

CRESTLINE®

Elite Clad



ALUMINUM CLAD WINDOWS & PATIO DOORS



CHOICES

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Why Crestline® Elite Premium Clad?

We're More Than Just Vanilla Windows

Vanilla ice cream is good, but sometimes you want more choices. It's the same with windows and doors. Instead of settling for the basic, discover the possibilities with Crestline Elite. As you read this brochure, you will see that there are no limits to what you can do when designing your windows and patio doors. With Crestline, if you can dream it, you can have it.

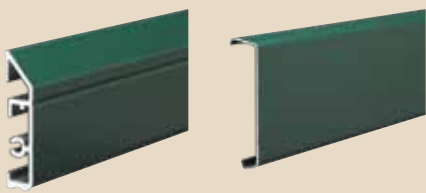
Uncompromising Craftsmanship

Cut corners? Not Crestline. Since 1892, we have been handcrafting some of the finest doors and windows on the market, which means you can count on them to be exceptionally beautiful, reliable, and easy to operate.



OPTIONS, OPTIONS, AND MORE OPTIONS

Crestline offers a full line of new construction and replacement products, all with the options you need to set your home apart. Choose from a wide variety of styles, standard and custom sizes and shapes, elegant wood interiors, unlimited exterior colors, designer hardware colors, and glass, grille and trim options. With so much to choose from, you'll discover the perfect windows and doors for your home.

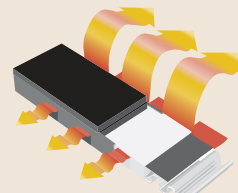


Ours

Other Manufacturers

WORRY-FREE EXTERIORS

Our uniquely designed extruded aluminum cladding is 50% stronger than thin roll-form cladding used on many other windows. And stronger cladding means better protection against water and air infiltration, denting, and fading.



ENERGY-EFFICIENT SYSTEM

Crestline's Real Warm Edge® spacer system bonds the two panes of insulated window or door glass together. This non-metallic spacer limits the amount of heat or cold that passes through the glass, making your home more comfortable.

WOOD SHIELD™ 30-YEAR WARRANTY



Wood components used in the production of Crestline windows and doors are treated with an advanced process called Wood Shield™ that prevents any rot and decay. This warranty coverage includes all wood species offered, with 30-year coverage on clad wood windows.

LOOK BEYOND THE BASIC

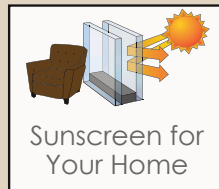
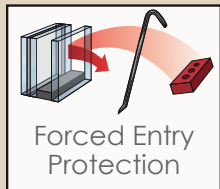
SAVE ENERGY

We build some of the best windows on the market. So it follows that we use the best technology to help you use less energy, spend less to heat and cool your home, and spend less time on maintenance.

Our wide variety of glass options enable you to achieve optimum energy performance and comfort in any climate.



SAFEGUARD™ offers an optional high-strength PVP interlayer creating a strong laminated inside pane of glass that increases resistance against certain impacts, thermal stress, and chemical deterioration. This helps protect your home from intruders, storms, loud sounds, and can even contribute to lower home insurance premiums.



HIGH-PERFORMANCE GLASS

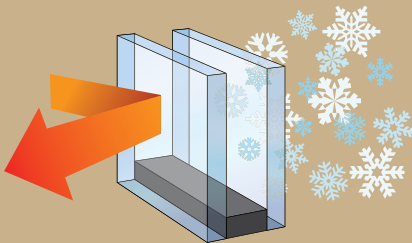
- Zo-e-shield® 5
- Zo-e-shield® 5 Extreme
- Zo-e-shield® 7
- Standard Lo-E
- Lo-E 240 for glare control and comfort
- Inert gas-filled airspace for improved energy efficiency*
- Tinted - Bronze and Gray
- Tempered
- Obscure
- High-altitude
- Safeguard certified



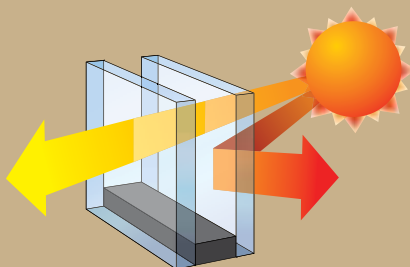
AS AN ENERGY STAR PARTNER, Crestline® has determined that all products bearing the ENERGY STAR logo meet or exceed the ENERGY STAR guidelines for energy efficiency.

* Harmless inert gas increases energy efficiency by minimizing the transfer of warm and cold air. Not available in all states. Check for availability.

COMFORT YEAR ROUND



During the winter, Zo-e-shield® minimizes heat loss, keeping rooms warmer

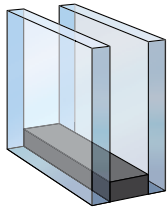


During the summer, Zo-e-shield® reflects the sun's heat, keeping rooms cooler



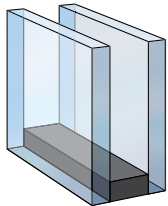
SAVE MONEY, SAVE TIME.

Glass Options



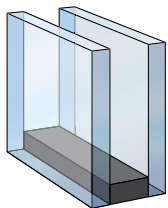
Standard Lo-E²

- 2 panes of glass
- Double layer of Lo-E coating
- Optional inert gas-filled insulating airspace
- Real Warm-Edge[®] spacer



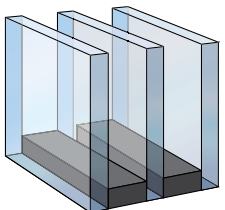
Zo-e-shield 5

- 2 panes of glass
- Triple layer of Lo-E coating
- Optional inert gas-filled insulating airspace
- Real Warm-Edge[®] spacer



Zo-e-shield 5E

- 2 panes of glass
- Triple layer of Lo-E coating
- Extreme Lo-E interior coating
- Optional inert gas-filled insulating airspace
- Real Warm-Edge[®] spacer



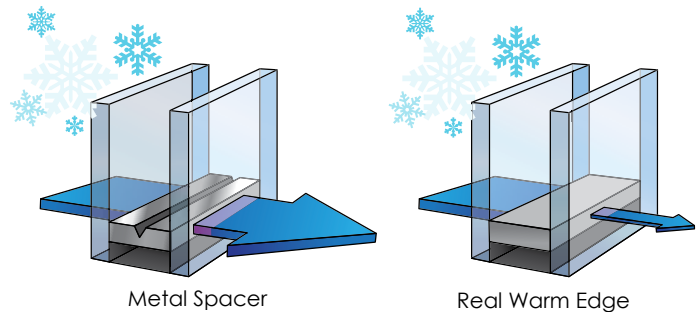
Zo-e-shield 7

- 3 panes of glass
- Multiple layers of Lo-E coating
- Optional 2 inert gas-filled insulating airspaces
- 2 Real Warm-Edge[®] spacers
- Available in casements, awnings, pictures and special shapes



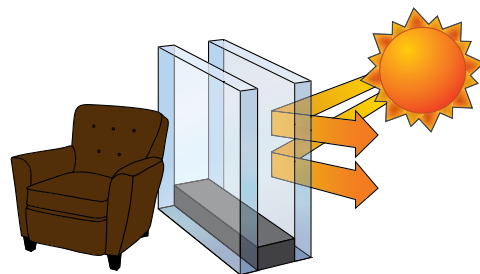
What is Zo-e-shield[®] Glass?

Zo-e-shield[®] was designed for comfort and engineered for efficiency. Below are just a few of the added benefits of Zo-e-shield[®] glass. To learn more go to zoeshield.com.



REAL WARM-EDGE[®] SPACER

Crestline[®]'s Real Warm-Edge[®] spacer has no metal to transfer temperatures. This improves the efficiency of the glass and reduces condensation and frost build-up.



SUNSCREEN FOR YOUR HOME

Furniture and flooring can be easily damaged by the sun. Crestline's Zo-e-shield[®] glass will filter out 95% of the harmful UV rays.



IMAGINE

The right interior can make an ordinary room extraordinary. Crestline® Elite offers premium pine interiors (standard), as well as an array of hardwood options, including oak, maple, alder (knotty), cherry, mahogany, and vertical grain Douglas fir. So you can order a cherry interior for your den, a standard pine interior for your kitchen, or choose a wood that coordinates with your home's moldings and trim.

Interior Finish Choices

All Elite windows and doors have a ready-to-finish wood interior. Or choose one of our prefinish options and we'll prime, paint, seal or stain your interiors for you, saving you time, work and money.

FACTORY-STAINED INTERIORS

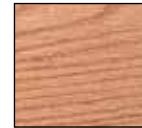
Our optional factory-stained pine or oak interiors feature two Clear Satin top coats for a beautiful, long-wearing finish. Best of all, they cost up to 50% less than staining them yourself.

- Five-step factory finish is applied to components prior to assembly for maximum coverage and protection
- Wood is stained and sealed on all surfaces—not just the top and sides—to seal out moisture
- Windows and doors arrive prefinished and ready to install—no additional work required

SOLID WOOD INTERIORS



Pine (Standard)



Oak



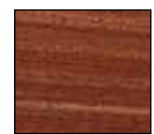
Maple



Alder (Knotty)



Cherry



Mahogany



Douglas Fir

Wood within same species may vary in color and grain.

Crestline reserves the right to substitute ash for oak. These two hardwoods are virtually identical in color, texture, grain variation and finishing characteristics.

FACTORY FINISHES



Clear Satin



Golden Oak Stain



Fruitwood Stain



Chestnut Stain



Painted White

Stains available on pine and oak.

Colors are approximate

ACCENTUATE YOUR WINDOWS

Our grille program has more flexibility so you have more options. Choose from distinctive grille styles, multiple configurations, and standard Prairie, Colonial and Gothic patterns. Or request a custom pattern that's all your own.



5/8" Flat Grilles in Airspace



5/8", 3/4" and 15/16" Profiled Grilles in Airspace



7/8" Perimeter Removable Wood Grilles



5/8", 7/8", 1-1/8" and 2" Simulated Divided Lites

Grille in Airspace. Prefinished aluminum grilles situated between the window panes where they are safe from dust, dirt and damage.

Two-Toned Grilles. 3/4" profiled aluminum grilles finished white on the interior with any of our 8 standard clad colors on the exterior.

Perimeter Removable Wood Grilles. Grilles that snap on and off of your window's interior for easy cleaning.

Simulated Divided Lites. Combines historically authentic grilles on the interior and exterior surfaces of your glass with grille work between the glass; stronger, more energy efficient and more affordable than true divided lites.

...YOUR PERFECT HOME.

Exterior Trim Options

ALUMINUM-CLAD TRIM



7/8" Brickmould



1-11/16" Brickmould*



3-5/16" Flat Casing*



3-5/16" Historical Brickmould*

*Factory-applied trims will require masonry straps for installation.

Exterior Color Options

Our extruded aluminum-clad exteriors come in 8 standard colors so you have more choices—all at no additional cost. Want more options? Upgrade to one of our 47 Designer Series colors. Or request a custom color; anything is possible with our Custom Color-Match process.

STANDARD COLORS



White



Almond



Cream



Taupe



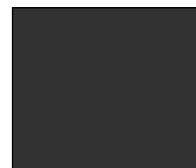
Hunter Green



Brown



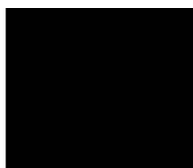
Brick Red



Dark Bronze



Charcoal Black



Jet Black



Terra Bronze



47 Designer Series Colors



Custom Color Match

Colors are approximate

GRILLE PATTERNS



Prairie and Colonial Patterns



Custom Patterns

ACCENTUATE

Patterns may be affected by glass size. Drawings required for custom patterns.

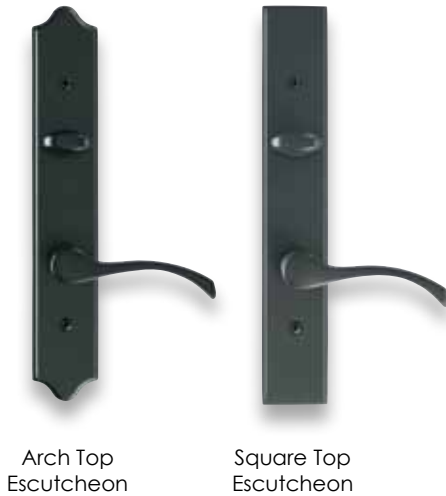
ACCENTUATE YOUR DÉCOR

Add an elegant touch to any room with our Crestline® Elite hardware styles and finishes. We offer a wide assortment of colors so you can achieve the look you envision for your home.

Patio Door Hardware/Finishes



PREMIUM-STYLE HINGED DOOR



SLIDING DOOR



Window Hardware/Finishes



Double Hung Cam-Action Lock



Folding Casement and Awning Operator

Colors are approximate

THE RESULTS STAND FOR THEMSELVES



Crestline is one of the few window manufacturers that certify and label their products according to AAMA (American Architectural Manufacturers Association). This elite certification program assures the highest level of quality and performance.

Crestline's unique design allows most products to achieve structural performance levels required in high wind areas.

A Time-Honored Classic

Our classic double hung windows are popular for their timeless beauty and ease of use. Both sash open so you can enjoy fresh air from both portions of your window at the same time. Select from a variety of grille options.

Security for Your Home



Our stylish recessed lock and concealed keeper look great and create a secure, weathertight seal.

Count on Our Construction

From the solid wood construction to the Innovative Constant Force Balance™ system, Crestline® Elite double hung windows outperform. Recessed latches enable you to tilt or remove both sash for cleaning. A built-in lift rail eliminates unnecessary hardware, keeping a clean look.



OPTIONAL WOOD JAMB

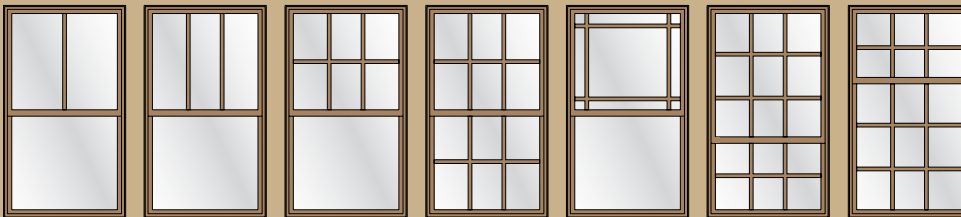
An optional vinyl jamb liner with a solid wood insert is available to conceal the balance system. All hardwood species have a matching insert; pine units have a maple insert. Clad units also have a matching exterior clad filler.



CREATE AN ANGLE BAY

Add drama to your room with multiple double hung windows combined into an elegant 30° or 45° angle bay.

OPTIONAL COLONIAL AND PRAIRIE GRILLE PATTERNS



Patterns may be affected by glass size.
Drawing required for custom patterns.

Oriel Style

Cottage Style

DOUBLE HUNG WINDOWS





CONTEMPORARY DESIGN

Crestline® Elite's double gliding windows add contemporary sophistication to your home, and are an ideal choice when outdoor space does not accommodate a crank-out sash.

Versatile and Energy Efficient Option For any Space

Gliding windows are classically styled, with understated simplicity and ease-of-use. The sash glide effortlessly to allow an abundance of fresh air inside.

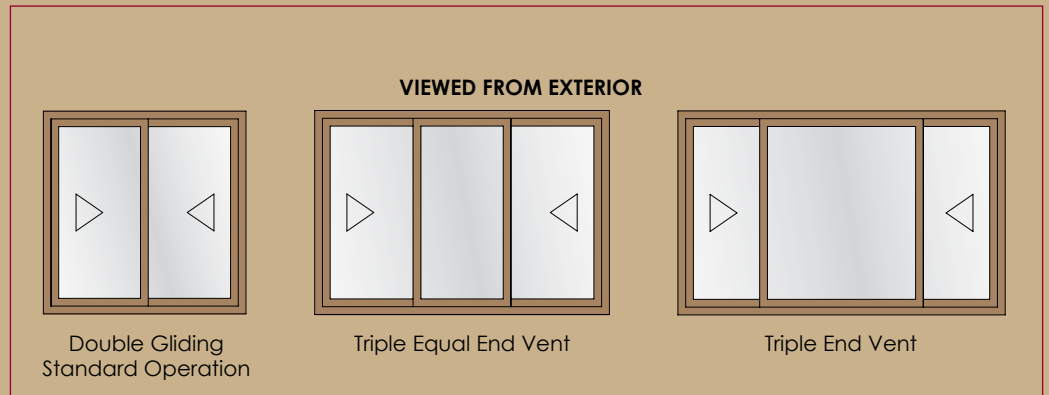
Simplify Window Cleaning



To make cleaning less of a chore, both sash tilt in for easy removal.

Feel How Easily They Work

Horizontally operating sash glide effortlessly on durable nylon rollers and a smooth nylon track.



DOUBLE GLIDING WINDOWS

Have Peace of Mind



Durable, all metal locks ensure the sash holds tight to the frame. Each lock is profiled to match the contours of the wood frame.

Fold Down the Handles

After opening or closing your casement or awning window simply fold the handle out of the way. Made of durable metal for smooth operation, the handle nests in its own keeper for added convenience and visual appeal. Corrosion-resistant seacoast hardware is also available.



Breathe Easier



Crestline® Elite awning windows are the perfect choice for allowing ventilation in tight areas.



AWNING WINDOWS

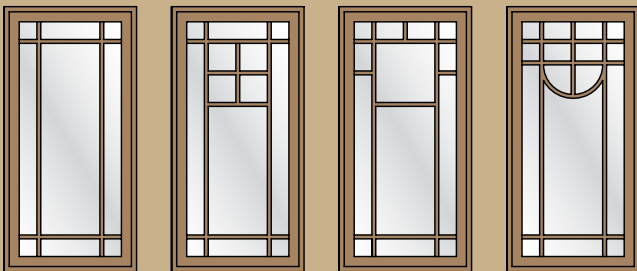
Stacked columns. Running ribbons of glass. Dramatic blocks of light. Create imaginative home designs without forsaking function.



CREATE A BOW OR ANGLE BAY WINDOW

Combine a series of casements to create the graceful curves of a bow window or the dramatic dimensions of a 30° or 45° angle bay.

OPTIONAL COLONIAL AND PRAIRIE GRILLE PATTERNS



Patterns may be affected by glass size.
Drawing required for custom patterns.



CASEMENT/AWNING WINDOWS





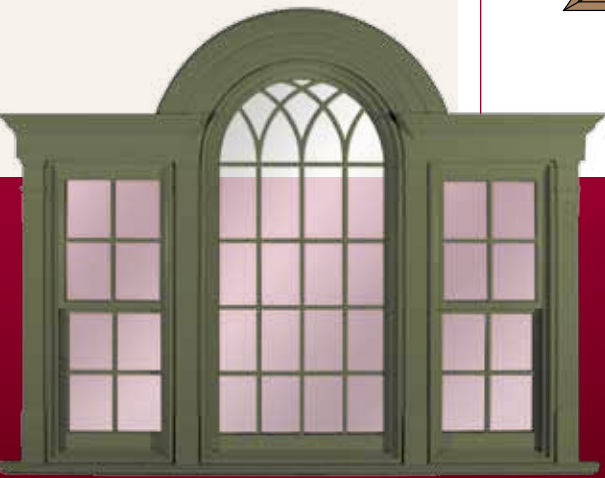
CREATE A SHAPE

If you can imagine it, we can build it. After all, no one should put limits on your creativity.



TRUE CUSTOM WINDOWS

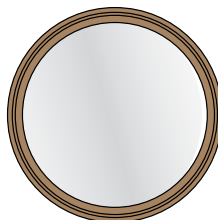
Individually crafted to fit your unique design and dimensions. The results? A one-of-a-kind window you won't find in any other home.



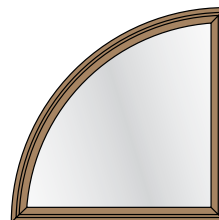
Your Window, Your Way

We make custom windows every day, so there's no need to settle for the basics. Whatever you envision for your home—geometric shapes, half rounds, radius tops, and custom shapes—you can have.

Every Crestline® Elite window and door is available in custom sizes, made to your specifications for a perfect fit.



Full Circle



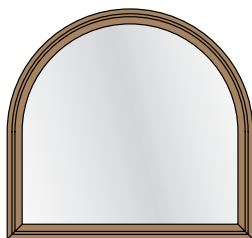
Quarter Circle



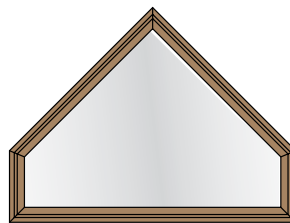
Eye brow



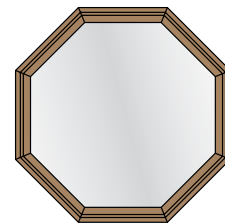
Ellipse



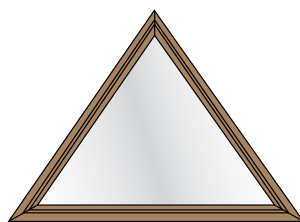
Extended Half Circle



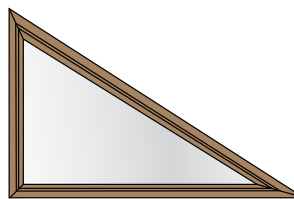
Pentagon



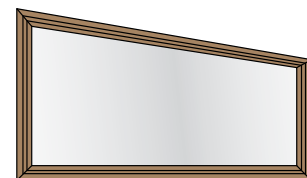
Octagon



Isosceles Triangle



Right Triangle



Trapezoid

Interested in additional shapes? Ask about our complete selection.

SPECIALTY SHAPED WINDOWS

Added Security for Your Home



Our sliding patio doors have an optional spring-loaded foot bolt that you can lock even when the door is open.

Comfortable Handles

Our sliding patio doors come standard with ergonomically correct handles for easy, comfortable use.



Worry-Free Operation

All of our sliding patio doors have adjustable, heavy-duty dual tandem rollers so your door glides easily, time after time.

We Have Style

Our French-style patio doors feature wide stiles and rails for a classic look.

Our traditional sliding patio doors have narrow stiles and rails and more glass to expand your view.

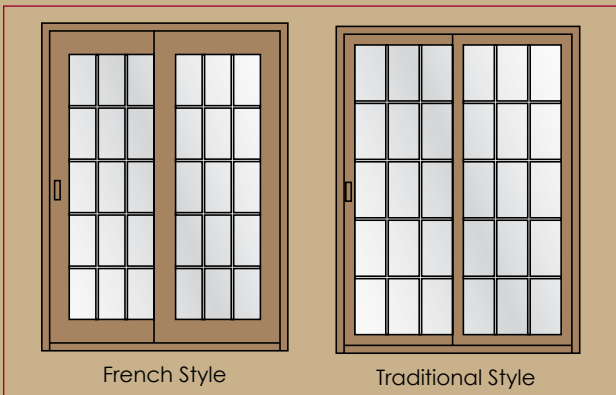


CLASSIC OR CONTEMPORARY

Whether your home is casual or elegant, Crestline® Elite has the patio doors to complement your style.



DUAL TANDEM ROLLERS



SLIDING PATIO DOORS



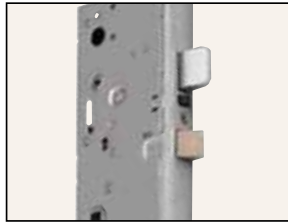
TRANSFORM YOUR ROOM
With the architectural details
of our hinged patio doors.



ACCENTUATE YOUR ARCHITECTURE
Choose our optional raised panel
for a more historical appearance.



Be Secure



All hinged doors are equipped with a corrosion-resistant locking system that secures the door at multiple locations with the turn of a handle.

Get a Better Fit

Our hinged patio doors come with four fully adjustable hinges—versus the industry standard of three—to ensure proper fit, proper swing, and an energy-efficient seal.



Get Extra-Strong Doors



Our optional, premium heavy-duty doors have 2-1/4" solid wood core panels for extra strength and durability.

In-Swing and Out-Swing Designs

Center hinged and French in-swing and out-swing styles are available in standard and custom heights from 6' 8" all the way to 10' 0" so you can get the door that's perfect for your home.



HINGED PATIO DOORS



Technical Specifications

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Double-Hung Window (8109) Elevations

Unit Dimension	1'-5 1/2"	1'-11 1/2"	2'-5 1/2"	2'-7 1/2"	2'-9 1/2"	2'-11 1/2"	3'-1 1/2"	3'-5 1/2"	3'-11 1/2"
Rough Opening	1'-6"	2'-0"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	4'-0"
Soft Metric R.O. (mm)	457	610	762	813	864	914	965	1067	1219
Glass Size	12"	18"	24"	26"	28"	30"	32"	36"	42"
2'-11 1/2"									
3'-0"									
3'-5 1/2"									
3'-11 1/2"									
4'-0"									
4'-5 1/2"									
4'-7 1/2"									
4'-8"									
4'-11 1/2"									
5'-0"									
5'-1 1/2"									
5'-2"									
5'-5 1/2"									
5'-6"									
5'-11 1/2"									
6'-0"									

Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".
Verify local or state egress opening sizes with your local building inspector.

Double-Hung Window (8109) Elevations

Unit Dimension	1'-5 1/2"	1'-11 1/2"	2'-5 1/2"	2'-7 1/2"	2'-9 1/2"	2'-11 1/2"	3'-1 1/2"	3'-5 1/2"	3'-11 1/2"
Rough Opening	1'-6"	2'-0"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	4'-0"
Soft Metric R.O. (mm)	457	610	762	813	864	914	965	1067	1219
Glass Size	12"	18"	24"	26"	28"	30"	32"	36"	42"

6'-5 1/2"									
6'-6"									
6'-11 1/2"									
7'-0"									
7'-11 1/2"									

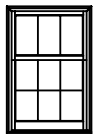
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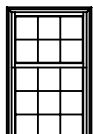
Optional Sash Configurations

Available for these heights, and all widths.

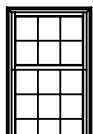
Cottage Sash Configuration



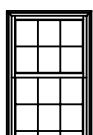
CO-2840



CO-2846

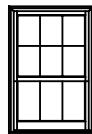


CO-2848

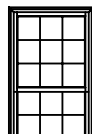


CO-2850

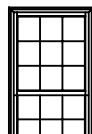
Oriel Sash Configuration



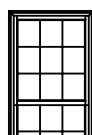
OR-2840



OR-2846

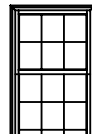


OR-2848

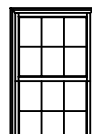


OR-2850

Cottage Sash Configuration

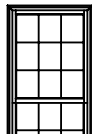


CO-2852

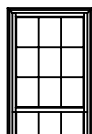


CO-2856

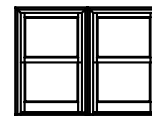
Oriel Sash Configuration



OR-2852

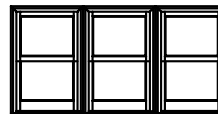


OR-2856



2 - Wide
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DH2-16	2'-11 1/16"	2'-11 9/16"	903
DH2-20	3'-11 1/16"	3'-11 9/16"	1208
DH2-26	4'-11 1/16"	4'-11 9/16"	1208
DH2-28	5'-3 1/16"	5'-3 9/16"	1411
DH2-210	5'-7 1/16"	5'-7 9/16"	1716
DH2-30	5'-11 1/16"	5'-11 9/16"	1818
DH2-32	6'-3 1/16"	6'-3 9/16"	1919
DH2-40	7'-11 1/16"	7'-11 9/16"	2427



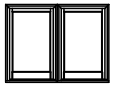
3 - Wide
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DH3-16	4'-4 5/8"	4'-5 1/8"	1372
DH3-20	5'-10 5/8"	5'-11 1/8"	1807
DH3-26	7'-4 5/8"	7'-5 1/8"	2264
DH3-28	7'-10 5/8"	7'-11 1/8"	2416
DH3-210	8'-4 5/8"	8'-5 1/8"	2569
DH3-30	8'-10 5/8"	8'-11 1/8"	2721
DH3-32	9'-4 5/8"	9'-5 1/8"	2873
DH3-40	11'-10 5/8"	11'-11 1/8"	3635

Double-Hung Picture Window (8116) Elevations

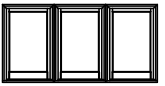
Unit Dimension	1'-5 1/2"	1'-11 1/2"	2'-5 1/2"	2'-7 1/2"	2'-9 1/2"	2'-11 1/2"	3'-1 1/2"	3'-5 1/2"	3'-11 1/2"
Rough Opening	1'-6"	2'-0"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	4'-0"
Soft Metric R.O. (mm)	457	610	762	813	864	914	965	1067	1219
Glass Size	12"	18"	24"	26"	28"	30"	32"	36"	42"

1630	2030	2630	2830	21030	3030	3230	3630	4030
1636	2036	2636	2836	21036	3036	3236	3636	4036
1640	2040	2640	2840	21040	3040	3240	3640	4040
1646	2046	2646	2846	21046	3046	3246	3646	4046
1648	2048	2648	2848	21048	3048	3248	3648	4048
1650	2050	2650	2850	21050	3050	3250	3650	4050
1652	2052	2652	2852	21052	3052	3252	3652	4052
1656	2056	2656	2856	21056	3056	3256	3656	4056
1660	2060	2660	2860	21060	3060	3260	3660	4060
1666	2066	2666	2866	21066	3066	3266	3666	4066
1670	2070	2670	2870	21070	3070	3270	3670	4070



2 - Wide
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DHP2-16	2'-11 1/16"	2'-11 9/16"	903
DHP2-20	3'-11 1/16"	3'-11 9/16"	1208
DHP2-26	4'-11 1/16"	4'-11 9/16"	1208
DHP2-28	5'-3 1/16"	5'-3 9/16"	1411
DHP2-210	5'-7 1/16"	5'-7 9/16"	1716
DHP2-30	5'-11 1/16"	5'-11 9/16"	1818
DHP2-32	6'-3 1/16"	6'-3 9/16"	1919
DHP2-40	7'-11 1/16"	7'-11 9/16"	2427



3 - Wide
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DHP3-16	4'-4 5/8"	4'-5 1/8"	1372
DHP3-20	5'-10 5/8"	5'-11 1/8"	1807
DHP3-26	7'-4 5/8"	7'-5 1/2"	2264
DHP3-28	7'-10 5/8"	7'-11 1/8"	2416
DHP3-210	8'-4 5/8"	8'-5 1/8"	2569
DHP3-30	8'-10 5/8"	8'-11 1/8"	2721
DHP3-32	9'-4 5/8"	9'-5 1/8"	2873
DHP3-40	11'-10 5/8"	11'-11 1/8"	3635

Verify local or state egress opening sizes with your local building inspector.

