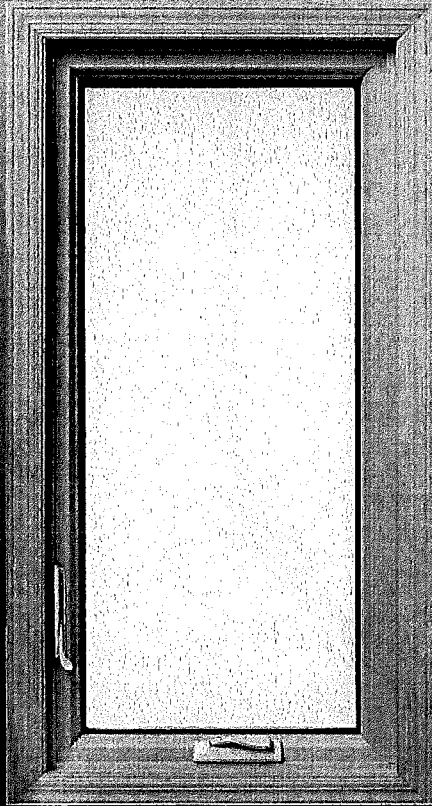


CASEMENT WINDOW

ADVANTAGES AND APPLICATIONS

The Renewal by Andersen® casement window consists of one or multiple sashes in a single frame. The sash can be hinged on the right or left side and pivots outward. Sash opening is controlled by a roto gear operator on the sill. A single sash lock lever activates multiple lock points to enhance security, and pulls the sash in tightly against the weatherstrip on the sash and frame. Insect screens are installed on the interior of the frame.



*Casement
Replacement Windows*

ADVANTAGES

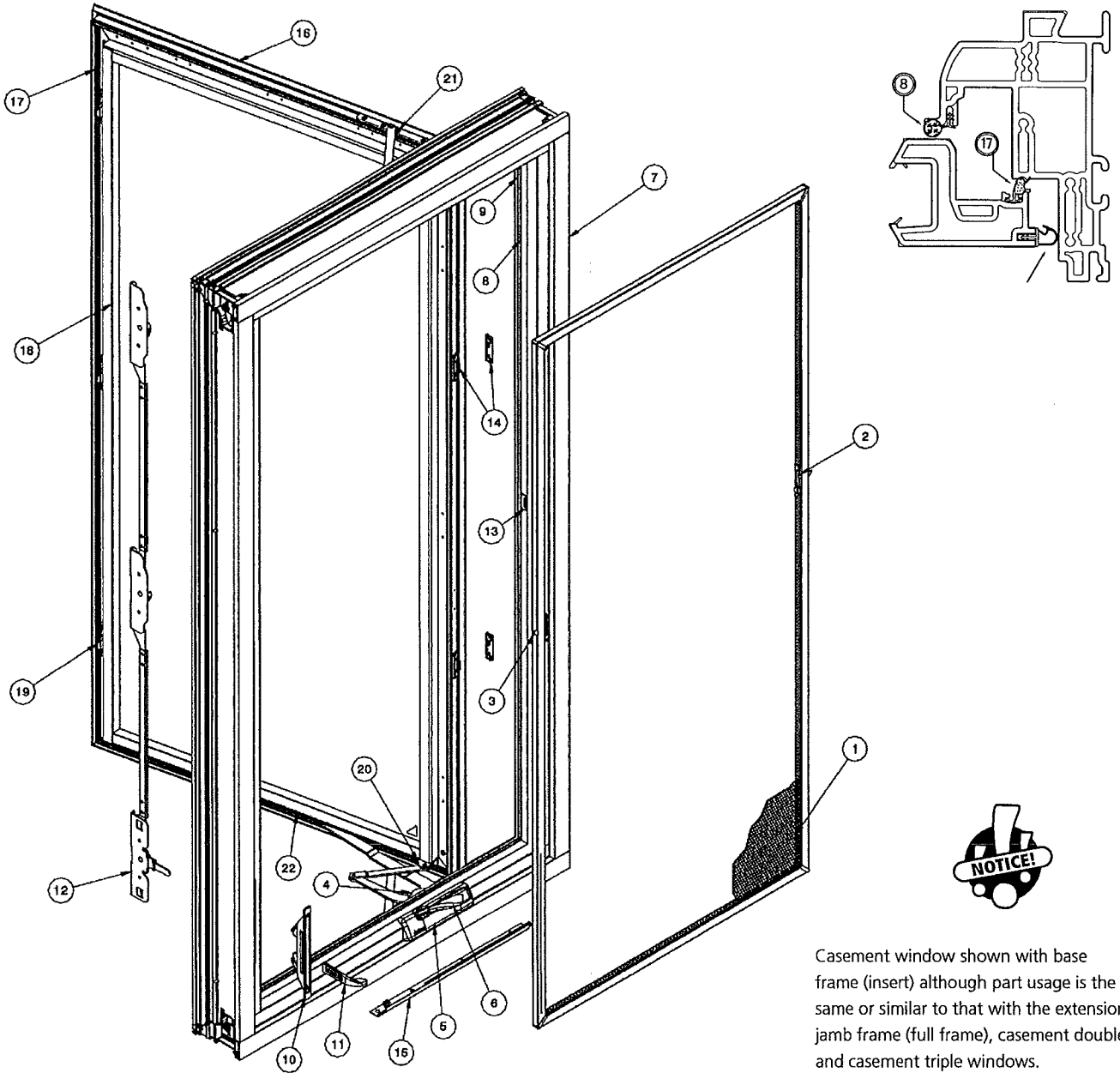
- Allows the most ventilation of any window type.
- Open sash can "catch" breezes from multiple directions.
- Multiple weatherstrips provide a weather tight seal when sash is closed and locked.
- Patented Fibrex® material is more rigid than vinyl, allowing more glass area.
- Fibrex material with low-maintenance capstock gives a rich, low-luster finish to sash and frame, similar to painted wood.
- Smooth radius surfaces on frame and sash are pleasing to the eye and easier to clean.
- Mortise and tenon appearance on the interior and exterior sash and frame corners give a traditional hand-crafted look.

APPLICATIONS

- Widely used to replace other styles of windows.
- Offers dramatic design accents when combined with fixed windows.
- Recommended for use over countertops and other wide obstructions because operation is controlled by turning a handle—an easier motion than lifting or sliding sash.
- Should not be used in areas where the projecting sash could obstruct outside walkways.
- Visually compatible with other Renewal by Andersen products.
- Corrosion-resistant casement hardware is available for use in harsh and corrosive environments such as heavy industrial or coastal areas.

EXPLODED VIEW

CASEMENT WINDOW



Casement window shown with base frame (insert) although part usage is the same or similar to that with the extension jamb frame (full frame), casement double, and casement triple windows.

CASEMENT WINDOW COMPONENTS

- | | | |
|---|-------------------------------------|---|
| 1. Insect screen | 8. Frame weatherstrip | 16. Sash rain screen weatherstrip |
| 2. Universal insect screen latch retainer | 9. Hole plug | 17. Sash bulb weatherstrip |
| 3. Insect screen latch | 10. Bezel | 18. Casement sash |
| 4. Casement dual arm operator | 11. Lock handle | 19. Lock strike |
| 5. Operator cover | 12. Lock assembly | 20. Casement sash bracket
(Corrosion-resistant upgrade option) |
| 6. Operator handle | 13. Insect screen grommet | 21. Hinge |
| 7. Frame | 14. Sash and frame snugger | 22. Operator track |
| | 15. Corrosion-resistant hinge track | |

STANDARD FEATURES

CASEMENT WINDOW

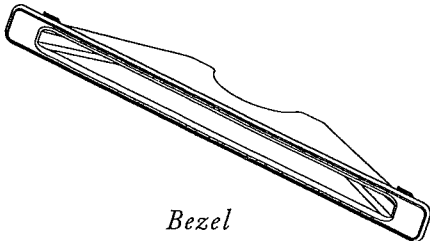
Described below are features that contribute to the casement window's low maintenance, energy efficiency, ease of operation, and pleasing appearance.

- **Frame** – Made of rigid Fibrex® material, a unique structural composite of wood fibers and a special thermoplastic polymer. Developed by Andersen®, Fibrex® material combines the strength and stability of wood with the low-maintenance features of vinyl.
- **Sash** – Corner keys provide durable, watertight corners. The mortise and tenon joinery complements the frame. A high-performance silicone sealant provides a watertight seal between glass and sash.
- **Glazing** – High-Performance™ Low-E4® glass with an inert, energy-efficient gas, is standard for every window. Glass is placed into sash before assembly for a strong, weather tight assembly. A high-performance silicone sealant provides a watertight seal between glass and sash. See options on page 1-6 for other glass choices.
- **Glass spacer** – The patented low-conductivity stainless steel spacer resists heat transfer four to five times better than aluminum spacers and is stronger than silicone or plastic spacers used by many other manufacturers.

STANDARD FEATURES CONT.

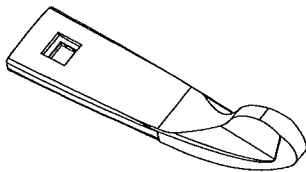
CASEMENT WINDOW

Glass exterior when exposed to sunlight



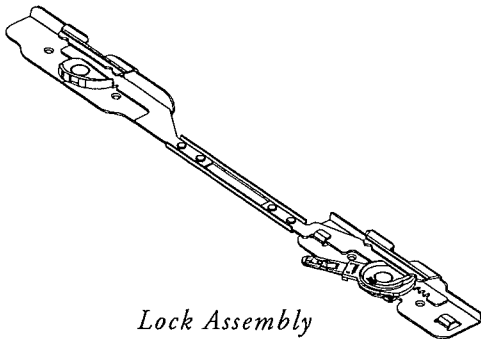
Bezel

- **Removable protective film**— Packaging features a clear protective film that is factory applied to both the interior and exterior glass surfaces to help protect the glass from shipping and installation damage.



Sash Lock Handle

- **Weatherstrip** – A three-piece weatherstrip system of a foam-filled bulb applied to the frame, a foam-filled bulb applied to the sash and a flexible bulb weatherstrip applied to the sash provide a tight robust seal.



Lock Assembly

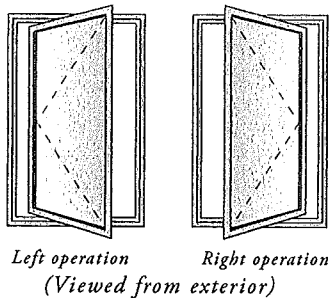
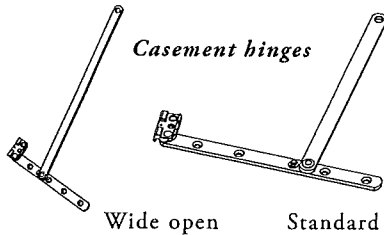
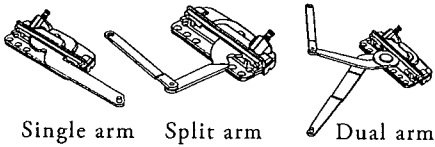
- **Casement Sash Lock Assembly and Lock Bar System** – One sash lock lever activates the lock assembly with up to three locking points per sash for greater security and better weather-tightness. The lock bezel is styled to fit and visually match the smooth radiused interior surface.

Window Height	Number of Locking Points
Less than 27"	1
27" to 53-15/16"	2
54" to 80"	3

STANDARD FEATURES, CONT.

CASEMENT WINDOW

Casement operators



- **Casement Operator** – The operator uses a hardened steel worm and gear drive for smooth, easy control. The operator includes a high-pressure die-cast zinc operator housing, crank handle and knob. The operator is handed providing a symmetrical appearance for double and triple sash casement units. The casement operator is styled to fit and visually match the smooth curved interior surface. The standard folding handle offers an integrated look when nesting in the operator cover and allows for easy insect screen removal.
- **Casement/Awning Hinge** – The dual-pivot hinge provides a smooth operation, and a corrosion-resistant finish complements the frame color. For easy cleaning, sash moves toward center of the opening, allowing hand to reach both sides of the glass from the inside.
- **Determining RH/LH Operation** – Right-hand or left-hand operation (opening) is designated by the side on which the hinges are mounted *when viewed from the exterior.*
- **Insect Screen** – The standard insect screen is made with an aluminum frame and an easy-to-see-through fiberglass screen cloth (18x16 per inch mesh) in a glare-resistant charcoal gray finish. The frame is reinforced with a unique nylon corner spline to keep it from sagging and is secured to the window with wing blade fasteners in nylon housings. Aluminum and TruScene® insect screens are available for all sizes. Optional pine, oak and maple veneer are available for TruScene insect screens - see options on following page for details.
- **Interior/Exterior Color and Component Color** – Refer to the Casement Window Component Color Combination Chart on page 1-10 for standard (and optional) color combinations.

OPTIONS

CASEMENT WINDOW

The options shown here are available for all Renewal by Andersen® casement windows.

Glass Options

- High Performance® Low-E4 Smart Sun™ with Heatlock™ (no pattern)
- High Performance® Low-E4 Smart Sun™ tinted
- High Performance® Low-E4 Smart Sun™ (no pattern)
- High Performance® Low-E4 (no pattern)
- Obscure
- Reed
- Cascade
- Fern

- **Dual-colors and Stainable Wood Interior Veneer** – Dual color windows are available that have different interior and exterior colors. Stainable wood interior veneers are also available (pine, maple and oak).

The Casement Window Component Color Combination Chart on page 1-10 shows these different combinations and the default color of individual components for these combinations. Alternative component (e.g., grille, insect screen, hardware) color combinations are available upon request.

- **Decorative Glass Patterns** – Standard windows have no glass pattern whatsoever. Optional patterns are as follows:
 - Obscure
 - Reed
 - Cascade
 - Fern (not available on 1:2:1 casement triple windows wider than 104-1/2")
- **Glass Coating** – High-Performance™ Low-E4® coating is standard with all windows. Optional glazings are as follows:
 - Clear (no coating)
 - SmartSun™
 - High-Performance Low-E4 Sun tinted coating
 - High Performance® Low-E4 Smart Sun™ with Heatlock™

* High Performance® Low-E4 Smart Sun™ with Heatlock™ not available with decorative glass patterns
- **Tempered Glass** – Tempering is an option for all available glass options. Untempered glass is standard.
- **Glass Breather Tubes** – Breather tubes are available for glass intended for high-altitude installations. It is important to note that breather tubes will decrease the thermal performance of the unit. Refer to the Technical Data (Section 8) in this Spec and Tech Manual for altitude specifics.

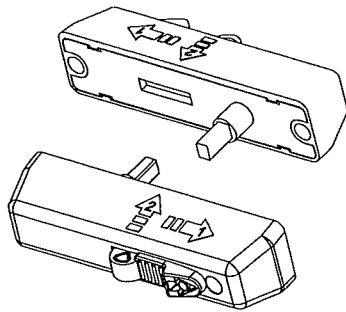
OPTIONS, CONT.

CASEMENT WINDOW

Unavailable Glass Patterns		
Pattern	on windows wider than	or windows taller than
Reed*	56-7/8"	100-7/8"
Cascade*	56-7/8"	84-7/8"
Fern	56-7/8"	84-7/8"
Obscure	56-7/8"	84-7/8"

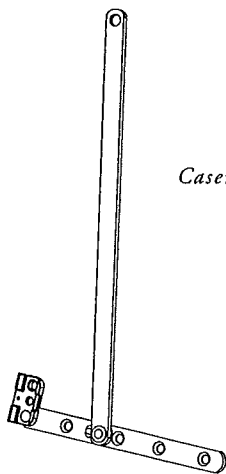
* Pattern is directional

- **Corrosion-Resistant Hardware** – Made from 300 series stainless steel, this material is more resistant to corrosion due to harsh, acidic or corrosive environments such as heavy industrial or coastal areas.
- **TruScene® Insect Screen Frame**—Micro-fine stainless steel mesh (25 x 25 per inch mesh) that provides over 50% more clarity than standard Andersen® insect screens. TruScene Insect Screen is an option for all operable Renewal by Andersen® window styles.
- **Veneered TruScreen® Insect Screen Frame**—Available in pine, maple and oak.
- **Aluminum Insect Screen** – Identical to the standard insect screen but with a durable aluminum screen cloth (18 x 16 per inch mesh) in a glare-resistant charcoal gray finish.
- **Wide Open Hinge** – Special corner pivot hinges increase the window clear opening by approximately 4" (important for egress code requirements). **Note:** Washing the window from the interior is not possible with this hinge.
- **Estate™ Hardware** – Estate hardware is available for all operating windows and is available in high-performance bright brass, antique brass, high-performance satin nickel, distressed nickel, brushed chrome, polished chrome, distressed bronze, oil-rubbed bronze and dark bronze. The Estate hardware components for casement windows are pictured below.
- **Opening Control Device** – This optional field applied item voluntarily restricts opening to a maximum of 4 inches. Its release feature will still allow increased opening capability when needed and will automatically re-engage when the sash is closed. The Opening Control Device complies with ASTM F2090-08&-10.



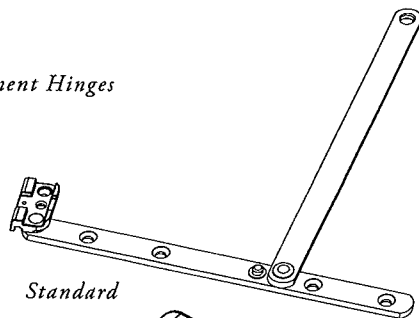
Opening Control Device

The devices are available as either right or left hand operating sash in White and Stone color only.

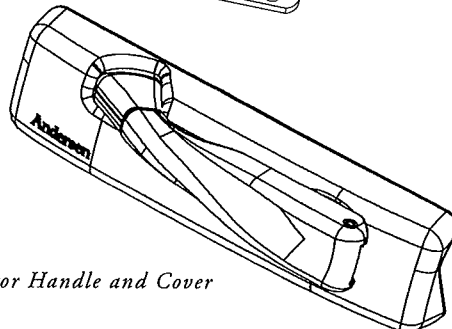


Wide Open

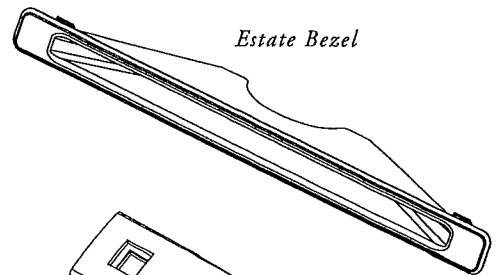
Casement Hinges



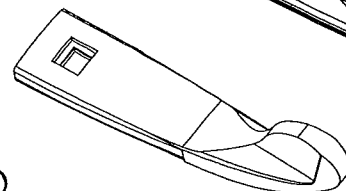
Standard



Estate Operator Handle and Cover



Estate Bezel



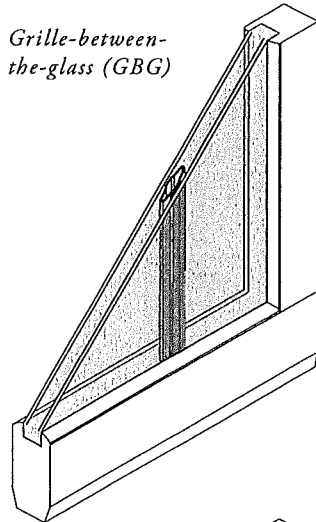
Estate Lock Handle

OPTIONS, cont.

