 1/8"	
5'-7 3/4"	
5'-6 1/2"	
59 1/8"	
6'-1 3/4"	
6'-0 1/2"	
65 1/8"	

Two-Wide French

U.D.	3'-6 1/4"	4'-2 1/4"	5'-2 1/4"
R.O.	3'-4 1/2"	4'-0 1/2"	5'-0 1/2"
G.S.	15 13/16"	19 13/16"	25 13/16"
3'-1 3/4"			
3'-0 1/2"			
29 1/8"			
3'-7 3/4"			
3'-6 1/2"			
35 1/8"			
4'-1 3/4"			
4'-0 1/2"			
41 1/8"			
4'-7 3/4"			
4'-6 1/2"			
47 1/8"			
5'-1 3/4"			
5'-0 1/2"			
53 1/8"			
5'-7 3/4"			
5'-6 1/2"			
59 1/8"			
6'-1 3/4"			
6'-0 1/2"			
65 1/8"			

NOTE: All measurements are nominal. Elevation charts are not to scale. Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "N" Series Picture Unit Combinations

U.D.	5'-2 1/2"		5'-2 1/2"		6'-10 1/2"			6'-10 1/2"		6'-10 1/2"		8'-6 1/2"		
R.O.	5'-0 1/2"		5'-0 1/2"		6'-8 1/2"			6'-8 1/2"		6'-8 1/2"		8'-4 1/2"		
G.S.**	15 1/4" 35 1/4"		35 1/4" 15 1/4"		15 1/4" 35 1/4" 15 1/4"			15 1/4" 55 1/4"		55 1/4" 15 1/4"		15 1/4" 55 1/4" 15 1/4"		
G.S.**	13 13/16" 33 13/16"		33 13/16" 13 13/16"		13 13/16" 33 13/16" 13 13/16"			13 13/16" 53 13/16"		53 13/16" 13 13/16"		13 13/16" 53 13/16" 13 13/16"		
3'-2"														
3'-0 1/2"														
3'-8"														
3'-6 1/2"														
4'-2"														
4'-0 1/2"														
4'-8"														
4'-6 1/2"														
5'-2"														
5'-0 1/2"														
5'-8"														
5'-6 1/2"														
6'-2"														
6'-0 1/2"														

** Glass size for push-out casements.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Venting is viewed from the exterior.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | “W” Series Picture Unit Combinations

U.D.	6'-2 1/2"		6'-2 1/2"		8'-2 1/2"			8'-2 1/2"		10'-2 1/2"		
R.O.	6'-0 1/2"		6'-0 1/2"		8'-0 1/2"			8'-0 1/2"		10'-0 1/2"		
G.S.	19 1/4" 43 1/4"		43 1/4" 19 1/4"		19 1/4" 43 1/4" 19 1/4"			19 1/4" 67 1/4"		19 1/4" 67 1/4" 19 1/4"		
G.S.**	17 13/16" 41 13/16"		41 13/16" 17 13/16"		17 13/16" 41 13/16" 17 13/16"			17 13/16" 65 13/16"		17 13/16" 65 13/16" 17 13/16"		
3'-2"												
3'-8"												
4'-2"												
4'-8"												
5'-2"												
5'-8"												
6'-2"												

** Glass size for push-out casements.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Venting is viewed from the exterior.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "N" Series Bow Windows

UNIT PROJECTION:		5"	8 9/16"	12 1/16"	17 1/4"	22 5/16"
U.D.		5'-2 3/8"	6'-9 1/2"	8'-4 1/16"	9'-9 15/16"	11'-3 1/16"
R.O.		4'-11 13/16"	6'-6 3/4"	8'-1 1/8"	9'-6 11/16"	10'-11 1/4"
G.S.		15 1/4"	15 1/4"	15 1/4"	15 1/4"	15 1/4"
3'-2"	3'-0 1/2"					
3'-8"	3'-6 1/2"					
4'-2"	4'-0 1/2"					
4'-8"	4'-6 1/2"					
5'-2"	5'-0 1/2"					
5'-8"	5'-6 1/2"					
6'-2"	6'-0 1/2"					

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bow units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | “W” Series Bow Windows

UNIT PROJECTION:		5 11/16"	9 15/16"	14 1/8"	20 5/16"	26 3/8"
U.D.		6'-2 1/4"	8'-1 3/16"	9'-11 7/16"	11'-8 7/8"	13'-5 7/16"
R.O.		5'-11 11/16"	7'-10 1/2"	9'-8 1/2"	11'-5 5/8"	13'-1 9/16"
G.S.		19 1/4"	19 1/4"	19 1/4"	19 1/4"	19 1/4"
3'-2"						
3'-0 1/2"		W33BOW	W43BOW	W53BOW	W63BOW	W73BOW
3'-6 1/2"						
37 1/4"		W336BOW	W436BOW	W536BOW	W636BOW	W736BOW
4'-2"						
4'-0 1/2"		W34BOW	W44BOW	W54BOW	W64BOW	W74BOW
4'-6 1/2"						
49 1/4"		W346BOW	W446BOW	W546BOW	W646BOW	W746BOW
5'-2"						
5'-0 1/2"		W35BOW	W45BOW	W55BOW	W65BOW	W75BOW
5'-8"						
5'-6 1/2"		W356BOW	W456BOW	W556BOW	W656BOW	W756BOW
6'-2"						
6'-0 1/2"		W36BOW	W46BOW	W56BOW	W66BOW	W76BOW
67 1/4"						

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bow units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "S" Series 30° Bay Windows

UNIT PROJECTION: 10 7/16"

	4'-2 11/16"	5'-6 11/16"	6'-10 11/16"
U.D.	4'-2 11/16"	5'-6 11/16"	6'-10 11/16"
R.O.	3'-10 7/8"	5'-2 7/8"	6'-6 7/8"
G.S.	11 1/4"	11 1/4"	11 1/4"
3'-2"			
3'-0 1/2"	S13-13-13	S13-23-13	S13-33-13
3'-8"			
3'-6 1/2"	S136-136-136	S136-236-136	S136-336-136
4'-2"			
4'-0 1/2"	S14-14-14	S14-24-14	S14-34-14
4'-8"			
4'-6 1/2"	S146-146-146	S146-246-146	S146-346-146
5'-2"			
5'-0 1/2"	S15-15-15	S15-25-15	S15-35-15
5'-8"			
5'-6 1/2"	S156-156-156	S156-256-156	S156-356-156
6'-2"			
6'-0 1/2"	S16-16-16	S16-26-16	S16-36-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms & support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

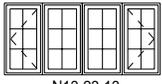
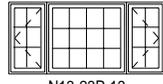
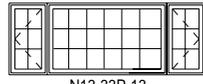
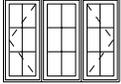
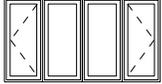
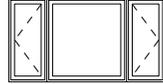
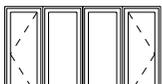
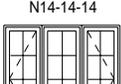
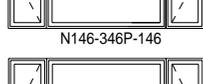
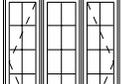
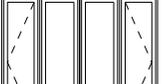
Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "N" Series 30° Bay Windows

UNIT PROJECTION: 12 7/16"

	5'-1 5/8"	6'-9 5/8"	6'-9 5/8"	8'-5 5/8"	8'-5 5/8"
U.D.	5'-1 5/8"	6'-9 5/8"	6'-9 5/8"	8'-5 5/8"	8'-5 5/8"
R.O.	4'-9 3/4"	6'-5 3/4"	6'-5 3/4"	8'-1 3/4"	8'-1 3/4"
G.S.	15 1/4"	15 1/4"	15 1/4" 35 1/4" 15 1/4"	15 1/4"	15 1/4" 55 1/4" 15 1/4"

3'-2"	3'-0 1/2"					
		N13-13-13	N13-23-13	N13-23P-13	N13-33-13	N13-33P-13
3'-8"	3'-5 1/2"					
		N136-136-136	N136-236-136	N136-236P-136	N136-336-136	N136-336P-136
4'-2"	4'-0 1/2"					
		N14-14-14	N14-24-14	N14-24P-14	N14-34-14	N14-34P-14
4'-8"	4'-6 1/2"					
		N146-146-146	N146-246-146	N146-246P-146	N146-346-146	N146-346P-146
5'-2"	5'-0 1/2"					
		N15-15-15	N15-25-15	N15-25P-15	N15-35-15	N15-35P-15
5'-8"	5'-6 1/2"					
		N156-156-156	N156-256-156	N156-256P-156	N156-356-156	N156-356P-156
6'-2"	6'-0 1/2"					
		N16-16-16	N16-26-16	N16-26P-16	N16-36-16	N16-36P-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "W" Series 30° Bay Windows

UNIT PROJECTION: 14 7/16"

	6'-0 9/16"	8'-0 9/16"	8'-0 9/16"	10'-0 9/16"	10'-0 9/16"
R.O.	5'-8 11/16"	7'-8 11/16"	7'-8 11/16"	9'-8 11/16"	9'-8 11/16"
G.S.	19 1/4"	19 1/4"	19 1/4" 43 1/4" 19 1/4"	19 1/4"	19 1/4" 67 1/4" 19 1/4"
3'-2" 3'-0 1/2" 31 1/4"	W13-13-13	W13-23-13	W13-23P-13	W13-33-13	W13-33P-13
3'-8" 3'-6 1/2" 37 1/4"	W136-136-136	W136-236-136	W136-236P-136	W136-336-136	W136-336P-136
4'-2" 4'-0 1/2" 43 1/4"	W14-14-14	W14-24-14	W14-24P-14	W14-34-14	W14-34P-14
4'-8" 4'-6 1/2" 49 1/4"	W146-146-146	W146-246-146	W146-246P-146	W146-346-146	W146-346P-146
5'-2" 5'-0 1/2" 55 1/4"	W15-15-15	W15-25-15	W15-25P-15	W15-35-15	W15-35P-15
5'-8" 5'-6 1/2" 61 1/4"	W156-156-156	W156-256-156	W156-256P-156	W156-356-156	W156-356P-156
6'-2" 6'-0 1/2" 67 1/4"	W16-16-16	W16-26-16	W16-26P-16	W16-36-16	W16-36P-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "X" Series 30° Bay Windows

UNIT PROJECTION: 17 7/16"

	7'-4 5/8"	9'-10 5/8"	12'-4 5/8"
U.D.	7'-4 5/8"	9'-10 5/8"	12'-4 5/8"
R.O.	7'-1 1/8"	9'-7 1/8"	12'-1 1/8"
G.S.	25 1/4"	25 1/4"	25 1/4"
3'-2" 3'-0 1/2" 31 1/4"			
	X13-13-13	X13-23-13	X13-33-13
3'-8" 3'-6 1/2" 37 1/4"			
	X136-136-136	X136-236-136	X136-336-136
4'-2" 4'-0 1/2" 43 1/4"			
	X14-14-14	X14-24-14	X14-34-14
4'-8" 4'-6 1/2" 49 1/4"			
	X146-146-146	X146-246-146	X146-346-146
5'-2" 5'-0 1/2" 55 1/4"			
	X15-15-15	X15-25-15	X15-35-15
5'-8" 5'-6 1/2" 61 1/4"			
	X156-156-156	X156-256-156	X156-356-156
6'-2" 6'-0 1/2" 67 1/4"			
	X16-16-16	X16-26-16	X16-36-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | "S" Series 45° Bay Windows

UNIT PROJECTION: 14 5/8"



	3'-10 15/16"	5'-2 15/16"	6'-6 15/16"
U.D.	3'-10 15/16"	5'-2 15/16"	6'-6 15/16"
R.O.	3'-5 15/16"	4'-9 15/16"	6'-1 15/16"
G.S.	11 1/4"	11 1/4"	11 1/4"
3'-2"			
3'-0 1/2"	S13-13-13	S13-23-13	S13-33-13
3'-8"			
3'-6 1/2"	S136-136-136	S136-236-136	S136-336-136
4'-2"			
4'-0 1/2"	S14-14-14	S14-24-14	S14-34-14
4'-8"			
4'-6 1/2"	S146-146-146	S146-246-146	S146-346-146
5'-2"			
5'-0 1/2"	S15-15-15	S15-25-15	S15-35-15
5'-8"			
5'-6 1/2"	S156-156-156	S156-256-156	S156-356-156
6'-2"			
6'-0 1/2"	S16-16-16	S16-26-16	S16-36-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "N" Series 45° Bay Windows

UNIT PROJECTION: 17 1/2"

	4'-8 9/16"	6'-4 9/16"	6'-4 9/16"	8'-0 9/16"	8'-0 9/16"
U.D.	4'-8 9/16"	6'-4 9/16"	6'-4 9/16"	8'-0 9/16"	8'-0 9/16"
R.O.	4'-3 5/8"	5'-11 5/8"	5'-11 5/8"	7'-7 5/8"	7'-7 5/8"
G.S.	15 1/4"	15 1/4"	15 1/4" 35 1/4" 15 1/4"	15 1/4"	15 1/4" 55 1/4" 15 1/4"
3'-2"					
3'-8"					
4'-2"					
4'-8"					
5'-2"					
5'-8"					
6'-2"					

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. Follow chart down from top row and across from left column to determine divided lites configurations.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

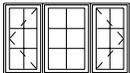
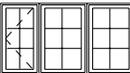
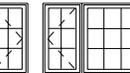
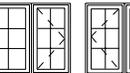
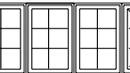
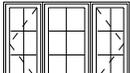
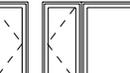
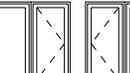
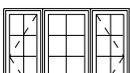
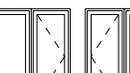
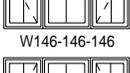
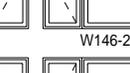
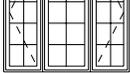
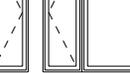
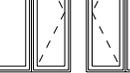
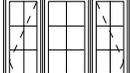
Casements | Elevation Charts

Casements | "W" Series 45° Bay Windows

UNIT PROJECTION: 20 5/16"



	5'-6 1/4"	7'-6 1/4"	7'-6 1/4"	9'-6 1/4"	9'-6 1/4"
U.D.	5'-6 1/4"	7'-6 1/4"	7'-6 1/4"	9'-6 1/4"	9'-6 1/4"
R.O.	5'-1 1/4"	7'-1 1/4"	7'-1 1/4"	9'-1 1/4"	9'-1 1/4"
G.S.	19 1/4"	19 1/4"	19 1/4" 43 1/4" 19 1/4"	19 1/4"	19 1/4" 67 1/4" 19 1/4"

3'-2" 3'-0 1/2" 31 1/4"	 W13-13-13	 W13-23-13	 W13-23P-13	 W13-33-13	 W13-33P-13
3'-8" 3'-6 1/2" 37 1/4"	 W136-136-136	 W136-236-136	 W136-236P-136	 W136-336-136	 W136-336P-136
4'-2" 4'-0 1/2" 43 1/4"	 W14-14-14	 W14-24-14	 W14-24P-14	 W14-34-14	 W14-34P-14
4'-8" 4'-6 1/2" 49 1/4"	 W146-146-146	 W146-246-146	 W146-246P-146	 W146-346-146	 W146-346P-146
5'-2" 5'-0 1/2" 55 1/4"	 W15-15-15	 W15-25-15	 W15-25P-15	 W15-35-15	 W15-35P-15
5'-8" 5'-6 1/2" 61 1/4"	 W156-156-156	 W156-256-156	 W156-256P-156	 W156-356-156	 W156-356P-156
6'-2" 6'-0 1/2" 67 1/4"	 W16-16-16	 W16-26-16	 W16-26P-16	 W16-36-16	 W16-36P-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | "X" Series 45° Bay Windows

UNIT PROJECTION: 24 9/16"



	6'-8 11/16"	9'-2 11/16"	11'-8 11/16"
U.D.	6'-8 11/16"	9'-2 11/16"	11'-8 11/16"
R.O.	6'-3 3/4"	8'-9 3/4"	11'-3 3/4"
G.S.	25 1/4"	25 1/4"	25 1/4"
3'-2"			
3'-0 1/2"	X13-13-13	X13-23-13	X13-33-13
3'-8"			
3'-6 1/2"	X136-136-136	X136-236-136	X136-336-136
4'-2"			
4'-0 1/2"	X14-14-14	X14-24-14	X14-34-14
4'-8"			
4'-6 1/2"	X146-146-146	X146-246-146	X146-346-146
5'-2"			
5'-0 1/2"	X15-15-15	X15-25-15	X15-35-15
5'-8"			
5'-6 1/2"	X156-156-156	X156-256-156	X156-356-156
6'-2"			
6'-0 1/2"	X16-16-16	X16-26-16	X16-36-16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Casements | 90° Bay Windows

UNIT PROJECTION: 23 1/2"

U.D.	4'-9 1/2"	4'-9 1/2"	6'-9 1/2"	6'-9 1/2"
R.O.	4'-0 1/2"	4'-0 1/2"	6'-0 1/2"	6'-0 1/2"
G.S.	19 1/4"	43 1/4"	19 1/4"	67 1/4"
3'-2"				
3'-0 1/2"	S13-W23-S13	S13-W23P-S13	S13-W33-S13	S13-W33P-S13
3'-8"				
3'-6 1/2"	S136-W236-S136	S136-W236P-S136	S136-W336-S136	S136-W336P-S136
4'-2"				
4'-0 1/2"	S14-W24-S14	S14-W24P-S14	S14-W34-S14	S14-W34P-S14
4'-8"				
4'-6 1/2"	S146-W246-S146	S146-W246P-S146	S146-W346-S146	S146-W346P-S146
5'-2"				
5'-0 1/2"	S15-W25-S15	S15-W25P-S15	S15-W35-S15	S15-W35P-S15
5'-8"				
5'-6 1/2"	S156-W256-S156	S156-W256P-S156	S156-W356-S156	S156-W356P-S156
6'-2"				
6'-0 1/2"	S16-W26-S16	S16-W26P-S16	S16-W36-S16	S16-W36P-S16

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Only flanker sash vent on 90° bay windows.

Divided lites are optional. Sizes and divided lite configurations for flanker sash can be found on the Casements - "S" Series chart on pg. 17.

If the cable support system and/or insulated platforms and support brackets are not being used, other means of proper support must be used. Add 1-11/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.

For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Segment Head Casements | Single Units

U.D.	1'-6 1/2"	1'-10 1/2"	2'-2 1/2"	2'-6 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"
R.O.	1'-4 1/2"	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"
G.S.*	11 1/4"	15 1/4"	19 1/4"	23 1/4"	25 1/4"	27 1/4"	31 1/4"
G.S.**	9 13/16"	13 13/16"	17 13/16"	21 13/16"	23 13/16"	25 13/16"	29 13/16"
2'-8"							
2'-6 1/2"							
3'-2"							
3'-0 1/2"							
3'-8"							
3'-6 1/2"							
4'-2"							
4'-0 1/2"							
4'-8"							
4'-6 1/2"							
5'-2"							
5'-0 1/2"							
5'-8"							
5'-6 1/2"							
6'-2"							
6'-0 1/2"							

* Approximate glass sizes are given; true glass sizes vary depending on the radius involved.

** Glass size for push-out casements.

*** Units meet most national emergency escape and rescue requirements.

† Push-out units are only available with single-point hardware.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Segment Head Casements "S" Series

U.D.	1'-6 1/2"	2'-10 1/2"	4'-2 1/2"
R.O.	1'-4 1/2"	2'-8 1/2"	4'-0 1/2"
G.S.*	11 1/4"	11 1/4"	11 1/4"
G.S.**	9 13/16"	9 13/16"	9 13/16"
2'-8"			
2'-6 1/2"			
25 1/4"			
23 13/16"			
3'-2"			
3'-0 1/2"			
31 1/4"			
29 13/16"			
3'-8"			
3'-6 1/2"			
37 1/4"			
35 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
4'-8"			
4'-6 1/2"			
49 1/4"			
47 13/16"			
5'-2"			
5'-0 1/2"			
55 1/4"			
53 13/16"			
5'-8"			
5'-6 1/2"			
61 1/4"			
59 13/16"			
6'-2"			
6'-0 1/2"			
67 1/4"			
65 13/16"			

Segment Head Casements "N" Series

U.D.	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"
R.O.	1'-8 1/2"	3'-4 1/2"	5'-0 1/2"
G.S.*	15 1/4"	15 1/4"	15 1/4"
G.S.**	13 13/16"	13 13/16"	13 13/16"
2'-8"			
2'-6 1/2"			
25 1/4"			
23 13/16"			
3'-2"			
3'-0 1/2"			
31 1/4"			
29 13/16"			
3'-8"			
3'-6 1/2"			
37 1/4"			
35 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
4'-8"			
4'-6 1/2"			
49 1/4"			
47 13/16"			
5'-2"			
5'-0 1/2"			
55 1/4"			
53 13/16"			
5'-8"			
5'-6 1/2"			
61 1/4"			
59 13/16"			
6'-2"			
6'-0 1/2"			
67 1/4"			
65 13/16"			

* Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

** Glass size for push-out casements.

† Push-out units are only available with single-point hardware.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Segment Head Casements "W" Series

U.D.	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"
R.O.	2'-0 1/2"	4'-0 1/2"	6'-0 1/2"
G.S.*	19 1/4"	19 1/4"	19 1/4"
G.S.**	17 13/16"	17 13/16"	17 13/16"
2'-8"			
3'-2"			
3'-8"			
4'-2"			
4'-8"			
5'-2"			
5'-8"			
6'-2"			

Segment Head Casements "L" Series

U.D.	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"
R.O.	2'-4 1/2"	4'-8 1/2"	7'-0 1/2"
G.S.*	23 1/4"	23 1/4"	23 1/4"
G.S.**	21 13/16"	21 13/16"	21 13/16"
2'-8"			
3'-2"			
3'-8"			
4'-2"			
4'-8"			
5'-2"			
5'-8"			
6'-2"			

* Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

** Glass size for push-out casements.

† Push-out units are only available with single-point hardware.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Segment Head Casements "X" Series

U.D.	2'-8 1/2"	5'-2 1/2"	7'-8 1/2"
R.O.	2'-6 1/2"	5'-0 1/2"	7'-6 1/2"
G.S.*	25 1/4"	25 1/4"	25 1/4"
G.S.**	23 13/16"	23 13/16"	23 13/16"
2'-8"			
3'-2"			
3'-6 1/2"			
4'-2"			
4'-6 1/2"			
5'-2"			
5'-6 1/2"			
6'-2"			

Segment Head Casements "C" Series

U.D.	2'-10 1/2"	5'-6 1/2"	8'-2 1/2"
R.O.	2'-8 1/2"	5'-4 1/2"	8'-0 1/2"
G.S.*	27 1/4"	27 1/4"	27 1/4"
G.S.**	25 13/16"	25 13/16"	25 13/16"
2'-8"			
3'-2"			
3'-6 1/2"			
4'-2"			
4'-6 1/2"			
5'-2"			
5'-6 1/2"			
6'-2"			

* Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

** Glass size for push-out casements.

*** Units meet most national emergency escape and rescue requirements.

† Push-out units are only available with single-point hardware.

§ Only available as stationary units.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

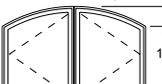
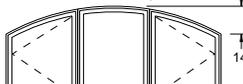
NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Segment Head Casements "E" Series

U.D.	3'-2 1/2"	6'-2 1/2"	9'-2 1/2"
R.O.	3'-0 1/2"	6'-0 1/2"	9'-0 1/2"
G.S.*	31 1/4"	31 1/4"	31 1/4"
G.S.**	29 13/16"	29 13/16"	29 13/16"
3'-2"			
3'-8"			
4'-2"			
4'-8"			
5'-2"			
5'-8"			
6'-2"			

* Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.
 ** Glass size for push-out casements.
 † Units meet most national emergency escape and rescue requirements.
 ‡ Only available as stationary units.
 U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configurations shown for single sash are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Elevation Charts

Segment Head Casements | Picture Units

U.D.	3'-6 1/2"	4'-2 1/2"	4'-8 1/2"	5'-2 1/2"	6'-2 1/2"
R.O.	3'-4 1/2"	4'-0 1/2"	4'-6 1/2"	5'-0 1/2"	6'-0 1/2"
G.S.*	35 1/4"	43 1/4"	49 1/4"	55 1/4"	67 1/4"
G.S.**	33 13/16"	41 13/16"	47 13/16"	53 13/16"	65 13/16"
1'-6"					
1'-10"					
2'-2"					
2'-8"					
3'-2"					
3'-8"					
4'-2"					
4'-8"					
5'-2"					
5'-8"					
6'-2"					

* Approximate glass sizes are given; true glass sizes vary depending on the radius involved.

** Glass size for units to match operating push-out casements.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. Follow down from top row and across from left column to determine divided lite configurations.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Half-Circle Top Casements

U.D.	1'-6 1/2"	1'-10 1/2"	2'-2 1/2"	2'-6 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"
R.O.	1'-4 1/2"	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"
G.S.*	11 1/4"	15 1/4"	19 1/4"	23 1/4"	25 1/4"	27 1/4"	31 1/4"
G.S.**	9 13/16"	13 13/16"	17 13/16"	21 13/16"	23 13/16"	25 13/16"	29 13/16"
2'-8"							
3'-2"							
3'-8"							
4'-2"							
4'-8"							
5'-2"							
5'-8"							
6'-2"							

* Approximate glass sizes are given; true glass sizes vary depending on the radius involved.

** Glass size for push-out casements.

*** Units meet most national emergency escape and rescue requirements when ordered as venting units.

† Push-out units are only available with single-point hardware.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Units are stationary as standard, however, some may be ordered as venting units. Contact your local dealer for details.

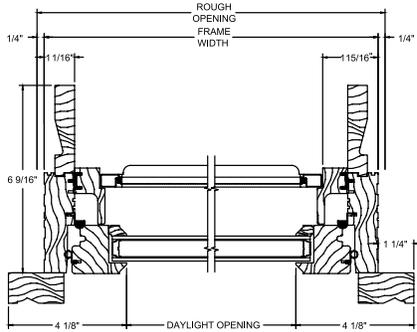
Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

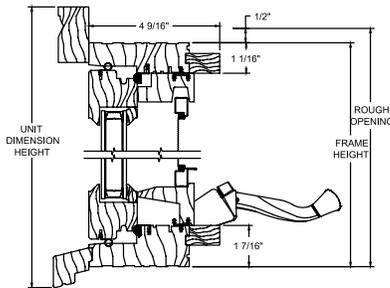
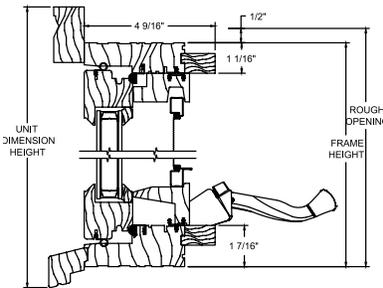
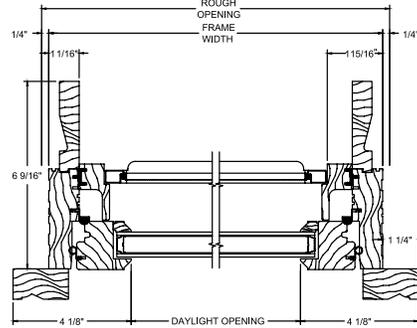
Additional and the most current drawings are available at www.kolbewindows.com.

Casements | Cross Section Drawings

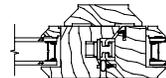
Crank-Out Casement



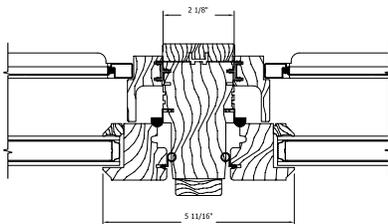
French Casement



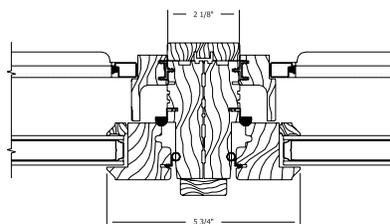
Wood Meeting Stiles



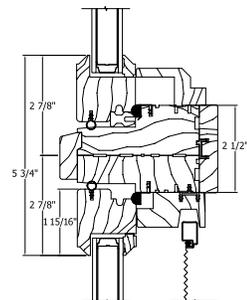
Crank-Out Casement Standard Mullion



Crank-Out Casement Narrow Mullion

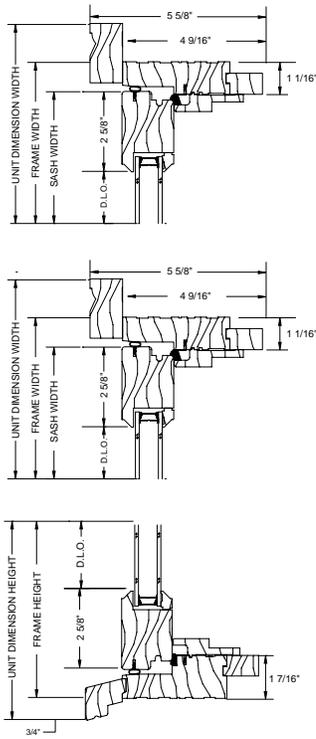


Rectangular Transoms Stacked over Crank-Out Casement



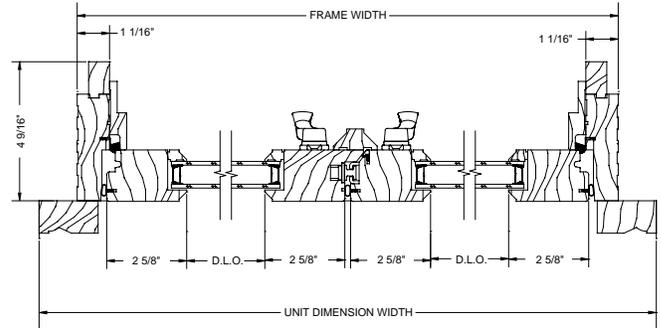
NOTE: Drawings are not to scale. Segment head and half-circle top casement drawings are similar to standard casement drawings shown. Additional and the most current drawings are available at www.kolbewindows.com.

Push-Out Casement

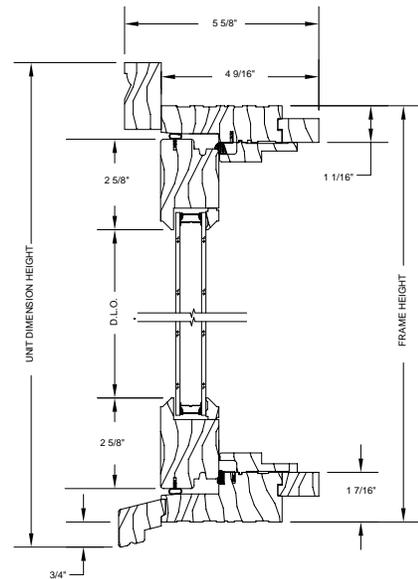


French Push-Out Casement

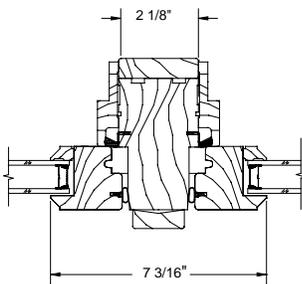
Horizontal Section



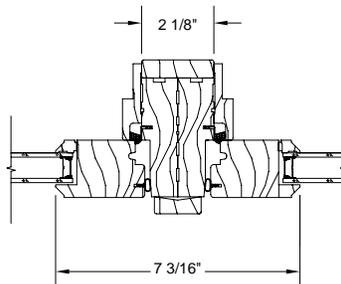
Vertical Section



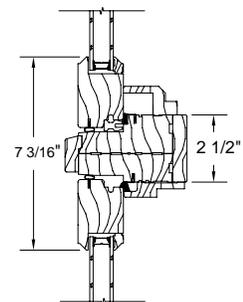
Push-Out Casement Standard Mullion



Push-Out Casement Narrow Mullion



Rectangular Transom Stacked over Push-Out Casement

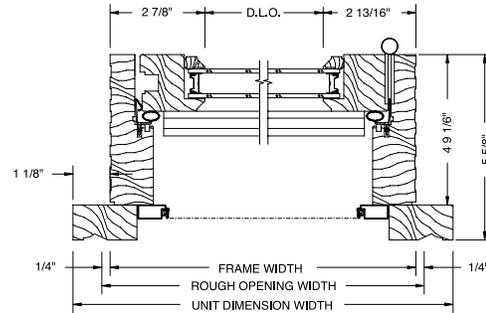


NOTE: Drawings are not to scale. Segment head and half-circle top casement drawings are similar to standard casement drawings shown. Additional and the most current drawings are available at www.kolbewindows.com.

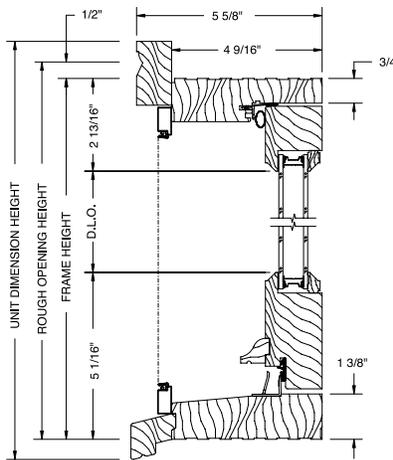
Casements | Cross Section Drawings

Inswing Casement

Horizontal Section

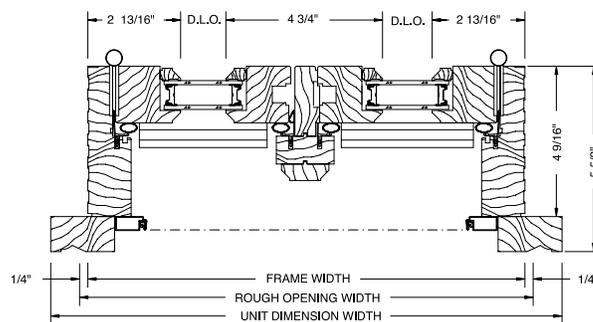


Vertical Section



2-Wide French Inswing Casement

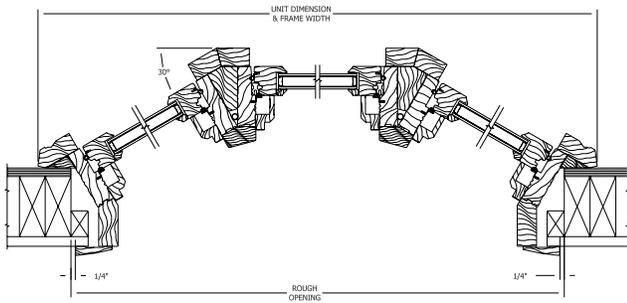
Horizontal Section



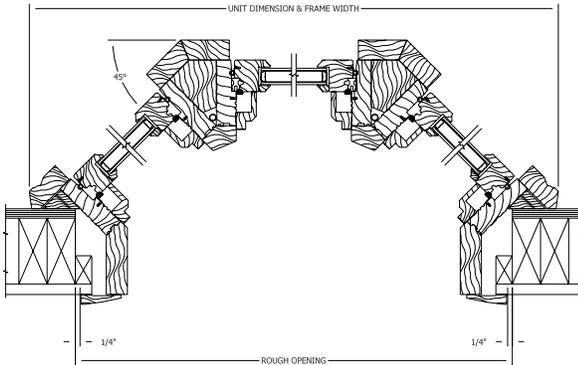
NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Casement Bay Window

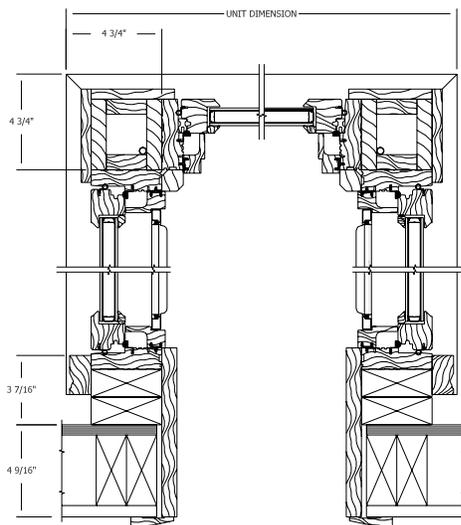
30° Horizontal Section



45° Horizontal Section

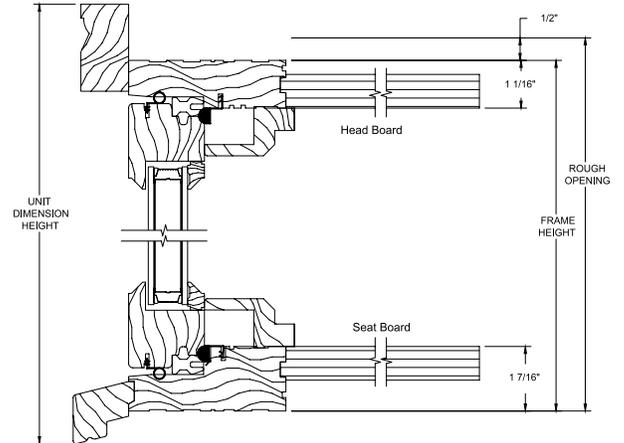


90° Horizontal Section



Casement Bay Window Stationary Picture Unit

Vertical Section

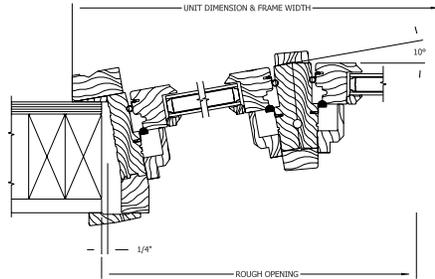


NOTE: Drawings are not to scale. Casement bay vertical drawings are similar to casement bow vertical drawings. See the following page for casement bow window drawings. Additional and the most current drawings are available at www.kolbewindows.com.

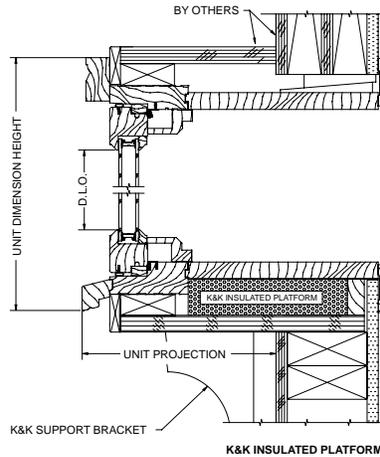
Casements | Cross Section Drawings

Casement Bow Window

Horizontal Section

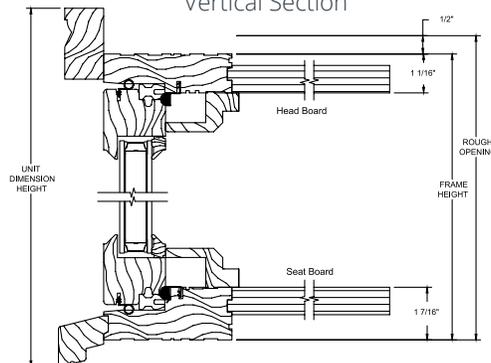


Vertical Section



Casement Bow Window Stationary Picture Unit

Vertical Section



NOTE: Drawings are not to scale. Casement bay vertical drawings are similar to casement bow vertical drawings. Additional and the most current drawings are available at www.kolbewindows.com.







© Scot Hill Photography

Awnings

Operating outward from the bottom, Heritage Series awning windows offer ventilation while keeping the exterior elements at bay. Their versatility can also create architectural interest in small spaces. Combined with awning picture windows, awnings can help to create a room with plenty of natural light, airflow, and a terrific view.

Awnings | Push-out Awnings | Picture Units | Picture Combination Units | Muller Configurations



Crank-Out Awnings

Crank-out awnings open out from the bottom with a crank handle that folds down when not in use. Choose motorized operators for an effortless way to open and close your window, especially if it's in a hard-to-reach place.



Crank-Out Awning Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16" (*basic box width is 3-1/2"*)
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Interior screens with Clay-colored aluminum frames and BetterVue[®] fiberglass mesh
- ▶ Clay-colored folding handles, operator covers and multi-point locks
- ▶ Folding corrosion resistant operators with concealed, adjustable hinges

NOTE: All measurements are nominal.

Hardware

- ▶ Folding handles in Clay (*standard*), White, Beige, Bright Brass, Antique Brass, Satin Nickel, Antique Nickel, Rustic Umber and Matte Black.
- ▶ Multi-point locking system* (*standard*), quickly and securely locks units from one convenient location. Multi-point lock handles will match operator handle colors.

*Not available on units with a box size smaller than 1' 4".

Folding Handle

(shown in Clay)



Folding Handle with Custodial Lock

(shown in Matte Black)



Multi-Point Locking Lever

(shown in Clay)





Crank-Out Awning Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Screens with White, Beige, Brass, Dark Bronze Anodized, Clear Anodized, and Coal Black frames
(Brass frames are not available on radius top units)
- ▶ Screens with aluminum or UltraVue® fiberglass mesh
(not available with brass frames)
- ▶ Wood wrapped screens
- ▶ Retractable screen kit
- ▶ Retractable screen covers available as beveled *(standard)* or square

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

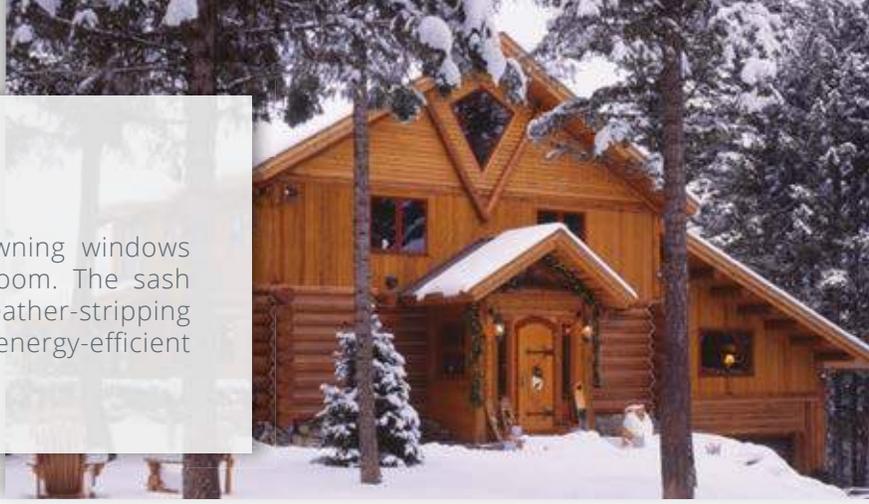
NOTE: All measurements are nominal.

Other Options *(custom options are also available)*

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Prep for stool
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Universal design awning handle and lock in White or Clay
- ▶ Motorized window system
- ▶ Extension jambs *(up to 12" applied; over 12" shipped loose for field application)*
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

Push-Out Awnings

The exceedingly simple operation of push-out awning windows makes them ideal for adding ventilation to any room. The sash pushes out and pulls in tightly to the frame. Weather-stripping prevents air infiltration, making them another great energy-efficient option.



Push-Out Awning Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16" (*basic box width is 3-1/2" on wood units, plus extensions*)
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Single-point lever handle in an Oil-Rubbed* finish
- ▶ Concealed hinges (*segment head and half-circle top units use Tri-Euro hinges for added support*)

NOTE: All measurements are nominal.

Hardware

- ▶ Push-out, single-point handles in Oil-Rubbed* (*standard*), Natural Brass and Satin Nickel finishes.
- ▶ Multi-point handles in Oil-Rubbed*, Natural Brass and Satin Nickel finishes.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

Single-Point Lock (*shown in Oil-rubbed**)

Multi-Point Lock (*shown in Satin Nickel*)





© Tarleton Photography



Push-Out Awning Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Wood frame hinged/swinging screen or retractable screen with BetterVue® fiberglass mesh (*segment head and half-circle top casements are only available with a hinged/swinging screen*)
- ▶ Retractable screen covers available as beveled (*standard*) or square
- ▶ Screens with UltraVue® fiberglass mesh (*hinged/swinging screen only*)

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Prep for stool
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Extension jambs (*up to 12" applied; over 12" shipped loose for field application*)
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

Awnings | Elevation Charts

Awnings | Single Units

U.D.	1'-10 1/2"	2'-2 1/2"	2'-6 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"	3'-8 1/2"	4'-2 1/2"
R.O.	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"	3'-6 1/2"	4'-0 1/2"
G.S.	15 1/4"	19 1/4"	23 1/4"	25 1/4"	27 1/4"	31 1/4"	37 1/4"	43 1/4"
G.S.	13 13/16"	17 13/16"	21 13/16"	23 13/16"	25 13/16"	29 13/16"	35 13/16"	41 13/16"
1'-10"								
1'-8 1/2"	1818	2018	2418	2618	2818	3018	3618	4018
2'-2"								
2'-0 1/2"	1820	2020	2420	2620	2820	3020	3620	4020
2'-6 1/2"								
2'-4 1/2"	1826	2026	2426	2626	2826	3026	3626	4026
2'-8 1/2"								
2'-6 1/2"	1830	2030	2430	2630	2830	3030	3630	4030

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

Awnings | Single Picture Units

U.D.	1'-10 1/2"	2'-2 1/2"	2'-6 1/2"	2'-8 1/2"	2'-10 1/2"	3'-2 1/2"	3'-8 1/2"	4'-2 1/2"
R.O.	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-6 1/2"	2'-8 1/2"	3'-0 1/2"	3'-6 1/2"	4'-0 1/2"
G.S.	15 1/4"	19 1/4"	23 1/4"	25 1/4"	27 1/4"	31 1/4"	37 1/4"	43 1/4"
G.S.	13 13/16"	17 13/16"	21 13/16"	23 13/16"	25 13/16"	29 13/16"	35 13/16"	41 13/16"
4'-2"								
4'-0 1/2"	1840	2040	2440	2640	2840	3040	3640	4040
4'-0 1/2"								
4'-3 1/4"	1850	2050	2450	2650	2850	3050	3650	4050
5'-2"								
5'-0 1/2"	1860	2060	2460	2660	2860	3060	3660	4060
5'-0 1/2"								
5'-1 1/4"	1880	2080	2480	2680	2880	3080	3680	4080
6'-2"								
6'-0 1/2"	1890	2090	2490	2690	2890	3090	3690	4090

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/2"	-2"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 5/8"	-3 9/16"
3-1/2" casing and backband; U.D. to F.S.	-7 1/8"	-4 5/16"

F.S. to Sash O.S.M.	-1 15/16"	1 15/16"
Sash O.S.M. to G.S.	-2 13/16"	2 13/16"
G.S. to D.L.O.	-1"	-1"
G.S. to Screen O.S.M.	+1 9/16"	+1/2"
U.D. to G.S. (for push-outs)	-8 11/16"	-8 3/16"

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional.

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Awnings | Mull Unit Combinations 1' - 8" Widths

	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"
U.D.	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"
R.O.	1-8 1/2"	3-4 1/2"	5-0 1/2"
G.S.	15 1/4"	15 1/4"	15 1/4"
G.S.*	13 13/16"	13 13/16"	13 13/16"
2'-8"			
1'-6 1/2"			
25 1/4"			
23 13/16"			
5'-2"			
5'-0 1/2"			
25 1/4"			
23 13/16"			
3'-2"			
3'-0 1/2"			
31 1/4"			
29 13/16"			
6'-2"			
6'-0 1/2"			
31 1/4"			
29 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
8'-2"			
8'-0 1/2"			
43 1/4"			
41 13/16"			

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening
G.S. = Glass Size (Glass sizes are shown per sash)

Awning Picture Units 1' - 8" Widths

	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"
U.D.	1'-10 1/2"	3'-6 1/2"	5'-2 1/2"
R.O.	1-8 1/2"	3-4 1/2"	5-0 1/2"
G.S.	15 1/4"	15 1/4"	15 1/4"
G.S.*	13 13/16"	13 13/16"	13 13/16"
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
5'-2"			
5'-0 1/2"			
55 1/4"			
53 13/16"			
6'-2"			
6'-0 1/2"			
67 1/4"			
65 13/16"			

Awning Picture Unit Combinations 1' - 8" Widths

	2'-10 1/2"	3'-6 1/2"	5'-2 1/2"
U.D.	2'-10 1/2"	3'-6 1/2"	5'-2 1/2"
R.O.	2-8 1/2"	3-4 1/2"	5-0 1/2"
G.S.	15 1/4"	15 1/4"	15 1/4"
G.S.*	13 13/16"	13 13/16"	13 13/16"
4'-3 1/2"			
4'-3 1/2"			
15 1/4" / 31 1/4"			
13 13/16" / 29 13/16"			
5'-10"			
5'-10"			
15 1/4" / 43 1/4"			
13 13/16" / 41 13/16"			
6'-10"			
6'-10"			
15 1/4" / 55 1/4"			
13 13/16" / 53 13/16"			
5'-2"			
5'-2"			
19 1/4" / 31 1/4"			
17 13/16" / 29 13/16"			
6'-2"			
6'-2"			
19 1/4" / 43 1/4"			
17 13/16" / 41 13/16"			

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening
G.S. = Glass Size (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

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Awning Units & Mull Configurations 2'- 0" Widths

U.D.	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"
R.O.	2'-0 1/2"	4'-0 1/2"	6'-0 1/2"
G.S.	19 1/4"	19 1/4"	19 1/4"
G.S.*	17 13/16"	17 13/16"	17 13/16"
1'-6"			
1'-4 1/2"			
2'-10"			
2'-8 1/2"			
1'-8"			
3'-2"			
3'-0 1/2"			
1'-8 1/2"			
3'-6"			
5'-2"			
5'-0 1/2"			
4'-2"			
6'-2"			
6'-0 1/2"			
19 1/4"			
17 13/16"			
2'-8"			
2'-6 1/2"			
25 1/4"			
23 13/16"			
31 1/4"			
29 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			

Awning Picture Units 2'- 0" Widths

U.D.	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"
R.O.	2'-0 1/2"	4'-0 1/2"	6'-0 1/2"
G.S.	19 1/4"	19 1/4"	19 1/4"
G.S.*	17 13/16"	17 13/16"	17 13/16"
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			

Awning Unit Combinations 2'- 0" Widths

U.D.	2'-2 1/2"	4'-2 1/2"	6'-2 1/2"
R.O.	2'-0 1/2"	4'-0 1/2"	6'-0 1/2"
G.S.	19 1/4"	19 1/4"	19 1/4"
G.S.*	17 13/16"	17 13/16"	17 13/16"
4'-10"			
4'-8 1/2"			
15 1/4" 31 1/4"			
13 13/16" 29 13/16"			
19 1/4" 31 1/4"			
17 13/16" 29 13/16"			
13 13/16" 41 13/16"			
15 1/4" 55 1/4"			
13 13/16" 53 13/16"			

* Glass size for push-out awnings
 U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
 (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.
 Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.
 Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.
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Awnings | Elevation Charts

Awnings | Mull Unit Combinations 2'- 4" Widths

U.D.	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"
R.O.	2'-4 1/2"	4'-8 1/2"	7'-0 1/2"
G.S.*	23 1/4"	23 1/4"	23 1/4"
G.S.*	21 13/16"	21 13/16"	21 13/16"
2'-8"			
1'-8 1/2"			
5'-2"			
3'-2"			
6'-2"			
4'-2"			
8'-2"			

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per sash)

Awning Picture Units 2'- 4" Widths

U.D.	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"
R.O.	2'-4 1/2"	4'-8 1/2"	7'-0 1/2"
G.S.*	23 1/4"	23 1/4"	23 1/4"
G.S.*	21 13/16"	21 13/16"	21 13/16"
4'-2"			
5'-2"			
6'-2"			

Awning Picture Units 2'- 4" Widths

U.D.	2'-6 1/2"	4'-10 1/2"	7'-2 1/2"
R.O.	2'-4 1/2"	4'-8 1/2"	7'-0 1/2"
G.S.*	23 1/4"	23 1/4"	23 1/4"
G.S.*	21 13/16"	21 13/16"	21 13/16"
4'-10"			
4'-8 1/2"			
5'-10"			
5'-8 1/2"			
6'-2"			

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.