Double-Hung Transom Window (8117) Elevations

Unit Dimension	1'-5 1/2"	1'-11 1/2"	2'-5 1/2"	2'-7 1/2"	2'-9 1/2"	2'-11 1/2"	3'-1 1/2"	3'-5 1/2"	3'-11 1/2"
Rough Opening	1'-6"	2'-0"	2'-6"	2'-8"	2'-10"	3'-0"	3'-2"	3'-6"	4'-0"
Soft Metric R.O. (mm)	457	610	762	813	864	914	965	1067	1219
Glass Size	12"	18"	24"	26"	28"	30"	32"	36"	42"

1'-5 1/2"									
1'-7 1/2"									
1'-11 1/2"									
2'-5 1/2"									
2'-11 1/2"									

2 - Wide

Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DHT2-16	2'-11 1/16"	2'-11 9/16"	903
DHT2-20	3'-11 1/16"	3'-11 9/16"	1208
DHT2-26	4'-11 1/16"	4'-11 9/16"	1208
DHT2-28	5'-3 1/16"	5'-3 9/16"	1411
DHT2-210	5'-7 1/16"	5'-7 9/16"	1716
DHT2-30	5'-11 1/16"	5'-11 9/16"	1818
DHT2-32	6'-3 1/16"	6'-3 9/16"	1919
DHT2-40	7'-11 1/16"	7'-11 9/16"	2427

3 - Wide

Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
DHT3-16	4'-4 5/8"	4'-5 1/8"	1372
DHT3-20	5'-10 5/8"	5'-11 1/8"	1807
DHT3-26	7'-4 5/8"	7'-5 1/2"	2264
DHT3-28	7'-10 5/8"	7'-11 1/8"	2416
DHT3-210	8'-4 5/8"	8'-5 1/8"	2569
DHT3-30	8'-10 5/8"	8'-11 1/8"	2721
DHT3-32	9'-4 5/8"	9'-5 1/8"	2873
DHT3-40	11'-10 5/8"	11'-11 1/8"	3635

Verify local or state egress opening sizes with your local building inspector.

Double-Hung Window (8109) Opening Specifications

Call Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Top of Subfloor to Top of Sill Stop ^a	Sq. Ft. Overall Unit Area ^b
		Width	Height				
1630	1.217	13.914	12.600	1.938	1.217	48.063	4.31
1636	1.507	13.914	15.600	2.397	1.507	42.063	5.04
1640	1.797	13.914	18.600	2.855	1.797	36.063	5.77
1646	2.087	13.914	21.600	3.313	2.087	30.063	6.50
1648	2.184	13.914	22.600	3.466	2.184	28.063	6.74
1650	2.377	13.914	24.600	3.772	2.377	24.063	7.23
1656	2.667	13.914	27.600	4.230	2.667	42.063	7.96
1660	2.957	13.914	30.600	4.688	2.957	36.063	8.69
1666	3.013	13.914	31.180	5.147	3.013	30.063	9.42
1670	3.013	13.914	31.180	5.605	3.013	24.063	10.15
2030	1.742	19.914	12.600	2.996	1.742	48.063	5.79
2036	2.157	19.914	15.600	3.704	2.157	42.063	6.77
2040	2.572	19.914	18.600	4.412	2.572	36.063	7.75
2046	2.987	19.914	21.600	5.121	2.987	30.063	8.73
2048	3.125	19.914	22.600	5.357	3.125	28.063	9.06
2050	3.402	19.914	24.600	5.829	3.402	24.063	9.71
2056	3.817	19.914	27.600	6.537	3.817	42.063	10.69
2060	4.232	19.914	30.600	7.246	4.232	36.063	11.67
2066	4.095	19.914	29.610	7.954	4.095	30.063	12.65
2070	4.095	19.914	29.610	8.662	4.095	24.063	13.63
2630	2.267	25.914	12.600	4.053	2.267	48.063	7.27
2636	2.807	25.914	15.600	5.011	2.807	42.063	8.50
2640	3.347	25.914	18.600	5.970	3.347	36.063	9.73
2646	3.887	25.914	21.600	6.928	3.887	30.063	10.96
2648	4.067	25.914	22.600	7.247	4.067	28.063	11.37
2650	4.427	25.914	24.600	7.886	4.427	24.063	12.19
2656	4.967	25.914	27.600	8.845	4.967	42.063	13.42
2660	5.329	25.914	29.610	9.803	5.329	36.063	14.65
2666	5.329	25.914	29.610	10.761	5.329	30.063	15.88
2670	5.329	25.914	29.610	11.720	5.329	24.063	17.11
2830	2.442	27.914	12.600	4.405	2.442	48.063	7.77
2836	3.024	27.914	15.600	5.447	3.024	42.063	9.08
2840	3.606	27.914	18.600	6.489	3.606	36.063	10.39
2846	4.187	27.914	21.600	7.530	4.187	30.063	11.70
2848	4.381	27.914	22.600	7.878	4.381	28.063	12.14
2850	4.769	27.914	24.600	8.572	4.769	24.063	13.02
2856	5.350	27.914	27.600	9.614	5.350	42.063	14.33
2860	5.740	27.914	29.610	10.655	5.740	36.063	15.64
2866	5.740	27.914	29.610	11.697	5.740	30.063	16.95
2870	5.740	27.914	29.610	12.739	5.740	24.063	18.27
21030	2.617	29.914	12.600	4.758	2.617	48.063	8.26
21036	3.241	29.914	15.600	5.883	3.241	42.063	9.65
21040	3.864	29.914	18.600	7.008	3.864	36.063	11.05
21046	4.487	29.914	21.600	8.133	4.487	30.063	12.45
21048	4.695	29.914	22.600	8.508	4.695	28.063	12.91
21050	5.110	29.914	24.600	9.258	5.110	24.063	13.84
21056	5.734	29.914	27.600	10.383	5.734	42.063	15.24
21060	6.151	29.914	29.610	11.508	6.151	36.063	16.63
21066	6.151	29.914	29.610	12.633	6.151	30.063	18.03
21070	6.151	29.914	29.610	13.758	6.151	24.063	19.43

Verify local or state egress opening sizes with your local building inspector.

DOUBLE HUNG

Double-Hung Window (8109) Opening Specifications

Call Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Top of Subfloor to Top of Sill Stop ^a	Sq. Ft. Overall Unit Area ^b
		Width	Height				
3030	2.792	31.914	12.600	5.110	2.792	48.063	8.75
3036	3.457	31.914	15.600	6.319	3.457	42.063	10.23
3040	4.122	31.914	18.600	7.527	4.122	36.063	11.71
3046	4.787	31.914	21.600	8.735	4.787	30.063	13.19
3048	5.009	31.914	22.600	9.138	5.009	28.063	13.68
3050	5.452	31.914	24.600	9.944	5.452	24.063	14.67
3050(E)	5.701	31.914	25.724	9.944	5.701	24.063	14.67
3052	5.701	31.914	25.724	10.346	5.701	22.063	15.16
3056	6.117	31.914	27.600	11.152	6.117	42.063	16.15
3060	6.562	31.914	29.610	12.360	6.562	36.063	17.63
3066	6.562	31.914	29.610	13.569	6.562	30.063	19.11
3070	6.562	31.914	29.610	14.777	6.562	24.063	20.59
3149(E)	5.721	33.664	24.474	10.010	5.721	26.563	14.74
3230	2.967	33.914	12.600	5.463	2.967	48.063	9.24
3236	3.674	33.914	15.600	6.754	3.674	42.063	10.81
3240	4.381	33.914	18.600	8.046	4.381	36.063	12.37
3246	5.087	33.914	21.600	9.338	5.087	30.063	13.93
3248	5.323	33.914	22.600	9.768	5.323	28.063	14.45
3250	5.794	33.914	24.600	10.629	5.794	24.063	15.49
3256	6.500	33.914	27.600	11.921	6.500	42.063	17.06
3260	6.974	33.914	29.610	13.213	6.974	36.063	18.62
3266	6.974	33.914	29.610	14.504	6.974	30.063	20.18
3270	6.974	33.914	29.610	15.796	6.974	24.063	21.74
3630	3.317	37.914	12.600	6.168	3.317	48.063	10.23
3636	4.107	37.914	15.600	7.626	4.107	42.063	11.96
3640	4.897	37.914	18.600	9.084	4.897	36.063	13.69
3646	5.687	37.914	21.600	10.543	5.687	30.063	15.42
3648	5.950	37.914	22.600	11.029	5.950	28.063	15.99
3650	6.477	37.914	24.600	12.001	6.477	24.063	17.15
3656	7.267	37.914	27.600	13.459	7.267	42.063	18.88
3660	7.796	37.914	29.610	14.918	7.796	36.063	20.61
3666	7.796	37.914	29.610	16.376	7.796	30.063	22.34
3670	7.368	37.914	27.986	17.834	7.368	24.063	24.06
4030	3.842	43.914	12.600	7.225	3.842	48.063	11.71
4036	4.757	43.914	15.600	8.933	4.757	42.063	13.69
4040	5.672	43.914	18.600	10.641	5.672	36.063	15.67
4046	6.587	43.914	21.600	12.350	6.587	30.063	17.65
4048	6.892	43.914	22.600	12.919	6.892	28.063	18.31
4050	7.502	43.914	24.600	14.058	7.502	24.063	19.63
4056	8.417	43.914	27.600	15.766	8.417	42.063	21.61
4060	8.535	43.914	27.986	17.475	8.535	36.063	23.59
4066	8.535	43.914	27.986	19.183	8.535	30.063	25.56
4070	8.535	43.914	27.986	20.891	8.535	24.063	27.54

Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".

^aFloor to bottom of clear opening dimensions are based on 82" header height.

All units over 66 height are based off 106" header height for floor to clear opening dimension

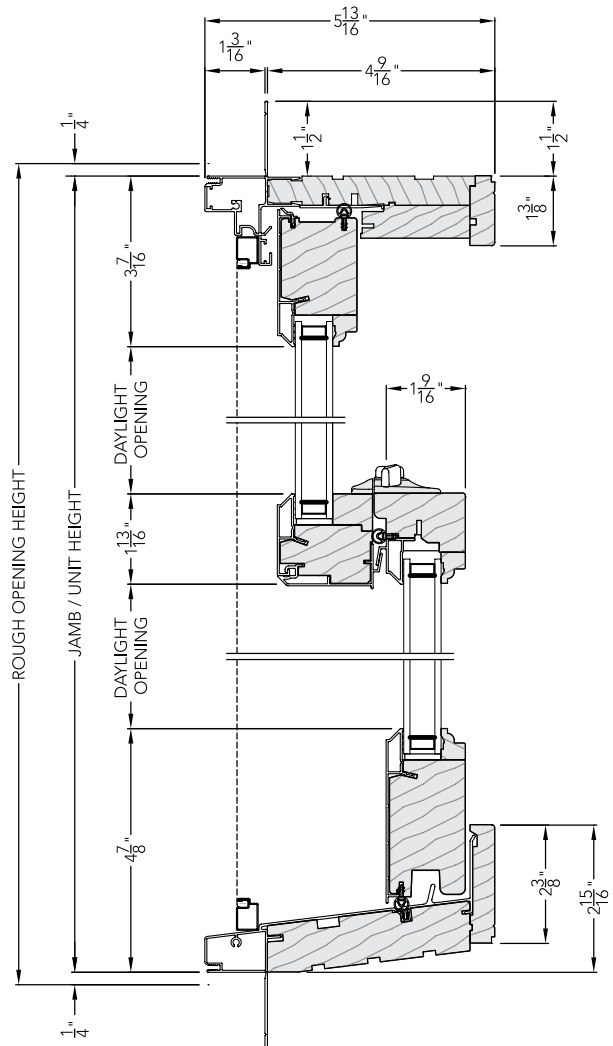
^bSq. Ft. Overall Unit Area is calculated on the jamb dimension.

3050 (E) and 3149 (E) have a slightly modified sash proportion to meet egress. Top sash glass is 2" taller than the bottom. Sash stop must be removed to meet egress requirements.

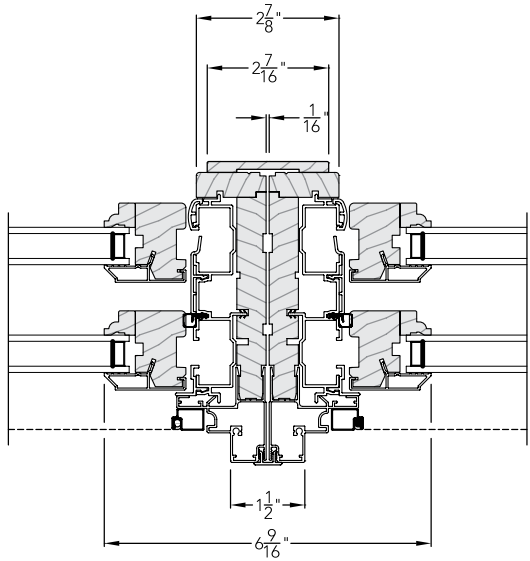
3052 R.O. (36" x 62") meets egress when sash stop is not used.

Verify local or state egress opening sizes with your local building inspector.

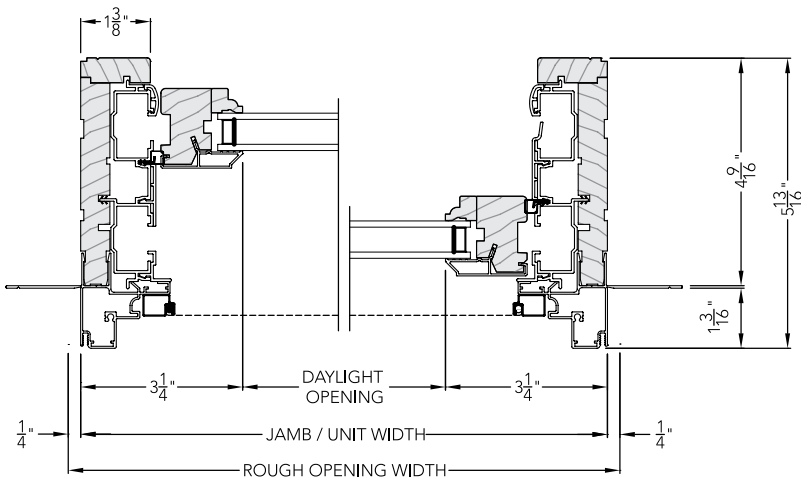
Double-Hung (8109) Cross Sections



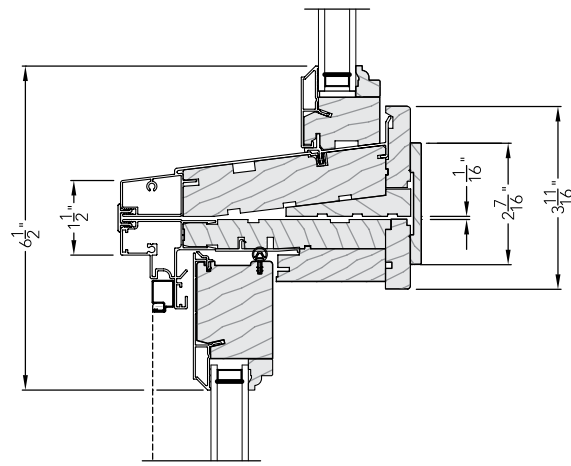
ELITE PREMIUM CLAD DOUBLE HUNG WINDOW
Vertical Section



ELITE PREMIUM CLAD DOUBLE HUNG WINDOW
Horizontal Mull Section - DH / DH

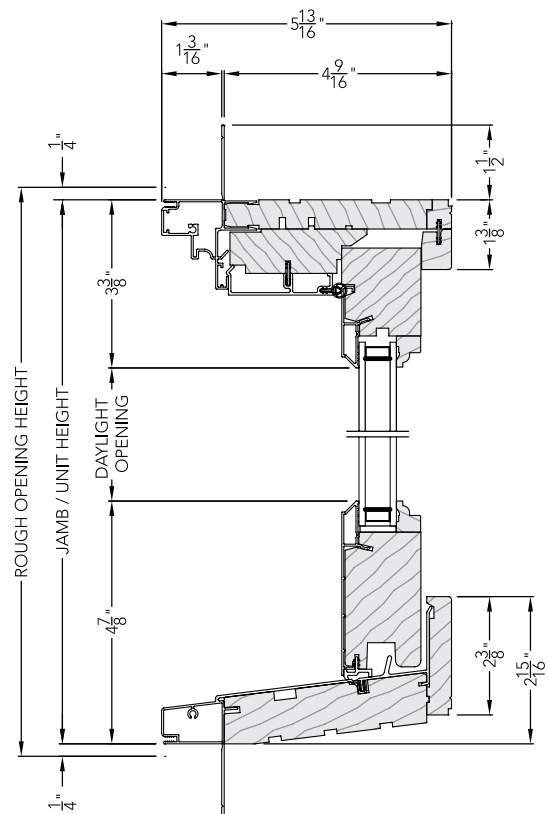


ELITE PREMIUM CLAD DOUBLE HUNG WINDOW
Horizontal Section

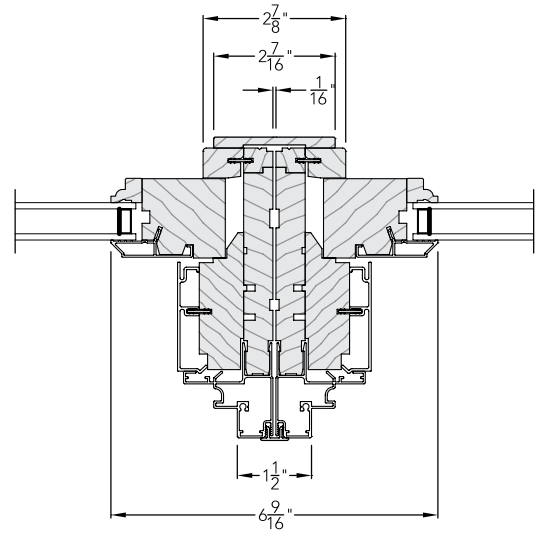


ELITE PREMIUM CLAD DOUBLE HUNG WINDOW
Vertical Section - Transom Stack over DH

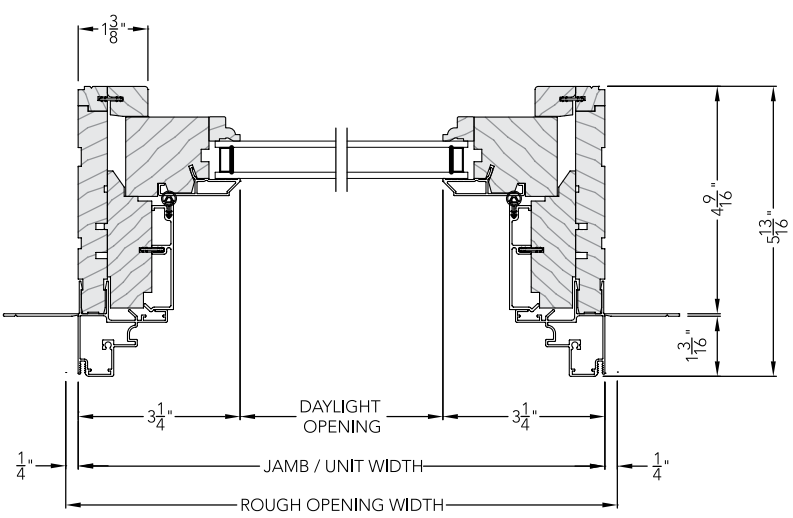
Double-Hung (8116/8117) Cross Sections



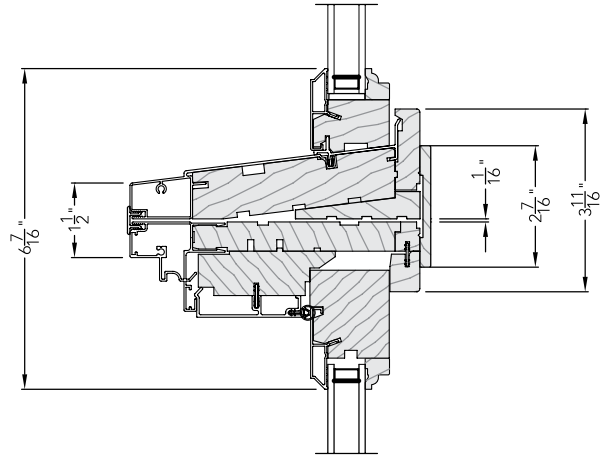
ELITE PREMIUM CLAD DOUBLE HUNG PICTURE
Vertical Section



ELITE PREMIUM CLAD DOUBLE HUNG PICTURE
Horizontal Mull Section - Picture / Picture



ELITE PREMIUM CLAD DOUBLE HUNG PICTURE
Horizontal Section



ELITE PREMIUM CLAD DOUBLE HUNG PICTURE
Vertical Section - Transom Stack over Picture

Casement Window (8205) Elevations

Unit Dimension	1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"
Rough Opening	1'-6"	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"
Soft Metric R.O. (mm)	457	508	610	711	762	813	914
Glass Size	13 3/8"	15 3/8"	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"

1'-5 1/2"	1620	1820	2020	2420	2620	2820	3020
2'-5 1/2"	1626	1826	2026	2426	2626	2826	3026
3'-0"	1630	1830	2030	2430	2630	2830	3030
3'-5 1/2"	1636	1836	2036	2436	2636	2836	3036
4'-0"	1640	1840	2040	2440	2640	2840	3040
4'-5 1/2"	1646	1846	2046	2446	2646	2846	3046
5'-0"	1650	1850	2050	2450	2650	2850	3050
5'-5 1/2"	1656	1856	2056	2456	2656	2856	3056
6'-0"	1660	1660	2060	2460	2660	2860	3060
6'-5 1/2"	1666	1666	2066	2466	2666	2866	3066

Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".

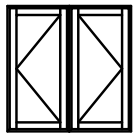
Verify local or state egress opening sizes with your local building inspector.

Casement Window (8205) Elevations

Unit Dimension	1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"
Rough Opening	1'-6"	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"
Soft Metric R.O. (mm)	457	508	610	711	762	813	914
Glass Size	13 3/8"	15 3/8"	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"

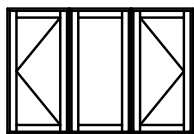
Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".

Verify local or state egress opening sizes with your local building inspector.



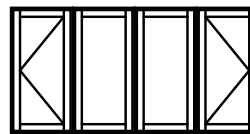
2 - Wide Units
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
CS2-16	2'-11 1/16"	2'-11 9/16"	903
CS2-18	3'-3 1/16"	3'-3 9/16"	1005
CS2-20	3'-11 1/16"	3'-11 9/16"	1208
CS2-24	4'-7 1/16"	4'-7 9/16"	1411
CS2-26	4'-11 1/16"	4'-11 9/16"	1513
CS2-28	5'-3 1/16"	5'-3 9/16"	1615
CS2-30	5'-11 1/16"	5'-11 9/16"	1818



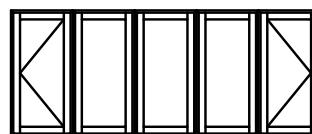
3 - Wide Units
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
CS3-16	4'-4 5/8"	4'-5 1/8"	1235
CS3-18	4'-10 5/8"	4'-11 1/8"	1502
CS3-20	5'-10 5/8"	5'-11 1/8"	1807
CS3-24	6'-10 5/8"	6'-11 1/8"	2111
CS3-26	7'-4 5/8"	7'-5 1/8"	2264
CS3-28	7'-10 5/8"	7'-11 1/8"	2416
CS3-30	8'-10 5/8"	8'-11 1/8"	2721



4 - Wide Units
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
CS4-16	5'-10 3/16"	5'-10 11/16"	1796
CS4-18	6'-6 3/16"	6'-6 11/16"	1999
CS4-20	7'-10 3/16"	7'-10 11/16"	2405
CS4-24	9'-2 3/16"	9'-2 11/16"	2812
CS4-26	9'-10 3/16"	9'-10 11/16"	3015
CS4-28	10'-6 3/16"	10'-6 11/16"	3218
CS4-30	11'-10 3/16"	11'-10 11/16"	3320



5 - Wide Units
Width Dimensions

Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
CS5-16	7'-3 3/4"	7'-4 1/4"	2242
CS5-18	8'-1 3/4"	8'-2 1/4"	2496
CS5-20	9'-9 3/4"	9'-10 1/4"	3004
CS5-24	11'-5 3/4"	11'-6 1/4"	3512

Casement Picture Window (8205) Elevations

Unit Dimension	1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"	3'-5 1/2"	3'-11 1/2"	4'-5 1/2"
Rough Opening	1'-6"	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"	3'-6"	4'-0"	4'-6"
Soft Metric R.O. (mm)	457	508	610	711	762	813	914	1067	1219	1372
Glass Size	13 3/8"	15 3/8"	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"	37 3/8"	43 3/8"	49 3/8"

1616	1816	2016	2416	2616	2816	3016	3616	4016	4616
1618	1818	2018	2418	2618	2818	3018	3618	4018	4618
1620	1820	2020	2420	2620	2820	3020	3620	4020	4620
1626	1826	2026	2426	2626	2826	3026	3626	4026	4626
1630	1830	2030	2430	2630	2830	3030	3630	4030	4630
1636	1836	2036	2436	2636	2836	3036	3636	4036	4636
1640	1840	2040	2440	2640	2840	3040	3640	4040	4640
1646	1846	2046	24046	2646	2846	3046	3646	4046	4646
1650	1850	2050	2450	2650	2850	3050	3650	4050	4650
1656	1856	2056	2456	2656	2856	3056	3656	4056	4656
1660	1660	2060	2460	2660	2860	3060	3660	4060	4660
1666	1666	2066	2466	2666	2866	3066	3666	4066	4666
1670	1670	2070	2470	2670	2870	3070	3670	4070	4670

CASEMENT

Verify local or state egress opening sizes with your local building inspector.

Casement Picture Window (8205) Elevations

CASEMENT

Unit Dimension	4'-11 1/2"	5'-5 1/2"	5'-11 1/2"
Rough Opening	5'-0"	5'-6"	6'-0"
Soft Metric R.O. (mm)	1524	1626	1829
Glass Size	55 3/8"	61 3/8"	67 3/8"
1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-5 1/2"
1'-6"	1'-8"	2'-0"	2'-6"
457	508	610	762
13 3/8"	15 3/8"	19 3/8"	25 3/8"
31 3/8"	31 3/8"	31 3/8"	31 3/8"
37 3/8"	37 3/8"	37 3/8"	37 3/8"
43 3/8"	43 3/8"	43 3/8"	43 3/8"
49 3/8"	49 3/8"	49 3/8"	49 3/8"
55 3/8"	55 3/8"	55 3/8"	55 3/8"
61 3/8"	61 3/8"	61 3/8"	61 3/8"
67 3/8"	67 3/8"	67 3/8"	67 3/8"
73 3/8"	73 3/8"	73 3/8"	73 3/8"
79 3/8"	79 3/8"	79 3/8"	79 3/8"
1981	1829	1829	1829
2134	2134	2134	2134
5016	5616	6016	
5018	5618	6018	
5020	5620	6020	
5026	5626	6026	
5030	5630	6030	
5036	5636	6036	
5040	5640	6040	
5046	5646	6046	
5050	5650	6050	
5056	5656	6056	
5060	5660	6060	
5066	5666	6066	
5070	5670	6070	

Verify local or state egress opening sizes with your local building inspector.