CASEMENT WINDOW

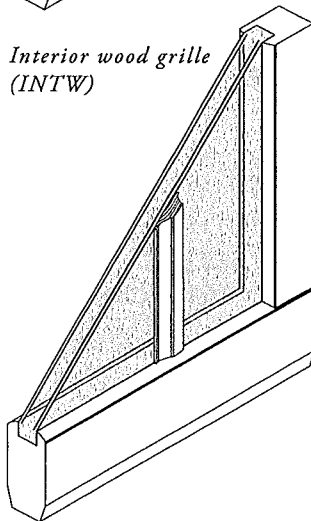
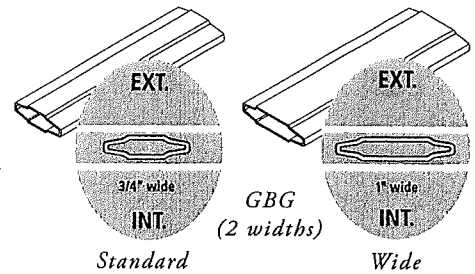
Available Grille Types

Three grille types are available. The interior and exterior sides of the grilles are color-coordinated with each side of the window frame. Consult the color combination charts in each window product section for detailed color information.



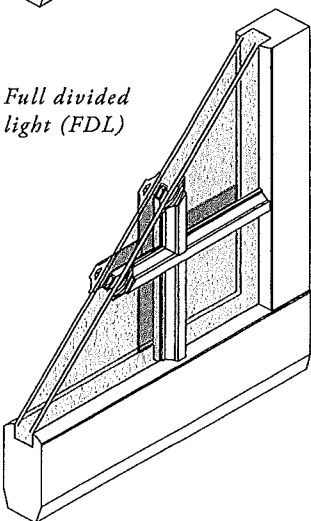
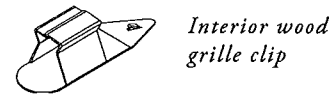
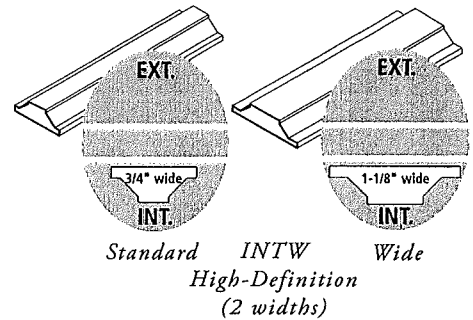
Grille-Between-the-Glass (GBG)

Sculpted aluminum grille members are manufactured between the glass panes, and are available in two widths. Enamel finish replicates interior and exterior face of window. If wood interior, interior facing surface will be gray.



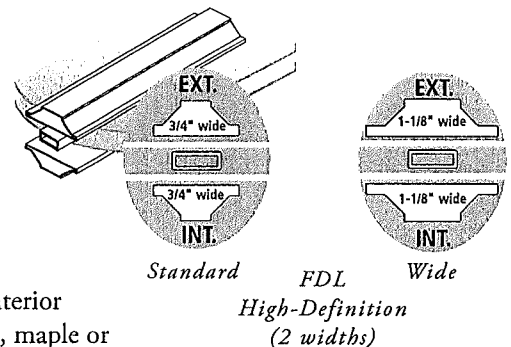
Interior Wood Grille (INTW)

With the option of hardwood maple or oak, these grilles snap into clips placed around the interior side of the sash and may be removed to clean the glass. These high-definition interior wood grilles are available in two different widths.



Full Divided Light (FDL) Grille

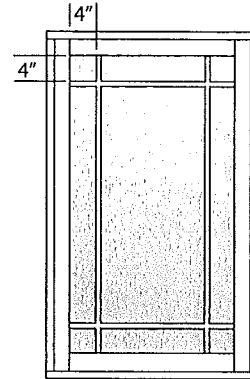
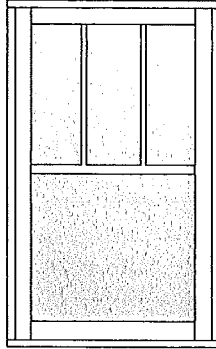
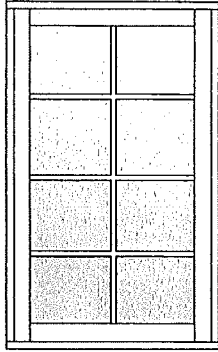
FDL grilles provide the classic look of a true divided light window. The high-definition exterior grille is made from Fibrex® material and is available in two different widths. Between the glass panes, an aluminum spacer stands slightly away from each pane to maintain thermal performance. The high-definition interior wood grille is available in hardwood, maple or oak and in two different widths, and may be permanently applied or removable.



GRILLE OPTIONS

CASEMENT WINDOW

- Available Grille Patterns – Grille pattern options include colonial, farmhouse, prairie, and modified prairie (viewed from exterior).



COLONIAL

Refer to colonial pattern grille by pattern name and grille lites wide by grille lites high for each sash. Example shown is “colonial pattern, 2 lites wide by 4 lites tall”.



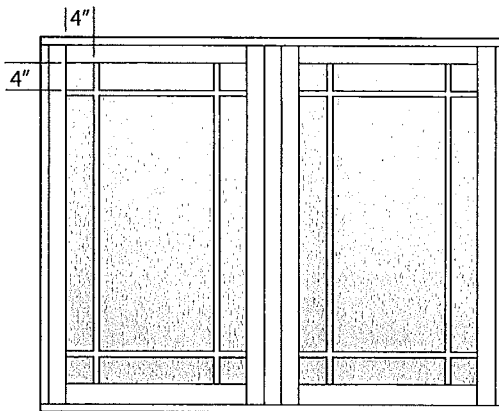
FARMHOUSE

Default pattern consists of two evenly spaced vertical bars (3/4") over a 1" wide center bar to simulate a double-hung window. Number of lites wide can be specified to more or less than 3 standard lites.



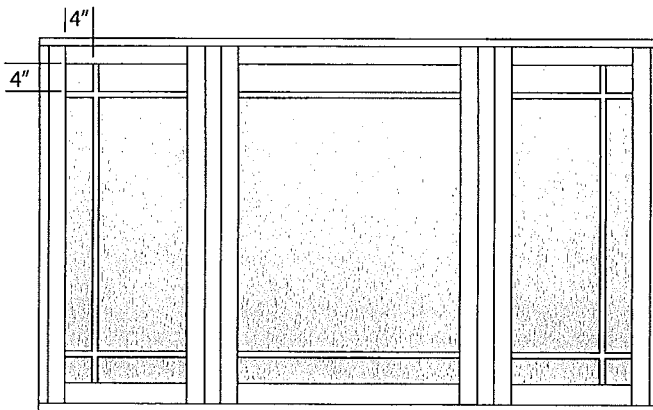
PRAIRIE

Refer to prairie grille by pattern name for each sash. Regardless of sash size, all prairie grilles intersect to form 4 inch squares of visible glass in the corners of the sash.



The prairie grille pattern is not available on the following windows:

	Narrower than	Shorter than
Casement	20-5/8"	20-5/8"
Casement-Double	40-1/4"	20-5/8"
Casement Triple (1:1:1)	59-15/16"	20-5/8"
Casement Triple (1:2:1)	78-5/16"	20-5/8"



MODIFIED PRAIRIE

Refer to modified prairie grille by pattern name for each sash. Regardless of sash size, all modified prairie grilles intersect to form 4 inch squares of visible glass in the outermost 4 corners of the window, rather than the sash.

Modified prairie grilles are not available on single casement, awning, and standard picture windows.

WINDOW COMPONENT COLOR COMBINATION CHART

CASEMENT WINDOW

	Window Color		Frame and Hardware		GBG		Grilles Full Divided Light	Interior Wood or Full Divided Light	
	Exterior	Interior	Insect Screen Frame	Hardware	Exterior	Interior	Exterior Facing	Interior Facing	
Single Color	White	White	White	White	White	White	White	White	
	Canvas	Canvas	Canvas	Canvas	Canvas	Canvas	Canvas	Canvas	
	Sandtone	Sandtone	Sandtone	Stone	Sandtone	Sandtone	Sandtone	Sandtone	
	Terratone	Terratone	Terratone	Stone	Terratone	Terratone	Terratone	Terratone	
	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	
Dual Color	Canvas	White	White	White	Canvas	White	Canvas	White	
	Sandtone	↓	↓	↓	Sandtone	↓	Sandtone	↓	
	Terratone	↓	↓	↓	Terratone	↓	Terratone	↓	
	Cocoa Bean	↓	↓	↓	Cocoa Bean	↓	Cocoa Bean	↓	
	Dark Bronze	↓	↓	↓	Dark Bronze	↓	Dark Bronze	↓	
	Forest Green	↓	↓	↓	Forest Green	↓	Forest Green	↓	
	Black	↓	↓	↓	Black	↓	Black	↓	
	Red Rock	↓	↓	↓	Red Rock	↓	Red Rock	↓	
	White	Canvas	Canvas	Canvas	White	Canvas	White	Canvas	
	Sandtone	↓	↓	↓	Sandtone	↓	Sandtone	↓	
	Terratone	↓	↓	↓	Terratone	↓	Terratone	↓	
	Cocoa Bean	↓	↓	↓	Cocoa Bean	↓	Cocoa Bean	↓	
	Dark Bronze	↓	↓	↓	Dark Bronze	↓	Dark Bronze	↓	
	Forest Green	↓	↓	↓	Forest Green	↓	Forest Green	↓	
	Black	↓	↓	↓	Black	↓	Black	↓	
Red Rock	↓	↓	↓	Red Rock	↓	Red Rock	↓		
Stainable Wood Interiors	Exterior	Interior	Low Maintenance Sash	Insect Screen Frame	Hardware	Exterior	Interior	Exterior	Interior
	White	Wood*	Canvas	Stone	Stone	White	Sandtone	White	**Unfinished wood
	Canvas	↓	↓	↓	↓	Canvas	↓	Canvas	↓
	Sandtone	↓	↓	↓	↓	Sandtone	↓	Sandtone	↓
	Terratone	↓	↓	↓	↓	Terratone	↓	Terratone	↓
	Cocoa Bean	↓	↓	↓	↓	Cocoa Bean	↓	Cocoa Bean	↓
	Dark Bronze	↓	↓	↓	↓	Dark Bronze	↓	Dark Bronze	↓
	Forest Green	↓	↓	↓	↓	Forest Green	↓	Forest Green	↓
	Black	↓	↓	↓	↓	Black	↓	Black	↓
	Red Rock	↓	↓	↓	↓	Red Rock	↓	Red Rock	↓

Alternative component and grille color combinations for each frame/sash color are available upon request

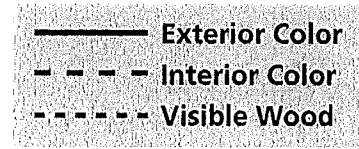
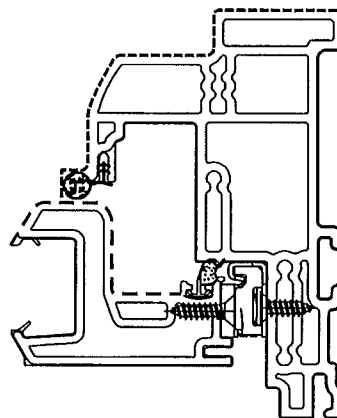
* Wood Interiors available in: pine, maple and oak

** Pine and maple interiors will use maple species interior grilles. Oak interiors will use oak species interior grilles



Low maintenance sash option clarifications:

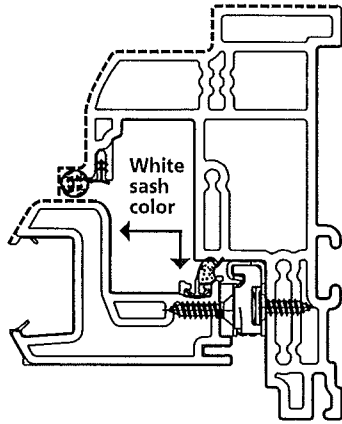
1. If window is offered as exterior color only (Example: Forest Green) then this portion of the sash will be canvas.
2. If window is offered as any other color, then interior of the sash will match exterior color of the sash.



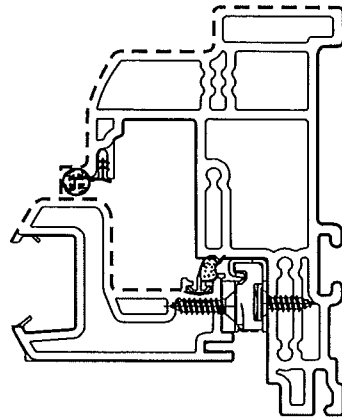
Fibrex® Material Sash and Frame Exterior/Wood Frame only Interior

WINDOW COLOR/WOOD COMBINATIONS

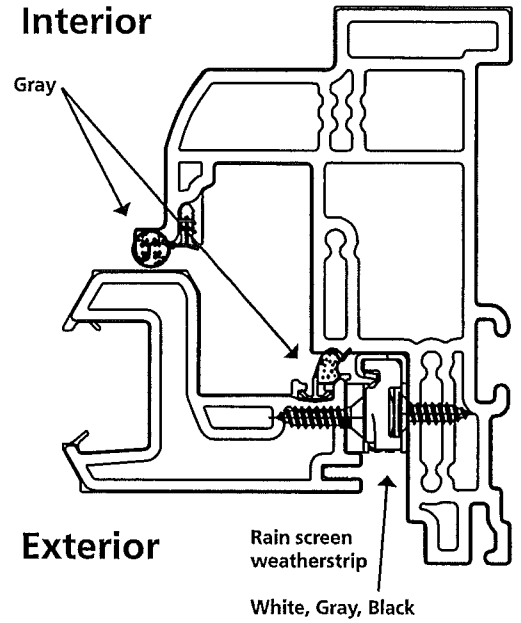
CASEMENT WINDOW



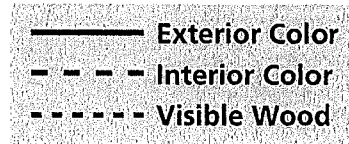
Fibrex® Material Exterior/Wood Interior



Dual Color



Window Color Exterior	Rain Screen Weatherstrip Color
White or Canvas	White
Sandtone or Terratone	Gray
Cocoa Bean, Dark Bronze, Forest Green, Black or Red Rock	Black



WINDOW INSTALLATION ACCESSORIES

CASEMENT WINDOW

Frame profile - can be used in either insert or full frame applications. Jamb dimensions is 4" overall.

- Base frame inset provides blind return for certain interior trim or insert applications.
- Extension Jamb Frame (full frame)

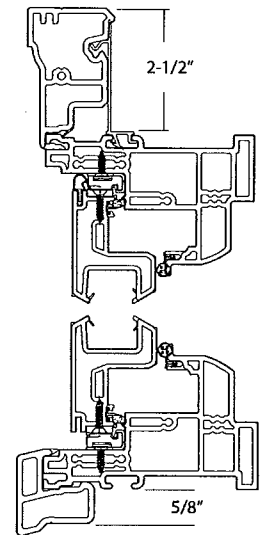
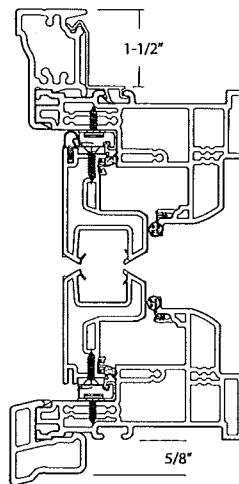
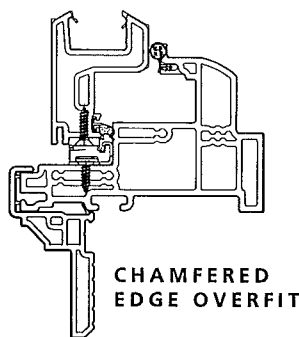
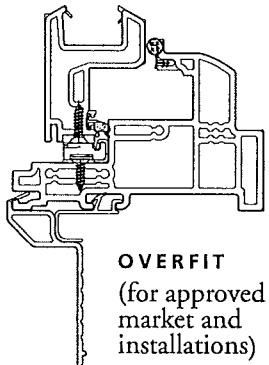
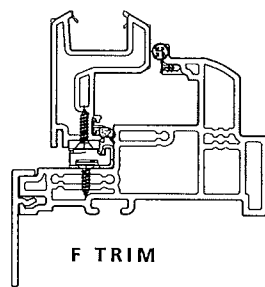
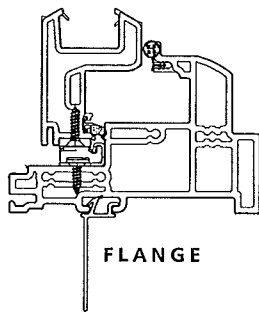
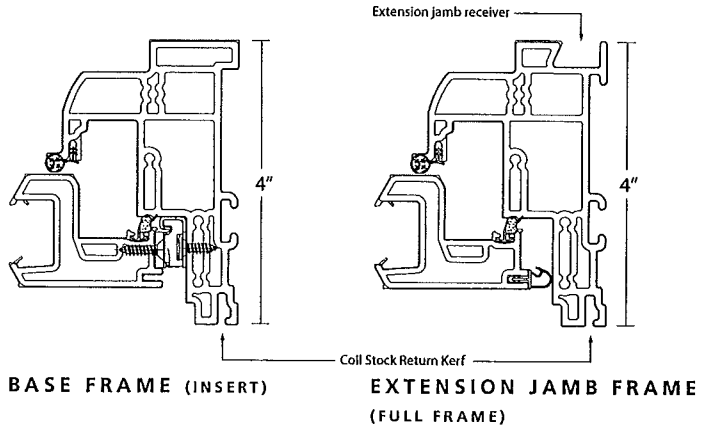
Installation Flexibility

Frame can use the following:

- Flange
- Brick mould
 - Traditional
 - Picture frame
- Overfit

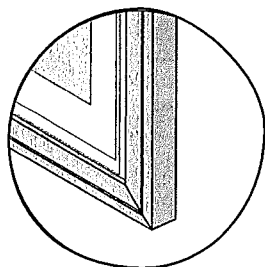
Factory mulling within mulling guidelines and restrictions for both frames

- Chamfered Edge Overfit

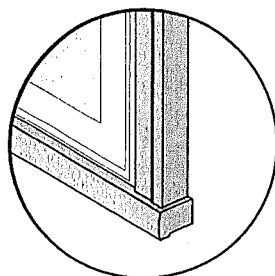


TRADITIONAL BRICK MOULD (TR)

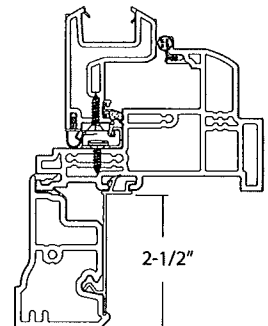
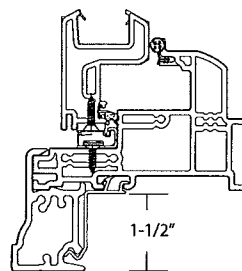
TRADITIONAL BRICK MOULD (ITR)



PICTURE FRAME STYLE
(one continuous profile)



TRADITIONAL STYLE FULL FRAME BRICK MOULD
(sill nose profile)



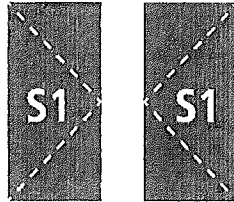
PICTURE FRAME BRICK MOULD (PF)

INSERT BRICK MOULD (IP)

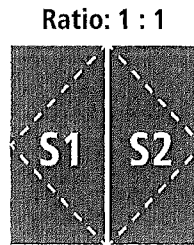
CASEMENT UNIT OFFERINGS

CASEMENT WINDOW

VIEWED FROM EXTERIOR

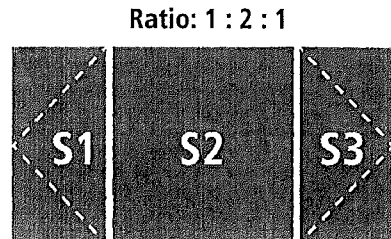
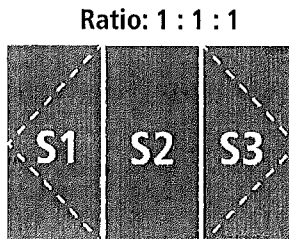


Single Sash Casement (CS)



Double Sash Casement, (CD)

- Both sash equal in width (1:1) only
- Sash operable or stationary
- Cannot hinge on center mull post

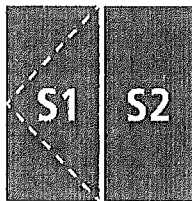


Triple Sash Casement, (CT)

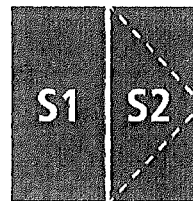
- Sash ratios (1:1:1 or 1:2:1) only
- Sash can be operable or stationary
- Center sash is always fixed
- Side (flankers) can be operable or stationary (cannot hinge on center mull post)

Sash Operation Identification

- Viewed from exterior
- Identify sash operation reading sash from left to right.