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Awnings | Elevation Charts

Awning Units & Mull Configurations 2'- 6" Widths

U.D.	2'-8 1/2"	5'-2 1/2"	7'-8 1/2"
R.O.	2'-6 1/2"	5'-0 1/2"	7'-6 1/2"
G.S.	25 1/4"	25 1/4"	25 1/4"
G.S.*	23 13/16"	23 13/16"	23 13/16"
1'-6"			
1'-4 1/2"			
1'-1 1/4"			
2'-10"			
2'-8 1/2"			
2'-5 1/2"			
4'-2"			
4'-0 1/2"			
11 1/4"			
9 13/16"			
1-8"			
1'-6 1/2"			
1'-3 1/4"			
3'-2"			
3'-0 1/2"			
13 1/4"			
11 13/16"			
4'-8"			
4'-6 1/2"			
13 1/4"			
11 13/16"			
1'-10"			
1'-8 1/2"			
1'-5 1/4"			
3'-6"			
3'-4 1/2"			
15 1/4"			
13 13/16"			
5'-2"			
5'-0 1/2"			
13 13/16"			
2'-2"			
2'-0 1/2"			
19 1/4"			
17 13/16"			
4'-2"			
4'-0 1/2"			
19 1/4"			
17 13/16"			
6'-2"			
6'-0 1/2"			
19 1/4"			
17 13/16"			
2'-8"			
2'-6 1/2"			
25 1/4"			
23 13/16"			
5'-2"			
5'-0 1/2"			
25 1/4"			
23 13/16"			
3'-2"			
3'-0 1/2"			
31 1/4"			
29 13/16"			
6'-2"			
6'-0 1/2"			
31 1/4"			
29 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
8'-2"			
8'-0 1/2"			
43 1/4"			
41 13/16"			

Awning Picture Units 2'- 6" Widths

U.D.	2'-8 1/2"	5'-2 1/2"	7'-8 1/2"
R.O.	2'-6 1/2"	5'-0 1/2"	7'-6 1/2"
G.S.	25 1/4"	25 1/4"	25 1/4"
G.S.*	23 13/16"	23 13/16"	23 13/16"
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
5'-2"			
5'-0 1/2"			
55 1/4"			
53 13/16"			
6'-2"			
6'-0 1/2"			
67 1/4"			
65 13/16"			

Awning Unit Combinations 2'- 6" Widths

U.D.	2'-8 1/2"	5'-2 1/2"	7'-8 1/2"
R.O.	2'-6 1/2"	5'-0 1/2"	7'-6 1/2"
G.S.	25 1/4"	25 1/4"	25 1/4"
G.S.*	23 13/16"	23 13/16"	23 13/16"
4'-10"			
4'-8 1/2"			
15 1/4" 31 1/4"			
13 13/16" 29 13/16"			
5'-2"			
5'-0 1/2"			
19 1/4" 31 1/4"			
17 13/16" 29 13/16"			
5'-10"			
5'-8 1/2"			
15 1/4" 43 1/4"			
13 13/16" 41 13/16"			
6'-2"			
6'-0 1/2"			
19 1/4" 43 1/4"			
17 13/16" 41 13/16"			
6'-10"			
6'-8 1/2"			
15 1/4" 55 1/4"			
13 13/16" 53 13/16"			

* Glass size for push-out awnings
 U.D. = Unit Dimension • R.O. =
 Rough Opening • G.S. = Glass Size
 (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.

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Awning Units & Mull Configurations 2'- 8" Widths

U.D.	2'-10 1/2"	5'-6 1/2"	8'-2 1/2"
R.O.	2'-8 1/2"	5'-4 1/2"	8'-0 1/2"
G.S.	27 1/4"	27 1/4"	27 1/4"
G.S.*	25 13/16"	25 13/16"	25 13/16"
1'-6"			
1'-4 1/2"			
1'-1 1/4"			
2'-10"			
2'-8 1/2"			
2'-6 1/2"			
4'-2"			
4'-0 1/2"			
3'-8 1/2"			
1'-8"			
1'-6 1/2"			
1'-4 1/2"			
3'-2"			
3'-0 1/2"			
2'-10"			
4'-8"			
4'-6 1/2"			
4'-4 1/2"			
1'-10"			
1'-8 1/2"			
1'-6 1/2"			
3'-6"			
3'-4 1/2"			
3'-2 1/2"			
5'-2"			
5'-0 1/2"			
4'-10"			
2'-2"			
2'-0 1/2"			
1'-10"			
4'-2"			
4'-0 1/2"			
3'-10"			
6'-2"			
6'-0 1/2"			
5'-10"			
2'-8"			
2'-6 1/2"			
2'-4 1/2"			
5'-2"			
5'-0 1/2"			
4'-10"			
3'-2"			
3'-0 1/2"			
2'-10"			
6'-2"			
6'-0 1/2"			
5'-10"			
4'-2"			
4'-0 1/2"			
3'-10"			
8'-2"			
8'-0 1/2"			
7'-10"			

Awning Picture Units 2'- 8" Widths

U.D.	2'-10 1/2"	5'-6 1/2"	8'-2 1/2"
R.O.	2'-8 1/2"	5'-4 1/2"	8'-0 1/2"
G.S.	27 1/4"	27 1/4"	27 1/4"
G.S.*	25 13/16"	25 13/16"	25 13/16"
4'-2"			
4'-0 1/2"			
3'-10"			
5'-2"			
5'-0 1/2"			
4'-10"			
6'-2"			
6'-0 1/2"			
5'-10"			

Awning Unit Combinations 2'- 8" Widths

U.D.	2'-10 1/2"	5'-6 1/2"	8'-2 1/2"
R.O.	2'-8 1/2"	5'-4 1/2"	8'-0 1/2"
G.S.	27 1/4"	27 1/4"	27 1/4"
G.S.*	25 13/16"	25 13/16"	25 13/16"
4'-10"			
4'-8 1/2"			
4'-6 1/2"			
5'-2"			
5'-0 1/2"			
4'-10"			
4'-8 1/2"			
4'-6 1/2"			
6'-2"			
6'-0 1/2"			
5'-10"			
6'-10"			
6'-8 1/2"			
6'-6 1/2"			

NOTE: All measurements are nominal. Elevation charts are not to scale.

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* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening
G.S. = Glass Size (Glass sizes are shown per sash)

Awning Units & Mull Configurations 3'- 0" Widths

U.D.	3'-2 1/2"	6'-2 1/2"	9'-2 1/2"
R.O.	3'-0 1/2"	6'-0 1/2"	9'-0 1/2"
G.S.	31 1/4"	31 1/4"	31 1/4"
G.S.*	29 13/16"	29 13/16"	29 13/16"
Basic Unit 3014	1'-6" 30141	1'-6" 30142	1'-6" 30143
	1'-4 1/2" 301412	1'-4 1/2" 301422	1'-4 1/2" 301432
	1'-4" 301413	1'-4" 301423	1'-4" 301433
Basic Unit 3016	1'-8" 30161	1'-8" 30162	1'-8" 30163
	3'-2" 301612	3'-2" 301622	3'-2" 301632
	4'-8" 301613	4'-8" 301623	4'-8" 301633
Basic Unit 3018	1'-10" 30181	1'-10" 30182	1'-10" 30183
	3'-6" 301812	3'-6" 301822	3'-6" 301832
	5'-2" 301813	5'-2" 301823	5'-2" 301833
Basic Unit 3020	2'-2" 30201	2'-2" 30202	2'-2" 30203
	4'-2" 302012	4'-2" 302022	4'-2" 302032
	6'-2" 302013	6'-2" 302023	6'-2" 302033
Basic Unit 3026	2'-8" 30261	2'-8" 30262	2'-8" 30263
	5'-2" 302612	5'-2" 302622	5'-2" 302632
	6'-0 1/2" 302613	6'-0 1/2" 302623	6'-0 1/2" 302633
Basic Unit 3030	3'-2" 30301	3'-2" 30302	3'-2" 30303
	6'-2" 303012	6'-2" 303022	6'-2" 303032
	8'-2" 303013	8'-2" 303023	8'-2" 303033
Basic Unit 3040	4'-2" 30401	4'-2" 30402	4'-2" 30403
	8'-0 1/2" 304012	8'-0 1/2" 304022	8'-0 1/2" 304032
	4'-0 1/2" 304013	4'-0 1/2" 304023	4'-0 1/2" 304033

Awning Picture Units 3'- 0" Widths

U.D.	3'-2 1/2"	6'-2 1/2"	9'-2 1/2"
R.O.	3'-0 1/2"	6'-0 1/2"	9'-0 1/2"
G.S.	31 1/4"	31 1/4"	31 1/4"
G.S.*	29 13/16"	29 13/16"	29 13/16"
Basic Unit 3040	4'-2" 30401	4'-2" 30402	4'-2" 30403
	4'-0 1/2" 304012	4'-0 1/2" 304022	4'-0 1/2" 304032
	4-0" 304013	4-0" 304023	4-0" 304033
Basic Unit 3050	5'-2" 30501	5'-2" 30502	5'-2" 30503
	5'-0 1/2" 305012	5'-0 1/2" 305022	5'-0 1/2" 305032
	5-1/4" 305013	5-1/4" 305023	5-1/4" 305033
Basic Unit 3060	6'-2" 30601	6'-2" 30602	6'-2" 30603
	6'-0 1/2" 306012	6'-0 1/2" 306022	6'-0 1/2" 306032
	6-1/4" 306013	6-1/4" 306023	6-1/4" 306033

Awning Unit Combinations 3'- 0" Widths

U.D.	3'-2 1/2"	6'-2 1/2"	9'-2 1/2"
R.O.	3'-0 1/2"	6'-0 1/2"	9'-0 1/2"
G.S.	31 1/4"	31 1/4"	31 1/4"
G.S.*	29 13/16"	29 13/16"	29 13/16"
Basic Unit 3030 over 3018	4'-10" 3030181	4'-10" 3030182	4'-10" 3030183
	4-8 1/2" 30301812	4-8 1/2" 30301822	4-8 1/2" 30301832
	4-8" 30301813	4-8" 30301823	4-8" 30301833
Basic Unit 3030 over 3020	5'-10" 3030201	5'-10" 3030202	5'-10" 3030203
	5-8 1/2" 30302012	5-8 1/2" 30302022	5-8 1/2" 30302032
	5-8" 30302013	5-8" 30302023	5-8" 30302033
Basic Unit 3040 over 3018	6'-10" 3040181	6'-10" 3040182	6'-10" 3040183
	6-8 1/2" 30401812	6-8 1/2" 30401822	6-8 1/2" 30401832
	6-8" 30401813	6-8" 30401823	6-8" 30401833
Basic Unit 3040 over 3020	6'-10" 3040201	6'-10" 3040202	6'-10" 3040203
	6-8 1/2" 30402012	6-8 1/2" 30402022	6-8 1/2" 30402032
	6-8" 30402013	6-8" 30402023	6-8" 30402033
Basic Unit 3050 over 3018	6'-10" 3050181	6'-10" 3050182	6'-10" 3050183
	6-8 1/2" 30501812	6-8 1/2" 30501822	6-8 1/2" 30501832
	6-8" 30501813	6-8" 30501823	6-8" 30501833

* Glass size for push-out awnings
 U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
 (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

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Awning Units & Mull Configurations 3'- 6" Widths

U.D.	3'-8 1/2"	7'-2 1/2"	10'-8 1/2"
R.O.	3'-6 1/2"	7'-0 1/2"	10'-6 1/2"
G.S.	37 1/4"	37 1/4"	37 1/4"
G.S.*	35 13/16"	35 13/16"	35 13/16"
4'-2"			
4'-0 1/2"			
4'-2"			
1'-8"			
3'-2"			
4'-8"			
1'-10"			
3'-6"			
5'-2"			
2'-2"			
4'-2"			
6'-2"			
2'-8"			
5'-2"			
3'-2"			
6'-2"			
4'-2"			
8'-2"			

Awning Picture Units 3'- 6" Widths

U.D.	3'-8 1/2"	7'-2 1/2"	10'-8 1/2"
R.O.	3'-6 1/2"	7'-0 1/2"	10'-6 1/2"
G.S.	37 1/4"	37 1/4"	37 1/4"
G.S.*	35 13/16"	35 13/16"	35 13/16"
4'-2"			
5'-2"			
6'-2"			

Awning Unit Combinations 3'- 6" Widths

U.D.	3'-8 1/2"	7'-2 1/2"	10'-8 1/2"
R.O.	3'-6 1/2"	7'-0 1/2"	10'-6 1/2"
G.S.	37 1/4"	37 1/4"	37 1/4"
G.S.*	35 13/16"	35 13/16"	35 13/16"
4'-10"			
5'-2"			
5'-10"			
6'-2"			
6'-10"			

* Glass size for push-out awnings
 U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
 (Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.
 Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.
 Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.
 For rough opening recommendations, see pg. 194.
 Additional and the most current drawings are available at www.kolbewindows.com.

Awnings | Elevation Charts

Awning Units & Mull Configurations 4'-0" Widths

U.D.	4'-2 1/2"	8'-2 1/2"	12'-2 1/2"
R.O.	4'-0 1/2"	8'-0 1/2"	12'-0 1/2"
G.S.	43 1/4"	43 1/4"	43 1/4"
G.S.*	41 13/16"	41 13/16"	41 13/16"
1'-6"			
1'-4 1/2"			
1'-1 1/4"			
2'-10"			
2'-8 1/2"			
4'-2"			
4'-0 1/2"			
11-1/4"			
9 13/16"			
1-8"			
1-6 1/2"			
3'-2"			
3'-0 1/2"			
4'-8"			
4'-6 1/2"			
13 1/4"			
11 13/16"			
1-10"			
1-8 1/2"			
3'-6"			
3'-4 1/2"			
5'-2"			
5'-0 1/2"			
15 1/4"			
13 13/16"			
2'-2"			
2'-0 1/2"			
4'-2"			
4'-0 1/2"			
19 1/4"			
17 13/16"			
6'-2"			
6'-0 1/2"			
19 1/4"			
17 13/16"			
2'-8"			
2'-6 1/2"			
5'-2"			
5'-0 1/2"			
25 1/4"			
23 13/16"			
3'-2"			
3'-0 1/2"			
6'-2"			
6'-0 1/2"			
31 1/4"			
29 13/16"			
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
8'-2"			
8'-0 1/2"			
43 1/4"			
41 13/16"			

Awning Picture Units 4'-0" Widths

U.D.	4'-2 1/2"	8'-2 1/2"	12'-2 1/2"
R.O.	4'-0 1/2"	8'-0 1/2"	12'-0 1/2"
G.S.	43 1/4"	43 1/4"	43 1/4"
G.S.*	41 13/16"	41 13/16"	41 13/16"
4'-2"			
4'-0 1/2"			
43 1/4"			
41 13/16"			
5'-2"			
5'-0 1/2"			
55 1/4"			
53 13/16"			
6'-2"			
6'-0 1/2"			
67 1/4"			
65 13/16"			

Awning Unit Combinations 4'-0" Widths

U.D.	4'-2 1/2"	8'-2 1/2"	12'-2 1/2"
R.O.	4'-0 1/2"	8'-0 1/2"	12'-0 1/2"
G.S.	43 1/4"	43 1/4"	43 1/4"
G.S.*	41 13/16"	41 13/16"	41 13/16"
4'-10"			
4'-8 1/2"			
31 1/4"			
15 1/4"			
13 13/16"			
5'-2"			
5'-0 1/2"			
19 1/4"			
17 13/16"			
5'-10"			
5'-8 1/2"			
15 1/4"			
13 13/16"			
6'-2"			
6'-0 1/2"			
19 1/4"			
17 13/16"			
6'-10"			
6'-8 1/2"			
15 1/4"			
13 13/16"			

* Glass size for push-out awnings

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per sash)

NOTE: All measurements are nominal. Elevation charts are not to scale.

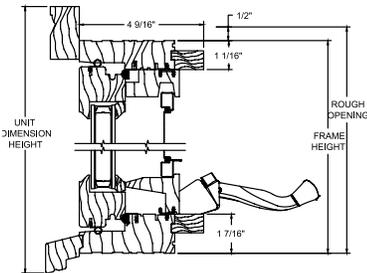
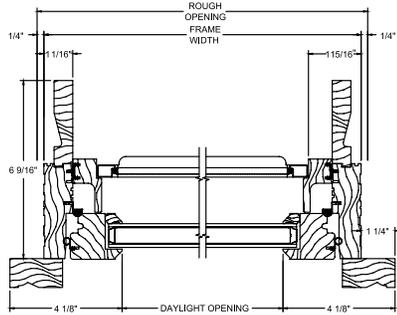
Divided lites are optional. The divided lite configuration shown for single units are typical for each sash of mullied units.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

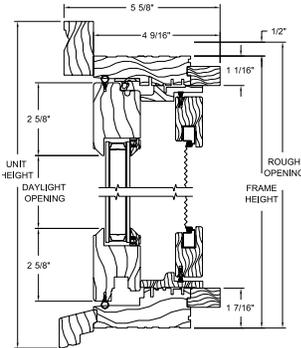
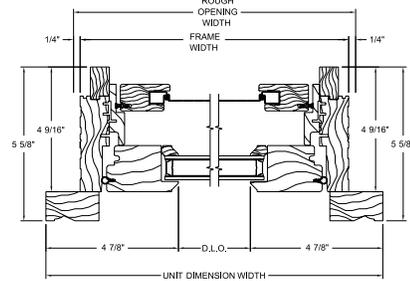
Additional and the most current drawings are available at www.kolbewindows.com.

Awnings | Cross Section Drawings

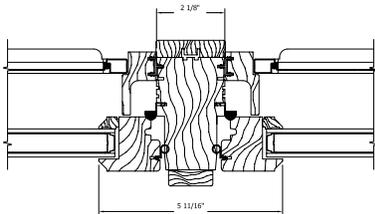
Crank-Out Awning



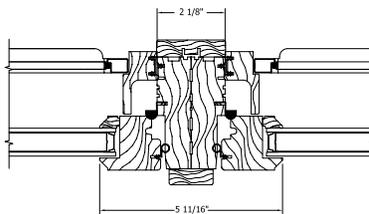
Push-Out Awning



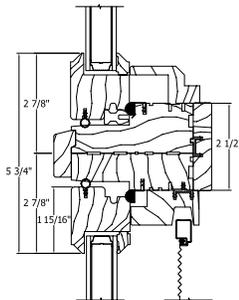
**Crank-Out Awning
Standard Mullion**



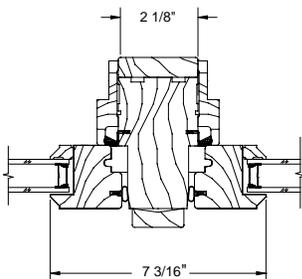
**Crank-Out Awning
Narrow Mullion**



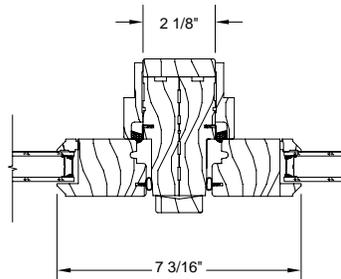
**Picture Unit Stacked Over
Crank-Out Awning**



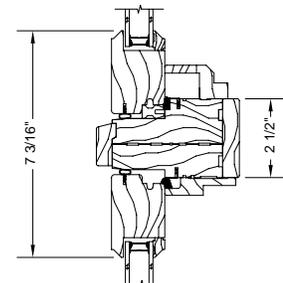
**Push-Out Awning
Standard Mullion**



**Push-Out Awning
Narrow Mullion**



**Picture Unit Stacked Over
Push-Out Awning**



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbwindows.com.

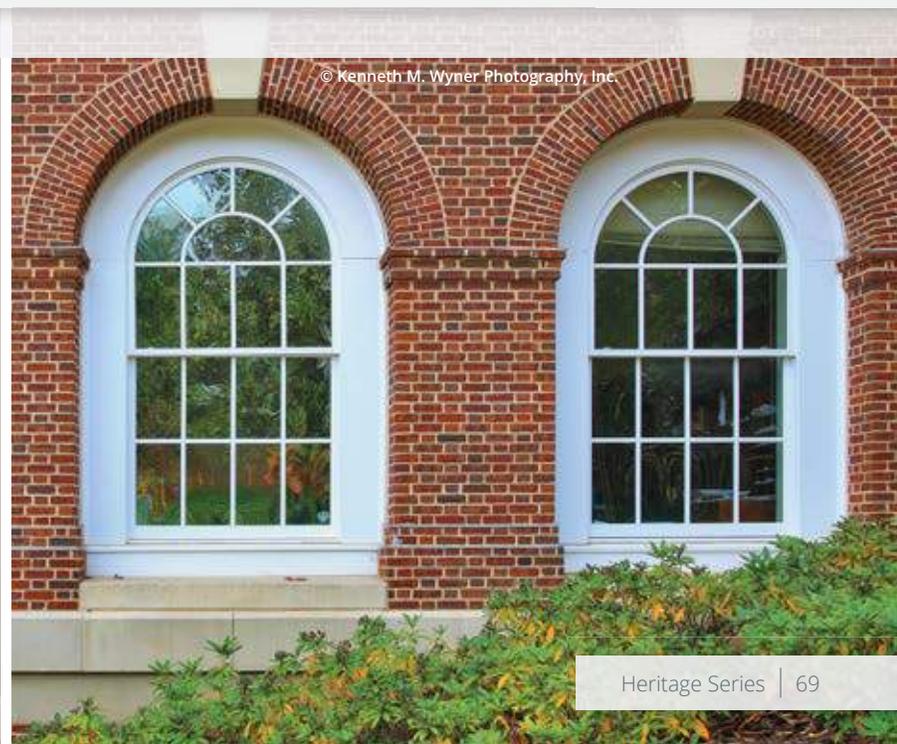
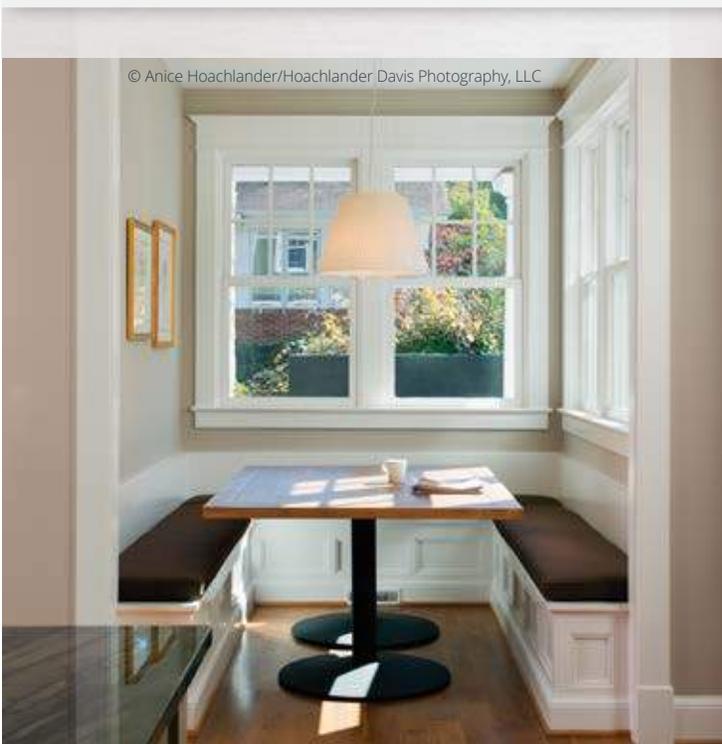




Double Hungs

Smooth operation, venting options, removable sash for easy cleaning, and classic styling are only the most obvious features of Heritage Series double hung windows. Kolbe offers a variety of double hung models to suit your project, whether it be residential, commercial, large scale, historic preservation or remodeling. There are many options and configurations to choose from as well, including bow and bay units, cottage-style units or triple pane glass options for increased energy efficiency.

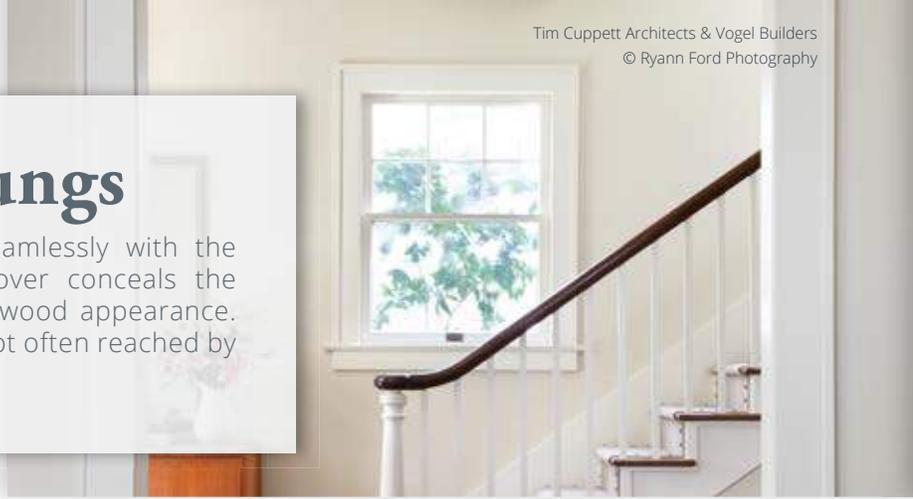
*Sterling Double Hungs | XL Sterling Double Hungs | Majesta® Double Hungs | Traditional Double Hungs
 Old World Classic Double Hungs | Cottage-Style & Reverse-Cottage Style | Studio & Transom Units
 Picture Combination Units | Bay Units | Segment Head & Half-Circle Top Units | Single Hungs | Replacement Sash Kits*



Sterling Double Hungs

Sterling double hungs are made to blend seamlessly with the grandest décor. A patented interior wood cover conceals the jambliner, while giving the windows a rich, full-wood appearance. The lock system boosts performance to a level not often reached by double hung windows.

Patents: 7,296,381 | 7,448,164 | 8,196,355 | 8,429,856



Sterling Double Hung Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16" (*basic box width is 4-9/16"*)
- ▶ Frame thickness is 3/4" at side jambs and head
- ▶ Sill thickness is 1-3/16", slope is 14°
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Wood interior head parting stop
- ▶ Clay-colored heavy duty Signature sash lock with a dual positioning lever allows sash to be unlocked, operated and tilted in from one location
- ▶ Spring-loaded block-and-tackle mechanical balances to carry the sash weight
- ▶ Concealed balance system
- ▶ Patented wood-wrapped jambliner closure on the interior (unless interior is prefinished white or primed, then jambliner will be white) and a primed, extruded aluminum jambliner closure on the exterior hides the PVC jambliners.
- ▶ Pine-veneered head and seat boards; unique narrow mullions on bay units

NOTE: All measurements are nominal.

Wood-wrapped jambliner closure on the interior (*shown*) and a primed, extruded aluminum jambliner closure on the exterior hide the PVC jambliners.



Heavy duty sash lock with dual positioning lever allows sash to be unlocked, operated, and tilted in from one location.

Hardware

- ▶ Pick-resistant Signature or Spoon sash lock with a concealed locking system and tilt latches. Available in Clay (*standard*), White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber or Matte Black.
- ▶ Curved, square, or traditional style sash lift handles for ease of use. Available in Clay, White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed^{*} or Matte Black.
- ▶ Custodial lock to prohibit unauthorized operation (*not pictured*).
- ▶ Universal design crank handle hardware kit offers ease-of-use for people with physical limitations. Available in White (*not pictured*).

[†] Brushed Chrome finishes are only available on Signature sash locks and curved sash lift handles.

^{*} The Oil-Rubbed finish is not available on curved sash lift handles. This is a living finish, which means that it will change appearance over time with use.

Signature Sash Lock
(*shown in Antique Nickel*)



Spoon Sash Lock
(*shown in Antique Brass*)



Curved Sash Lift Handle
(*shown in Bright Chrome*)





Sterling Double Hung Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Full or half screens with aluminum frames and options for BetterVue® or UltraVue® fiberglass screen mesh or aluminum screen mesh in either aluminum or charcoal colors; frames will match the exterior color of the unit
- ▶ Retractable screen kit (pg. 188)
- ▶ Retractable screen covers available as beveled (standard) or square
- ▶ StormGuard combination storm/screen units

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

Other Options (custom options are also available)

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Prep for stool
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Class 5 balances available for commercial specifications or larger units
- ▶ Custodial locks
- ▶ Universal design crank handle hardware kit in White (pg. 189)
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ Factory-installed Window Opening Control Device (WOCD) (pg. 188)
- ▶ Sash limiters for safety
- ▶ Galvanized steel installation clips
- ▶ Insulated platforms, support brackets and oak-veneered head and seat boards for bay units
- ▶ High performance modifications

NOTE: All measurements are nominal.

Traditional Style Sash Lift Handle

(shown in Rustic Umber)



Square Style Sash Lift Handle

(shown in Satin Nickel)



XL Sterling Double Hungs

The award-winning XL Sterling double hung expands the architecturally-correct design and high performance of a Sterling double hung. Quality components combined with thoughtful product design allow the XL Sterling double hung to be the perfect fit for any oversized commercial or residential opening.

Patents: 7,296,381 | 7,448,164 | 8,196,355 | 8,429,856



XL Sterling Double Hung Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 5" (*basic box width is 5"*)
- ▶ Frame thickness is 3/4" at side jambs and head
- ▶ Sill thickness is 1-3/16"; slope is 14°
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ Wood interior head parting stop
- ▶ Clay-colored heavy duty Signature sash lock with a dual positioning lever allows sash to be unlocked and operated from one location
- ▶ Class 5 balances capable of carrying sash up to 200 lbs.
- ▶ Concealed balance system
- ▶ Patented wood wrapped jambliner closure on the interior (*unless interior is prefinished white or primed, then jambliner will be white*) and extruded aluminum jambliner closure on the exterior hides balance system

NOTE: All measurements are nominal.



XL Sterling double hungs have the same full-wood appearance as Sterling double hungs; the jambs are concealed by wood jambliner covers.



A retractable screen kit (*pg. 188*) is available to help disguise the screen. Wood components match the species and finish of the interior wood.

Hardware

- ▶ Pick-resistant Signature or Spoon sash lock with a concealed locking system and tilt latches. Available in Clay (*standard*), White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber or Matte Black.
- ▶ Curved, square, or traditional style sash lift handles for ease of use. Available in Clay, White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed^{*} or Matte Black.
- ▶ Custodial lock to prohibit unauthorized operation (*not pictured*).
- ▶ Universal design crank handle hardware kit offers ease-of-use for people with physical limitations. Available in White (*not pictured*).

[†] Brushed Chrome finishes are only available on Signature sash locks and curved sash lift handles.

^{*} The Oil-Rubbed finish is not available on curved sash lift handles. This is a living finish, which means that it will change appearance over time with use.

Signature Sash Lock

(shown in Matte Black)



Spoon Sash Lock

(shown in Satin Nickel)



Curved Sash Lift Handle

(shown in Clay)





XL Sterling Double Hung Options

Glass *(pg. 184)*

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites *(pgs. 185-186)*

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4" or 4-1/2" bars
- ▶ Grilles-in-the-airpace

Insect Screens

- ▶ Full or half insect screen with aluminum frame and options for BetterVue® or UltraVue® fiberglass mesh or aluminum mesh; frame will match the exterior color of the unit
- ▶ Retractable insect screen kit with beveled or square cover *(pg. 188)*

Exterior Finishes *(pg. 183)*

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options *(custom options are also available)*

- ▶ Other wood species and FSC-certified wood *(pg. 182)*
- ▶ Interior prefinishing *(pg. 182)*
- ▶ Exterior brickmould and casing *(pg. 187)*
- ▶ Prep for stool
- ▶ Ovolo or square profile glazing beads and interior divided lite bars *(pgs. 185-186)*
- ▶ Extension jambs *(up to 12" applied, over 12" shipped loose for field application)*
- ▶ Segment head, cottage style segment head, half-circle top, and cottage style half-circle top units
- ▶ Factory-installed Window Opening Control Device (WOCD) *(pg. 188)*
- ▶ Sash limiters for safety
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

Traditional Style Sash Lift Handle

(shown in Antique Brass)



Square Style Sash Lift Handle

(shown in Matte Black)



Majesta® Double Hungs

Majesta double hungs are made-to-order in sizes as large as 6 feet wide by 12 feet tall to allow even larger openings in the most expansive of spaces. The balances are specially made to match the size of the window and the hardware is positioned in an easily accessible place, so this extra large window is very easy to operate.



Majesta Double Hung Standard Features

- ▶ 2-1/4" thick sash
- ▶ Overall jamb width is 6-9/16" (*basic box width is 6-9/16"*)
- ▶ Frame thickness is 3/4" at side jambs and head
- ▶ Sill thickness is 1-3/16", slope is 14°
- ▶ Top rail is 3", stiles are 2-1/8", and bottom rail is 4-1/8"
- ▶ Constructed of pine with pine interior head parting stops and side stops
- ▶ Horizontal sash parts are constructed with engineered core for added strength
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior frame and sash are latex primed
- ▶ Exterior wood parts are treated
- ▶ Innovative heavy-duty Bright Brass sash locks: top lock eliminates sash drop and is located at the center of the top rail on the top sash; bottom lock is located at the center of the bottom rail on the bottom sash for operating convenience
- ▶ Class 5 balance system capable of carrying sash up to 200 lbs.
- ▶ Concealed jambliners and balance system using a wood-wrapped jambliner closure on the interior and an aluminum closure on the exterior
- ▶ Innovative design secures the sash in place allowing this unit to meet ratings up to CW-PG65 for certain units.

NOTE: All measurements are nominal.

Hardware

- ▶ Standard heavy-duty sash locks are placed on the top rail and the bottom rail. Available in Bright Brass (*standard*), Satin Nickel or Rustic Umber.
- ▶ Keyed custodial lock prohibits unauthorized operation (*not pictured*).
- ▶ Traditional style or curved sash lift handles (*two per sash*). Available in Bright Brass, Satin Nickel or Rustic Umber.
- ▶ Hook and pole device to help unlock and lower the top sash. Available in Bright Brass (*standard*), Rustic Umber and Satin Nickel finishes.

Bottom Rail Turn Knob Lock

(shown in Rustic Umber)



Top Rail Lock

(shown in Rustic Umber)



Traditional Style Sash Lift Handle (shown in Bright Brass)



Curved Sash Lift Handle (shown in Satin Nickel)





Majesta Double Hung Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 7/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

Insect Screens

- ▶ Full or half insect screen with aluminum frame and options for BetterVue® or UltraVue® fiberglass mesh or aluminum mesh; frame will match the exterior color of the unit

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Prep for stool
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Keyed custodial locks
- ▶ Hook and pole device to help unlock and lower the top sash
- ▶ Sash limiters for safety
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ Galvanized steel installation clips

Concealed wood jamb liners provide a clean look



Optional triple pane glazing for added energy efficiency



Traditional Double Hungs

Kolbe's traditional double hungs offer classic styling, with a sloped sill to help guard against water damage. Available as cottage-style units, radius-top shapes or 30° and 45° bays, traditional double hungs open and close smoothly and effortlessly, with a tilt-in or removable sash for easy cleaning.



Traditional Double Hung Standard Features

- ▶ 1-3/8" thick sash
- ▶ Overall jamb width is 4-9/16" (*basic box width is 4-9/16"*)
- ▶ Frame thickness is 3/4" at side jambs and head
- ▶ Sill thickness is 1-3/16", slope is 14°
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Rigid PVC head parting stop with flexible fins and waterseal at the sill
- ▶ Clay-colored heavy duty sash lock
- ▶ Machined finger grooves on the top rail of the upper sash and bottom rail of the lower sash
- ▶ Spring-loaded block-and-tackle mechanical balances to carry the sash weight
- ▶ Beige PVC jambliners with compression foam backing
- ▶ Pine-veneered head and seat boards; unique narrow mullions and cable support system on bay units

NOTE: All measurements are nominal.

Hardware

- ▶ Sash lock in Clay (*standard*), White, Beige, Bright Brass, Antique Brass, Satin Nickel, Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed* or Matte Black.
- ▶ Curved, square, or traditional style sash lift handle for ease of use. Available in Clay, White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed* or Matte Black.
- ▶ Universal design crank handle hardware kit offers ease-of-use for people with physical limitations. Available in White (*not pictured*).

[†] Brushed Chrome finishes are only available on Signature sash locks and curved sash lift handles.

* The Oil-Rubbed finish is not available on curved sash lift handles. This is a living finish, which means that it will change appearance over time with use.

Sash Lock

(shown in Satin Nickel)



Curved Sash Lift Handle

(shown in Clay)



Traditional Style Sash Lift Handle

(shown in Antique Nickel)





Traditional Double Hung Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 1/2" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Full or half screens with aluminum frames and options for BetterVue® or UltraVue® fiberglass screen mesh or aluminum screen mesh; frames will match the exterior color of the unit
- ▶ StormGuard combination storm/screen units

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Prep for stool
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ No finger grooves in top, bottom or both sash
- ▶ Universal design crank handle hardware kit in White (pg. 189)
- ▶ White jamb liners
- ▶ Extension jambs (up to 12" applied, over 12" shipped loose for field application)
- ▶ Factory-installed Window Opening Control Device (WOCD) (pg. 188)
- ▶ Sash limiters for safety
- ▶ Galvanized steel installation clips
- ▶ Insulated platforms, support brackets, and oak-veneered head and seat boards for bay units
- ▶ Available as replacement sash kits (pg. 80)

Square Style Sash Lift Handle

(shown in Bright Brass)



Old World Classic Double Hungs

Old World Classic double hungs replicate the charm of historical double hung windows for historically-accurate renovations and projects. Their visible brass pulley system with solid brass chains and alloyed weights creates seamless operation. What's more, every Old World Classic window is specifically engineered for each unique project, offering an unprecedented level of customization.



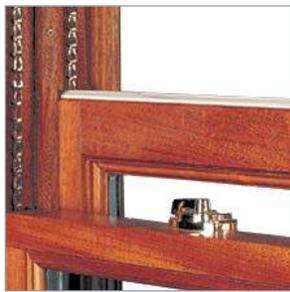
Old World Classic Double Hung Standard Features

- ▶ 1-3/4" thick sash
- ▶ Basic frame jamb width is 6-9/16"
- ▶ Constructed of pine with pine interior head parting stops and side stops
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior frame and sash are latex primed
- ▶ Exterior wood parts are treated
- ▶ Heavy duty sash lock with Antique Brass finish
- ▶ Brass chains and pulleys
- ▶ A proportionate balance between sash and alloyed weights creates a one-to-one ratio

NOTE: All measurements are nominal.



Brass chains and pulleys



Brass sash locks



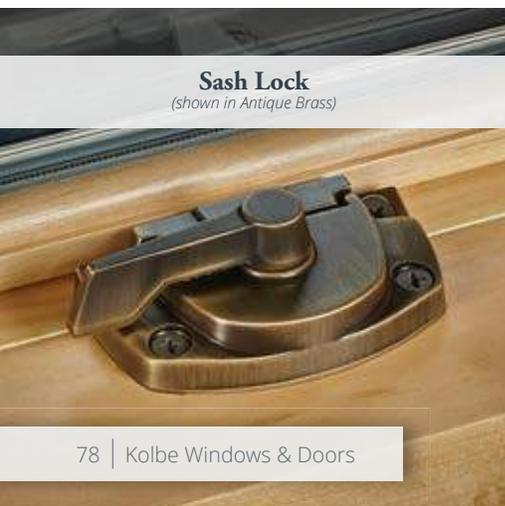
Optional ogee lugs

Hardware

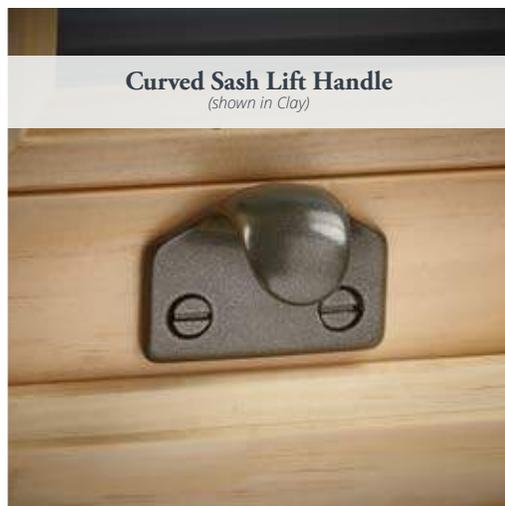
- ▶ Sash lock in Clay (*standard*), White, Beige, Bright Brass, Antique Brass, Satin Nickel, Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed* or Matte Black.
- ▶ Curved, square, or traditional style sash lift handle for ease of use. Available in Clay, White, Beige, Bright Brass, Antique Brass, Satin Nickel, Bright Chrome[†], Brushed Chrome[†], Antique Nickel, Rustic Umber, Oil-Rubbed* or Matte Black.

[†] Brushed Chrome finishes are only available on Signature sash locks and curved sash lift handles.

* The Oil-Rubbed finish is not available on curved sash lift handles. This is a living finish, which means that it will change appearance over time with use.



Sash Lock
(shown in Antique Brass)



Curved Sash Lift Handle
(shown in Clay)



Traditional Style Sash Lift Handle
(shown in Antique Nickel)



Old World Classic Double Hung Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Half or full screens with BetterVue® or UltraVue® fiberglass screen mesh, or aluminum mesh, and aluminum frames that match the exterior color of the unit

Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Available as single, double or triple hung
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Projected sill nosing, extended sill horns or no sill nosing
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Prep for stool
- ▶ Ogee lugs integrated into the top sash stiles
- ▶ Oil-Rubbed*, Bright Brass, Polished Nickel and Satin Nickel chains and pulleys
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

NOTE: Customized options to address historical or architectural design elements are available. Please contact your Kolbe dealer.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

Square Style Sash Lift Handle

(shown in Bright Brass)



Replacement Double Hung Sash Kits

Replacement double hung sash kits make updating windows easy. The sash fit into the existing frames using compression jambliners, making installation a snap. Cottage style & reverse cottage style units are available, along with standard and optional features.



Replacement Sash Kits

Updating your project with new, energy-efficient windows that have the convenience of tilt-in sash is easy with Kolbe's double hung replacement sash kits. There are no worries about tearing into walls or ruining specialty mouldings that provide character and charm because sash are made to fit into your existing window frames. Plus, installation is a snap and is done from the interior from any height. Kits are available with Traditional double hung sash, and include spring-loaded, counter balanced jambliners. Both sash open for ventilation, and tilt in or may be removed for easy cleaning. Sash are also available as cottage-style and reverse cottage-style double hungs. Many options, such as exterior finishes, glazing beads and divided lites help to preserve the original design of your home or add a new twist. Standard and optional features for replacement sash are the same as fully framed Traditional sash (see pg. 76-77).

NOTE: The same standard and optional features of Heritage Series Traditional double hung windows apply to replacement sash kits.

Double Hung Replacement Sash Kits Include:

- | | |
|--|--|
| (1) Top sash | (8) Foam pads |
| (2) PVC jambliners with compression-foam backing | (9) Screws |
| (3) Wood head parting stop | (10) Bottom sash |
| (4) Vinyl head parting stop | (11) Energy efficient, insulating LoE ² -270 glass |
| (5) Tacks | (12) Heavy duty sash lock |
| (6) Jambliner clips | (13) Spring-loaded block-and-tackle mechanical balances (not pictured) |
| (7) Vinyl sash stops | |





Double Hungs | Elevation Charts

Sterling & Traditional Double Hungs | Single Units

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
G.S.	16"	20"	24"	26"	28"	30"	32"	36"	40"
3'-2 1/8"									
3'-5"									
3'-10"									
4'-2 1/8"									
4'-5"									
4'-10 1/8"									
4'-5"									
4'-10 1/8"									
5'-2 1/8"									
5'-5"									
5'-10 1/8"									
6'-2 1/8"									
6'-5"									
6'-10 1/8"									

* Units meet most national emergency escape and rescue requirements.

** Only Traditional sash units meet most national emergency escape and rescue requirements.

U.D. = Unit Dimension

R.O. = Rough Opening

S.O. = Sash Opening

G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Single units shown are also available as single hung units and replacement sash kits with Traditional sash only.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Sterling & Traditional Double Hungs | Cottage-Style

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
G.S.	16"	20"	24"	26"	28"	30"	32"	36"	40"

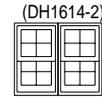
5'-10 1/8"

5'-9"

5'-6"

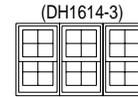
36" | 24"

Width Dimensions for Twin-Mulled Units



Glass (per-sash)	16"	20"	24"	26"	28"	30"	32"	36"	40"
R.O.	3'-7 1/2"	4'-3 1/2"	4'-11 1/2"	5'-3 1/2"	5'-7 1/2"	5'-11 1/2"	6'-3 1/2"	6'-11 1/2"	7'-7 1/2"
U.D.	3'-9 3/8"	4'-5 3/8"	5'-1 3/8"	5'-5 3/8"	5'-9 3/8"	6'-1 3/8"	6'-5 3/8"	7'-1 3/8"	7'-9 3/8"

Width Dimensions for Triple-Mulled Units



Glass (per-sash)	16"	20"	24"	26"	28"	30"	32"	36"	40"
R.O.	5'-5"	6'-5"	7'-5"	7'-11"	8'-5"	8'-11"	9'-5"	10'-5"	11'-5"
U.D.	5'-6 7/8"	6'-6 7/8"	7'-6 7/8"	8'-0 7/8"	8'-6 7/8"	9'-0 7/8"	9'-6 7/8"	10'-6 7/8"	11'-6 7/8"

U.D. = Unit Dimension • R.O. = Rough Opening
S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal.
Elevation charts are not to scale.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary. For rough opening recommendations, see pg. 194.

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 3/8"	-1 11/16"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 51/2"	-3 1/4"
3-1/2" casing and backband; U.D. to F.S.	-7"	-4 3/16"

F.S. to S.O.	-1 1/2"	-2 7/16"
S.O. to G.S.	-4"	-6 2"
G.S. to D.L.O.	-1"	-1"

Note: Clear opening dimensions can be found on pgs. 196-199.
Cottage-style dimension calculations are different; please contact your dealer.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

Double Hungs | Elevation Charts

Double Hungs | Rectangular Transoms

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-11 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-10"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-8"	3'-0"	3'-4"	3'-8"
G.S.	16"	20"	24"	28"	32"	36"	40"
1'-1 1/8"	DHT1606	DHT2006	DHT2406	DHT2806	DHT3206	DHT3606	DHT4006
1'-5 1/8"	DHT1610	DHT2010	DHT2410	DHT2810	DHT3210	DHT3610	DHT4010
1'-7 1/8"	DHT1612	DHT2012	DHT2412	DHT2812	DHT3212	DHT3612	DHT4012
1'-9 1/8"	DHT1614	DHT2014	DHT2414	DHT2814	DHT3214	DHT3614	DHT4014
2'-1 1/8"	DHT1618	DHT2018	DHT2418	DHT2818	DHT3218	DHT3618	DHT4018
2'-7 1/8"	DHT1624	DHT2024	DHT2424	DHT2824	DHT3224	DHT3624	DHT4024

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. These dimensions apply only for transoms with flat sills. Contact your supplier for dimensions of units with beveled sills. Elevation charts are not to scale.