Casement Transom Window (8205) Elevations

Unit Dimension	1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"	3'-5 1/2"	3'-11 1/2"	4'-5 1/2"
Rough Opening	1'-6"	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"	3'-6"	4'-0"	4'-6"
Soft Metric R.O. (mm)	457	508	610	711	762	813	914	1067	1219	1372
Glass Size	13 3/8"	15 3/8"	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"	37 3/8"	43 3/8"	49 3/8"

1'-5 1/2"										
1'-6"	1616	1816	2016	2416	2616	2816	3016	3616	4016	4616
1'-7 1/2"										
1'-8"	1618	1818	2018	2418	2618	2818	3018	3618	4018	4618
2'-0"										
2'-4"	1620	1820	2020	2420	2620	2820	3020	3620	4020	4620
2'-6"										
2'-8"	1626	1826	2026	2426	2626	2826	3026	3626	4026	4626
3'-0"										
3'-6"	1630	1830	2030	2430	2630	2830	3030	3630	4030	4630

Unit Dimension	4'-11 1/2"	5'-5 1/2"	5'-11 1/2"
Rough Opening	5'-0"	5'-6"	6'-0"
Soft Metric R.O. (mm)	1524	1626	1829
Glass Size	55 3/8"	61 3/8"	67 3/8"

1'-5 1/2"			
1'-6"	5016	5616	6016
1'-7 1/2"			
1'-8"	5018	5618	6018
2'-0"			
2'-4"	5020	5620	6020
2'-6"			
2'-8"	5026	5626	6026
3'-0"			
3'-6"	5030	5630	6030

Verify local or state egress opening sizes with your local building inspector.

Casement Window (8205) Opening Specifications

Call Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Floor to Bottom of Clear Opening ^a	Sq. Ft. Overall Unit Area ^b
		Width	Height				
1620	1.29	9.71	19.16	1.59	1.57	60.89	2.86
1626	1.70	9.71	25.16	2.11	2.06	54.89	3.59
1630	2.10	9.71	31.16	2.63	2.55	48.89	4.31
1636	2.51	9.71	37.16	3.14	3.04	42.89	5.04
1640	2.91	9.71	43.16	3.66	3.54	36.89	5.77
1646	3.32	9.71	49.16	4.18	4.03	30.89	6.50
1650	3.72	9.71	55.16	4.70	4.52	24.89	7.23
1656	4.13	9.71	61.16	5.21	5.01	42.89	7.96
1660	4.53	9.71	67.16	5.73	5.50	36.89	8.69
1666	4.93	9.71	73.16	6.25	5.99	30.89	9.42
1670	5.34	9.71	79.16	6.77	6.49	24.89	10.15
1820	1.56	11.71	19.16	1.85	1.84	60.89	3.18
1826	2.05	11.71	25.16	2.45	2.41	54.89	3.99
1830	2.53	11.71	31.16	3.05	2.99	48.89	4.81
1836	3.02	11.71	37.16	3.65	3.56	42.89	5.62
1840	3.51	11.71	43.16	4.25	4.14	36.89	6.43
1846	4.00	11.71	49.16	4.85	4.71	30.89	7.24
1850	4.49	11.71	55.16	5.45	5.29	24.89	8.06
1856	4.98	11.71	61.16	6.05	5.86	42.89	8.87
1860	5.46	11.71	67.16	6.66	6.44	36.89	9.68
1866	5.95	11.71	73.16	7.26	7.01	30.89	10.49
1870	6.44	11.71	79.16	7.86	7.59	24.89	11.31
2020	2.09	15.71	19.16	2.36	2.37	60.89	3.84
2026	2.75	15.71	25.16	3.13	3.11	54.89	4.81
2030	3.40	15.71	31.16	3.89	3.85	48.89	5.79
2036	4.06	15.71	37.16	4.66	4.59	42.89	6.77
2040	4.71	15.71	43.16	5.43	5.33	36.89	7.75
2046	5.36	15.71	49.16	6.20	6.08	30.89	8.73
2050	6.02	15.71	55.16	6.96	6.82	24.89	9.71
2056	6.67	15.71	61.16	7.73	7.56	42.89	10.69
2060	7.33	15.71	67.16	8.50	8.30	36.89	11.67
2066	7.98	15.71	73.16	9.27	9.04	30.89	12.65
2070	8.64	15.71	79.16	10.04	9.78	24.89	13.63
2420	2.62	19.71	19.16	2.87	2.90	60.89	4.49
2426	3.44	19.71	25.16	3.80	3.81	54.89	5.63
2430	4.27	19.71	31.16	4.74	4.72	48.89	6.78
2436	5.09	19.71	37.16	5.67	5.63	42.89	7.93
2440	6.43	21.44	43.16	6.61	6.53	36.89	9.07
2446	7.32	21.44	49.16	7.54	7.44	30.89	10.22
2450	8.21	21.44	55.16	8.48	8.35	24.89	11.36
2456	9.11	21.44	61.16	9.41	9.26	42.89	12.51
2460	10.00	21.44	67.16	10.35	10.17	36.89	13.65
2466	10.89	21.44	73.16	11.28	11.08	30.89	14.80
2470	11.79	21.44	79.16	12.21	11.98	24.89	15.95

Verify local or state egress opening sizes with your local building inspector.

CASEMENT

Casement Window (8205) Opening Specifications

Call Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Floor to Bottom of Clear Opening ^a	Sq. Ft. Overall Unit Area ^b
		Width	Height				
2620	2.89	21.71	19.16	3.13	3.17	60.89	4.81
2626	3.79	21.71	25.16	4.14	4.16	54.89	6.04
2630	4.70	21.71	31.16	5.16	5.15	48.89	7.27
2636	6.05	23.44	37.16	6.18	6.14	42.89	8.50
2640	6.51	21.71	43.16	7.20	7.13	36.89	9.73
2646	7.41	21.71	49.16	8.21	8.12	30.89	10.96
2650	8.32	21.71	55.16	9.23	9.12	24.89	12.19
2656	9.22	21.71	61.16	10.25	10.11	42.89	13.42
2660	10.13	21.71	67.16	11.27	11.10	36.89	14.65
2666	11.03	21.71	73.16	12.29	12.09	30.89	15.88
2670	11.94	21.71	79.16	13.30	13.08	24.89	17.11
2820	2.87	21.53	19.16	3.38	3.43	60.89	5.14
2826	3.76	21.53	25.16	4.48	4.51	54.89	6.45
2830	4.66	21.53	31.16	5.58	5.58	48.89	7.77
2836	6.12	23.71	37.16	6.69	6.66	42.89	9.08
2840	6.45	21.53	43.16	7.79	7.73	36.89	10.39
2846	7.35	21.53	49.16	8.89	8.81	30.89	11.70
2850	8.25	21.53	55.16	9.99	9.88	24.89	13.02
2856	9.15	21.53	61.16	11.09	10.96	42.89	14.33
2860	10.04	21.53	67.16	12.19	12.03	36.89	15.64
2866	10.94	21.53	73.16	13.29	13.11	30.89	16.95
2870	11.84	21.53	79.16	14.39	14.18	24.89	18.27
3020	3.39	25.47	19.16	3.89	3.97	60.89	5.79
3026	4.45	25.47	25.16	5.16	5.21	54.89	7.27
3030 ^c	6.00	27.71	31.16	6.43	6.45	48.89	8.75
3036	6.57	25.47	37.16	7.70	7.69	42.89	10.23
3040	7.63	25.47	43.16	8.96	8.93	36.89	11.71
3046	8.69	25.47	49.16	10.23	10.17	30.89	13.19
3050	9.76	25.47	55.16	11.50	11.41	24.89	14.67
3056	10.82	25.47	61.16	12.77	12.66	42.89	16.15
3060	11.88	25.47	67.16	14.04	13.90	36.89	17.63
3066	12.94	25.47	73.16	15.30	15.14	30.89	19.11
3070	14.00	25.47	79.16	16.57	16.38	24.89	20.59

CASEMENT

Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".

^aFloor to bottom of clear opening dimensions are based on 82" header height.

All units over 66 height are based off 106" header height for floor to clear opening dimension

^bSq. Ft. Overall Unit Area is calculated on the jamb dimension.

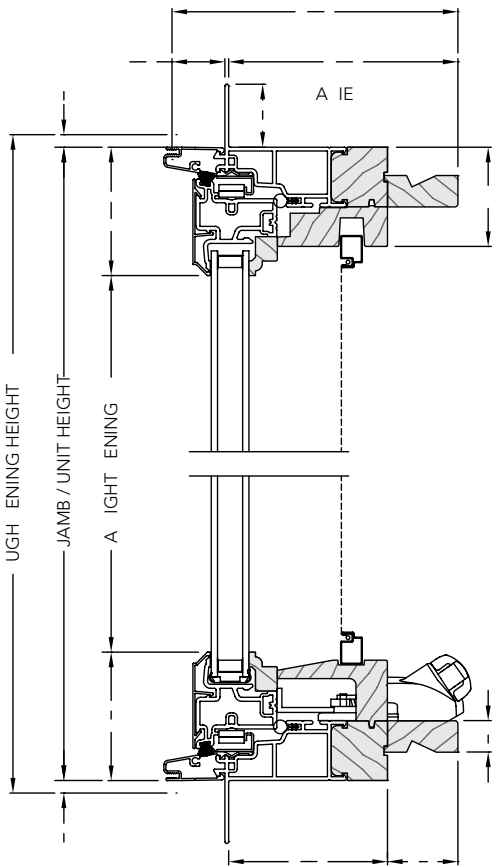
^cThese windows meet or exceed emergency escape and rescue opening requirements if installed lower in the wall so the "Floor to Bottom of Clear Opening Height" does not exceed 44".

All units 32.5" or wider in rough opening width are manufactured with a 14" hinge. Sash opens to approximately 82° at full opening, which could limit emergency escape and rescue compatibility. Clear opening width values for these are calculated parallel to the sash. Check with your local building inspector to verify allowance

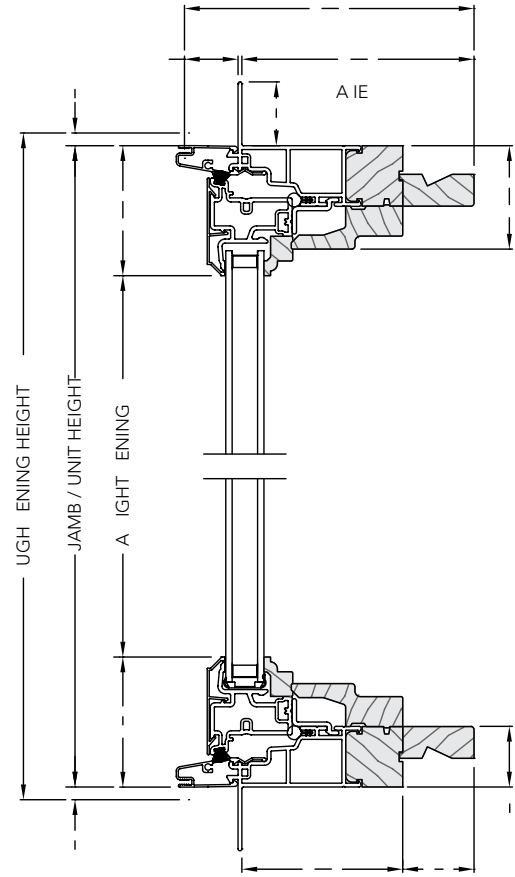
Verify local or state egress opening sizes with your local building inspector.

Casement Window (8205) Cross Sections

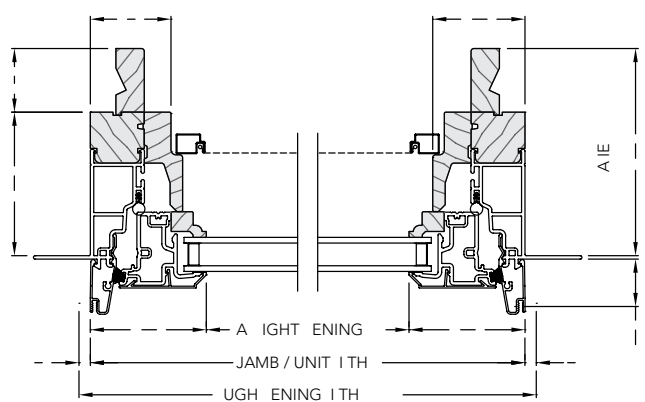
CASEMENT



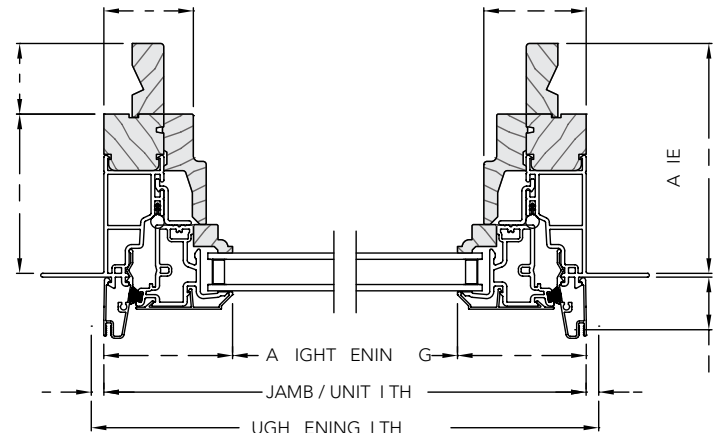
ELITE PREMIUM CLAD CASEMENT WINDOW
Vertical Section



ELITE PREMIUM CLAD CASEMENT PICTURE WINDOW
Vertical Section

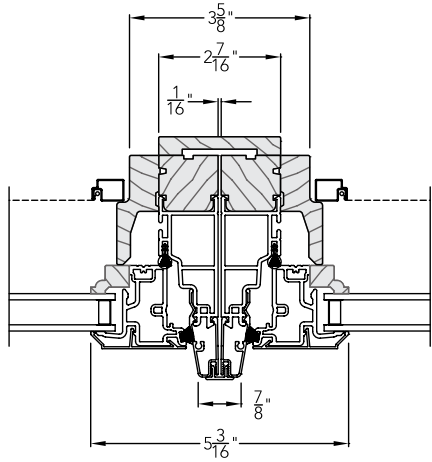


ELITE PREMIUM CLAD CASEMENT WINDOW
Horizontal Section

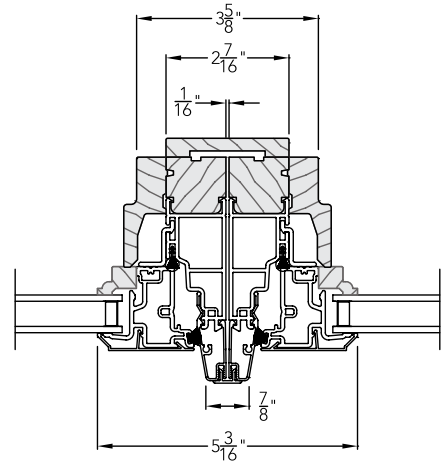


ELITE PREMIUM CLAD CASEMENT PICTURE WINDOW
Horizontal Section

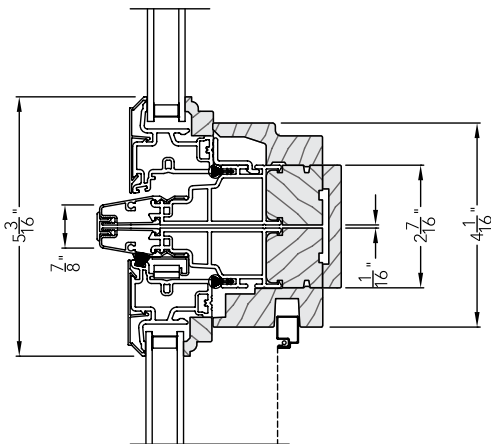
Casement Window (8205) Cross Sections



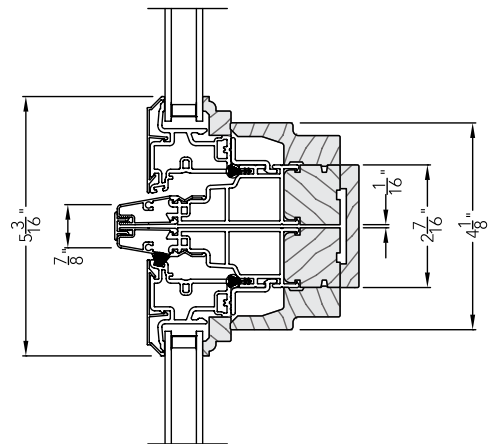
ELITE PREMIUM CLAD CASEMENT WINDOW
Horizontal Mull Section



ELITE PREMIUM CLAD CASEMENT PICTURE WINDOW
Horizontal Mull Section



ELITE PREMIUM CLAD CASEMENT WINDOW
Vertical Section - Transom Stack over Casement



ELITE PREMIUM CLAD CASEMENT PICTURE WINDOW
Vertical Section - Transom Stack over Casement Picture

Note: All dimensions are approximate. Crestline reserves the right to change specifications without notice.

Awning Window (8205) Elevations

Awning Windows

Unit Dimension	1'-5 1/2"	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"	3'-5 1/2"	3'-11 1/2"	4'-5 1/2"	4'-11 1/2"
Rough Opening	1'-6"	1'-8"	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
Soft Metric R.O. (mm)	457	508	610	711	762	813	914	1067	1219	1372	1524
Glass Size	13 3/8"	15 3/8"	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"	37 3/8"	43 3/8"	49 3/8"	55 3/8"

1616	1816	2016	2416	2616	2816	3016	3616	4016	4616	5016
1618	1818	2018	2418	2618	2818	3018	3618	4018	4618	5018
1620	1820	2020	2420	2620	2820	3020	3620	4020	4620	5020
1626	1826	2026	2426	2626	2826	3026	3626	4026	4626	5026
1630	1830	2030	2430	2630	2830	3030	3630	4030	4630	5030
1636	1836	2036	2436	2636	2836	3036	3636	4036	4636	5036
1640	1840	2040	2440	2640	2840	3040	3640	4040	4640	5040

Awning Picture Combinations

Unit Dimension	1'-11 1/2"	2'-3 1/2"	2'-5 1/2"	2'-7 1/2"	2'-11 1/2"	3'-5 1/2"	3'-11 1/2"	4'-5 1/2"	4'-11 1/2"
Rough Opening	2'-0"	2'-4"	2'-6"	2'-8"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
Soft Metric R.O. (mm)	610	711	762	813	914	1067	1219	1372	1524
Glass Size	19 3/8"	23 3/8"	25 3/8"	27 3/8"	31 3/8"	37 3/8"	43 3/8"	49 3/8"	55 3/8"

204020	244020	264020	284020	304020	364020	404020	464020	504020
205020	245020	265020	285020	305020	365020	405020	465020	505020
204026	244026	264026	284026	304026	364026	404026	464026	504026
205026	245026	265026	285026	305026	365026	405026	465026	505026

2 - Wide Width Dimensions			
Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
AW2-16	2'-11 1/16"	2'-11 9/16"	903
AW2-18	3'-3 1/16"	3'-3 9/16"	1005
AW2-20	3'-11 1/16"	3'-11 9/16"	1208
AW2-24	4'-7 1/16"	4'-7 9/16"	1411
AW2-26	4'-11 1/16"	4'-11 9/16"	1513
AW2-28	5'-3 1/16"	5'-3 9/16"	1615
AW2-30	5'-11 1/16"	5'-11 9/16"	1818
AW2-36	6'-11 1/16"	6'-11 9/16"	2123
AW2-40	7'-11 1/16"	7'-11 9/16"	2427
AW2-46	8'-11 1/16"	8'-11 9/16"	2732
AW2-50	9'-11 1/16"	9'-11 9/16"	3037

3 - Wide Width Dimensions			
Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
AW3-16	4'-4 5/8"	4'-5 1/8"	1235
AW3-18	4'-10 5/8"	4'-11 1/8"	1502
AW3-20	5'-10 5/8"	5'-11 1/8"	1807
AW3-24	6'-10 5/8"	6'-11 1/8"	2111
AW3-26	7'-4 5/8"	7'-5 1/8"	2264
AW3-28	7'-10 5/8"	7'-11 1/8"	2416
AW3-30	8'-10 5/8"	8'-11 1/8"	2721
AW3-36	10'-4 5/8"	10'-5 1/8"	3178
AW3-40	11'-10 5/8"	11'-11 1/8"	3635

4 - Wide Width Dimensions			
Base Code	Unit Dimension (Frame Size)	Rough Opening	Soft Metric R.O. (mm)
AW4-16	5'-10 3/16"	5'-10 11/16"	1796
AW4-18	6'-6 3/16"	6'-6 11/16"	1999
AW4-20	7'-10 3/16"	7'-10 11/16"	2405
AW4-24	9'-2 3/16"	9'-2 11/16"	2812
AW4-26	9'-10 3/16"	9'-10 11/16"	3015
AW4-28	10'-6 3/16"	10'-6 11/16"	3218
AW4-30	11'-10 3/16"	11'-10 11/16"	3320

Verify local or state egress opening sizes with your local building inspector.

Awning Window (8205) Opening Specifications

Call Size	Vent		Sq. Ft. Vent	Sq. Ft. Daylight Opening	Sq. Ft. Overall Unit Area ^a
	Width	Height			
1616	13.44	9.59	0.89	1.07	2.13
1618	13.44	11.59	1.08	1.24	2.37
1620	13.44	14.59	1.36	1.58	2.86
1626	13.44	20.59	1.92	2.10	3.59
1630	13.44	24.59	2.29	2.62	4.31
1636	13.44	30.59	2.85	3.13	5.04
1640	13.44	34.59	3.23	3.65	5.77
1816	15.44	9.59	1.03	1.24	2.37
1818	15.44	11.59	1.24	1.44	2.64
1820	15.44	14.59	1.56	1.84	3.18
1826	15.44	20.59	2.21	2.44	3.99
1830	15.44	24.59	2.64	3.04	4.81
1836	15.44	30.59	3.28	3.64	5.62
1840	15.44	34.59	3.71	4.24	6.43
2016	19.44	9.59	1.29	1.58	2.86
2018	19.44	11.59	1.56	1.84	3.18
2020	19.44	14.59	1.97	2.35	3.84
2026	19.44	20.59	2.78	3.12	4.81
2030	19.44	24.59	3.32	3.88	5.79
2036	19.44	30.59	4.13	4.65	6.77
2040	19.44	34.59	4.67	5.42	7.75
2416	23.44	9.59	1.56	1.93	3.34
2418	23.44	11.59	1.89	2.24	3.72
2420	23.44	14.59	2.37	2.86	4.49
2426	23.44	20.59	3.35	3.79	5.63
2430	23.44	24.59	4.00	4.73	6.78
2436	23.44	30.59	4.98	5.66	7.93
2440	23.44	34.59	5.63	6.59	9.07
2616	25.44	9.59	1.69	2.10	3.59
2618	25.44	11.59	2.05	2.44	3.99
2620	25.44	14.59	2.58	3.12	4.81
2626	25.44	20.59	3.64	4.13	6.04
2630	25.44	24.59	4.34	5.15	7.27
2636	25.44	30.59	5.40	6.17	8.50
2640	25.44	34.59	6.11	7.18	9.73
2816	27.44	9.59	1.83	2.27	3.83
2818	27.44	11.59	2.21	2.64	4.27
2820	27.44	14.59	2.78	3.37	5.14
2826	27.44	20.59	3.92	4.47	6.45
2830	27.44	24.59	4.68	5.57	7.77
2836	27.44	30.59	5.83	6.67	9.08
2840	27.44	34.59	6.59	7.77	10.39
3016	31.44	9.59	2.09	2.62	4.31
3018	31.44	11.59	2.53	3.04	4.81
3020	31.44	14.59	3.18	3.88	5.79
3026	31.44	20.59	4.49	5.15	7.27
3030	31.44	24.59	5.37	6.42	8.75
3036	31.44	30.59	6.68	7.68	10.23
3040	31.44	34.59	7.55	8.95	11.71

Verify local or state egress opening sizes with your local building inspector.

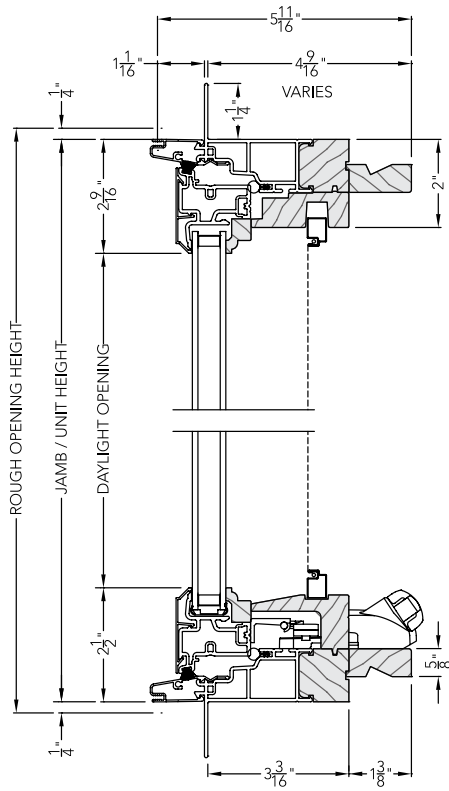
Awning Window (8205) Opening Specifications

Call Size	Vent		Sq. Ft. Vent	Sq. Ft. Daylight Opening	Sq. Ft. Overall Unit Area ^a
	Width	Height			
3616	31.44	9.59	2.09	2.62	4.31
3618	31.44	11.59	2.53	3.04	4.81
3620	31.44	14.59	3.18	3.88	5.79
3626	31.44	20.59	4.49	5.15	7.27
3630	31.44	24.59	5.37	6.42	8.75
3636	31.44	30.59	6.68	7.68	10.23
3640	31.44	34.59	7.55	8.95	11.71
4016	43.44	9.59	2.89	3.65	5.77
4018	43.44	11.59	3.49	4.24	6.43
4020	43.44	14.59	4.40	5.42	7.75
4026	43.44	20.59	6.21	7.18	9.73
4030	43.44	24.59	7.42	8.95	11.71
4036	43.44	30.59	9.23	10.71	13.69
4040	43.44	34.59	10.43	12.48	15.67
4616	49.44	9.59	3.29	4.17	6.50
4618	49.44	11.59	3.98	4.84	7.24
4620	49.44	14.59	5.01	6.18	8.73
4626	49.44	20.59	7.07	8.20	10.96
4630	49.44	24.59	8.44	10.21	13.19
4636	49.44	30.59	10.50	12.23	15.42
4640	49.44	34.59	11.87	14.25	17.65
5016	55.44	9.59	3.69	4.68	7.23
5018	55.44	11.59	4.46	5.44	8.06
5020	55.44	14.59	5.62	6.95	9.71
5026	55.44	20.59	7.93	9.21	12.19
5030	55.44	24.59	9.46	11.48	14.67
5036	55.44	30.59	11.77	13.75	17.15
5040	55.44	34.59	13.31	16.01	19.63

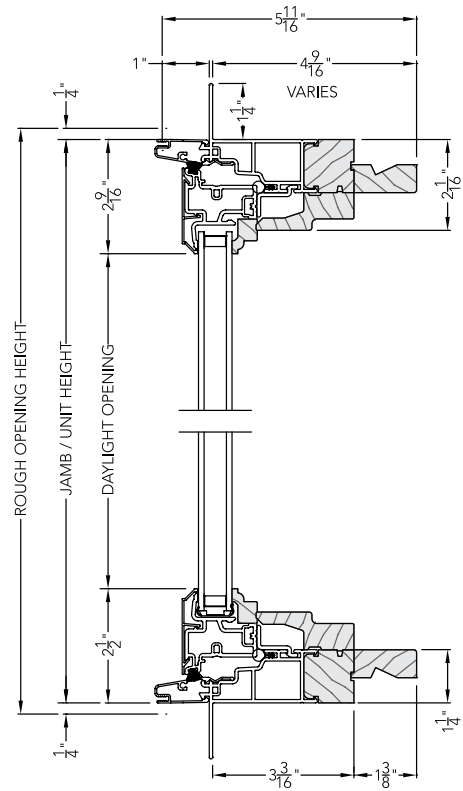
^a Sq. Ft. Overall Unit Area is calculated on the jamb dimension.

Verify local or state egress opening sizes with your local building inspector.