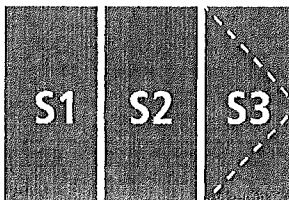


Left Vent/Stationary



Stationary/Right Vent

See stationary sash casement window (FW) details on page 1-28



Stationary/Stationary/Right Vent

MIN/MAX SIZES

CASEMENT WINDOW (CS)

Casement windows are available in any window dimension between the limits shown here, rounded to the nearest 1/16".

Casement Window Size Limitations			
	Minimum	Minimum with Wide Open Hinge	Maximum
Width	16" *	23-1/2" **	40"
Height	17"	17"	80"

United Inch Limitation: 112
Find the United Inches by adding the height and the width (H + W = UI).

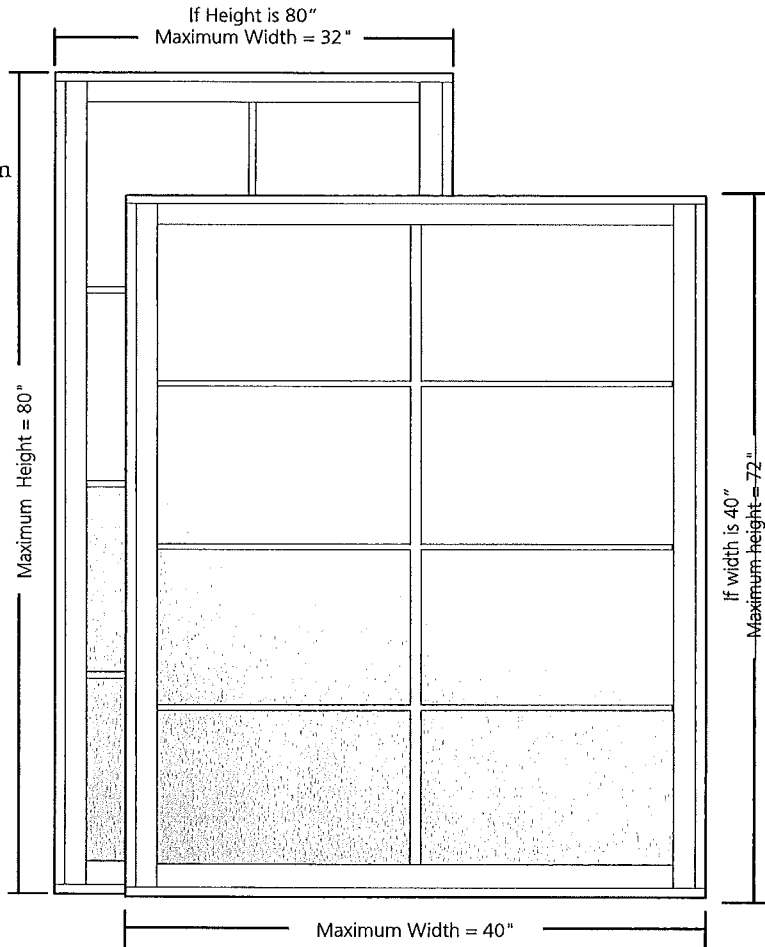
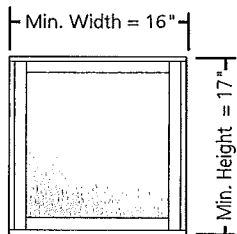
Note: Casement windows may be ordered up to a height of 80" as long as the united inches do not exceed 112.

Important: Windows less than 18" wide require wide-open-hinges. Interior washability is not possible with wide-open hinges.

* To achieve a 20" clear opening with standard hinges, the unit width must be at least 31-3/8" .

** To achieve a 20" clear opening with wide-open hinges, the unit width must be at least 27" .

Casement single products perform to PG40. For other Casement products (CD and CT), refer to charts on pages 1-18 and 1-22.



CLEAR OPENING, CLEAR GLASS, AND VENT OPENING DIMENSIONS

CASEMENT SINGLE WINDOW (CS)

Enter unit height (H) and unit width (W) in inches into the formulas below to calculate **Clear Opening** dimensions:

Determining Clear Opening Dimensions (to assess egress code compliance)	
CLEAR OPENING WIDTH (inches)	Standard Hinge Fully-Opened = Width - 11.375
	Wide-Open Hinge Fully-Opened = Width - 7.000
<hr/>	
CLEAR OPENING HEIGHT (inches)	= H - 5.500
<hr/>	
CLEAR OPENING AREA (ft ²)	= $\frac{(\text{Clear Opening Width}) \times (\text{Clear Opening Height})}{144}$

Enter unit height (H) and unit width (W) in inches into the formulas below to calculate **Clear Glass** or **Vent Opening** square footage dimensions:

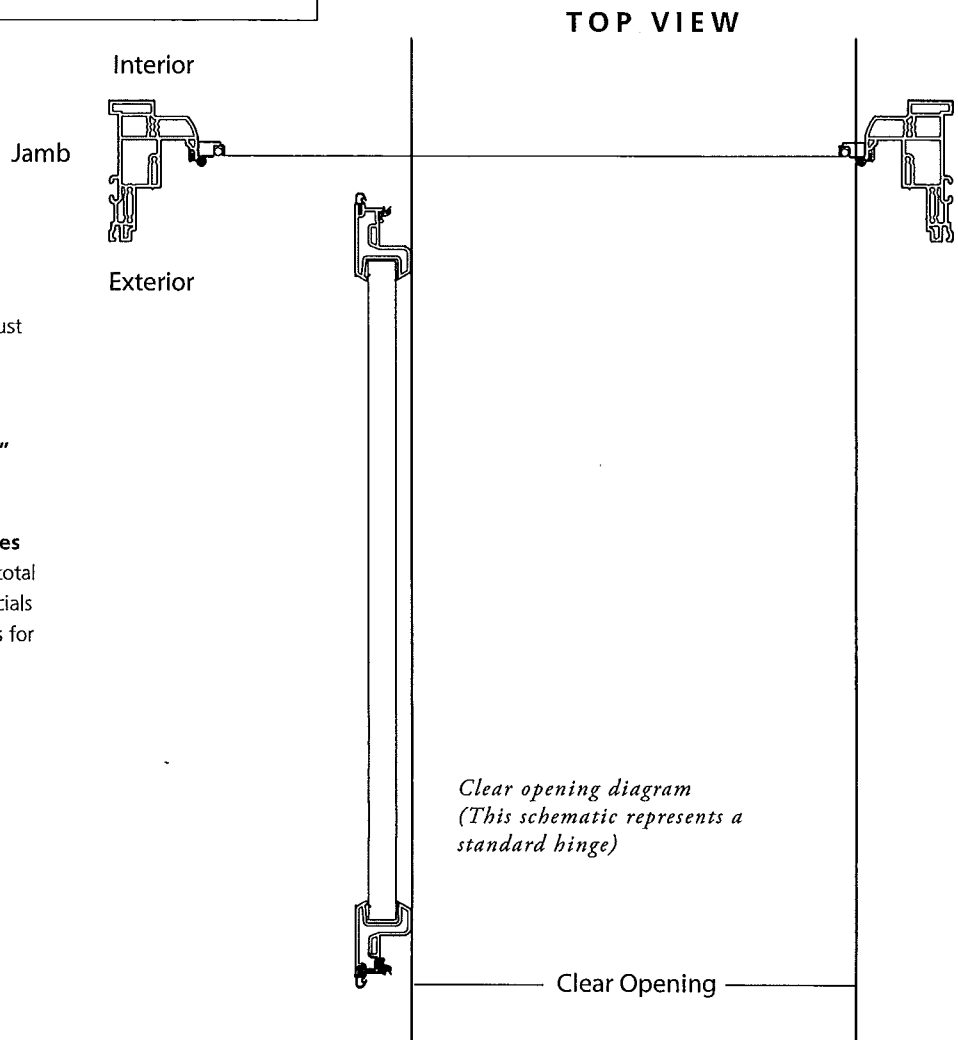
Determining Clear Glass and Vent Opening Dimensions	
CLEAR GLASS AREA (ft ²)	= $\frac{(W - 6.500) \times (H - 6.500)}{144}$
<hr/>	
VENT OPENING AREA (ft ²)	= $\frac{(W - 5.500) \times (H - 5.500)}{144}$



To achieve a 20" clear opening with wide- open-hinges, the unit width must be at least 27" .

Clear Opening Width formulas are used to determine "Egress Opening" Dimensions.

For most areas, **egress opening codes** dictate minimum width, height, and total area. Check with your local code officials to determine the precise egress codes for each home.

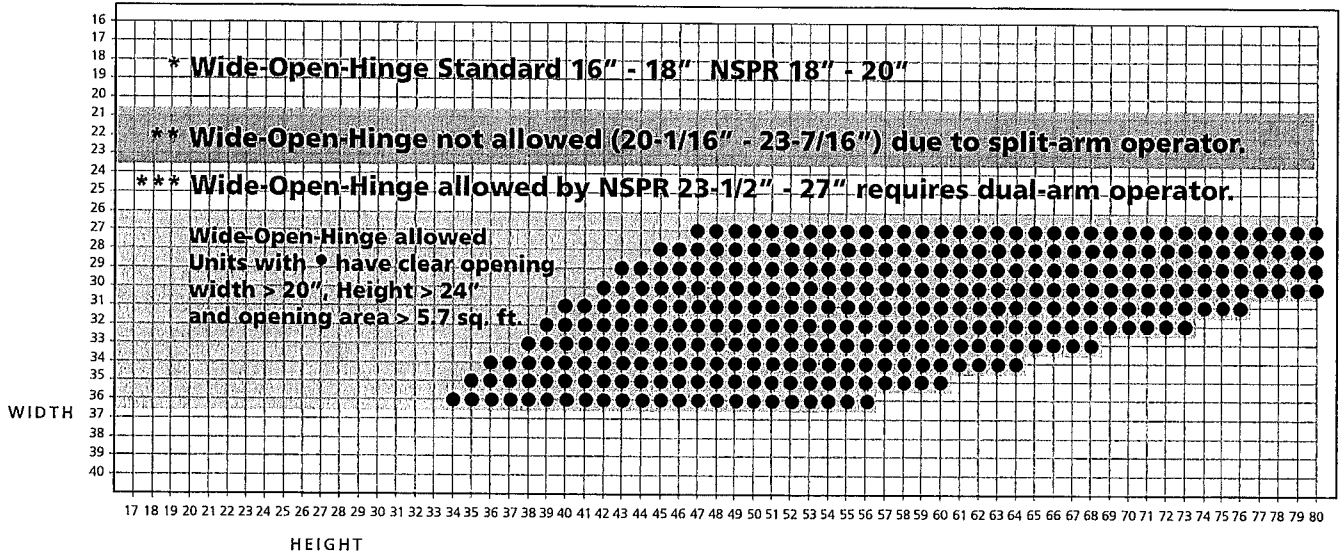
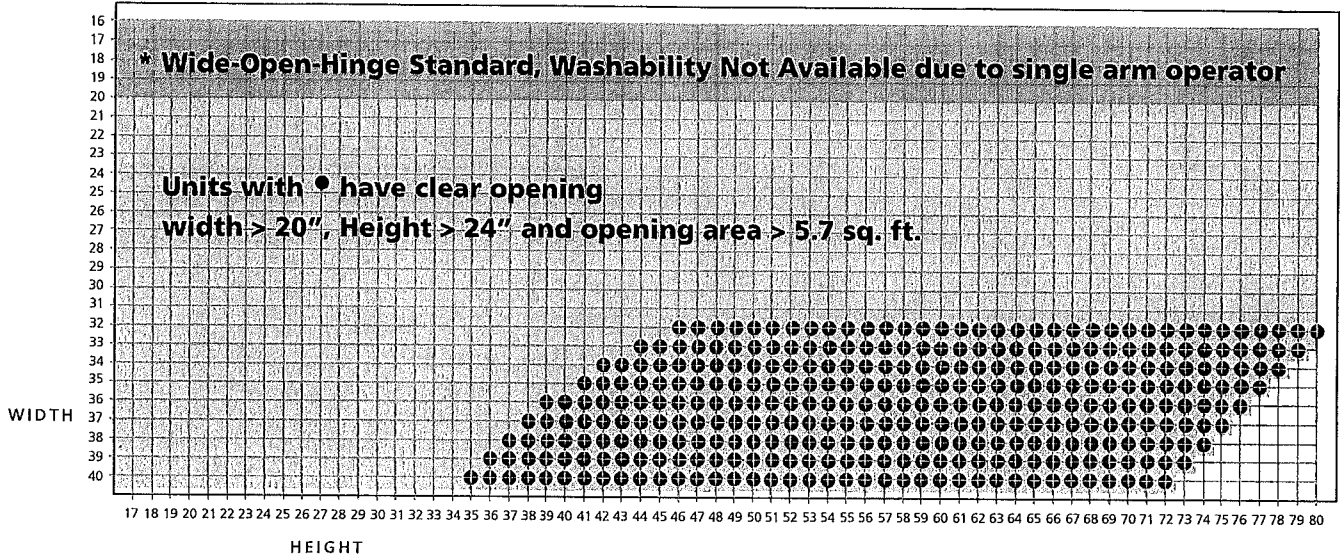


WIDE-OPEN-HINGE

CASEMENT SINGLE WINDOW (CS)

Wide-Open-Hinge is standard.

Washability of exterior side of window from interior of home will be limited.



WINDOW OPENING AND DIMENSIONAL SPECIFICATIONS

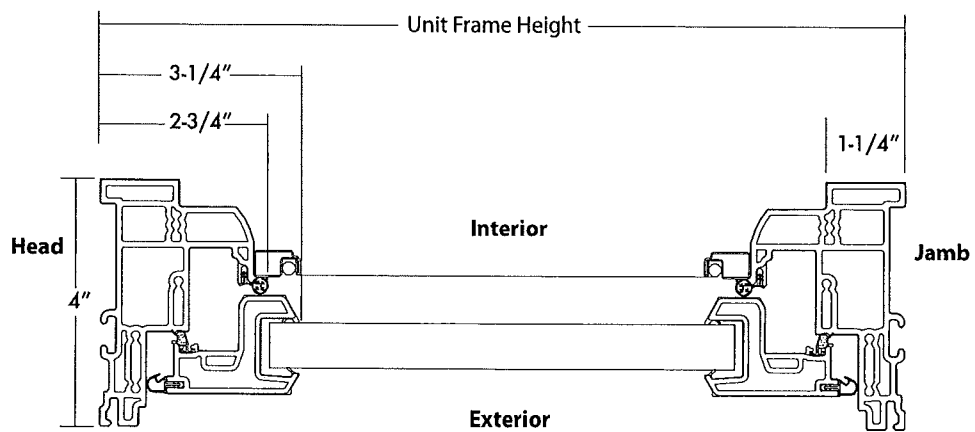
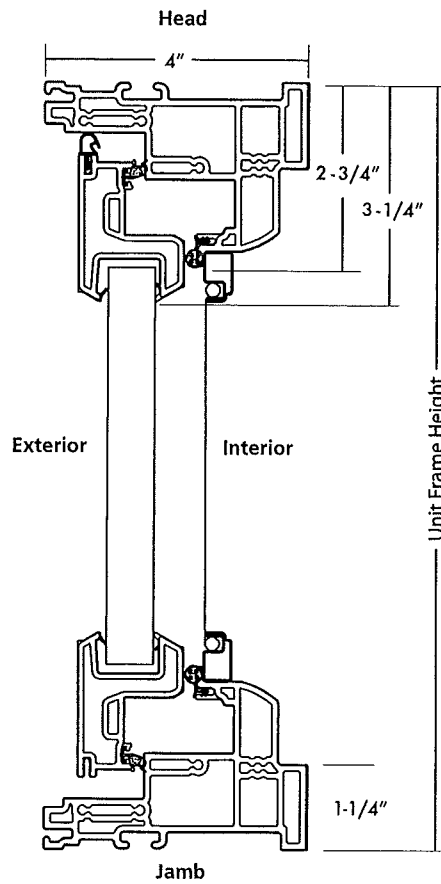
CASEMENT SINGLE WINDOW (CS)



Window profiles shown for measurement purposes.



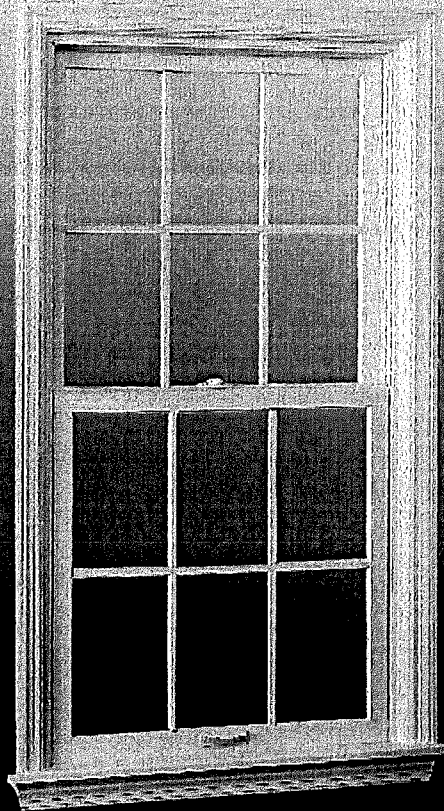
All dimensions shown are approximate. For precise clear opening and clear glass dimensions, refer to the Clear Opening, Clear Glass, and Vent Opening Dimensions charts on the 1-15.