Transom units are only available with a 1-3/4" sash. The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Double Hungs | Studio Units

	4'-3 7/8"	4'-7 7/8"	5'-3 7/8"	5'-11 7/8"	6'-7 7/8"	7'-3 7/8"	8'-7 7/8"
U.D.	4'-3 7/8"	4'-7 7/8"	5'-3 7/8"	5'-11 7/8"	6'-7 7/8"	7'-3 7/8"	8'-7 7/8"
R.O.	4'-2"	4'-6"	5'-2"	5'-10"	6'-6"	7'-2"	8'-6"
S.O.	4'-0"	4'-4"	5'-0"	5'-8"	6'-4"	7'-0"	8'-4"
G.S.	44 1/2"	48 1/2"	56 1/2"	64 1/2"	72 1/2"	80 1/2"	96 1/2"
4'-2 1/8"							
	DHS40310	DHS44310	DHS50310	DHS58310	DHS64310	DHS70310	DHS84310
4'-6 1/8"							
	DHS4042	DHS4442	DHS5042	DHS5842	DHS6442	DHS7042	DHS8442
4'-10 1/8"							
	DHS4046	DHS4446	DHS5046	DHS5846	DHS6446	DHS7046	DHS8446
5'-2 1/8"							
	DHS40410	DHS44410	DHS50410	DHS58410	DHS64410	DHS70410	DHS84410
5'-6 1/8"							
	DHS4052	DHS4452	DHS5052	DHS5852	DHS6452	DHS7052	DHS8452
5'-10 1/8"							
	DHS4056	DHS4456	DHS5056	DHS5856	DHS6456	DHS7056	DHS8456
6'-2 1/8"							
	DHS40510	DHS44510	DHS50510	DHS58510	DHS64510	DHS70510	DHS84510
6'-6 1/8"							
	DHS4062	DHS4462	DHS5062	DHS5862	DHS6462	DHS7062	DHS8462
6'-10 1/8"							
	DHS4066	DHS4466	DHS5066	DHS5866	DHS6466	DHS7066	DHS8466

*To match cottage-style double hungs with divided lites, 5'-6" high (S.O.) units must be ordered 5 lites high.
 U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Studio units are only available with a 1-3/4" sash.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Double Hungs | Elevation Charts

Sterling & Traditional Double Hungs | Picture Units 16" flankers

U.D.	8'-2 7/8"		8'-10 7/8"		9'-6 7/8"		10'-2 7/8"	
R.O.	8'-1"		8'-9"		9'-5"		10'-1"	
S.O.	1'-8" 4'-4" 1'-8"	1'-8" 5'-0" 1'-8"	1'-8" 5'-8" 1'-8"	1'-8" 6'-4" 1'-8"	1'-8" 5'-0" 1'-8"	1'-8" 5'-8" 1'-8"	1'-8" 6'-4" 1'-8"	1'-8" 7'-0" 1'-8"
G.S.	16" 48 1/2" 16"	16" 56 1/2" 16"	16" 64 1/2" 16"	16" 72 1/2" 16"	16" 64 1/2" 16"	16" 72 1/2" 16"	16" 80 1/2" 16"	16" 88 1/2" 16"
4'-6 1/8"	4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"	
	DH16224442		DH16225042		DH16225842		DH16226442	
4'-10 1/8"	4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"	
	DH16244446		DH16245046		DH16245846		DH16246446	
5'-6 1/8"	5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"	
	DH16284452		DH16285052		DH16285852		DH16286452	

Sterling & Traditional Double Hungs | Picture Units 20" flankers

U.D.	8'-10 7/8"		9'-6 7/8"		10'-2 7/8"		10'-10 7/8"	
R.O.	8'-9"		9'-5"		10'-1"		10'-9"	
S.O.	2'-0" 4'-4" 2'-0"	2'-0" 5'-0" 2'-0"	2'-0" 5'-8" 2'-0"	2'-0" 6'-4" 2'-0"	2'-0" 5'-0" 2'-0"	2'-0" 5'-8" 2'-0"	2'-0" 6'-4" 2'-0"	2'-0" 7'-0" 2'-0"
G.S.	20" 48 1/2" 20"	20" 56 1/2" 20"	20" 64 1/2" 20"	20" 72 1/2" 20"	20" 64 1/2" 20"	20" 72 1/2" 20"	20" 80 1/2" 20"	20" 88 1/2" 20"
4'-6 1/8"	4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"		4'-5" 4'-2" 22" 45 1/4"	
	DH20224442		DH20225042		DH20225842		DH20226442	
4'-10 1/8"	4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"		4'-9" 4'-6" 24" 49 1/4"	
	DH20244446		DH20245046		DH20245846		DH20246446	
5'-6 1/8"	5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"		5'-5" 5'-2" 28" 57 1/4"	
	DH20284452		DH20285052		DH20285852		DH20286452	

*The first number of the glass size height is the height (per sash) for each flanker sash. The second number is the glass height for the center picture unit.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Center picture units are only available with a 1-3/4" sash. Flanker sash must be specified as either Traditional or Sterling sash when ordering.

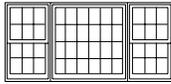
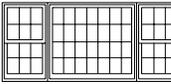
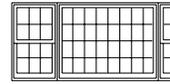
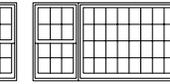
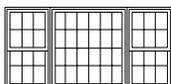
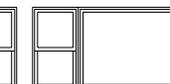
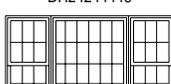
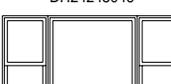
Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Sterling & Traditional Double Hungs | Picture Units 24" flankers

	9'-6 7/8"	10'-2 7/8"	10'-10 7/8"	11'-6 7/8"
U.D.	9'-5"	10'-1"	10'-9"	11'-5"
R.O.	9'-5"	10'-1"	10'-9"	11'-5"
S.O.	2'-4" 4'-4" 2'-4"	2'-4" 5'-0" 2'-4"	2'-4" 5'-8" 2'-4"	2'-4" 6'-4" 2'-4"
G.S.*	24" 48 1/2" 24"	24" 56 1/2" 24"	24" 64 1/2" 24"	24" 72 1/2" 24"
4'-6 1/8" 4'-5" 4'-2" 22" 45 1/4" 4'-10 1/8" 4'-9" 4'-6" 24" 49 1/4" 5'-6 1/8" 5'-5" 5'-2" 28" 57 1/4"	 DH24224442	 DH24225042	 DH24225842	 DH24226442
	 DH24244446	 DH24245046	 DH24245846	 DH24246446
	 DH24284452	 DH24285052	 DH24285852	 DH24286452

*The first number of the glass size height is the height (per sash) for each flanker sash. The second number is the glass height for the center picture unit.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Center picture units are only available with a 1-3/4" sash. Wood flanker sash must be specified as either Traditional or Sterling sash when ordering.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

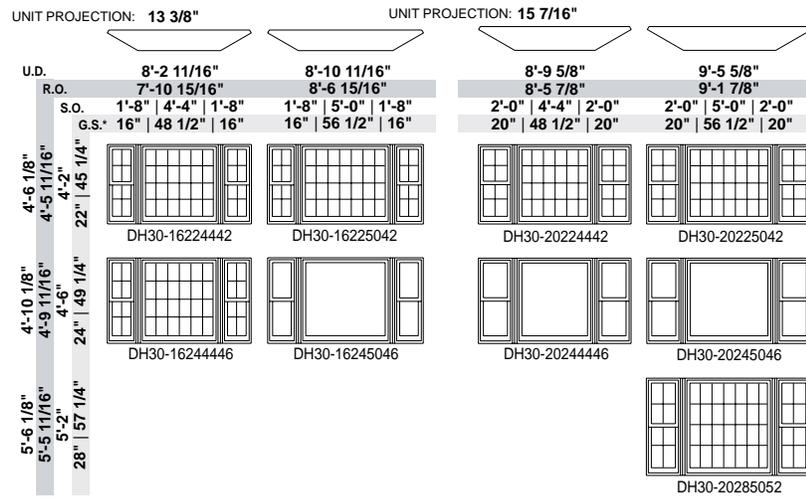
The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Double Hungs | Elevation Charts

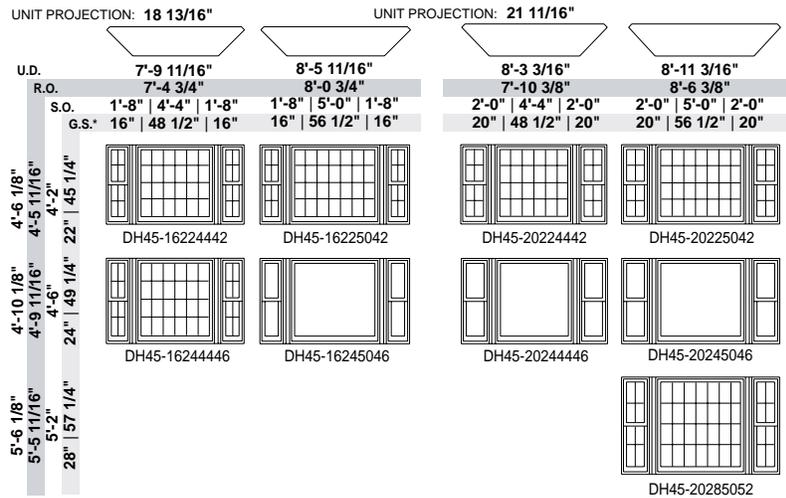
Sterling & Traditional Double Hungs | 30° Bay Windows

16" flankers 20" flankers



Sterling & Traditional Double Hungs | 45° Bay Windows

16" flankers 20" flankers



*The first number of the glass size height is the height (per sash) for each flanker sash. The second number is the glass height for the center picture unit.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Center picture units are only available with a 1-3/4" sash. Flanker sash must be specified as either Traditional or Sterling sash when ordering.

Divided lites are optional.

If the cable support system and/or insulated platforms & support brackets are not being used, other means of proper support must be used. Add 1-13/16" to the R.O. height if an insulated platform is being used. R.O.'s for bay units without head and seat boards, typically used for walk-out applications, are different.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.

For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Sterling & Traditional Segment Head Double Hungs

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
G.S.	16"	20"	24"	26"	28"	30"	32"	36"	40"
3'-2 1/8"									
3'-6 1/8"									
4'-2 1/8"									
4'-6 1/8"									
4'-10 1/8"									
5'-2 1/8"									
5'-6 1/8"									
5'-10 1/8"									
6'-2 1/8"									
6'-6 1/8"									
6'-10 1/8"									

*Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

The venting of the bottom sash of segment head units is limited due to the radius on the top sash.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

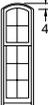
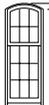
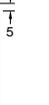
The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Double Hungs | Elevation Charts

Sterling & Traditional Segment Head Double Hungs | Cottage Style

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
G.S.*	16"	20"	24"	26"	28"	30"	32"	36"	40"

5'-10 7/8"	5'-9"	5'-6"	36" 24"						
									
	WDH1624/36-SEG	WDH2024/36-SEG	WDH2424/36-SEG	WDH2624/36-SEG	WDH2824/36-SEG	WDH3024/36-SEG	WDH3224/36-SEG	WDH3624/36-SEG	WDH4024/36-SEG

*Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

The venting of the bottom sash of segment head units is limited due to the radius on the top sash.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Segment Head Double Hungs | Studio Units

	4'-3 7/8"	4'-7 7/8"	5'-3 7/8"	5'-11 7/8"	6'-7 7/8"	7'-3 7/8"	8'-7 7/8"
U.D.	4'-2"	4'-6"	5'-2"	5'-10"	6'-6"	7'-2"	8'-6"
R.O.	4'-0"	4'-4"	5'-0"	5'-8"	6'-4"	7'-0"	8'-4"
S.O.	44 1/2"	48 1/2"	56 1/2"	64 1/2"	72 1/2"	80 1/2"	96 1/2"
G.S.*							
4'-2 1/8"							
4'-6 1/8"							
4'-10 1/8"							
5'-2 1/8"							
5'-6 1/8"							
5'-10 1/8"							
6'-2 1/8"							
6'-6 1/8"							
6'-10 1/8"							

*Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Studio units are only available with a 1-3/4" sash.

Divide lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbwindows.com.

Double Hungs | Elevation Charts

Sterling & Traditional Half-Circle Top Single Hungs

U.D.	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
R.O.	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
S.O.	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
G.S.	16"	20"	24"	26"	28"	30"	32"	36"	40"
3'-2 3/16"									
3'-5 3/16"									
4'-2 3/16"									
4'-6 3/16"									
4'-10 3/16"									
5'-2 3/16"									
5'-6 3/16"									
5'-10 3/16"									
6'-2 3/16"									
6'-6 3/16"									
6'-10 3/16"									

*Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.
 U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

The venting of the bottom sash of half-circle top units is limited due to the radius on the top sash.

Divided lites are optional.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

Additional and the most current drawings are available at www.kolbewindows.com.

Sterling & Traditional Half-Circle Top Single Hungs | Cottage-Style

U.D. R.O. S.O. G.S.*	1'-11 7/8"	2'-3 7/8"	2'-7 7/8"	2'-9 7/8"	2'-11 7/8"	3'-1 7/8"	3'-3 7/8"	3'-7 7/8"	3'-11 7/8"
	1'-10"	2'-2"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	3'-10"
	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	2'-10"	3'-0"	3'-4"	3'-8"
	16"	20"	24"	26"	28"	30"	32"	36"	40"
5'-10 3/16" 5'-9 1/16" 5'-6" 36" 24"									
	WDH1624/36-HC	WDH2024/36-HC	WDH2424/36-HC	WDH2624/36-HC	WDH2824/36-HC	WDH3024/36-HC	WDH3224/36-HC	WDH3624/36-HC	WDH4024/36-HC

*Approximate glass sizes per sash are given; true glass sizes vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • S.O. = Sash Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

The venting of the bottom sash of half-circle top units is limited due to the radius on the top sash.

Divided lites are optional.

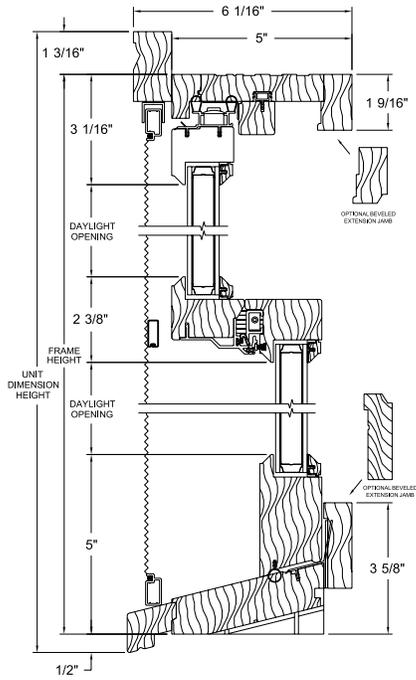
Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

The side jambs of double hung units extend above the head jamb; additional space for the rough opening height may be necessary.

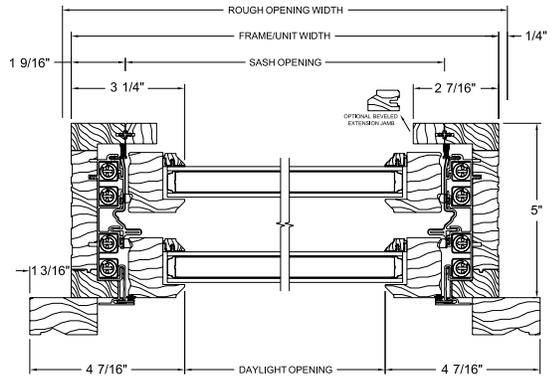
Additional and the most current drawings are available at www.kolbewindows.com.

XL Sterling Double Hung

Vertical Section



Horizontal Section

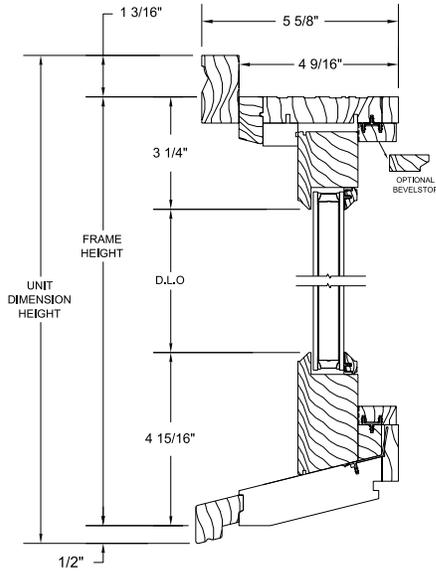


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbwindows.com.

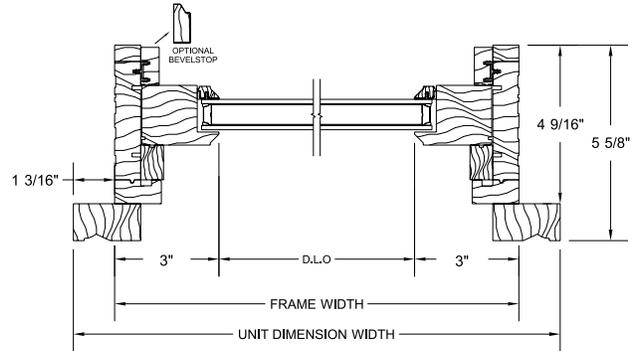
Double Hungs | Cross Section Drawings

Sterling Double Hung Studio Unit

Vertical Section

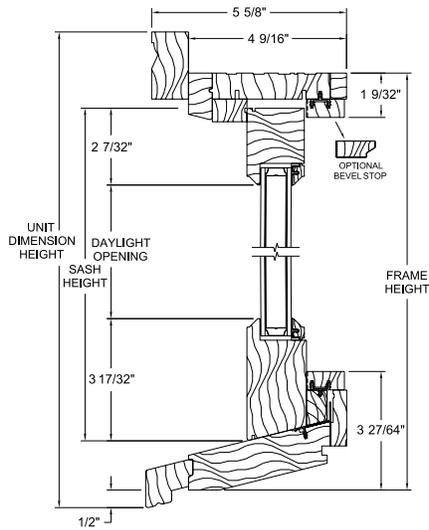


Horizontal Section

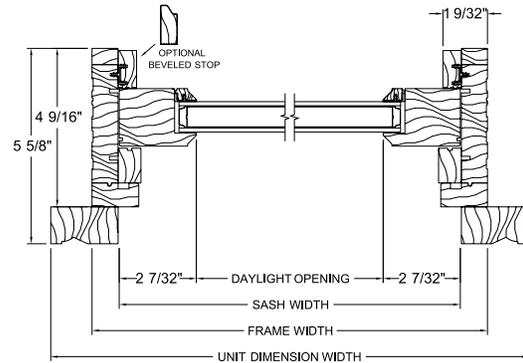


Traditional Double Hung Studio Unit

Vertical Section

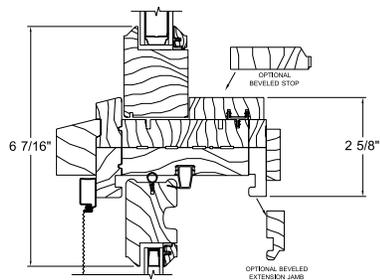


Horizontal Section

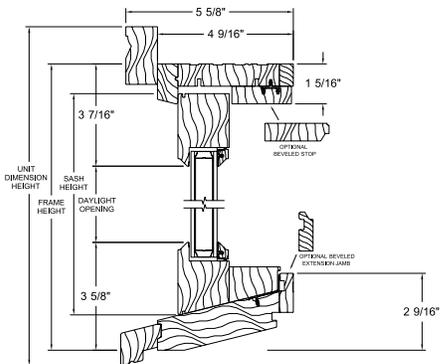


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

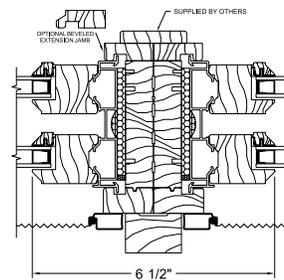
Rectangular Transom Stacked Over Traditional Double Hung



Double Hung Transom with Optional Beveled Sill

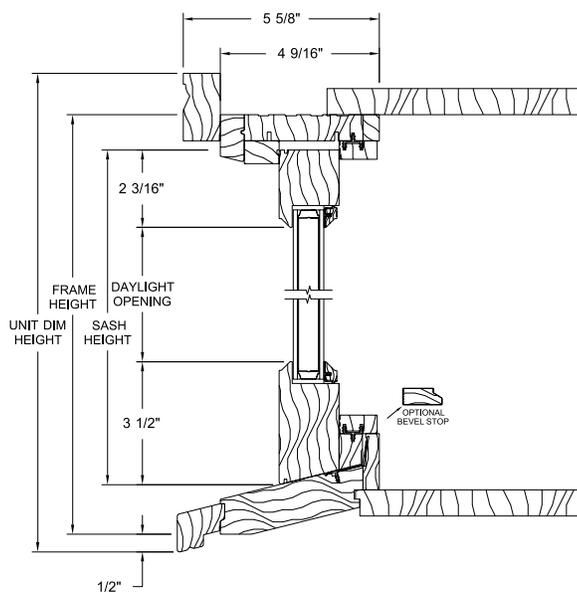


Standard Narrow Mullion



Traditional Double Hung 30° & 45° Bay Window

Vertical Section

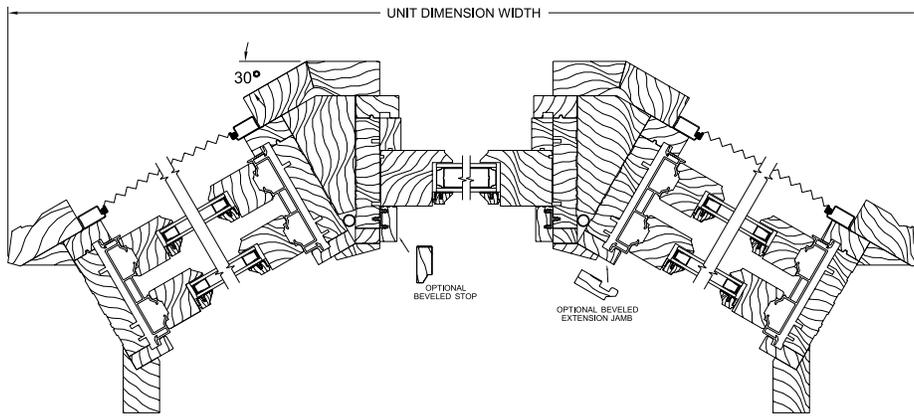


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Double Hungs | Cross Section Drawings

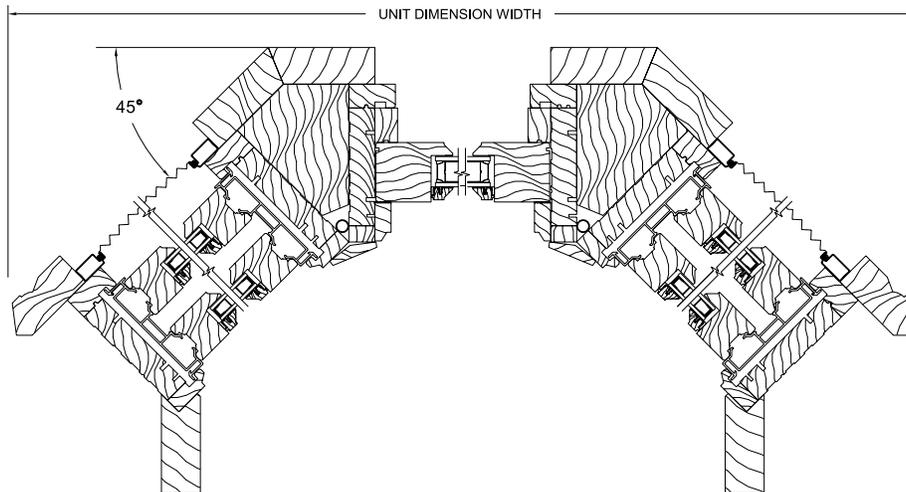
Traditional Double Hung 30° Bay Window

Horizontal Section



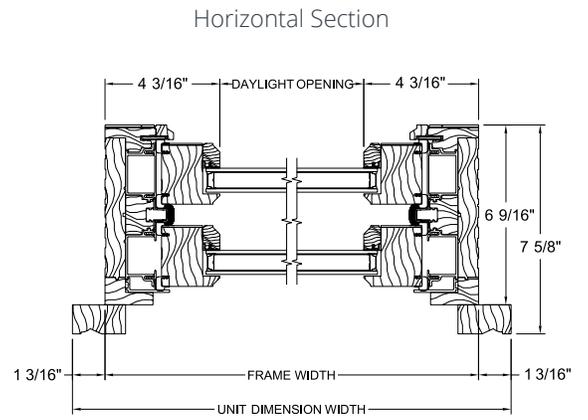
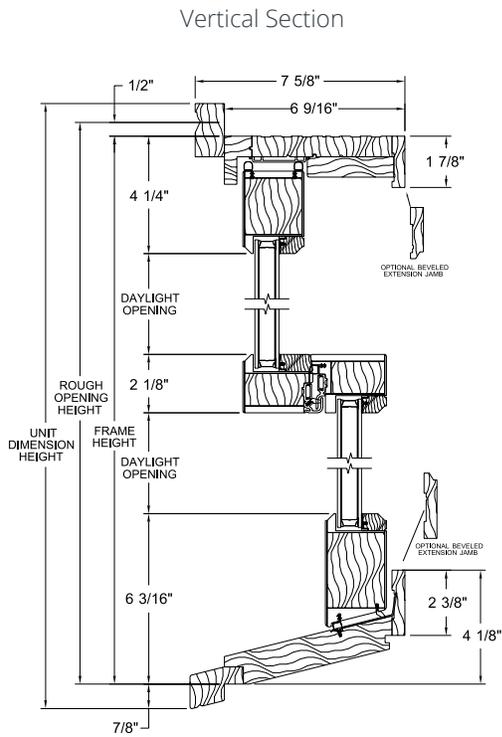
Traditional Double Hung 45° Bay Window

Horizontal Section

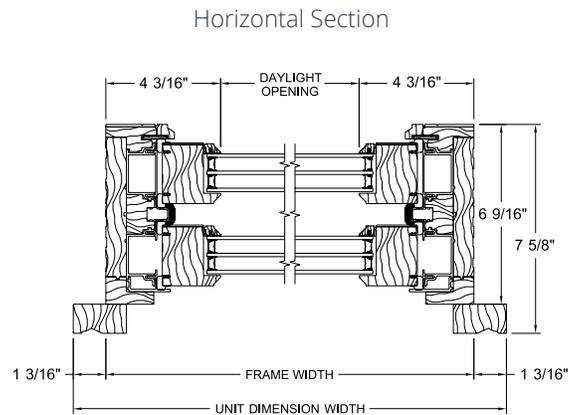
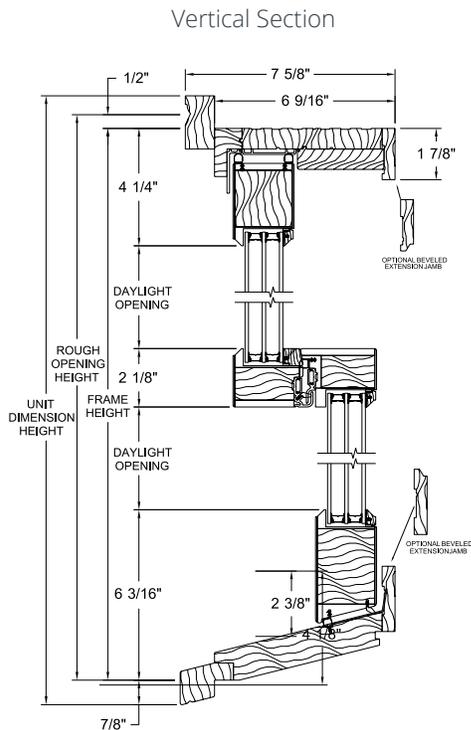


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Majesta Double Hung Dual Pane



Majesta Double Hung Triple Pane

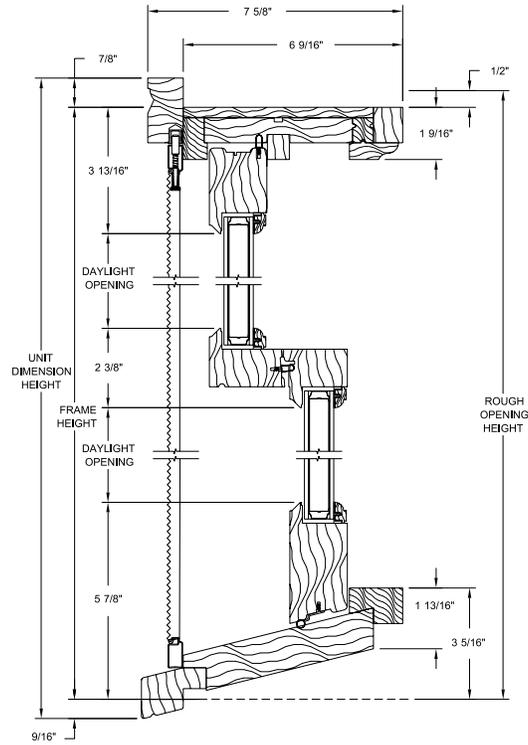


NOTE: There are no standard sizes for Majesta double hungs. Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

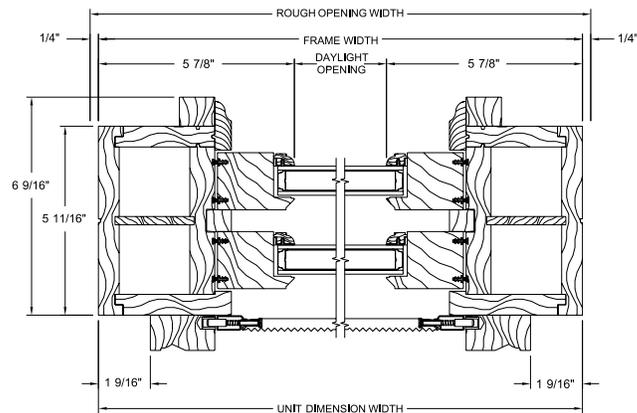
Double Hungs | Cross Section Drawings

Old World Classic Double Hung

Vertical Section



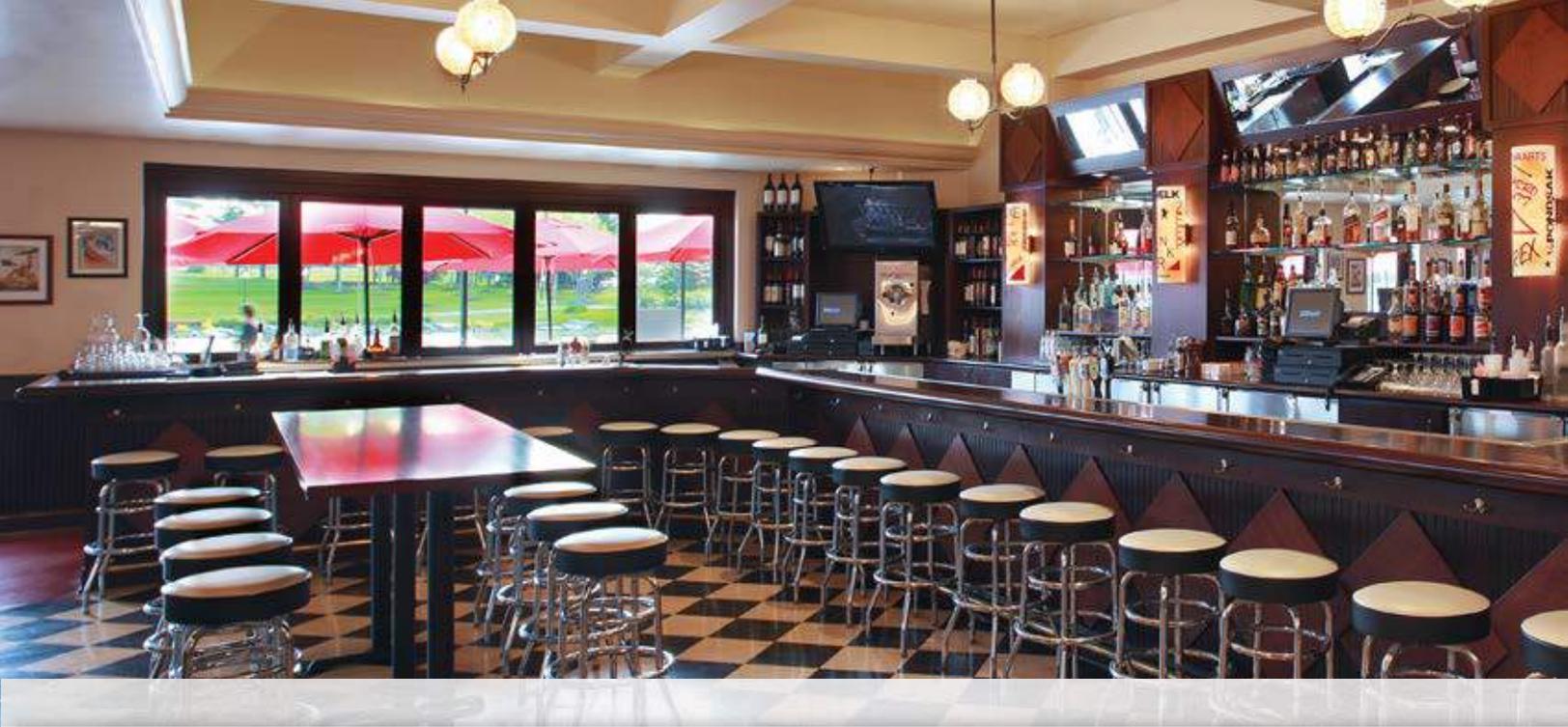
Horizontal Section



NOTE: There are no standard sizes for Old World Classic double hungs. Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.



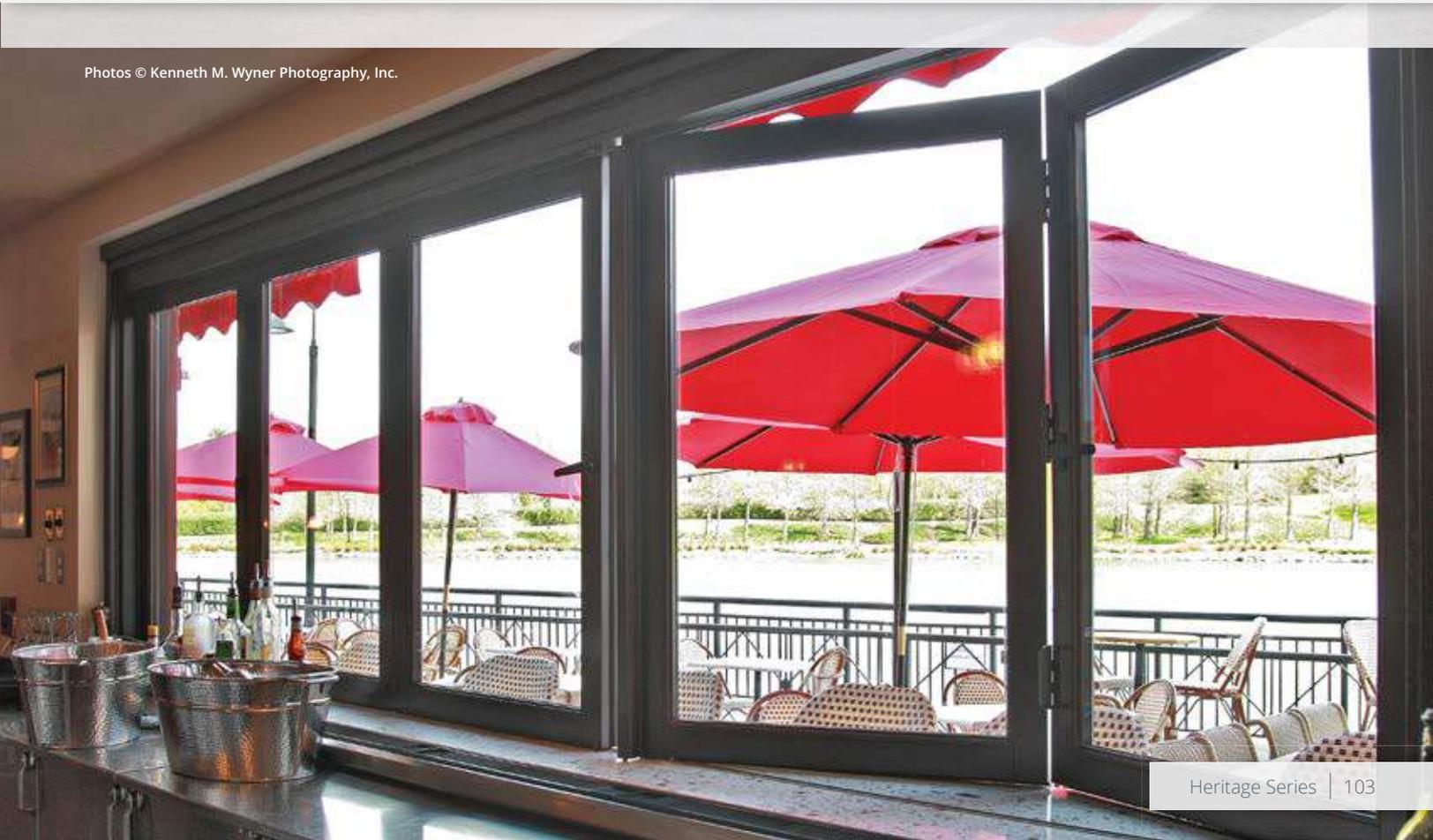




Folding Windows

Kolbe is well known in the window and door industry for innovative products. Folding windows are a perfect example, made for projects requiring a pass-through serving system. For indoor/outdoor living areas and restaurants, Kolbe's folding windows offer a large, unobstructed view of the landscape, and are highly customizable with numerous hardware and finish options.

Photos © Kenneth M. Wyner Photography, Inc.



Folding Windows

Folding windows can infuse a room with a remarkable amount of fresh air by offering openings up to 52 feet. With up to eight panels per side, folding windows are highly customizable with a number of different configurations available.



Photos © Kenneth M. Wyner Photography, Inc.

Folding Window Standard Features

- ▶ 1-3/4" thick sash
- ▶ 6-9/16" minimum jamb width
- ▶ Folding windows feature LVL locking stiles; stiles and rails are a nominal 3" wide
- ▶ Frame setup up to 177" wide x 77-1/8" tall; all others knocked down
- ▶ Constructed of pine with pine interior stops
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame is latex primed
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ Bronze weep sill
- ▶ Grooved guide rollers with adjustable, ball-bearing wheels carry the folding panels
- ▶ Multi-point* mortise latch with handle set in a Bright Brass finish
- ▶ Face-mounted flush bolt locking hardware on folding panels
- ▶ Thick oak interior threshold

NOTE: All measurements are nominal.

Minimum panel height is 36", minimum panel width is 16", maximum panel height is 72" and maximum panel width is 39-3/8".

* Minimum panel height for multi-point hardware is 36".

Hardware

- ▶ Face-mounted flush bolt locking hardware on folding panels if a handle is not desired. Available in Matte Black, Bright Brass, Chrome and Satin Nickel.
- ▶ Uno[†] or Aria handle set for folding panels with concealed shootbolt locking hardware. Available in Matte Black, Brushed Chrome, Bright Brass and Chrome.
- ▶ Hinges with handles in Bright Brass, Chrome, Satin Nickel and Matte Black.
- ▶ Finger pulls for panels without hinge handles in Bright Brass, Chrome, Satin Nickel and Matte Black.
- ▶ For units with a swinging panel, choose a Toronto, München, Verona or Dallas^{††} handle set. Available in Bright Brass PVD, Antique Brass, Satin Nickel PVD, Antique Nickel PVD, Oil-Rubbed**, Rustic Umber, Matte Black and Smoky Gray PVD (pgs. 136-137).
- ▶ For units with a swinging panel, choose a Baldwin[®] handle set in Bright Brass, Antique Brass, Satin Brass, Satin Nickel, Antique Nickel, Distressed Smoky Gray, Rustic Umber, Oil Rubbed**, Matte Black or Brushed Chrome finishes (pg. 138).
- ▶ Magnetic latches or panel stays are available to assist in keeping windows stationary while open.

† Uno handle set is only available in Brushed Chrome and Matte Black.

†† Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

**The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

Flush Bolt (shown in Satin Nickel)

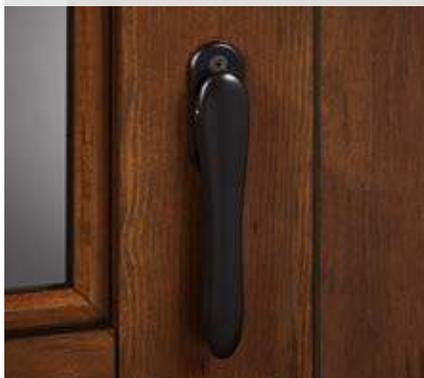


Concealed Shoot Bolt



Uno[†] Handle

(shown in Matte Black)



Aria Handle

(shown in Chrome)





Folding Window Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Screens

- ▶ Black pleated retractable insect screens
- ▶ Black pleated sliding screens only available on units with the frame setup

Exterior Finishes (pg. 183)

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Stile and top rail options: 4-5/8" or 6"
- ▶ Bottom rail options: 4-5/8", 6", 7-9/16" or 12-5/8"
- ▶ 2-1/4" thick panel
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Single-point hardware for access panel
- ▶ Toronto, Verona, Dallas or München handle set for access panel (pgs. 136-137)
- ▶ Baldwin® handle sets in various styles (pg. 138)
- ▶ Concealed shootbolt locking hardware for folding panels
- ▶ Recessed floor track sill (interior), weep or non-weep in Bronze Anodized finish
- ▶ Weep sill, Clear Anodized finish
- ▶ Extension jambs in a wide variety of sizes (shipped loose for field application if over 12")
- ▶ Galvanized steel installation clips

Hinge Handle
(shown in Matte Black)



Finger Pull
(shown in Satin Nickel)



Magnetic Latch

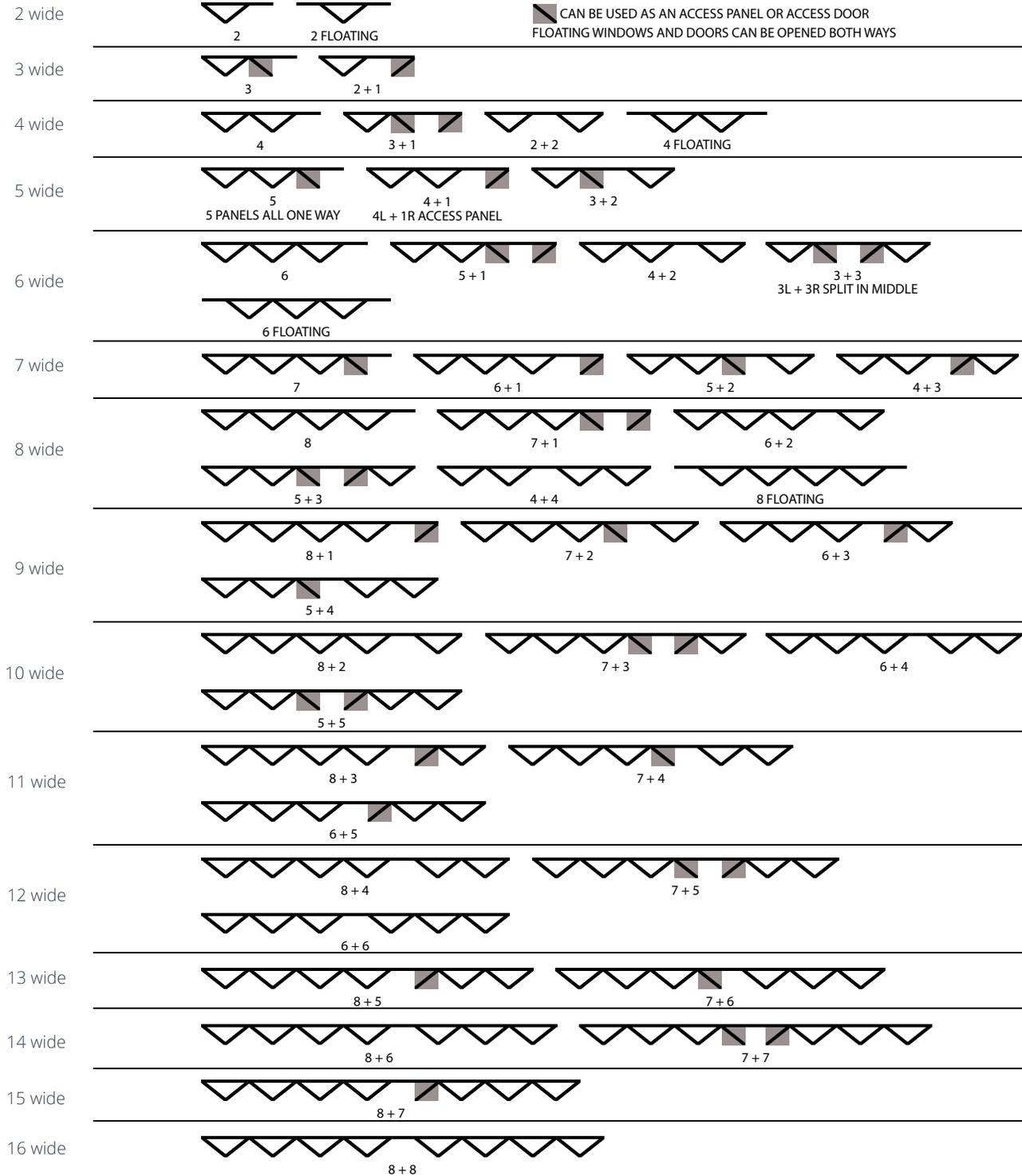


Panel Stay



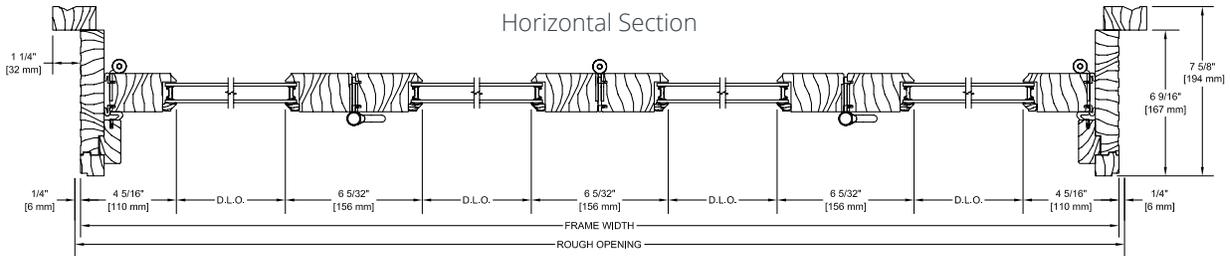
Hinge color options for folding windows include Bright Brass, Chrome, Satin Nickel and Matte Black.

Folding Windows Panel Configurations

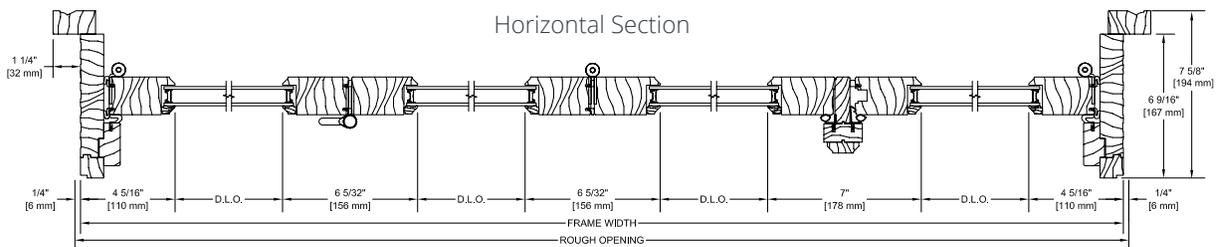


Folding Windows Cross Section Drawings

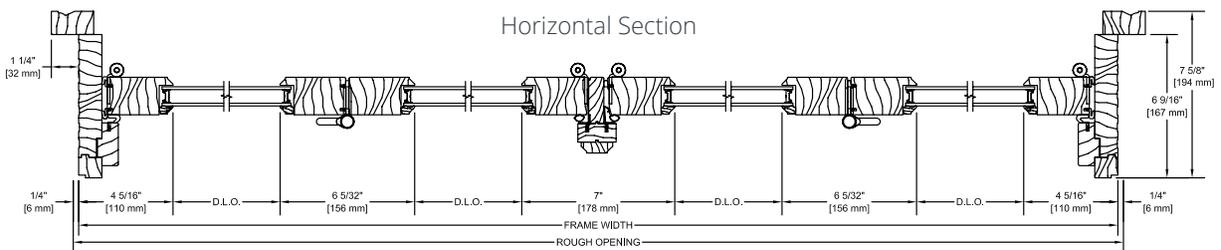
4-Wide: Folding 1-Way



4-Wide: One Left & Three Right



4-Wide: Two Left & Two Right



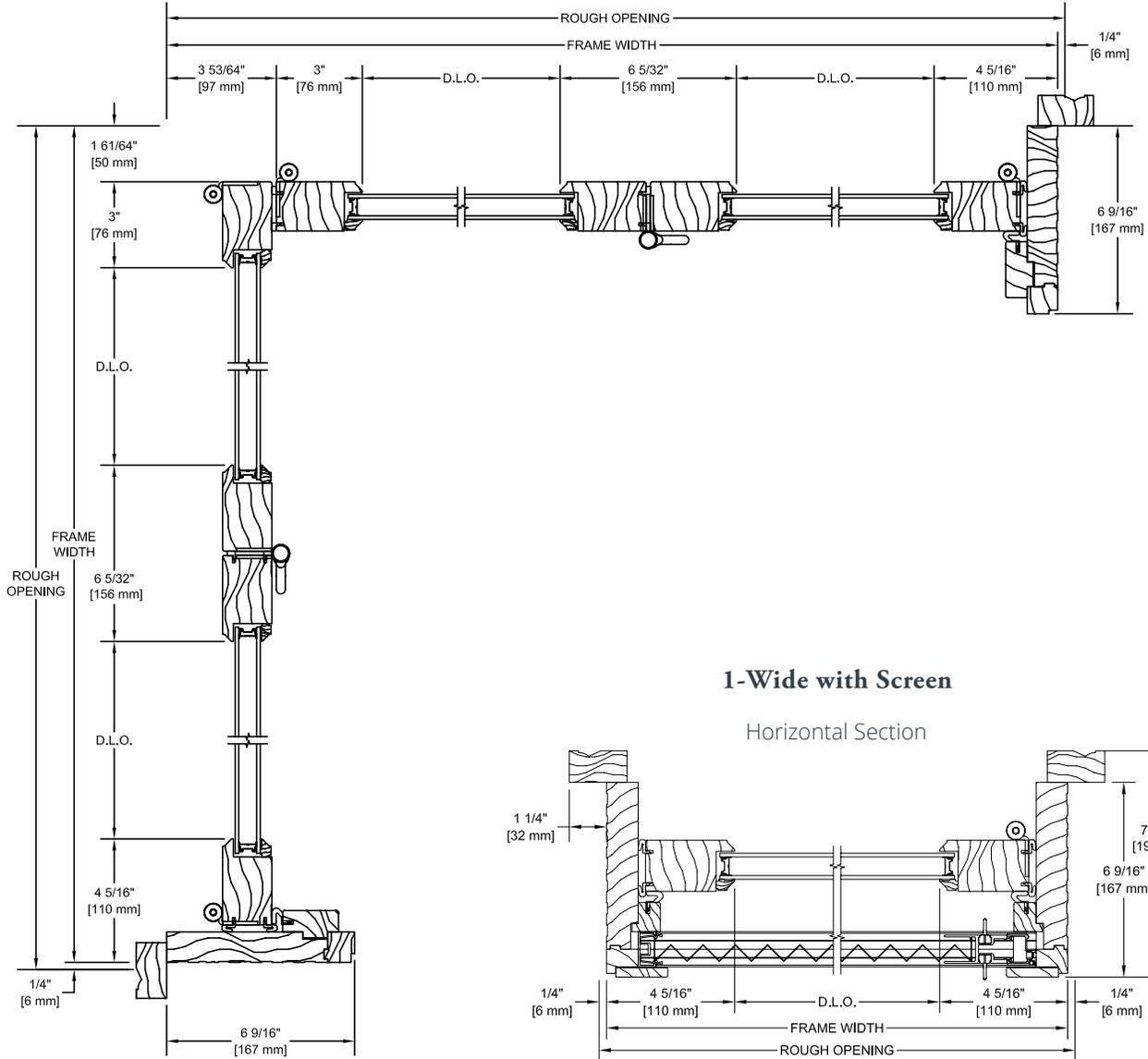
Operation is viewed from the exterior.

NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Folding Windows Cross Section Drawings

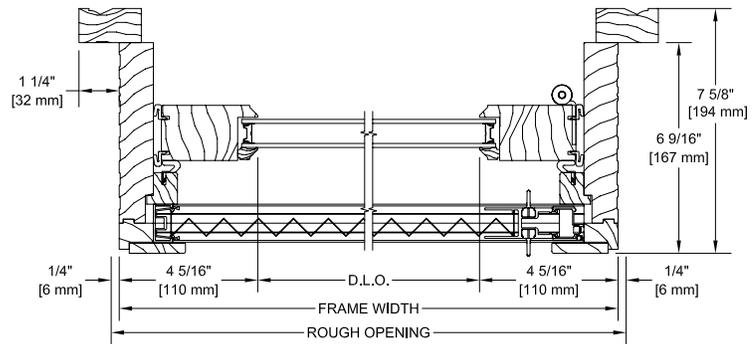
Corner Unit

Horizontal Section



1-Wide with Screen

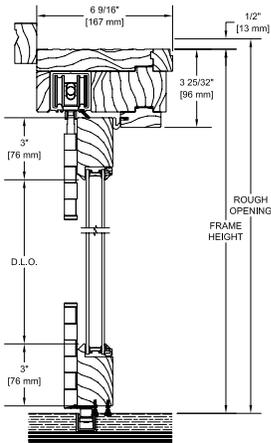
Horizontal Section



NOTE: Drawings are not to scale. Corner unit cross section will change when an odd number of panels are used. Additional and the most current drawings are available at www.kolbewindows.com.

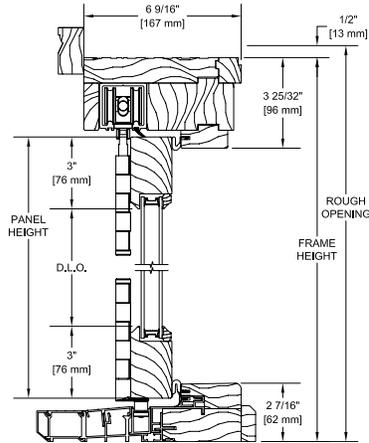
1.75 Panel with Recessed Sill

Vertical Section



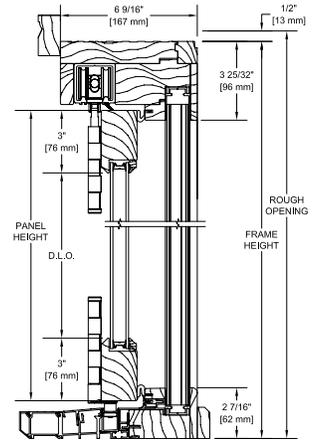
1.75 Panel with Weep Sill

Vertical Section



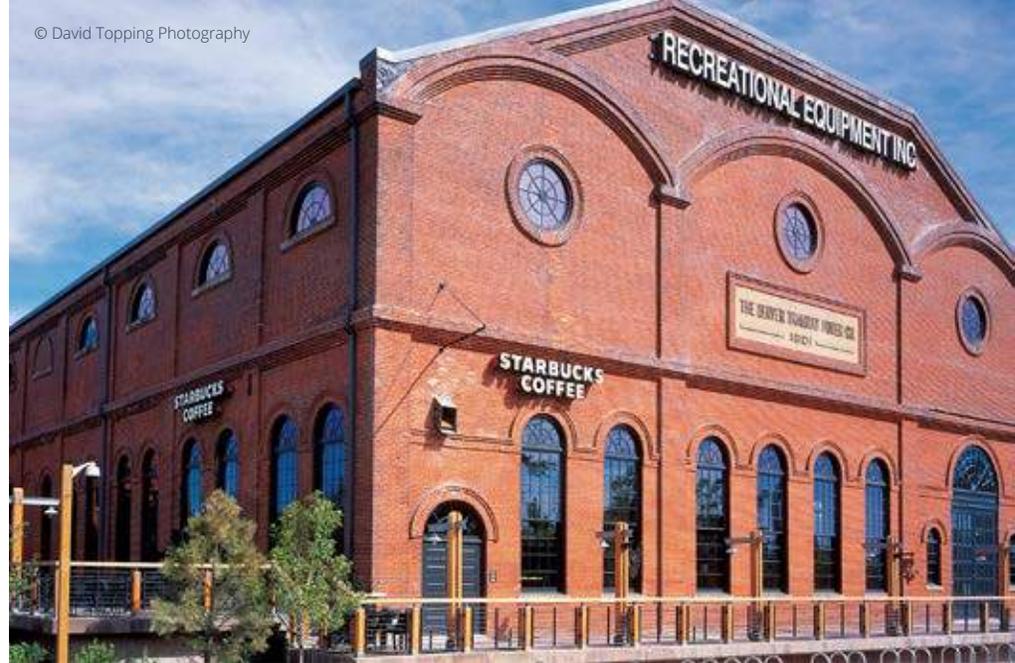
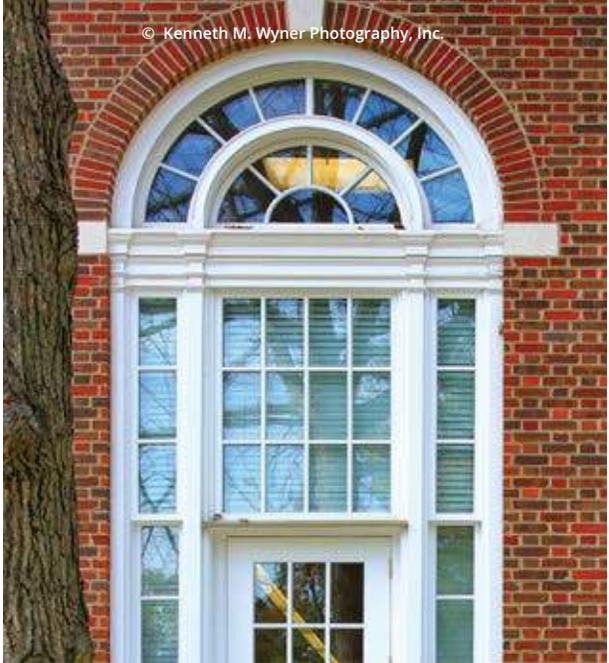
1.75 Panel with Weep Sill and Screen

Vertical Section



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbwindows.com.





Specialty Windows

Heritage Series offers a variety of specialty window sizes and styles. Add radius or geometric units to other windows and doors to make that final dramatic statement to your design. To achieve a unique look, choose Kolbe's radius windows. Half-circle or elliptical units stacked above other Kolbe windows and doors create gracious curves and allow more light to enter your room. Make your design truly distinctive with Kolbe's geometric windows. Any combination will provide a light-filled room and a terrific view. Comprise a window wall with a variety of triangles, trapezoids, parallelograms, octagons, pentagons, diamonds, hexagons or any shape you can imagine to create a unique space that is sure to be eye-catching.

Radius Windows | Geometric Windows

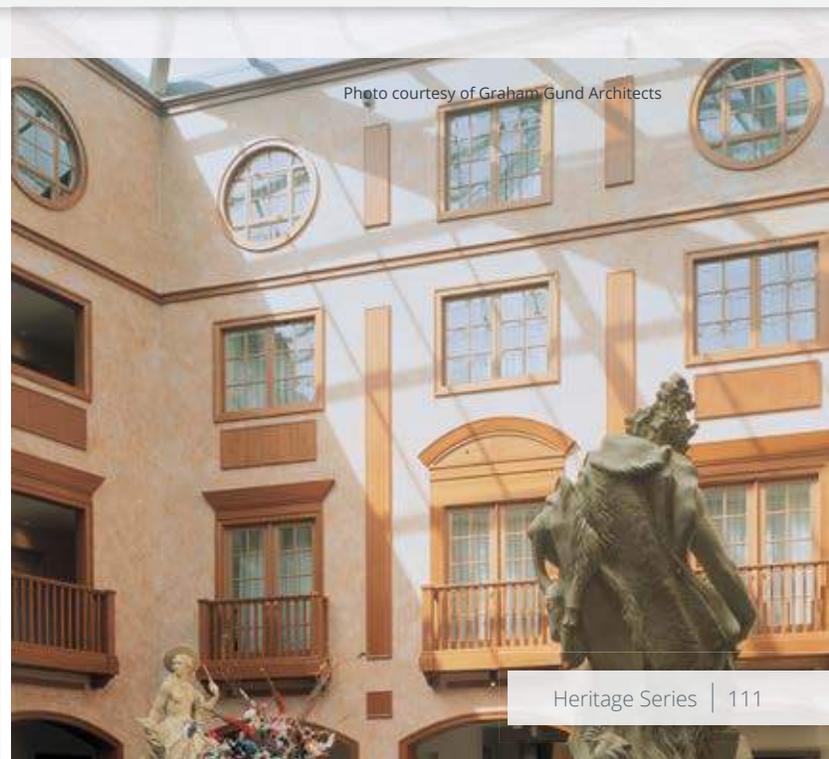


Photo courtesy of Graham Gund Architects

Radius Windows

Kolbe makes radius windows in stand-alone full circles, half-circles, quarter-circles, elliptical, ovals and custom shapes. Half-circle or elliptical windows can be stacked over other Kolbe windows and doors to create larger window walls. We build our radius windows to order so that their profiles match those of the windows they complement.



Radius Window Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16"
- ▶ 3" straight legs on half-circles
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Available in sash and direct set styles
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazing is sash set to the interior with beveled wood glazing beads

NOTE: All measurements are nominal.



Photo courtesy of Group 3 Architecture & John McManus Photography

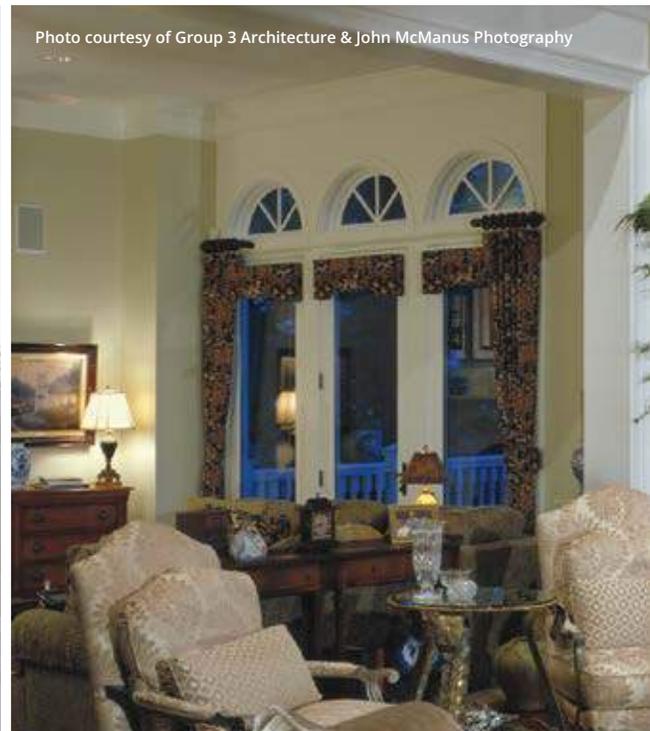




Photo courtesy of Zaveta Construction Company

Radius Window Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

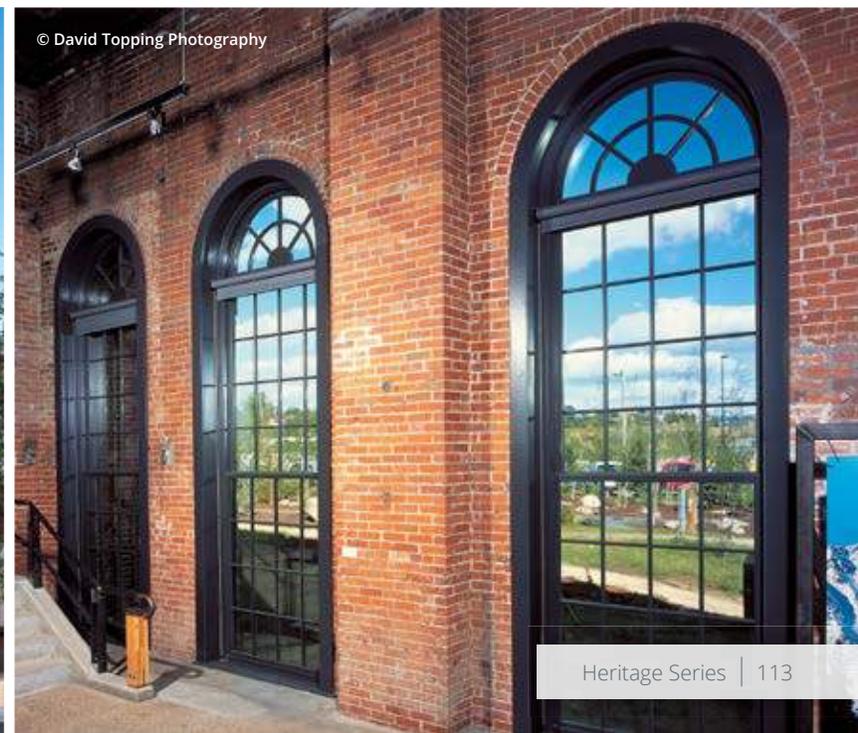
Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

NOTE: All measurements are nominal.

Other Options (custom options are also available)

- ▶ Custom shapes such as bell-tops and gothic-tops
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Glazing may be direct set
- ▶ Extended legs or no legs on half-circles
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ Galvanized steel installation clips
- ▶ High performance modifications



© David Topping Photography

Geometric Windows

Make your design truly distinctive with Kolbe's geometric windows. Any combination will provide a light-filled room and a terrific view. Angled for interest, geometric windows are attention-grabbers. Kolbe can produce a nearly infinite variety of window shapes and sizes, with a vast array of glazing options.



Geometric Window Standard Features

- ▶ 1-3/4" thick sash
- ▶ Overall jamb width is 4-9/16"
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and sash are latex primed
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Available in sash and direct set styles
- ▶ Glazing is sash set to the interior with beveled wood glazing beads
- ▶ Standard geometric shapes include triangles, octagons, hexagons, pentagons, trapezoids, and diamonds

NOTE: All measurements are nominal.





Geometric Window Options

Glass (pg. 184)

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned-, bronze-, or gray-lite
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4" or 4-1/2" bars
- ▶ Grilles-in-the-airspace

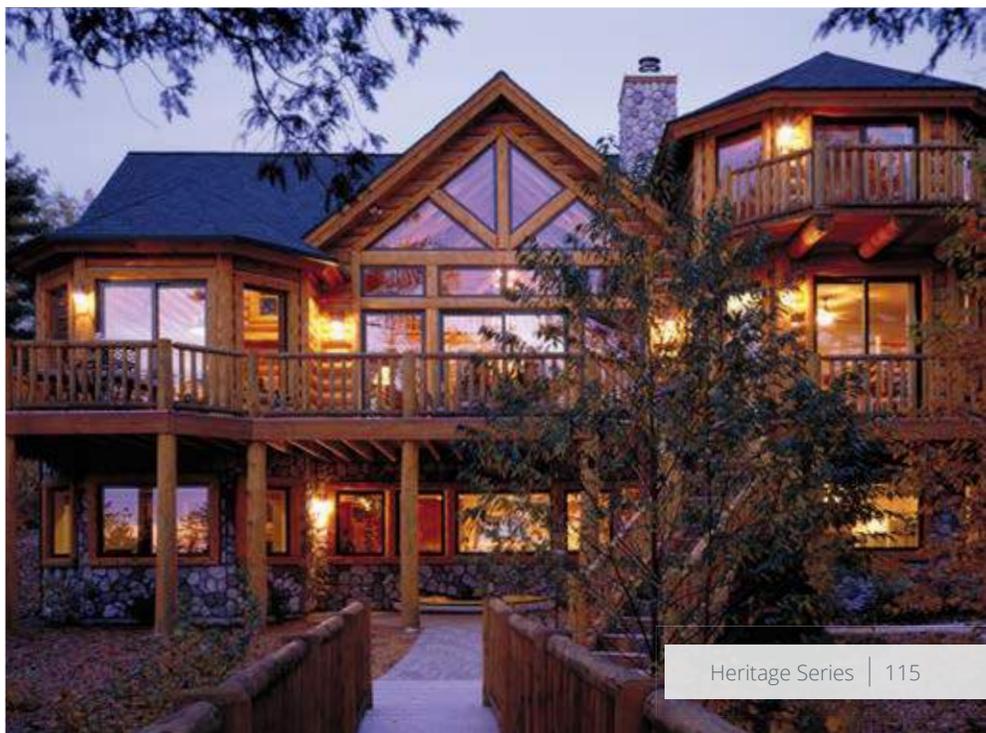
Exterior Finishes (pg. 183)

- ▶ K-Kron II exterior paint finish

Other Options (custom options are also available)

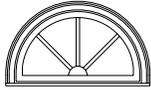
- ▶ Custom shapes such as trapezoid, triangle and octagon
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo or square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Glazing may be direct set
- ▶ Extension jambs (up to 12" applied, over 12" shipped loose for field application)
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

NOTE: All measurements are nominal.

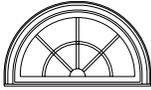


Radius | Elevation Charts

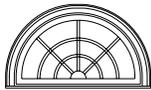
Radius Divided Lite Patterns



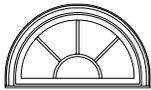
Sunburst



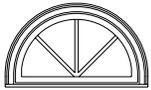
Double Cut
Sunburst



Triple Cut
Sunburst



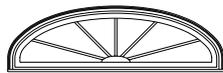
Open Hub
Sunburst



Starburst



Spider
Web



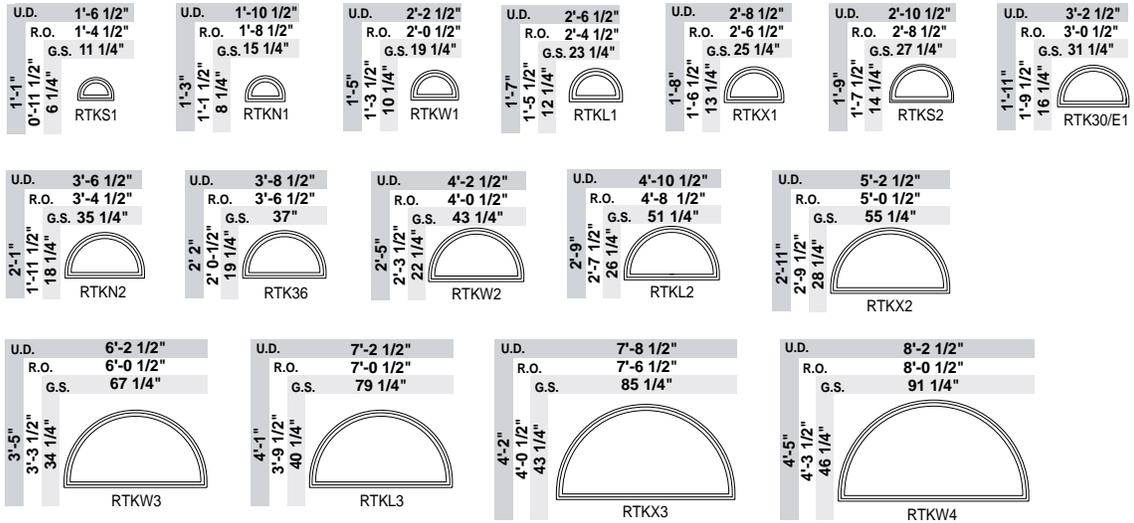
Elliptical
Sunburst

Dimension Calculations

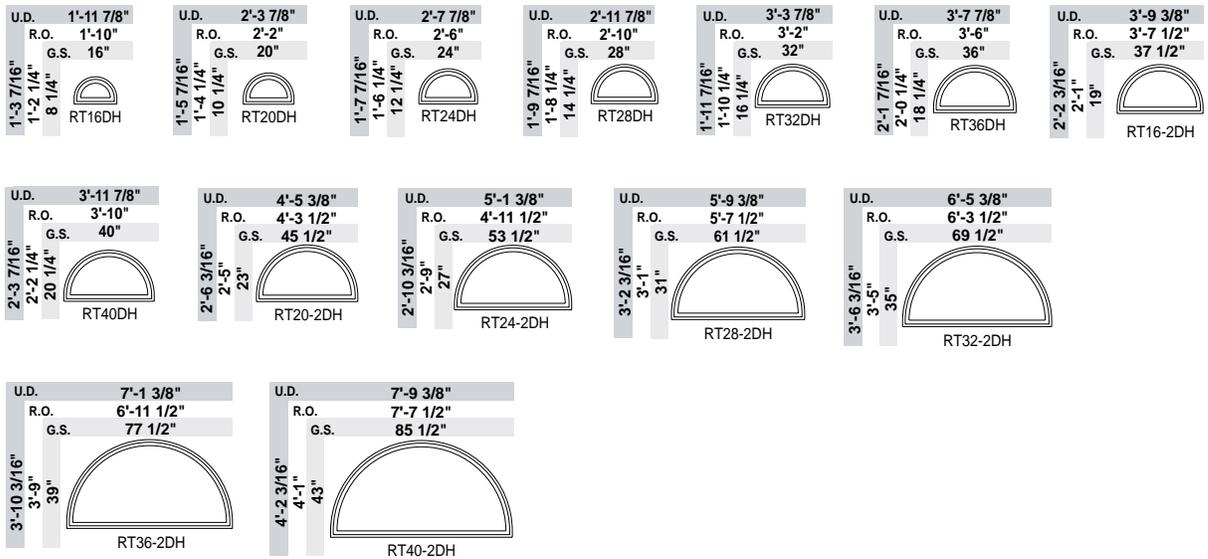
Dimension calculation formulas for radius units vary depending on the unit and application. Please contact your Kolbe dealer if formulas are needed.

NOTE: 2-1/4" PDL bars are not available for patterns with curved bars.
Some designs may have a composite material for the exterior PDL bar.

Half-Circle Units | Casement



Half-Circle Units | Double Hung



U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Radius units are sash set as standard. Direct set units are available. Glass sizes differ for direct set units. Contact your supplier for details.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

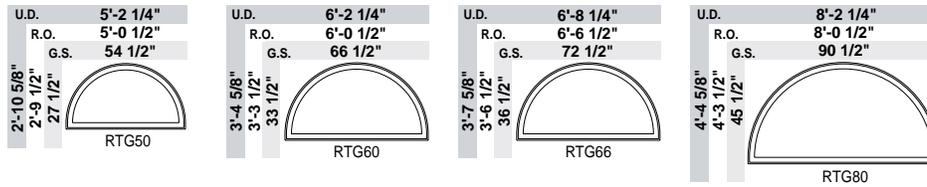
Divided lites are optional. Divided lite pattern options are shown on pg. 116.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

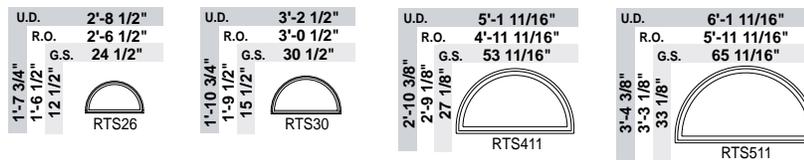
Additional and the most current drawings are available at www.kolbewindows.com.

Radius | Elevation Charts

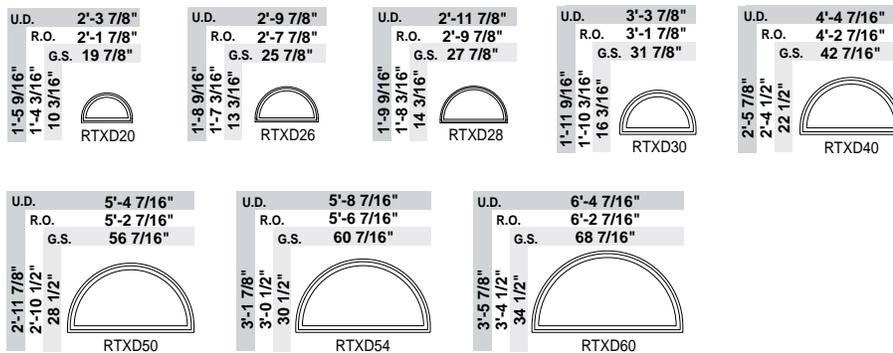
Half-Circle Units | Garden-Aire Sliding Patio Door



Half-Circle Units | Inswing Patio Door



Half-Circle Units | Inswing Exterior Door



U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Radius units are sash set as standard. Direct set units are available. Glass sizes differ for direct set units. Contact your supplier for details.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

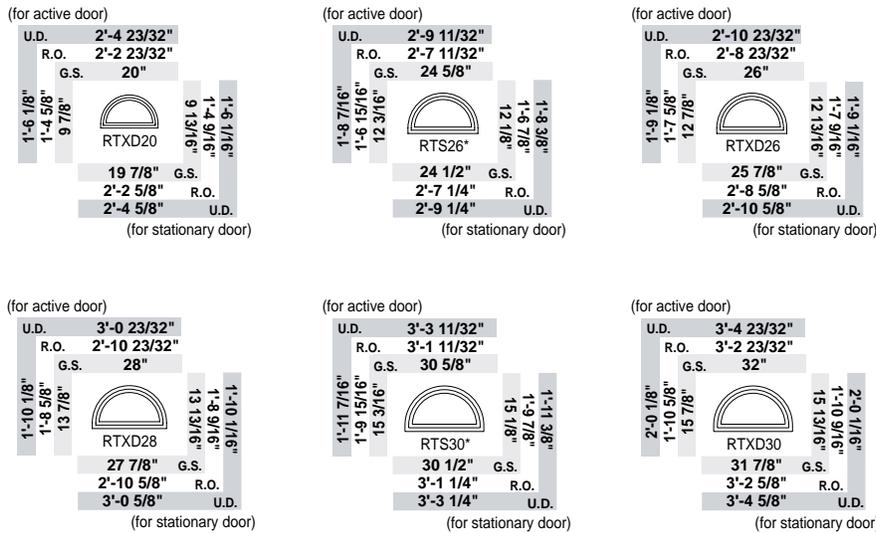
Divided lites are optional. Divided lite pattern options are shown on pg. 116.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.

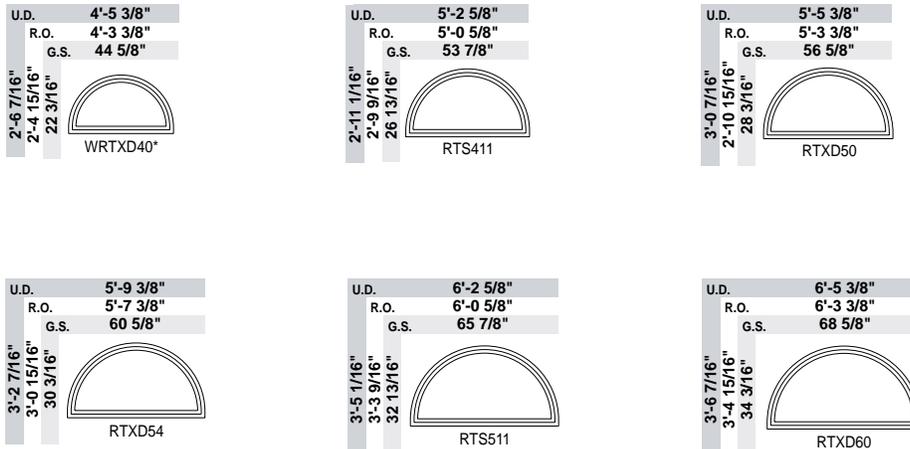
For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Half-Circle Units | 1-Wide Outswing Entrance Door



Half-Circle Units | 2-Wide Outswing Entrance Door



* Patio door sizes

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Radius units are sash set as standard. Direct set units are available. Glass sizes differ for direct set units. Contact your supplier for details.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lites are optional. Divided lite pattern options are shown on pg. 116.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbwindows.com.

Radius | Elevation Charts

Elliptical Units | Casement

U.D.	4'-2 1/2"	5'-2 1/2"	6'-2 1/2"	7'-8 1/2"	8'-2 1/2"
R.O.	4'-0 1/2"	5'-0 1/2"	6'-0 1/2"	7'-6 1/2"	8'-0 1/2"
G.S.	43 1/4"	55 1/4"	67 1/4"	85 1/4"	91 1/4"
1'-8" 1'-6 1/2" 13 1/4"					
	EHKW2	EHKX2	EHWK3	WEHKX3	WEHWK4

Elliptical Units | Double Hung

U.D.	3'-9 3/8"	4'-5 3/8"	5'-1 3/8"	5'-9 3/8"	6'-5 3/8"	7'-1 3/8"	7'-9 3/8"
R.O.	3'-7 1/2"	4'-3 1/2"	4'-11 1/2"	5'-7 1/2"	6'-3 1/2"	6'-11 1/2"	7'-7 1/2"
G.S.	37 1/2"	45 1/2"	53 1/2"	61 1/2"	69 1/2"	77 1/2"	85 1/2"
1'-7 11/16" 1'-6 1/2" 12 1/2"							
	WEH16-2DH	WEH20-2DH	WEH24-2DH	EH28-2DH	EH32-2DH	WEH36-2DH	WEH40-2DH

U.D.	5'-6 7/8"	6'-6 7/8"	7'-6 7/8"	8'-6 7/8"	9'-6 7/8"	10'-6 7/8"
R.O.	5'-5"	6'-5"	7'-5"	8'-5"	9'-5"	10'-5"
G.S.	59"	71"	83"	95"	107 1/8"	119"
1'-7 11/16" 1'-6 1/2" 12 1/2"						
	WEH16-3DH	WEH20-3DH	WEH24-3DH	WEH28-3DH	WEH32-3DH	WEH36-3DH

Elliptical Units | Garden-Aire Sliding Patio Door

U.D.	5'-2 1/4"	6'-2 1/4"	6'-8 1/4"	8'-2 1/4"
R.O.	5'-0 1/2"	6'-0 1/2"	6'-6 1/2"	8'-0 1/2"
G.S.	54 1/2"	66 1/2"	72 1/2"	90 1/2"
1'-7 5/8" 1'-6 1/2" 12 1/2"				
	WEHG50	WEHG60	WEHG66	WEHG80

Elliptical Units Inswing Patio Door

U.D.	5'-1 7/16"	6'-1 7/16"
R.O.	4'-11 11/16"	5'-11 11/16"
G.S.	53 11/16"	65 11/16"
1'-7 5/8" 1'-6 1/2" 12 1/2"		
	WEHS411	EHS511

Elliptical Units | Inswing Entrance Door

U.D.	4'-4 3/16"	5'-4 3/16"	5'-8 3/16"	6'-4 3/16"
R.O.	4'-2 7/16"	5'-2 7/16"	5'-6 7/16"	6'-2 7/16"
G.S.	44 9/16"	56 9/16"	60 9/16"	68 9/16"
1'-7 5/8" 1'-6 1/2" 12 1/2"				
	WEHXD40	EHXD50	WEHXD54	WEHXD60

Elliptical Units Outswing Patio Door

U.D.	5'-2 5/8"	6'-2 5/8"
R.O.	5'-0 5/8"	6'-0 5/8"
G.S.	53 15/16"	65 15/16"
1'-7 23/32" 1'-6 1/2" 11 3/4"		
	WEHS411	EHS511

Elliptical Units | Outswing Entrance Door

U.D.	4'-5 3/8"	5'-5 3/8"	5'-9 3/8"	6'-5 3/8"
R.O.	4'-3 3/8"	5'-3 3/8"	5'-7 3/8"	6'-3 3/8"
G.S.	44 5/8"	56 5/8"	60 5/8"	68 5/8"
1'-8" 1'-6 1/2" 11 3/4"				
	WEHXD40	EHXD50	WEHXD54	WEHXD60

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Radius units are sash set as standard. Direct set units are available. Glass sizes differ for direct set units. Contact your supplier for details.

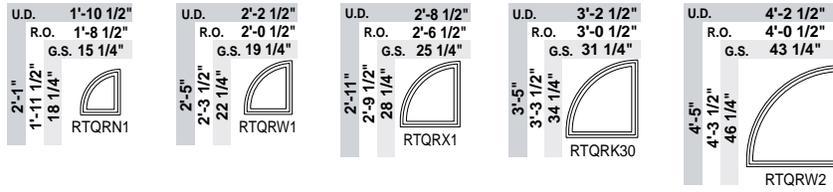
The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lites are optional. Divided lite pattern options are shown on pg. 116.

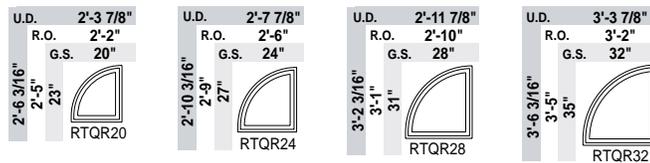
Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

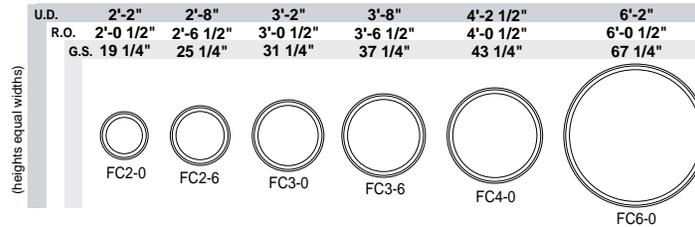
Quarter-Circle Units | Casement



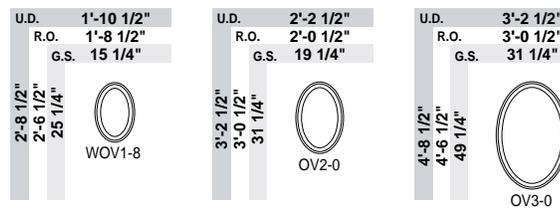
Quarter-Circle Units | Double Hung



Full Circle Units



Oval Units



U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Radius units are sash set as standard. Direct set units are available.

Glass sizes differ for direct set units. Contact your supplier for details.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

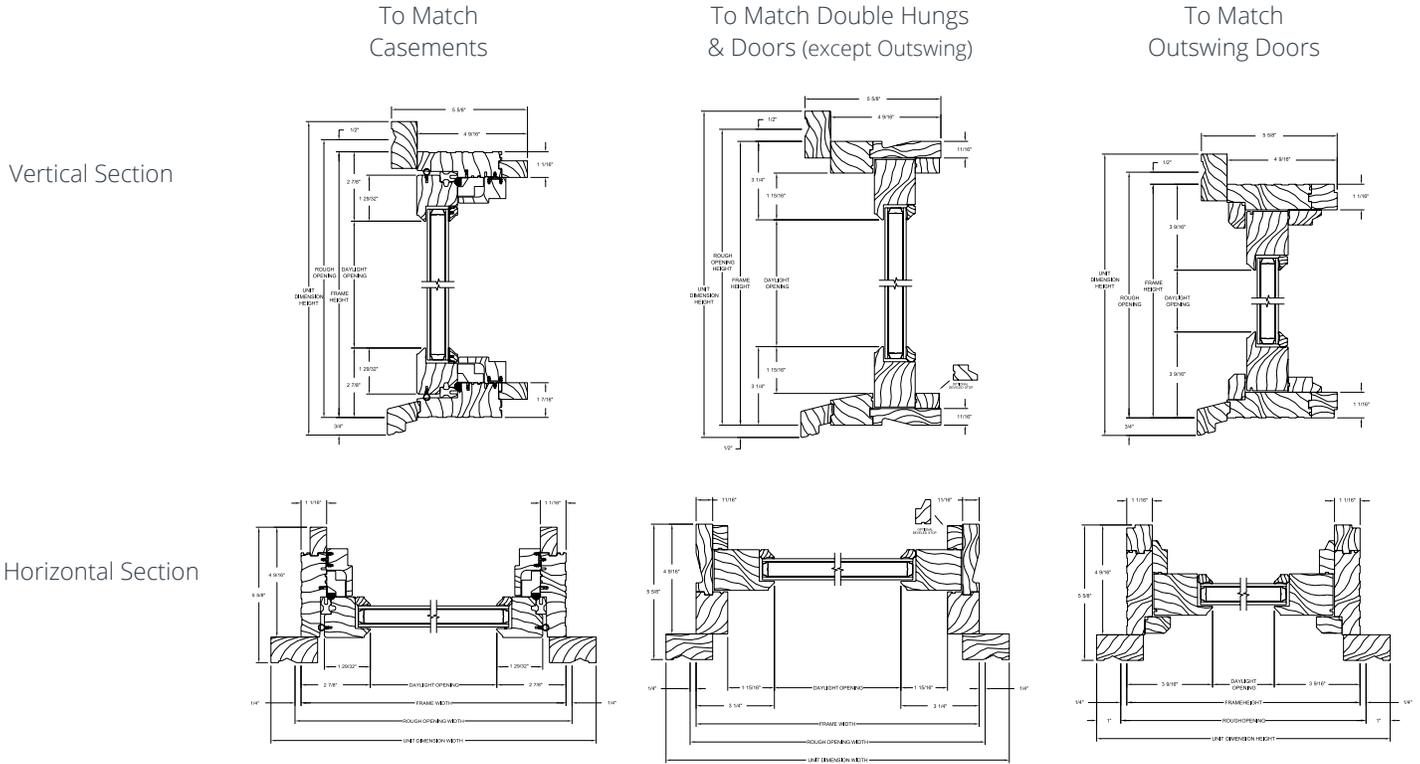
Divided lites are optional. Divided lite pattern options are shown on pg. 116.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

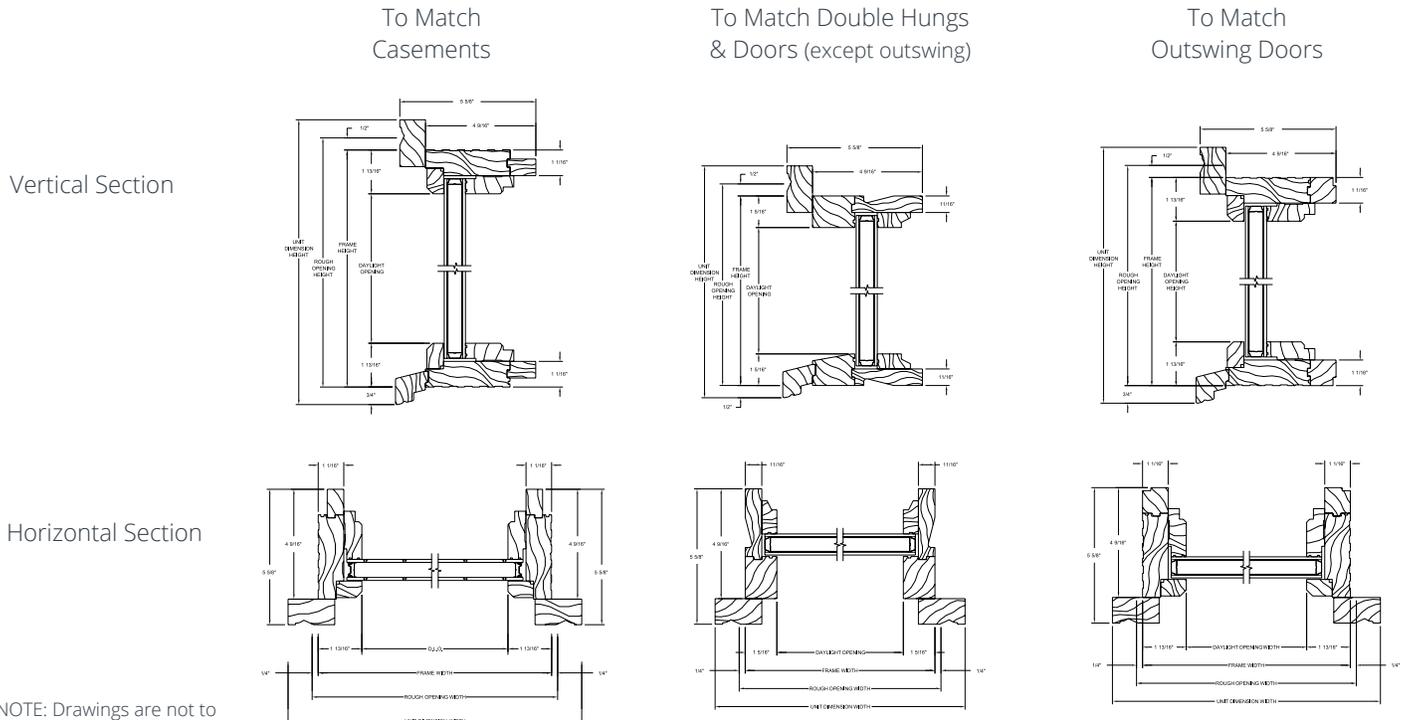
Additional and the most current drawings are available at www.kolbewindows.com.

Radius | Cross Section Drawings

Sash Set Units



Direct Set Units



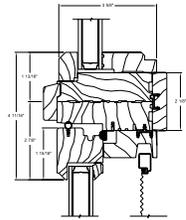
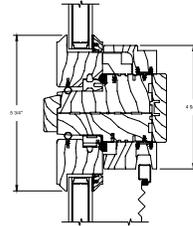
NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Radius Unit Stacking Details

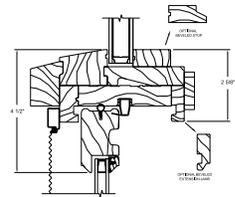
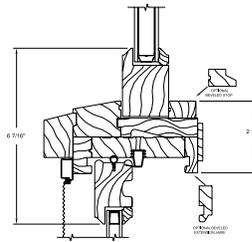
Sash Set

Direct Set

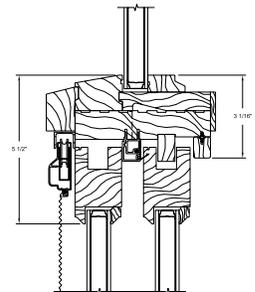
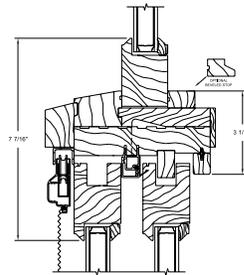
Stacked over Casements



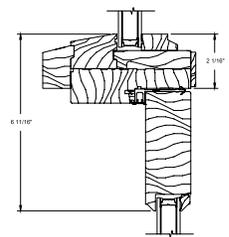
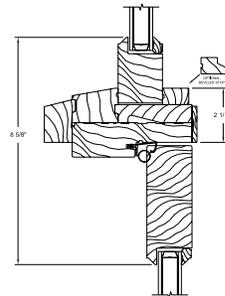
Stacked over Double Hungs



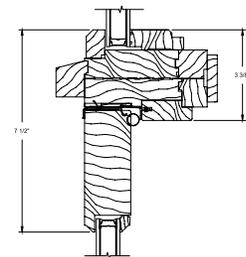
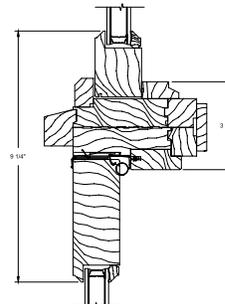
Stacked over Garden-Aire Siding Patio Doors



Stacked over Inswing Patio or Inswing Entrance Doors

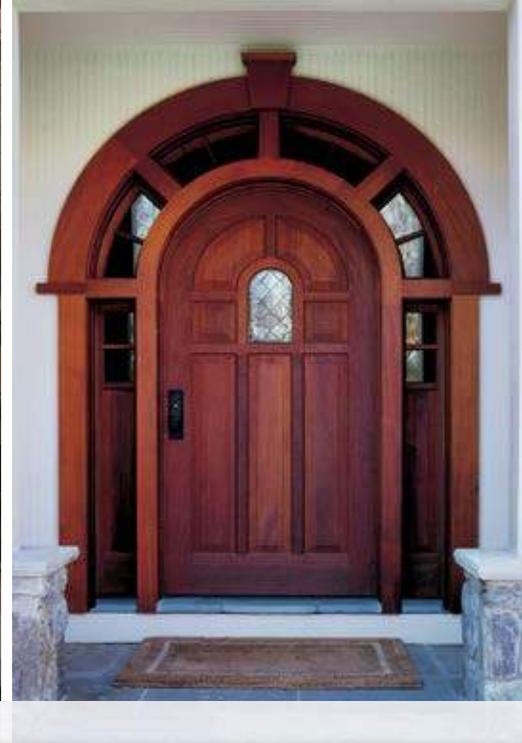


Stacked over Outswing Entrance Doors



NOTE: Drawings are not to scale.
Additional and the most current drawings are available at www.kolbewindows.com.

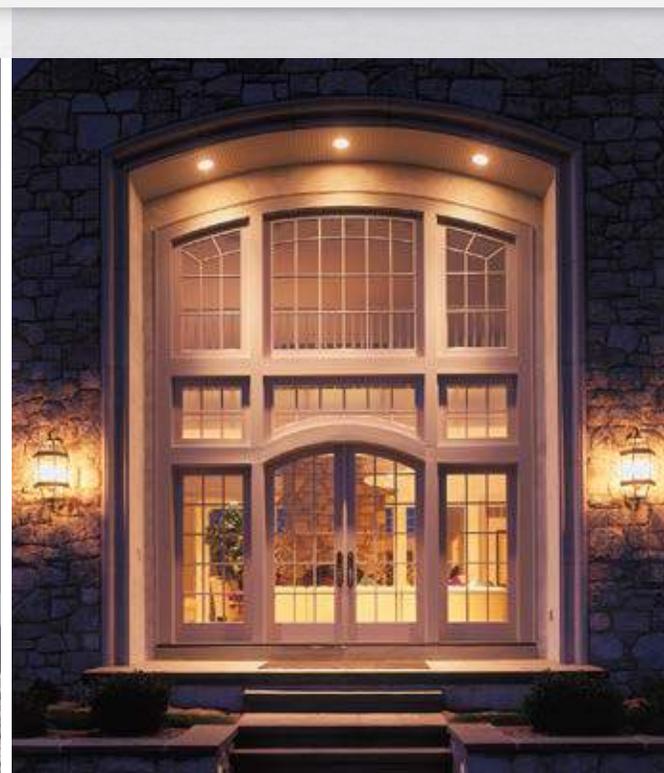




Patio & Entrance Doors

Whether it's a stunning entryway or a passageway to an outdoor living area, Heritage Series doors bring beauty and elegance to any project. Customize an entry to exemplify your personal aesthetic, with folding, swinging or sliding doors that create expansive openings and embrace outdoor spaces. Combine with matching transoms, sidelites, or radius units, with a variety of glass, divided lite and hardware options to choose from.

*Garden-Aire Sliding Patio Doors | Folding Doors | Inswing Doors | Outswing Doors
Craftsman Collection Doors | Raised Panel Doors | French Doors | Sidelites & Transoms*



Garden-Aire Sliding Patio Doors

Sliding patio doors are a space-saving way to connect your indoor and outdoor living spaces. Slide the doors from side-to-side to operate and create access to the outdoors. Sliding patio doors are available in various sizes to accommodate new construction or remodeling projects.



Garden-Aire Sliding Patio Door Standard Features

- ▶ 1-3/4" thick sash
- ▶ Standard jamb width is 5"
- ▶ 3" wide LVL stiles and rails
- ▶ Frame setup
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ All wood interior for clean look
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame and panels are latex primed
- ▶ Tandem rollers with adjustable, ball-bearing wheels carry the sliding panel
- ▶ Single-point mortise latch with handle set in a Bright Brass finish
- ▶ Screens with BetterVue[®] fiberglass mesh and extruded aluminum frames
- ▶ One-piece, pultruded fiberglass sill with continuous aluminum sill nosing and fiberglass sill filler
- ▶ Thick oak interior threshold

NOTE: All measurements are nominal.

Hardware

- ▶ Single-point mortise latch with handle set available in Bright Brass, Antique Brass, Satin Nickel, Antique Nickel, Rustic Umber, Oil-Rubbed* or Matte Black.
- ▶ Narrow flush pull handle available in Satin Nickel, Brushed Chrome, White, Bright Brass PVD[†], Rustic Umber and Matte Black.
- ▶ Madison handle set available in Satin Nickel PVD[†], Brushed Chrome PVD[†], White, Bright Brass PVD[†], Antique Brass, Rustic Umber and Matte Black.
- ▶ Dallas handle set available in Silver, Rustic Umber or Matte Black.
- ▶ Corrosion-resistant, multi-point hardware in Bell or Arch escutcheon. Available in Bright Brass PVD[†], Satin Nickel PVD[†], Antique Brass, Antique Nickel PVD[†], Smoky Gray PVD[†], Rustic Umber, Oil-Rubbed* and Matte Black.
- ▶ Keyed lock
- ▶ Secondary security lock *(not pictured)*

[†]PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the finish from tarnishing, peeling, and cracking.