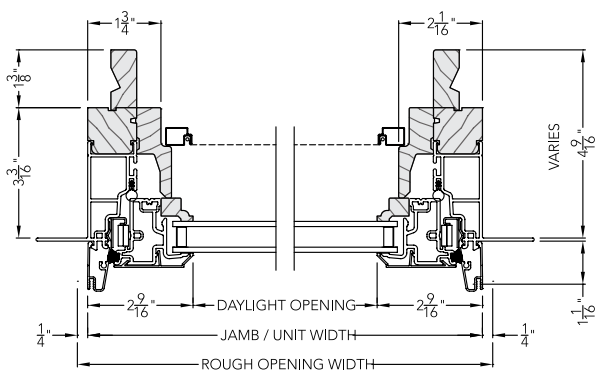
Awning Window (8205) Cross Sections



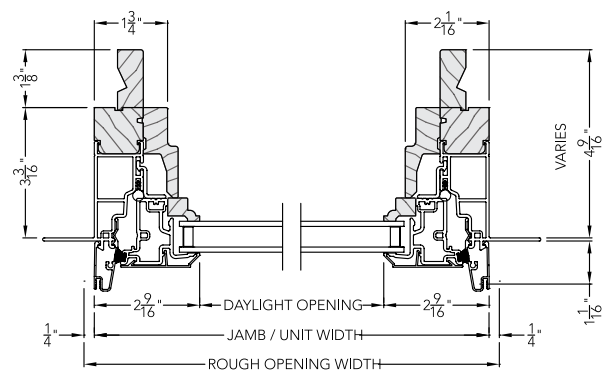
ELITE PREMIUM CLAD AWNING WINDOW
Vertical Section



ELITE PREMIUM CLAD AWNING PICTURE WINDOW
Vertical Section



ELITE PREMIUM CLAD AWNING WINDOW
Horizontal Section



ELITE PREMIUM CLAD AWNING PICTURE WINDOW
Horizontal Section

Note: All dimensions are approximate. Crestline reserves the right to change specifications without notice.

Slider Window (8401) Elevations

Unit Dimension	2'-11 1/2"	3'-11 1/2"	4'-11 1/2"	5'-11 1/2"
Rough Opening	3'-0"	4'-0"	5'-0"	6'-0"
Soft Metric R.O. (mm)	914	1219	1524	1829
Glass Size	14 7/8"	20 7/8"	26 7/8"	32 7/8"

Unit Dimension	1'-11 1/2"	2'-5 1/2"	2'-11 1/2"	3'-5 1/2"	3'-11 1/2"	4'-5 1/2"	4'-11 1/2"	5'-5 1/2"	5'-11 1/2"
Rough Opening	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
Soft Metric R.O. (mm)	610	762	914	1067	1219	1372	1524	1676	1829
Glass Size	17 5/16"	23 5/16"	29 5/16"	35 5/16"	41 5/16"	47 5/16"	53 5/16"	59 5/16"	65 5/16"

3020	4020	5020	6020
3026	4026	5026	6026
3030	4030	5030	6030
3036	4036	5036	6036
3040	4040	5040	6040
3046	4046	5046	6046
3050	4050	5050	6050
3056	4056	5056	6056
3060	4060	5060	6060

SLIDER

Verify local or state egress opening sizes with your local building inspector.

Slider Window (8401) Opening Specifications

Call Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Floor to Bottom of Clear Opening ^a	Sq. Ft. Overall Unit Area ^b
		Width	Height				
3020	1.847	14.006	18.985	3.156	1.847	61.221	5.793
3026	2.430	14.006	24.985	4.312	2.430	55.221	7.273
3030	3.014	14.006	30.985	5.468	3.014	49.221	8.752
3036	3.597	14.006	36.985	6.624	3.597	43.221	10.231
3040	4.181	14.006	42.985	7.781	4.181	37.221	11.710
3046	4.570	14.006	46.985	8.552	4.570	33.221	12.696
3050	5.348	14.006	54.985	10.093	5.348	25.221	14.668
3056	5.932	14.006	60.985	11.249	5.932	43.221	16.148
3060	6.515	14.006	66.985	12.406	6.515	37.221	17.627
4020	2.638	20.006	18.985	4.520	2.638	61.221	7.752
4026	3.471	20.006	24.985	6.177	3.471	55.221	9.731
4030	4.305	20.006	30.985	7.833	4.305	49.221	11.710
4036	5.138	20.006	36.985	9.489	5.138	43.221	13.689
4040	5.972	20.006	42.985	11.145	5.972	37.221	15.668
4046	6.528	20.006	46.985	12.249	6.528	33.221	16.988
4050	7.639	20.006	54.985	14.458	7.639	25.221	19.627
4056	8.473	20.006	60.985	16.114	8.473	43.221	21.606
4060	9.306	20.006	66.985	17.770	9.306	37.221	23.585
5020	3.429	26.006	18.985	5.885	3.429	61.221	9.710
5026	4.512	26.006	24.985	8.041	4.512	55.221	12.189
5030	5.596	26.006	30.985	10.197	5.596	49.221	14.668
5036	6.679	26.006	36.985	12.354	6.679	43.221	17.148
5040	7.763	26.006	42.985	14.510	7.763	37.221	19.627
5046	8.485	26.006	46.985	15.947	8.485	33.221	21.280
5050	9.930	26.006	54.985	18.822	9.930	25.221	24.585
5056	11.014	26.006	60.985	20.979	11.014	43.221	27.064
5050	12.097	26.006	66.985	23.135	12.097	37.221	29.543
6020	4.220	32.006	18.985	7.250	4.220	61.221	11.668
6026	5.553	32.006	24.985	9.906	5.553	55.221	14.648
6030 ^c	6.887	32.006	30.985	12.562	6.887	49.221	17.627
6036	8.220	32.006	36.985	15.218	8.220	43.221	20.606
6040	9.554	32.006	42.985	17.875	9.554	37.221	23.585
6046	10.443	32.006	46.985	19.645	10.443	33.221	25.571
6050	12.221	32.006	54.985	23.187	12.221	25.221	29.543
6056	13.555	32.006	60.985	25.843	13.555	43.221	32.523
6060	14.888	32.006	66.985	28.500	14.888	37.221	35.502
7036	5.472	21.307	36.985	17.412	5.472	43.221	24.064
7040	6.360	21.307	42.985	20.451	6.360	37.221	27.543
7046	6.952	21.307	46.985	22.477	6.952	33.221	29.863
7050	8.136	21.307	54.985	26.529	8.136	25.221	34.502
7056	9.023	21.307	60.985	29.568	9.023	19.221	37.981
7060	9.911	21.307	66.985	32.607	9.911	13.221	41.460
8036	6.500	25.307	36.985	20.276	6.500	43.221	27.523
8040	7.554	25.307	42.985	23.815	7.554	37.221	31.502
8046	8.257	25.307	46.985	26.175	8.257	33.221	34.155
8050	9.663	25.307	54.985	30.893	9.663	25.221	39.460
8056	10.717	25.307	60.985	34.432	10.717	43.221	43.439
8060	11.772	25.307	66.985	37.971	11.772	37.221	47.418

Shaded sizes meet or exceed egress opening requirements per 2006 IBC (International Building Code) minimum dimensions of 20" clear opening width, 24" clear opening height, 5.7 sq. ft. clear opening and floor to bottom of clear opening not to exceed 44".

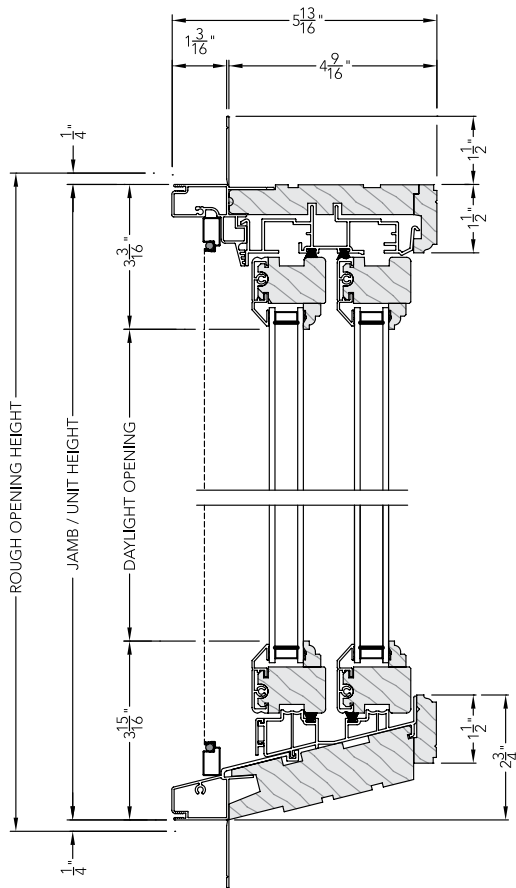
^aFloor to bottom of clear opening dimensions are based on 82" header height. All units over 66 height are based off 106" header height for floor to clear opening dimension

^bSq. Ft. Overall Unit Area is calculated on the jamb dimension.

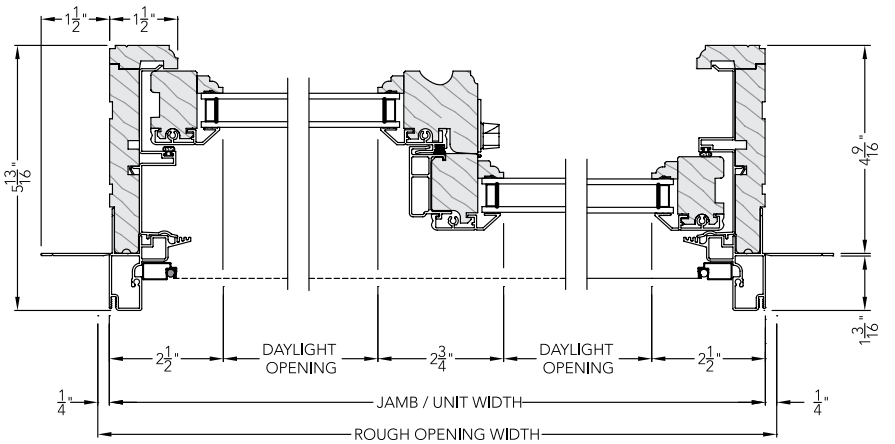
^cThese windows meet or exceed emergency escape and rescue opening requirements if installed lower in the wall so the "Floor to Bottom of Clear Opening Height" does not exceed 44".

TRIPLE SLIDER - EQUAL

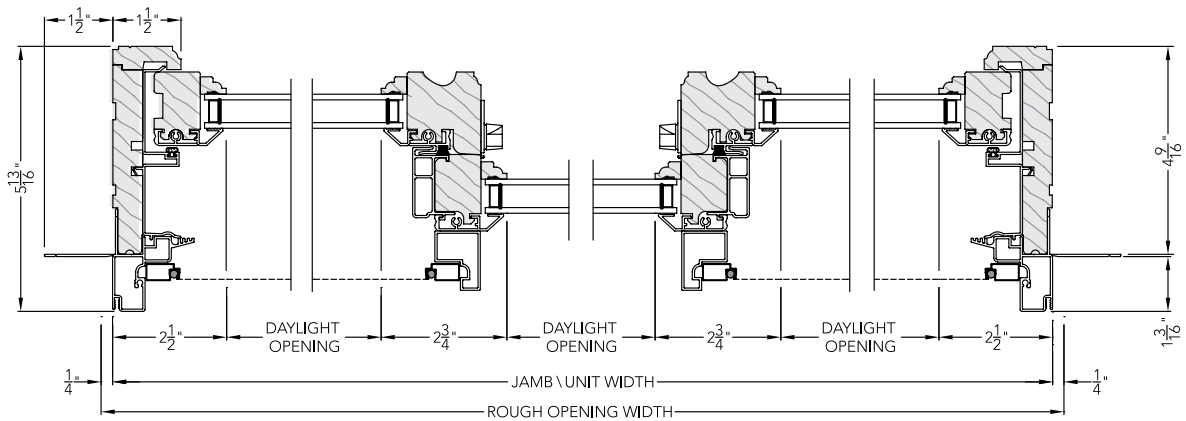
Slider Window (8401) Cross Sections



ELITE PREMIUM CLAD SLIDER WINDOW
Vertical Section



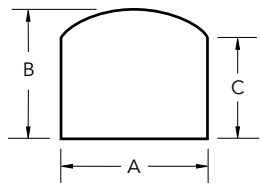
ELITE PREMIUM CLAD SLIDER WINDOW
Horizontal Section - Double Slider



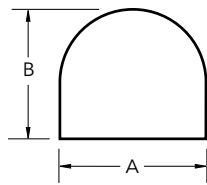
ELITE PREMIUM CLAD SLIDER WINDOW
Horizontal Section - End Vent Picture Slider

Note: All dimensions are approximate. Crestline reserves the right to change specifications without notice.

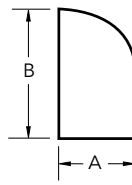
Special Shape Window – Radius & Geometric (8306) Elevations



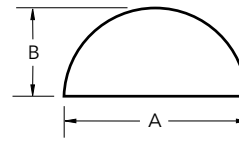
Eyebrow with Extended Legs



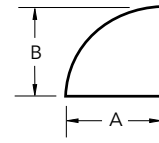
Half Circle
with Extended Legs



Quarter Circle
with Extended Legs

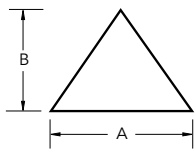


Half Circle

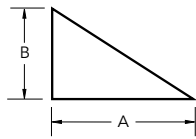


Quarter Circle

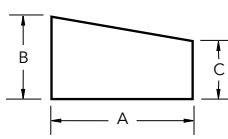
*Template is required when ordering replacement glass and interior trim for custom sizes.



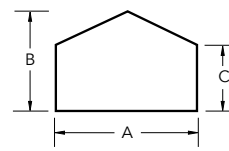
Isosceles Triangle



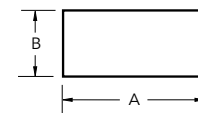
Right Angle Triangle



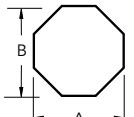
Trapezoid



Pentagon



Rectangle

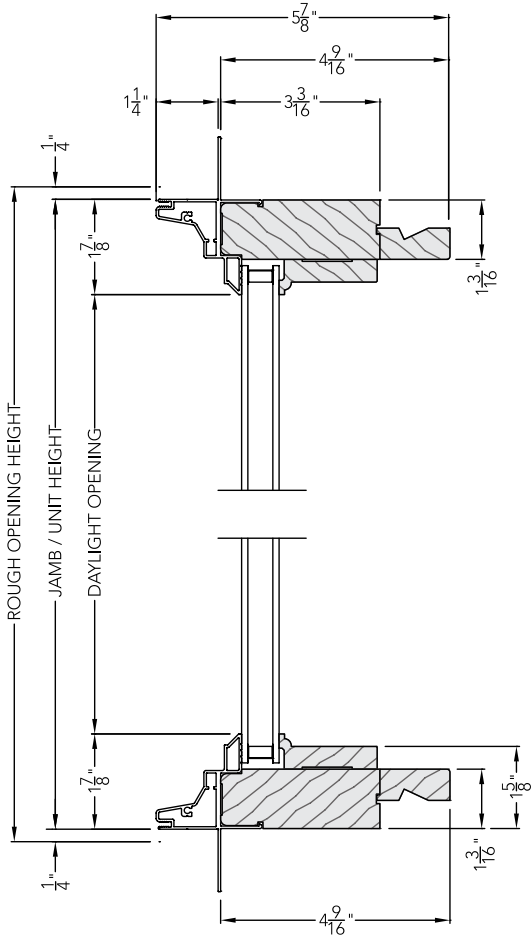


Octagon

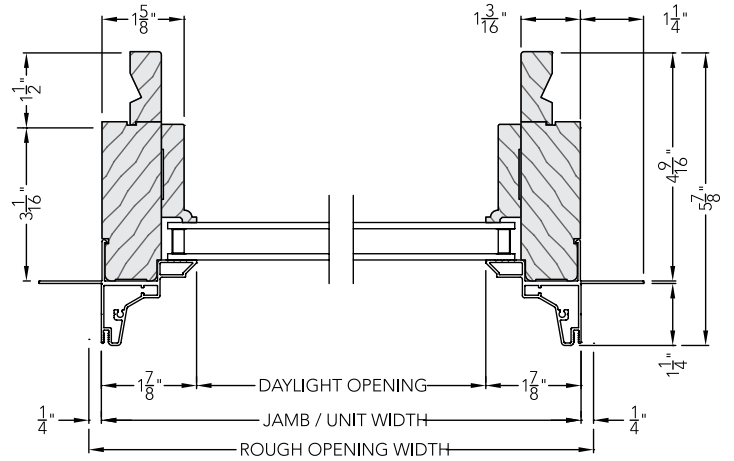
A - Rough Opening Width
B - Rough Opening Height
C - Rough Opening Leg

For availability of specialty shapes not shown,
contact customer service.

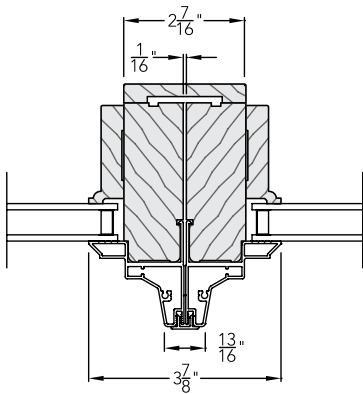
Special Shape Window (8306) Cross Sections



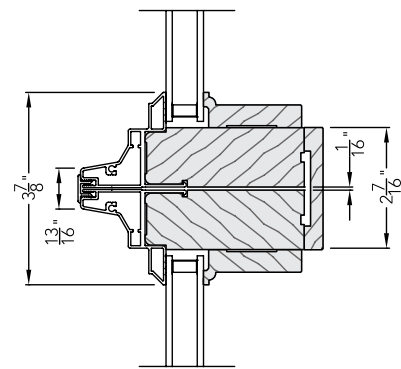
ELITE PREMIUM CLAD SPECIAL SHAPE
Vertical Section



ELITE PREMIUM CLAD SPECIAL SHAPE
Horizontal Section



ELITE PREMIUM CLAD SPECIAL SHAPE
Horizontal Mullion Section



ELITE PREMIUM CLAD SPECIAL SHAPE
Stack Section

Note: All dimensions are approximate. Crestline reserves the right to change specifications without notice.

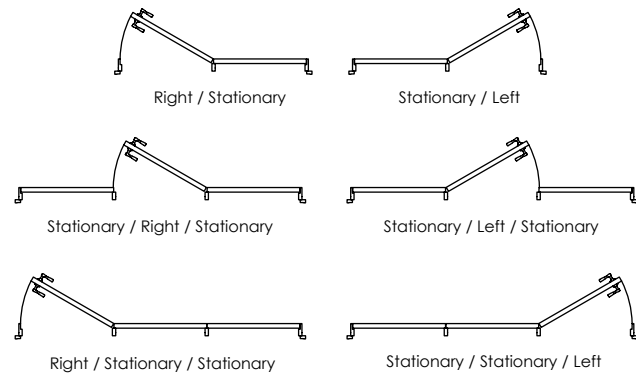
Center Hinged Patio Door (8510) Elevations

Clad Unit Dimension	4'-11 1/4"	5'-11 1/4"	6'-1 11/16"	7'-4 3/16"	7'-10 3/16"
Rough Opening	5'-0"	6'-0"	6'-2 7/16"	7'-4 15/16"	7'-10 15/16"
Soft Metric R.O. (mm)	1524	1829	1897	2259	2411
Glass Size	19 1/16"	25 1/16"	26 1/4"	19 1/16"	21 1/16"
6'-7 1/2"					
6'-8"					
6'-10"					
6'-10 1/2"					
7'-2"					
7'-2 1/2"					
7'-10"					
8'-0"					
8'-0 1/2"					
8'-1 5/16"					

NOTE: Sizes are available in-swing only.

Verify local or state egress opening sizes with your local building inspector.

Center Hinged Patio Doors (Hinge Codes)



Center Hinged Patio Door (8510) Elevations

Clad Unit Dimension	8'-10 3/16"
Rough Opening	8'-10 15/16"
Soft Metric R.O. (mm)	2716
Glass Size	25 1/16"

8'-0"	7'-2"	6'-10"	6'-7 1/2"
8'-0 1/2"	7'-2 1/2"	6'-10 1/2"	6'-8"
2451	2197	2032	2032
81 5/16"	71 5/16"	67 5/16"	64 13/16"

3-81168

3-811610

3-81172

3-81180

Verify local or state egress opening sizes with your local building inspector.

Center Hinged Patio Door Transom Elevations

Clad Unit Dimension	4'-11 1/4"	5'-11 1/4"	6'-1 11/16"	7'-4 3/16"	7'-10 3/16"
Rough Opening	5'-0"	6'-0"	6'-2 7/16"	7'-4 15/16"	7'-10 15/16"
Soft Metric R.O. (mm)	1524	1829	1897	2259	2411
Glass Size	57 3/4"	69 3/4"	72 3/16"	86 11/16"	92 11/16"

2'-4"	2'-0"	1'-8"	1'-0"		
2'-4 1/2"	2'-0 1/2"	1'-8 1/2"	1'-0 1/2"		
622	622	521	318		
26 1/2"	22 1/2"	18 1/2"	10 1/2"		

5010	6010	6210	7510	71110
5018	6018	6218	7518	71118
5020	6020	6220	7520	71120
5024	6024	6224	7524	71124

Clad Unit Dimension	8'-10 3/16"
Rough Opening	8'-10 15/16"
Soft Metric R.O. (mm)	2716
Glass Size	104 11/16"

2'-4"	2'-0"	1'-8"	1'-0"	
2'-4 1/2"	2'-0 1/2"	1'-8 1/2"	1'-0 1/2"	
622	622	521	318	
26 1/2"	22 1/2"	18 1/2"	10 1/2"	

8110
81118
81120
81124

Verify local or state egress opening sizes with your local building inspector.

Center Hinged Patio Door (8510) Opening Specifications

Ordering Size			Sq. Ft. Clear Opening		Clear Opening ^B inches			Sq. Ft. Daylight Opening	Sq. Ft. Vent		Sq. Ft. Overall Unit Area ^D	
			Hinge Code R/S S/L R/S/S S/S/L		Hinge Code S/R/S S/L/S		Width		7-1/2" Bottom Rail	Hinge Code R/S S/L R/S/S S/S/L		
							Hinge Code R/S S/L R/S/S S/S/L	Hinge Code S/R/S S/L/S				Height ^C
5-0	x	6-8	13.55	---	25.63	---	76.13	16.10	13.55	---	32.72	
6-0	x	6-8	16.72	---	31.63	---	76.13	21.40	16.72	---	39.35	
6-2	x	6-8	17.38	---	32.88	---	76.13	22.48	17.38	---	40.70	
7-5	x	6-8	13.55	13.41	25.63	25.38	76.13	24.15	13.55	13.41	48.71	
7-11	x	6-8	14.60	14.47	27.63	27.38	76.13	26.79	14.60	14.47	52.02	
8-11	x	6-8	16.72	16.59	31.63	31.38	76.13	32.10	16.72	16.59	58.65	
5-0	x	6-10	13.99	---	25.63	---	78.63	16.72	13.99	---	33.75	
6-0	x	6-10	17.27	---	31.63	---	78.63	22.24	17.27	---	40.59	
6-2	x	6-10	17.95	---	32.88	---	78.63	23.38	17.95	---	41.98	
7-5	x	6-10	13.99	13.85	25.63	25.38	78.63	25.08	13.99	13.85	50.24	
7-11	x	6-10	15.08	14.95	27.63	27.38	78.63	27.84	15.08	14.95	53.65	
8-11	x	6-10	17.27	17.13	31.63	31.38	78.63	33.36	17.27	17.13	60.49	
5-0	x	7-2	14.70	---	25.63	---	82.63	17.74	14.70	---	35.40	
6-0	x	7-2	18.15	---	31.63	---	82.63	23.60	18.15	---	42.57	
6-2	x	7-2	18.86	---	32.88	---	82.63	24.78	18.86	---	44.02	
7-5	x	7-2	14.70	14.56	25.63	25.38	82.63	26.61	14.70	14.56	52.69	
7-11	x	7-2	15.85	15.71	27.63	27.38	82.63	29.52	15.85	15.71	56.27	
8-11	x	7-2	18.15	18.00	31.63	31.38	82.63	35.40	18.15	18.00	63.44	
5-0	x	8-0	16.48	---	25.63	---	92.63	20.26	16.48	---	39.51	
6-0	x	8-0	20.34	---	31.63	---	92.63	26.94	20.34	---	47.52	
6-2	x	8-0	21.15	---	32.88	---	92.63	28.30	21.15	---	49.14	
7-5	x	8-0	16.48	16.32	25.63	25.38	92.63	30.39	16.48	16.32	58.81	
7-11	x	8-0	17.77	17.61	27.63	27.38	92.63	33.72	17.77	17.61	62.81	
8-11	x	8-0	20.34	20.18	31.63	31.38	92.63	40.41	20.34	20.18	70.81	

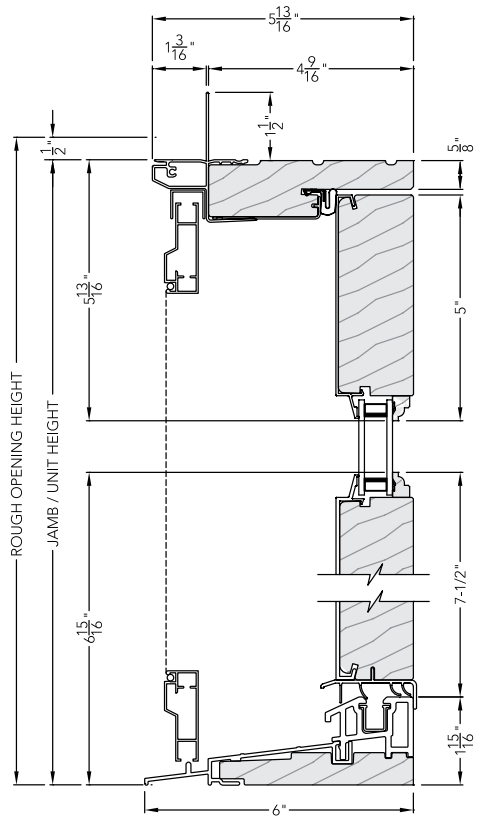
^A All calculations assume operating panel is open 90 degrees.

^B Sq. Ft. Overall Unit Area is calculated on the jamb dimension.

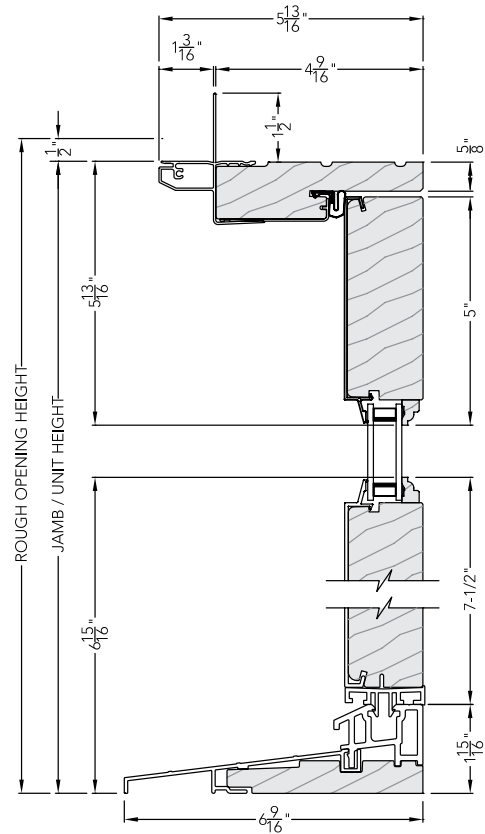
^C Clear Opening Height dimensions calculated without screen.

Verify local or state egress opening sizes with your local building inspector.