DOUBLE-HUNG WINDOW

ADVANTAGES AND APPLICATIONS

A double-hung window consists of two vertically sliding sash in a single frame. Both sash are counterbalanced by a spring-powered block-and-tackle balance mounted on the side of each sash. Tilt latches for each sash allow inward tilting for easy cleaning. Upper and lower sash are securely closed by use of a cam-type sash lock. An insect screen is installed into the outside track.



*Double-Hung
Replacement Windows*

ADVANTAGES

- Both sash can be operated for ventilation at top and bottom of window.
- Both sash can be tilted inward for easy cleaning.
- Patented Fibrex® material is stronger than vinyl, providing greater durability.
- Fibrex material with low-maintenance capstock gives a rich, low-luster finish to sash and frame, similar to painted wood.
- Smooth radius surfaces on the frame and sash are pleasing to the eye and easier to clean.
- Mortise-and-tenon appearance on the interior and exterior sash corners gives a traditional, hand-crafted look.
- Full-perimeter weatherstrip provides superior weathertightness while still allowing easy sash operation.
- Sash are counterbalanced by a spring-powered block-and-tackle balance mounted on the side and matched to the weight of each individual sash.

APPLICATIONS

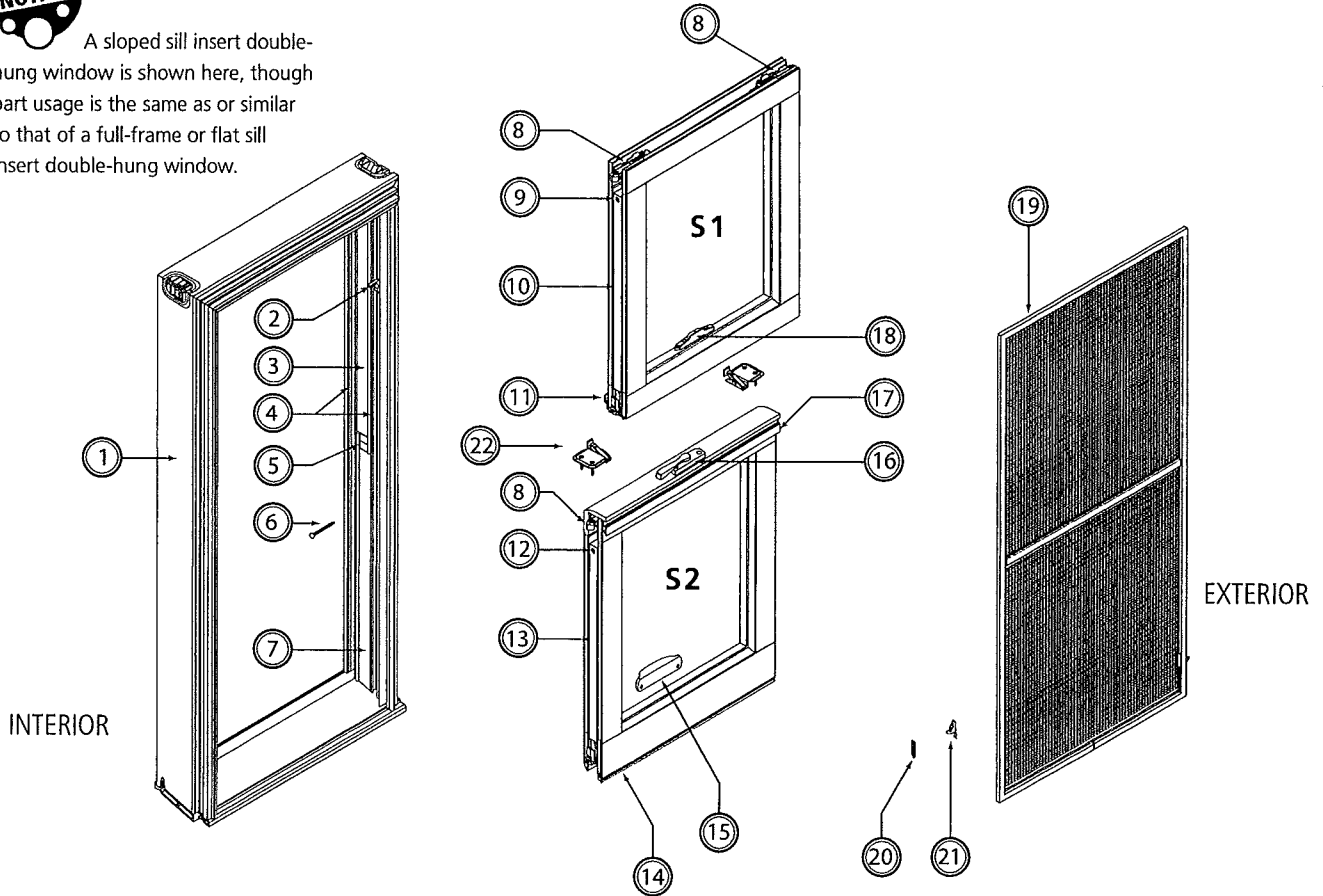
- Excellent choice for homes and condominiums where traditional styling is important; appropriate for many restoration projects.
- Suitable in areas facing walkways, decks and other traffic areas because sash do not project outward.
- Convenient in areas where the sash need to be cleaned from the interior.
- Visually compatible with other Renewal by Andersen® products.

EXPLODED VIEW

DOUBLE-HUNG WINDOW



A sloped sill insert double-hung window is shown here, though part usage is the same as or similar to that of a full-frame or flat sill insert double-hung window.



DOUBLE-HUNG COMPONENTS

- | | | |
|--|--|--|
| 1. Frame (insert) | 8. Tilt latch | 16. Sash lock |
| 2. Wash assist | 9. Upper balance screw | 17. Interior sash interlock (lower sash) |
| 3. Side jamb liner weatherstrip (upper) | 10. Balance (upper sash) | 18. Sash keeper |
| 4. Side jamb liner (interior and exterior sash tracks) | 11. Exterior sash interlock (upper sash) | 19. Insect screen |
| 5. Side cover check rail weatherstrip | 12. Lower balance screw | 20. Universal insect screen latch retainer |
| 6. Balance end clip screw | 13. Balance (lower sash) | 21. Insect screen latch |
| 7. Side jamb liner weatherstrip (lower) with integrated fin pile | 14. Bottom rail weatherstrip | 22. Child safety opening control device (optional) |
| | 15. Sash lift (optional) | |

STANDARD FEATURES

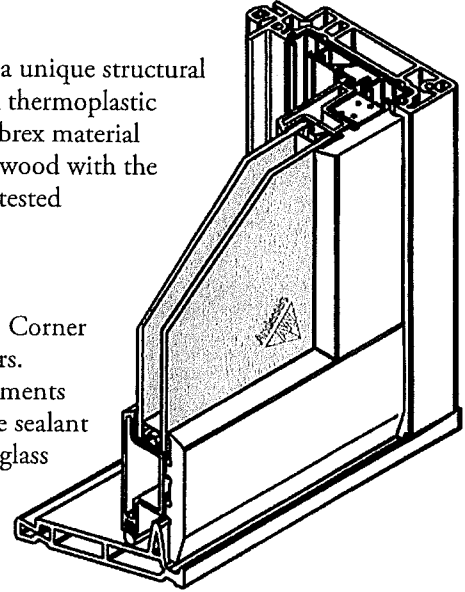
DOUBLE-HUNG WINDOW



A sloped sill insert double-hung window corner section is shown here, though **standard features are the same as for flat sill insert or full-frame** double-hung windows.

Described below are features that contribute to the double-hung window's low maintenance, energy efficiency, ease of operation, and pleasing appearance.

- **Frame** – Made of rigid Fibrex® material a unique structural composite of wood fibers and a special thermoplastic polymer. Developed by Andersen®, Fibrex material combines the strength and stability of wood with the low-maintenance features of our time-tested Perma-Shield® cladding.
- **Sash** – Constructed of Fibrex material. Corner keys provide durable, watertight corners. The mortise and tenon joinery complements the frame. A high-performance silicone sealant provides a watertight seal between the glass and sash.
- **Glazing** – High-Performance™ LoE⁴®* glass with an inert, energy-efficient gas, is standard for every window. See Options on page 3-6 for other glass choices.
- **Glass spacer** – The patented low-conductivity spacer is made of stainless steel and resists heat transfer four to five times better than aluminum spacers used by many other manufacturers.

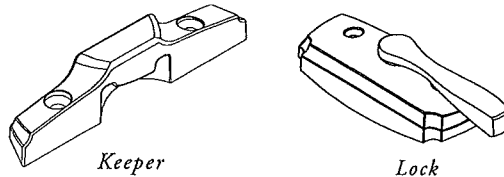


*LoE⁴ is a registered trademark of Cardinal IG Company.

STANDARD FEATURES, cont.

DOUBLE-HUNG WINDOW

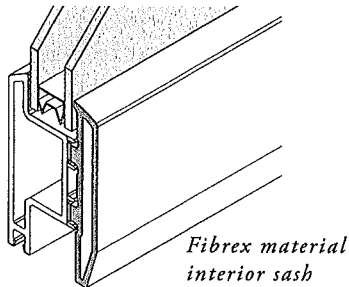
- **Removable protective film** – Packaging features a clear protective film that is factory applied to both the interior and exterior glass surfaces to help protect the glass from shipping and installation damage.
- **Weatherstrip** – A dual system of a foam-filled bulb applied to the sash frame and a constant-force low-friction weatherstrip applied to the frame provide a tight seal.



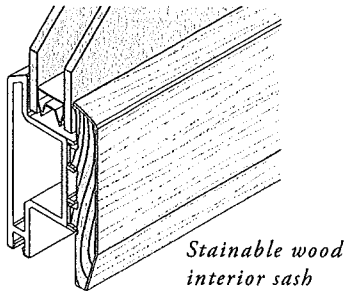
- **Sash Lock and Keeper** – The zinc die cast dual cam-type sash lock, mounted at center of the meeting rail on the interior sash, engages easily into the keeper mounted on the center of the meeting rail on the exterior sash. The Double-hung Window Component Color Combination Chart on page 3-11 shows the hardware color for each window color combination.

OPTIONS

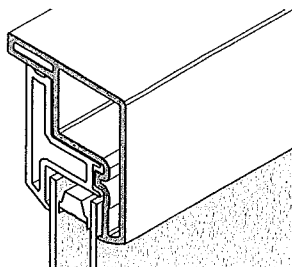
DOUBLE-HUNG WINDOW



Fibrex material interior sash



Stainable wood interior sash



Traditional Fibrex Material Square Check Rail

The following options are available for all Renewal by Andersen® double-hung windows:

- **Dual-Colors and Stainable Wood Interior Veneers** – Dual-color windows are available that have different interior and exterior colors. Stainable wood interior veneers are also available in oak, maple, and engineered pine. The Double-Hung Window Component Color Combination Chart on page 3-11 shows available color combinations and the default color of individual components for these combinations. Alternative component (e.g., insect screens, grilles, hardware, side jambs) color combinations are available upon request.

Painting and staining guidelines for Fibrex® material and stainable wood interiors are available in this manual, the *Product Installation Manual* and in the *Care and Maintenance Guide*.

- **Traditional Square Check Rail** – Optional square-shaped check rail available in oak, maple, engineered pine veneer and Fibrex material interior finishes offers a classic flat surface appearance. These classic lines create the old world look, using the advanced technology of today. This option can be used with any other double-hung lock components or grille accessories.
- **Rounded Contemporary Check Rail** – Original rounded contemporary check rail is still available (as an option) in same color and wood species.
- **TruScene® Insect Screen** – Micro-fine stainless steel mesh (25 x 25 per inch mesh) that provides over 50% more clarity than standard Andersen insect screens.

OPTIONS, cont.

DOUBLE-HUNG WINDOW

Double-Hung Window	Full Insect Screen	All sash ratios	Restrictions All heights available for unit widths less than or equal to 50-1/4". All widths available for unit heights less than or equal to 48-5/8".
<div data-bbox="1032 531 1284 743" style="border: 1px solid black; padding: 5px;"> <p>NOTE: Equal Sash Ratio DB min/max chart shown here; screen dimensions apply to all sash ratios.</p> </div>			
Double-Hung Window	Half Insect Screen	All sash ratios	All sizes available, no restrictions

Glass Options

- High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™] (no pattern)
- High Performance[®] Low-E4 Smart Sun[™] tinted
- High Performance[®] Low-E4 Smart Sun[™] (no pattern)
- High Performance[®] Low-E4 (no pattern)
- Obscure
- Reed
- Cascade
- Fern

- **Aluminum Insect Screen Cloth** – Durable aluminum screen cloth (18 x 16 per inch mesh) in a glare-resistant charcoal gray.
- **Half Insect Screen** – A half insect screen is available that only covers the lower sash. The half screen does not impede the operation of the upper sash.
- **Decorative Glass Patterns** – Standard windows have no textured glass pattern whatsoever. Optional textured patterns are as follows:
 - Obscure (not available on double-hung windows taller than 86")
 - Reed
 - Cascade
 - Fern (not available on double-hung windows wider than 50-5/16")
- **Glass Coating** – High-Performance[™] Low-E4[™] coating is standard with all windows. Optional glazings are as follows:
 - Clear (no coating)
 - SmartSun[™]
 - High-Performance Low-E4 Smart Sun[™] tinted coating
 - High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™]

* High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™] not available with decorative glass patterns
- **Tempered Glass** – Tempering is an option for all available glass options. Untempered glass is standard.

OPTIONS, cont.

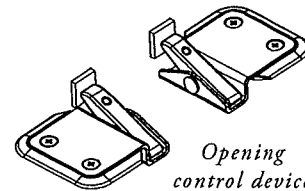
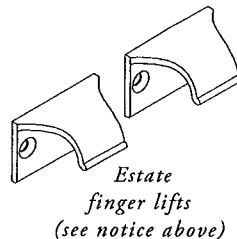
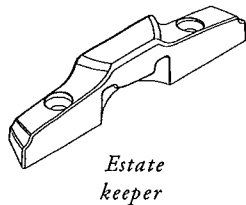
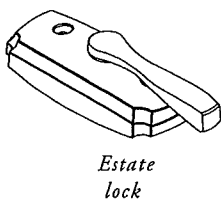
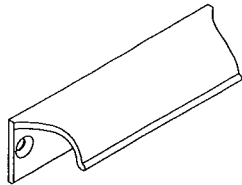
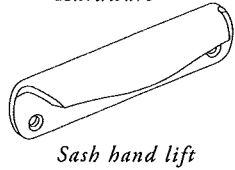
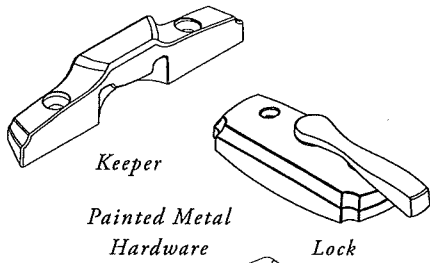
DOUBLE-HUNG WINDOW

Unavailable Glass Patterns		
Pattern	on windows wider than	or windows taller than
Reed*	56-7/8"	100-7/8"
Cascade*	56-7/8"	84-7/8"
Fern	56-7/8"	84-7/8"
Obscure	56-7/8"	84-7/8"

* Pattern is directional



When finger lifts are desired, order the window with **no** lifts. Finger lifts are then installed in the field after the window installation.



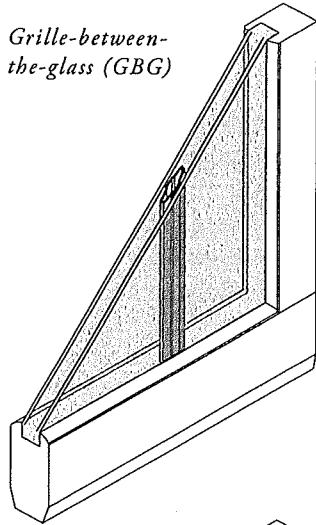
- **Glass Breather Tubes** – Breather tubes are available for glass intended for high-altitude installations. It is important to note that breather tubes will decrease the thermal performance of the unit. Refer to the Technical Data (Section 8) in this Spec and Tech Manual for altitude specifics.
- **Sash Lock** – A single zinc-cast metal lock is available in White, Stone and Canvas colors. Units narrower than 22-13/16" have a single lock. For units 22-13/16" wide or wider, a second lock is available as an option. For units wider than 45-9/16", a second lock is required.
- **Sash Lift** – One or two sash lifts may be mounted to the bottom rail of the lower sash. Can be specified, available in White, Stone, or Canvas colors or Estate™ finishes.
- **Estate™ Finish Hardware** – Estate finish hardware is available for all operating windows and is available in high performance bright brass, antique brass, high performance satin nickel, distressed nickel, brushed chrome, polished chrome, distressed bronze, oil-rubbed bronze and dark bronze. Hardware in each of the finishes is electroplated and/or modified to obtain the desired look. The Estate hardware components for double-hung windows are listed below:
 - **Lock and Keeper** – The zinc cast, plated lock and keeper provide elegant Estate styling that beautifully complements not only the window, but matches any Estate hardware found on Andersen® patio doors.
 - **Hand Lift** – Similar to the standard lift, the Estate hand lift provides an easy gripping surface with which to operate the window.
 - **Finger Lifts** – These smaller, more traditional looking lifts provide a different aesthetic option for a grasp to operate the window. These lifts are typically used in pairs.
 - **Opening Control Device** – Field-applied device restricts sash opening to 4 inches. This device will allow full sash opening when disengaged and will re-engage when sash is closed.

OPTIONS, cont.

DOUBLE-HUNG WINDOW

Available Grille Types

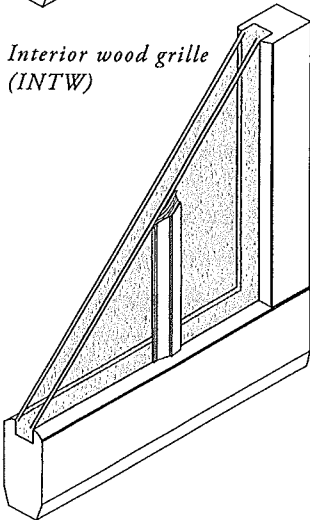
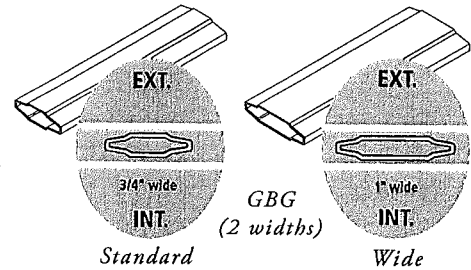
Three grille types are available. The interior and exterior sides of the grilles are color-coordinated with each side of the window frame. Consult the color combination charts in each window product section for detailed color information.