* The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

Single-point Hardware

(shown in Antique Nickel)



Narrow Flush Pull Handle

(shown in Matte Black)
Interior



(shown in Satin Nickel)
Exterior



Madison Handle

(shown in Matte Black)
Interior



(shown in Antique Brass)
Exterior





Garden-Aire Sliding Patio Door Options

Glass (pg. 184): All door glass is tempered

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Laminated glass
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Insect Screens

- ▶ "Ultra" sliding screen with fiberglass mesh and extruded aluminum screen frames
- ▶ Screens with UltraVue® fiberglass mesh or aluminum mesh

Exterior Finishes (pg. 183)

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish

Other Options (custom options are also available)

- ▶ Available with wide stiles and rails (stiles and top rail are a nominal 4-5/8", bottom rail is 7-9/16" or 12 5/8")
- ▶ 2-1/4" thick panels
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Available as a 3-wide unit in an Active-Fixed-Active configuration
- ▶ Available as a 4-wide unit in a Fixed-Active-Active-Fixed configuration
- ▶ Interior casing
- ▶ Two types of escutcheon styles: bell (standard) and arch (optional on multi-point only)
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo or square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Multi-point lock
- ▶ Keyed lock
- ▶ Secondary security lock
- ▶ Corrosion-resistant hardware
- ▶ Extension jambs in a wide variety of sizes (shipped loose for field application)
- ▶ Galvanized steel installation clips
- ▶ High performance modifications
- ▶ Universal design aluminum sill ramp kits

NOTE: All measurements are nominal.

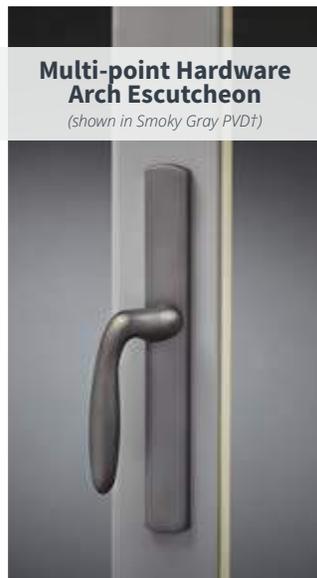


Dallas Handle

(shown in Rustic Umber)
Interior

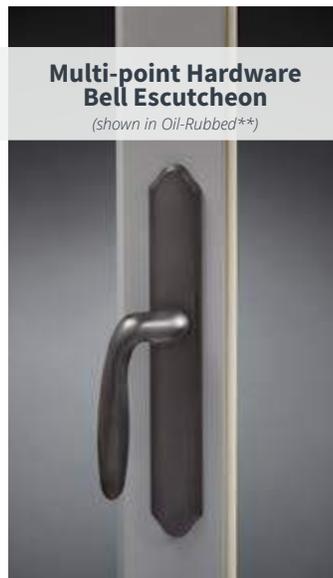


(shown in Silver)
Exterior



Multi-point Hardware Arch Escutcheon

(shown in Smoky Gray PVD+)

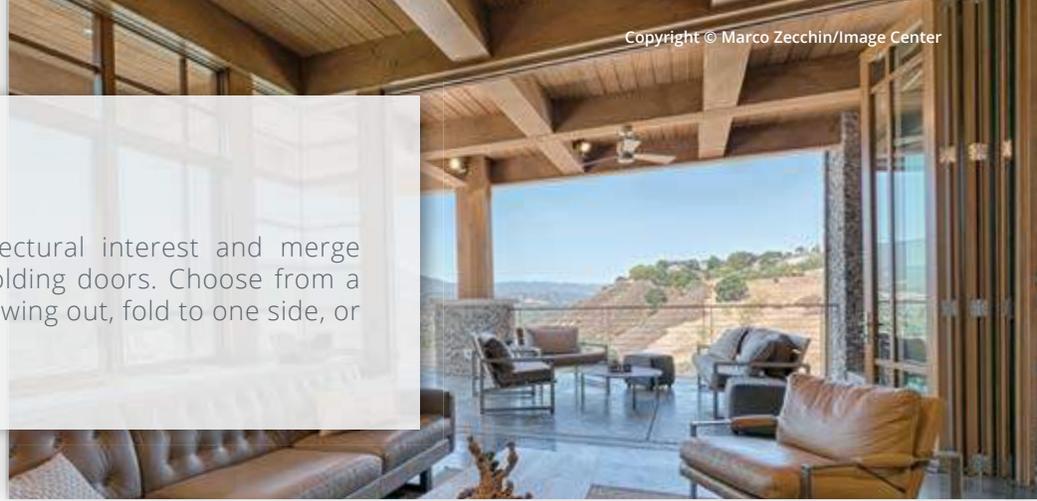


Multi-point Hardware Bell Escutcheon

(shown in Oil-Rubbed**)

Folding Doors

Breathe in the fresh air, add architectural interest and merge outdoor and indoor space by using folding doors. Choose from a variety of operating styles: doors that swing out, fold to one side, or split and fold to either side.



Folding Door Standard Features

- ▶ 1-3/4" thick sash
- ▶ 6-9/16" minimum jamb width
- ▶ Folding doors feature LVL locking stiles; stiles and top rails are a nominal 4-5/8" wide; bottom rail is a nominal 7-9/16" high
- ▶ Frame setup up to 177" wide x 106" tall; all others knocked down
- ▶ Constructed of pine with pine interior stops
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame is latex primed
- ▶ Energy efficient, insulating LoE²-270 glass (*tempered glass is standard on folding doors*)
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ Bronze weep sill
- ▶ Grooved guide rollers with adjustable, ball-bearing wheels carry the folding panels
- ▶ Multi-point mortise latch with handle set in a Bright Brass finish
- ▶ Face-mounted flush bolt locking hardware on folding panels
- ▶ Thick oak interior threshold

NOTE: All measurements are nominal.

Minimum panel height is 72", minimum panel width is 23-3/4", maximum panel height is 120" and maximum panel width is 39-3/8".

Hardware

- ▶ Face-mounted flush bolt locking hardware on folding panels if a handle is not desired. Available in Matte Black, Bright Brass, Chrome and Satin Nickel.
- ▶ Uno[†] or Aria handle set for folding panels with concealed shootbolt locking hardware. Available in Matte Black, Brushed Chrome, Bright Brass and Chrome.
- ▶ Hinges with handles in Bright Brass, Chrome, Satin Nickel and Matte Black.
- ▶ Finger pulls for panels without hinge handles in Bright Brass, Chrome, Satin Nickel and Matte Black.
- ▶ For units with a swinging panel, choose a Toronto, München, Verona or Dallas^{††} handle set. Available in Bright Brass PVD, Antique Brass, Satin Nickel PVD, Antique Nickel PVD, Oil-Rubbed*, Rustic Umber, Matte Black and Smoky Gray PVD (*pgs. 136-137*).
- ▶ For units with a swinging panel, choose a Baldwin[®] handle set in Bright Brass, Antique Brass, Satin Brass, Satin Nickel, Antique Nickel, Distressed Smoky Gray, Rustic Umber, Oil Rubbed*, Matte Black or Brushed Chrome finishes (*pg. 138*).
- ▶ Magnetic latches or panel stays are available to assist in keeping windows stationary while open.

[†] Uno handle set is only available in Brushed Chrome and Matte Black.

^{††} Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

* The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

Flush Bolt (*shown in Satin Nickel*)

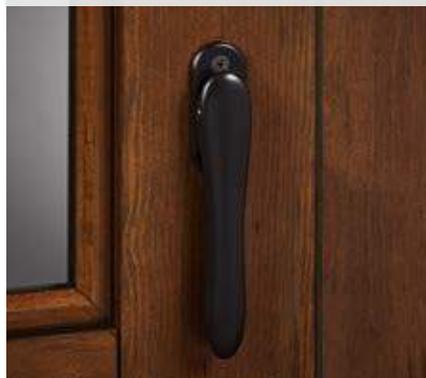


Concealed Shoot Bolt



Uno[†] Handle

(*shown in Matte Black*)



Aria Handle

(*shown in Chrome*)





Folding Door Options

Glass (pg. 184): All door glass is tempered

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned, bronze- or gray-lite
- ▶ Tempered or laminated
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Insect Screens

- ▶ Black pleated sliding screens available up to 177" wide x 102" tall (screen opening size; screen only available on units with the frame setup)

Exterior Finishes (pg. 183)

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish

Other Options (custom options are also available)

- ▶ Stile and top rail options: 3"* or 6"
- ▶ Bottom rail options: 4-5/8", 6" or 12-5/8"
- ▶ 2-1/4" thick panel
- ▶ Extension jambs in a wide variety of sizes (shipped loose for field application if over 12")
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Toronto, Verona, Dallas or München handle set for access door (pgs. 136-137)
- ▶ Baldwin® handle sets in various styles (pg. 138)
- ▶ Concealed shootbolt locking hardware for folding panels
- ▶ Single-point hardware for access door
- ▶ Recessed floor track sill (interior), weep or non-weep in Bronze Anodized finish
- ▶ Weep sill, Clear Anodized finish
- ▶ Galvanized steel installation clips

Hinge Handle
(shown in Matte Black)



Finger Pull
(shown in Satin Nickel)



Magnetic Latch



Panel Stay



NOTE: All measurements are nominal.

* When folding doors are ordered with 3" stiles and panel size is larger than 8', panel thickness must be 2-1/4".

Hinge color options for folding doors include Bright Brass, Chrome, Satin Nickel and Matte Black.

Inswing Doors

Whether it's an entrance door or a patio door, Kolbe offers custom options to personalize any entryway. Choose from various glass, panel configurations, wood species and finishes to make a personal statement. Add further distinction to a single, double or French unit with sidelites or transoms.



Inswing Door Standard Features

- ▶ 1-3/4" thick sash panel prehung in the 1-5/16" frame; entrance doors are prehung in the 3/4" frame with a 9/16" stop
- ▶ Standard jamb width is 4-9/16"
- ▶ LVL locking stiles; stiles and top rails are a nominal 4-5/8" wide; bottom rail is a nominal 7-9/16" high
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mull units
- ▶ Joints between stiles and rails are fastened with splined hardwood dowels
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame is latex primed
- ▶ Toronto handle set in a Bright Brass finish
- ▶ HLS 9000 stainless steel multi-point locking hardware on single door panels, French doors have a 3-point lock on the active panel and a 2-point lock on the less active panel
- ▶ Adjustable, 4" x 3-5/8" hinges with 5/8" radius corners in a Gold-painted finish
- ▶ "Ultra" sliding screens with BetterVue[®] fiberglass mesh and extruded aluminum frames
- ▶ Bronze-anodized aluminum, self-draining exterior sill with an oak interior threshold

NOTE: All measurements are nominal.

Minimum panel height is 72", minimum panel width is 23-3/4", maximum panel height is 120" and maximum panel width is 39-3/8".

Hardware

See all swinging door hardware options on pgs. 136-139.

† PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

• The Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

Toronto

(shown in Antique Brass)



München

(shown in Antique Nickel PVD[†])



Verona

(shown in Rustic Umber)



Dallas*

(shown in Satin Nickel PVD)





Inswing Door Options

Glass (pg. 184): All door glass is tempered

- ▶ LoE-180
- ▶ LoE³-340
- ▶ LoE³-366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned, bronze- or gray-lite
- ▶ Laminated glass
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 7/8" or 1-1/8" bars and full surrounds

Insect Screens

- ▶ Self-closing, swinging screen includes a spring-loaded lock, aluminum screen frame to match unit exterior and choice of BetterVue® or UltraVue® fiberglass mesh or aluminum mesh
- ▶ "Ultra" sliding screens with fiberglass or aluminum mesh and extruded aluminum frames

Exterior Finishes (pg. 183)

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish
(not recommended for raised panel doors)

Hardware

- ▶ Toronto, München, Verona and Dallas[†] handle set in Bright Brass PVD, Antique Brass, Satin Nickel PVD, Antique Nickel PVD, Oil-Rubbed*, Rustic Umber, Matte Black and Smoky Gray PVD finishes (pgs. 136-137)
- ▶ Baldwin® handle sets in various styles; available in Bright Brass PVD[‡], Antique Brass, Satin Brass PVD[‡], Satin Nickel PVD[‡], Antique Nickel, Distressed Smoky Gray, Rustic Umber, Oil Rubbed*, Matte Black and Brushed Chrome (pg. 138)

NOTE: All measurements are nominal.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

[†]Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

[‡]PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

- ▶ 2-point flush bolt lock on less active panel of French doors
- ▶ Single-point locking system
- ▶ Electronic multi-point lock (available for select single-panel doors up to 8' high with stiles wider than 3"; not available on double or French door configurations. Not recommended for coastal applications.)

Hinges (pg. 139)

- ▶ Adjustable, 4" x 3-5/8" hinges with 5/8" radius corners in Bright Brass, Bright Brass PVD, Antique Brass, Brushed Chrome PVD, Satin Nickel, Satin Nickel PVD, Antique Nickel, Smoky Gray PVD, Oil-Rubbed*, Rustic Umber, Silver and Matte Black finishes
- ▶ Non-adjustable, residential, 4" x 4" ball-bearing hinges with 1/4" radius corners in Bright Brass, Antique Brass, Satin Nickel, Antique Nickel, Stainless Steel, Oil-Rubbed* and Matte Black finishes
- ▶ Non-adjustable, commercial-grade, 4" x 4" ball-bearing hinges with square corners in Bright Brass, Antique Brass, Stainless Steel, Oil-Rubbed* Matte Black and Satin Nickel finishes
- ▶ Non-adjustable, commercial-grade, 4-1/2" x 4-1/2" hinges in Bright Brass, Oil-Rubbed* and Stainless Steel finishes

Sills

- ▶ Clear Anodized weep sill
- ▶ Adjustable sills in Bronze or Clear Anodized
- ▶ Oak and Mahogany sills
- ▶ Thermal break or non-thermal break ADA-compliant sills

Other Options (custom options are also available)

- ▶ 2-1/4" thick door panels
- ▶ Extension jambs in a variety of sizes
- ▶ 3" or 6" optional stiles and optional 12-5/8" bottom rail
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ Galvanized steel installation clips

Outswing Doors

Outswing doors are available with the same multitude of options as inswing doors, but swing outward for areas that have space constraints. Outswing entrance doors are available in single, double and French units, and can be customized with sidelites or transoms to create a distinctive opening.



Outswing Door Standard Features

- ▶ 1-3/4" thick sash panel, prehung in the 1-1/16" frame with a 1/2" rabbeted-in stop
- ▶ Standard jamb width is 4-9/16"
- ▶ LVL locking stiles; stiles and top rails are a nominal 4-5/8" wide; bottom rail is a nominal 7-9/16" high on all doors
- ▶ Constructed of pine, with pine interior stops and wood mull casings on mullied units
- ▶ Joints between stiles and rails are fastened with splined hardwood dowels
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with beveled wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Exterior frame is latex primed
- ▶ Toronto handle set in a Bright Brass finish
- ▶ Non-adjustable, residential, 4" x 4" ball-bearing hinges with 1/4" radius corners in a Bright Brass finish
- ▶ Bronze-anodized aluminum bumper sill with oak interior threshold

NOTE: All measurements are nominal.

Hardware

See all swinging door hardware options on pgs. 136-139.

† PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

• The Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

Toronto

(shown in Antique Brass)



München

(shown in Antique Nickel PVD[†])



Verona

(shown in Rustic Umber)



Dallas*

(shown in Satin Nickel PVD)





© Jay Graham Photography

Outswing Door Options

Glass (pg. 184): All door glass is tempered

- ▶ LoE-180
- ▶ LoE³ -340
- ▶ LoE³ -366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned, bronze- or gray-lite
- ▶ Laminated glass
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4", or 4-1/2" bars
- ▶ True divided lites with 5/8" LoE² insulating glass and 1-1/8" bars
- ▶ Grilles-in-the-air-space
- ▶ Interior removable wood grilles with 1-1/8" bars and full surrounds

Exterior Finishes (pg. 183):

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish
(not recommended for raised panel doors)

Hardware

- ▶ Toronto, München, Verona and Dallas[†] handle set in Bright Brass PVD, Antique Brass, Satin Nickel PVD, Antique Nickel PVD, Oil-Rubbed*, Rustic Umber, Matte Black and Smoky Gray PVD finishes (pgs. 136-137)
- ▶ Baldwin® handle sets in various styles; available in Bright Brass PVD^{††}, Antique Brass, Satin Brass PVD^{††}, Satin Nickel PVD^{††}, Antique Nickel, Distressed Smoky Gray, Rustic Umber, Oil Rubbed*, Matte Black and Brushed Chrome (pg. 138)
- ▶ Electronic multi-point lock (available for select single-panel doors up to 8' high with stiles wider than 3"; not available on double or French door configurations. Not recommended for coastal applications.)
- ▶ HLS 9000 stainless steel multi-point locking hardware on single panel doors, French doors have a 3-point lock on the active panel and a 2-point lock on the less active panel
- ▶ 2-point flush bolt lock on less active panel of French doors
- ▶ Single-point locking system

NOTE: All measurements are nominal.

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

[†]Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

^{††}PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

Hinges (pg. 139)

- ▶ Non-adjustable, residential, 4" x 4" ball-bearing hinges with 1/4" radius corners in Antique Brass, Satin Nickel, Antique Nickel, Stainless Steel, Oil-Rubbed* and Matte Black finishes
- ▶ Adjustable, 4" x 3-5/8" hinges with 5/8" radius corners in Gold Painted, Bright Brass, Bright Brass PVD, Antique Brass, Brushed Chrome PVD, Satin Nickel, Satin Nickel PVD, Antique Nickel, Smoky Gray PVD, Oil-Rubbed*, Rustic Umber, Silver and Matte Black finishes
- ▶ Non-adjustable, commercial-grade, 4" x 4" ball-bearing hinges with square corners in Bright Brass, Antique Brass, Stainless Steel, Oil-Rubbed* Matte Black and Satin Nickel finishes
- ▶ Non-adjustable, commercial-grade, 4-1/2" x 4-1/2" hinges in Bright Brass, Oil-Rubbed* and Stainless Steel finishes

Sills

- ▶ Clear Anodized bumper sill
- ▶ Oak bumper sills
- ▶ Oak and Mahogany sills
- ▶ Thermal break or non-thermal break ADA-compliant sills

Other Options (custom options are also available)

- ▶ 2-1/4" thick door panels
- ▶ Extension jambs (up to 12" applied; over 12" shipped loose for field application)
- ▶ 3" or 6" optional stiles and optional 12-5/8" bottom rail
- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Interior prefinishing (pg. 182)
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Ovolo and square profile glazing beads and interior divided lite bars (pgs. 185-186)
- ▶ High profile panel moulding
- ▶ Galvanized steel installation clips
- ▶ High performance modifications

Craftsman Collection Doors

Wood panel Craftsman style entrance doors are the perfect match for Arts & Crafts style homes. Constructed of Vertical Grain Douglas Fir, Knotty Alder, or a custom wood species, these doors add classic warmth to any entryway.



Craftsman Door Standard Features

- ▶ 1-3/4" thick door panel
- ▶ Panel is constructed of unfinished vertical grain Douglas Fir
- ▶ 5-1/2" wide stiles, 4-1/2" wide top rails, 7-1/2" wide cross rails, and a 7-9/16" bottom rail on all door heights
- ▶ Joints between stiles and rails are fastened with splined hardwood dowels
- ▶ Energy efficient, insulating LoE²-270 glass
- ▶ Glazed to the interior with wood glazing beads
- ▶ 1-15/16" exterior brickmould applied
- ▶ Exterior wood parts are treated
- ▶ Ovolo sticking
- ▶ Inswing and outswing operation available

NOTE: All measurements are nominal.
Craftsman door panels may be prehung as inswing or outswing units.



Ovolo Sticking (*standard*)
shown on a raised panel



Square Sticking (*optional*)
shown on a flat panel

Hardware

See all swinging door hardware options on pgs. 136-139.

† PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

• The Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

Toronto

(shown in Antique Brass)



München

(shown in Antique Nickel PVD†)



Verona

(shown in Rustic Umber)



Dallas*

(shown in Satin Nickel PVD)





Craftsman Door Options

Glass (pg. 184): All door glass is tempered

- ▶ LoE-180
- ▶ LoE³ -340
- ▶ LoE³ -366
- ▶ ThermaPlus™ LoE
- ▶ Neat®
- ▶ Triple pane
- ▶ Patterned, bronze- or gray-lite
- ▶ Laminated glass
- ▶ Other options standard to the industry

Divided Lites (pgs. 185-186)

- ▶ Performance divided lites with 1-1/8" bars; wood both interior and exterior

Exterior Finishes (pg. 183): Frames only

- ▶ Urethane primer
- ▶ K-Kron II exterior paint finish

Hardware

- ▶ Toronto, München, Verona and Dallas[†] handle set in Bright Brass PVD, Antique Brass, Satin Nickel PVD, Antique Nickel PVD, Oil-Rubbed*, Rustic Umber, Matte Black and Smoky Gray PVD finishes (pgs. 136-137)
- ▶ Baldwin® handle sets in various styles; available in Bright Brass PVD^{††}, Antique Brass, Satin Brass PVD^{††}, Satin Nickel PVD^{††}, Antique Nickel, Distressed Smoky Gray, Rustic Umber, Oil Rubbed*, Matte Black and Brushed Chrome (pg. 138)
- ▶ Electronic multi-point lock (available for select single-panel doors up to 8' high with stiles wider than 3"; not available on double or French door configurations. Not recommended for coastal applications.)
- ▶ HLS 9000 stainless steel multi-point locking hardware on single doors; 3-point lock on the active door and a 2-point lock on the less active door of French doors
- ▶ 2-point flush bolt lock on the less active door of French doors
- ▶ Single-point locking system

NOTE: All measurements are nominal.

Hinges (pg. 139)

- ▶ Non-adjustable, residential, 4" x 4" ball-bearing hinges with 1/4" radius corners in Bright Brass, Antique Brass, Satin Nickel, Antique Nickel, Stainless Steel, Oil-Rubbed* and Matte Black finishes
- ▶ Adjustable, 4" x 3-5/8" hinges with 5/8" radius corners in Gold Painted, Bright Brass, Bright Brass PVD, Antique Brass, Brushed Chrome PVD, Satin Nickel, Satin Nickel PVD, Antique Nickel, Smoky Gray PVD, Oil-Rubbed*, Rustic Umber, Silver and Matte Black finishes
- ▶ Non-adjustable, commercial-grade, 4" x 4" ball-bearing hinges with square corners in Bright Brass, Antique Brass, Stainless Steel, Oil-Rubbed* Matte Black and Satin Nickel finishes
- ▶ Non-adjustable, commercial-grade, 4-1/2" x 4-1/2" hinges in Bright Brass, Oil-Rubbed* and Stainless Steel finishes

Sills

- ▶ Oak bumper sills for outswing doors
- ▶ Oak and Mahogany sills
- ▶ Bronze or Clear Anodized weep sills for inswing doors

Other Options (custom options are also available)

- ▶ Other wood species and FSC-certified wood (pg. 182)
- ▶ Square sticking
- ▶ Interior clear coat or stain (pg. 182)
- ▶ Wire brushing for distressed appearance
- ▶ Mantel detailing
- ▶ Interior casing
- ▶ Exterior brickmould and casing (pg. 187)
- ▶ Extension jambs in a variety of sizes
- ▶ Galvanized steel installation clips

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

[†] Dallas handle set is only available in Bright Brass PVD, Satin Nickel PVD, Matte Black, Rustic Umber and Smoky Gray PVD.

^{††} PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

Swinging Door Hardware

Kolbe's handle sets are designed to complement the style of your home and match the look you've chosen for your doors. To truly customize your entrance, patio, or access door on a folding door unit, numerous hardware styles and finishes are available.



Toronto Handle Set



Bright Brass PVD†



Satin Nickel PVD†



Rustic Umber



Matte Black
(shown with keyed cylinder)



Smoky Gray PVD†



Antique Brass



Antique Nickel PVD†



Oil-Rubbed*

München Handle Set



Bright Brass PVD†



Satin Nickel PVD†



Rustic Umber



Matte Black
(shown with keyed cylinder)



Smoky Gray PVD†



Antique Brass



Antique Nickel PVD†



Oil-Rubbed*



Verona Handle Set



Bright Brass PVD[†]



Satin Nickel PVD[†]



Rustic Umber



Matte Black
(shown with keyed cylinder)



Smoky Gray PVD[†]



Antique Brass



Antique Nickel PVD[†]



Oil-Rubbed*

Dallas Handle Set



Bright Brass PVD[†]



Satin Nickel PVD[†]



Rustic Umber



Matte Black
(shown with keyed cylinder)



Smoky Gray PVD[†]

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

[†]PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

Baldwin Hardware

Kolbe has partnered with Baldwin® Hardware to provide decorative handle sets that coordinate with luxurious décor. Multi-point locking hardware and weather-resistant stainless steel operator parts and hardware channels are available, as well as keyed handle sets.

Baldwin Hardware Handle Sets

Baldwin handle sets, in the styles shown below, are available in Bright Brass PVD†, Satin Brass PVD†, Antique Brass, Satin Nickel PVD†, Brushed Chrome, Antique Nickel, Oil-Rubbed*, Rustic Umber, Matte Black or Distressed Smoky Gray.



Boulder
(shown in Rustic Umber)



Bristol
(shown in Satin Brass PVD†)



Cody
(shown in Oil-Rubbed)*



Concord
(shown in Antique Brass)



Kensington
(shown in Bright Brass PVD†)



Lakeshore
(shown in Satin Nickel PVD†)



Richland
(shown in Antique Nickel)



Santa Monica
(shown in Brushed Chrome)

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

†PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

Hinges

As standard, inswing doors feature Gold-painted adjustable hinges. Outswing doors feature Bright Brass 4" x 4" non-adjustable hinges with 1/4" radius corners. Additional residential and commercial grade options are available in multiple styles, sizes and finishes.

Non-Adjustable Hinges

Residential 4" x 4" ball-bearing with 1/4" radius corners



Bright Brass



Antique Brass



Satin Nickel



Antique Nickel



Stainless Steel



Oil-Rubbed*



Matte Black

Commercial-grade 4" x 4" ball-bearing with square corners



Bright Brass



Antique Brass



Satin Nickel



Stainless Steel



Oil-Rubbed*



Matte Black

Commercial-grade 4-1/2" x 4-1/2"



Bright Brass



Oil-Rubbed*



Stainless Steel

Adjustable Hinges

4 x 3-5/8" with 5/8" radius corners



Gold-Painted



Bright Brass



Antique Brass



Brushed Chrome PVD†



Satin Nickel



Silver



Antique Nickel



Smoky Gray PVD†



Oil-Rubbed*



Rustic Umber



Matte Black

*The Oil-Rubbed finish is a living finish, which means that it will change appearance over time with use.

†PVD (Physical Vapor Deposition) finish is an application over the color which helps protect the hardware against tarnishing, peeling and cracking.

Garden-Aire Sliding Patio Doors Elevation Charts

Narrow Stile Garden-Aire Sliding Patio Doors

U.D.	2' 10 3/4"	3' 4 3/4"	4' 4 3/4"	4' 10 3/4"	5' 4 3/4"	5' 2 1/4"	6' 2 1/4"	8' 2 1/4"	9' 2 1/4"	10' 2 1/4"
R.O.	2' 9"	3' 3"	4' 3"	4' 9"	5' 3"	5' 0 1/2"	6' 0 1/2"	8' 0 1/2"	9' 0 1/2"	10' 0 1/2"
G.S.	25 1/4"	31 1/4"	43 1/4"	49 1/4"	55 1/4"	25 1/4"	31 1/4"	43 1/4"	49 1/4"	55 1/4"
6' 11 9/16" 6' 10 15/16" 75"	GAW2968	GAW3368	GAW4368	GAW4768	GAW5068	GAW5068	GAW6068	GAW8068	GAW9068	GAW10068
7' 3 9/16" 7' 2 15/16" 79"	GAW2970	GAW3370	GAW4370	GAW4770	GAW5070	GAW5070	GAW6070	GAW8070	GAW9070	GAW10070
8' 3 9/16" 8' 2 15/16" 91"	GAW2980	GAW3380	GAW4380	GAW4780	GAW5080	GAW5080	GAW6080	GAW8080	GAW9080	GAW10080
9' 3 9/16" 9' 2 15/16" 103"	GAW2990	GAW3390	GAW4390	GAW4790	GAW5090	GAW5090	GAW6090	GAW8090	GAW9090	GAW10090
10' 3 9/16" 10' 2 15/16" 114"	GAW29100	GAW33100	GAW43100	GAW47100	GAW50100	GAW50100	GAW60100	GAW80100	GAW90100	GAW100100

U.D.	7' 10 3/4"	9' 4 3/4"	12' 4 3/4"	13' 10 3/4"	15' 4 3/4"
R.O.	7' 9"	9' 3"	12' 3"	13' 9"	15' 3"
G.S.	25 1/4"	31 1/4"	45 1/4"	49 1/4"	55 1/4"
6' 11 9/16" 6' 10 15/16" 75"	GAW7968	GAW9368	GAW12368	GAW13768	GAW15068
7' 3 9/16" 7' 2 15/16" 79"	GAW7970	GAW9370	GAW12370	GAW13770	GAW15070
8' 3 9/16" 8' 2 15/16" 91"	GAW7980	GAW9380	GAW12380	GAW13780	GAW15080
9' 3 9/16" 9' 2 15/16" 103"	GAW7990	GAW9390	GAW12390	GAW13790	GAW15090
10' 3 9/16" 10' 2 15/16" 115"	GAW79100	GAW93100	GAW123100	GAW137100	GAW150100

Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • F.S. = Frame Size
R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Wide Stile Garden-Aire Sliding Patio Doors

U.D.	2' 10-3/4"	3' 4-3/4"	4' 4-3/4"	4' 10-3/4"	5' 4-3/4"	5' 2-1/4"	6' 2-1/4"	8' 2-1/4"	9' 2-1/4"	10' 2-1/4"
R.O.	2' 9"	3' 3"	4' 3"	4' 9"	5' 3"	5' 0-1/2"	6' 0-1/2"	8' 0-1/2"	9' 0-1/2"	10' 0-1/2"
G.S.	22"	28"	40"	46"	52"	22"	28"	40"	46"	52"
6' 11-9/16" 6' 10-15/16" 68-7/16"										
7' 5-9/16" 7' 2-15/16" 72-7/16"										
8' 3-9/16" 8' 2-15/16" 84-7/16"										
9' 3-9/16" 9' 2-15/16" 95-7/16"										
10' 3-9/16" 10' 2-15/16" 108-7/16"										

U.D.	7' 10-3/4"	9' 4-3/4"	12' 4-3/4"	13' 10-3/4"	15' 4-3/4"
R.O.	7' 9"	9' 3"	12' 3"	13' 9"	15' 3"
G.S.	22"	28"	40"	46"	52"
6' 11-9/16" 6' 10-15/16" 68-7/16"					
7' 5-9/16" 7' 2-15/16" 72-7/16"					
8' 3-9/16" 8' 2-15/16" 84-7/16"					
9' 3-9/16" 9' 2-15/16" 95-7/16"					
10' 3-9/16" 10' 2-15/16" 108-7/16"					

Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • F.S. = Frame Size
R.O. = Rough Opening • G.S. = Glass Size
(Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

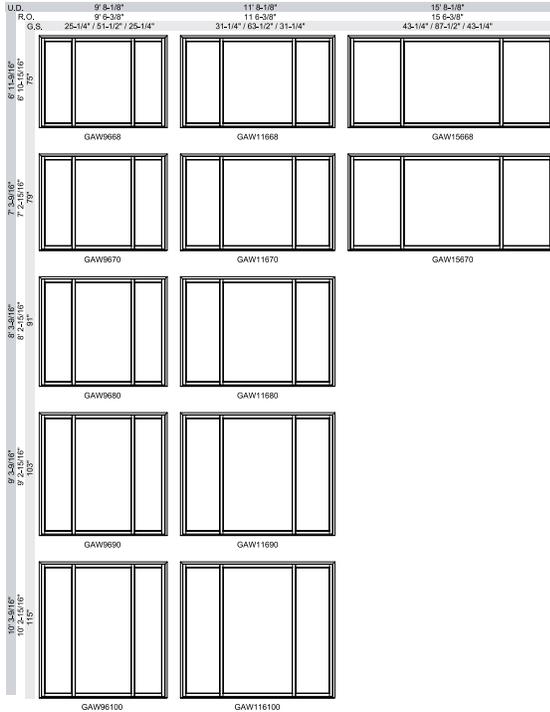
Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

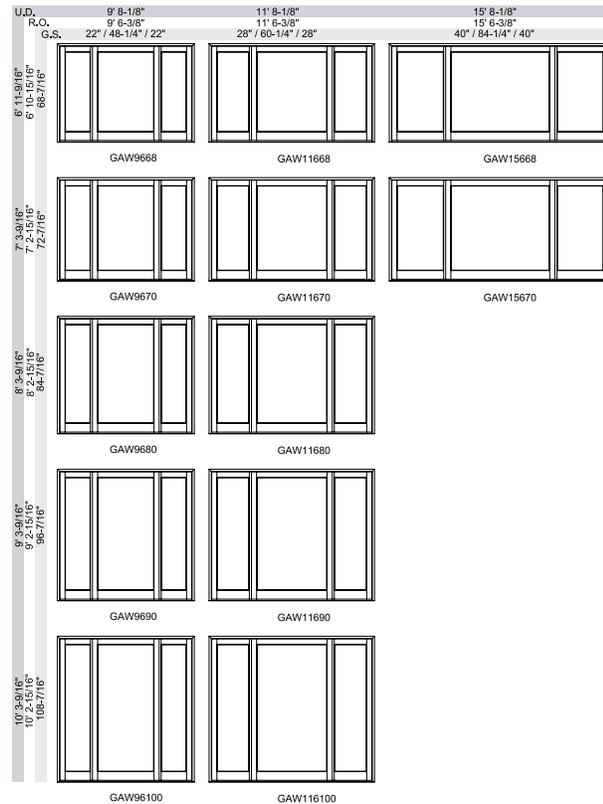
Additional and the most current drawings are available at www.kolbewindows.com.

Garden-Aire Sliding Patio Doors Elevation Charts

Narrow Stile 3-Wide Garden-Aire Sliding Patio Doors Active-Fixed-Active (AFA) Configuration



Wide Stile 3-Wide Garden-Aire Sliding Patio Doors Active-Fixed-Active (AFA) Configuration



Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • F.S. = Frame Size • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Narrow Stile 4-Wide Garden-Aire Sliding Patio Doors

U.D.	10' 0-13/16"	12' 0-13/16"	16' 0-13/16"	18' 0-13/16"	20' 0-13/16"
R.O.	9' 11-1/16"	11' 11-1/16"	15' 11-1/16"	17' 11-1/16"	19' 11-1/16"
G.S.	25-1/4"	31-1/4"	43-1/4"	49-1/4"	55-1/4"
6' 11-9/16"					
7' 3-9/16"					
8' 3-9/16"					
9' 3-9/16"					
10' 3-9/16"					

Wide Stile 4-Wide Garden-Aire Sliding Patio Doors

U.D.	10' 0-13/16"	12' 0-13/16"	16' 0-13/16"	18' 0-13/16"	20' 0-13/16"
R.O.	9' 11-1/16"	11' 11-1/16"	15' 11-1/16"	17' 11-1/16"	19' 11-1/16"
G.S.	22"	28"	40"	46"	52"
6' 11-9/16"					
7' 3-9/16"					
8' 3-9/16"					
9' 3-9/16"					
10' 3-9/16"					

Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • F.S. = Frame Size • R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

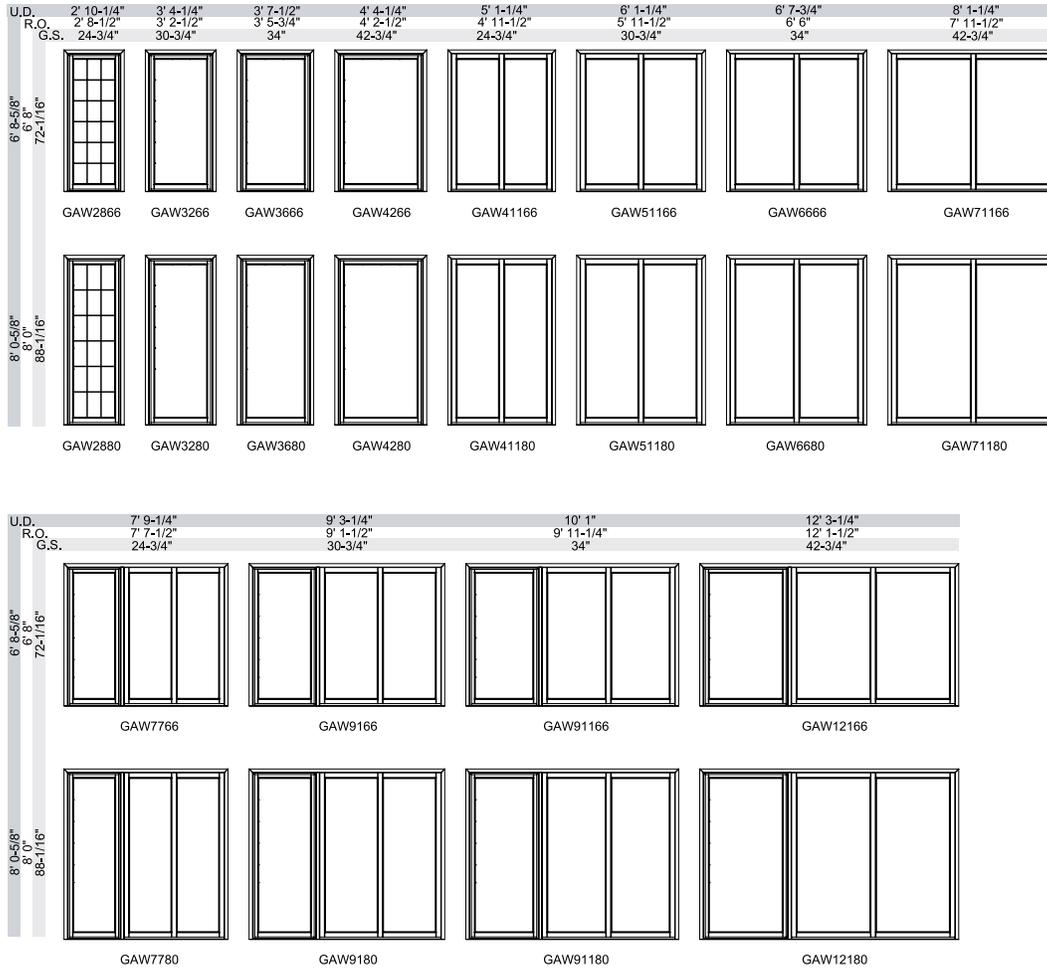
Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Garden-Aire Sliding Patio Doors Elevation Charts

Narrow Stile Garden-Aire Sliding Patio Doors | Modular Sizes



Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • R.O. = Rough Opening
G.S. = Glass Size (Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Wide Stile Garden-Aire Sliding Patio Doors | Modular Sizes

U.D.	2' 10-1/4"	3' 4-1/4"	3' 7-1/2"	4' 4-1/4"	5' 1-1/4"	6' 1-1/4"	6' 7-3/4"	8' 1-1/4"
R.O.	2' 8-1/2"	3' 2-1/2"	3' 5-3/4"	4' 2-1/2"	4' 11-1/2"	5' 11-1/2"	6' 6"	7' 11-1/2"
G.S.	21-1/2"	27-1/2"	30-3/4"	39-1/2"	21-1/2"	27-1/2"	30-3/4"	39-1/2"

6' 8-5/8"								
6' 8"								
65-1/2"								
GAW2866	GAW3266	GAW3666	GAW4266	GAW41166	GAW51166	GAW6666	GAW71166	

8' 5/8"								
8' 0"								
81-1/2"								
GAW2880	GAW3280	GAW3680	GAW4280	GAW41180	GAW51180	GAW6680	GAW71180	

U.D.	7' 9-1/4"	9' 3-1/4"	10' 1"	12' 3-1/4"
R.O.	7' 7-1/2"	9' 1-1/2"	9' 11-1/4"	12' 1-1/2"
G.S.	21-1/2"	27-1/2"	30-3/4"	39-1/2"

6' 8-5/8"				
6' 8"				
65-1/2"				
GAW7766	GAW9166	GAW91166	GAW12166	

8' 5/8"				
8' 0"				
81-1/2"				
GAW7780	GAW9180	GAW91180	GAW12180	

Operation is viewed from the exterior. Standard operation is shown. Please specify if other operational configurations are needed.

NOTE: All measurements are nominal.

Grilles are optional. The grille configuration shown for a single panel is typical for each panel of a multiple unit. Grille configurations for wide stile units are different.

U.D. = Unit Dimension • F.S. = Frame Size

R.O. = Rough Opening • G.S. = Glass Size (Glass sizes are shown per panel.)

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The configuration shown for a single panel is typical for each panel.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Garden-Aire Sliding Patio Doors Elevation Charts

Garden-Aire Sliding Patio Doors | Rectangular Transoms

U.D.	2'-10 3/4"	3'-4 3/4"	3'-7 1/2"	4'-4 3/4"	5'-2 1/4"	6'-2 1/4"	6'-8 1/4"	8'-2 1/4"
R.O.	2'-9"	3'-3"	3'-5 3/4"	4'-3"	5'-0 1/2"	6'-0 1/2"	6'-6 1/2"	8'-0 1/2"
G.S.	25 1/4"	31 1/4"	34"	43 1/4"	52 3/4"	64 3/4"	70 3/4"	88 3/4"
1'-0 1/2"								
1'-0"								
1'-4"								
1'-5 1/2"								
1'-6"								
1'-7 1/2"								
1'-8"								
1'-9 1/2"								
2'-0"								
2'-1 1/2"								
2'-6"								
2'-7 1/2"								
22 1/4"								

Operation is viewed from the exterior.
Standard operation is shown. Please specify if other operational configurations are needed.

U.D. = Unit Dimension • R.O. = Rough Opening
G.S. = Glass Size (Glass sizes are shown per panel.)

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/4"	-1 1/8"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 3/8"	-2 11/16"
3-1/2" casing and backband; U.D. to F.S.	-6 7/8"	-3 7/16"

F.S. to Panel O.S.M.	+1/2"÷2	-2 3/4"
Panel O.S.M. to G.S. (standard stiles & rails)-5"		-4 11/16"
G.S. to D.L.O.	-1"	-1"

Note: Clear opening dimensions can be found on pg. 199-200.
Contact supplier for 4-wide Garden-Aire dimension calculations.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard. The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lites are optional. The configuration shown for a single panel is typical for each panel.

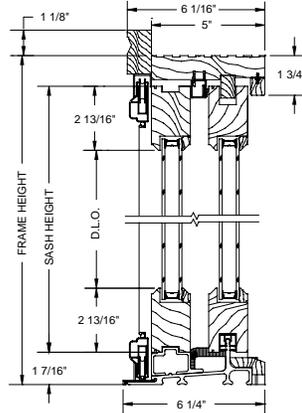
Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

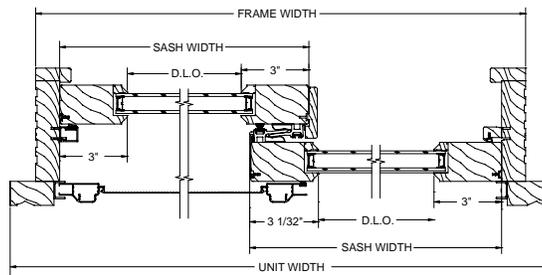
Garden-Aire Sliding Patio Doors Cross Section Drawings

Narrow Stile 3-Wide Garden-Aire Sliding Patio Doors

Vertical Section

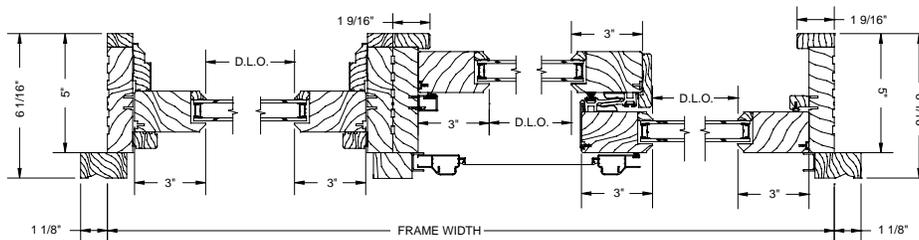


Horizontal Section



Narrow Stile Garden-Aire with Sidelite

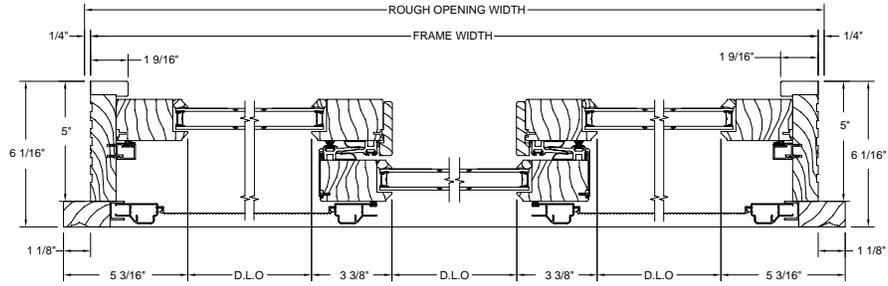
Horizontal Section



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

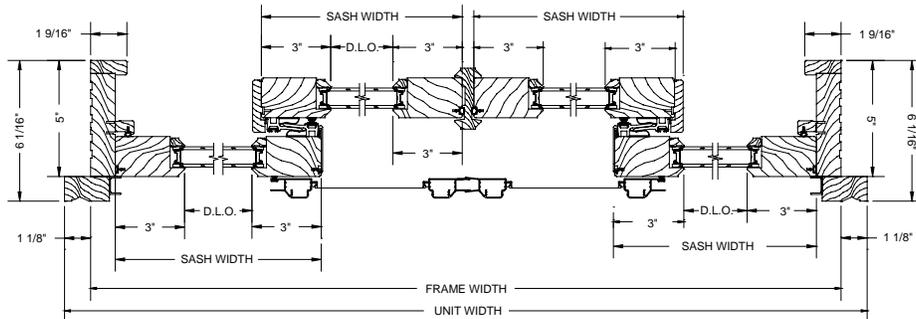
Narrow Stile 3-Wide Garden-Aire Sliding Patio Doors

Horizontal Section

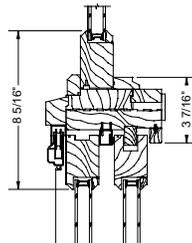


Narrow Stile 4-Wide Garden-Aire Sliding Patio Doors

Horizontal Section



Narrow Stile Rectangular Transom Stacked over Narrow Stile Garden-Aire Sliding Patio Doors

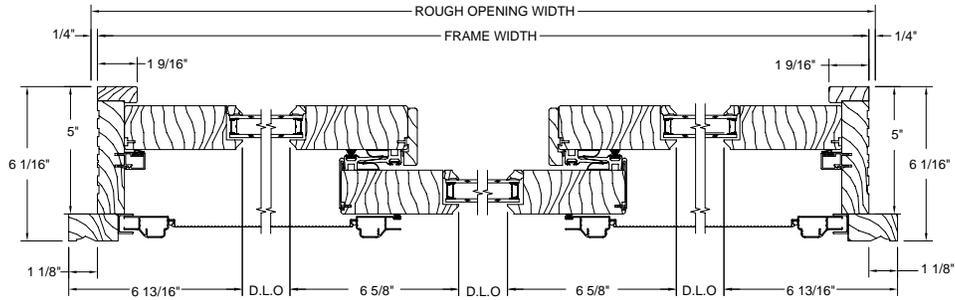


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Garden-Aire Sliding Patio Doors Cross Section Drawings

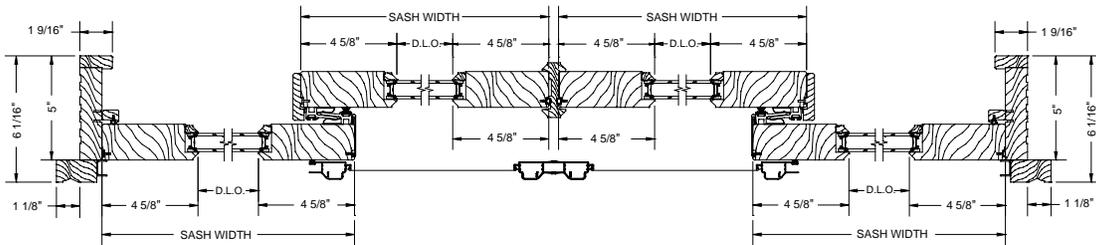
Wide Stile 3-Wide Garden-Aire Sliding Patio Doors

Horizontal Section

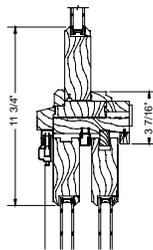


Wide Stile 4-Wide Garden-Aire Sliding Patio Doors

Horizontal Section

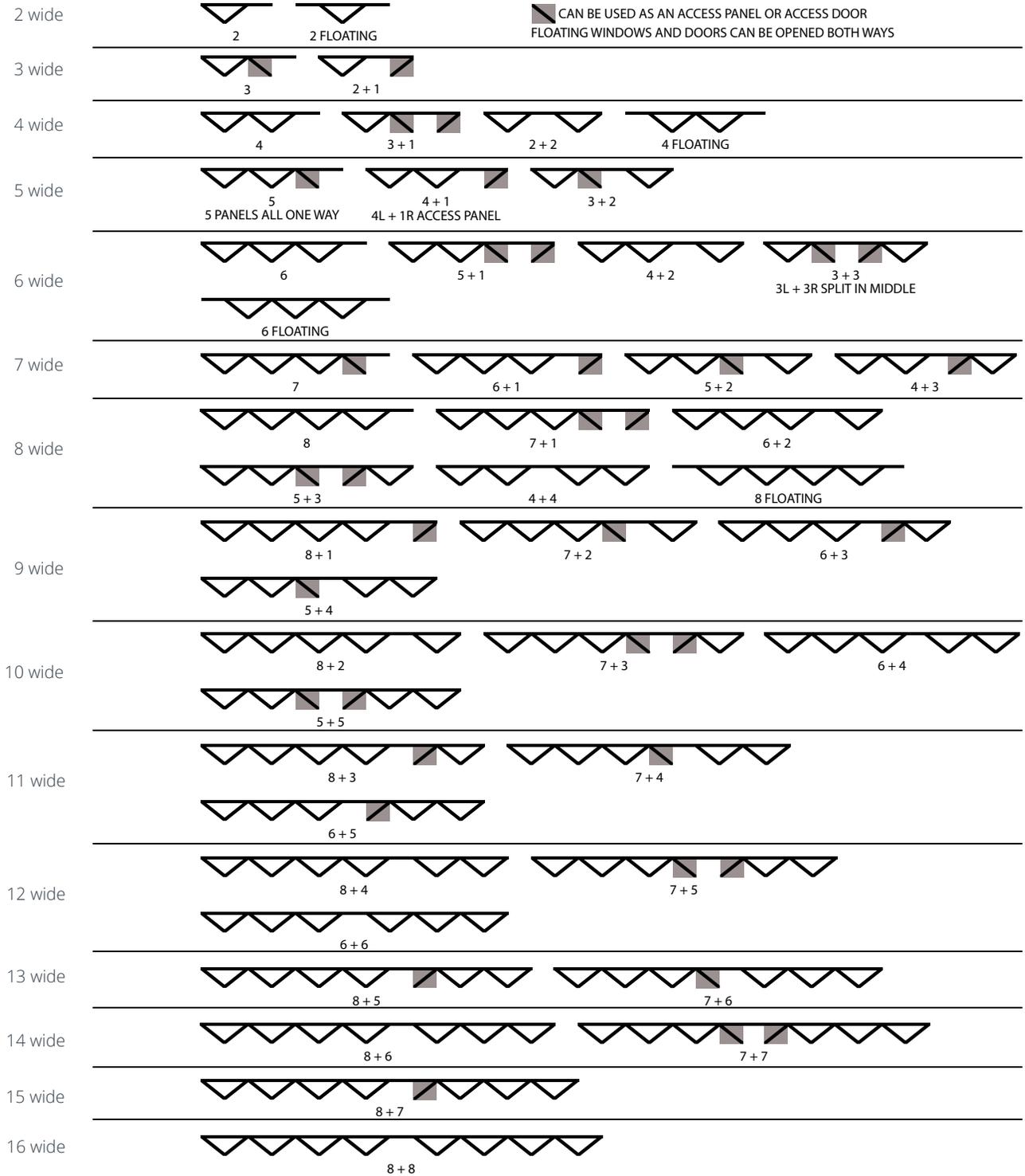


Wide Stile Rectangular Transom Stacked over Wide Stile Garden-Aire Sliding Patio Doors