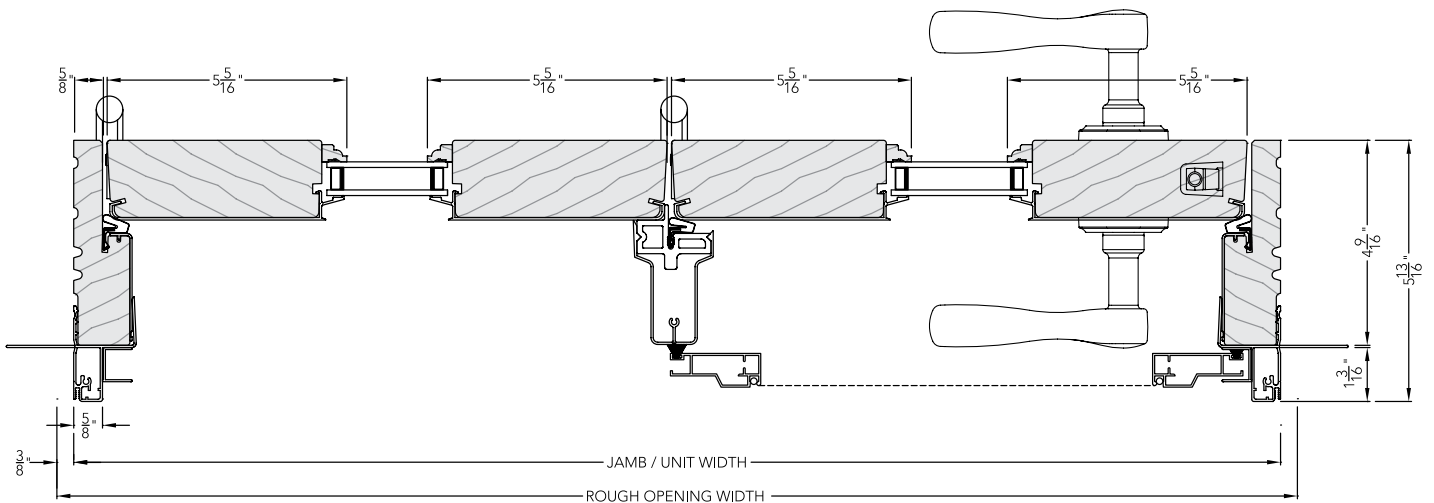
Center Hinged Patio Door (8510) Cross Sections



ELITE PREMIUM CLAD CENTER HINGE PATIO DOOR
Vertical Section



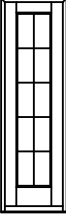
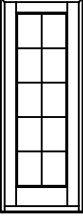
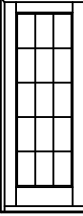
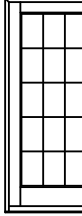
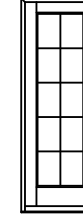
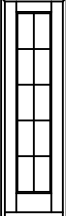
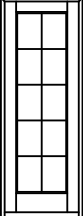
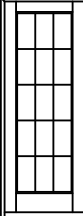
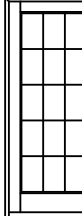
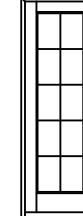
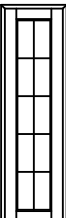
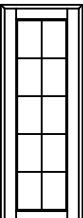
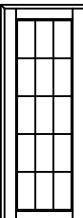
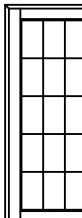
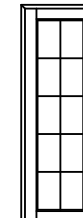
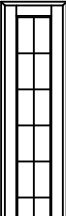
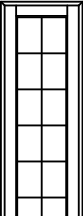
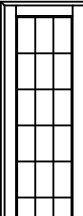
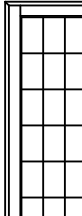
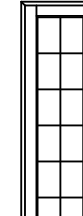
ELITE PREMIUM CLAD HINGED PATIO DOOR IN-SWING SIDELITE
Vertical Section



ELITE PREMIUM CLAD CENTER HINGED PATIO DOOR
Horizontal Section

In-Swing or Out-Swing Hinged Patio Door (8510/8610) Elevations

Clad Unit Dimension	2'-0 5/16"	2'-6 5/16"	2'-8 5/16"	3'-0 5/16"	3'-1 9/16"
Rough Opening	2'-0 1/16"	2'-7 1/16"	2'-9 1/16"	3'-1 1/16"	3'-2 5/16"
Soft Metric R.O. (mm)	611	789	840	941	973
Glass Size	13 1/16"	19 1/16"	21 1/16"	25 1/16"	25 5/16"

<p>6'-7 1/2"</p> <p>6'-8"</p> <p>2032</p> <p>64 13/16"</p> <p>6'-10"</p> <p>6'-10 1/2"</p> <p>2032</p> <p>67 5/16"</p> <p>7'-2"</p> <p>7'-2 1/2"</p> <p>2197</p> <p>71 5/16"</p> <p>8'-0"</p> <p>8'-0 1/2"</p> <p>2451</p> <p>81 5/16"</p>	 <p>1-2168</p>  <p>1-2768</p>  <p>1-2968</p>  <p>1-3168</p>  <p>1-3268</p>  <p>1-21610</p>  <p>1-27610</p>  <p>1-29610</p>  <p>1-31610</p>  <p>1-32610</p>  <p>1-2172</p>  <p>1-2772</p>  <p>1-2972</p>  <p>1-3172</p>  <p>1-3272</p>  <p>1-2180</p>  <p>1-2780</p>  <p>1-2980</p>  <p>1-3180</p>  <p>1-3280</p>
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Verify local or state egress opening sizes with your local building inspector.

In-Swing or Out-Swing Hinged Patio Door (8510/8610) Elevations

Clad Unit Dimension	3'-11 1/4"	4'-11 1/4"	5'-3 1/4"	5'-11 1/4"	6'-1 11/16"
Rough Opening	4'-0"	5'-0"	5'-4"	6'-0"	6'-2 7/16"
Soft Metric R.O. (mm)	1219	1524	1626	1829	1891
Glass Size	13 1/16"	19 1/16"	21 1/16"	25 1/16"	26 9/32"

6'-7 1/2"	2-4068	2-5068	2-5468	2-6068	2-6268
6'-8"					
6'-10"	2-40610	2-50610	2-54610	2-60610	2-62610
6'-10 1/2"					
7'-2"	2-4072	2-5072	2-5472	2-6072	2-6272
7'-2 1/2"					
8'-0"	2-4080	2-5080	2-5480	2-6080	2-6280
8'-0 1/2"					

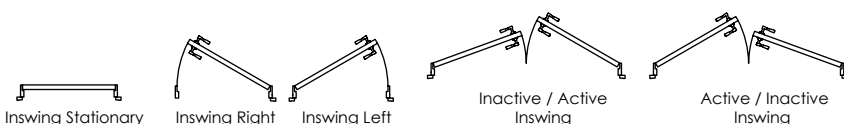
Verify local or state egress opening sizes with your local building inspector.

In-Swing Hinged Patio Door (8510) Opening Specifications

Ordering Size			Sq. Ft. Clear Opening		Clear Opening ^A inches			Sq. Ft. Daylight Opening	Sq. Ft. Vent		Sq. Ft. Overall Unit Area ^B
			1 Oper. Panel	2 Oper. Panels	Width		Height	with 7-1/2" Bottom Rail	1 Oper. Panel	2 Oper. Panels	
					1 Oper. Panel	2 Oper. Panels					
2-1	x	6-8	10.40	---	19.66	---	76.18	5.39	10.40	---	13.43
2-7	x	6-8	13.58	---	25.66	---	76.18	8.05	13.58	---	16.74
2-9	x	6-8	14.64	---	27.66	---	76.18	8.93	14.64	---	17.85
3-1	x	6-8	16.75	---	31.66	---	76.18	10.70	16.75	---	20.06
3-2	x	6-8	17.40	---	32.88	---	76.18	11.24	17.40	---	20.75
4-0	x	6-8	10.28	21.55	19.44	40.74	76.18	10.78	10.28	21.55	26.10
5-0	x	6-8	13.46	27.90	25.44	52.74	76.18	16.10	13.46	27.90	32.72
5-4	x	6-8	14.51	30.02	27.44	56.74	76.18	17.86	14.51	30.02	34.93
6-0	x	6-8	16.63	34.25	31.44	64.74	76.18	21.40	16.63	34.25	39.35
6-2	x	6-8	17.27	35.54	32.65	67.18	76.18	22.48	17.27	35.54	40.70
2-1	x	6-10	10.74	---	19.66	---	78.68	5.60	10.74	---	13.85
2-7	x	6-10	14.02	---	25.66	---	78.68	8.36	14.02	---	17.27
2-9	x	6-10	15.12	---	27.66	---	78.68	9.28	15.12	---	18.41
3-1	x	6-10	17.30	---	31.66	---	78.68	11.12	17.30	---	20.69
3-2	x	6-10	17.97	---	32.88	---	78.68	11.69	17.97	---	21.40
4-0	x	6-10	10.62	22.26	19.44	40.74	78.68	11.20	10.62	22.26	26.92
5-0	x	6-10	13.90	28.82	25.44	52.74	78.68	16.72	13.90	28.82	33.75
5-4	x	6-10	14.99	31.00	27.44	56.74	78.68	18.56	14.99	31.00	36.03
6-0	x	6-10	17.18	35.37	31.44	64.74	78.68	22.24	17.18	35.37	40.59
6-2	x	6-10	17.84	36.71	32.65	67.18	78.68	23.38	17.84	36.71	41.98
2-1	x	7-2	11.29	---	19.66	---	82.68	5.94	11.29	---	14.53
2-7	x	7-2	14.74	---	25.66	---	82.68	8.87	14.74	---	18.11
2-9	x	7-2	15.88	---	27.66	---	82.68	9.84	15.88	---	19.30
3-1	x	7-2	18.18	---	31.66	---	82.68	11.80	18.18	---	21.69
3-2	x	7-2	18.88	---	32.88	---	82.68	12.39	18.88	---	22.44
4-0	x	7-2	11.16	23.39	19.44	40.74	82.68	11.88	11.16	23.39	28.23
5-0	x	7-2	14.60	30.28	25.44	52.74	82.68	17.74	14.60	30.28	35.40
5-4	x	7-2	15.75	32.58	27.44	56.74	82.68	19.68	15.75	32.58	37.79
6-0	x	7-2	18.05	37.17	31.44	64.74	82.68	23.60	18.05	37.17	42.57
6-2	x	7-2	18.75	38.57	32.65	67.18	82.68	24.78	18.75	38.57	44.02

^A All calculations assume operating panel is open 90 degrees.
^B Sq. Ft. Overall Unit Area is calculated on the jamb dimension.
 Verify local or state egress opening sizes with your local building inspector.

Side Hinged Patio Door In-Swing Hinge Codes

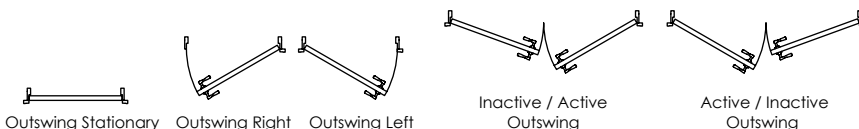


Out-Swing Hinged Patio Door (8610) Opening Specifications

Ordering Size			Sq. Ft. Clear Opening		Clear Opening ^A inches			Sq. Ft. Daylight Opening	Sq. Ft. Vent		Sq. Ft. Overall Unit Area ^B
			1 Oper. Panel	2 Oper. Panels	Width		Height	7-1/2" Bottom Rail	1 Oper. Panel	2 Oper. Panels	
					1 Oper. Panel	2 Oper. Panels					
2-1	x	6-8	10.36	---	19.77	---	75.48	5.39	10.36	---	13.43
2-7	x	6-8	13.51	---	25.77	---	75.48	8.05	13.51	---	16.74
2-9	x	6-8	14.56	---	27.77	---	75.48	8.93	14.56	---	17.85
3-1	x	6-8	16.65	---	31.77	---	75.48	10.70	16.65	---	20.06
3-2	x	6-8	17.29	---	32.99	---	75.48	11.24	17.29	---	20.75
4-0	x	6-8	10.19	21.31	19.44	40.66	75.48	10.78	10.19	21.31	26.10
5-0	x	6-8	13.33	27.61	25.44	52.66	75.48	16.10	13.33	27.61	32.72
5-4	x	6-8	14.38	29.70	27.44	56.66	75.48	17.86	14.38	29.70	34.93
6-0	x	6-8	16.48	33.90	31.44	64.66	75.48	21.40	16.48	33.90	39.35
6-2	x	6-8	17.13	35.17	32.69	67.10	75.48	22.48	17.13	35.17	40.70
2-1	x	6-10	10.71	---	19.77	---	77.98	5.60	10.71	---	13.85
2-7	x	6-10	13.96	---	25.77	---	77.98	8.36	13.96	---	17.27
2-9	x	6-10	15.04	---	27.77	---	77.98	9.28	15.04	---	18.41
3-1	x	6-10	17.20	---	31.77	---	77.98	11.12	17.20	---	20.69
3-2	x	6-10	17.86	---	32.99	---	77.98	11.69	17.86	---	21.40
4-0	x	6-10	10.53	22.02	19.44	40.66	77.98	11.20	10.53	22.02	26.92
5-0	x	6-10	13.78	28.52	25.44	52.66	77.98	16.72	13.78	28.52	33.75
5-4	x	6-10	14.86	30.69	27.44	56.66	77.98	18.56	14.86	30.69	36.03
6-0	x	6-10	17.02	35.02	31.44	64.66	77.98	22.24	17.02	35.02	40.59
6-2	x	6-10	17.70	36.34	32.69	67.10	77.98	23.38	17.70	36.34	41.98
2-1	x	7-2	11.26	---	19.77	---	81.98	5.94	11.26	---	14.53
2-7	x	7-2	14.67	---	25.77	---	81.98	8.87	14.67	---	18.11
2-9	x	7-2	15.81	---	27.77	---	81.98	9.84	15.81	---	19.30
3-1	x	7-2	18.09	---	31.77	---	81.98	11.80	18.09	---	21.69
3-2	x	7-2	18.78	---	32.99	---	81.98	12.39	18.78	---	22.44
4-0	x	7-2	11.07	23.15	19.44	40.66	81.98	11.88	11.07	23.15	28.23
5-0	x	7-2	14.48	29.98	25.44	52.66	81.98	17.74	14.48	29.98	35.40
5-4	x	7-2	15.62	32.26	27.44	56.66	81.98	19.68	15.62	32.26	37.79
6-0	x	7-2	17.90	36.81	31.44	64.66	81.98	23.60	17.90	36.81	42.57
6-2	x	7-2	18.61	38.20	32.69	67.10	81.98	24.78	18.61	38.20	44.02

^A All calculations assume operating panel is open 90 degrees.
^B Sq. Ft. Overall Unit Area is calculated on the jamb dimension.
 Verify local or state egress opening sizes with your local building inspector.

Side Hinged Patio Door Out-Swing Hinge Codes



Out-Swing Hinged Patio Door (8610) Opening Specifications — Low profile Sill

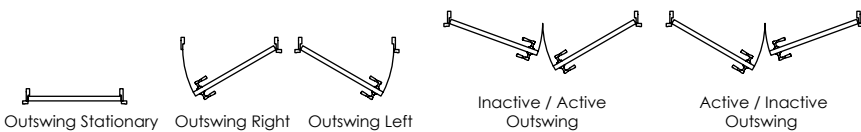
Ordering Size			Sq. Ft. Clear Opening		Clear Opening ^A inches			Sq. Ft. Daylight Opening	Sq. Ft. Vent		Sq. Ft. Overall Unit Area ^B
			1 Oper. Panel	2 Oper. Panels	Width		Height	7-1/2" Bottom Rail	1 Oper. Panel	2 Oper. Panels	
					1 Oper. Panel	2 Oper. Panels					
2-1	x	6-8	10.39	---	19.77	---	75.66	5.39	10.39	---	13.32
2-7	x	6-8	13.54	---	25.77	---	75.66	8.05	13.54	---	16.61
2-9	x	6-8	14.59	---	27.77	---	75.66	8.93	14.59	---	17.71
3-1	x	6-8	16.69	---	31.77	---	75.66	10.70	16.69	---	19.90
3-2	x	6-8	17.33	---	32.99	---	75.66	11.24	17.33	---	20.58
4-0	x	6-8	10.21	21.36	19.44	40.66	75.66	10.78	10.21	21.36	25.89
5-0	x	6-8	13.37	27.67	25.44	52.66	75.66	16.10	13.37	27.67	32.47
5-4	x	6-8	14.42	29.77	27.44	56.66	75.66	17.86	14.42	29.77	34.66
6-0	x	6-8	16.52	33.97	31.44	64.66	75.66	21.40	16.52	33.97	39.04
6-2	x	6-8	17.17	35.26	32.69	67.10	75.66	22.48	17.17	35.26	40.38
2-1	x	6-10	10.73	---	19.77	---	78.16	5.60	10.73	---	13.74
2-7	x	6-10	13.99	---	25.77	---	78.16	8.36	13.99	---	17.14
2-9	x	6-10	15.07	---	27.77	---	78.16	9.28	15.07	---	18.27
3-1	x	6-10	17.24	---	31.77	---	78.16	11.12	17.24	---	20.53
3-2	x	6-10	17.91	---	32.99	---	78.16	11.69	17.91	---	21.23
4-0	x	6-10	10.55	22.07	19.44	40.66	78.16	11.20	10.55	22.07	26.71
5-0	x	6-10	13.81	28.58	25.44	52.66	78.16	16.72	13.81	28.58	33.50
5-4	x	6-10	14.89	30.76	27.44	56.66	78.16	18.56	14.89	30.76	35.76
6-0	x	6-10	17.06	35.10	31.44	64.66	78.16	22.24	17.06	35.10	40.28
6-2	x	6-10	17.74	36.42	32.69	67.10	78.16	23.38	17.74	36.42	41.66
2-1	x	7-2	11.28	---	19.77	---	82.16	5.94	11.28	---	14.42
2-7	x	7-2	14.70	---	25.77	---	82.16	8.87	14.70	---	17.98
2-9	x	7-2	15.84	---	27.77	---	82.16	9.84	15.84	---	19.16
3-1	x	7-2	18.13	---	31.77	---	82.16	11.80	18.13	---	21.54

^A All calculations assume operating panel is open 90 degrees.

^B Sq. Ft. Overall Unit Area is calculated on the jamb dimension.

Verify local or state egress opening sizes with your local building inspector.

Side Hinged Patio Door Out-Swing Hinge Codes



Out-Swing Hinged Patio Door (8610) Opening Specifications — ADA Sill

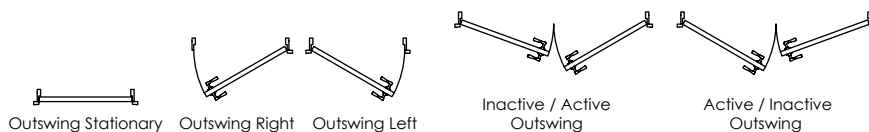
Ordering Size			Sq. Ft. Clear Opening		Clear Opening ^A inches			Sq. Ft. Daylight Opening	Sq. Ft. Vent		Sq. Ft. Overall Unit Area ^B
			1 Oper. Panel	2 Oper. Panels	Width		Height	7-1/2" Bottom Rail	1 Oper. Panel	2 Oper. Panels	
					1 Oper. Panel	2 Oper. Panels					
2-1	x	6-8	10.47	---	19.77	---	76.28	5.39	10.47	---	13.17
2-7	x	6-8	13.65	---	25.77	---	76.28	8.05	13.65	---	16.43
2-9	x	6-8	14.71	---	27.77	---	76.28	8.93	14.71	---	17.51
3-1	x	6-8	16.83	---	31.77	---	76.28	10.70	16.83	---	19.68
3-2	x	6-8	17.48	---	32.99	---	76.28	11.24	17.48	---	20.35
4-0	x	6-8	10.30	21.54	19.44	40.66	76.28	10.78	10.30	21.54	25.60
5-0	x	6-8	13.48	27.90	25.44	52.66	76.28	16.10	13.48	27.90	32.11
5-4	x	6-8	14.53	30.02	27.44	56.66	76.28	17.86	14.53	30.02	34.27
6-0	x	6-8	16.65	34.25	31.44	64.66	76.28	21.40	16.65	34.25	38.61
6-2	x	6-8	17.32	35.55	32.69	67.10	76.28	22.48	17.32	35.55	39.93
2-1	x	6-10	10.82	---	19.77	---	78.78	5.60	10.82	---	13.60
2-7	x	6-10	14.10	---	25.77	---	78.78	8.36	14.10	---	16.95
2-9	x	6-10	15.19	---	27.77	---	78.78	9.28	15.19	---	18.07
3-1	x	6-10	17.38	---	31.77	---	78.78	11.12	17.38	---	20.31
3-2	x	6-10	18.05	---	32.99	---	78.78	11.69	18.05	---	21.01
4-0	x	6-10	10.63	22.25	19.44	40.66	78.78	11.20	10.63	22.25	26.42
5-0	x	6-10	13.92	28.81	25.44	52.66	78.78	16.72	13.92	28.81	33.14
5-4	x	6-10	15.01	31.00	27.44	56.66	78.78	18.56	15.01	31.00	35.37
6-0	x	6-10	17.20	35.38	31.44	64.66	78.78	22.24	17.20	35.38	39.85
6-2	x	6-10	17.88	36.71	32.69	67.10	78.78	23.38	17.88	36.71	41.21
2-1	x	7-2	11.37	---	19.77	---	82.78	5.94	11.37	---	14.27
2-7	x	7-2	14.81	---	25.77	---	82.78	8.87	14.81	---	17.79
2-9	x	7-2	15.96	---	27.77	---	82.78	9.84	15.96	---	18.97
3-1	x	7-2	18.26	---	31.77	---	82.78	11.80	18.26	---	21.32

^A All calculations assume operating panel is open 90 degrees.

^B Sq. Ft. Overall Unit Area is calculated on the jamb dimension.

Verify local or state egress opening sizes with your local building inspector.

Side Hinged Patio Door Out-Swing Hinge Codes



In-Swing or Out-Swing Hinged Patio Door Sidelites (8510/8610) Opening Specifications

Ordering Size			Sq. Ft. Daylight Opening	Sq. Ft. Overall Unit Area ^B		
			7-1/2" Bottom Rail	Standard Sill	ADA Sill	Low Profile Sill (Outswing Frame Only)
1-3	x	6-8	3.10	7.99	7.84	7.93
1-5	x	6-8	3.99	9.10	8.92	9.02
1-7	x	6-8	4.87	10.20	10.01	10.12
1-9	x	6-8	5.76	11.30	11.09	11.22
1-3	x	6-10	3.22	8.24	8.09	8.18
1-5	x	6-10	4.14	9.38	9.21	9.31
1-7	x	6-10	5.07	10.52	10.33	10.44
1-9	x	6-10	5.99	11.66	11.45	11.57
1-3	x	7-2	3.42	8.64	8.49	8.58
1-5	x	7-2	4.39	9.84	9.67	9.77
1-7	x	7-2	5.37	11.03	10.84	10.95
1-9	x	7-2	6.35	12.23	12.02	12.14
1-3	x	8-0	3.90	9.65	9.50	9.59
1-5	x	8-0	5.02	10.98	10.81	10.91
1-7	x	8-0	6.13	12.32	12.12	12.24
1-9	x	8-0	7.25	13.65	13.44	13.56

Verify local or state egress opening sizes with your local building inspector.

^A Sq. Ft. Overall Unit Area is calculated on the jamb dimension.

Hinged Patio Door Transom Elevations

Clad Unit Dimension	2'-0 5/16"	2'-6 5/16"	2'-8 5/16"	3'-0 5/16"	3'-1 9/16"	4'-11 1/4"	5'-3 1/4"
Rough Opening	2'-1 1/16"	2'-7 1/16"	2'-9 1/16"	3'-1 1/16"	3'-2 5/16"	5'-0"	5'-4"
Soft Metric R.O. (mm)	611	789	840	941	973	1524	1626
Glass Size	22 13/16"	28 13/16"	30 13/16"	34 13/16"	36 1/16"	57 3/4"	61 3/4"

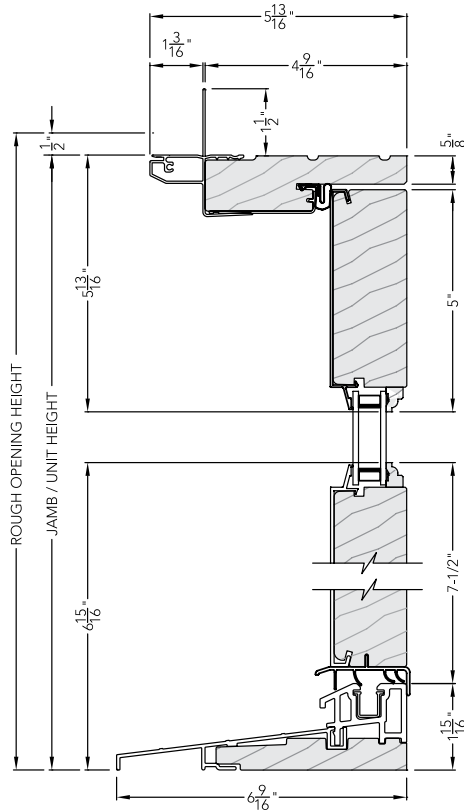
1'-0"	2110	2710	2910	3110	3210	5010	5410
1'-8"	2118	2718	2918	3118	3218	5018	5418
2'-0"	2120	2720	2920	3120	3220	5020	5420
2'-4"	2124	2724	2924	3124	3224	5024	5424

Clad Unit Dimension	5'-11 1/4"	6'-1 11/16"
Rough Opening	6'-0"	6'-2 7/16"
Soft Metric R.O. (mm)	1829	1891
Glass Size	69 3/4"	72 3/16"

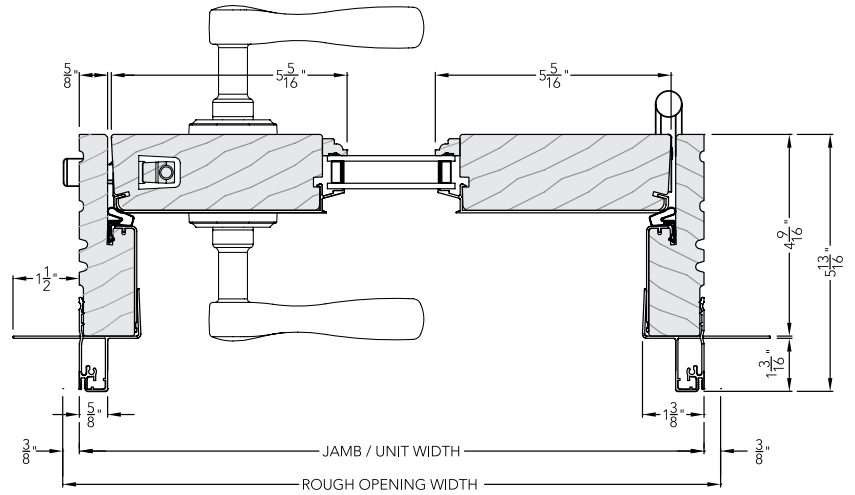
1'-0"	6010	6210
1'-8"	6018	62018
2'-0"	6020	6220
2'-4"	6024	6224

Verify local or state egress opening sizes with your local building inspector.