Grille-between-the-glass (GBG)

Grille-Between-the-Glass (GBG)

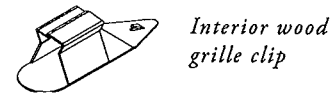
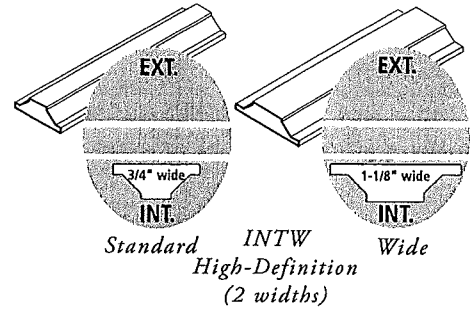
Sculpted aluminum grille members are manufactured between the glass panes, and are available in two widths. Enamel finish replicates interior and exterior face of window. If wood interior, interior facing surface will be gray.



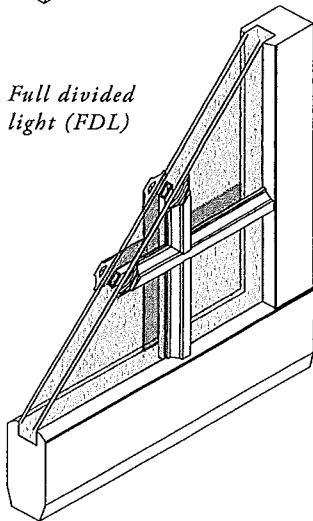
Interior wood grille (INTW)

Interior Wood Grille (INTW)

With the option of hardwood maple or oak, these grilles snap into clips placed around the interior side of the sash and may be removed to clean the glass. These high-definition interior wood grilles are available in two different widths.



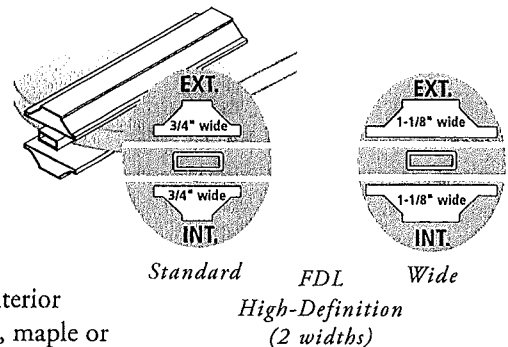
Interior wood grille clip



Full divided light (FDL)

Full Divided Light (FDL) Grille

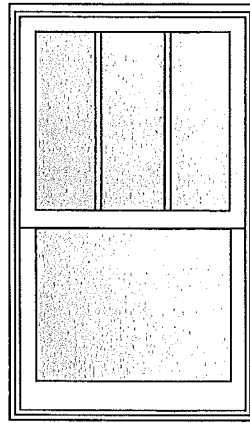
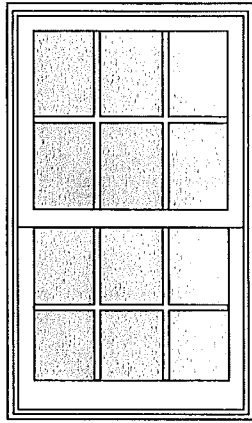
FDL grilles provide the classic look of a true divided light window. The high-definition exterior grille is made from Fibrex® material and is available in two different widths. Between the glass panes, an aluminum spacer stands slightly away from each pane to maintain thermal performance. The high-definition interior wood grille is available in hardwood, maple or oak and in two different widths, and may be permanently applied or removable.



OPTIONS, cont.

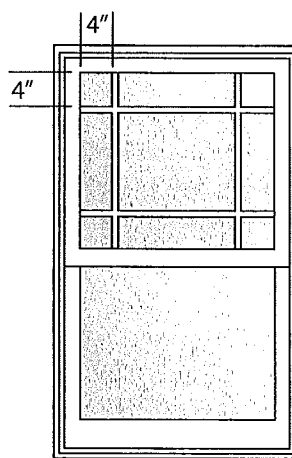
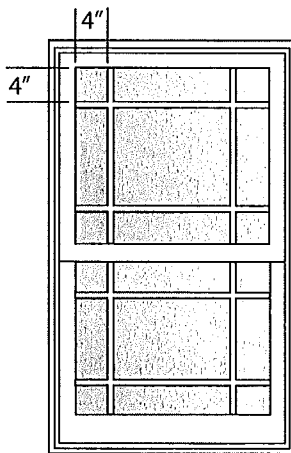
DOUBLE-HUNG WINDOW

- Available Grille Patterns – Grille pattern options include colonial, prairie, and modified prairie.



COLONIAL

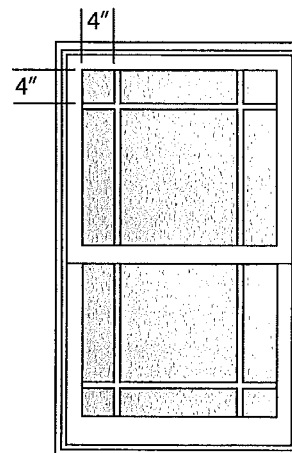
Refer to colonial pattern grilles by pattern name and “grille lites wide by grille lites high” for each sash. For the examples shown, the left window would be “colonial pattern, 3 by 2, upper and lower sash”. For the example to the right, “colonial pattern, 3 by 1 on the upper sash, no grille on the lower sash”.



PRAIRIE

Regardless of sash size, all prairie grilles intersect to form 4" squares of visible glass in the corners of the sash. Prairie grilles are available on one or both sash.

The prairie grille pattern is not available on double-hung windows narrower than 20”.



MODIFIED PRAIRIE

Regardless of sash size, all modified prairie grilles intersect to form 4" squares of visible glass. Modified prairie grilles are available for one or both sash.

The modified prairie grille pattern is not available on double-hung windows narrower than 20”.

OPTIONS, cont.

DOUBLE-HUNG WINDOW

- **Exterior brick mould** – Fibrex® material brick mould is available in two configurations, picture frame and traditional style, as an exterior trim option for full-frame windows. Brick mould is available on insert frame windows in picture frame style only.
- **Overfit brick mould** – Fibrex material is available as an exterior trim option for insert flat sill only windows in picture frame style.

FULL-FRAME BRICK MOULD

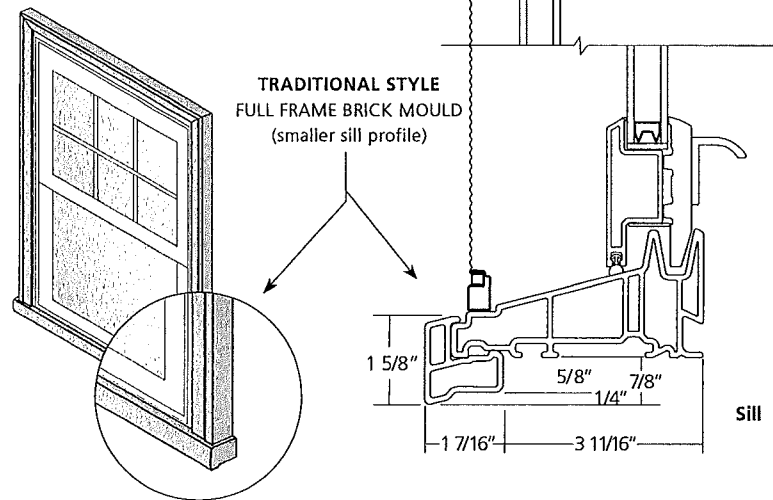
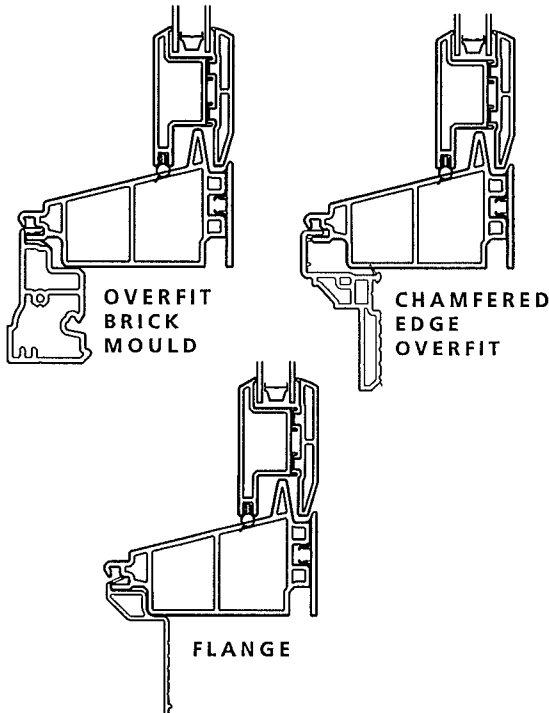
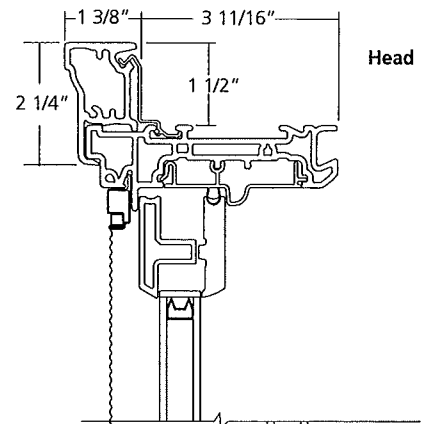
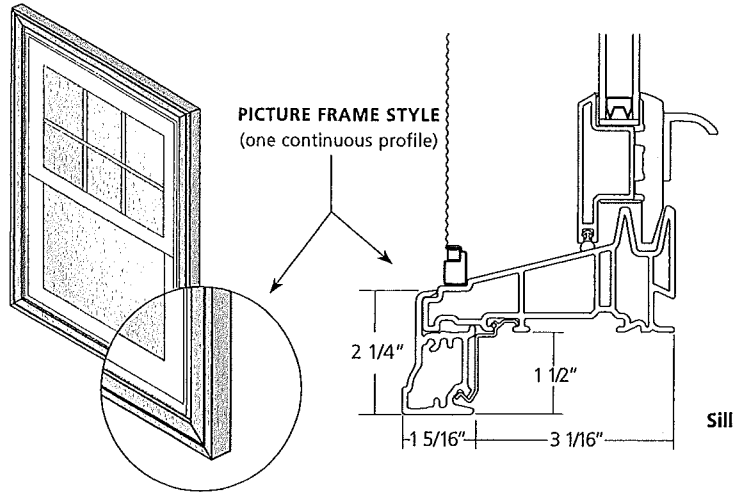
Full-frame brick mould is available in two configurations:

- **Picture Frame Style** – The same brick mould profile is used all the way around the window.
- **Traditional Style** – A thinner sill profile that runs completely under the side brick mould pieces is used reminiscent of old, traditional window installations.

INSERT-FRAME BRICK MOULD

- **Overfit Brick Mould** – Fibrex material overfit brick mould is available as an exterior trim option for insert (flat sill only) window in picture frame style.

- Overfit Flange
- Chamfered Overfit Flange



WINDOW COMPONENT COLOR COMBINATION CHART

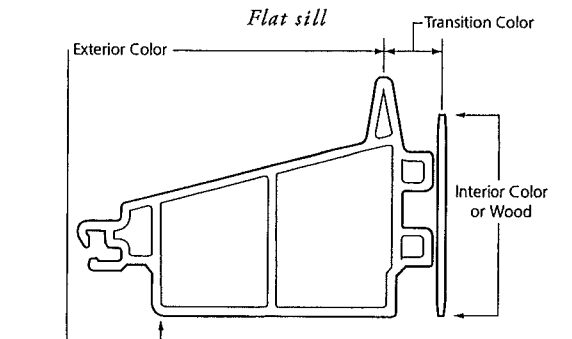
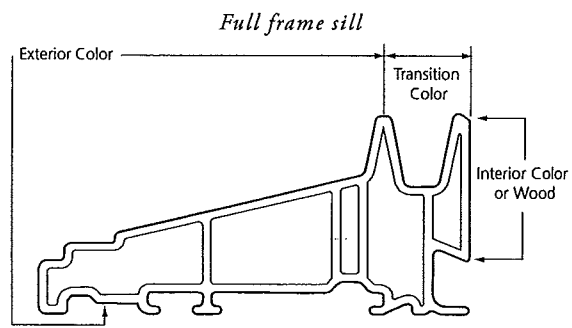
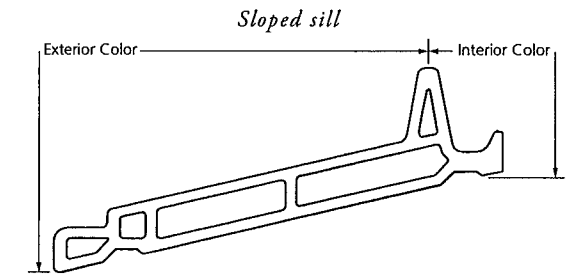
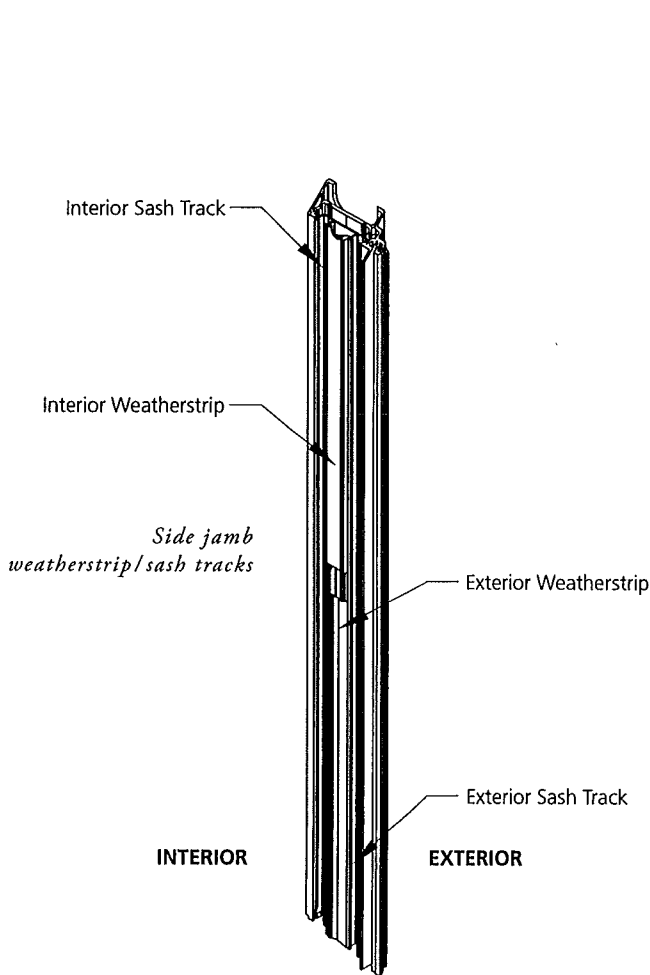
DOUBLE-HUNG WINDOW

Window Color	Interior and Exterior Colors (Exterior/Transition/Interior)				Components		Grille Between Glass		Interior Wood & Full Divided Light		Headliner		Side Jamb Components		
	Exterior White	Interior White	Sloped Sill White/White	Flat Sill White/White/White	Full Frame Sill White/White/White	Insect Screen Frame White	Hardware White	Exterior White	Interior White	Exterior White	Interior White	Exterior White	Interior White	Lower Exterior White/White	Upper Interior White/White
Canvas	Canvas	Canvas/Canvas	Canvas/Canvas/Canvas	Canvas/Canvas/Canvas	Canvas/Canvas/Canvas	Canvas	Canvas	Canvas	Canvas	Canvas	Canvas	White	White	White/White	White/White
Sandtone	Sandtone	Sandtone/Sandtone	Sandtone/Sandtone/Sandtone	Sandtone/Sandtone/Sandtone	Sandtone/Sandtone/Sandtone	Sandtone	Stone	Sandtone	Sandtone	Sandtone	Sandtone	White	White	White/White	White/White
Terratone	Terratone	Terratone/Terratone	Terratone/Terratone/Terratone	Terratone/Terratone/Terratone	Terratone/Terratone/Terratone	Terratone	Stone	Terratone	Terratone	Terratone	Terratone	White	White	White/White	White/White
Dark Bronze	Dark Bronze	Dark Bronze/Terratone	Dark Bronze/Terratone	Dark Bronze/Terratone	Dark Bronze/Terratone	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	White	White	White/White	White/White
Canvas	White	Canvas/White	Canvas/Canvas/White	Canvas/White/White	Canvas/White/White	Canvas	White	Canvas	White	Canvas	White	White	White	White/White	White/White
Sandtone	White	Sandtone/White	Sandtone/Sandtone/White	Sandtone/White/White	Sandtone/White/White	Sandtone	White	Sandtone	White	Sandtone	White	White	White	White/White	White/White
Terratone	White	Terratone/White	Terratone/Terratone/White	Terratone/White/White	Terratone/White/White	Terratone	White	Terratone	White	Terratone	White	White	White	White/White	White/White
Cocoa Bean	White	Cocoa Bean/White	Cocoa Bean/Sandtone/White	Cocoa Bean/White/White	Cocoa Bean/White/White	Cocoa Bean	White	Cocoa Bean	White	Cocoa Bean	White	White	White	White/White	White/White
Dark Bronze	White	Dark Bronze/White	Dark Bronze/Canvas/White	Dark Bronze/White/White	Dark Bronze/White/White	Dark Bronze	White	Dark Bronze	White	Dark Bronze	White	White	White	White/White	White/White
Forest Green	White	Forest Green/White	Forest Green/Canvas/White	Forest Green/White/White	Forest Green/White/White	Forest Green	White	Forest Green	White	Forest Green	White	White	White	White/White	White/White
Black	White	Black/White	Black/Canvas/White	Black/White/White	Black/White/White	Black	White	Black	White	Black	White	White	White	White/White	White/White
Red Rock	White	Red Rock/White	Red Rock/Canvas/White	Red Rock/White/White	Red Rock/White/White	Red Rock	White	Red Rock	White	Red Rock	White	White	White	White/White	White/White
White	Canvas	White/Canvas	White/White/Canvas	White/Canvas/Canvas	White/Canvas/Canvas	White	Canvas	White	Canvas	White	Canvas	White	White	White/White	White/White
Sandtone	Canvas	Sandtone/Canvas	Sandtone/Sandtone/Canvas	Sandtone/Canvas/Canvas	Sandtone/Canvas/Canvas	Sandtone	Canvas	Sandtone	Canvas	Sandtone	Canvas	White	White	White/White	White/White
Terratone	Canvas	Terratone/Canvas	Terratone/Terratone/Canvas	Terratone/Canvas/Canvas	Terratone/Canvas/Canvas	Terratone	Canvas	Terratone	Canvas	Terratone	Canvas	White	White	White/White	White/White
Cocoa Bean	Canvas	Cocoa Bean/Canvas	Cocoa Bean/Sandtone/Canvas	Cocoa Bean/Canvas/Canvas	Cocoa Bean/Canvas/Canvas	Cocoa Bean	Canvas	Cocoa Bean	Canvas	Cocoa Bean	Canvas	White	White	White/White	White/White
Dark Bronze	Canvas	Dark Bronze/Canvas	Dark Bronze/Canvas/Canvas	Dark Bronze/Canvas/Canvas	Dark Bronze/Canvas/Canvas	Dark Bronze	Canvas	Dark Bronze	Canvas	Dark Bronze	Canvas	White	White	White/White	White/White
Forest Green	Canvas	Forest Green/Canvas	Forest Green/Canvas/Canvas	Forest Green/Canvas/Canvas	Forest Green/Canvas/Canvas	Forest Green	Canvas	Forest Green	Canvas	Forest Green	Canvas	White	White	White/White	White/White
Black	Canvas	Black/Canvas	Black/Canvas/Canvas	Black/Canvas/Canvas	Black/Canvas/Canvas	Black	Canvas	Black	Canvas	Black	Canvas	White	White	White/White	White/White
Red Rock	Canvas	Red Rock/Canvas	Red Rock/Canvas/Canvas	Red Rock/Canvas/Canvas	Red Rock/Canvas/Canvas	Red Rock	Canvas	Red Rock	Canvas	Red Rock	Canvas	White	White	White/White	White/White
White	Wood*	White/White	White/White/Wood	White/White/Wood	White/White/Wood	White	Stone	White	Wood*	White	Wood*	Gray	Wood	White/White	Wood/White
Canvas	Wood*	Canvas/Canvas	Canvas/Canvas/Wood	Canvas/Canvas/Wood	Canvas/Canvas/Wood	Canvas	Stone	Canvas	Wood*	Canvas	Wood*	Gray	Wood	White/White	Wood/White
Sandtone	Wood*	Sandtone/Sandtone	Sandtone/Sandtone/Wood	Sandtone/Sandtone/Wood	Sandtone/Sandtone/Wood	Sandtone	Stone	Sandtone	Wood*	Sandtone	Wood*	Gray	Wood	White/White	Wood/White
Terratone	Wood*	Terratone/Terratone	Terratone/Terratone/Wood	Terratone/Terratone/Wood	Terratone/Terratone/Wood	Terratone	Stone	Terratone	Wood*	Terratone	Wood*	Gray	Wood	White/White	Wood/White
Cocoa Bean	Wood*	Cocoa Bean/Canvas	Cocoa Bean/Canvas/Wood	Cocoa Bean/Canvas/Wood	Cocoa Bean/Canvas/Wood	Cocoa Bean	Stone	Cocoa Bean	Wood*	Cocoa Bean	Wood*	Gray	Wood	White/White	Wood/White
Dark Bronze	Wood*	Dark Bronze/Canvas	Dark Bronze/Canvas/Wood	Dark Bronze/Canvas/Wood	Dark Bronze/Canvas/Wood	Dark Bronze	Stone	Dark Bronze	Wood*	Dark Bronze	Wood*	Gray	Wood	White/White	Wood/White
Forest Green	Wood*	Forest Green/Canvas	Forest Green/Canvas/Wood	Forest Green/Canvas/Wood	Forest Green/Canvas/Wood	Forest Green	Stone	Forest Green	Wood*	Forest Green	Wood*	Gray	Wood	White/White	Wood/White
Black	Wood*	Black/Canvas	Black/Canvas/Wood	Black/Canvas/Wood	Black/Canvas/Wood	Black	Stone	Black	Wood*	Black	Wood*	Gray	Wood	White/White	Wood/White
Red Rock	Wood*	Red Rock/Canvas	Red Rock/Canvas/Wood	Red Rock/Canvas/Wood	Red Rock/Canvas/Wood	Red Rock	Stone	Red Rock	Wood*	Red Rock	Wood*	Gray	Wood	White/White	Wood/White