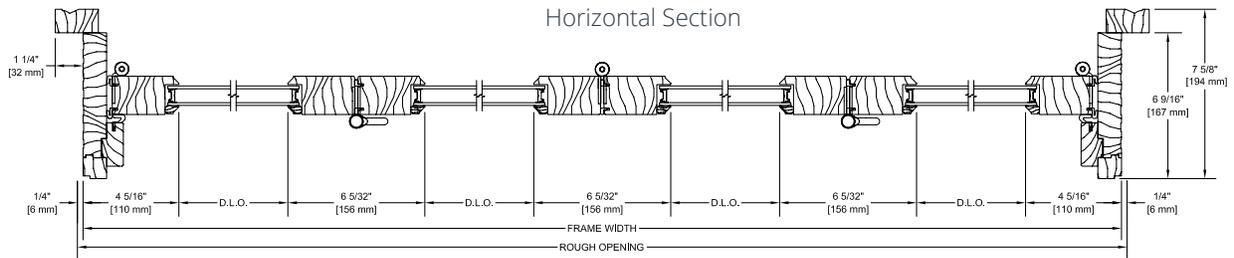
NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Folding Doors Panel Configurations

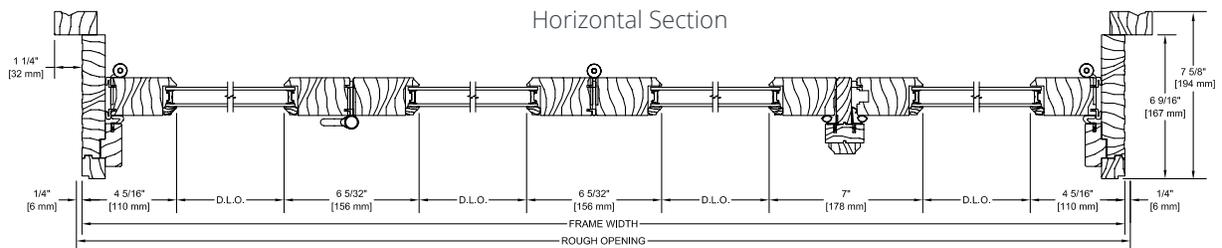


Folding Doors Cross Section Drawings

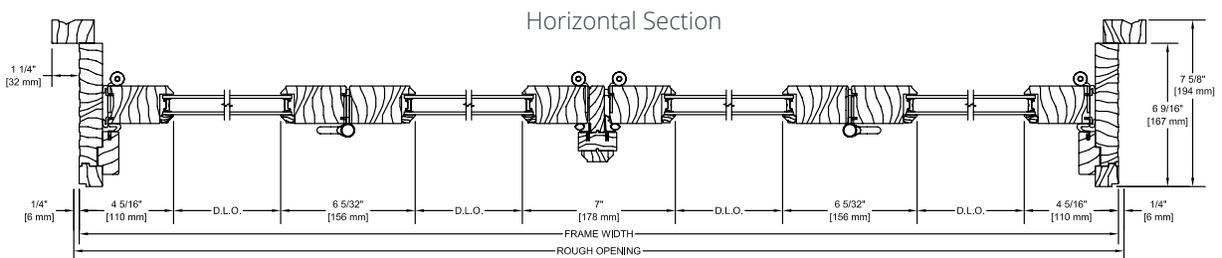
4-Wide: Folding 1-Way



4-Wide: One Left & Three Right



4-Wide: Two Left & Two Right

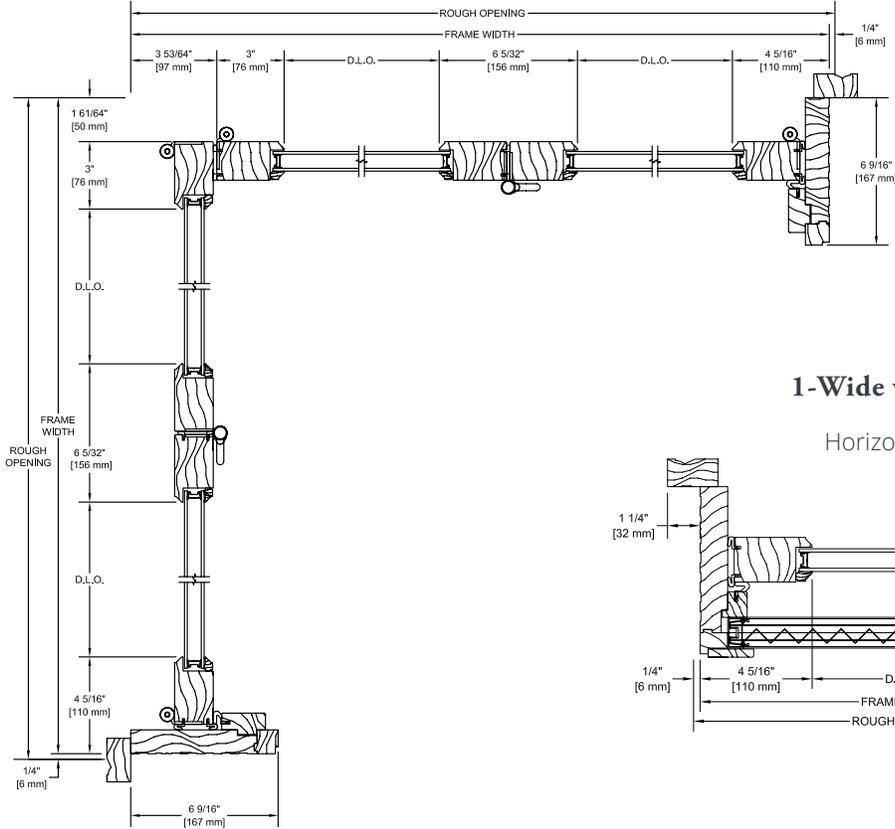


Operation is viewed from the exterior.

NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

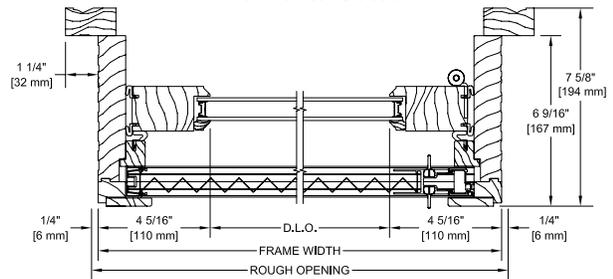
Corner Unit

Horizontal Section



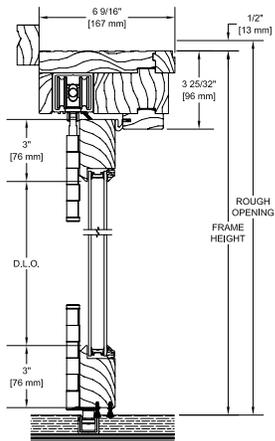
1-Wide with Screen

Horizontal Section



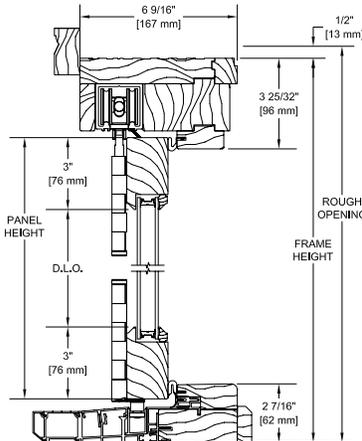
1.75 Panel with Recessed Sill

Vertical Section



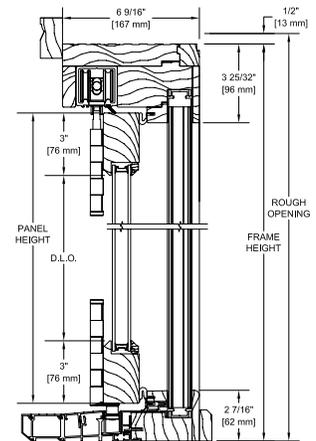
1.75 Panel with Weep Sill

Vertical Section



1.75 Panel with Weep Sill and Screen

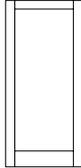
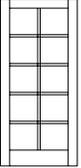
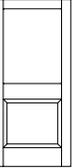
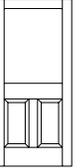
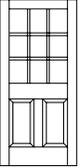
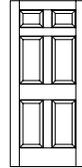
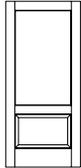
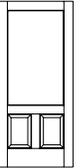
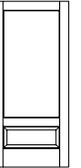
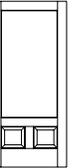
Vertical Section



NOTE: Drawings are not to scale. Corner unit cross section will change when an odd number of panels are used. Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Doors Panel Designs

Inswing Entrance Door Panel Designs

									
Sash Design#: KK610 Full Lite	KK625 2W5H Pattern	KK6110 1 Lite over 1 Panel, 8" Cross Rail at 40"	KK6210 1 Lite over 2 Panels, 8" Cross Rail at 40"	KK6233 1 Lite over 2 Panels, 8" Cross Rail at 40" with 3W3H Pattern	KK108-6 6 Panels	KK6110-30 1 Lite over 1 Panel, 4-5/8" Cross Rail at 30"	KK6210-30 1 Lite over 2 Panels, 4-5/8" Cross Rail at 30"	KK6110-24 1 Lite over 1 Panel, 4-5/8" Cross Rail at 24"	KK6210-24 1 Lite over 2 Panels, 4-5/8" Cross Rail at 24"

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/4"	-1 1/8"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 3/8"	-2 11/16"
3-1/2" casing and backband; U.D. to F.S.	-6 7/8"	-3 7/16"

F.S. to Panel O.S.M. (1-wide, active)	-1 13/16"	-2 23/32"
(1-wide, stationary)	-1 3/4"	-2 23/32"
(2-wide)	-2 9/16"÷2	-2 23/32"
(3-wide)	-3 5/16"÷3	-2 23/32"
Panel O.S.M. to G.S. (wood 6-8 ht.)	-8 1/8"	-11 3/32"
G.S. to D.L.O.	-1"	-1"

Note: Dimension calculations for sidelites and transoms may be obtained from your Kolbe dealer.
Clear opening dimensions can be found on pg. 201.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

NOTE: Sash design KK625 has TDL or PDL in the configuration shown. If a different configuration pattern is needed, specify sash design KK610 or KK6210 and the type of divided lite configuration desired.

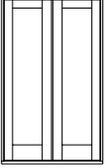
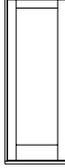
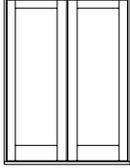
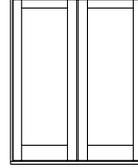
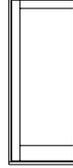
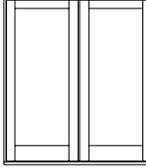
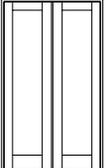
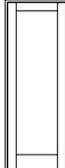
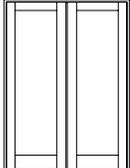
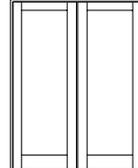
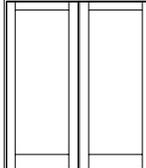
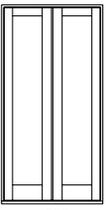
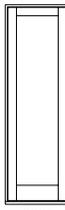
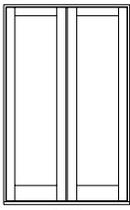
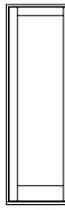
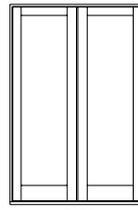
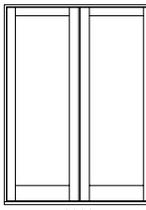
Not all panel designs are available in all sizes.

Not all panel designs are shown; see your local Kolbe distributor for further assistance.

Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Doors Elevation Charts

Inswing Entrance Doors

U.D.	2'-3 7/8"	4'-4 7/16"	2'-9 7/8"	5'-4 7/16"	2'-11 7/8"	5'-8 7/16"	3'-3 7/8"	6'-4 7/16"
R.O.	2'-2 1/8"	4'-2 11/16"	2'-8 1/8"	5'-2 11/16"	2'-10 1/8"	5'-6 11/16"	3'-2 1/8"	6'-2 11/16"
G.S.*	15 11/16"	15 11/16"	21 11/16"	21 11/16"	23 11/16"	23 11/16"	27 11/16"	27 11/16"
6'-11 27/32"								
	2068	4068	2668	5068	2868	5468	3068	6068
7'-3 27/32"								
	2070	4070	2670	5070	2870	5470	3070	6070
8'-3 27/32"								
	2080	4080	2680	5080	2880	5480	3080	6080

* Glass size widths are shown per panel for one-lite glass. For TDL glass sizes contact your supplier.
U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Doors Elevation Charts

Segment Head Inswing Entrance Doors

	2'-3 7/8"		4'-4 7/16"		2'-9 7/8"		5'-4 7/16"		2'-11 7/8"		5'-8 7/16"		3'-3 7/8"		6'-4 7/16"	
U.D.	2'-3 7/8"		4'-4 7/16"		2'-9 7/8"		5'-4 7/16"		2'-11 7/8"		5'-8 7/16"		3'-3 7/8"		6'-4 7/16"	
R.O.	2'-2 1/8"		4'-2 11/16"		2'-8 1/8"		5'-2 11/16"		2'-10 1/8"		5'-6 11/16"		3'-2 1/8"		6'-2 11/16"	
G.S.	15 11/16"		15 11/16"		21 11/16"		21 11/16"		23 11/16"		23 11/16"		27 11/16"		27 11/16"	
6'-11 27/32"	6'-11 7/32"	68 29/32"														
			WXD2068-SEG	WXD4068-SEG	WXD2668-SEG	WXD5068-SEG	WXD2868-SEG	WXD5468-SEG	WXD3068-SEG	WXD6068-SEG						
7'-3 27/32"	7'-3 7/32"	72 29/32"														
			WXD2070-SEG	WXD4070-SEG	WXD2670-SEG	WXD5070-SEG	WXD2870-SEG	WXD5470-SEG	WXD3070-SEG	WXD6070-SEG						
8'-3 27/32"	8'-3 7/32"	84 29/32"														
			WXD2080-SEG	WXD4080-SEG	WXD2680-SEG	WXD5080-SEG	WXD2880-SEG	WXD5480-SEG	WXD3080-SEG	WXD6080-SEG						

* Approximate glass sizes are given; true glass sizes may vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Door Sidelites

U.D.	1'-4"	1'-6"	1'-8"	1'-10"
R.O.	1'-2 1/4"	1'-4 1/4"	1'-6 1/4"	1'-8 1/4"
G.S.*	7 3/4"	9 3/4"	11 3/4"	13 3/4"

6'-11 27/32"	6'-11 7/32"	68 29/32"							
			WXD1068S	WXD1268S	WXD1468S	WXD1668S			
			7'-3 27/32"	7'-3 7/32"	68 29/32"				
						WXD1070S	WXD1270S	WXD1470S	WXD1670S
8'-3 27/32"	8'-3 7/32"	84 29/32"							
						WXD1080S	WXD1280S	WXD1480S	WXD1680S

* Glass size widths are shown for one-lite glass. For TDL glass sizes, contact your Kolbe window and door supplier.
 U.D. = Unit Dimension • R.O. = Rough Opening
 G.S. = Glass Size

Inswing Entrance Door Sidelite Panel Designs

Sash Design#:	KK510	KK515	KK5110	KK5110-30	KK5110-24
	Full Lite	1W5H Pattern	1 Lite over 1 Panel, 8" Cross Rail at 40"	1 Lite over 1 Panel, 4-5/8" Cross Rail at 30"	1 Lite over 1 Panel, 4-5/8" Cross Rail at 24"

NOTE: All measurements are nominal. Elevation charts are not to scale.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Sidelite sash design KK515 has TDL or PDL in the configuration shown. If a different configuration pattern is needed, specify sash design KK510 or KK5110 and the type of configuration desired.

Not all panel designs are available in all sizes.

Not all panel designs are shown; see your local Kolbe distributor for further assistance.

Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Doors Elevation Charts

Inswing Entrance Doors | Rectangular Transoms

U.D.	2'-3 7/8"	2'-9 7/8"	2'-11 7/8"	3'-3 7/8"	4'-4 7/16"	5'-4 7/16"	5'-8 7/16"	6'-4 7/16"
R.O.	2'-1 7/8"	2'-7 7/8"	2'-9 7/8"	3'-1 7/8"	4'-2 7/16"	5'-2 7/16"	5'-6 7/16"	6'-2 7/16"
G.S.	19 7/8"	25 7/8"	27 7/8"	31 7/8"	44 7/16"	56 7/16"	60 7/16"	68 7/16"
1'-1 3/8"								
1'-1 3/8"	2010	2610	2810	3010	4010	5010	5410	6010
1'-4"								
1'-4"	2014	2614	2814	3014	4014	5014	5414	6014
1'-6"								
1'-6"	2016	2616	2816	3016	4016	5016	5416	6016
1'-7 3/8"								
1'-7 3/8"	2018	2618	2818	3018	4018	5018	5418	6018
1'-9"								
1'-9"	2020	2620	2820	3020	4020	5020	5420	6020
1'-10"								
1'-10"	2026	2626	2826	3026	4026	5026	5426	6026
2'-1 3/8"								
2'-1 3/8"	2020	2620	2820	3020	4020	5020	5420	6020
2'-6"								
2'-6"	2026	2626	2826	3026	4026	5026	5426	6026

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lite configurations must be specified when ordering. Specify inswing when ordering.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

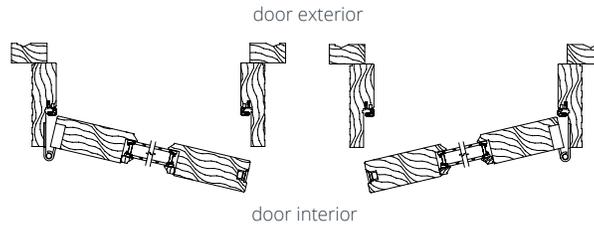
Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Entrance Doors Hinging Options

Hinging for Inswing Entrance Doors

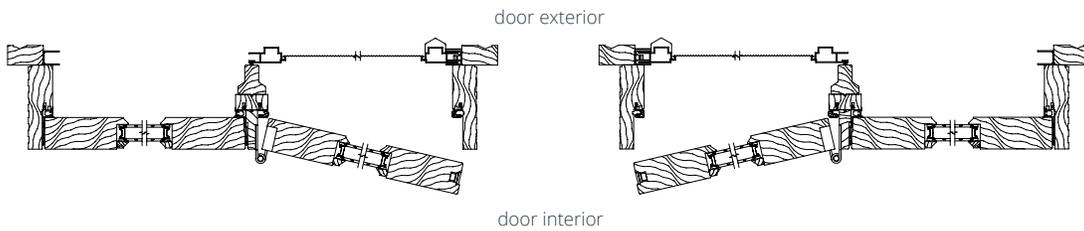
HL (Hinged Left)

HR (Hinged Right)



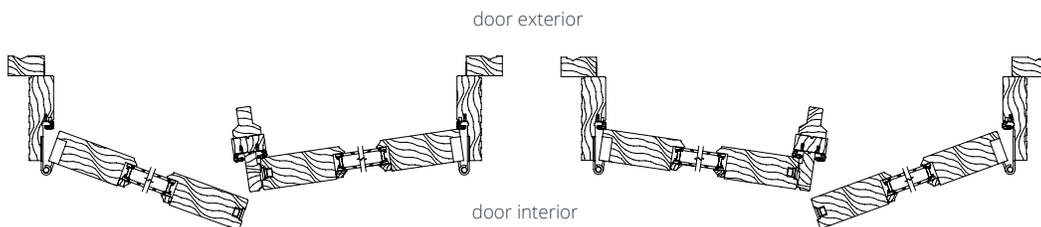
SAL (Stationary, Active Hinged Left)

ASR (Active Hinged Right, Stationary)



AL (French, Hinged Left, Active)

AR (French, Hinged Right, Active)

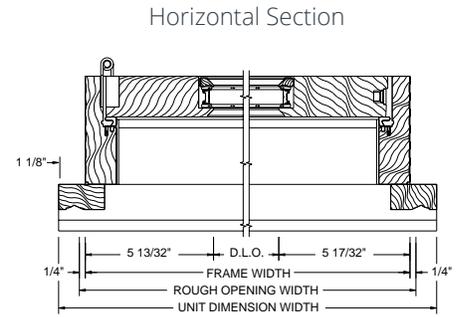
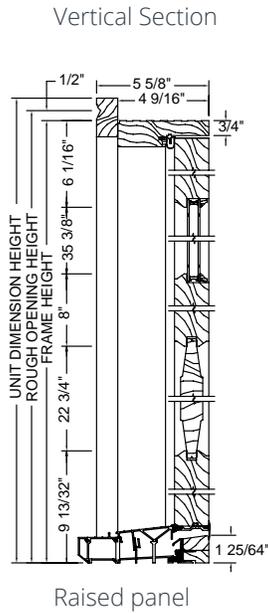
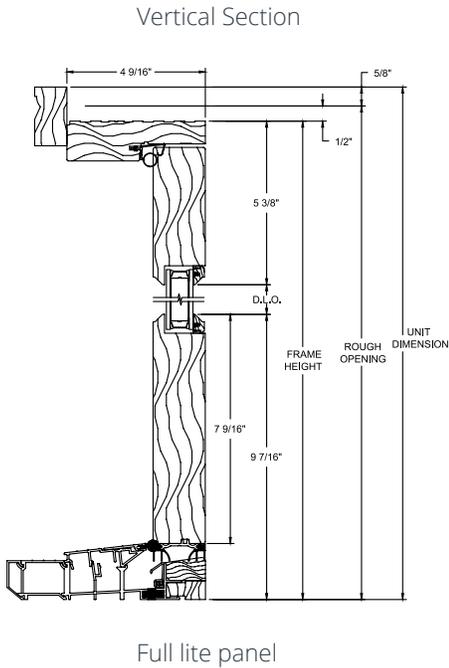


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

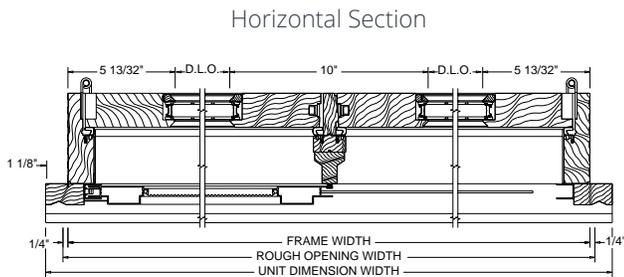
Inswing Entrance Doors

Cross Section Drawings

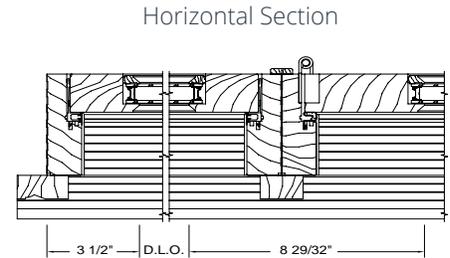
Standard Inswing Entrance Door



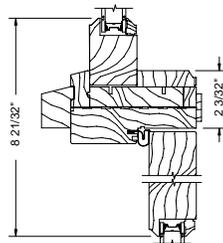
2-Wide Inswing Entrance French Doors



Inswing Entrance Door with Sidelite



Rectangular Transom Stacked over Inswing Entrance Doors



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Patio Doors Elevation Charts

Inswing Patio Doors

	2' 8-1/2"	5' 1-11/16"	7' 6-7/8"	3' 2-1/2"	6' 1-11/16"	9' 0-7/8"
U.D.	2' 8-1/2"	5' 1-11/16"	7' 6-7/8"	3' 2-1/2"	6' 1-11/16"	9' 0-7/8"
F.S.	2' 6-1/4"	4' 11-7/16"	7' 4-5/8"	3' 0-1/4"	5' 11-7/16"	8' 10-5/8"
R.O.	2' 6-3/4"	4' 11-15/16"	7' 5-1/8"	3' 0-3/4"	5' 11-15/16"	8' 11-1/8"
G.S.	20-3/16"	20-5/16"	20-5/16"	26-5/16"	26-5/16"	26-5/16"

8' 0-5/8"	6' 7-1/2"	65-11/16"						
			SPW2666	SPW41166	SPW7566	SPW3066	SPW51166	SPW81166
8' 0-5/8"	7' 1-1/2"	81-11/16"						
			SPW2680	SPW41180	SPW7580	SPW3080	SPW51180	SPW81180

Operation is viewed from the interior.

U.D. = Unit Dimension • R.O. = Rough Opening • F.S. = Frame Size
 G.S. = Glass Size (Glass sizes are shown per door panel for one-lite glass. For cutlite glass widths, contact your supplier).

Grilles are optional. The grille configurations shown for single doors are typical for each door of mulled units.

When ordering inswing entrance doors, use the product codes shown and specify stationary, hinged left or hinged right, or other operation configuration.

NOTE: All measurements are nominal. Elevation charts are not to scale.

Divided lites are optional. The configuration shown for a single panel is typical for each panel in the unit.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Inswing Patio Doors Elevation Charts

Inswing Patio Doors | French Doors

U.D.	5'-1 11/16"	5'-1 11/16"	6'-1 11/16"	6'-1 11/16"
R.O.	4'-11 15/16"	4'-11 15/16"	5'-11 15/16"	5'-11 15/16"
G.S.	20 5/16"	20 5/16"	26 5/16"	26 5/16"

6'-8 5/8"	6'-8"	65 11/16"				
			41166AL	41166AR	51166AL	51166AR
8'-0 23/32"	8'-0 1/8"	81 23/32"				
			41180AL	41180AR	51180AL	51180AR

Operation is viewed from the interior.

Inswing Patio Doors | Rectangular Transoms

U.D.	2'-8 1/2"	3'-2 1/2"	5'-1 11/16"	6'-1 11/16"
R.O.	2'-6 1/2"	3'-0 1/2"	4'-11 11/16"	5'-11 11/16"
G.S.	24 1/2"	30 1/2"	53 11/16"	65 11/16"

1'-1 1/4"	1'-0"				
		2610	3010	41110	51110
1'-5 1/4"	1'-4"				
		2614	3014	41114	51114
1'-7 1/4"	1'-6"				
		2616	3016	41116	51116
1'-9 1/4"	1'-8"				
		2618	3018	41118	51118
2'-1 1/4"	2'-0"				
		2620	3020	41120	51120
2'-7 1/4"	2'-6"				
		2626	3026	41126	51126

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/4"	-1 1/8"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 3/8"	-2 11/16"
3-1/2" casing and backband; U.D. to F.S.	-6 7/8"	-3 7/16"

F.S. to Panel O.S.M. (1-wide, active)	-1 13/16"	-2 23/32"	
	(1-wide, stationary)	-1 3/4"	-2 23/32"
	(2-wide)	-2 9/16"+2	-2 23/32"
	(3-wide)	-3 5/16"+3	-2 23/32"
Panel O.S.M. to G.S.	-8 1/8"	-11 3/32"	
G.S. to D.L.O.	-1"	-1"	

Note: Clear opening dimensions can be found on pg. 200.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Divided lite configurations must be specified when ordering. Specify inswing when ordering.

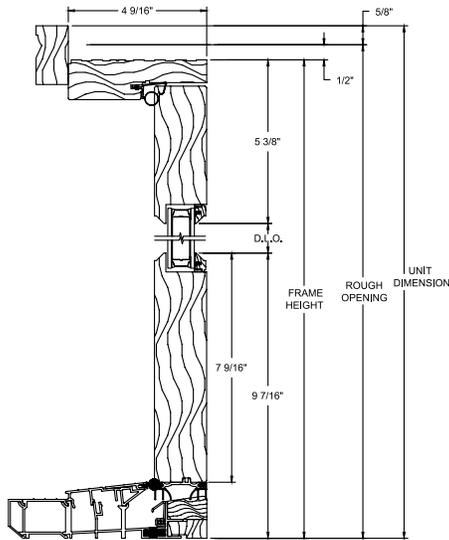
Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

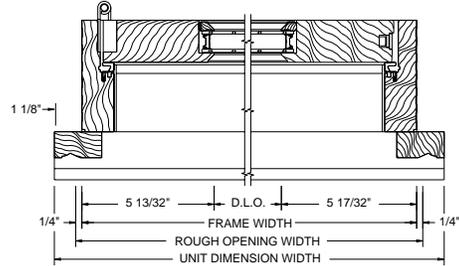
Inswing Patio Doors Cross Section Drawings

Inswing Patio Door

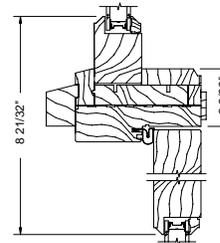
Vertical Section



Horizontal Section



Rectangular Transom Stacked Over Inswing Patio Door

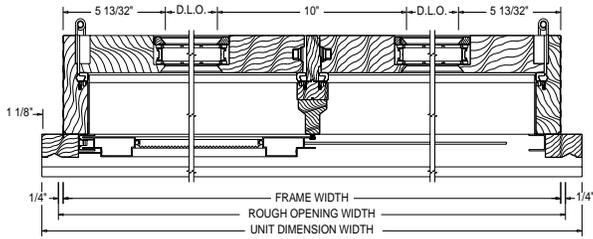


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbwindows.com.

Inswing Patio Doors Cross Section Drawings

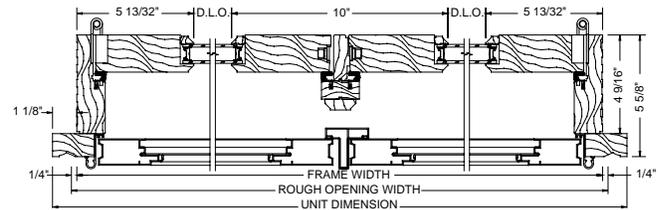
2-Wide Inswing French Doors

Horizontal Section



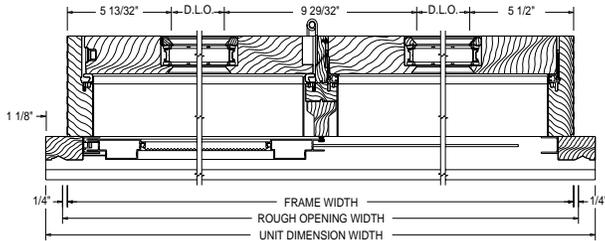
2-Wide Inswing French Doors with Swinging Screen

Horizontal Section



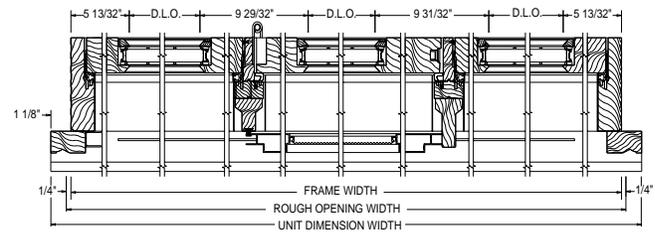
2-Wide Inswing Center-Hinged Doors

Horizontal Section



3-Wide Center-Hinged Inswing Doors

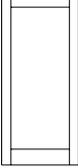
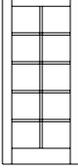
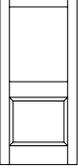
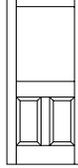
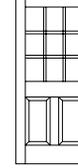
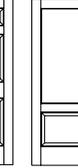
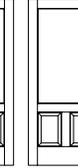
Horizontal Section



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Entrance Doors Panel Designs

Outswing Entrance Door Panel Designs

										
Sash Design#:	KK610	KK625	KK6110	KK6210	KK6233	KK108-6	KK6110-30	KK6210-30	KK6110-24	KK6210-24
	Full Lite	2W5H Pattern	1 Lite over 1 Panel, 8" Cross Rail at 40"	1 Lite over 2 Panels, 8" Cross Rail at 40"	1 Lite over 2 Panels, 8" Cross Rail at 40" with 3W3H Pattern	6 Panels	1 Lite over 1 Panel, 4-5/8" Cross Rail at 30"	1 Lite over 2 Panels, 4-5/8" Cross Rail at 30"	1 Lite over 1 Panel, 4-5/8" Cross Rail at 24"	1 Lite over 2 Panels, 4-5/8" Cross Rail at 24"

Dimension Calculations

Elevation charts provide wood unit dimensions for units with the standard 1-15/16" brickmould. Below are the calculations to determine the frame size of units with brickmould.

	Width	Height
1-15/16" brickmould; U.D. to F.S.	-2 1/2"	-1 1/4"
3-1/2" flat or profiled casing; U.D. to F.S.	-5 5/8"	-2 13/16"
3-1/2" casing and backband; U.D. to F.S.	-7 1/8"	-3 9/16"

F.S. to Panel O.S.M. (1-wide, wood)	-2 13/32"	-2 19/32"
Panel O.S.M. to G.S. (1-wide, wood)	-8 1/8"	-11 3/32"
Panel Opening Width to G.S. (2-wide)	-17 3/8"÷2	
(3-wide)	-26 5/16"÷3	
F.S. to Panel Opening Width	-2 1/8"	
G.S. to D.L.O.	-1"	-1"

Note: Dimension calculations for sidelites and transoms may be obtained from your Kolbe dealer. Clear opening dimensions can be found on pg. 201.

F.S. = Frame Size • G.S. = Glass Size • O.S.M. = Outside Measurement
D.L.O. = Daylight Opening • U.D. = Unit Dimension

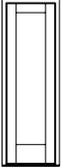
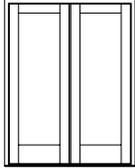
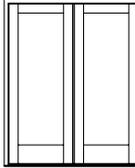
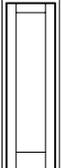
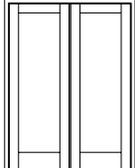
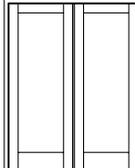
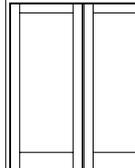
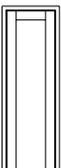
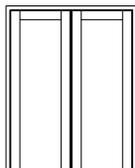
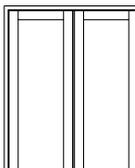
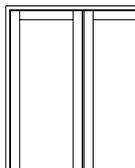
NOTE: Sash design KK625 has TDL or PDL in the configuration shown. If a different configuration pattern is needed, specify sash design KK610 or KK6210 and the type of divided lite configuration desired.

Not all panel designs are available in all sizes.

Not all panel designs are shown; see your local Kolbe distributor for further assistance.

Outswing Entrance Doors Elevation Charts

Outswing Entrance Doors

U.D.	2'-4 23/32"	4'-5 3/8"	2'-10 23/32"	5'-5 3/8"	3'-0 23/32"	5'-9 3/8"	3'-4 23/32"	6'-5 3/8"
R.O.	2'-2 23/32"	4'-3 3/8"	2'-8 23/32"	5'-3 3/8"	2'-10 23/32"	5'-7 3/8"	3'-2 23/32"	6'-3 3/8"
G.S.*	15 11/16"	15 11/16"	21 11/16"	21 11/16"	23 11/16"	23 11/16"	27 11/16"	27 11/16"
6'-11 27/32" 6'-11 3/32" 68 29/32"								
7'-3 27/32" 7'-3 3/32" 72 29/32"								
8'-3 27/32" 8'-3 3/32" 84 29/32"								

* Approximate glass sizes are given; true glass sizes may vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Dimensions are given for active units; dimensions of stationary units may vary.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Segment Head Outswing Entrance Doors

U.D.	2'-4 23/32"	4'-5 3/8"	2'-10 23/32"	5'-5 3/8"	3'-0 23/32"	5'-9 3/8"	3'-4 23/32"	6'-5 3/8"
R.O.	2'-2 23/32"	4'-3 3/8"	2'-8 23/32"	5'-3 3/8"	2'-10 23/32"	5'-7 3/8"	3'-2 23/32"	6'-3 3/8"
G.S.	15 11/16"	15 11/16"	21 11/16"	21 11/16"	23 11/16"	23 11/16"	27 11/16"	27 11/16"
6'-11 27/32" 6'-11 3/32" 68 29/32"								
	WXD2068-SEG	WXD4068-SEG	WXD2668-SEG	WXD5068-SEG	WXD2868-SEG	WXD5468-SEG	WXD3068-SEG	WXD6068-SEG
7'-3 27/32" 7'-3 3/32" 72 29/32"								
	WXD2070-SEG	WXD4070-SEG	WXD2670-SEG	WXD5070-SEG	WXD2870-SEG	WXD5470-SEG	WXD3070-SEG	WXD6070-SEG
8'-3 27/32" 8'-3 3/32" 84 29/32"								
	WXD2080-SEG	WXD4080-SEG	WXD2680-SEG	WXD5080-SEG	WXD2880-SEG	WXD5480-SEG	WXD3080-SEG	WXD6080-SEG

* Approximate glass sizes are given; true glass sizes may vary depending on the radius involved.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Dimensions are given for active units; dimensions of stationary units may vary.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Entrance Doors Elevation Charts

Outswing Entrance Door Sidelites

	U.D.	1'-4 3/4"	1'-6 3/4"	1'-8 3/4"	1'-10 3/4"
	R.O.	1'-2 3/4"	1'-4 3/4"	1'-6 3/4"	1'-8 3/4"
	G.S.*	7 5/8"	9 5/8"	11 5/8"	13 5/8"
6'-11 27/32"	6'-11 3/32"				
	68 29/32"	WXD1068S	WXD1268S	WXD1468S	WXD1668S
7'-3 27/32"	7'-3 3/32"				
	72 29/32"	WXD1070S	WXD1270S	WXD1470S	WXD1670S
8'-3 27/32"	8'-3 3/32"				
	84 29/32"	WXD1080S	WXD1280S	WXD1480S	WXD1680S

* Glass size widths are shown for one-lite glass. For TDL glass sizes, contact your Kolbe window and door supplier.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

Outswing Entrance Door Sidelite Panel Designs

Sash Design#:	KK510	KK515	KK5110	KK5110-30	KK5110-24
Full Lite					
	Full Lite	1W5H Pattern	1 Lite over 1 Panel, 8" Cross Rail at 40"	1 Lite over 1 Panel, 4-5/8" Cross Rail at 30"	1 Lite over 1 Panel, 4-5/8" Cross Rail at 24"

NOTE: All measurements are nominal. Elevation charts are not to scale.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Sidelite sash design KK515 has TDL or PDL in the configuration shown. If a different configuration pattern is needed, specify sash design KK510 or KK5110 and the type of configuration desired.

Not all panel designs are available in all sizes.

Not all panel designs are shown; see your local Kolbe distributor for further assistance.

Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Entrance Doors | Rectangular Transoms

U.D.	2'-4 23/32"	2'-10 23/32"	3'-0 23/32"	3'-4 23/32"	4'-5 3/8"	5'-5 3/8"	5'-9 3/8"	6'-5 3/8"
R.O.	2'-2 23/32"	2'-8 23/32"	2'-10 23/32"	3'-2 23/32"	4'-3 3/8"	5'-3 3/8"	5'-7 3/8"	6'-3 3/8"
G.S.	20 3/32"	26 3/32"	28 3/32"	32 3/32"	44 3/4"	56 3/4"	60 3/4"	68 3/4"
1'-1 1/8"								
1'-1 1/8" 1'-4"								
1'-1 1/8" 1'-4" 1'-6"								
1'-1 1/8" 1'-6" 1'-8"								
1'-1 1/8" 1'-8" 1'-10"								
1'-1 1/8" 1'-10" 1'-12"								

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Transom dimensions shown are for units stacked above active doors; dimensions for transoms stacked above stationary doors may vary.

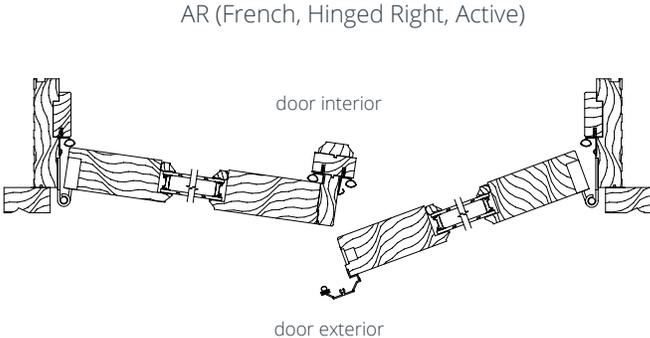
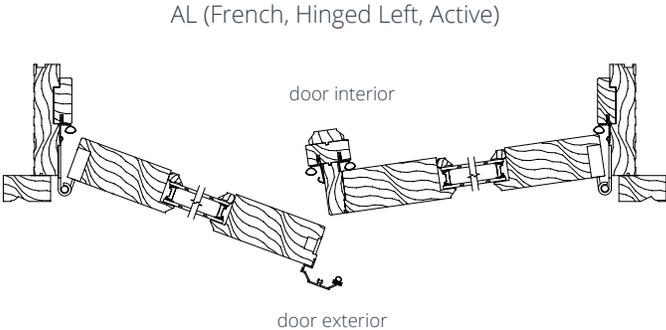
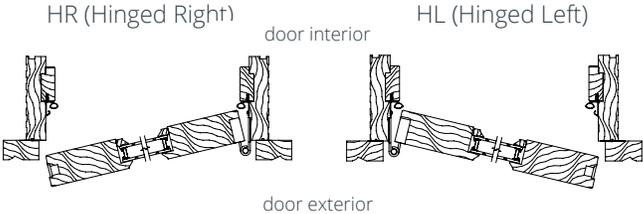
Divided lite configurations must be specified when ordering.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Entrance Doors Hinging Options

Hinging For Outswing Entrance Doors

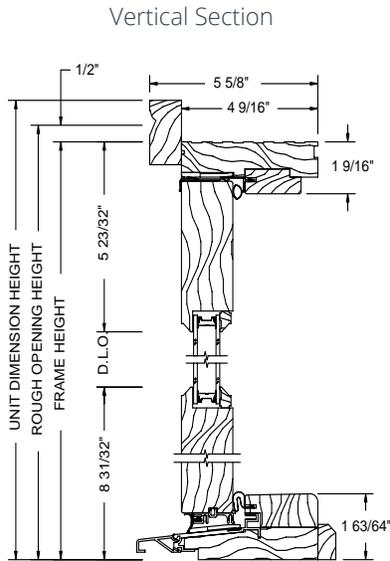


Operation is viewed from the exterior.

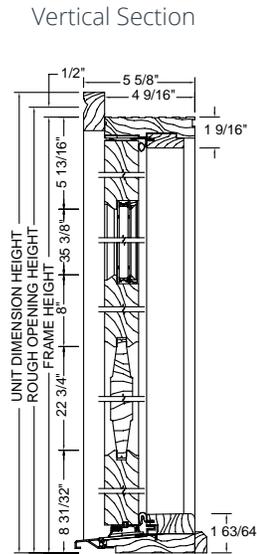
NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Entrance Doors Cross Section Drawings

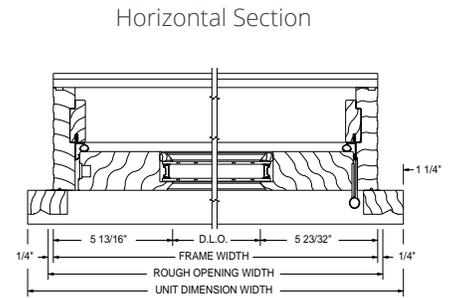
Standard Outswing Entrance Door



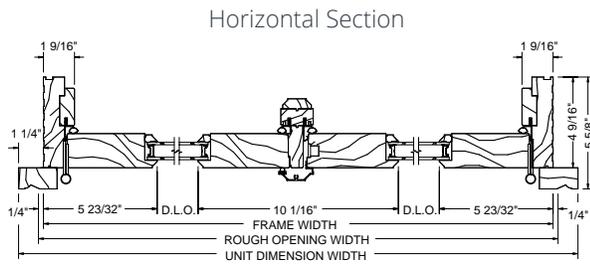
Full lite panel



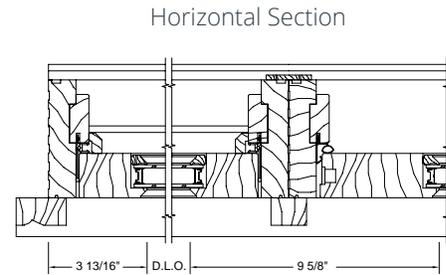
Raised panel



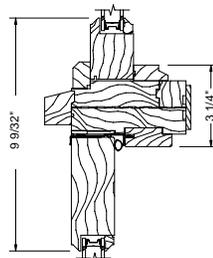
2-Wide Outswing French Doors



Outswing Entrance Door with Sidelite



Rectangular Transom Stacked over Outswing Entrance Door



NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbwindows.com.

Outswing Patio Doors Elevation Charts

Outswing Patio Doors

U.D.	2' 8-25/32"	5' 1-1/2"	3' 2-25/32"	6' 1-1/2"
F.S.	2' 6-9/32"	4' 11"	3' 0-9/32"	5' 11"
R.O.	2' 6-25/32"	4' 11-1/2"	3' 0-25/32"	5' 11-1/2"
G.S.	19-3/4"	19-3/4"	25-3/4"	25-3/4"
6' 8-3/4"				
6' 7-1/2"				
6' 5"				
65-137/16"				
8' 0-3/4"				
7' 11-1/2"				
8' 0"				
81-137/16"				

Operation is viewed from the interior.

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size
Glass size widths are shown per panel for one-lite glass.
For TDL glass sizes contact your supplier.

Outswing Patio Doors | Rectangular Transoms

U.D.	2'-9 11/32"	3'-3 11/32"	5'-2 5/8"	6'-2 5/8"
R.O.	2'-7 11/32"	3'-1 11/32"	5'-0 5/8"	6'-0 5/8"
G.S.	24 3/4"	30 3/4"	54"	66"
1-1 1/8"				
1-0"				
5 3/8"				
1-4"				
1-5 1/8"				
9 3/8"				
1-6"				
1-7 1/8"				
11 3/8"				
1-8"				
1-9 1/8"				
13 3/8"				
2-0"				
2-1 1/8"				
17 3/8"				
2-4"				
23 3/8"				

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Transom dimensions shown are for units stacked above active doors; dimensions for transoms stacked above stationary doors may vary.

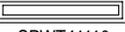
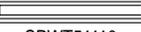
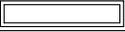
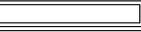
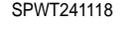
Divided lites are optional. The configuration shown for a single panel is typical for each panel in the unit. Divided lite configurations must be specified when ordering.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines.

For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Patio Doors | Rectangular Transoms

U.D.	2'-9 11/32"	3'-3 11/32"	5'-2 5/8"	6'-2 5/8"
R.O.	2'-7 11/32"	3'-1 11/32"	5'-0 5/8"	6'-0 5/8"
G.S.	24 3/4"	30 3/4"	54"	66"
1'-1 1/8"				
1'-1 1/8" 1'-5 1/8" 1'-1 1/8"				
1'-4" 1'-6" 1'-4"				
1'-6" 1'-8" 1'-6"				
11 3/8" 13 3/8" 11 3/8"				
17 3/8" 23 3/8" 17 3/8"				
2'-7 1/8" 2'-1 1/8" 1'-9 1/8" 1'-7 1/8" 1'-5 1/8" 1'-1 1/8"				
2'-6" 2'-0" 1'-8" 1'-6" 1'-4" 1'-0"				

U.D. = Unit Dimension • R.O. = Rough Opening • G.S. = Glass Size

NOTE: All measurements are nominal. Elevation charts are not to scale.

Rectangular transom units are sash set as standard.

The units shown are stand-alone units. Adjustments may be required when stacking over other units; adjustments will be made in the factory.

Transom dimensions shown are for units stacked above active doors; dimensions for transoms stacked above stationary doors may vary.