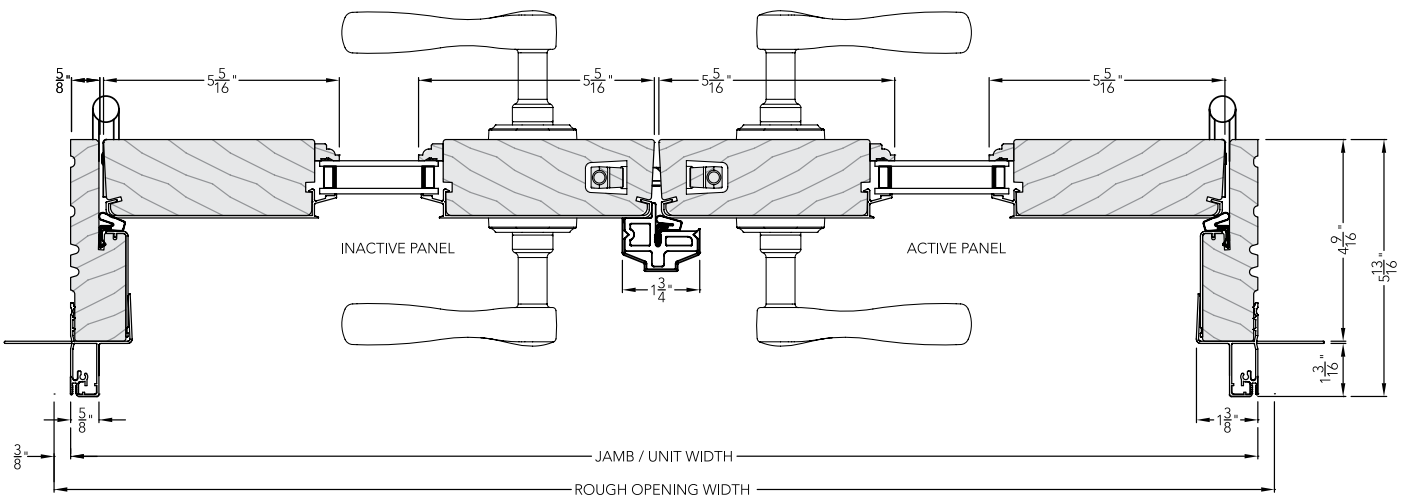
In-Swing Hinged Patio Door (8510) Cross Sections



ELITE PREMIUM CLAD IN-SWING PATIO DOOR
Vertical Section

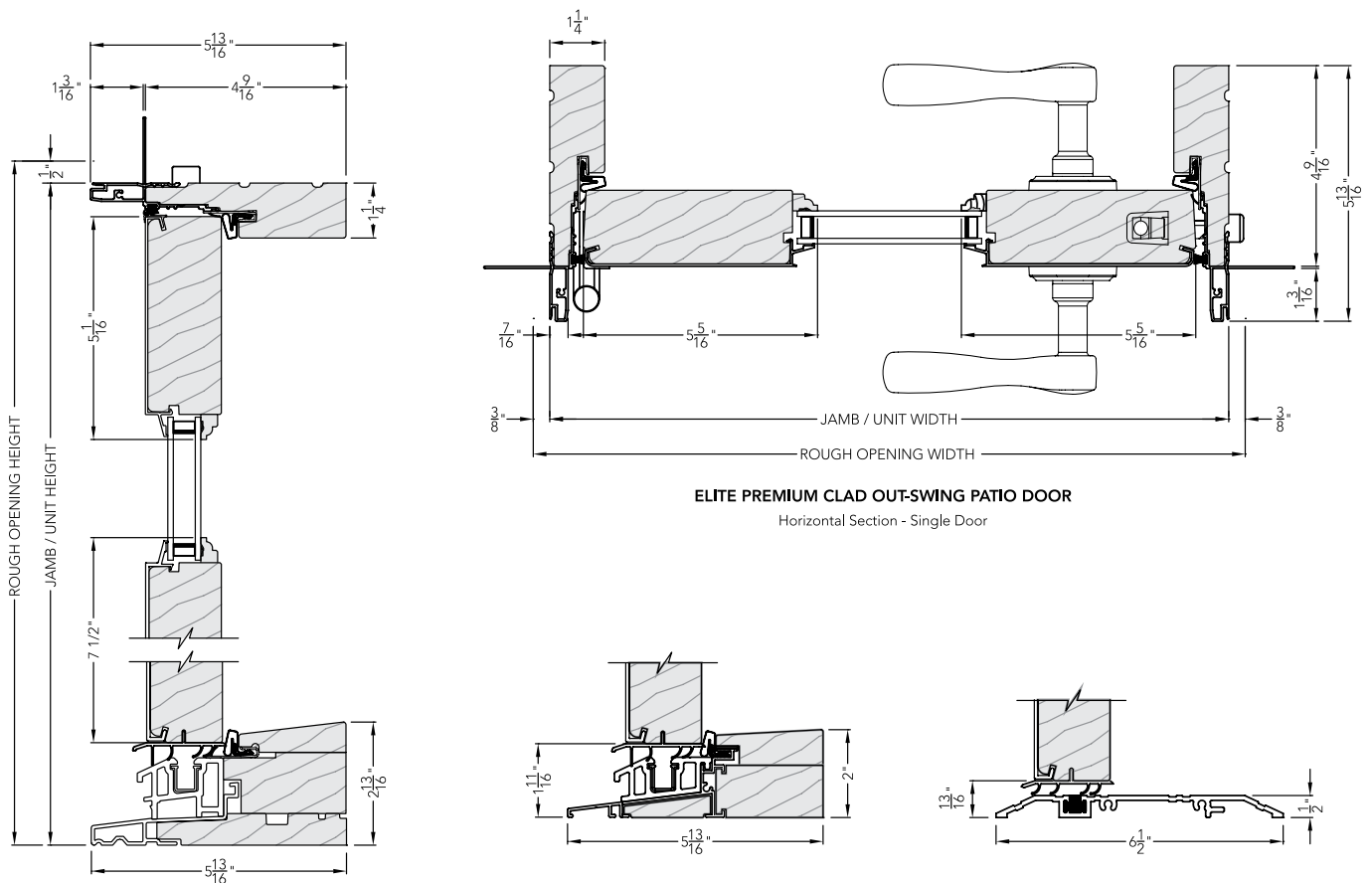


ELITE PREMIUM CLAD IN-SWING PATIO DOOR
Horizontal Section - Single Door



ELITE PREMIUM CLAD IN-SWING PATIO DOOR
Horizontal Section - Double Door

Out-Swing Hinged Patio Door (8610) Cross Sections

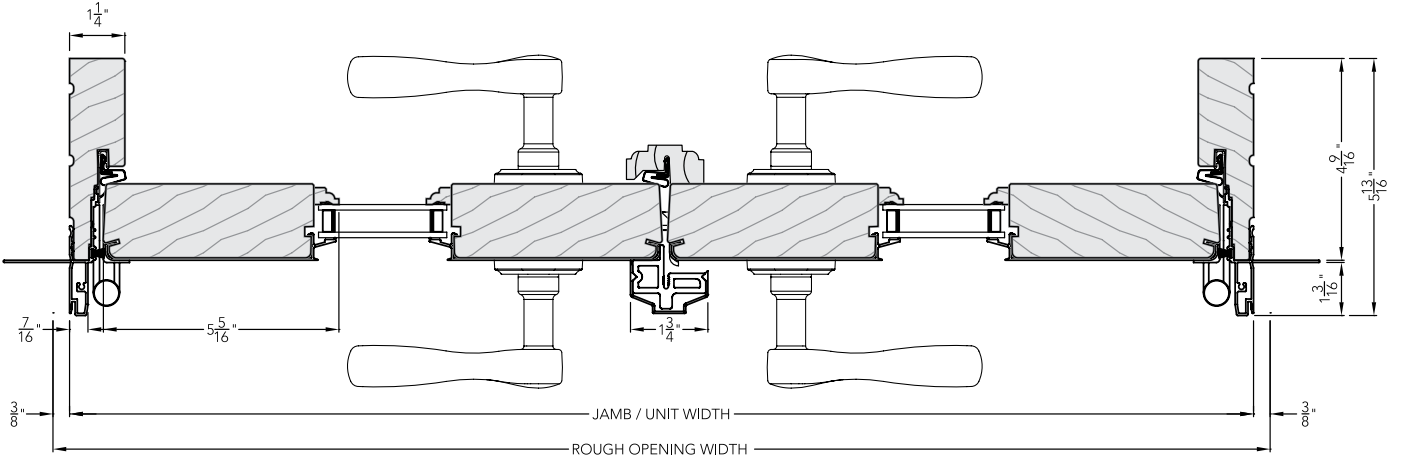


ELITE PREMIUM CLAD OUT-SWING PATIO DOOR
Horizontal Section - Single Door

ELITE PREMIUM CLAD OUT-SWING PATIO DOOR
Vertical Section - Standard Sill

ELITE PREMIUM CLAD OUT-SWING PATIO DOOR
Vertical Section - Alternate Low Profile Sill

ELITE PREMIUM CLAD OUT-SWING PATIO DOOR
Vertical Section - ADA Sill



ELITE PREMIUM CLAD FRENCH OUT-SWING PATIO DOOR
Horizontal Section - Double Door

Sliding Patio Door (8714) Elevations

SLIDING PATIO DOORS

Unit Dimension	4'-11 9/16"	5'-11 9/16"	6'-9 9/16"	7'-11 9/16"
Rough Opening	5'-0 5/16"	6'-0 5/16"	6'-10 5/16"	8'-0 5/16"
Soft Metric R.O. (mm)	1532	1837	2091	2446
Glass Size	24 7/8"	30 7/8"	35 7/8"	42 7/8"

6'-7 1/2"				
6'-8"				
6'-10 1/2"				
7'-2"				
7'-2 1/2"				
8'-0"				
8'-2 1/2"				

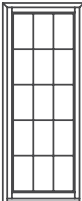
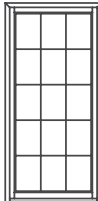
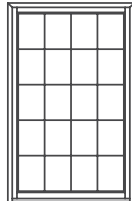
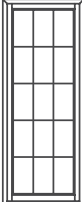
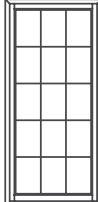
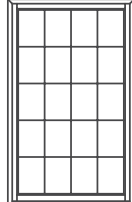
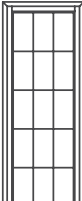
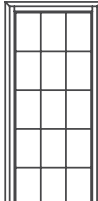
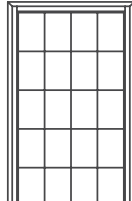
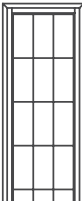
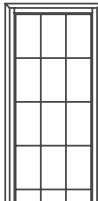
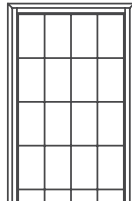
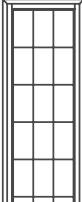
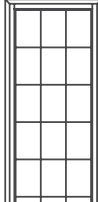
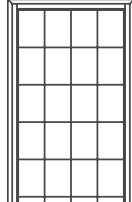





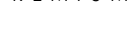
NOTE: Two panel units are also available in reverse operation (IA)

Verify local or state egress opening sizes with your local building inspector.

Sliding Patio Door (8714) Elevations

Stationary Doors

Unit Dimension	2'-8 1/4"	3'-2 1/4"	4'-2 1/4"
Rough Opening	2'-9"	3'-3"	4'-3"
Soft Metric R.O. (mm)	838	991	1295
Glass Size	24 7/8"	30 7/8"	42 7/8"

6'-7 1/2"			
6'-8"	2968	3368	4368
6'-10 1/2"			
2032	28610	33610	43610
71 7/16"			
7'-2"	2872	3372	4372
7'-2 1/2"			
2197	2880	3380	4380
77 15/16"			
8'-0"	2882	3382	4382
8'-0 1/2"			
2451	2502	3502	4502
89 15/16"			
8'-2"	89 15/16"	39 15/16"	49 15/16"

SLIDING PATIO DOORS

Verify local or state egress opening sizes with your local building inspector.

Sliding Patio Door (8714) Opening Specifications

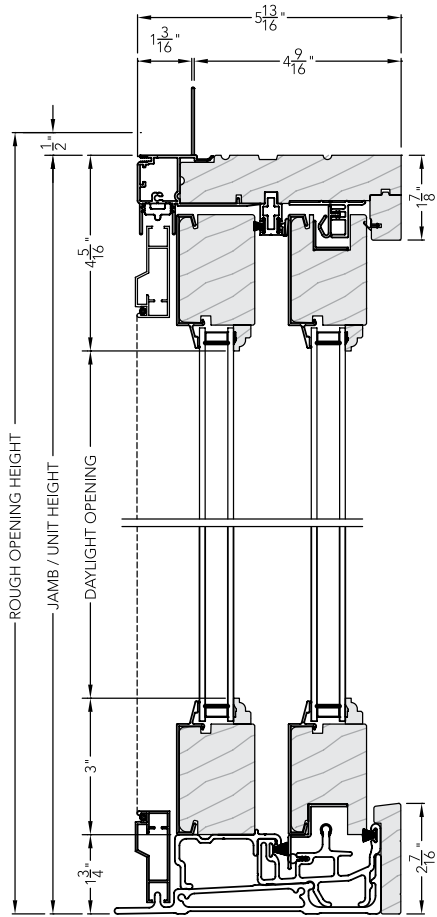
SLIDING PATIO DOORS

	Ordering Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Sq. Ft. Overall Unit Area [^]
			Width	Height			
2-PANEL DOORS	5-0 x 6-8	11.33	21.69	75.25	23.52	11.33	32.88
	6-0 x 6-8	14.47	27.69	75.25	29.40	14.47	39.51
	6-10 x 6-8	17.08	32.69	75.25	34.30	17.08	45.03
	8-0 x 6-8	20.74	39.69	75.25	41.16	20.74	52.76
	5-0 x 6-10	11.71	21.69	77.75	24.35	11.71	33.92
	6-0 x 6-10	14.95	27.69	77.75	30.44	14.95	40.75
	6-10 x 6-10	17.65	32.69	77.75	35.52	17.65	46.45
	8-0 x 6-10	21.43	39.69	77.75	42.62	21.43	54.42
	5-0 x 7-2	12.31	21.69	81.75	25.69	12.31	35.57
	6-0 x 7-2	15.72	27.69	81.75	32.11	15.72	42.74
	6-10 x 7-2	18.56	32.69	81.75	37.46	18.56	48.71
	8-0 x 7-2	22.53	39.69	81.75	44.95	22.53	57.07
	5-0 x 8-0	13.82	21.69	91.75	29.02	13.82	39.71
	6-0 x 8-0	17.64	27.69	91.75	36.28	17.64	47.71
	6-10 x 8-0	20.83	32.69	91.75	42.32	20.83	54.38
	8-0 x 8-0	25.29	39.69	91.75	50.79	25.29	63.71
	5-0 x 8-2	14.12	21.69	93.75	29.69	14.12	40.54
	6-0 x 8-2	18.03	27.69	93.75	37.11	18.03	48.70
	6-10 x 8-2	21.28	32.69	93.75	43.29	21.28	55.51
	8-0 x 8-2	25.84	39.69	93.75	51.95	25.84	65.04
3-PANEL DOORS	7-8 x 6-8	11.33	21.67	75.25	35.28	11.33	50.15
	9-2 x 6-8	14.46	27.67	75.25	44.10	14.46	60.09
	12-2 x 6-8	20.73	39.67	75.25	61.74	20.73	79.97
	7-8 x 6-10	11.70	21.67	77.75	36.53	11.70	51.73
	9-2 x 6-10	14.94	27.67	77.75	45.66	14.94	61.98
	12-2 x 6-10	21.42	39.67	77.75	63.93	21.42	82.48
	7-8 x 7-2	12.30	21.67	81.75	38.53	12.30	54.25
	9-2 x 7-2	15.71	27.67	81.75	48.16	15.71	65.00
	12-2 x 7-2	22.52	39.67	81.75	67.43	22.52	86.50
	7-8 x 8-0	13.81	21.67	91.75	43.53	13.81	60.56
	9-2 x 8-0	17.63	27.67	91.75	54.41	17.63	72.56
	12-2 x 8-0	25.28	39.67	91.75	76.18	25.28	96.56
	7-8 x 8-2	14.11	21.67	93.75	44.53	14.11	61.82
	9-2 x 8-2	18.02	27.67	93.75	55.66	18.02	74.07
	12-2 x 8-2	25.83	39.67	93.75	77.93	25.83	98.57
	4-PANEL DOORS	9-10 x 6-8	23.04	44.09	75.25	47.04	23.04
11-10 x 6-8		29.31	56.09	75.25	58.80	29.31	77.98
15-10 x 6-8		41.85	80.09	75.25	82.32	41.85	104.48
9-10 x 6-10		23.80	44.09	77.75	48.71	23.80	66.77
11-10 x 6-10		30.28	56.09	77.75	60.89	30.28	80.43
15-10 x 6-10		43.24	80.09	77.75	85.24	43.24	107.77
9-10 x 7-2		25.03	44.09	81.75	51.38	25.03	70.02
11-10 x 7-2		31.84	56.09	81.75	64.22	31.84	84.36
15-10 x 7-2		45.46	80.09	81.75	89.91	45.46	113.02
9-10 x 8-0		28.09	44.09	91.75	58.04	28.09	78.17
11-10 x 8-0		35.73	56.09	91.75	72.55	35.73	94.17
15-10 x 8-0		51.03	80.09	91.75	101.57	51.03	126.17
9-10 x 8-2		28.70	44.09	93.75	59.38	28.70	79.80
11-10 x 8-2		36.51	56.09	93.75	74.22	36.51	96.13
15-10 x 8-2	52.14	80.09	93.75	103.91	52.14	128.80	

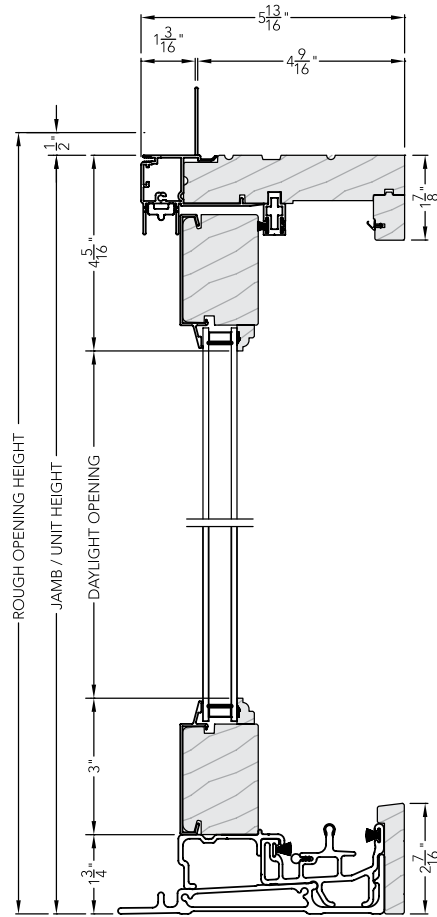
[^]Sq. Ft. Overall Unit Area is calculated on the jamb dimension.
Verify local or state egress opening sizes with your local building inspector.

Sliding Patio Door (8714) Cross Sections

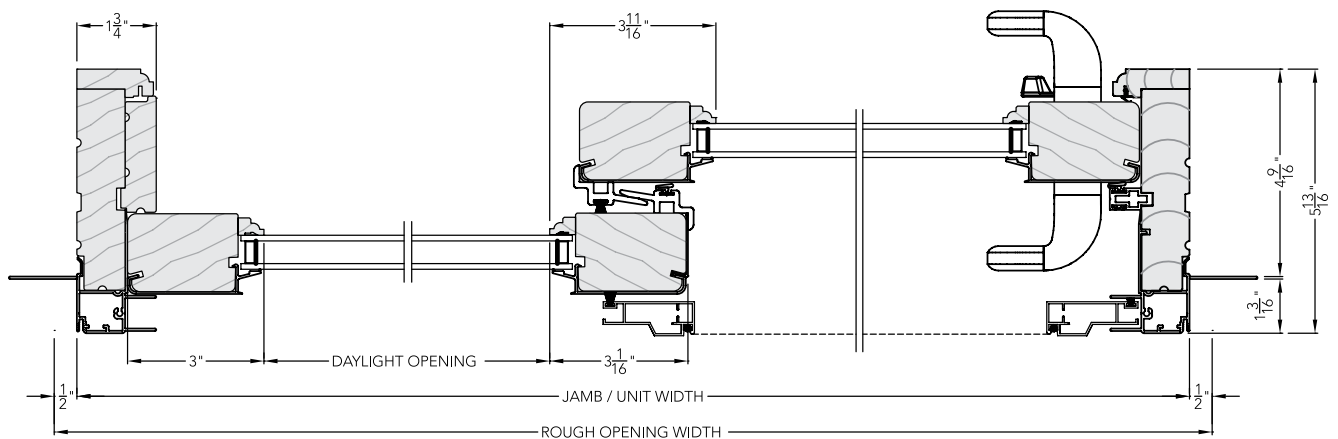
SLIDING PATIO DOORS



ELITE PREMIUM CLAD SLIDING PATIO DOOR
Vertical Section



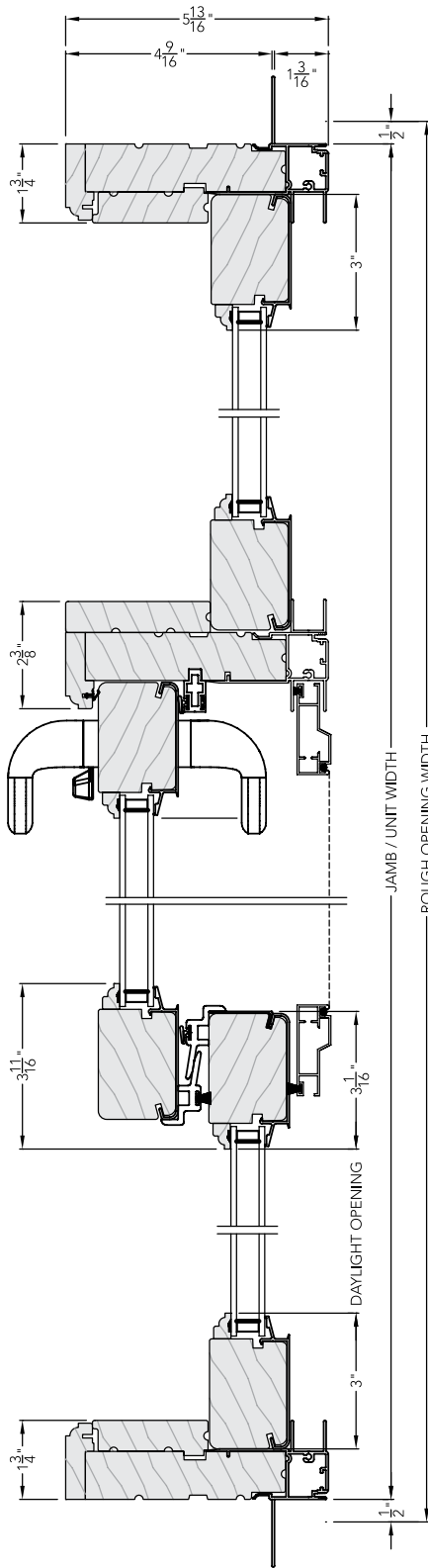
ELITE PREMIUM CLAD SLIDING PATIO DOOR
Vertical Section - Fixed Sidelite



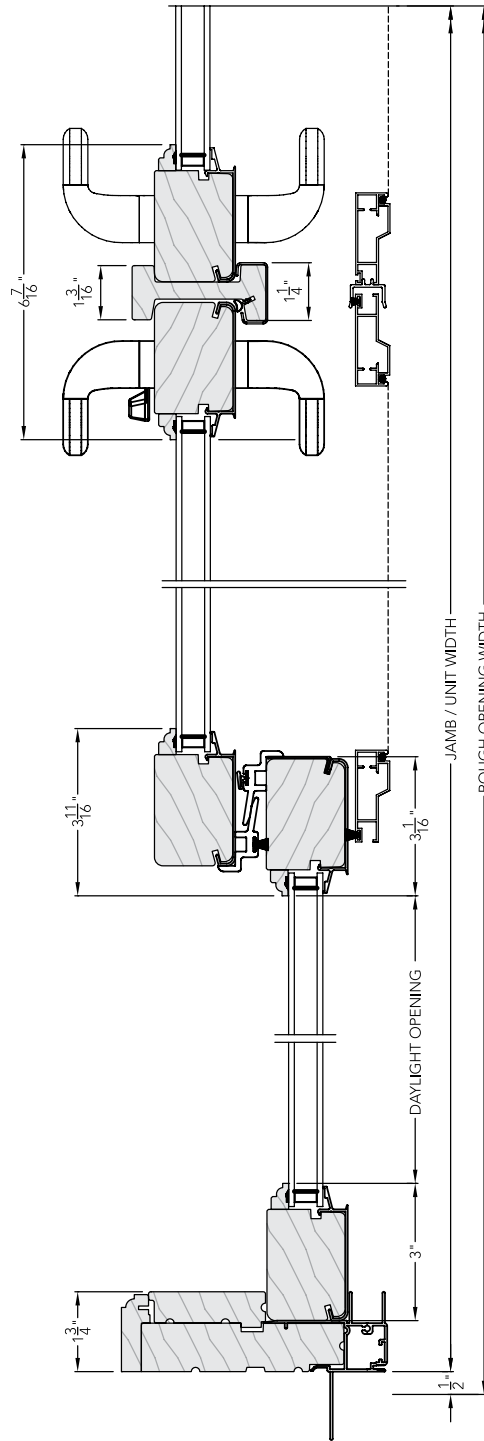
ELITE PREMIUM CLAD SLIDING PATIO DOOR
Horizontal Section

Sliding Patio Door (8714) Cross Sections

SLIDING PATIO DOORS



ELITE PREMIUM CLAD SLIDING PATIO DOOR
Horizontal Section - 3-Panel Door



ELITE PREMIUM CLAD SLIDING PATIO DOOR
Horizontal Section - 4-Panel Door

French Sliding Patio Door (8715)

Opening Specifications

	Ordering Size	Sq. Ft. Clear Opening	Clear Opening		Sq. Ft. Daylight Opening	Sq. Ft. Vent	Sq. Ft. Overall Unit Area ^A
			Width	Height			
2-PANEL DOORS	5-0 x 6-8	10.86	20.78	75.25	17.96	10.86	32.88
	6-0 x 6-8	13.99	26.78	75.25	23.29	13.99	39.51
	8-0 x 6-8	20.26	38.78	75.25	33.96	20.26	52.76
	5-0 x 6-10	11.22	20.78	77.75	18.67	11.22	33.92
	6-0 x 6-10	14.46	26.78	77.75	24.20	14.46	40.75
	8-0 x 6-10	20.94	38.78	77.75	35.28	20.94	54.42
	5-0 x 7-2	11.79	20.78	81.75	19.79	11.79	35.57
	6-0 x 7-2	15.20	26.78	81.75	25.66	15.20	42.74
	8-0 x 7-2	22.01	38.78	81.75	37.41	22.01	57.07
	5-0 x 8-0	13.24	20.78	91.75	22.60	13.24	39.71
	6-0 x 8-0	17.06	26.78	91.75	29.30	17.06	47.71
	8-0 x 8-0	24.71	38.78	91.75	42.71	24.71	63.71
3-PANEL DOORS	5-0 x 8-2	13.53	20.78	93.75	23.16	13.53	40.54
	6-0 x 8-2	17.43	26.78	93.75	30.03	17.43	48.70
	8-0 x 8-2	25.24	38.78	93.75	43.78	25.24	65.04
	7-8 x 6-8	10.85	20.77	75.25	26.94	10.85	50.15
	9-2 x 6-8	13.99	26.77	75.25	34.94	13.99	60.09
	12-2 x 6-8	20.26	38.77	75.25	50.93	20.26	79.97
	7-8 x 6-10	11.21	20.77	77.75	28.00	11.21	51.73
	9-2 x 6-10	14.45	26.77	77.75	36.31	14.45	61.98
	12-2 x 6-10	20.93	38.77	77.75	52.92	20.93	82.48
	7-8 x 7-2	11.79	20.77	81.75	29.68	11.79	54.25
	9-2 x 7-2	15.19	26.77	81.75	38.49	15.19	65.00
	12-2 x 7-2	22.01	38.77	81.75	56.11	22.01	86.50
	7-8 x 8-0	13.23	20.77	91.75	33.90	13.23	60.56
	9-2 x 8-0	17.05	26.77	91.75	43.95	17.05	72.56
	12-2 x 8-0	24.70	38.77	91.75	64.07	24.70	96.56
	7-8 x 8-2	13.52	20.77	93.75	34.74	13.52	61.82
	9-2 x 8-2	17.43	26.77	93.75	45.05	17.43	74.07
	12-2 x 8-2	25.24	38.77	93.75	65.66	25.24	98.57
4-PANEL DOORS	9-10 x 6-8	22.09	42.28	75.25	35.93	22.09	64.73
	11-10 x 6-8	28.36	54.28	75.25	46.59	28.36	77.98
	15-10 x 6-8	40.91	78.28	75.25	67.91	40.91	104.48
	9-10 x 6-10	22.83	42.28	77.75	37.33	22.83	66.77
	11-10 x 6-10	29.31	54.28	77.75	48.41	29.31	80.43
	15-10 x 6-10	42.27	78.28	77.75	70.57	42.27	107.77
	9-10 x 7-2	24.00	42.28	81.75	39.58	24.00	70.02
	11-10 x 7-2	30.81	54.28	81.75	51.32	30.81	84.36
	15-10 x 7-2	44.44	78.28	81.75	74.81	44.44	113.02
	9-10 x 8-0	26.94	42.28	91.75	45.19	26.94	78.17
	11-10 x 8-0	34.58	54.28	91.75	58.60	34.58	94.17
	15-10 x 8-0	49.88	78.28	91.75	85.43	49.88	126.17
9-10 x 8-2	27.53	42.28	93.75	46.32	27.53	79.80	
11-10 x 8-2	35.34	54.28	93.75	60.06	35.34	96.13	
15-10 x 8-2	50.96	78.28	93.75	87.55	50.96	128.80	

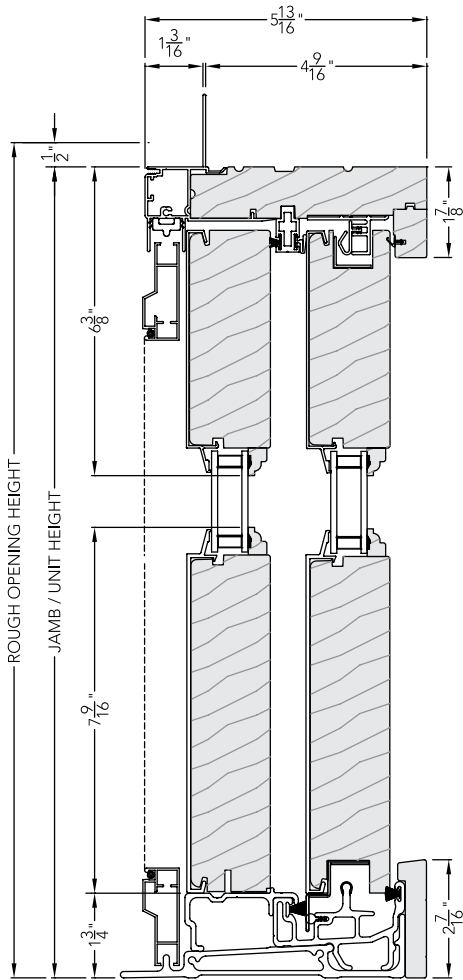
^ASq. Ft. Overall Unit Area is calculated on the jamb dimension.