Alternative component and grille color combinations for each transomsash color are available upon request

*Wood Interiors available in pine, maple and oak

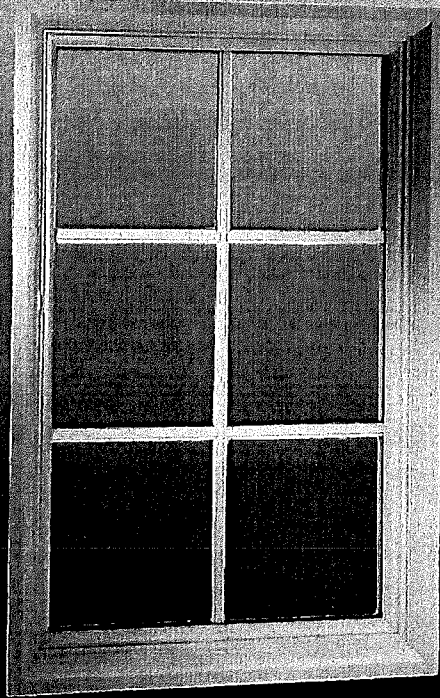
**Pine and maple Interiors will use maple species interior grilles. Oak Interiors will use oak species interior grilles



PICTURE WINDOW

ADVANTAGES AND APPLICATIONS

The picture window consists of a fixed lite of glass in a frame with fusion-welded corners. The sash profile complements all Renewal by Andersen® windows.



*Picture
Replacement Windows*

ADVANTAGES

- Full-perimeter silicone bed glazing provides a strong seal between glass and frame.
- Patented Fibrex® material is stronger than vinyl, allowing more glass area to show.
- Fibrex material with low-maintenance capstock gives a rich, low-luster finish to sash and frame, similar to painted wood.
- Smooth radius surfaces on frame and sash are pleasing to the eye and easier to clean.

APPLICATIONS

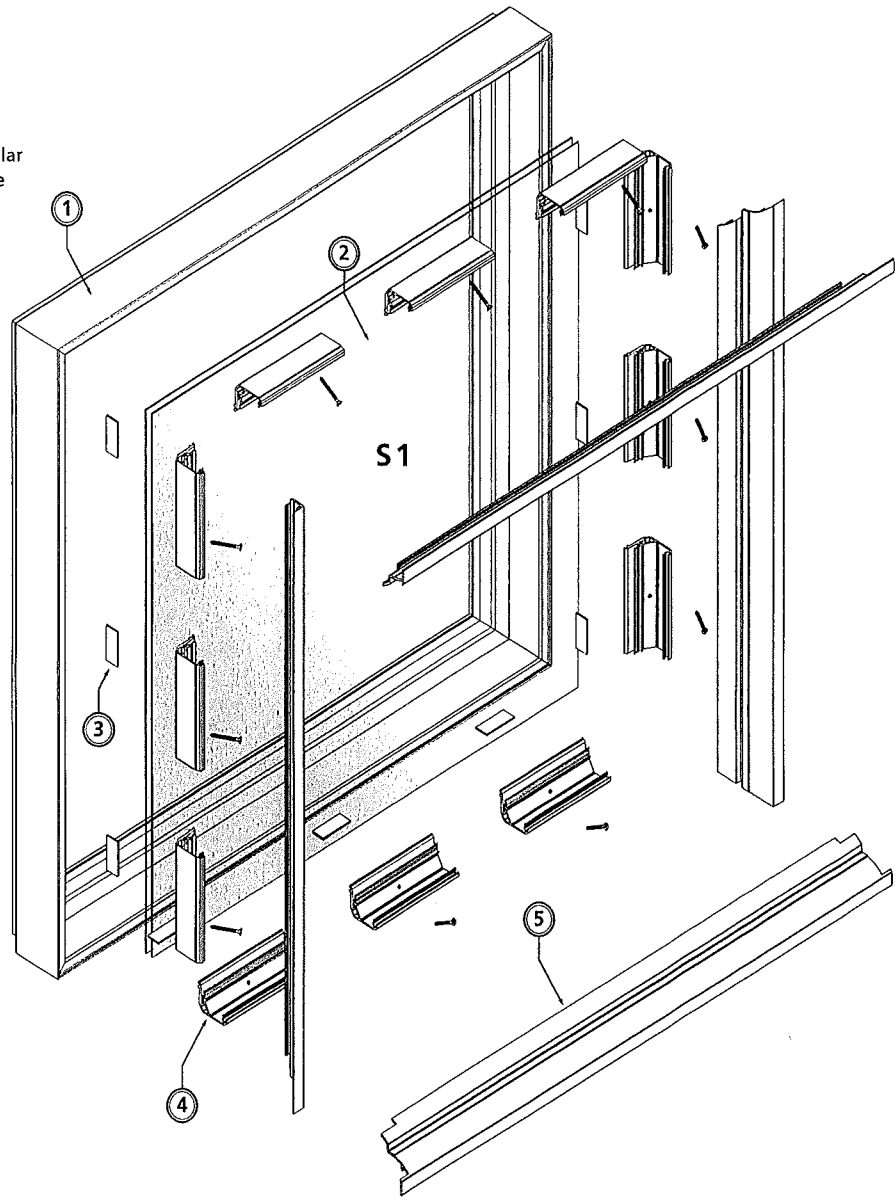
- Picture windows are the first choice when large viewing areas and daylight are desired and ventilation is not required.
- Effective in very large openings that cannot be filled with other styles of windows.
- Used extensively as stationary windows next to vent windows such as casements and double-hungs.
- Visually compatible with other Renewal by Andersen® products.

EXPLODED VIEW

PICTURE WINDOW



Insert picture window shown although part usage is the same or similar to those of insert and full-frame picture windows.



PICTURE WINDOW COMPONENTS

1. Frame (insert)
2. Glass
3. (Glass) setting block
4. Glass stop
5. Glass stop cover

STANDARD FEATURES

PICTURE WINDOW



Full-Frame examples are shown although information in exploded view, standard features, and optional items applies to both full-frame and insert picture windows.

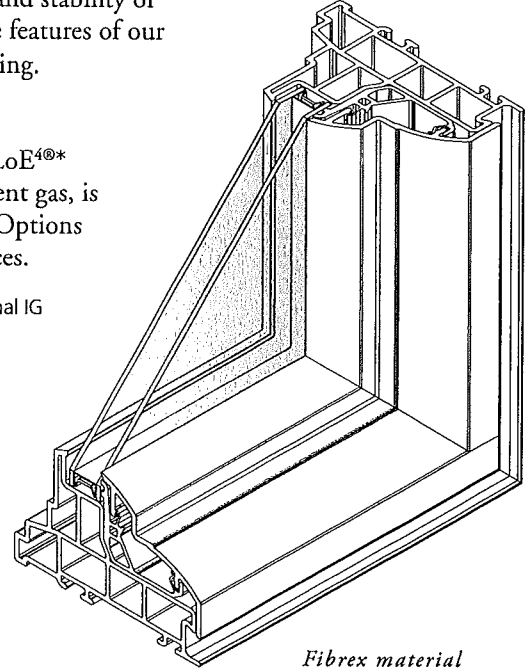
Described below are features that contribute to the picture window's low maintenance, energy efficiency, ease of operation, and pleasing appearance.

- **Frame** – Made of rigid Fibrex® material, a unique structural composite of wood fibers and a special thermoplastic polymer. Developed by Andersen®, Fibrex material combines the strength and stability of wood with the low-maintenance features of our time-tested Perma-Shield® cladding.

- **Glazing** – High-Performance™ LoE⁴* glass with an inert, energy-efficient gas, is standard for every window. See Options on page 5-5 for other glass choices.

*LoE⁴ is a registered trademark of Cardinal IG Company.

- **Glass spacer** – The patented low-conductivity spacer is made of stainless steel and resists heat transfer four to five times better than aluminum spacers used by many other manufacturers.



*Fibrex material
frame corner section*

- **Removable protective film** – Packaging features a clear protective film that is factory applied to both the interior and exterior glass surfaces to help protect the glass from shipping and installation damage.

OPTIONS

PICTURE WINDOW



Failure to follow our painting and/or staining instructions could hamper window performance and will nullify the Limited Warranty. See the General Guidelines section of this manual for more information.

Glass Options

- High Performance[®] Low-E4 Smart Sun™ with Heatlock™ (no pattern)
- High Performance[®] Low-E4 Smart Sun™ tinted
- High Performance[®] Low-E4 Smart Sun™ (no pattern)
- High Performance[®] Low-E4 (no pattern)
- Obscure
- Reed
- Cascade
- Fern

Unavailable Glass Patterns

Pattern	on windows wider than	or windows taller than
Reed*	56-7/8"	100-7/8"
Cascade*	56-7/8"	84-7/8"
Fern	56-7/8"	84-7/8"
Obscure	56-7/8"	84-7/8"

* Pattern is directional

The options shown here are available for all Renewal by Andersen[®] picture windows.

- **Dual colors and Stainable Wood Interior Veneer** – Dual-color windows are available that have different interior and exterior colors. Stainable wood interior veneers are also available (pine, maple and oak).

The *Picture Window Component Color Combination Chart* on page 5-8 shows these different combinations and the default color of individual components for these combinations. Alternative component (e.g., grille) color combinations are available upon request.

Decorative Glass Patterns – Standard windows have no glass pattern whatsoever. Optional patterns are as follows (some restrictions apply—see table on this page):

- Obscure
- Reed
- Cascade
- Fern
- **Glass Coating** – High-Performance Low E-4™ coating is standard with all windows. Optional glazings are as follows:
 - Clear (no coating)
 - High-Performance Low-E4[®] SmartSun™
 - High-Performance Low-E4 Sun™ tinted coating
 - High Performance[®] Low-E4 Smart Sun™ with Heatlock™

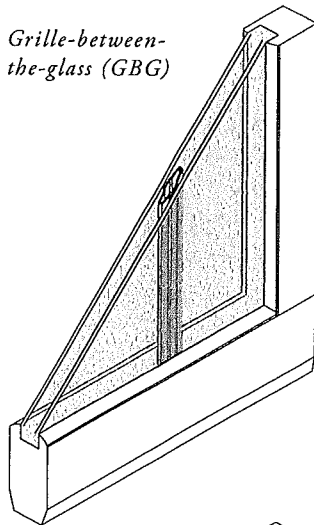
* High Performance[®] Low-E4 Smart Sun™ with Heatlock™ not available with decorative glass patterns
- **Tempered Glass** – Tempering is an option for all available glass options. Untempered glass is standard. Unit size of 148 unitted inches or more are required with tempered glass.
- **Glass Breather Tubes** – Breather tubes are available for glass intended for high-altitude installations. It is important to note that breather tubes will decrease the thermal performance of the unit. Refer to the Technical Data (Section 8) in this *Spec and Tech Manual* for altitude specifics.

GRILLE OPTIONS

PICTURE WINDOW

Available Grille Types

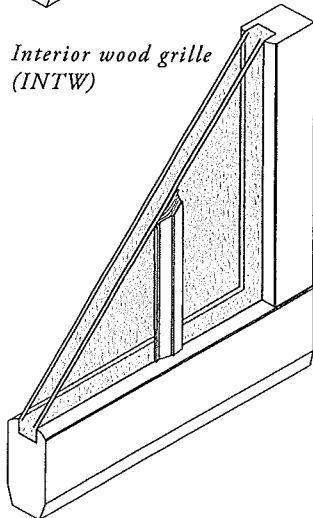
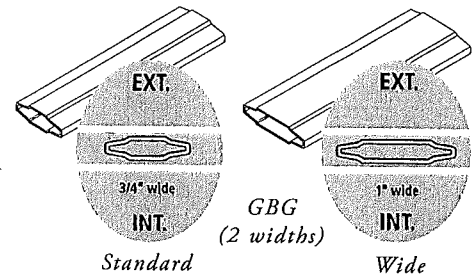
Three grille types are available. The interior and exterior sides of the grilles are color-coordinated with each side of the window frame. Consult the color combination charts in each window product section for detailed color information.



Grille-between-the-glass (GBG)

Grille-Between-the-Glass (GBG)

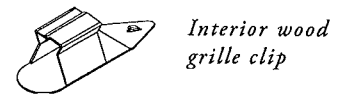
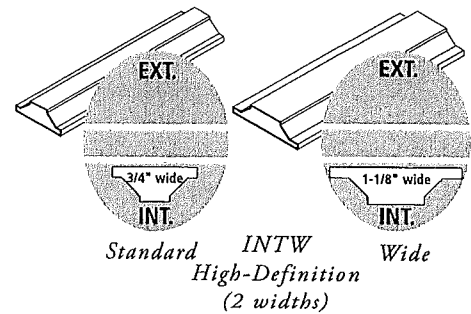
Sculpted aluminum grille members are manufactured between the glass panes, and are available in two widths. Enamel finish replicates interior and exterior face of window. If wood interior, interior facing surface will be gray.



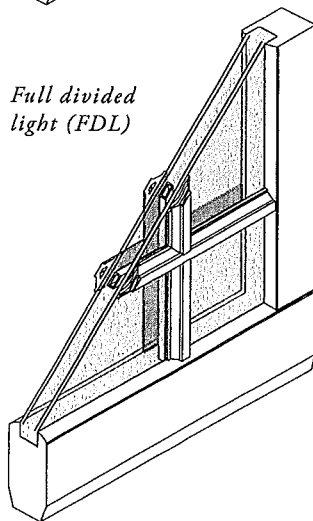
Interior wood grille (INTW)

Interior Wood Grille (INTW)

With the option of hardwood maple or oak, these grilles snap into clips placed around the interior side of the sash and may be removed to clean the glass. These high-definition interior wood grilles are available in two different widths.



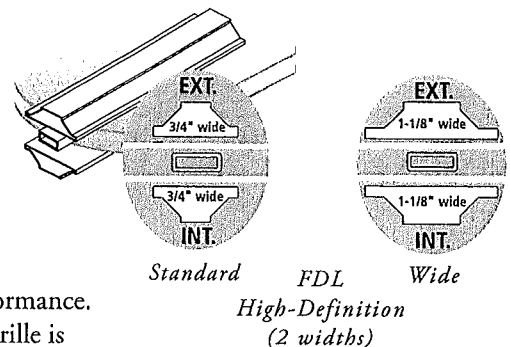
Interior wood grille clip



Full divided light (FDL)

Full Divided Light (FDL) Grille

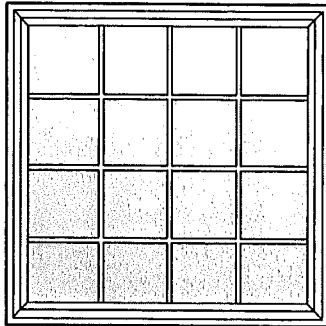
FDL grilles provide the classic look of a true divided light window. The high-definition exterior grille is made from Fibrex® material and is available in two different widths. Between the glass panes, an aluminum spacer stands slightly away from each pane to maintain thermal performance. The high-definition interior wood grille is available in hardwood, maple or oak and in two different widths, and may be permanently applied or removable.



GRILLE OPTIONS, cont.

PICTURE WINDOW

- Available Grille Patterns – Grille pattern options include colonial, farmhouse and prairie.

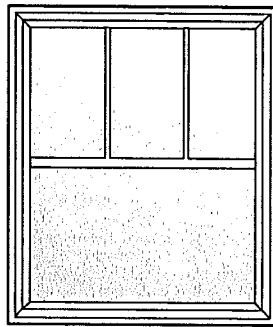


COLONIAL

Refer to colonial pattern grilles by pattern name and grille lites wide by grille lites high. Example shown is “colonial pattern, 4 by 4”.