Divided lite configurations must be specified when ordering.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

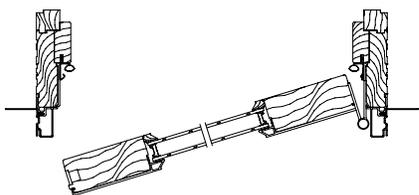
Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Patio Doors Hinging Options

Hinging for Outswing Doors

HR (Hinged Right)

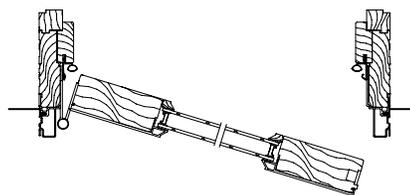
door interior



door exterior

HL (Hinged Left)

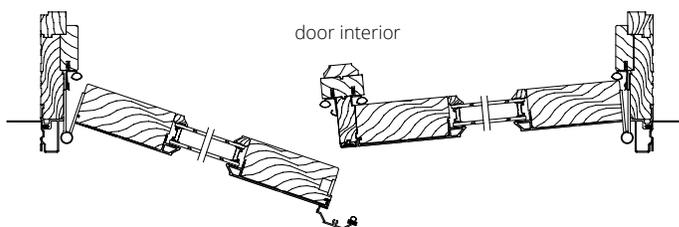
door interior



door exterior

AR (French, Hinged Left, Active)

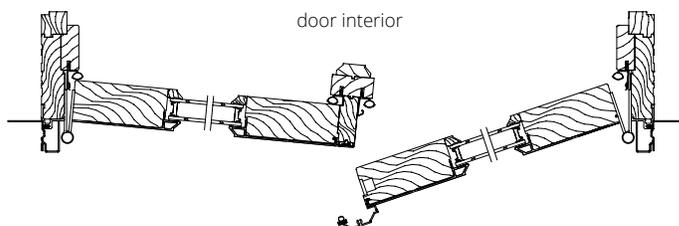
door interior



door exterior

AL (French, Hinged Right, Active)

door interior



door exterior

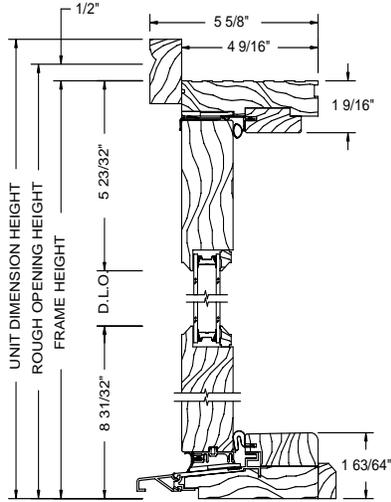
Operation is viewed from the exterior.

NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

Outswing Patio Doors Cross Section Drawings

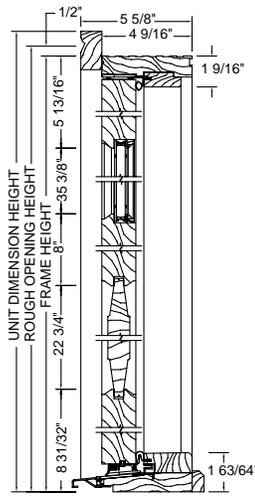
Standard Outswing Door

Vertical Section



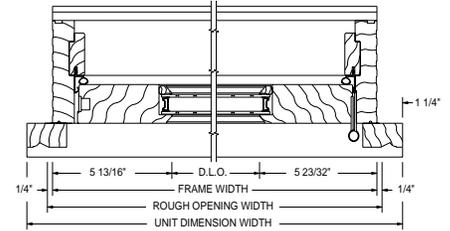
Full lite panel

Vertical Section



Raised panel

Horizontal Section

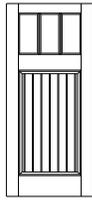


NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

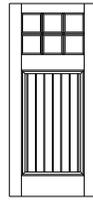
Craftsman Collection Panel Designs

Craftsman Collection Door Panel Designs

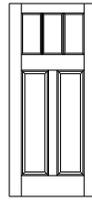
Square Panels and Glass Lites



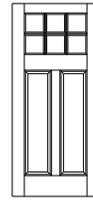
PA 4661-3



PA 4661-6



PA 4662-3

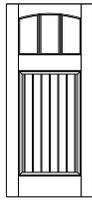


PA 4662-6

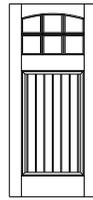


PA 4982

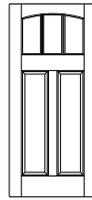
Square Panels and Arch-Top Glass Lites



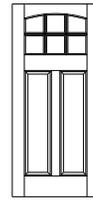
PR 4661-3



PR 4661-6



PR 4662-3

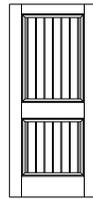


PR 4662-6



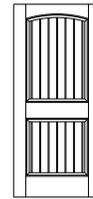
PR 4982

Square, Beaded 2-Panel



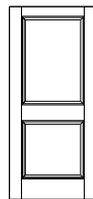
PL 4082

Arch-Top, Beaded 2-Panel



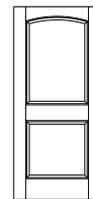
S 4082

Square 2-Panel



R 4082

Arch-Top 2-Panel



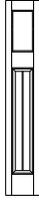
T 4082

NOTE: All measurements are nominal. Elevation drawings are not to scale.

Some installation procedures will require a larger rough opening than noted (i.e. installations utilizing our installation clips), therefore, you may need to increase the rough opening size accordingly. Rough opening gaps may be increased up to a maximum of 1/2" on all sides and still be within good practice guidelines. For rough opening recommendations, see pg. 194.

Additional and the most current drawings are available at www.kolbewindows.com.

Craftsman Collection Sidelites



PAS 4661-1



PAS 4661-2



PAS 4662-1



PAS 4662-2



PAS 4982

Inswing Rough Openings

Single Doors		Double Doors	
2-6	32-1/8"	5-0	62-11/16"
2-8	34-1/8"	5-4	66-11/16"
3-0	38-1/8"	6-0	74-11/16"
3-6	44-1/8"		
Sidelites		Heights	
1-0	14-1/4"	6-8	83-7/32"
1-2	16-1/4"	7-0	87-7/32"
1-4	18-14"	8-0	99-7/32"
1-6	20-1/4"		

Outswing Rough Openings

Single Doors		Double Doors	
2-6	32-23/32"	5-0	63-3/8"
2-8	34-23/32"	5-4	67-3/8"
3-0	38-23/32"	6-0	75-3/8"
3-6	44-23/32"		
Sidelites		Heights	
1-0	14-3/4"	6-8	83-3/32"
1-2	34-3/4"	7-0	87-3/32"
1-4	18-3/4"	8-0	99-3/32"
1-6	20-3/4"		

Dimension Calculations

Inswing

	Width	Height
F.S. to Panel O.S.M. (1-wide, active)	-1 13/16"	-2 23/32"
(1-wide, sidelite)	-1 3/4"	-2 23/32"
(2-wide, French)	-2 9/16"÷2	-2 23/32"

Outswing

	Width	Height
F.S. to Panel O.S.M. (1-wide, active)	-2 13/32"	-2 19/32"
(1-wide, sidelite)	-2 3/8"	-2 19/32"
(2-wide, French)	-3 1/4"÷2	-2 19/32"

Note: Dimension calculations for transoms may be obtained from your supplier.

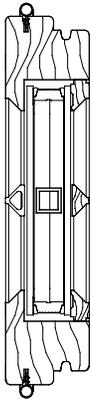
Elevation charts provide frame sizes for units without brickmould. Below are the calculations to determine overall unit dimensions for units with brickmould.

1-15/16" brickmould; F.S. to U.D.	+2 1/4"	+1 1/8"
3-1/2" flat or profiled casing; F.S. to U.D.	+5 3/8"	+2 11/16"
3-1/2" flat casing & backband; F.S. to U.D.	+6 7/8"	+3 7/16"

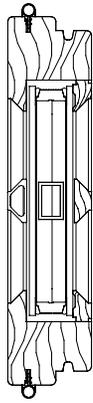
F.S. = Frame Size • O.S.M. = Outside Measurement
U.D. = Unit Dimension

Divided Lites | Cross Section Drawings

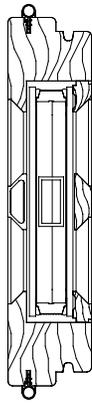
Beveled Performance Divided Lites



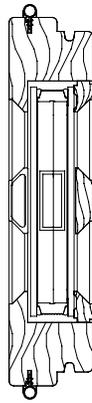
5/8"
beveled
PDL



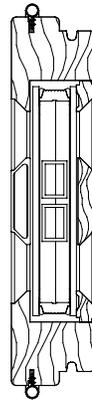
7/8"
beveled
PDL



1-1/8"
beveled
PDL



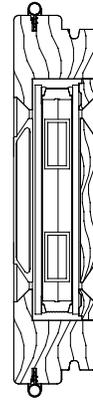
1-3/8"
beveled
PDL



1-3/4"
beveled
PDL

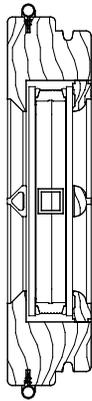


2-1/4"
beveled
PDL

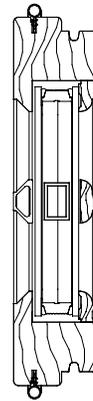


4-1/2"
beveled
PDL

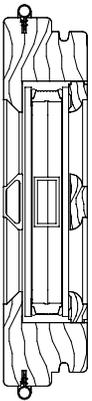
Ovolo Performance Divided Lites



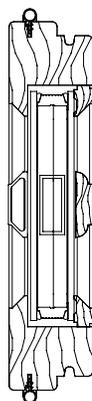
5/8"
ovolo
PDL



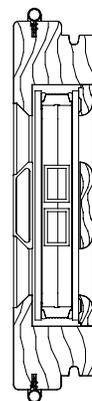
7/8"
ovolo
PDL



1-1/8"
ovolo
PDL



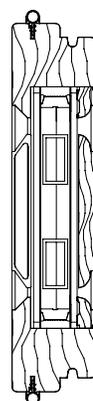
1-3/8"
ovolo
PDL



1-3/4"
ovolo
PDL



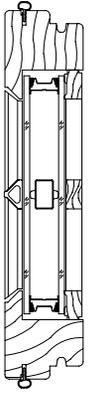
2-1/4"
ovolo
PDL



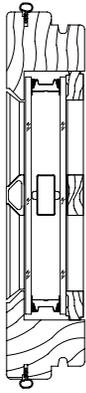
4-1/2"
ovolo
PDL

NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

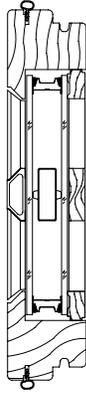
Square Performance Divided Lites



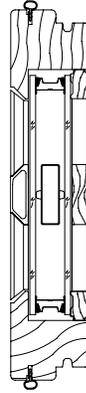
5/8"
square
PDL



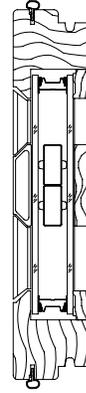
7/8"
square
PDL



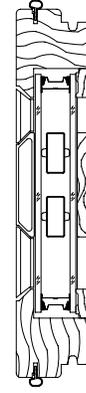
1-1/8"
square
PDL



1-3/8"
square
PDL



1-3/4"
square
PDL

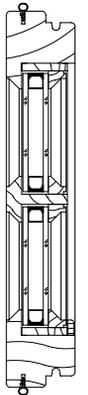


2-1/4"
square
PDL

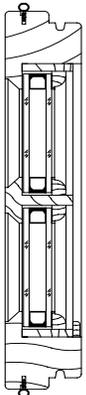


4-1/2"
square
PDL

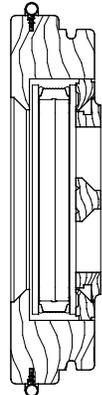
True Divided Lites



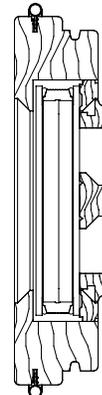
1-1/8"
beveled
TDL



1-1/8"
ovolo
TDL



7/8" beveled
removable
grilles



1-1/8" beveled
removable
grilles



7/8" ovolo
removable
grilles



1-1/8" ovolo
removable
grilles

Wood Removable Grilles

NOTE: Drawings are not to scale. Additional and the most current drawings are available at www.kolbewindows.com.

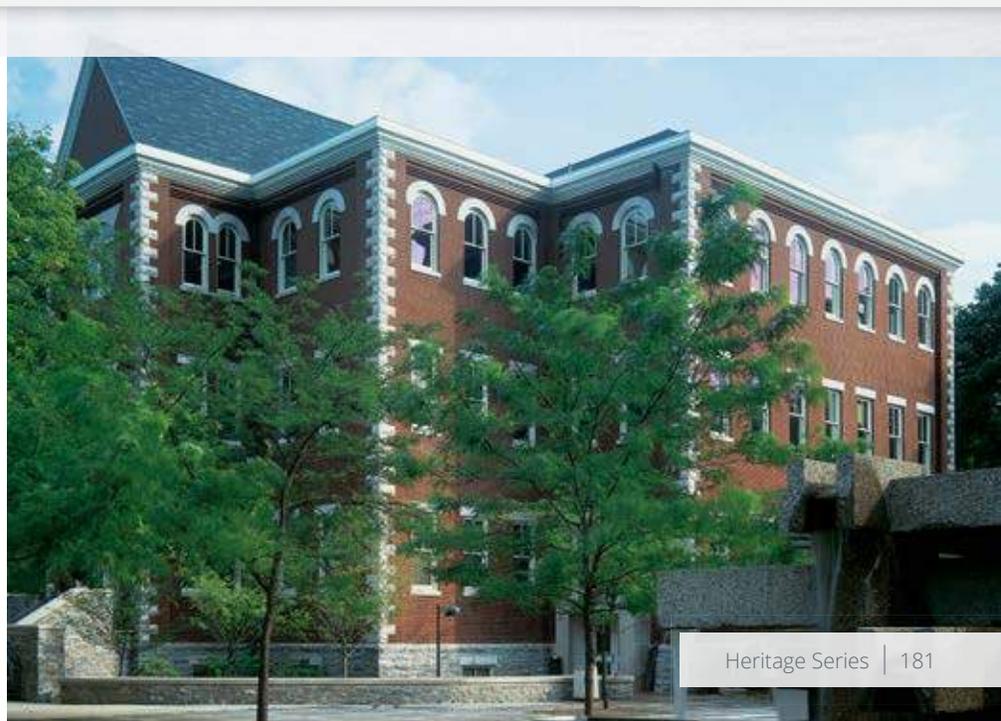




Options & Accessories

Craftsmanship and artistry are hallmarks of Kolbe products. We build innovative windows and doors with a wide array of options. But, don't let the standard options limit your imagination.

At Kolbe, we love a good challenge. We welcome projects that require exotic wood species, custom divided lite patterns, unique shapes, custom finish colors, unusual mulling configurations – you dream it, we'll build it. We can even help inspire and develop your designs. Whatever the opening, we will help you fill it with style. Our windows and doors are built to order, which allows you to choose the options that best fit with the design of your home and vision for your project. We offer many customizable options that blend beautifully with your home's décor.



Finish Options

Interior Wood Species

We craft Heritage Series windows and doors from a variety of wood species sourced from managed forests. The Forest Stewardship Council® (FSC®)-certified wood species are also available for green building projects (FSC® license code FSC-C019541). Ask about the availability of additional or exotic wood species.



Interior Finish Options

For units that are ready to install upon delivery, Heritage Series windows and doors can be prefinished on the interior with one of the water-based stains or paints shown. Stained units are given two coats of satin finish clear sealer. Because our interior finishes are water-based, low-VOC stains and paints, you can rest assured you've made an environmentally conscious decision. Custom colors are also available.



Printed images of wood species and stain options will vary from actual product colors. Selections should be made based on color samples available from your Kolbe dealer. Stain colors are shown on pine. A double coat clear finish is also offered. Since no two trees are identical, wood can be expected to differ both in color and graining. These factors will influence the stain's final color.

Color-matched interior paint is available through any Sherwin-Williams retail store in the United States and Canada.

Exterior Finish Options

Most Heritage Series windows and doors are coated on the exterior with latex primer, ready for your choice of topcoat, with an optional urethane primer available on some products. Kolbe also offers K-Kron II – a durable exterior finish that enhances and preserves the look of wood windows and doors.

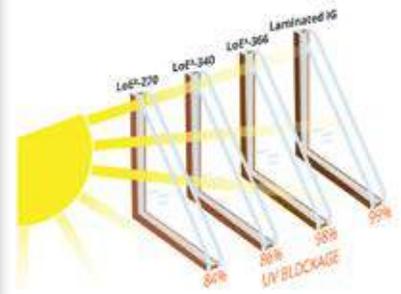


Some options for our products may have limited color offerings or may incur a nominal charge. Check with your Kolbe dealer for further details on pricing and availability. Printed images of exterior finishes may vary slightly from actual colors. Selections should be made based on actual color samples available from your Kolbe dealer.

Glass Options

Kolbe offers glazing options to provide optimum energy efficiency for the geographic region in which you live. As standard, most units use double-pane insulating LoE²-270 glass. LoE is a “smart” coating that reduces energy transfer through the insulating glass unit. LoE coated glass is also designed to reflect room-side heat back into the room during winter months. In summer, visible sunlight is allowed in while blocking 96% of the sun’s infrared heat energy. The result is reduced heating and cooling costs throughout the year. LoE coatings also reduce the potential for condensation, as well as provide protection against fading of furniture, fabrics and carpeting.

Kolbe also offers the following glass options, as well as many specialized options.



NOTE: Tested units include argon. The laminate has 1/4" inner pane. Based on Lawrence Berkeley Lab (LBL) Window 5.2 © 2003 analysis for classical UV transmission data.

LoE-180

When the weather turns frigid, LoE-180 glass is the perfect cold remedy. It keeps homes warmer and more comfortable by blocking heat loss to the outside and letting the sun’s heat stream in to increase solar heat gain.

LoE³-340

A tinted glass recommended for warm climates that achieves solar control over a wide range of the spectrum, while also helping to reduce glare.

LoE³-366

Offers an ideal balance of solar control and high visibility by blocking 95% of UV rays while maintaining the interior temperature.

ThermaPlus™ LoE

Helps to meet the strictest energy requirements; provides protection against heat loss and UV damage.

Triple Pane

Provides a greater energy performing window that keeps indoor air warm and comfortable, prevents heat loss and lowers your heating bills. It is constructed with three panes of glass, Thermo-Edge spacer bars and is available with a variety of LoE coatings that best suit your needs.

Preserve Film

A protective film that protects the glass surfaces from scratches during transit and construction, as well as reducing the time involved in job site clean-up.

Tinted, Colored or Patterned

Provides shading, privacy or visual interest.



Tempered

Standard in Kolbe doors to address safety concerns. Also available in window units to meet specific building codes.

Laminated

Benefits include safety, security, sound control and provides the ultimate in UV blockage.

Impact

Glazing utilized to withstand harsh environmental conditions, especially in coastal regions. Combined with an impact product, this product offers the highest level of security.

Neat®

Harnesses the sun’s UV rays to loosen dirt so water can rinse it away, leaving windows virtually spotless. A special sputter-coating process makes the glass ultra smooth, so the water “sheets off” more readily than it would on uncoated glass, allowing you to spend less time cleaning.

Not all glass is available on all products. Please contact your Kolbe dealer for product specifics.

LoE-180, LoE³-340, LoE²-270, LoE³-366, Neat and Preserve are trademarks of Cardinal IG.

LoE insulating glass with a stainless steel spacer bar carries a 20-year warranty. Not all glass options listed have the same glass warranty. Please contact your dealer for details.

Divided Lites

Expand the character of your home or project by adding one of our divided lite options to your windows and doors. Choose anything from a traditional, colonial-style pattern to a unique, custom design to accentuate the overall appearance of your project. Kolbe offers four types of divided lites: grilles-in-the-airspace, wood removable grilles, performance divided lites and true divided lites. As standard, wood bars have a beveled profile, however, an ovolo profile or a square profile is also available. (See pg. 186, *Glazing Beads & Muntin Bars*) Divided lite cross section drawings can be found on pgs. 178-179.



Beveled



Ovolo



Square



Performance Divided Lites

Kolbe's performance divided lite (PDL) glazing system gives the appearance of true divided lites without sacrificing energy efficiency. Extruded aluminum bars are adhered to the exterior and pine bars are adhered to the interior of the single lite of insulating glass. Aesthetically pleasing spacer bars are installed within the insulating glass unit. Together, these bars create the illusion of true divided lites. PDL bars are available in 5/8", 7/8", 1-1/8", 1-3/8", 1-3/4", 2-1/4" or 4-1/2" bar widths. The exterior finish of the aluminum bars will match the exterior finish on the unit. Variations on the PDL option may include custom grille patterns, custom bar widths or no spacer bars. Some designs may have a composite material for the exterior PDL bar.

True Divided Lites

True divided lites (TDL) give each unit the traditional look often found in historical projects. Units with TDL are comprised of wood muntin bars in between glass panes. The horizontal and vertical, colonial-style wood TDL bars use interlocking half-lap joints. Profile shadow lines enhance the warm, richness of the wood on both the interior and exterior. The exterior finish on the bars will match the exterior finish of the unit. TDL options include custom patterns and bar widths, other wood species and interior stain or paint finishes. Depending on glass options chosen, standard bar widths are available in 7/8" or 1-1/8". TDL glass units are not filled with argon gas.

Divided Lites

Grilles-in-the-Airspace

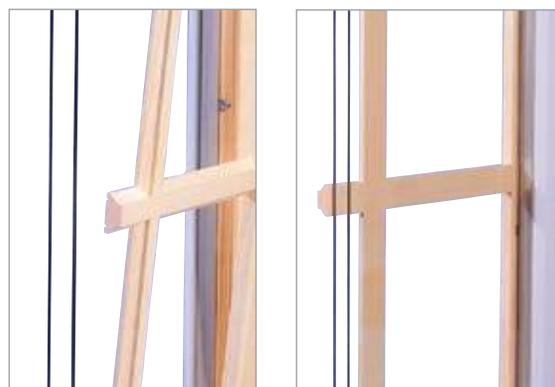
Grilles-in-the-airspace are constructed with aluminum bars sealed between two panes of insulating glass, offering the look of divided panes while reducing cleaning time. For units with 7/8" insulating glass, contoured, 3/4" wide bars are standard in White, Beige, Sand, Rustic, Hartford Green and Chutney. Optional colors are light wood and dark wood faux finishes. Two-tone contour are available with either light or dark wood faux finishes to the interior and White to the exterior. Also available for 7/8" insulating glass are 5/16" wide Brass and Pewter pencil bars.



Wood Removable Grilles

Wood grilles are built with a full surround frame and bars that interlock at the joints for stability. Grilles are applied to the interior of the window using an exclusive hidden clip system.* This system makes unsightly pins and attachment points unnecessary and removal or replacement easy. As standard, bars are constructed of unfinished pine and are 7/8" wide on windows and 1-1/8" wide on doors. Custom grille patterns, bar widths, wood species and interior stains may be available upon request.

* A clear pin system will be used for Garden-Aire sliding patio doors.



Glazing Beads & Muntin Bars

As standard, glazing beads have a beveled profile, but may also be ordered with an ovolo or square profile. Matching muntin bars are available on units with performance divided lites (PDL). Units will have beveled muntin bars on the exterior, regardless of which profile is chosen for the interior.

(See divided lite cross section drawings on pgs. 178-179)



Beveled



Ovolo

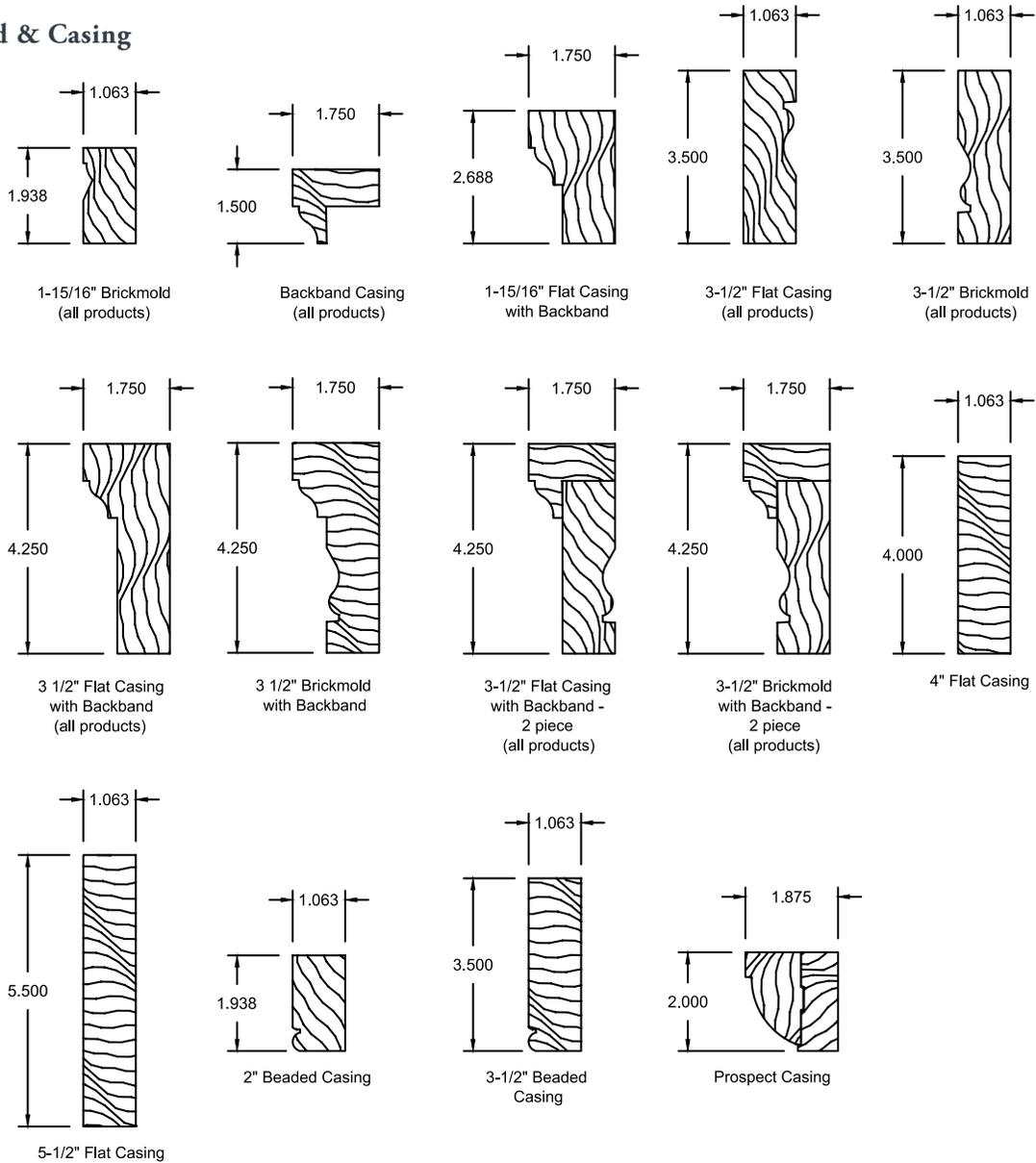


Square

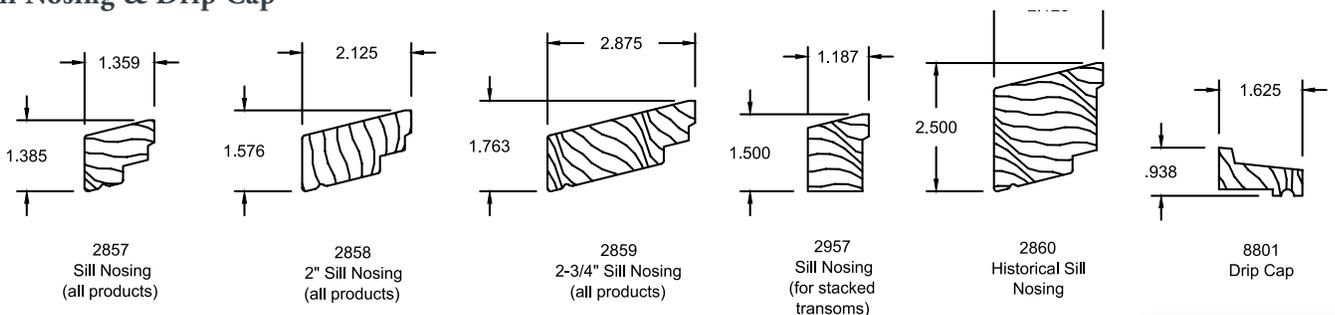
Wood Accessories

Accentuate the beauty of your home with Kolbe's exterior brickmould and casing; talk to your local Kolbe dealer for information on custom options. Various sill nosings can be applied to enhance the overall appearance and to create the perfect look.

Brickmould & Casing



Sill Nosing & Drip Cap



Options & Accessories

Wire Brush Finish

Most Kolbe wood windows and doors can be further enhanced by our wire brushed finish. Wire brushing creates a rugged texture and adds character – the perfect option to complement any rustic-styled home. Due to the nature of the finish, certain limitations apply. Contact your local Kolbe dealer for more information.



Swinging Screen Doors

Swinging screen doors are available for field installation with Kolbe single and double inswing doors. Featuring an adjustable self-closing mechanism, double swinging screen doors have spring-loaded locking mechanisms on the head and sill of the passive door. Weatherstripping around the frame perimeter and on the astragal of double screen doors, and rubber door sweeps that meet the sill add energy efficiency. Swinging screen door frames are available in over 30 colors, plus custom colors.

Sterling Double Hung Retractable Insect Screen Kit

A retractable insect screen kit is offered for Heritage Series Sterling and XL Sterling double hungs, for those who prefer an unobstructed view at times. Wood components that match the interior wood species and finish disguise the insect screen hardware, revealing only the beauty of the window. When you want to open your window and use the screen, operation is practically effortless. Simply press the pull bar down to the sill to engage the screen. A gentle push toward the exterior allows the screen to retract. BetterVue® fiberglass screen mesh is used as standard for a clearer view; UltraVue® fiberglass screen mesh is also available.

Kit includes all components necessary for field installation on Sterling or XL Sterling double hung.



Kit Components:

a – Side rails

b – Cassette
(housing and pull bar)



c – Wood trim for side rails

d – Wood trim for housing

e – Screws

f – Wood trim for pull bar



Window Opening Control Devices (WOCDs)

Kolbe offers Window Opening Control Devices (WOCDs) that restrict the size of the open window area to less than 4 inches, and feature a limit release mechanism to allow for emergency escape. These devices allow the window to latch into place at a predetermined position and automatically re-latch when closed. The WOCDs meet the ASTM F2090-13 requirements.

WOCDs can be factory applied to Heritage Series Sterling double hungs, XL Sterling double hungs, and Traditional double hungs, and are available in a Satin Nickel finish. WOCDs may also be field-applied to crank-out and push-out casements.



Double Hung with WOCD

Universal Design

To meet the needs of homeowners with physical limitations, Kolbe offers a variety of windows and doors that are designed for independent living. From door sills that create a flush surface for smoother passage, to window and door hardware that is easy to operate, we have many options that will help make living at home more manageable. Whether your project is new construction or you are adapting an existing residence for a special need, Kolbe's windows and doors with universal design options will give you the freedom and style you are seeking.

Casements



Longer crank handles with large knobs for casement windows make operating easier. Available in white or clay.



Larger levers for multi-point casement locks make locking of a casement window easy. Available in white or clay.



Motorized operators make opening and closing casement windows simple and effortless. Available in white or clay.

Double Hungs



A crank handle hardware kit for double hungs allows the bottom sash to be operated with minimal effort. Available in white.

Swinging Doors



Wider door sizes help provide additional space for those who use mobility aids.



ADA-compliant sills (thermal break and non-thermal break) for swinging doors create a flush surface for easy access to pass through.



Lever handles for swinging doors are available in a variety of styles and finishes, and make operation easier than doors with knobs.

Sliding Doors



Aluminum sill ramp kits for Garden-Aire sliding patio doors allow smooth transitioning between the interior and exterior of the home.

Many of these options meet standards of the Americans with Disabilities Act. Other options, such as taller bottom rails on doors, are also available to meet these standards. Certain product limitations and modifications may apply. Please contact your local Kolbe dealer for more information.

Options & Accessories

Automation Options

For added convenience, you can operate windows and doors with a touch of a button or a flip of a switch. Kolbe offers the latest technology advancements integrated into select window and door products.

Entrance Doors

- Electronic multi-point lock system
- Allows for multiple control integration devices

Casements & Awnings

- Provides ventilation for hard-to-reach applications
- Can be integrated with multiple operating systems (*push button, toggle switch, etc.*)



Product Performance Modifications

Most Kolbe products can be modified to meet even the most strict building code requirements. Depending on the criteria, Kolbe offers high performance and impact performance products to improve air, water and structural ratings or sound transmittance ratings. With each level of modification, window and door strength is enhanced, though use of additional sash locks, alternate glazing methods or impact laminated glass. Contact your dealer for further details.

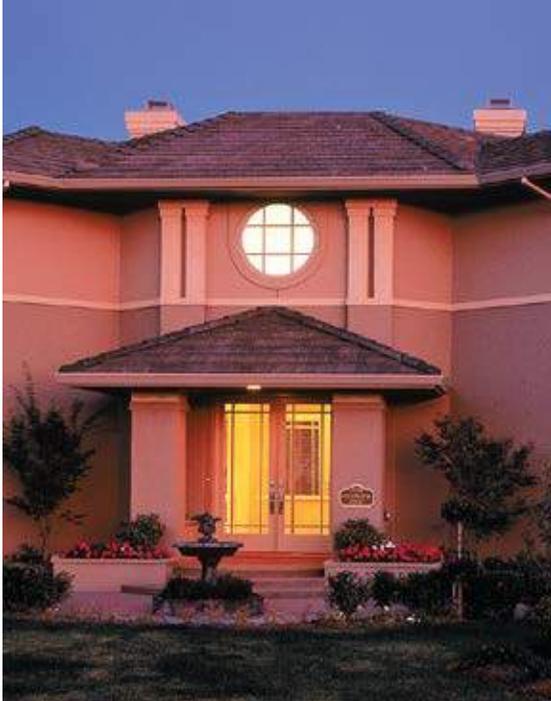


Photo courtesy of the Alexis Agency



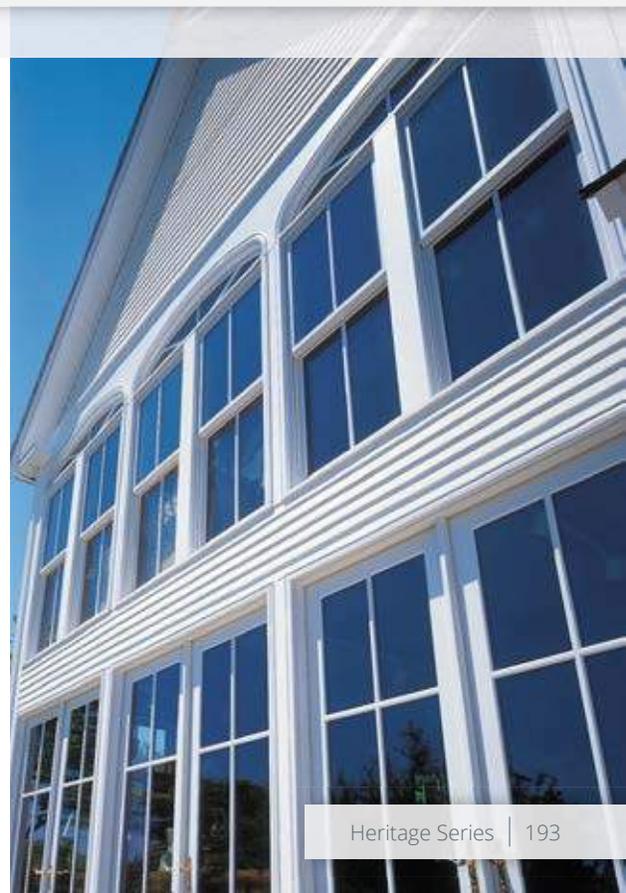
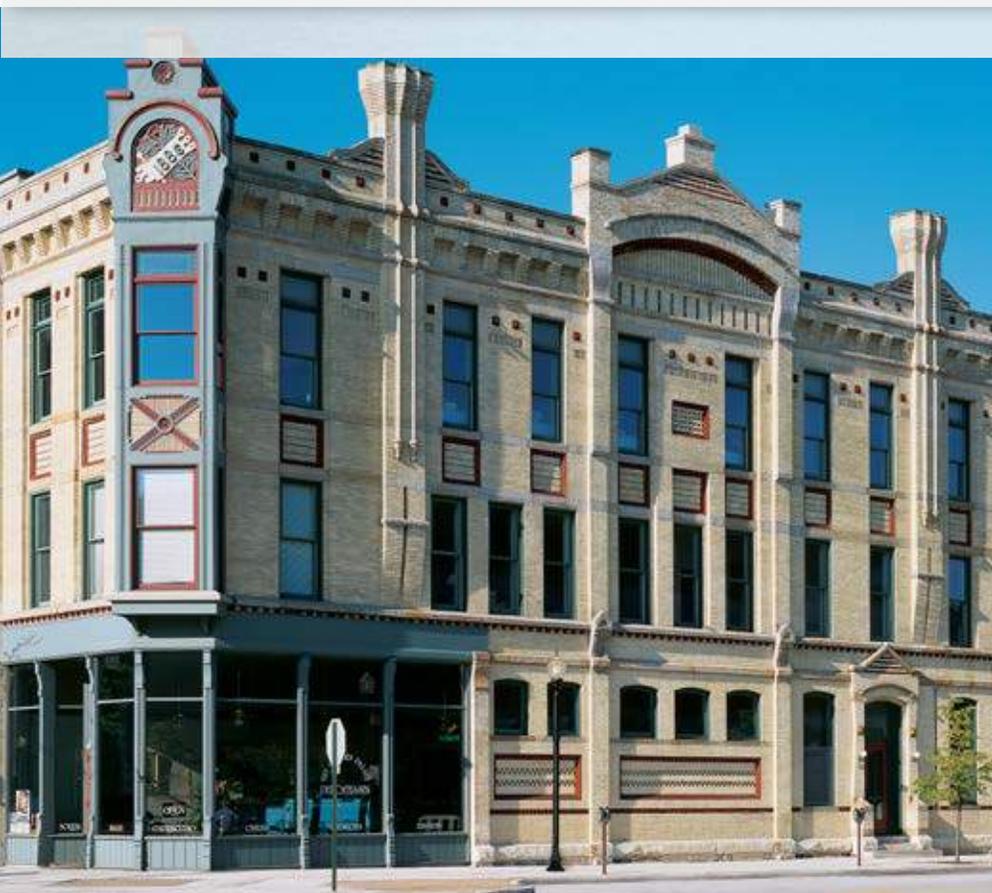






Technical Data

In addition to superior craftsmanship, Kolbe windows and doors offer superior performance. Our products undergo independent testing to ensure the highest quality available. Our participation in programs such as the ENERGY STAR® and WDMA Hallmark Certification programs ensures that our products are tested to industry standards, allowing them to meet and exceed today's stricter building codes and standards for energy efficiency.



Clear Opening Dimensions

Rough Opening Recommendations:

The Kolbe standard rough opening dimensions published in our product literature are provided as a guideline to maintain a minimum 1/4" space between the window or patio door and the building structure. There are certain situations where Kolbe recommends a gap larger than our published 1/4" standard:

- ▶ When installation clips are used, the gap should be increased to 1/2" on the sides, top and bottom of the unit.
- ▶ When mulls are installed in the opening, the gap all around should be increased to 1/2". For installation consistency, the same gap should be used on all units in the project.
- ▶ Kolbe recommends using a sill pan drainage system, and increasing the gap to 1/2" on the top and bottom of the unit.

Because every installation is different, Kolbe strongly recommends consultation with the local supplier or an experienced contractor, architect or structural engineer prior to the installation of any Kolbe product. Installation of Kolbe products, including sizing of rough opening, method of attachment, fastener selection, and code compliance is the sole responsibility of the architect, building owner, contractor and/or consumer. Unless otherwise specified, if units are ordered by rough opening, Kolbe will size the units using our standard minimum 1/4" gap - regardless of the options or construction of the product ordered.

Definitions of Acceptable Emergency Escape & Rescue Openings:

"Egress" has long been the term used to describe the clear opening dimensions of a window or door necessary to enter or exit a building in case of an emergency. With the release of the International Building Code (IBC) and International Residential Code (IRC), "egress" is no longer the appropriate term.

IBC and IRC have set the following as basic requirements for Emergency Escape & Rescue Openings.

- ▶ Minimum Opening Width: 20 inches (508 mm)
- ▶ Minimum Opening Height: 24 inches (610 mm)
- ▶ Minimum Opening Area: 5.7 sq. ft. (0.53 m²)

NOTE:

Please check your local codes to confirm that these Emergency Escape & Rescue Opening requirements are applicable. Other requirements may also apply.

Notes For Casement Windows:

- ▶ Clear opening widths shown are for standard casements with multi-point locks and concealed hinges.
- ▶ Exposed Hinges (a.k.a. Euro Hinges) - The Euro hinge is the default hinge used when standard concealed casement hinges can not be utilized (radius head units, high performance units and impact performance units), or if this type of hinge is requested.
- ▶ In most cases single-arm operators are used with Euro hinges, which changes the clear opening widths. For units with this type of hinge, add 3-7/16" to widths shown for one sash open. For French casements add 6-7/8" to widths shown for two sash open. Two sash open may or may not be considered as an acceptable emergency escape and rescue opening per the local building inspector.
- ▶ All dimensions are taken with sash open to 90°, except for an "E" Series unit with dual-arm operator and concealed hinges, which opens to 75°.

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Casements						
S12	0.99	7-5/16"	19-1/2"	1.30	1.59	2.67
S126	1.29	7-5/16"	25-1/2"	1.73	2.08	3.33
S13	1.60	7-5/16"	31-1/2"	2.15	2.57	4.00
S136	1.90	7-5/16"	37-1/2"	2.58	3.06	4.67
S14	2.21	7-5/16"	43-1/2"	3.01	3.55	5.33
S146	2.51	7-5/16"	49-1/2"	3.43	4.04	6.00
S15	2.82	7-5/16"	55-1/2"	3.86	4.53	6.67
S156	3.12	7-5/16"	61-1/2"	4.29	5.02	7.33
S16	3.43	7-5/16"	67-1/2"	4.72	5.51	8.00
N12	1.53	11-5/16"	19-1/2"	1.81	2.13	3.33
N126	2.00	11-5/16"	25-1/2"	2.40	2.79	4.17
N13	2.47	11-5/16"	31-1/2"	2.99	3.45	5.00
N136	2.95	11-5/16"	37-1/2"	3.59	4.10	5.83
N14	3.42	11-5/16"	43-1/2"	4.18	4.76	6.67
N146	3.89	11-5/16"	49-1/2"	4.77	5.41	7.50
N15	4.36	11-5/16"	55-1/2"	5.37	6.07	8.33
N156	4.83	11-5/16"	61-1/2"	5.96	6.73	9.17
N16	5.30	11-5/16"	67-1/2"	6.56	7.38	10.00
W12	2.07	15-5/16"	19-1/2"	2.31	2.67	4.00
W126	2.71	15-5/16"	25-1/2"	3.07	3.50	5.00
W13	3.35	15-5/16"	31-1/2"	3.83	4.32	6.00
W136	3.99	15-5/16"	37-1/2"	4.59	5.14	7.00
W14	4.63	15-5/16"	43-1/2"	5.35	5.97	8.00
W146	5.26	15-5/16"	49-1/2"	6.12	6.79	9.00
W15	5.90	15-5/16"	55-1/2"	6.88	7.61	10.00
W156	6.54	15-5/16"	61-1/2"	7.64	8.43	11.00
W16	7.18	15-5/16"	67-1/2"	8.40	9.26	12.00
L12	2.62	19-5/16"	19-1/2"	2.82	3.22	4.67
L126	3.42	19-5/16"	25-1/2"	3.75	4.21	5.83
L13	4.22	19-5/16"	31-1/2"	4.67	5.20	7.00
L136	5.03	19-5/16"	37-1/2"	5.60	6.18	8.17
L14	5.83	19-5/16"	43-1/2"	6.53	7.17	9.33
L146	6.64	19-5/16"	49-1/2"	7.46	8.16	10.50
L15	7.44	19-5/16"	55-1/2"	8.38	9.15	11.67
L156	8.25	19-5/16"	61-1/2"	9.31	10.14	12.83
L16	9.05	19-5/16"	67-1/2"	10.24	11.13	14.00
X12	2.89	21-5/16"	19-1/2"	3.07	3.49	5.00
X126	3.77	21-5/16"	25-1/2"	4.08	4.56	6.25
X13	4.66	21-5/16"	31-1/2"	5.09	5.63	7.50
X136	5.55	21-5/16"	37-1/2"	6.10	6.71	8.75
X14	6.44	21-5/16"	43-1/2"	7.12	7.78	10.00
X146	7.33	21-5/16"	49-1/2"	8.13	8.85	11.25
X15	8.21	21-5/16"	55-1/2"	9.14	9.92	12.50
X156	9.10	21-5/16"	61-1/2"	10.15	11.00	13.75
X16	9.99	21-5/16"	67-1/2"	11.16	12.07	15.00
E13	5.63	25-3/4"	31-1/2"	6.35	6.95	9.00
E136	6.71	25-3/4"	37-1/2"	7.62	8.27	10.50

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Casements (continued)						
E14	7.78	25-3/4"	43-1/2"	8.88	9.59	12.00
E146	8.85	25-3/4"	49-1/2"	10.14	10.91	13.50
E15	9.92	25-3/4"	55-1/2"	11.40	12.24	15.00
E156	11.00	25-3/4"	61-1/2"	12.66	13.56	16.50
E16	12.07	25-3/4"	67-1/2"	13.92	14.88	18.00

Product #	Sq. Ft. Clear Opg.	Clear Opg.		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Frame Dim.
		Width	Height			
Push-out Casements						
S12	0.91	6-3/4"	19-1/2"	1.03	1.73	2.67
S126	1.20	6-3/4"	25-1/2"	1.40	2.26	3.33
S13	1.48	6-3/4"	31-1/2"	1.76	2.79	4.00
S136	1.76	6-3/4"	37-1/2"	2.13	3.32	4.67
S14	2.04	6-3/4"	43-1/2"	2.50	3.85	5.33
S146	2.32	6-3/4"	49-1/2"	2.86	4.38	6.00
S15	2.60	6-3/4"	55-1/2"	3.23	4.91	6.67
S156	2.88	6-3/4"	61-1/2"	3.60	5.45	7.33
S16	3.16	6-3/4"	67-1/2"	3.97	5.98	8.00
N12	1.46	10-3/4"	19-1/2"	1.50	2.27	3.33
N126	1.90	10-3/4"	25-1/2"	2.03	2.97	4.17
N13	2.35	10-3/4"	31-1/2"	2.56	3.66	5.00
N136	2.80	10-3/4"	37-1/2"	3.10	4.36	5.83
N14	3.25	10-3/4"	43-1/2"	3.63	5.06	6.67
N146	3.70	10-3/4"	49-1/2"	4.16	5.76	7.50
N15	4.14	10-3/4"	55-1/2"	4.70	6.46	8.33
N156	4.59	10-3/4"	61-1/2"	5.23	7.15	9.17
N16	5.04	10-3/4"	67-1/2"	5.77	7.85	10.00
W12	2.00	10-3/4"	19-1/2"	1.96	2.81	4.00
W126	2.61	14-3/4"	25-1/2"	2.66	3.67	5.00
W13	3.23	14-3/4"	31-1/2"	3.36	4.54	6.00
W136	3.84	14-3/4"	37-1/2"	4.06	5.40	7.00
W14	4.46	14-3/4"	43-1/2"	4.76	6.27	8.00
W146	5.07	14-3/4"	49-1/2"	5.47	7.13	9.00
W15	5.68	14-3/4"	55-1/2"	6.17	8.00	10.00
W156	6.30	14-3/4"	61-1/2"	6.87	8.86	11.00
W16	6.91	14-3/4"	67-1/2"	7.57	9.73	12.00
L12	2.54	18-3/4"	19-1/2"	2.43	3.35	4.67
L126	3.32	18-3/4"	25-1/2"	3.30	4.38	5.83
L13	4.10	18-3/4"	31-1/2"	4.16	5.41	7.00
L136	4.88	18-3/4"	37-1/2"	5.03	6.45	8.17
L14	5.66	18-3/4"	43-1/2"	5.90	7.48	9.33
L146	6.45	18-3/4"	49-1/2"	6.77	8.51	10.50
L15	7.23	18-3/4"	55-1/2"	7.63	9.54	11.67
L156	8.01	18-3/4"	61-1/2"	8.50	10.57	12.83
L16	8.79	18-3/4"	67-1/2"	9.37	11.60	14.00

Product #	Sq. Ft. Clear Opg.	Clear Opg.		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Frame Dim.
		Width	Height			
Push-out Casements (continued)						
X12	2.81	20-3/4"	19-1/2"	2.66	3.62	5.00
X126	3.67	20-3/4"	25-1/2"	3.61	4.74	6.25
X13	4.54	20-3/4"	31-1/2"	4.56	5.85	7.50
X136	5.40	20-3/4"	37-1/2"	5.51	6.97	8.75
X14	6.27	20-3/4"	43-1/2"	6.47	8.08	10.00
X146	7.13	20-3/4"	49-1/2"	7.42	9.20	11.25
X15	8.00	20-3/4"	55-1/2"	8.37	10.31	12.50
X156	8.86	20-3/4"	61-1/2"	9.32	11.42	13.75
X16	9.73	20-3/4"	67-1/2"	10.27	12.54	15.00
E13	5.85	26-3/4"	31-1/2"	5.76	7.16	9.00
E136	6.97	26-3/4"	37-1/2"	6.97	8.53	10.50
E14	8.08	26-3/4"	43-1/2"	8.17	9.89	12.00
E146	9.20	26-3/4"	49-1/2"	9.37	11.26	13.50
E15	10.31	26-3/4"	55-1/2"	10.57	12.62	15.00
E156	11.42	26-3/4"	61-1/2"	11.77	13.99	16.50
E16	12.54	26-3/4"	67-1/2"	12.97	15.35	18.00