Verify local or state egress opening sizes with your local building inspector.

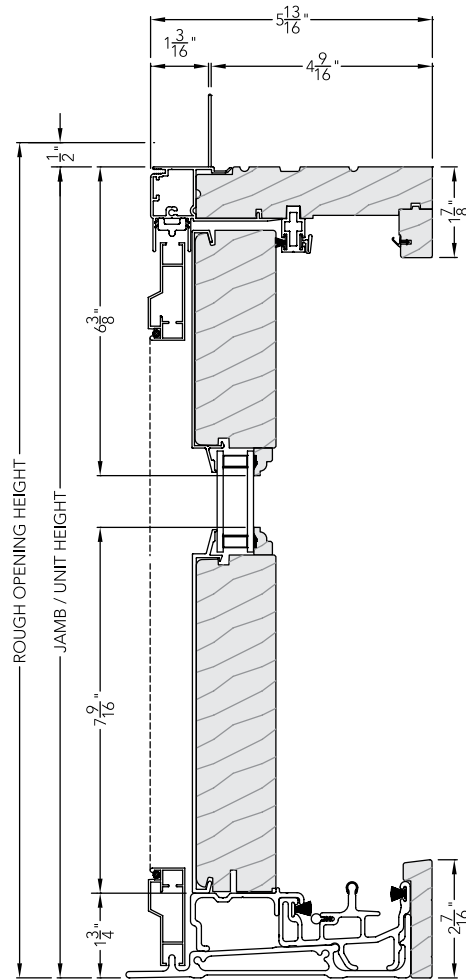
SLIDING PATIO DOORS

French Sliding Door (8715) Cross Sections

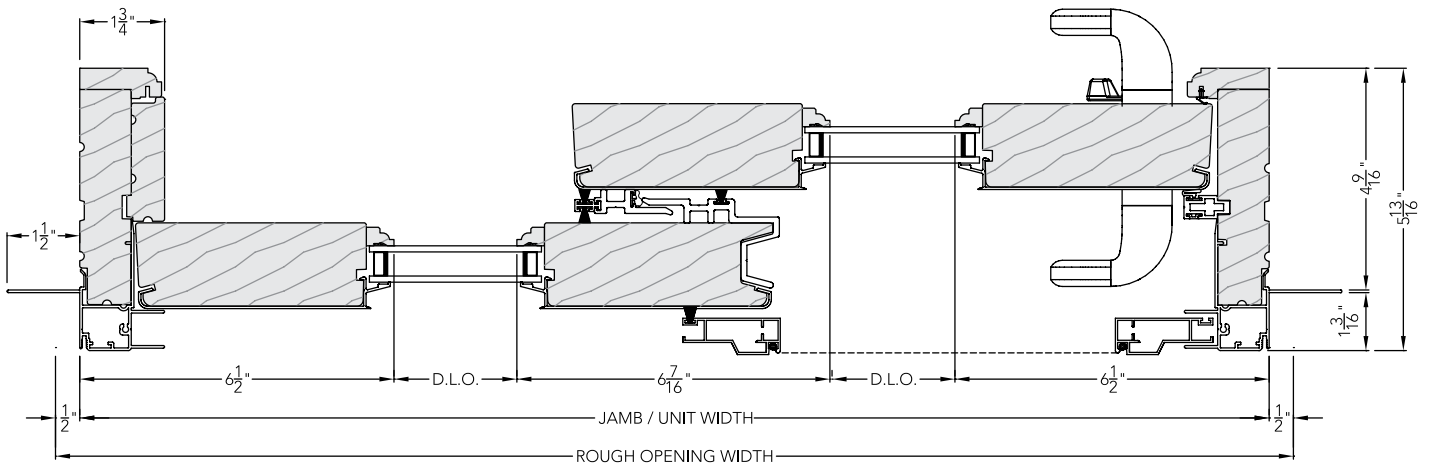
SLIDING PATIO DOORS



ELITE PREMIUM CLAD FRENCH SLIDING PATIO DOOR
Vertical Section

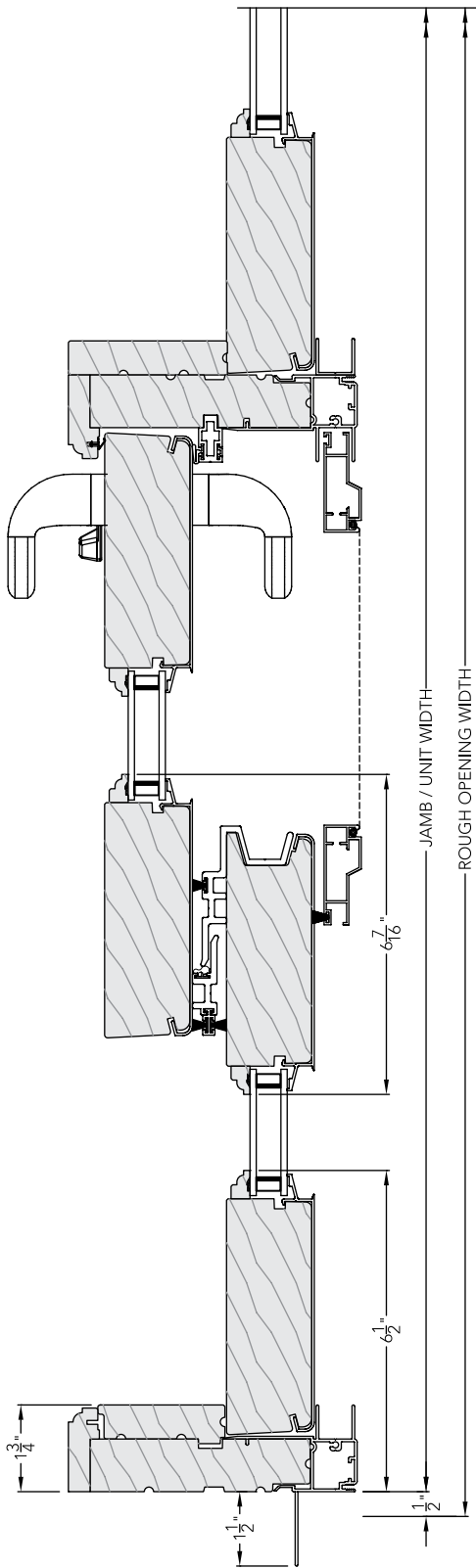


ELITE PREMIUM CLAD FRENCH SLIDING PATIO DOOR
Vertical Section - Fixed Sidelite

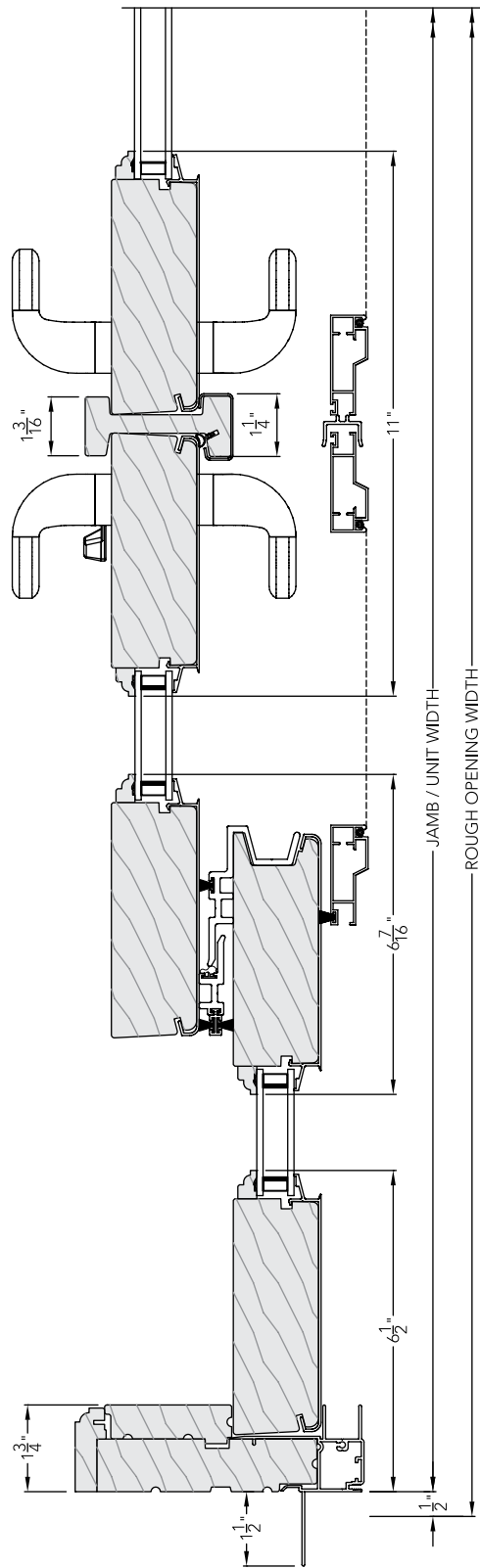


ELITE PREMIUM CLAD FRENCH SLIDING PATIO DOOR
Horizontal Section

French Sliding Door (8715) Cross Sections



ELITE PREMIUM CLAD FRENCH SLIDING PATIO DOOR
Horizontal Section - 3-Panel Door



ELITE PREMIUM CLAD FRENCH SLIDING PATIO DOOR
Horizontal Section - 4-Panel Door



CRESTLINE'S Lifetime Limited Warranty

Effective date August 1, 2014.

Subject to the conditions, exclusions and limitations that follow, the manufacturer of CRESTLINE products, ("CRESTLINE") warrants CRESTLINE products (Select 500™, Acclaim™, Elite Premium Clad, Elite Premium Primed, Select 500™ Replacement, and Elite Premium Replacement Windows and Doors) to be free from defects in material and workmanship as noted below. All referenced times are in relation to date of purchase.

Innovations: Wood Shield™, Symmetry Balance System™, TriCore™ Frame Technology, EasyCare®, Zo-e-shield®

WARRANTY COVERAGE

Insulated Glass Hermetic Seal – Lifetime

CRESTLINE warrants the insulated glass, if any, against failure of the hermetic seal. During the first twenty (20) years after the date of purchase, CRESTLINE's obligations under this warranty shall be limited to, at its option, repair or replacement of the insulated glass only (FOB the original point of delivery), or refund of the original purchase price of the insulated glass. After twenty (20) years from the date of purchase, CRESTLINE's obligations under this warranty shall be limited to granting a prorated credit against the then current list price of comparable new replacement insulated glass. Such credit shall be computed on the basis of the number of years from the date of purchase as follows:

Years from Date of Purchase	Amount of Credit
0 to 20.....	100%
21 to lifetime.....	10%

Vinyl Clad Products – Lifetime

CRESTLINE warrants its vinyl exterior cladding, to be free from defects in material and workmanship and to not rot, rust, crack, pit, corrode, peel, blister or flake. For any products or parts determined by CRESTLINE to contain defects in material or workmanship, CRESTLINE will, at its option, repair the product or parts at no charge, or provide replacements at no charge, or refund the original purchase price of the product or part containing the defect. Decisions as to whether to repair, replace, or refund shall be made by CRESTLINE, in its sole discretion.

Window and Patio Door Product – Twenty Years

CRESTLINE warrants that its products and insulated glass shall be free from defects in material or workmanship for a period of TWENTY (20) YEARS unless specified below. Should any CRESTLINE products or components of products be determined by CRESTLINE to contain defects in material or workmanship within the applicable warranty period, CRESTLINE will, at its option, repair the products or components at no charge, or provide replacement products or components at no charge, or refund the original purchase price of the products containing the defective components. Decisions as to whether to repair, replace or refund shall be made by CRESTLINE in its sole discretion. Replacements will be the closest equivalent current product and may not exactly match the original. Replacements will be delivered to the original point of purchase with no shipping charges. If shipment direct to the consumer is requested, normal shipping and handling charges will apply.

Wood Rot – Wood Shield Clad Wood Products – Thirty Years

Maintained primed /unprimed (unclad) wood products finished pursuant to installation instructions shall be warranted against wood rot for a period of TEN (10) years. Mildew and other discoloration due to condensation is not considered rot and not covered. Products in contact with the ground are not warranted against wood rot.

Laminated Glass – Five Years

Laminated glass shall be free from defects in material and workmanship for a period of FIVE (5) years.

Decorative Glass – Five Years

Decorative glass shall be free from defects in material and workmanship for a period of FIVE (5) years.

Factory-Applied Interior Finishes – Five Years

Factory-applied interior finish or stain is warranted against peeling, checking, or cracking for FIVE (5) years. Standard factory-applied primer is not a finish coat.

Hardware Finish – Ten Years

Corrosive-resistant finishes and seacoast hardware packages installed within one mile of a corrosive environment shall be warranted for TEN (10) years unless marred or scratched. The above conditions/exclusions apply.

Glass Stress Cracks – One Year

Glass shall be warranted against stress cracks for ONE (1) year.

Transferability – Ten Years

This warranty is transferable to subsequent owners. This transferred warranty is the lesser of TEN (10) years or the period specified from the date of manufacture.

NON COVERAGE

- Normal wear and tear, weathering and natural variations in wood color or texture are considered normal and not a product defect.
- Normal wear and tear of hardware and hardware finishes that can naturally occur (e.g. corrosion, tarnishing) or damage at construction site.
- Products not installed pursuant to our installation instructions attached to each unit.
- Minor scratches, slight glass curvature or glass imperfections are natural variances in glazing and do not impair structural integrity or significantly obscure normal vision.
- Repairs, refinishing or similar activities involved when skilled labor installs or replaces products.
- Condensation and any related water damage (such as mold or wood rot due to water or ice build up), which occur as a result of humidity within the property or changes in the interior/exterior temperatures, do not indicate a defect. Contact a heating/cooling specialist to assist.
- Products installed in a non-vertical position, discoloration of non-visible parts, or failures or operating difficulties due to accident, acts of God, abuse, misuse, alteration, exposure to the elements, improper or insufficient handling, storage, maintenance or service including, but not limited to, obstruction of weep holes. Installation of units must be finished and operated in accordance with our installation instructions attached to each unit.
- Failures or operating difficulties resulting from use of high-expansion foam insulation, incompatible sealant, cleaning agent, or exposure to corrosive, unusual, harmful or aggressive substances, acid rain, fumes or condensates, subjection to abnormal stress from localized application of heat, excessive vibration or movement of buildings or foundations or to other abnormal physical stress or use in high humidity areas.
- Products installed in buildings with cladding systems that do not allow for proper management/drainage of moisture (e.g. EIFS or synthetic stucco without an engineered drainage system).
- Vinyl parts or weather strip that has non-factory-applied paint or stain voids the warranty of the affected unit.
- Warpage or air/water infiltration on any swing door with a call-out height of greater than 6'10" unless CRESTLINE'S multi-point lock system is used with the door.
- Any installations at an altitude over 3,500 feet above sea level unless capillary tubes have been installed or a HIGH ALTITUDE GLASS PACKAGE is used, which provides limited coverage.

- Insulated True Divided Lite units.
- Products with wood surfaces that are not covered within thirty (30) days after purchase with a high-quality top coat of paint, sealer or varnish. The top coat should be applied as recommended by the paint manufacturer and it is the customer's responsibility to properly care for and protect the woodwork against moisture or excessive dryness.
- Products with factory-applied primer paint that are not covered with a finish coat within six (6) months of unit installation.
- Products or components not provided by CRESTLINE including but not limited to hardware locksets, strikes, or panning systems.
- CRESTLINE products that are stacked or mulled with products manufactured by others.
- Products with modifications (e.g. customer applied point finishes, tints, films) or security systems without prior approval.

ADDITIONALLY

- Insulated units with capillary tubes will not have inert gas fill.
- ADA-compliant sills or telescoping, pocket and bifold patio door systems are not designed nor are they intended to manage moisture or water infiltration. The determination of proper building design and moisture management (through an overhang or otherwise) is the responsibility of your building designer, architect or contractor.
- Warping of a door shall not be deemed to be a product defect unless the warping is in the door panel itself and then only if the warping is more than one quarter inch. The amount of warp shall be determined by placing a taut wire or string or straightedge across the face of the installed door panel thought to be concave and measuring the amount of warp at the point of the greatest distance between the bottom of such wire, string or straightedge and the face of the door panel. CRESTLINE may, at its option, defer action on a warping claim for a period of not more than ONE (1) year from the date of the claim to permit the door panel to adjust to temperature and humidity in its installed position.
- The performance of windows and doors may be affected by factors beyond CRESTLINE'S control. Examples include handling and installation, construction details of the building, exposure conditions, maintenance, normal wear and tear, and migration of inert gas. Structural or thermal ratings are for comparison purposes only. While CRESTLINE products are manufactured to meet or exceed published ratings, it is not possible to guarantee that they will meet or exceed those ratings after they have been installed.
- CRESTLINE is not responsible for removing any defective products from the structure in which they are installed, or for installing any replacement products or components provided by CRESTLINE pursuant to this limited warranty, or for any painting, refinishing or other work necessary to complete the installation of replacement products or components, all of which shall be the consumer's responsibility.

GENERAL PROVISIONS

Selection and purchase of CRESTLINE products which conform to all applicable building codes and local ordinances is the sole responsibility of the architect, building contractor or homeowner. CRESTLINE assumes no responsibility for compliance with local building codes or ordinances, or for calculation and design of support mullions, structural support, or flashing required for installation. Consult with your local building code officials and/or a qualified contractor, architect or engineer for specific requirements.

THERE ARE NO OTHER EXPRESS WARRANTIES EXCEPT AS SET FORTH HEREIN. ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE PERIODS OF COVERAGE OF THE EXPRESS WARRANTIES SET FORTH IN THIS LIMITED WARRANTY. CRESTLINE SHALL NOT BE LIABLE FOR APPLICABLE TAXES OR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGE OR LOSS TO PERSONS OR OTHER PROPERTY.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so these limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TO GET ASSISTANCE

For further information, or to make a claim under The CRESTLINE Limited Lifetime Warranty, please contact the contractor who installed the product or the CRESTLINE retailer from whom the product was purchased or fill out an online service form. To find your closest retailer, please use the dealer locator on the web site (www.Crestlinewindows.com).

Online service form: www.Crestlinewindows.com

If you cannot find a local retailer, you may contact us at the below location.

CRESTLINE WINDOWS AND DOORS
P.O. Box 309 Medford, WI 54451

800-826-5509

Please provide the following information:

- Your name, address, daytime telephone number and e-mail address.
- A description of the product for which the claim is being made.
- Original proof of purchase (or approximate date if exact date is not known).
- The name of the CRESTLINE retailer from whom the product was purchased (if known).
- The nature of the product complaint.
- The coded information on the spacer between the panes of glass.

In cases relating to hardware, the customer may be invoiced for the replacement hardware at the list price and appropriate credit will be issued when the defective hardware has been returned to CRESTLINE.

Supplying replacement products or parts shall not extend the time period of the warranty and the replacement product or part shall be warranted only to the extent of the unexpired portion of the warranty period on the originally purchased product or part.

NO DISTRIBUTOR, SALESPERSON, DEALER, RETAILER OR OTHER REPRESENTATIVE OF CRESTLINE PRODUCTS HAS THE AUTHORITY TO ALTER OR CHANGE THESE WARRANTIES OR TO MAKE ANY OTHER WARRANTY EITHER ORALLY OR IN WRITING.

Effective Date: August 1, 2014



CRESTLINE®

Elite Clad



Crestline Windows and Doors
P.O. Box 309
Medford, WI 54401

www.crestlinewindows.com
Customer Service: 800-826-5509

Crestline reserves the right to change product materials, specifications and methods of manufacture without prior notice. Please verify unit dimensions and/or rough openings with your local **MENARDS** store.

Printed in the USA
1271924 04/15


Thermal Performance Data

Elite Double Hung Windows (8109)



ENERGY PERFORMANCE DATA										CANADIAN ENERGY PERFORMANCE DATA										
NFRF Total Unit Calculations ^a										ENERGY STAR			ENERGY STAR							
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m ²	Energy R. ating	CANADA Energy Star (2010)				CANADA Energy Star (2015)		
							N	NC	SC	S				A	B	C	D	1	2	3
No Grilles	3/4"	Clear Insul	0.47	0.56	0.59	43					2.67	0.36	14							
	3/4"	Insul Low-E	0.34	0.30	0.51	53				Y	1.93	0.36	15							
	3/4"	Insul Low E w/Argon	0.30	0.30	0.51	58	Y	Y	Y		1.70	0.36	20	Y						
	3/4"	Bronze Low E	0.34	0.29	0.39	53				Y	1.93	0.36	14							
	3/4"	Bronze Low E w/Argon	0.30	0.29	0.39	58	Y	Y	Y		1.70	0.36	19	Y						
	3/4"	Insul Low-E 240	0.34	0.19	0.29	53				Y	1.93	0.36	9							
	3/4"	Insul Low-E 240 w/Argon	0.31	0.18	0.29	56				Y	1.76	0.36	12	Y						
	3/4"	Zo-e-shield 5	0.34	0.20	0.46	54				Y	1.93	0.36	9							
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.20	0.46	57	Y	Y	Y	Y	1.70	0.36	14	Y						
	3/4"	Zo-e-shield 5 Extreme	0.29	0.19	0.42	43	Y	Y	Y	Y	1.65	0.36	15	Y						
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.27	0.19	0.42	46	Y	Y	Y	Y	1.53	0.36	17	Y	Y				Y	
	3/4"	Zo-e-shield 6	0.36	0.20	0.45	50				Y	2.04	0.36	7							
	3/4"	Zo-e-shield 6 w/ Argon	0.32	0.20	0.45	54				Y	1.82	0.36	12	Y						
	1"	Zo-e-shield 7 (Triple Glazed)	0.28	0.18	0.37	61	Y	Y	Y	Y	1.59	0.36	15	Y	Y					
1"	Zo-e-shield 7 w/ Argon (Triple Glazed)	0.24	0.18	0.37	64	Y	Y	Y	Y	1.36	0.36	20	Y	Y	Y		Y	Y		
5/8" - 13/16" GIA	3/4"	Clear Insul	0.47	0.50	0.52	43					2.67	0.36	10							
	3/4"	Insul Low-E	0.34	0.27	0.46	53				Y	1.93	0.36	13							
	3/4"	Insul Low E w/Argon	0.30	0.27	0.46	58	Y	Y	Y	Y	1.70	0.36	18	Y						
	3/4"	Bronze Low E	0.34	0.26	0.34	53				Y	1.93	0.36	13							
	3/4"	Bronze Low E w/Argon	0.30	0.26	0.34	58	Y	Y	Y	Y	1.70	0.36	18	Y						
	3/4"	Insul Low-E 240	0.34	0.17	0.25	53				Y	1.93	0.36	7							
	3/4"	Insul Low-E 240 w/Argon	0.31	0.17	0.25	56				Y	1.76	0.36	11	Y						
	3/4"	Zo-e-shield 5	0.34	0.18	0.41	54				Y	1.93	0.36	8							
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.18	0.41	57	Y	Y	Y	Y	1.70	0.36	13	Y						
	3/4"	Zo-e-shield 5 Extreme	0.29	0.17	0.37	43	Y	Y	Y	Y	1.65	0.36	14	Y						
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.27	0.17	0.37	46	Y	Y	Y	Y	1.53	0.36	16	Y	Y				Y	
	3/4"	Zo-e-shield 6	0.37	0.18	0.40	50				Y	2.10	0.36	4							
	3/4"	Zo-e-shield 6 w/ Argon	0.33	0.18	0.40	54				Y	1.87	0.36	9							
	1"	Zo-e-shield 7 (Triple Glazed)	0.29	0.17	0.33	61	Y	Y	Y	Y	1.65	0.36	14	Y						
1"	Zo-e-shield 7 w/ Argon (Triple Glazed)	0.25	0.17	0.33	64	Y	Y	Y	Y	1.42	0.36	19	Y	Y	Y		Y			
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.47	0.44	0.46	43					2.67	0.36	7							
	3/4"	Insul Low-E	0.34	0.24	0.40	53				Y	1.93	0.36	11							
	3/4"	Insul Low E w/Argon	0.30	0.24	0.40	58	Y	Y	Y	Y	1.70	0.36	16	Y						
	3/4"	Bronze Low E	0.34	0.23	0.30	53				Y	1.93	0.36	11							
	3/4"	Bronze Low E w/Argon	0.30	0.23	0.30	58	Y	Y	Y	Y	1.70	0.36	16	Y						
	3/4"	Insul Low-E 240	0.34	0.15	0.22	53				Y	1.93	0.36	6							
	3/4"	Insul Low-E 240 w/Argon	0.31	0.15	0.22	56				Y	1.76	0.36	10	Y						
	3/4"	Zo-e-shield 5	0.34	0.16	0.36	54				Y	1.93	0.36	7							
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.16	0.36	57	Y	Y	Y	Y	1.70	0.36	12	Y						
	3/4"	Zo-e-shield 5 Extreme	0.29	0.15	0.33	43	Y	Y	Y	Y	1.65	0.36	12	Y						
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.27	0.15	0.33	46	Y	Y	Y	Y	1.53	0.36	15	Y	Y					
	3/4"	Zo-e-shield 6	0.37	0.16	0.35	50				Y	2.10	0.36	3							
	3/4"	Zo-e-shield 6 w/ Argon	0.33	0.16	0.35	54				Y	1.87	0.36	8							
	1"	Zo-e-shield 7 (Triple Glazed)	0.29	0.15	0.29	61	Y	Y	Y	Y	1.65	0.36	12	Y						
1"	Zo-e-shield 7 w/ Argon (Triple Glazed)	0.25	0.15	0.29	64	Y	Y	Y	Y	1.42	0.36	17	Y	Y	Y		Y			

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRF 100-04.