Regardless of unit width, the farmhouse pattern will always have only two vertical bars, three lites wide, as standard.

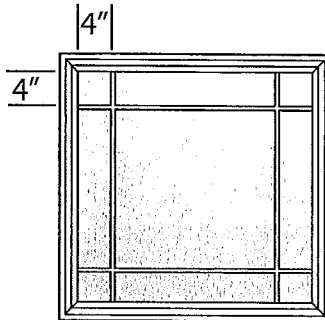


FARMHOUSE

Pattern consists of two evenly spaced vertical bars (3/4”) over a 1” wide center bar to simulate a double-hung window. Horizontal bar divides visible glass into two equal lites.



The prairie grille pattern is not available on picture windows narrower or shorter than 20”.



PRAIRIE

Regardless of sash size, all prairie grilles intersect to form 4” squares (full-frame only) in the corners of the sash.

To facilitate grille alignment when mulled with or placed adjacent to casement or awning windows, insert frame picture window prairie grilles have 4” squares in the corners.

WINDOW COMPONENT COLOR COMBINATION CHART

PICTURE WINDOW

	Window Color		Grille Between Glass		Interior Wood & Full Divided Light	
	Exterior	Interior	Exterior	Interior	Exterior	Interior
Single Color	White	White	White	White	White	White
	Canvas	Canvas	Canvas	Canvas	Canvas	Canvas
	Sandtone	Sandtone	Sandtone	Sandtone	Sandtone	Sandtone
	Terratone	Terratone	Terratone	Terratone	Terratone	Terratone
	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze	Dark Bronze
Dual Color	Canvas	White	Canvas	White	Canvas	White
	Sandtone	↓	Sandtone	↓	Sandtone	↓
	Terratone	↓	Terratone	↓	Terratone	↓
	Cocoa Bean	↓	Cocoa Bean	↓	Cocoa Bean	↓
	Dark Bronze	↓	Dark Bronze	↓	Dark Bronze	↓
	Forest Green	↓	Forest Green	↓	Forest Green	↓
	Black	↓	Black	↓	Black	↓
	Red Rock	↓	Red Rock	↓	Red Rock	↓
	White	Canvas	White	Canvas	White	Canvas
	Sandtone	↓	Sandtone	↓	Sandtone	↓
	Terratone	↓	Terratone	↓	Terratone	↓
	Cocoa Bean	↓	Cocoa Bean	↓	Cocoa Bean	↓
	Dark Bronze	↓	Dark Bronze	↓	Dark Bronze	↓
	Forest Green	↓	Forest Green	↓	Forest Green	↓
Black	↓	Black	↓	Black	↓	
Red Rock	↓	Red Rock	↓	Red Rock	↓	
Stainable Wood Interiors	White	Wood*	White	Sandtone	White	Wood**
	Canvas	↓	Canvas	↓	Canvas	↓
	Sandtone	↓	Sandtone	↓	Sandtone	↓
	Terratone	↓	Terratone	↓	Terratone	↓
	Cocoa Bean	↓	Cocoa Bean	↓	Cocoa Bean	↓
	Dark Bronze	↓	Dark Bronze	↓	Dark Bronze	↓
	Forest Green	↓	Forest Green	↓	Forest Green	↓
	Black	↓	Black	↓	Black	↓
	Red Rock	↓	Red Rock	↓	Red Rock	↓

Alternative component and grille color combinations for each frame/sash color are available upon request

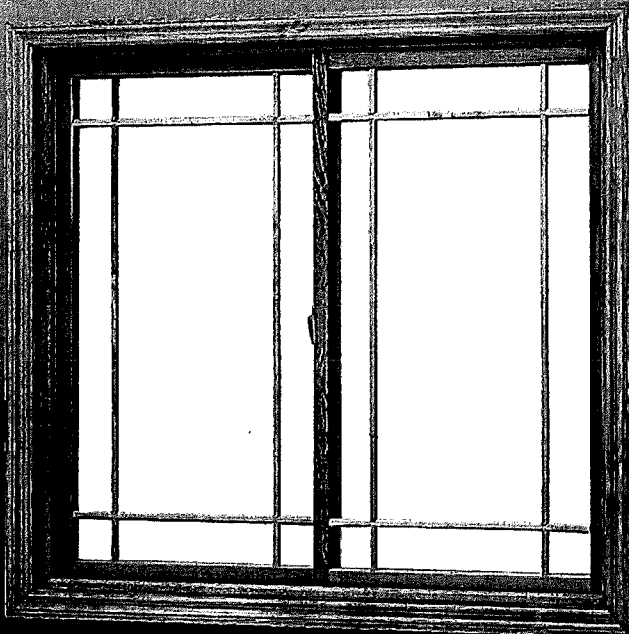
* Wood interiors available in: pine, maple and oak

** Pine and maple interiors will use maple species interior grilles. Oak interiors will use oak species interior grilles

GLIDING WINDOW

ADVANTAGES AND APPLICATIONS

The Renewal by Andersen® gliding window has a pleasing contemporary appearance that blends well with any decor. A gliding window consists of two or more sash in a single frame. A gliding-stationary window consists of one operating and one stationary sash in a single frame. A gliding-picture window has two operating sash, one on each side of a stationary center sash, all contained within one frame. Operating sash can be secured by a dual cam-type sash lock, and a removable insect screen is installed on the exterior of the operating sash.



*Gliding, Gliding-Stationary,
and Gliding-Picture
Replacement Windows*

ADVANTAGES

- Viewing area is large because there are no horizontal sight line interruptions.
- Sash do not project outward when opened for ventilation.
- Strong, patented Fibrex® material allows more glass area.
- Fibrex material with low-maintenance capstock gives a rich, low-luster finish to sash and frame, similar to painted wood.
- Smooth radius surfaces on frame and sash are pleasing to the eye and easier to clean.
- Mortise-and-tenon appearance on interior and exterior sash and frame corners gives a handcrafted traditional look.

APPLICATIONS

- Suitable in areas facing walkways, decks and other traffic areas outside the window because sash do not project outward.
- Visually compatible with other Renewal by Andersen products.

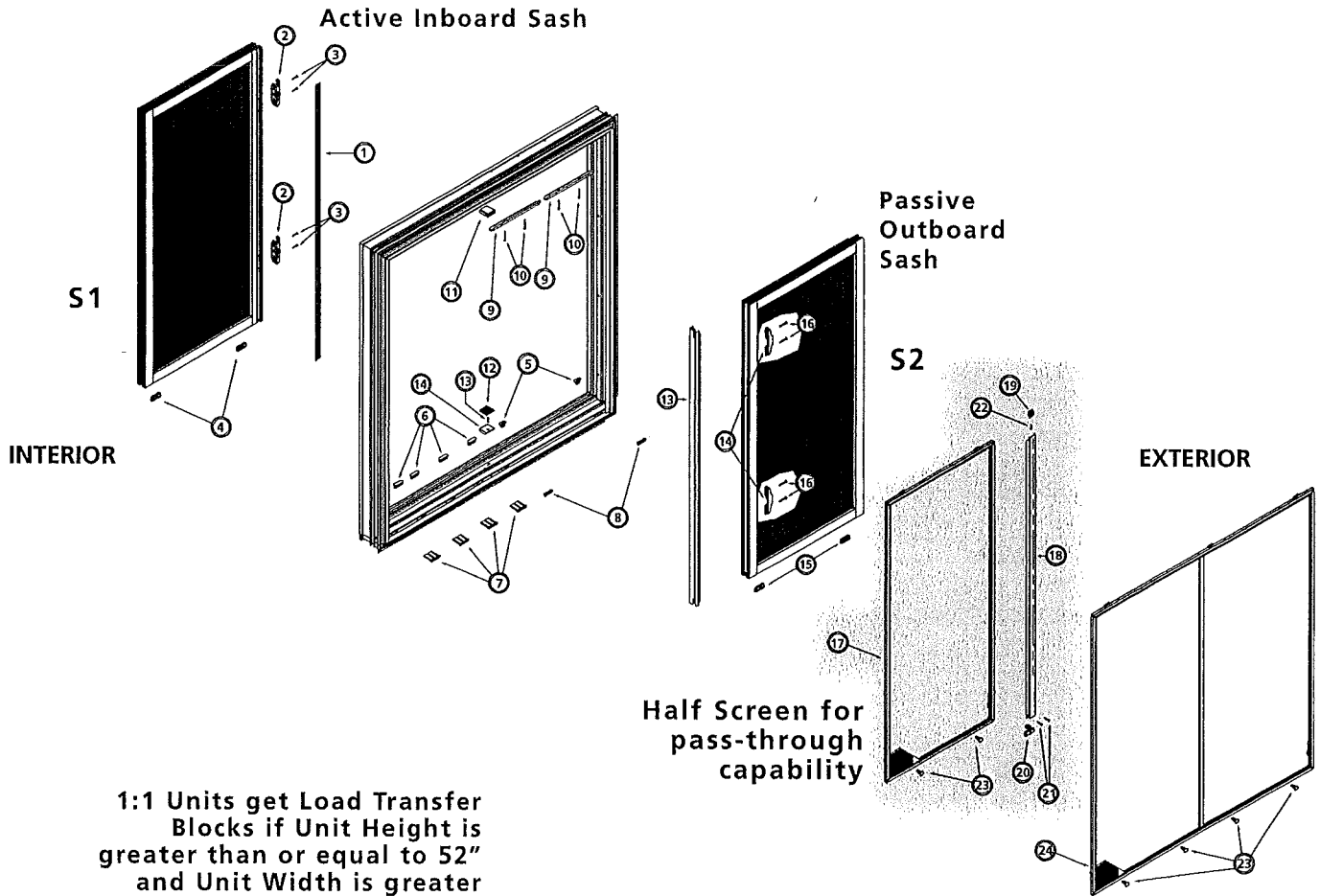
EXPLODED VIEW

ACTIVE/PASSIVE GLIDING WINDOW GL (AP)



A gliding-stationary window is shown below. Part usage is similar but not identical to gliding-stationary and gliding-picture windows.

A = Active Inboard Sash
P = Passive Outboard Sash



1:1 Units get Load Transfer Blocks if Unit Height is greater than or equal to 52" and Unit Width is greater than or equal to 50".

Full Insect Screen offered either as Full Screen or 2 Half Screens based on unit size.

Refer to page 4-8 for details

GLIDING-STATIONARY WINDOW COMPONENTS

- | | | |
|---|--------------------------------|--|
| 1. Lineal, Interlock, Active | 8. Assembly, Weep, Cover | 16. Screw, 6 - 10 X 1 |
| 2. Assembly, Lock, LH, Traditional | 9. Load Transfer Block | 17. Half Screen, Insect, Glider |
| 3. Screw, 6 - 10 X 1 PLS PH Oval Stl Zinc | 10. Screw, 8 - 15 x 3/4 | 18. Linear, Astragal |
| 4. Assembly Roller | 11. Plug, Dust, Head | 19. Clip, Top, Astragal |
| 5. Cover, Weep, Top | 12. Assembly, Plug Meet Stile | 20. Clip, Bottom, Astragal |
| 6. Cover, Active | 13. Lineal, Interlock, Passive | 21. Screw, 6 - 18 X 1 |
| 7. Chute, Active | 14. Keeper | 22. Screw, 6 - 18 X 3/4 |
| | 15. Assembly, Roller | 23. Insect Screen Bottom Rail Spacer Tower |
| | | 24. Full Screen, Insect Glider |

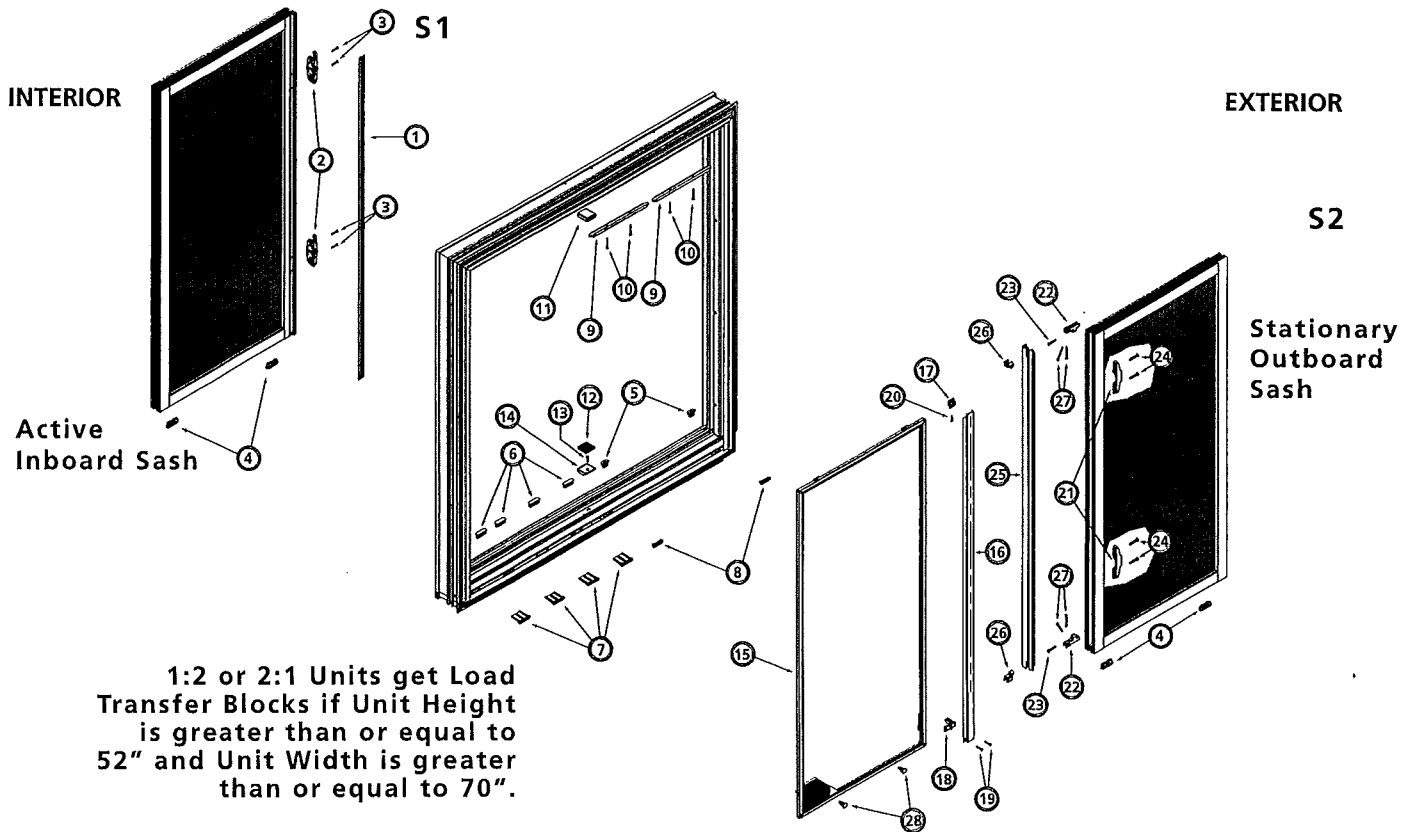
EXPLODED VIEW

ACTIVE/STATIONARY GLIDING WINDOW GL (AS)



A gliding window is shown below. Part usage is similar but not identical to gliding-stationary and gliding-picture windows.

A = Active Inboard Sash
S = Stationary Outboard Sash

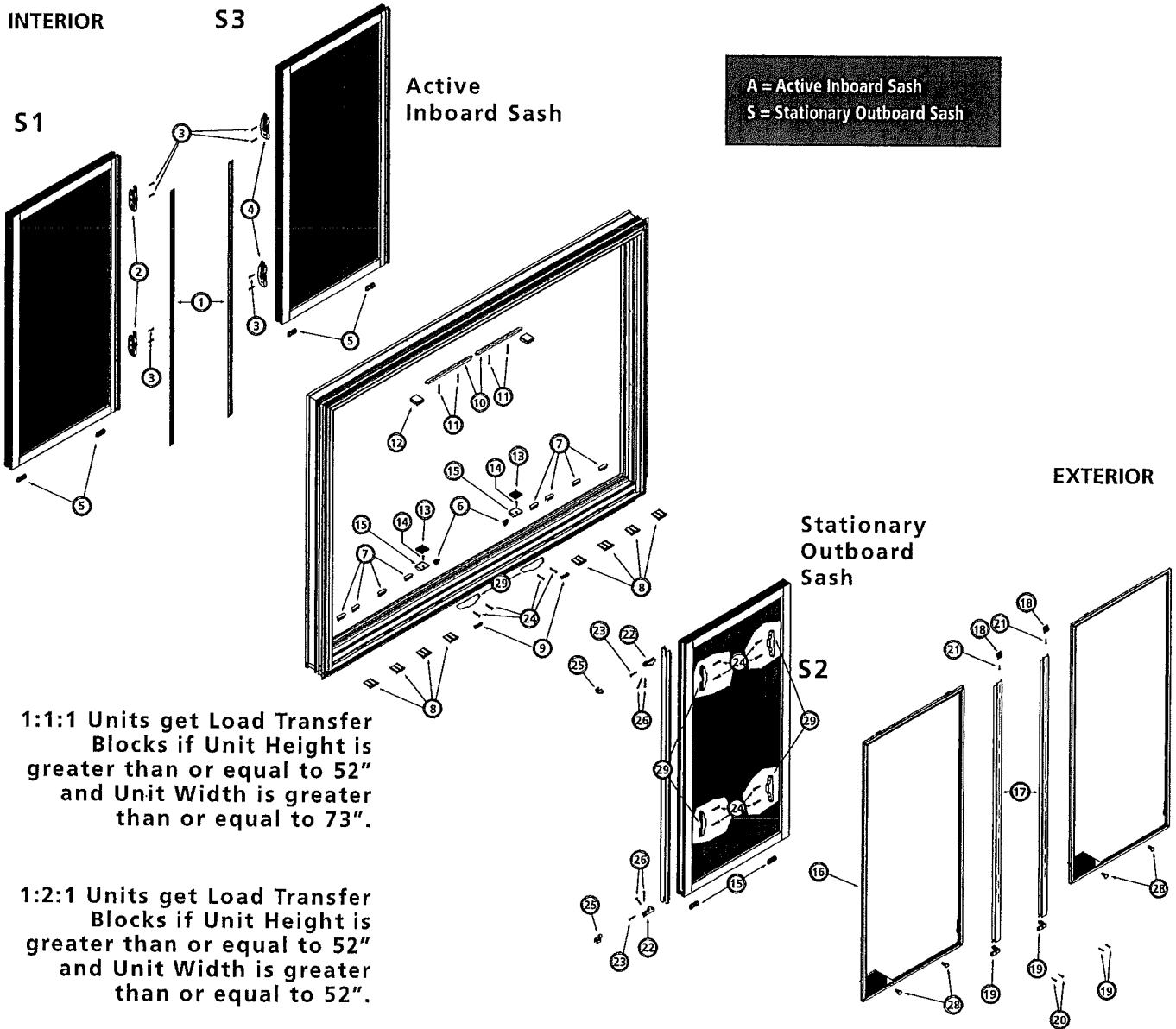


GLIDING WINDOW COMPONENTS

- | | | |
|------------------------------------|--------------------------------|--|
| 1. Lineal, Interlock, Active | 11. Plug, Dust, Head | 21. Keeper |
| 2. Assembly, Lock, LH, Traditional | 12. Weatherstrip, Fin Pile | 22. Clip, Stationary |
| 3. Screw, 6 - 10 X 1 | 13. Screw, 8 - 15 X 3/4 | 23. Screw, 8-15 X 1-1/4 |
| 4. Assembly, Roller | 14. Assembly, Plug, Meet Stile | 24. Screw, 6 - 10 X 1 |
| 5. Cover, Weep, Top | 15. Screen, Insect, Glider | 25. Lineal, Interlock, Passive |
| 6. Cover, Active | 16. Lineal, Astragal | 26. Cover, Clip, Stationary |
| 7. Chute, Active | 17. Clip, Top, Astragal | 27. Screw, 8 - 15 X 1-3/4 |
| 8. Assembly, Weep Cover | 18. Clip, Bottom, Astragal | 28. Insect Screen Bottom Rail Spacer Tower |
| 9. Block, Load Transfer | 19. Screw, 6 - 18 X 1 | |
| 10. Screw, 8 - 15 X 1-1/2 | 20. Screw, 6 - 18 X 3/4 | |

EXPLODED VIEW

GLIDING PICTURE WINDOW GT (AS)



1:1:1 Units get Load Transfer Blocks if Unit Height is greater than or equal to 52" and Unit Width is greater than or equal to 73".