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opg. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
French Casements								
N23	2.66	5.71	12-3/16"	26-3/16"	31-3/8"	6.35	7.93	10.00
N236	3.16	6.80	12-3/16"	26-3/16"	37-3/8"	7.62	9.44	11.67
N24	3.67	7.89	12-3/16"	26-3/16"	43-3/8"	8.88	10.96	13.33
N246	4.18	8.98	12-3/16"	26-3/16"	49-3/8"	10.14	12.47	15.00
N25	4.69	10.07	12-3/16"	26-3/16"	55-3/8"	11.40	13.99	16.67
N256	5.19	11.16	12-3/16"	26-3/16"	61-3/8"	12.66	15.50	18.33
N26	5.70	12.25	12-3/16"	26-3/16"	67-3/8"	13.92	17.02	20.00
W23	3.53	7.45	16-3/16"	34-3/16"	31-3/8"	8.04	9.67	12.00
W236	4.20	8.87	16-3/16"	34-3/16"	37-3/8"	9.63	11.52	14.00
W24	4.88	10.30	16-3/16"	34-3/16"	43-3/8"	11.22	13.37	16.00
W246	5.55	11.72	16-3/16"	34-3/16"	49-3/8"	12.82	15.22	18.00
W25	6.22	13.15	16-3/16"	34-3/16"	55-3/8"	14.41	17.06	20.00
X23	4.83	10.06	22-3/16"	46-3/16"	31-3/8"	10.56	12.28	15.00
X236	5.76	11.99	22-3/16"	46-3/16"	37-3/8"	12.65	14.63	17.50
X24	6.68	13.91	22-3/16"	46-3/16"	43-3/8"	14.74	16.98	20.00
X246	7.61	15.84	22-3/16"	46-3/16"	49-3/8"	16.84	19.33	22.50
X25	8.53	17.76	22-3/16"	46-3/16"	55-3/8"	18.93	21.68	25.00

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Clear Opening Dimensions

Product #	Sq. Ft. Clear Opp.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Inswing Casements						
W13	4.42	19-1/2"	32-5/8"	3.67	4.96	6.13
W136	5.23	19-1/2"	38-5/8"	4.46	5.87	7.15
W14	6.04	19-1/2"	44-5/8"	5.24	6.78	8.17
W146	6.86	19-1/2"	50-5/8"	6.03	7.69	9.19
W15	7.67	19-1/2"	56-5/8"	6.81	8.60	10.21
W156	8.48	19-1/2"	62-5/8"	7.59	9.51	11.23
W16	9.29	19-1/2"	68-5/8"	8.38	10.42	12.25

Product #	Sq. Ft. Clear Opp.		Clear Opp. Width		Clear Opp. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
French Inswing Casements								
N23	3.51	7.17	15-1/2"	31-5/8"	32-5/8"	5.79	8.47	10.00
N236	4.16	8.48	15-1/2"	31-5/8"	38-5/8"	7.02	10.03	11.67
N24	4.80	9.80	15-1/2"	31-5/8"	44-5/8"	8.25	11.58	13.33
N246	5.45	11.12	15-1/2"	31-5/8"	50-5/8"	9.49	13.14	15.00
N25	6.10	12.44	15-1/2"	31-5/8"	56-5/8"	10.72	14.70	16.67
N256	6.74	13.75	15-1/2"	31-5/8"	62-5/8"	11.96	16.25	18.33
N26	7.39	15.07	15-1/2"	31-5/8"	68-5/8"	13.19	17.81	20.00
W23	4.42	8.98	19-1/2"	39-5/8"	32-5/8"	7.35	10.28	12.00
W236	5.23	10.63	19-1/2"	39-5/8"	38-5/8"	8.92	12.17	14.00
W24	6.04	12.28	19-1/2"	39-5/8"	44-5/8"	10.48	14.06	16.00
W246	6.86	13.93	19-1/2"	39-5/8"	50-5/8"	12.05	15.95	18.00
W25	7.67	15.58	19-1/2"	39-5/8"	56-5/8"	13.62	17.84	20.00
W256	8.48	17.23	19-1/2"	39-5/8"	62-5/8"	15.19	19.73	22.00
W26	9.29	18.88	19-1/2"	39-5/8"	68-5/8"	16.75	21.62	24.00
X23	5.78	11.70	25-1/2"	51-5/8"	32-5/8"	9.69	13.00	15.00
X236	6.84	13.85	25-1/2"	51-5/8"	38-5/8"	11.76	15.39	17.50
X24	7.90	16.00	25-1/2"	51-5/8"	44-5/8"	13.83	17.78	20.00
X246	8.96	18.15	25-1/2"	51-5/8"	50-5/8"	15.90	20.17	22.50
X25	10.03	20.30	25-1/2"	51-5/8"	56-5/8"	17.96	22.56	25.00
X256	11.09	22.45	25-1/2"	51-5/8"	62-5/8"	20.03	24.95	27.50
X26	12.15	24.60	25-1/2"	51-5/8"	68-5/8"	22.10	27.34	30.00

Product #	Sq. Ft. Clear Opp.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Sterling Double Hungs						
1614	1.54	17-31/32"	12-3/8"	2.71	1.54	5.44
1616	1.79	17-31/32"	14-3/8"	3.13	1.79	6.04
1620	2.29	17-31/32"	18-3/8"	3.96	2.29	7.23
1622	2.54	17-31/32"	20-3/8"	4.38	2.54	7.83
1624	2.79	17-31/32"	22-3/8"	4.79	2.79	8.43
1626	3.04	17-31/32"	24-3/8"	5.21	3.04	9.02
1628	3.29	17-31/32"	26-3/8"	5.63	3.29	9.62
1630	3.54	17-31/32"	28-3/8"	6.04	3.54	10.22
1632	3.79	17-31/32"	30-3/8"	6.46	3.79	10.82
1634	4.04	17-31/32"	32-3/8"	6.88	4.04	11.41
1636	4.29	17-31/32"	34-3/8"	7.29	4.29	12.01
2014	1.89	21-31/32"	12-3/8"	3.43	1.89	6.45
2016	2.19	21-31/32"	14-3/8"	3.96	2.19	7.16
2020	2.80	21-31/32"	18-3/8"	5.01	2.80	8.58
2022	3.11	21-31/32"	20-3/8"	5.54	3.11	9.29
2024	3.41	21-31/32"	22-3/8"	6.07	3.41	9.99
2026	3.72	21-31/32"	24-3/8"	6.60	3.72	10.70
2028	4.02	21-31/32"	26-3/8"	7.13	4.02	11.41
2030	4.33	21-31/32"	28-3/8"	7.65	4.33	12.12
2032	4.63	21-31/32"	30-3/8"	8.18	4.63	12.83
2034	4.94	21-31/32"	32-3/8"	8.71	4.94	13.54
2036	5.24	21-31/32"	34-3/8"	9.24	5.24	14.24
2414	2.23	25-31/32"	12-3/8"	4.15	2.23	7.47
2416	2.59	25-31/32"	14-3/8"	4.79	2.59	8.28
2420	3.31	25-31/32"	18-3/8"	6.07	3.31	9.92
2422	3.67	25-31/32"	20-3/8"	6.71	3.67	10.74
2424	4.04	25-31/32"	22-3/8"	7.35	4.04	11.56
2426	4.40	25-31/32"	24-3/8"	7.99	4.40	12.38
2428	4.76	25-31/32"	26-3/8"	8.63	4.76	13.20
2430	5.12	25-31/32"	28-3/8"	9.26	5.12	14.02
2432	5.48	25-31/32"	30-3/8"	9.90	5.48	14.84
2434	5.84	25-31/32"	32-3/8"	10.54	5.84	15.66
2436	6.20	25-31/32"	34-3/8"	11.18	6.20	16.48
2614	2.40	27-31/32"	12-3/8"	4.51	2.40	7.97
2616	2.79	27-31/32"	14-3/8"	5.21	2.79	8.85
2620	3.57	27-31/32"	18-3/8"	6.60	3.57	10.60
2622	3.96	27-31/32"	20-3/8"	7.29	3.96	11.47
2624	4.35	27-31/32"	22-3/8"	7.99	4.35	12.35
2626	4.73	27-31/32"	24-3/8"	8.68	4.73	13.22
2628	5.12	27-31/32"	26-3/8"	9.38	5.12	14.10
2630	5.51	27-31/32"	28-3/8"	10.07	5.51	14.97
2632	5.90	27-31/32"	30-3/8"	10.76	5.90	15.85
2634	6.29	27-31/32"	32-3/8"	11.46	6.29	16.72
2636	6.68	27-31/32"	34-3/8"	12.15	6.68	17.60
2814	2.58	29-31/32"	12-3/8"	4.88	2.58	8.48
2816	2.99	29-31/32"	14-3/8"	5.63	2.99	9.41
2820	3.82	29-31/32"	18-3/8"	7.13	3.82	11.27

NOTE: For the most up-to-date data, please visit www.kolbewindows.com.
Shaded units meet most national building codes for emergency escape and rescue requirements.

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Sterling Double Hungs (continued)						
2822	4.24	29-31/32"	20-3/8"	7.88	4.24	12.20
2824	4.66	29-31/32"	22-3/8"	8.63	4.66	13.13
2826	5.07	29-31/32"	24-3/8"	9.38	5.07	14.06
2828	5.49	29-31/32"	26-3/8"	10.13	5.49	14.99
2830	5.91	29-31/32"	28-3/8"	10.88	5.91	15.92
2832	6.32	29-31/32"	30-3/8"	11.63	6.32	16.85
2834	6.74	29-31/32"	32-3/8"	12.38	6.74	17.78
2836	7.15	29-31/32"	34-3/8"	13.13	7.15	18.71
3014	2.75	31-31/32"	12-3/8"	5.24	2.75	8.98
3016	3.19	31-31/32"	14-3/8"	6.04	3.19	9.97
3020	4.08	31-31/32"	18-3/8"	7.65	4.08	11.94
3022	4.52	31-31/32"	20-3/8"	8.46	4.52	12.93
3024	4.97	31-31/32"	22-3/8"	9.26	4.97	13.91
3026	5.41	31-31/32"	24-3/8"	10.07	5.41	14.90
3028	5.86	31-31/32"	26-3/8"	10.88	5.86	15.89
3030	6.30	31-31/32"	28-3/8"	11.68	6.30	16.87
3032	6.74	31-31/32"	30-3/8"	12.49	6.74	17.86
3034	7.19	31-31/32"	32-3/8"	13.29	7.19	18.84
3036	7.63	31-31/32"	34-3/8"	14.10	7.63	19.83
3214	2.92	33-31/32"	12-3/8"	5.60	2.92	9.49
3216	3.39	33-31/32"	14-3/8"	6.46	3.39	10.53
3220	4.33	33-31/32"	18-3/8"	8.18	4.33	12.61
3222	4.81	33-31/32"	20-3/8"	9.04	4.81	13.66
3224	5.28	33-31/32"	22-3/8"	9.90	5.28	14.70
3226	5.75	33-31/32"	24-3/8"	10.76	5.75	15.74
3228	6.22	33-31/32"	26-3/8"	11.63	6.22	16.78
3230	6.69	33-31/32"	28-3/8"	12.49	6.69	17.82
3232	7.17	33-31/32"	30-3/8"	13.35	7.17	18.86
3234	7.64	33-31/32"	32-3/8"	14.21	7.64	19.91
3236	8.11	33-31/32"	34-3/8"	15.07	8.11	20.95
3614	3.26	37-31/32"	12-3/8"	6.32	3.26	10.50
3616	3.79	37-31/32"	14-3/8"	7.29	3.79	11.65
3620	4.84	37-31/32"	18-3/8"	9.24	4.84	13.96
3622	5.37	37-31/32"	20-3/8"	10.21	5.37	15.11
3624	5.90	37-31/32"	22-3/8"	11.18	5.90	16.27
3626	6.43	37-31/32"	24-3/8"	12.15	6.43	17.42
3628	6.95	37-31/32"	26-3/8"	13.13	6.95	18.57
3630	7.48	37-31/32"	28-3/8"	14.10	7.48	19.72
3632	8.01	37-31/32"	30-3/8"	15.07	8.01	20.88
3634	8.54	37-31/32"	32-3/8"	16.04	8.54	22.03
3636	9.06	37-31/32"	34-3/8"	17.01	9.06	23.18
4014	3.61	41-31/32"	12-3/8"	7.04	3.61	11.51
4016	4.19	41-31/32"	14-3/8"	8.13	4.19	12.78
4020	5.36	41-31/32"	18-3/8"	10.29	5.36	15.31
4022	5.94	41-31/32"	20-3/8"	11.38	5.94	16.57
4024	6.52	41-31/32"	22-3/8"	12.46	6.52	17.83
4026	7.10	41-31/32"	24-3/8"	13.54	7.10	19.10

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Sterling Double Hungs (continued)						
4028	7.69	41-31/32"	26-3/8"	14.63	7.69	20.36
4030	8.27	41-31/32"	28-3/8"	15.71	8.27	21.63
4032	8.85	41-31/32"	30-3/8"	16.79	8.85	22.89
4034	9.44	41-31/32"	32-3/8"	17.88	9.44	24.15
4036	10.02	41-31/32"	34-3/8"	18.96	10.02	25.42
1624/36	2.79	17-31/32"	22-3/8"	6.04	2.79	10.22
2024/36	3.41	21-31/32"	22-3/8"	7.65	3.41	12.12
2424/36	4.04	25-31/32"	22-3/8"	9.26	4.04	14.02
2624/36	4.35	27-31/32"	22-3/8"	10.01	4.35	14.97
2824/36	4.66	29-31/32"	22-3/8"	10.88	4.66	15.92
3024/36	4.97	31-31/32"	22-3/8"	11.68	4.97	16.87
3224/36	5.28	33-31/32"	22-3/8"	12.49	5.28	17.82
3624/36	5.90	37-31/32"	22-3/8"	14.10	5.90	19.72
4024/36	6.52	41-31/32"	22-3/8"	15.71	6.52	21.63

Notes for Sterling Double Hung Windows:

- ▶ For Sterling high performance units, deduct 2-1/8" from the clear opening heights.
- ▶ Shaded units meet most national building codes for emergency escape and rescue requirements.

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Traditional Double Hungs						
1614	1.70	18-1/4"	13-7/16"	2.71	1.70	5.44
1616	1.96	18-1/4"	15-7/16"	3.13	1.96	6.04
1620	2.46	18-1/4"	19-7/16"	3.96	2.46	7.23
1622	2.72	18-1/4"	21-7/16"	4.38	2.72	7.83
1624	2.97	18-1/4"	23-7/16"	4.79	2.97	8.43
1626	3.22	18-1/4"	25-7/16"	5.21	3.22	9.02
1628	3.48	18-1/4"	27-7/16"	5.63	3.48	9.62
1630	3.73	18-1/4"	29-7/16"	6.04	3.73	10.22
1632	3.98	18-1/4"	31-7/16"	6.46	3.98	10.82
1634	4.24	18-1/4"	33-7/16"	6.88	4.24	11.41
1636	4.49	18-1/4"	35-7/16"	7.29	4.49	12.01
2014	2.08	22-1/4"	13-7/16"	3.43	2.08	6.45
2016	2.39	22-1/4"	15-7/16"	3.96	2.39	7.16
2020	3.00	22-1/4"	19-7/16"	5.01	3.00	8.58
2022	3.31	22-1/4"	21-7/16"	5.54	3.31	9.29
2024	3.62	22-1/4"	23-7/16"	6.07	3.62	9.99
2026	3.93	22-1/4"	25-7/16"	6.60	3.93	10.70
2028	4.24	22-1/4"	27-7/16"	7.13	4.24	11.41
2030	4.55	22-1/4"	29-7/16"	7.65	4.55	12.12
2032	4.86	22-1/4"	31-7/16"	8.18	4.86	12.83
2034	5.17	22-1/4"	33-7/16"	8.71	5.17	13.54
2036	5.48	22-1/4"	35-7/16"	9.24	5.48	14.24
2414	2.45	26-1/4"	13-7/16"	4.15	2.45	7.47

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Clear Opening Dimensions

Product #	Sq. Ft. Clear Oppg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Traditional Double Hungs (continued)						
2416	2.81	26-1/4"	15-7/16"	4.79	2.81	8.28
2420	3.54	26-1/4"	19-7/16"	6.07	3.54	9.92
2422	3.91	26-1/4"	21-7/16"	6.71	3.91	10.74
2424	4.27	26-1/4"	23-7/16"	7.35	4.27	11.56
2426	4.64	26-1/4"	25-7/16"	7.99	4.64	12.38
2428	5.00	26-1/4"	27-7/16"	8.63	5.00	13.20
2430	5.37	26-1/4"	29-7/16"	9.26	5.37	14.02
2432	5.73	26-1/4"	31-7/16"	9.90	5.73	14.84
2434	6.10	26-1/4"	33-7/16"	10.54	6.10	15.66
2436	6.46	26-1/4"	35-7/16"	11.18	6.46	16.48
2614	2.64	28-1/4"	13-7/16"	4.51	2.64	7.97
2616	3.03	28-1/4"	15-7/16"	5.21	3.03	8.85
2620	3.81	28-1/4"	19-7/16"	6.60	3.81	10.60
2622	4.21	28-1/4"	21-7/16"	7.29	4.21	11.47
2624	4.60	28-1/4"	23-7/16"	7.99	4.60	12.35
2626	4.99	28-1/4"	25-7/16"	8.68	4.99	13.22
2628	5.38	28-1/4"	27-7/16"	9.38	5.38	14.10
2630	5.77	28-1/4"	29-7/16"	10.07	5.77	14.97
2632	6.17	28-1/4"	31-7/16"	10.76	6.17	15.85
2634	6.56	28-1/4"	33-7/16"	11.46	6.56	16.72
2636	6.95	28-1/4"	35-7/16"	12.15	6.95	17.60
2814	2.82	30-1/4"	13-7/16"	4.88	2.82	8.48
2816	3.24	30-1/4"	15-7/16"	5.63	3.24	9.41
2820	4.08	30-1/4"	19-7/16"	7.13	4.08	11.27
2822	4.50	30-1/4"	21-7/16"	7.88	4.50	12.20
2824	4.92	30-1/4"	23-7/16"	8.63	4.92	13.13
2826	5.34	30-1/4"	25-7/16"	9.38	5.34	14.06
2828	5.76	30-1/4"	27-7/16"	10.13	5.76	14.99
2830	6.18	30-1/4"	29-7/16"	10.88	6.18	15.92
2832	6.60	30-1/4"	31-7/16"	11.63	6.60	16.85
2834	7.02	30-1/4"	33-7/16"	12.38	7.02	17.78
2836	7.44	30-1/4"	35-7/16"	13.13	7.44	18.71
3014	3.01	32-1/4"	13-7/16"	5.24	3.01	8.98
3016	3.46	32-1/4"	15-7/16"	6.04	3.46	9.97
3020	4.35	32-1/4"	19-7/16"	7.65	4.35	11.94
3022	4.80	32-1/4"	21-7/16"	8.46	4.80	12.93
3024	5.25	32-1/4"	23-7/16"	9.26	5.25	13.91
3026	5.70	32-1/4"	25-7/16"	10.07	5.70	14.90
3028	6.14	32-1/4"	27-7/16"	10.88	6.14	15.89
3030	6.59	32-1/4"	29-7/16"	11.68	6.59	16.87
3032	7.04	32-1/4"	31-7/16"	12.49	7.04	17.86
3034	7.49	32-1/4"	33-7/16"	13.29	7.49	18.84
3036	7.94	32-1/4"	35-7/16"	14.10	7.94	19.83
3214	3.20	34-1/4"	13-7/16"	5.60	3.20	9.49
3216	3.67	34-1/4"	15-7/16"	6.46	3.67	10.53
3220	4.62	34-1/4"	19-7/16"	8.18	4.62	12.61

Product #	Sq. Ft. Clear Oppg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Traditional Double Hungs (continued)						
3222	5.10	34-1/4"	21-7/16"	9.04	5.10	13.66
3224	5.57	34-1/4"	23-7/16"	9.90	5.57	14.70
3226	6.05	34-1/4"	25-7/16"	10.76	6.05	15.74
3228	6.53	34-1/4"	27-7/16"	11.63	6.53	16.78
3230	7.00	34-1/4"	29-7/16"	12.49	7.00	17.82
3232	7.48	34-1/4"	31-7/16"	13.35	7.48	18.86
3234	7.95	34-1/4"	33-7/16"	14.21	7.95	19.91
3236	8.43	34-1/4"	35-7/16"	15.07	8.43	20.95
3614	3.57	38-1/4"	13-7/16"	6.32	3.57	10.50
3616	4.10	38-1/4"	15-7/16"	7.29	4.10	11.65
3620	5.16	38-1/4"	19-7/16"	9.24	5.16	13.96
3622	5.69	38-1/4"	21-7/16"	10.21	5.69	15.11
3624	6.23	38-1/4"	23-7/16"	11.18	6.23	16.27
3626	6.76	38-1/4"	25-7/16"	12.15	6.76	17.42
3628	7.29	38-1/4"	27-7/16"	13.13	7.29	18.57
3630	7.82	38-1/4"	29-7/16"	14.10	7.82	19.72
3632	8.35	38-1/4"	31-7/16"	15.07	8.35	20.88
3634	8.88	38-1/4"	33-7/16"	16.04	8.88	22.03
3636	9.41	38-1/4"	35-7/16"	17.01	9.41	23.18
4014	3.94	42-1/4"	13-7/16"	7.04	3.94	11.51
4016	4.53	42-1/4"	15-7/16"	8.13	4.53	12.78
4020	5.70	42-1/4"	19-7/16"	10.29	5.70	15.31
4022	6.29	42-1/4"	21-7/16"	11.38	6.29	16.57
4024	6.88	42-1/4"	23-7/16"	12.46	6.88	17.83
4026	7.46	42-1/4"	25-7/16"	13.54	7.46	19.10
4028	8.05	42-1/4"	27-7/16"	14.63	8.05	20.36
4030	8.64	42-1/4"	29-7/16"	15.71	8.64	21.63
4032	9.22	42-1/4"	31-7/16"	16.79	9.22	22.89
4034	9.81	42-1/4"	33-7/16"	17.88	9.81	24.15
4036	10.40	42-1/4"	35-7/16"	18.96	10.40	25.42
1624/36	2.97	18-1/4"	23-7/16"	6.04	2.97	10.22
2024/36	3.62	22-1/4"	23-7/16"	7.65	3.62	12.12
2424/36	4.27	26-1/4"	23-7/16"	9.26	4.27	14.02
2824/36	4.92	30-1/4"	23-7/16"	10.88	4.92	15.92
3224/36	5.57	34-1/4"	23-7/16"	12.49	5.57	17.82
3624/36	6.23	38-1/4"	23-7/16"	14.10	6.23	19.72
4024/36	6.88	42-1/4"	23-7/16"	15.71	6.88	21.63

Notes for Traditional Double Hung Windows

- ▶ For Traditional single hungs, deduct 1/4" from the clear opening widths.
- ▶ For Traditional double hung high performance units, deduct 1-1/4" from the clear opening heights.
- ▶ Shaded units meet most national building codes for emergency escape and rescue requirements.

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Product #	Sq. Ft. Clear Oppg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Old World Classic Double Hungs						
3062	8.01	35"	32-15/16"	14.10	8.01	23.04
3066	8.49	35"	34-15/16"	14.97	8.49	24.24
3072	9.46	35"	38-15/16"	16.70	9.46	26.63
30710	10.44	35"	42-15/16"	18.44	10.44	29.02
3086	11.41	35"	46-15/16"	20.17	11.41	31.41
30810	11.89	35"	48-15/16"	21.04	11.89	32.60
3462	8.92	39"	32-15/16"	15.91	8.92	25.19
3466	9.46	39"	34-15/16"	16.89	9.46	26.49
3472	10.55	39"	38-15/16"	18.85	10.55	29.10
34710	11.63	39"	42-15/16"	20.80	11.63	31.72
3486	12.71	39"	46-15/16"	22.76	12.71	34.33
34810	13.25	39"	48-15/16"	23.73	13.25	35.63
3862	9.84	43"	32-15/16"	17.72	9.84	27.33
3866	10.43	43"	34-15/16"	18.81	10.43	28.75
3872	11.63	43"	38-15/16"	20.99	11.63	31.58
38710	12.82	43"	42-15/16"	23.17	12.82	34.42
3886	14.02	43"	46-15/16"	25.34	14.02	37.25
38810	14.61	43"	48-15/16"	26.43	14.61	38.67
4062	10.75	47"	32-15/16"	19.53	10.75	29.48
4066	11.40	47"	34-15/16"	20.73	11.40	31.00
4072	12.71	47"	38-15/16"	23.13	12.71	34.06
40710	14.01	47"	42-15/16"	25.53	14.01	37.11
4086	15.32	47"	46-15/16"	27.93	15.32	40.17
40810	15.97	47"	48-15/16"	29.13	15.97	41.70
4462	11.67	51"	32-15/16"	21.34	11.67	31.62
4466	12.37	51"	34-15/16"	22.65	12.37	33.26
4472	13.79	51"	38-15/16"	25.27	13.79	36.54
44710	15.21	51"	42-15/16"	27.89	15.21	39.81
4486	16.62	51"	46-15/16"	30.52	16.62	43.09
44810	17.33	51"	48-15/16"	31.83	17.33	44.73
4862	12.58	55"	32-15/16"	23.15	12.58	33.76
4866	13.34	55"	34-15/16"	24.57	13.34	35.51
4872	14.87	55"	38-15/16"	27.42	14.87	39.01
48710	16.40	55"	42-15/16"	30.26	16.40	42.51
4886	17.93	55"	46-15/16"	33.10	17.93	46.01
48810	18.69	55"	48-15/16"	34.53	18.69	47.76

Notes for Majesta Double Hung Windows:

There are no standard sizes for Majesta windows.
 Minimum Frame Size = 42" wide x 67-1/2" high
 Minimum Glass Size = 34-5/8" wide x 28-7/16" (per sash)
 Egress Clearance = 37" wide x 24" high

Product #	Sq. Ft. Clear Oppg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
		Width	Height			
Garden-Aire Sliding Patio Doors						
2968	-	-	-	12.46	-	18.61
3368	-	-	-	15.55	-	22.04
3668	-	-	-	17.09	-	23.76
4368	-	-	-	21.71	-	28.91
2980	-	-	-	15.16	-	22.22
3380	-	-	-	18.91	-	26.32
3680	-	-	-	20.78	-	28.37
4380	-	-	-	26.41	-	34.52
5068	12.01	22"	78-5/8"	24.92	12.01	34.35
6068	15.29	28"	78-5/8"	31.09	15.29	41.22
6668	16.93	31"	78-5/8"	34.17	16.93	44.65
8068	21.84	40"	78-5/8"	43.42	21.84	54.96
5080	14.46	22"	94-5/8"	30.31	14.46	41.02
6080	18.40	28"	94-5/8"	37.81	18.40	49.22
6680	20.37	31"	94-5/8"	41.56	20.37	53.32
8080	26.28	40"	94-5/8"	52.81	26.28	65.63
7968	12.01	22"	78-5/8"	37.39	12.01	52.95
9368	15.29	28"	78-5/8"	46.64	15.29	63.26
10068	16.93	31"	78-5/8"	51.26	16.93	68.41
12368	21.84	40"	78-5/8"	65.14	21.84	83.87
7980	14.46	22"	94-5/8"	45.47	14.46	63.23
9380	18.40	28"	94-5/8"	56.72	18.40	75.54
10080	20.37	31"	94-5/8"	62.34	20.37	81.69
12380	26.8	40"	94-5/8"	79.22	26.28	100.15
Garden-Aire Sliding Patio Doors, remodeling sizes						
2866	-	-	-	10.72	-	17.76
3266	-	-	-	14.77	-	21.09
4266	-	-	-	20.73	-	27.76
41166	11.37	21-1/2"	76-1/8"	23.59	11.37	32.75
51166	14.54	27-1/2"	76-1/8"	29.54	14.54	39.41
71166	20.88	39-1/2"	76-1/8"	41.46	20.88	52.74
7766	11.37	21-1/2"	76-1/8"	35.38	11.37	50.52
9166	14.54	27-1/2"	76-1/8"	44.32	14.54	60.51
12166	20.88	39-1/2"	76-1/8"	62.19	20.88	80.49
2968	-	-	-	9.84	-	18.61
3368	-	-	-	12.65	-	22.04
3668	-	-	-	14.06	-	23.76
4368	-	-	-	18.27	-	28.91
2980	-	-	-	12.17	-	22.22
3380	-	-	-	15.65	-	26.32
3680	-	-	-	17.39	-	28.37
4380	-	-	-	22.61	-	34.52
5068	12.01	22"	78-5/8"	19.68	12.01	34.35
6068	15.29	28"	78-5/8"	25.30	15.29	41.22
6668	16.93	31"	78-5/8"	28.11	16.93	44.65
8068	21.84	40"	78-5/8"	36.55	21.84	54.96

NOTE: For the most up-to-date data, please visit www.kolbewindows.com.
 Shaded units meet most national building codes for emergency escape and rescue requirements.

Clear Opening Dimensions

Product #	Sq. Ft. Clear Opg.	Clear Opening		Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim
		Width	Height			
Garden-Aire Sliding Patio Doors – wide stile <i>(continued)</i>						
5080	14.46	22"	94-5/8"	24.35	14.46	41.02
6080	18.40	28"	94-5/8"	31.30	18.40	49.22
6680	20.37	31"	94-5/8"	34.78	20.37	53.32
8080	26.28	40"	94-5/8"	45.21	26.28	65.63
7968	12.01	22"	78-5/8"	29.52	12.01	52.95
9368	15.29	28"	78-5/8"	37.95	15.29	63.26
10068	16.93	31"	78-5/8"	42.17	16.93	68.41
12368	21.84	40"	78-5/8"	54.82	21.84	83.87
7980	14.46	22"	94-5/8"	36.52	14.46	63.23
9380	18.40	28"	94-5/8"	46.95	18.40	75.54
10080	20.37	31"	94-5/8"	52.17	20.37	81.69
12380	26.28	40"	94-5/8"	67.82	26.28	100.15
Garden-Aire Sliding Patio Doors – wide stile, remodeling sizes						
2866	-	-	-	9.25	-	17.76
3266	-	-	-	11.96	-	21.09
4266	-	-	-	17.37	-	27.76
41166	11.37	21-1/2"	76-1/8"	18.50	11.37	32.75
51166	14.54	27-1/2"	76-1/8"	23.91	14.54	39.41
71166	20.88	39-1/2"	76-1/8"	34.74	20.88	52.74
7666	11.37	21-1/2"	76-1/8"	27.75	11.37	50.52
9166	14.54	27-1/2"	76-1/8"	35.87	14.54	60.51
12166	20.88	39-1/2"	76-1/8"	52.11	20.88	80.49

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opg. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
Garden-Aire Sliding Patio Doors – 4-wide								
4-10068	12.32	24.78	22-9/16"	45-3/8"	78-5/8"	49.85	24.78	67.75
4-12068	15.60	31.33	28-9/16"	57-3/8"	78-5/8"	62.18	31.33	81.49
4-16068	22.15	44.43	40-9/16"	81-3/8"	78-5/8"	86.85	44.43	108.97
4-10080	14.83	29.82	22-9/16"	45-3/8"	94-5/8"	60.63	29.82	80.90
4-12080	18.77	37.70	28-9/16"	57-3/8"	94-5/8"	75.63	37.70	97.31
4-16080	26.65	53.47	40-9/16"	81-3/8"	94-5/8"	105.63	53.47	130.12
Garden-Aire Sliding Patio Doors – 4-wide, wide stile								
4-10068	12.32	24.78	22-9/16"	45-3/8"	78-5/8"	39.36	24.78	67.75
4-12068	15.60	31.33	28-9/16"	57-3/8"	78-5/8"	50.60	31.33	81.49
4-16068	22.15	44.43	40-9/16"	81-3/8"	78-5/8"	73.09	44.43	108.97
4-10080	14.83	29.82	22-9/16"	45-3/8"	94-5/8"	48.69	29.82	80.90
4-12080	18.77	37.70	28-9/16"	57-3/8"	94-5/8"	62.60	37.70	97.31
4-16080	26.65	53.47	40-9/16"	81-3/8"	94-5/8"	90.42	53.47	130.12

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opt. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
Inswing Patio Doors – 1-wide								
2666	13.65	-	25-3/4"	-	76-11/32"	8.68	14.65	16.70
3066	16.83	-	31-3/4"	-	76-11/32"	11.37	17.83	20.01
2680	16.53	-	25-3/4"	-	92-7/16"	10.83	17.73	20.08
3080	20.38	-	31-3/4"	-	92-7/16"	14.20	21.58	24.06
Inswing Patio Doors – 2-wide (stationary/active)								
41166	13.65	-	25-3/4"	-	76-11/32"	17.35	14.62	32.81
51166	16.83	-	31-3/4"	-	76-11/32"	22.74	17.80	39.44
41180	16.53	-	25-3/4"	-	92-7/16"	21.67	17.70	39.46
51180	20.38	-	31-3/4"	-	92-7/16"	28.40	21.55	47.42
Inswing Patio Doors – French								
41166	13.65	26.64	25-3/4"	50-1/4"	76-11/32"	17.35	30.12	32.81
51166	16.83	33.00	31-3/4"	62-1/4"	76-11/32"	22.74	36.48	39.44
41180	16.53	32.26	25-3/4"	50-1/4"	92-7/16"	21.67	36.47	39.46
51180	20.38	39.96	31-3/4"	62-1/4"	92-7/16"	28.40	44.17	47.42
Inswing Patio Doors – 3-wide (stationary/active/stationary)								
7566	13.65	-	25-3/4"	-	76-11/32"	26.03	14.62	48.93
81166	16.83	-	31-3/4"	-	76-11/32"	34.11	17.80	58.87
7580	16.53	-	25-3/4"	-	92-7/16"	32.50	17.70	58.83
81180	20.38	-	31-3/4"	-	92-7/16"	42.60	21.55	70.78

Notes for Inswing Patio Doors:

- ▶ For units with ADA-compliant sills, add 5/8" to the clear opening heights.
- ▶ One or both sash open to 90°

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opg. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
Outswing Doors – patio sizes, 1-wide								
2666	13.60	-	25-27/32"	-	75-25/32"	8.68	14.59	17.00
3066	16.76	-	31-27/32"	-	75-25/32"	11.37	17.74	20.31
2680	16.49	-	25-27/32"	-	91-7/8"	10.83	17.69	20.45
3080	20.32	-	31-27/32"	-	91-7/8"	14.20	21.51	24.43
Outswing Doors – patio sizes, 2-wide (stationary/active)								
41166	13.60	-	25-27/32"	-	75-25/32"	17.35	14.57	33.14
51166	16.76	-	31-27/32"	-	75-25/32"	22.74	17.73	39.76
41180	16.49	-	25-27/32"	-	91-7/8"	21.67	17.67	39.86
51180	20.32	-	31-27/32"	-	91-7/8"	28.40	21.49	47.82
Outswing Doors – patio sizes, French units								
41166	13.60	27.13	25-27/32"	51-9/16"	75-25/32"	17.35	30.00	33.14
51166	16.76	33.45	31-27/32"	63-9/16"	75-25/32"	22.74	36.31	39.76
41180	16.49	32.90	25-27/32"	51-9/16"	91-7/8"	21.67	36.37	39.86
51180	20.32	40.55	31-27/32"	63-9/16"	91-7/8"	28.40	44.02	47.82
Outswing Doors – patio sizes, 3-wide (stationary/active/stationary)								
7566	13.60	-	25-27/32"	-	75-25/32"	26.03	14.57	49.26
81166	16.76	-	31-27/32"	-	75-25/32"	34.11	17.73	59.19
7580	16.49	-	25-27/32"	-	91-7/8"	32.50	17.66	59.25
81180	20.32	-	31-27/32"	-	91-7/8"	42.60	21.49	71.19

Notes for Outswing Patio Doors:

- ▶ For units with ADA-compliant sills, add 1-1/8" to the clear opening heights.
- ▶ One or both sash open to 90°.

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opg. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
Inswing Entrance Doors – 1-wide								
2068	11.67	-	21-1/8"	-	79-9/16"	6.93	12.71	14.72
2668	14.99	-	27-1/8"	-	79-9/16"	9.76	16.02	18.17
2868	16.09	-	29-1/8"	-	79-9/16"	10.70	17.13	19.32
3068	18.30	-	33-1/8"	-	79-9/16"	12.59	19.34	21.61
2070	12.26	-	21-1/8"	-	83-9/16"	7.33	13.35	15.43
2670	15.74	-	27-1/8"	-	83-9/16"	10.33	16.83	19.05
2870	16.90	-	29-1/8"	-	83-9/16"	11.33	17.99	20.25
3070	19.22	-	33-1/8"	-	83-9/16"	13.33	20.31	22.66
2080	14.02	-	21-1/8"	-	95-9/16"	8.56	15.26	17.57
2680	18.00	-	27-1/8"	-	95-9/16"	12.05	19.25	21.68
2880	19.33	-	29-1/8"	-	95-9/16"	13.22	20.57	23.05
3080	21.98	-	33-1/8"	-	95-9/16"	15.55	23.23	25.79
Inswing Entrance Doors – 2-wide (stationary/active)								
4068	11.67	-	21-1/8"	-	79-9/16"	13.85	12.68	28.83
5068	14.99	-	27-1/8"	-	79-9/16"	19.51	16.00	35.72
5468	16.09	-	29-1/8"	-	79-9/16"	21.40	17.10	38.02
6068	18.30	-	33-1/8"	-	79-9/16"	25.17	19.31	42.62
4070	12.26	-	21-1/8"	-	83-9/16"	14.67	13.32	30.22
5070	15.74	-	27-1/8"	-	83-9/16"	20.66	16.80	37.45
5470	16.90	-	29-1/8"	-	83-9/16"	22.66	17.96	39.86
6070	19.22	-	33-1/8"	-	83-9/16"	26.65	20.28	44.68
4080	14.02	-	21-1/8"	-	95-9/16"	17.12	15.23	34.41
5080	18.00	-	27-1/8"	-	95-9/16"	24.11	19.21	42.63
5480	19.33	-	29-1/8"	-	95-9/16"	26.44	20.54	45.38
6080	21.98	-	33-1/8"	-	95-9/16"	31.10	23.30	50.86
Inswing Entrance Doors – French								
4068	11.67	22.65	21-1/8"	41"	79-9/16"	13.85	26.28	28.83
5068	14.99	29.28	27-1/8"	53"	79-9/16"	19.51	32.91	35.72
5468	16.09	31.49	29-1/8"	57"	79-9/16"	21.40	35.12	38.02
6068	18.30	35.91	33-1/8"	65"	79-9/16"	25.71	39.54	42.62
4070	12.26	23.79	21-1/8"	41"	83-9/16"	14.67	27.60	30.22
5070	15.74	30.76	27-1/8"	53"	83-9/16"	20.66	34.56	37.45
5470	16.90	33.08	29-1/8"	57"	83-9/16"	22.66	36.89	39.86
6070	19.22	37.72	33-1/8"	65"	83-9/16"	26.65	41.53	44.68
4080	14.02	27.21	21-1/8"	41"	95-9/16"	17.12	31.56	34.41
5080	18.00	35.17	27-1/8"	53"	95-9/16"	24.11	39.53	42.63
5480	19.33	37.83	29-1/8"	57"	95-9/16"	26.44	42.18	45.38
6080	21.98	43.14	33-1/8"	65"	95-9/16"	31.10	47.49	50.86

Notes for Inswing Entrance Doors:

- For units with optional oak or ADA-compliant sills, add 5/8" to the clear opening heights.
- One or both sash open to 90°.

Product #	Sq. Ft. Clear Opg.		Clear Opg. Width		Clear Opg. Ht.	Sq. Ft. D.L.O.	Sq. Ft. Vent	Sq. Ft. of Unit Frame Dim.
	1 Open	2 Open	1 Open	2 Open				
Outswing Entrance Doors – 1-wide								
2068	11.64	-	21-7/32"	-	79"	6.93	12.67	15.04
2668	14.93	-	27-7/32"	-	79"	9.76	15.96	18.48
2868	16.03	-	29-7/32"	-	79"	10.70	17.06	19.63
3068	18.22	-	33-7/32"	-	79"	12.59	19.25	21.92
2070	12.23	-	21-7/32"	-	83"	7.33	13.31	15.77
2670	15.69	-	27-7/32"	-	83"	10.33	16.77	19.37
2870	16.84	-	29-7/32"	-	83"	11.33	17.92	20.58
3070	19.15	-	33-7/32"	-	83"	13.33	20.23	22.98
2080	14.00	-	21-7/32"	-	95"	8.56	15.24	17.95
2680	17.96	-	27-7/32"	-	95"	12.05	19.19	22.06
2880	19.28	-	29-7/32"	-	95"	13.22	20.51	23.43
3080	21.92	-	33-7/32"	-	95"	15.55	23.15	26.17
Outswing Entrance Doors – 2-wide (stationary/active)								
4068	11.64	-	21-7/32"	-	79"	13.85	12.65	29.18
5068	14.93	-	27-7/32"	-	79"	19.51	15.94	36.06
5468	16.03	-	29-7/32"	-	79"	21.40	17.04	38.36
6068	18.22	-	33-7/32"	-	79"	25.17	19.24	42.95
4070	12.23	-	21-7/32"	-	83"	14.67	13.29	30.59
5070	15.69	-	27-7/32"	-	83"	20.66	16.75	37.81
5470	16.84	-	29-7/32"	-	83"	22.66	17.90	40.22
6070	19.15	-	33-7/32"	-	83"	26.65	20.21	45.03
4080	14.00	-	21-7/32"	-	95"	17.12	15.21	34.83
5080	17.96	-	27-7/32"	-	95"	24.11	19.17	43.05
5480	19.28	-	29-7/32"	-	95"	26.44	20.49	45.79
6080	21.91	-	33-7/32"	-	95"	31.10	23.13	51.27
Outswing Entrance Doors – French								
4068	11.64	23.21	21-7/32"	42-5/16"	79"	13.85	26.20	29.18
5068	14.93	29.80	27-7/32"	54-5/16"	79"	19.51	32.78	36.06
5468	16.03	31.99	29-7/32"	58-5/16"	79"	21.40	34.97	38.36
6068	18.22	36.38	33-7/32"	66-5/16"	79"	25.17	39.36	42.95
4070	12.23	24.39	21-7/32"	42-5/16"	83"	14.67	27.52	30.59
5070	15.69	31.30	27-7/32"	54-5/16"	83"	20.66	34.44	37.81
5470	16.84	33.61	29-7/32"	58-5/16"	83"	22.66	36.74	40.22
6070	19.15	38.22	33-7/32"	66-5/16"	83"	26.65	41.36	45.03
4080	14.00	27.91	21-7/32"	42-5/16"	95"	17.12	31.50	34.53
5080	17.96	35.83	27-7/32"	54-5/16"	95"	24.11	39.42	43.05
5480	19.28	38.47	29-7/32"	58-5/16"	95"	26.44	42.06	45.79
6080	21.91	43.75	33-7/32"	66-5/16"	95"	31.10	47.34	51.27

Notes for Outswing Entrance Doors:

- For units with ADA-compliant sills, add 1-1/8" to the clear opening heights.
- One or both sash open to 90°.

NOTE: For the most up-to-date data, please visit www.kolbewindows.com. Shaded units meet most national building codes for emergency escape and rescue requirements.

Energy Performance Data

ENERGY STAR® – United States

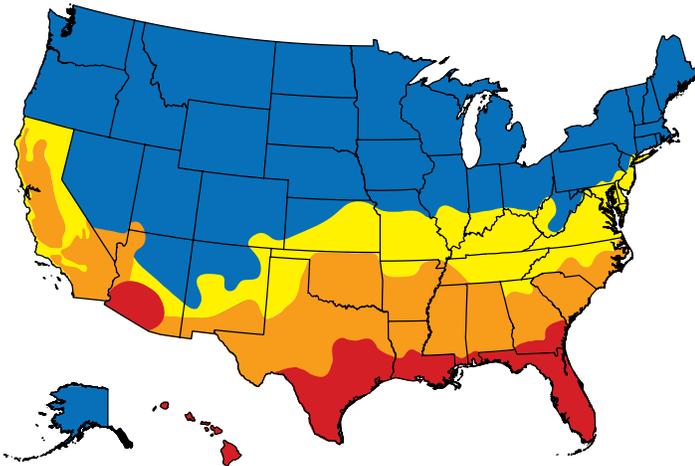


Energy Star is a government-regulated program that was created by the Environmental Protection Agency (EPA), and the U.S. Department of Energy (DOE), to help consumers quickly and easily identify energy saving products.

The Energy Star program uses energy values obtained by window and door manufacturers through the National Fenestration Rating Council (NFRC) program. NFRC ratings are based on the energy performance of the total window or door – both glass and frame.

The Energy Star program for the United States divides the nation into four separate climate zones – Northern, North-Central, South-Central, and Southern.

The performance criteria that needs to be met in order to be Energy Star compliant in a specific climate zone (effective January 1, 2015) is shown in the charts provided.



- Northern
Mostly Heating
- South-Central
Heating & Cooling
- North-Central
Heating & Cooling
- Southern
Mostly Cooling

2015 ENERGY STAR Qualification Criteria for Windows

Climate Zones - U.S.		U-Factor	SHGC
	North-Central	≤ 0.30	≤ 0.40
	South-Central	≤ 0.30	≤ 0.25
	Southern	≤ 0.40	≤ 0.25

**Northern zone windows can meet prescriptive (1st row) or alternative energy performance (2nd & 3rd row) criteria to qualify for ENERGY STAR.

2016 ENERGY STAR Qualification Criteria for Windows

The effective date for the Northern Zone prescriptive and equivalent energy performance criteria for windows is January 1, 2016. North-Central, South-Central, and Southern criteria will continue to follow 2015 guidelines.

Climate Zones - U.S.		U-Factor	SHGC
	Northern**	≤ 0.27	Any
	Northern**	= 0.28	≥ 0.32
	Northern**	= 0.29	≥ 0.37
	Northern**	= 0.30	≥ 0.42

**Northern zone windows can meet prescriptive (1st row) or alternative energy performance (2nd, 3rd, and 4th rows) criteria to qualify for ENERGY STAR.

2015 ENERGY STAR Qualification Criteria for Doors

Glazing	U-Factor	SHGC	
Opaque	≤ 0.17	No rating	
≤ 1/2-Lite	≤ 0.25	≤ 0.25	
> 1/2-Lite	≤ 0.30	Northern North-Central	≤ 0.40
		Southern South-Central	≤ 0.25

California's Title 24

Kolbe's Heritage Series windows and doors can meet the strict California Title 24 Building Energy Efficiency Standards. Talk to your dealer about Heritage Series products with glass options that help meet these stringent energy efficiency requirements, yet have a variety of options for customization.

For energy performance data, visit:
www.kolbewindows.com/energy

Kolbe demonstrates a commitment to providing accurate energy data by having products independently simulated, tested, inspected and listed in the NFRC certification program, and making that data available at kolbewindows.com and on window labels.

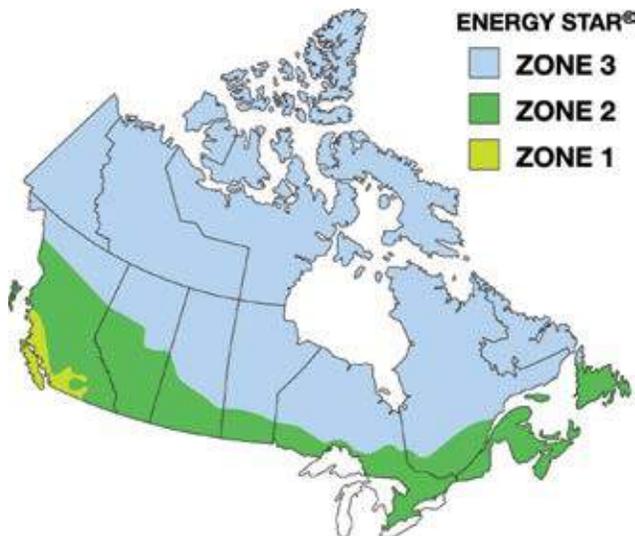
Energy performance data and air, water, structural data is updated on a continuous basis. For the most current information, contact your local Kolbe dealer.

ENERGY STAR® – Canada

Products may comply for Canada's Energy Star program based on these compliance paths: their total U-factor, their Energy Rating (ER), or both. The Energy Rating is based on a product's overall performance based on three criteria: (1) solar heat gain, (2) U-factor, and (3) average air tightness. The higher the ER number, the better the product's thermal performance.



The U-factor and ER criteria for Canada's three climate zones is shown in the charts provided. For more detailed information about their Energy Rating system and Kolbe products that qualify for Canada's Energy Star Program, visit their website at www.oee.nrcan.gc.ca/energystar.



2015 ENERGY STAR – Canada Qualification Criteria for Windows and Sliding Doors†

Zone	COMPLIANCE PATHS		
	Minimum Energy Rating (ER)	or	Maximum U-Factor
1	25	or	≤ 0.28 (Min. ER = 16)
2	29	or	≤ 0.25 (Min. ER = 20)
3	34	or	≤ 0.21 (Min. ER = 24)

2015 ENERGY STAR – Canada Qualification Criteria for Doors†

Zone	COMPLIANCE PATHS		
	Minimum Energy Rating (ER)	or	Maximum U-Factor
1	25	or	≤ 0.28
2	29	or	≤ 0.28
3	34	or	≤ 0.21

†Criteria shown applies to both sliding and hinged doors and in all four climate zones. Doors following the "Maximum U-factor" compliance path do not have a minimum ER requirement.

U-FACTOR CONVERSION	
Imperial	Metric
0.35	2.00
0.32	1.80
0.28	1.60
0.25	1.40
0.21	1.20

Energy Performance Terminology

- ▶ U-Factor refers to a measure of heat transfer through the window or door unit. A lower U-factor means less heat escapes during winter weather, thus reducing heating costs in cold climates.
- ▶ R-Value refers to resistance to heat flow. A high R-value indicates that a window or door has good heat insulating properties.

- ▶ Solar Heat Gain Coefficient (SHGC) is a measure of how much solar energy is passing through the unit's glass. The lower a window or door unit's SHGC, the less solar heat is transmitted into a room, thus allowing for lower cooling bills in hot climates.
- ▶ Visible Transmittance (VT) is a measure of the portion of visible light that passes through a window or door. The higher a window or door unit's VT Total, the more visible light is transmitted into a room. This value is influenced by both the glass selection and by the ratio of glazing and frame area.



KOLBE

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1323 S. 11th Avenue | Wausau, WI 54401-5998
715.842.5666

www.kolbewindows.com

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