US Qualification Criteria	Climate Zone	U-Factor	*SHGC
 As of January 2010	Northern	<=0.30	Any
		<=0.31	>=0.35
		<=0.32	>=0.40
	North-Central	<=0.32	<=0.40
	South-Central	<=0.35	<=0.30
Southern	<=0.60	<=0.27	

* SHGC = Solar Heat Gain Coefficient

Thermal Performance Data

Elite Casement Windows (8205)



ENERGY PERFORMANCE DATA							CANADIAN ENERGY PERFORMANCE DATA				ENERGY STAR														
NFRC Total Unit Calculations ^a							US Energy Star				CANADA Energy Star														
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m2	Energy R airtng	CANADA Energy Star (2010)				CANADA Energy Star (2015)							
							N	NC	SC	S				A	B	C	D	1	2	3					
No Grilles	3/4"	Clear Insul	0.44	0.55	0.58	44					2.50	0.05	17												
	3/4"	Insul Low-E	0.32	0.30	0.52	56		Y	Y		1.82	0.05	18	Y											
	3/4"	Insul Low E w/Argon	0.29	0.30	0.52	59	Y	Y	Y		1.65	0.05	21	Y											
	3/4"	Bronze Low E	0.32	0.36	0.52	56		Y			1.82	0.05	21	Y											
	3/4"	Bronze Low E w/Argon	0.29	0.36	0.52	59	Y	Y			1.65	0.05	25	Y											
	3/4"	Insul Low-E 240	0.32	0.19	0.29	56		Y	Y	Y	1.82	0.05	11	Y											
	3/4"	Insul Low-E 240 w/Argon	0.29	0.19	0.29	59	Y	Y	Y	Y	1.65	0.05	15	Y											
	3/4"	Zo-e-shield 5	0.31	0.20	0.46	56		Y	Y	Y	1.76	0.05	13	Y											
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.20	0.46	60	Y	Y	Y	Y	1.59	0.05	17	Y	Y									Y	
	3/4"	Zo-e-shield 5 Extreme	0.27	0.19	0.42	44	Y	Y	Y	Y	1.53	0.05	17	Y	Y									Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.19	0.42	48	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y								Y	
	3/4"	Zo-e-shield 6	0.33	0.20	0.45	53			Y	Y	1.87	0.05	10												
	3/4"	Zo-e-shield 6 w/ Argon	0.29	0.20	0.45	58	Y	Y	Y	Y	1.65	0.05	15	Y											
	1"	Zo-e-shield 7	0.25	0.19	0.37	64	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y								Y	
1"	Zo-e-shield 7 w/ Argon	0.22	0.18	0.37	68	Y	Y	Y	Y	1.25	0.05	23	Y	Y	Y								Y	Y	
5/8" - 13/16" GIA	3/4"	Clear Insul	0.44	0.50	0.53	44					2.50	0.05	14												
	3/4"	Insul Low-E	0.32	0.28	0.47	56		Y	Y		1.82	0.05	16	Y											
	3/4"	Insul Low E w/Argon	0.29	0.28	0.47	59	Y	Y	Y		1.65	0.05	20	Y											
	3/4"	Bronze Low E	0.32	0.33	0.47	56		Y			1.82	0.05	19	Y											
	3/4"	Bronze Low E w/Argon	0.29	0.33	0.47	59	Y	Y			1.65	0.05	23	Y											
	3/4"	Insul Low-E 240	0.32	0.18	0.26	56		Y	Y	Y	1.82	0.05	11	Y											
	3/4"	Insul Low-E 240 w/Argon	0.29	0.17	0.26	59	Y	Y	Y	Y	1.65	0.05	14	Y											
	3/4"	Zo-e-shield 5	0.31	0.19	0.42	56		Y	Y	Y	1.76	0.05	12	Y											
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.18	0.42	60	Y	Y	Y	Y	1.59	0.05	16	Y	Y										
	3/4"	Zo-e-shield 5 Extreme	0.27	0.18	0.38	44	Y	Y	Y	Y	1.53	0.05	17	Y	Y									Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.17	0.38	48	Y	Y	Y	Y	1.42	0.05	19	Y	Y	Y								Y	
	3/4"	Zo-e-shield 6	0.34	0.19	0.41	53			Y	Y	1.93	0.05	9												
	3/4"	Zo-e-shield 6 w/ Argon	0.30	0.18	0.41	58	Y	Y	Y	Y	1.70	0.05	13	Y											
	1"	Zo-e-shield 7	0.26	0.17	0.34	64	Y	Y	Y	Y	1.48	0.05	17	Y	Y									Y	
1"	Zo-e-shield 7 w/ Argon	0.23	0.17	0.34	68	Y	Y	Y	Y	1.31	0.05	21	Y	Y	Y								Y	Y	
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.44	0.45	0.48	44					2.50	0.05	11												
	3/4"	Insul Low-E	0.32	0.25	0.42	56		Y	Y	Y	1.82	0.05	15	Y											
	3/4"	Insul Low E w/Argon	0.29	0.25	0.42	59	Y	Y	Y	Y	1.65	0.05	18	Y											
	3/4"	Bronze Low E	0.32	0.30	0.42	56		Y	Y		1.82	0.05	18	Y											
	3/4"	Bronze Low E w/Argon	0.29	0.30	0.42	59	Y	Y	Y		1.65	0.05	21	Y											
	3/4"	Insul Low-E 240	0.32	0.16	0.23	56		Y	Y	Y	1.82	0.05	9	Y											
	3/4"	Insul Low-E 240 w/Argon	0.29	0.16	0.23	59	Y	Y	Y	Y	1.65	0.05	13	Y											
	3/4"	Zo-e-shield 5	0.31	0.17	0.38	56		Y	Y	Y	1.76	0.05	11	Y											
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.17	0.38	60	Y	Y	Y	Y	1.59	0.05	15	Y	Y										
	3/4"	Zo-e-shield 5 Extreme	0.27	0.16	0.34	44	Y	Y	Y	Y	1.53	0.05	16	Y	Y										
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.16	0.34	48	Y	Y	Y	Y	1.42	0.05	18	Y	Y	Y								Y	
	3/4"	Zo-e-shield 6	0.34	0.17	0.37	53			Y	Y	1.93	0.05	8												
	3/4"	Zo-e-shield 6 w/ Argon	0.30	0.17	0.37	58	Y	Y	Y	Y	1.70	0.05	12	Y											
	1"	Zo-e-shield 7	0.26	0.16	0.30	64	Y	Y	Y	Y	1.48	0.05	17	Y	Y									Y	
1"	Zo-e-shield 7 w/ Argon	0.23	0.16	0.30	68	Y	Y	Y	Y	1.31	0.05	21	Y	Y	Y								Y	Y	

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100-04.

US Qualification Criteria	Climate Zone	U-Factor	*SHGC
<p>As of January 2010</p>	Northern	<=0.30	Any
		<=0.31	>=0.35
		<=0.32	>=0.40
	North-Central	<=0.32	<=0.40
	South-Central	<=0.35	<=0.30
Southern	<=0.60	<=0.27	

* SHGC = Solar Heat Gain Coefficient


Thermal Performance Data

Elite Casement Picture Windows (8205)



ENERGY PERFORMANCE DATA											CANADIAN ENERGY PERFORMANCE DATA									
NFRC Total Unit Calculations ^a											ENERGY STAR									
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m2	Energy R rating	CANADA Energy Star (2010)				CANADA Energy Star (2015)		
							N	NC	SC	S				A	B	C	D	1	2	3
No Grilles	3/4"	Clear Insul	0.45	0.62	0.66	44					2.56	0.05	20							
	3/4"	Insul Low-E	0.31	0.34	0.59	55		Y			1.76	0.05	21	Y						
	3/4"	Insul Low E w/Argon	0.27	0.34	0.59	59	Y	Y			1.53	0.05	26	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.41	0.59	55	Y				1.76	0.05	25	Y					Y	
	3/4"	Bronze Low E w/Argon	0.27	0.41	0.59	59	Y				1.53	0.05	30	Y	Y				Y	Y
	3/4"	Insul Low-E 240	0.31	0.21	0.33	55		Y	Y	Y	1.76	0.05	14	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.21	0.33	59	Y	Y	Y	Y	1.59	0.05	17	Y	Y				Y	
	3/4"	Zo-e-shield 5	0.30	0.23	0.53	56	Y	Y	Y	Y	1.70	0.05	16	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.23	0.53	59	Y	Y	Y	Y	1.53	0.05	20	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.21	0.48	44	Y	Y	Y	Y	1.42	0.05	21	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.22	0.21	0.48	47	Y	Y	Y	Y	1.25	0.05	25	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.32	0.23	0.52	53		Y	Y	Y	1.82	0.05	13	Y						
	3/4"	Zo-e-shield 6 w/ Argon	0.28	0.23	0.52	57	Y	Y	Y	Y	1.59	0.05	18	Y	Y				Y	
	1"	Zo-e-shield 7	0.24	0.21	0.42	65	Y	Y	Y	Y	1.36	0.05	22	Y	Y	Y			Y	Y
1"	Zo-e-shield 7 w/ Argon	0.20	0.21	0.42	69	Y	Y	Y	Y	1.14	0.05	27	Y	Y	Y	Y		Y	Y	Y
5/8" - 13/16" GIA	3/4"	Clear Insul	0.45	0.56	0.59	44					2.56	0.05	16							
	3/4"	Insul Low-E	0.31	0.31	0.52	55		Y			1.76	0.05	19	Y						
	3/4"	Insul Low E w/Argon	0.27	0.31	0.52	59	Y	Y			1.53	0.05	24	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.37	0.52	55	Y	Y			1.76	0.05	23	Y						
	3/4"	Bronze Low E w/Argon	0.27	0.37	0.52	59	Y	Y			1.53	0.05	28	Y	Y				Y	
	3/4"	Insul Low-E 240	0.31	0.19	0.29	55		Y	Y	Y	1.76	0.05	12	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.19	0.29	59	Y	Y	Y	Y	1.59	0.05	16	Y	Y				Y	
	3/4"	Zo-e-shield 5	0.30	0.21	0.47	56	Y	Y	Y	Y	1.70	0.05	15	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.20	0.47	59	Y	Y	Y	Y	1.53	0.05	18	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.19	0.43	44	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.22	0.19	0.43	47	Y	Y	Y	Y	1.25	0.05	24	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.34	0.21	0.46	53			Y	Y	1.93	0.05	10							
	3/4"	Zo-e-shield 6 w/ Argon	0.29	0.20	0.46	57	Y	Y	Y	Y	1.65	0.05	15	Y						
	1"	Zo-e-shield 7	0.25	0.19	0.38	65	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y			Y	
1"	Zo-e-shield 7 w/ Argon	0.21	0.19	0.38	69	Y	Y	Y	Y	1.19	0.05	25	Y	Y	Y	Y		Y	Y	Y
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.45	0.50	0.53	44					2.56	0.05	13							
	3/4"	Insul Low-E	0.31	0.28	0.47	55		Y	Y		1.76	0.05	18	Y						
	3/4"	Insul Low E w/Argon	0.27	0.28	0.47	59	Y	Y	Y		1.53	0.05	23	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.33	0.47	55		Y			1.76	0.05	20	Y						
	3/4"	Bronze Low E w/Argon	0.27	0.33	0.47	59	Y	Y			1.53	0.05	25	Y	Y				Y	
	3/4"	Insul Low-E 240	0.31	0.18	0.26	55		Y	Y	Y	1.76	0.05	12	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.17	0.26	59	Y	Y	Y	Y	1.59	0.05	15	Y	Y					
	3/4"	Zo-e-shield 5	0.30	0.19	0.42	56	Y	Y	Y	Y	1.70	0.05	14	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.19	0.42	59	Y	Y	Y	Y	1.53	0.05	17	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.18	0.38	44	Y	Y	Y	Y	1.42	0.05	19	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.22	0.17	0.38	47	Y	Y	Y	Y	1.25	0.05	22	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.34	0.19	0.41	53			Y	Y	1.93	0.05	9							
	3/4"	Zo-e-shield 6 w/ Argon	0.29	0.19	0.41	57	Y	Y	Y	Y	1.65	0.05	15	Y						
	1"	Zo-e-shield 7	0.25	0.17	0.33	65	Y	Y	Y	Y	1.42	0.05	19	Y	Y	Y			Y	
1"	Zo-e-shield 7 w/ Argon	0.21	0.17	0.33	69	Y	Y	Y	Y	1.19	0.05	24	Y	Y	Y	Y		Y	Y	

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100-04.

US Qualification Criteria	Climate Zone	U-Factor	*SHGC
 As of January 2010	Northern	<=0.30	Any
		<=0.31	>=0.35
		<=0.32	>=0.40
	North-Central	<=0.32	<=0.40
	South-Central	<=0.35	<=0.30
Southern	<=0.60	<=0.27	

* SHGC = Solar Heat Gain Coefficient


Thermal Performance Data

Elite Awning Windows (8205)



ENERGY PERFORMANCE DATA											ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA			ENERGY STAR					
NFRC Total Unit Calculations ^a											US Energy Star		CANADIAN ENERGY PERFORMANCE DATA			CANADA Energy Star (2010)			CANADA Energy Star (2015)		
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m2	Energy Rating	A	B	C	D	1	2	3	
							N	NC	SC	S											A
No Grilles	3/4"	Clear Insul	0.45	0.55	0.58	43					2.56	0.10	16								
	3/4"	Insul Low-E	0.32	0.30	0.52	54		Y	Y		1.82	0.10	17	Y							
	3/4"	Insul Low E w/Argon	0.29	0.30	0.52	58	Y	Y	Y		1.65	0.10	21	Y							
	3/4"	Bronze Low E	0.32	0.36	0.52	54		Y			1.82	0.10	21	Y							
	3/4"	Bronze Low E w/Argon	0.29	0.36	0.52	58	Y	Y			1.65	0.10	25	Y							
	3/4"	Insul Low-E 240	0.33	0.19	0.29	54			Y	Y	1.87	0.10	10								
	3/4"	Insul Low-E 240 w/Argon	0.29	0.19	0.29	57	Y	Y	Y	Y	1.65	0.10	15	Y							
	3/4"	Zo-e-shield 5	0.32	0.20	0.46	54		Y	Y	Y	1.82	0.10	12	Y							
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.20	0.46	58	Y	Y	Y	Y	1.59	0.10	17	Y	Y					Y	
	3/4"	Zo-e-shield 5 Extreme	0.28	0.19	0.42	43	Y	Y	Y	Y	1.59	0.10	16	Y	Y					Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.19	0.42	47	Y	Y	Y	Y	1.42	0.10	20	Y	Y	Y				Y	
	3/4"	Zo-e-shield 6	0.34	0.20	0.45	52			Y	Y	1.93	0.10	9								
	3/4"	Zo-e-shield 6 w/ Argon	0.29	0.20	0.45	56	Y	Y	Y	Y	1.65	0.10	15	Y							
	1"	Zo-e-shield 7	0.26	0.19	0.37	65	Y	Y	Y	Y	1.48	0.10	19	Y	Y					Y	
1"	Zo-e-shield 7 w/ Argon	0.22	0.18	0.37	69	Y	Y	Y	Y	1.25	0.10	23	Y	Y	Y				Y	Y	
5/8" - 13/16" GIA	3/4"	Clear Insul	0.45	0.50	0.53	43					2.56	0.10	13								
	3/4"	Insul Low-E	0.32	0.28	0.47	54		Y	Y		1.82	0.10	16	Y							
	3/4"	Insul Low E w/Argon	0.29	0.28	0.47	58	Y	Y	Y		1.65	0.10	20	Y							
	3/4"	Bronze Low E	0.32	0.33	0.47	54		Y			1.82	0.10	19	Y							
	3/4"	Bronze Low E w/Argon	0.29	0.33	0.47	58	Y	Y			1.65	0.10	23	Y							
	3/4"	Insul Low-E 240	0.33	0.18	0.26	54			Y	Y	1.87	0.10	9								
	3/4"	Insul Low-E 240 w/Argon	0.29	0.17	0.26	57	Y	Y	Y	Y	1.65	0.10	14	Y							
	3/4"	Zo-e-shield 5	0.32	0.19	0.42	54		Y	Y	Y	1.82	0.10	11	Y							
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.18	0.42	58	Y	Y	Y	Y	1.59	0.10	16	Y	Y						
	3/4"	Zo-e-shield 5 Extreme	0.28	0.18	0.38	43	Y	Y	Y	Y	1.59	0.10	16	Y	Y						
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.17	0.38	47	Y	Y	Y	Y	1.42	0.10	19	Y	Y	Y				Y	
	3/4"	Zo-e-shield 6	0.35	0.19	0.41	52			Y	Y	1.99	0.10	7								
	3/4"	Zo-e-shield 6 w/ Argon	0.30	0.18	0.41	56	Y	Y	Y	Y	1.70	0.10	13	Y							
	1"	Zo-e-shield 7	0.26	0.17	0.34	65	Y	Y	Y	Y	1.48	0.10	17	Y	Y					Y	
1"	Zo-e-shield 7 w/ Argon	0.23	0.17	0.34	69	Y	Y	Y	Y	1.31	0.10	21	Y	Y	Y				Y	Y	
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.45	0.45	0.48	43					2.56	0.10	10								
	3/4"	Insul Low-E	0.32	0.25	0.42	54		Y	Y	Y	1.82	0.10	15	Y							
	3/4"	Insul Low E w/Argon	0.29	0.25	0.42	58	Y	Y	Y	Y	1.65	0.10	18	Y							
	3/4"	Bronze Low E	0.32	0.30	0.42	54		Y	Y		1.82	0.10	17	Y							
	3/4"	Bronze Low E w/Argon	0.29	0.30	0.42	58	Y	Y	Y		1.65	0.10	21	Y							
	3/4"	Insul Low-E 240	0.33	0.16	0.23	54			Y	Y	1.87	0.10	8								
	3/4"	Insul Low-E 240 w/Argon	0.29	0.16	0.23	57	Y	Y	Y	Y	1.65	0.10	13	Y							
	3/4"	Zo-e-shield 5	0.32	0.17	0.38	54		Y	Y	Y	1.82	0.10	10	Y							
	3/4"	Zo-e-shield 5 w/ Argon	0.28	0.17	0.38	58	Y	Y	Y	Y	1.59	0.10	15	Y	Y						
	3/4"	Zo-e-shield 5 Extreme	0.28	0.16	0.34	43	Y	Y	Y	Y	1.59	0.10	14	Y	Y						
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.25	0.16	0.34	47	Y	Y	Y	Y	1.42	0.10	18	Y	Y	Y				Y	
	3/4"	Zo-e-shield 6	0.35	0.17	0.37	52			Y	Y	1.99	0.10	6								
	3/4"	Zo-e-shield 6 w/ Argon	0.30	0.17	0.37	56	Y	Y	Y	Y	1.70	0.10	12	Y							
	1"	Zo-e-shield 7	0.26	0.16	0.30	65	Y	Y	Y	Y	1.48	0.10	17	Y	Y					Y	
1"	Zo-e-shield 7 w/ Argon	0.23	0.16	0.30	69	Y	Y	Y	Y	1.31	0.10	21	Y	Y	Y				Y	Y	

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100-04.

US Qualification Criteria	Climate Zone	U-Factor	*SHGC
 As of January 2010	Northern	<=0.30	Any
		<=0.31	>=0.35
		<=0.32	>=0.40
	North-Central	<=0.32	<=0.40
	South-Central	<=0.35	<=0.30
Southern	<=0.60	<=0.27	

* SHGC = Solar Heat Gain Coefficient

Thermal Performance Data


Elite Slider (8401)

All Data Valid Until 1/22/15



ENERGY PERFORMANCE DATA							CANADIAN ENERGY PERFORMANCE DATA												
NFRC Total Unit Calculations ^a							ENERGY STAR												
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m2	Energy Rating	CANADA Energy Star					
							US Energy Star							CANADA Energy Star (2010)		CANADA Energy Star (2015)			
							N	NC	SC	S				A	B	C	D	1	2
No Grilles	3/4"	Clear Insul	0.46	0.59	0.61	44					2.61	0.46	17						
	3/4"	Insul Low-E	0.33	0.31	0.53	55					1.87	0.46	17						
	3/4"	Insul Low E w/Argon	0.30	0.31	0.53	59	Y	Y			1.70	0.46	20	Y					
	3/4"	Bronze Low E	0.33	0.29	0.39	55			Y		1.87	0.46	15						
	3/4"	Bronze Low E w/Argon	0.30	0.31	0.53	59	Y	Y			1.70	0.46	20	Y					
	3/4"	Insul Low-E 240	0.33	0.19	0.30	55			Y	Y	1.87	0.46	10						
	3/4"	Insul Low-E 240 w/Argon	0.30	0.19	0.30	58	Y	Y	Y	Y	1.70	0.46	13	Y					
	3/4"	Zo-e-shield 5	0.33	0.21	0.48	54			Y	Y	1.87	0.46	11						
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.21	0.48	57	Y	Y	Y	Y	1.70	0.46	15	Y					
	3/4"	Zo-e-shield 5 Extreme	0.28	0.19	0.43	44	Y	Y	Y	Y	1.59	0.46	16	Y	Y				
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.26	0.19	0.43	48	Y	Y	Y	Y	1.48	0.46	18	Y	Y			Y	
	3/4"	Zo-e-shield 6	0.34	0.21	0.47	53			Y	Y	1.93	0.46	10						
	3/4"	Zo-e-shield 6 w/ Argon	0.30	0.21	0.47	57	Y	Y	Y	Y	1.70	0.46	15	Y					
5/8" - 13/16" GIA	3/4"	Clear Insul	0.46	0.52	0.54	44					2.61	0.46	13						
	3/4"	Insul Low-E	0.33	0.28	0.47	55			Y		1.87	0.46	15						
	3/4"	Insul Low E w/Argon	0.30	0.28	0.47	59	Y	Y	Y		1.70	0.46	19	Y					
	3/4"	Bronze Low E	0.33	0.27	0.35	55			Y	Y	1.87	0.46	14						
	3/4"	Bronze Low E w/Argon	0.30	0.28	0.47	59	Y	Y	Y		1.70	0.46	19	Y					
	3/4"	Insul Low-E 240	0.33	0.18	0.26	55			Y	Y	1.87	0.46	9						
	3/4"	Insul Low-E 240 w/Argon	0.30	0.17	0.26	58	Y	Y	Y	Y	1.70	0.46	12	Y					
	3/4"	Zo-e-shield 5	0.33	0.19	0.42	54			Y	Y	1.87	0.46	10						
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.19	0.42	57	Y	Y	Y	Y	1.70	0.46	13	Y					
	3/4"	Zo-e-shield 5 Extreme	0.28	0.18	0.38	44	Y	Y	Y	Y	1.59	0.46	15	Y	Y				
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.26	0.17	0.38	48	Y	Y	Y	Y	1.48	0.46	17	Y	Y			Y	
	3/4"	Zo-e-shield 6	0.36	0.19	0.42	53				Y	2.04	0.46	6						
	3/4"	Zo-e-shield 6 w/ Argon	0.32	0.19	0.42	57		Y	Y	Y	1.82	0.46	11	Y					
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.46	0.46	0.48	44					2.61	0.46	9						
	3/4"	Insul Low-E	0.33	0.25	0.42	55			Y	Y	1.87	0.46	13						
	3/4"	Insul Low E w/Argon	0.30	0.25	0.42	59	Y	Y	Y	Y	1.70	0.46	17	Y					
	3/4"	Bronze Low E	0.33	0.24	0.31	55			Y	Y	1.87	0.46	13						
	3/4"	Bronze Low E w/Argon	0.30	0.25	0.42	59	Y	Y	Y	Y	1.70	0.46	17	Y					
	3/4"	Insul Low-E 240	0.33	0.16	0.23	55			Y	Y	1.87	0.46	8						
	3/4"	Insul Low-E 240 w/Argon	0.30	0.15	0.23	58	Y	Y	Y	Y	1.70	0.46	11	Y					
	3/4"	Zo-e-shield 5	0.33	0.17	0.37	54			Y	Y	1.87	0.46	9						
	3/4"	Zo-e-shield 5 w/ Argon	0.30	0.17	0.37	57	Y	Y	Y	Y	1.70	0.46	12	Y					
	3/4"	Zo-e-shield 5 Extreme	0.28	0.16	0.34	44	Y	Y	Y	Y	1.59	0.46	14	Y	Y				
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.26	0.16	0.34	48	Y	Y	Y	Y	1.48	0.46	17	Y	Y			Y	
	3/4"	Zo-e-shield 6	0.36	0.17	0.37	53				Y	2.04	0.46	5						
	3/4"	Zo-e-shield 6 w/ Argon	0.32	0.17	0.37	57		Y	Y	Y	1.82	0.46	10	Y					

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100-04.

US Qualification Criteria	Climate Zone	U-Factor	*SHGC
 As of January 2010	Northern	<=0.30	Any
		<=0.31	>=0.35
		<=0.32	>=0.40
	North-Central	<=0.32	<=0.40
	South-Central	<=0.35	<=0.30
	Southern	<=0.60	<=0.27

* SHGC = Solar Heat Gain Coefficient


Thermal Performance Data

Elite Direct-Set Windows (8306)



ENERGY PERFORMANCE DATA											ENERGY STAR		CANADIAN ENERGY PERFORMANCE DATA							
NFRC Total Unit Calculations ^a											CANADIAN ENERGY PERFORMANCE DATA			ENERGY STAR						
Grille Option	Glazing thickness	Glazing Option	U Value	Solar Heat Gain Coefficient	Visible Light Transmittance	Condensation Resistance Rating	US Energy Star				U-Value (metric)	Air Infiltration L/s/m2	Energy Rating	CANADA Energy Star (2010)			CANADA Energy Star (2015)			
							N	NC	SC	S				A	B	C	D	1	2	3
No Grilles	3/4"	Clear Insul	0.47	0.67	0.71	43					2.67	0.05	20							
	3/4"	Insul Low-E	0.31	0.36	0.62	55	Y	Y			1.76	0.05	22	Y						
	3/4"	Insul Low E w/Argon	0.28	0.36	0.62	58	Y	Y			1.59	0.05	26	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.35	0.47	55	Y	Y			1.76	0.05	22	Y						
	3/4"	Bronze Low E w/Argon	0.28	0.34	0.47	58	Y	Y			1.59	0.05	25	Y	Y				Y	
	3/4"	Insul Low-E 240	0.32	0.23	0.34	55		Y	Y	Y	1.82	0.05	13	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.22	0.34	58	Y	Y	Y	Y	1.59	0.05	18	Y	Y				Y	
	3/4"	Zo-e-shield 5	0.31	0.24	0.56	55		Y	Y	Y	1.76	0.05	15	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.24	0.56	59	Y	Y	Y	Y	1.53	0.05	20	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.22	0.50	43	Y	Y	Y	Y	1.42	0.05	22	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.23	0.22	0.50	47	Y	Y	Y	Y	1.31	0.05	24	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.33	0.24	0.55	52			Y	Y	1.87	0.05	13							
	3/4"	Zo-e-shield 6 w/ Argon	0.28	0.24	0.55	56	Y	Y	Y	Y	1.59	0.05	19	Y	Y				Y	
	1"	Zo-e-shield 7	0.24	0.22	0.44	64	Y	Y	Y	Y	1.36	0.05	23	Y	Y	Y			Y	Y
1"	Zo-e-shield 7 w/ Argon	0.20	0.22	0.44	68	Y	Y	Y	Y	1.14	0.05	28	Y	Y	Y	Y		Y	Y	Y
5/8" - 13/16" GIA	3/4"	Clear Insul	0.47	0.61	0.64	43					2.67	0.05	17							
	3/4"	Insul Low-E	0.31	0.33	0.56	55		Y			1.76	0.05	20	Y						
	3/4"	Insul Low E w/Argon	0.28	0.32	0.56	58	Y	Y			1.59	0.05	24	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.31	0.42	55		Y			1.76	0.05	19	Y						
	3/4"	Bronze Low E w/Argon	0.28	0.31	0.42	58	Y	Y			1.59	0.05	23	Y	Y				Y	
	3/4"	Insul Low-E 240	0.32	0.20	0.31	55		Y	Y	Y	1.82	0.05	12	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.20	0.31	58	Y	Y	Y	Y	1.59	0.05	17	Y	Y				Y	
	3/4"	Zo-e-shield 5	0.31	0.22	0.50	55		Y	Y	Y	1.76	0.05	14	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.22	0.50	59	Y	Y	Y	Y	1.53	0.05	19	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.20	0.45	43	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.23	0.20	0.45	47	Y	Y	Y	Y	1.31	0.05	23	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.34	0.22	0.49	52			Y	Y	1.93	0.05	10							
	3/4"	Zo-e-shield 6 w/ Argon	0.31	0.22	0.49	56		Y	Y	Y	1.76	0.05	14	Y						
	1"	Zo-e-shield 7	0.25	0.20	0.40	64	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y			Y	
1"	Zo-e-shield 7 w/ Argon	0.22	0.20	0.40	68	Y	Y	Y	Y	1.25	0.05	24	Y	Y	Y			Y	Y	
Over 7/8" GIA or SDL	3/4"	Clear Insul	0.47	0.54	0.57	43					2.67	0.05	13							
	3/4"	Insul Low-E	0.31	0.29	0.50	55		Y	Y		1.76	0.05	18	Y						
	3/4"	Insul Low E w/Argon	0.28	0.29	0.50	58	Y	Y	Y		1.59	0.05	22	Y	Y				Y	
	3/4"	Bronze Low E	0.31	0.28	0.37	55		Y	Y		1.76	0.05	18	Y						
	3/4"	Bronze Low E w/Argon	0.28	0.28	0.37	58	Y	Y	Y		1.59	0.05	21	Y	Y				Y	
	3/4"	Insul Low-E 240	0.32	0.19	0.28	55		Y	Y	Y	1.82	0.05	11	Y						
	3/4"	Insul Low-E 240 w/Argon	0.28	0.18	0.28	58	Y	Y	Y	Y	1.59	0.05	16	Y	Y					
	3/4"	Zo-e-shield 5	0.31	0.20	0.45	55		Y	Y	Y	1.76	0.05	13	Y						
	3/4"	Zo-e-shield 5 w/ Argon	0.27	0.20	0.45	59	Y	Y	Y	Y	1.53	0.05	18	Y	Y				Y	
	3/4"	Zo-e-shield 5 Extreme	0.25	0.19	0.40	43	Y	Y	Y	Y	1.42	0.05	20	Y	Y	Y			Y	
	3/4"	Zo-e-shield 5 Extreme w/ Argon	0.23	0.18	0.40	47	Y	Y	Y	Y	1.31	0.05	22	Y	Y	Y			Y	Y
	3/4"	Zo-e-shield 6	0.34	0.20	0.44	52			Y	Y	1.93	0.05	9							
	3/4"	Zo-e-shield 6 w/ Argon	0.31	0.20	0.44	56		Y	Y	Y	1.76	0.05	13	Y						
	1"	Zo-e-shield 7	0.25	0.18	0.36	64	Y	Y	Y	Y	1.42	0.05	19	Y	Y	Y			Y	
1"	Zo-e-shield 7 w/ Argon	0.22	0.18	0.36	68	Y	Y	Y	Y	1.25	0.05	23	Y	Y	Y			Y	Y	

^a Total Unit calculations are derived from computer simulations that are then verified by 3rd party testing in accordance with NFRC 100-04.

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