1:2:1 Units get Load Transfer Blocks if Unit Height is greater than or equal to 52" and Unit Width is greater than or equal to 52".

GLIDING WINDOW COMPONENTS

- | | | |
|------------------------------------|--------------------------------|--|
| 1. Lineal, Interlock, Active | 12. Plug, Dust, Head | 23. Screw, 8-15 X 1-1/4 |
| 2. Assembly, Lock, LH, Traditional | 13. Weatherstrip, Fin Pile | 24. Screw, 6 - 10 X 1 |
| 3. Screw, 6 - 10 X 1 | 14. Screw, 8 - 15 X 3/4 | 25. Cover, Clip, Stationary |
| 4. Assembly, Lock, RH, Traditional | 15. Assembly, Plug, Meet Stile | 26. Screw, 8 - 15 X 1-3/4 |
| 5. Assembly, Roller | 16. Screen, Insect, Glider | 27. Screen, Insect, Glider |
| 6. Cover, Weep, Top | 17. Lineal, Astragal | 28. Insect Screen Bottom Rail Spacer Tower |
| 7. Cover, Active | 18. Clip, Top, Astragal | 29. Lock Keeper |
| 8. Chute, Active | 19. Clip, Bottom, Astragal | |
| 9. Assembly, Weep Cover | 20. Screw, 6 - 18 X 1 | |
| 10. Block, Load Transfer | 21. Screw, 6 - 18 X 3/4 | |
| 11. Screw, 8 - 15 X 1-1/2 | 22. Clip, Stationary | |

STANDARD FEATURES

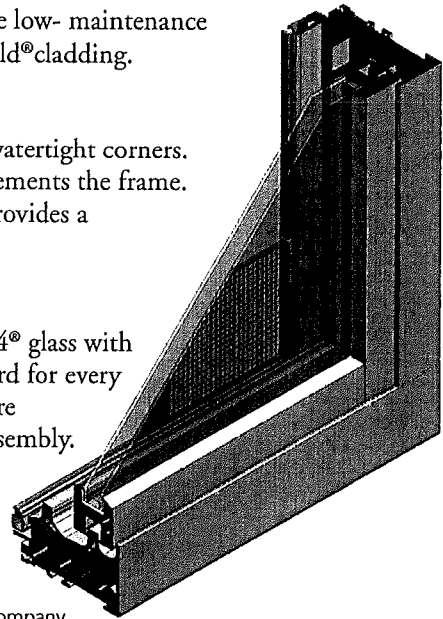
GLIDING WINDOW



Information in exploded view, standard features, optional items, and available grille patterns applies to all gliding windows.

Described below are features that contribute to the gliding window's low maintenance, energy efficiency, ease of operation, and pleasing appearance.

- **Frame** – Made of rigid Fibrex® material, a unique structural composite of wood fibers and a special thermoplastic polymer. Developed by Andersen®, Fibrex material combines the strength and stability of wood with the low-maintenance features of our time-tested Perma-Shield® cladding.
- **Sash** – Corner keys provide durable, watertight corners. The mortise and tenon joinery complements the frame. A high-performance silicone sealant provides a watertight seal between glass and sash.
- **Glazing** – High-Performance™ Low-E4® glass with an inert, energy-efficient gas, is standard for every window. Glass is placed into sash before assembly for a strong, weather tight assembly. A high-performance silicone sealant provides a watertight seal between glass and sash. See options on page 4-8 for other glass choices.

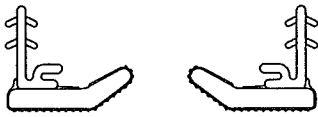


*LoE4 is a registered trademark of Cardinal IG Company.

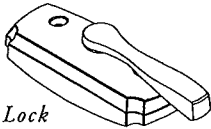
- **Glass spacer** – The patented low-conductivity spacer is made of stainless steel and resists heat transfer four to five times better than aluminum spacers used by many other manufacturers.
- **Removable protective film** – The Low-E4 glass package features a clear protective film that is factory applied to both the interior and exterior glass surfaces to help protect the glass from shipping and installation damage.

STANDARD FEATURES

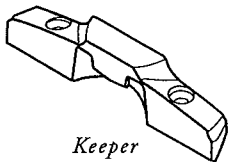
GLIDING WINDOW



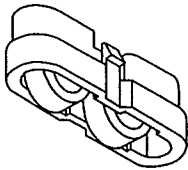
Double-fin weatherstrip



Lock



Keeper

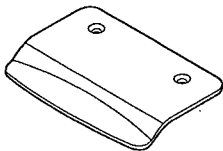


Dual Tandem Roller System

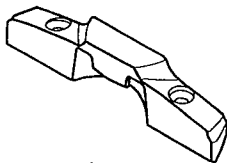
- **Weatherstrip** – A double-fin weatherstrip system provides a seal between sash and frame. The weatherstrip has a slip-coating to reduce friction on frame surface, resulting in a reduced operation force. A weather-stripped, full-length meeting stile interlock seals the sash tightly.
- **Sash Lock and Keeper** – The zinc cast dual-cam type metal sash lock, mounted at center of the meeting stile on the interior sash, engages easily into the keeper mounted on the center of the meeting stile on the exterior sash. The Gliding Window Component Color Combination Chart on page 4-11 shows the hardware color for each window color combination.
- **Insect Screen** – The standard insect screen is made with an aluminum frame and a glass fiber screen cloth (18 x 16 per inch mesh) in a glare-resistant charcoal gray finish. The frame is reinforced with a unique nylon corner spline to keep it from sagging, and is secured to the window with wing blade fasteners in nylon housings. A center bar adds strength and rigidity. Aluminum and TruScene® insect screen cloth options are available—see next page for details.
- **Interior/Exterior Color and Component Color** – Refer to the chart on page 4-11 for standard and optional color combinations.
- **Dual Tandem Roller System** – Each operable sash has two or more dual tandem rollers based on size of sash. Roller is made of durable high-impact polymers for easy operation.

OPTIONS

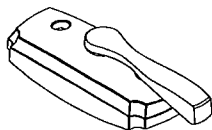
GLIDING WINDOW



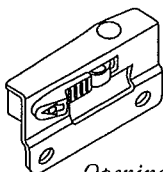
Sash pull



Estate keeper



Estate lock



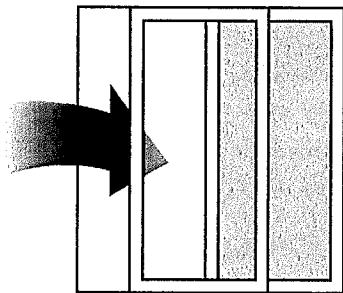
Opening control device

The options shown here are available for all Renewal by Andersen® gliding windows.

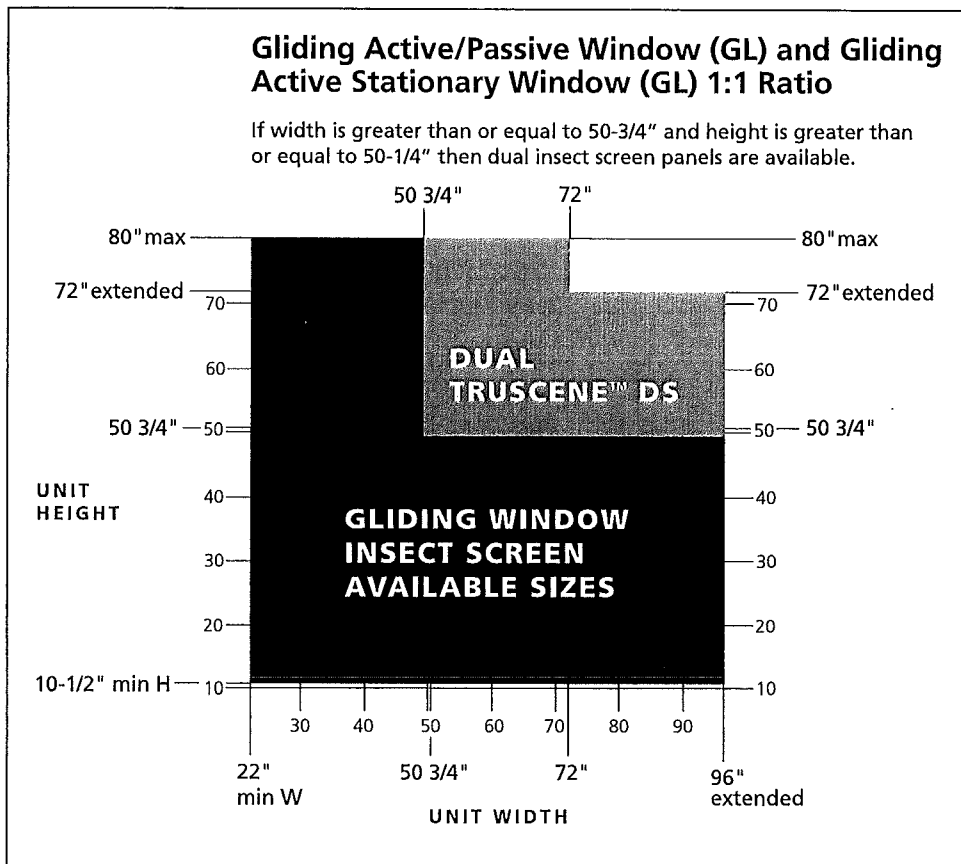
- **Second Sash Lock and Keeper** – A second sash lock and keeper are an option for gliding windows between 24" and 54" tall (a second sash lock and keeper are standard with windows taller than 54").
- **Sash Pull** – A low-profile sash pull can be mounted to the meeting stile of the active sash. The sash pull color will match the lock and keeper. A standard window has no sash pull. The pull can be custom-positioned during installation if ordered separately. Sash pulls are not recommended for passive (exterior) sash because they inhibit sash operation.
- **Estate™ Hardware** – Sash pull, lock and keeper are available for all operating windows in high-performance bright brass, antique brass, high-performance satin nickel, distressed nickel, brushed chrome, polished chrome, distressed bronze, oil-rubbed bronze and dark bronze. The zinc cast, plated lock and keeper provide elegant Estate styling that beautifully complements not only the window, but matches any Estate hardware found on Andersen® patio doors.
- **Opening Control Device** – Field-applied device restricts sash opening to 4 inches. This device will allow full sash opening when disengaged and will re-engage when sash is closed. Available for left- and right-hand (as viewed from exterior) vent sash for gliding window/gliding stationary and gliding picture window. Opening Control Device available in White and Stone colors only.

OPTIONS, cont.

GLIDING WINDOW



- **Pass-Through Insect Screen** – This optional feature is only available on AP or PA two-sash gliding windows. The pass-through is accomplished by operating the passive outboard sash. A half insect screen is placed over the active sash. There will be no insect screen over the passive sash.
- **TruScene® Insect Screen** – Micro-fine stainless steel mesh (25 x 25 per inch mesh) that provides over 50% more clarity than standard Andersen insect screens. See size limitations below.



GL Fractional 2:1 or 1:2: half screen only, positioned over operable sash.

GT: two half screens positioned over operable sash.

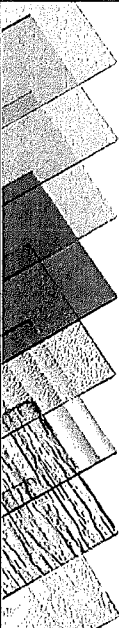
- **Aluminum Insect Screen** – Identical to the standard insect screen but with a durable aluminum screen cloth (18 x 16 per inch mesh) in a glare-resistant charcoal gray finish.

* NOTE: Dual TruScene insect screen (DS) consists of two insect screen panels installed and removable from the interior when the respective sash is fully opened.

OPTIONS, cont.

GLIDING WINDOW

Glass Options



- High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™] (no pattern)
- High Performance[®] Low-E4 Smart Sun[™] tinted
- High Performance[®] Low-E4 Smart Sun[™] (no pattern)
- High Performance[®] Low-E4 (no pattern)
- Obscure
- Reed
- Cascade
- Fern

Unavailable Glass Patterns

Pattern	on windows wider than	or windows taller than
Reed*	56-7/8"	100-7/8"
Cascade*	56-7/8"	84-7/8"
Fern	56-7/8"	84-7/8"
Obscure	56-7/8"	84-7/8"

* Pattern is directional

- **Dual-colors and Stainable Wood Interior Veneer** – Dual-color windows are available that have different interior and exterior colors. Stainable wood interior veneers are also available (pine, maple and oak). Gliding Picture Window (GP) will not have wood interior available in sizes 118" or wider.
 The Gliding Window Component Color Combination Chart on page 4-11 shows these different combinations and the default color of individual components for these combinations. Alternative component (e.g., insect screens, grilles, hardware) color combinations are available upon request.
- **Decorative Glass Patterns** – Standard windows have no glass pattern whatsoever. Optional patterns are as follows:
 - Obscure • Reed • Cascade • Fern
- **Glass Coating** – High-Performance[™] Low-E4[™] coating is standard with all windows. Optional glazings are as follows:
 - Clear (no coating) • High-Performance Low-E4 SmartSun[™]
 - High-Performance Low-E4 Sun tinted coating
 - High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™]

* High Performance[®] Low-E4 Smart Sun[™] with Heatlock[™] not available with decorative glass patterns
- **Tempered Glass** – Tempering is an option for all available glass options. Untempered glass is standard.
- **Glass Breather Tubes** – Breather tubes are available for glass intended for high-altitude installations. It is important to note that breather tubes will decrease the thermal performance of the unit. Refer to the Technical Data (Section 8) in this *Spec and Tech Manual* for altitude specifics.

Gliding Window Obscure Glass Restrictions

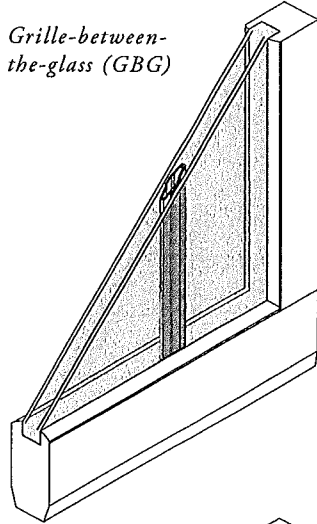
Window Type	Ratio	Glass Type	Unit Dimension		
			Width		Height
GL	1:1 ratio	Obscure	no restrictions		no restrictions
		Reed Vertical	78" or greater	and	78" or greater
		Reed Horizontal	no restrictions	and	66" or greater
		Cascade Vertical	54" or greater	and	58" or greater
		Cascade Horizontal	86" or greater		66" or greater
	Fern	58" or greater	and	58" or greater	
	1:2 fractional	Obscure	no restrictions		no restrictions
		Reed Vertical	88" or greater	and	no restrictions
		Reed Horizontal	no restrictions	and	62" or greater
		Cascade Vertical (units wider than 92")	48" or greater	and	46" or greater
Cascade Horizontal		68" or greater	and	66" or greater	
Fern	48" or greater	and	34" or greater		
GT	1:1:1 ratio	Obscure	no restrictions		no restrictions
		Reed Vertical	78" or greater	and	78" or greater
		Reed Horizontal	no restrictions	and	66" or greater
		Cascade Vertical	84" or greater	and	64" or greater
		Cascade Horizontal	128" or greater	and	66" or greater
	Fern	84" or greater	and	58" or greater	
	1:2:1 ratio	Obscure	no restrictions		no restrictions
		Reed Vertical	116" or greater	and	no restrictions
		Reed Horizontal	no restrictions	and	58" or greater
		Cascade Vertical (unit wider than 124")	56" or greater	and	46" or greater
Cascade Horizontal		88" or greater	and	66" or greater	
Fern	60" or greater	and	34" or greater		

GRILLE OPTIONS

GLIDING WINDOW

Available Grille Types

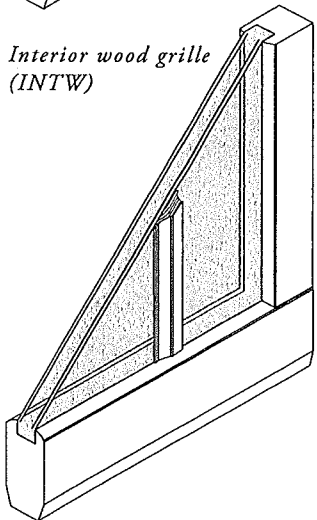
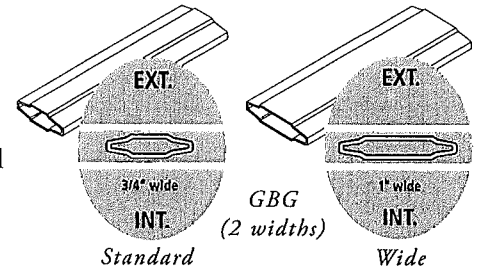
Three grille types are available. The interior and exterior sides of the grilles are color-coordinated with each side of the window frame. Consult the color combination charts in each window product section for detailed color information.



Grille-between-the-glass (GBG)

Grille-Between-the-Glass (GBG)

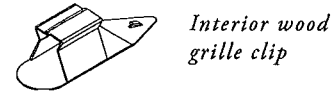
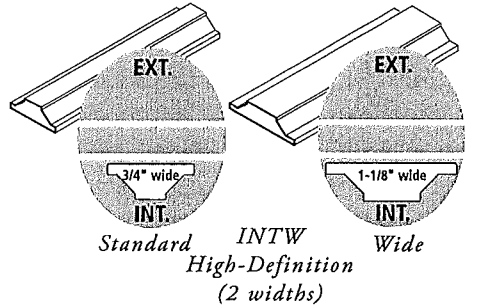
Sculpted aluminum grille members are manufactured between the glass panes, and are available in two widths. Enamel finish replicates interior and exterior face of window. If wood interior, interior facing surface will be gray.



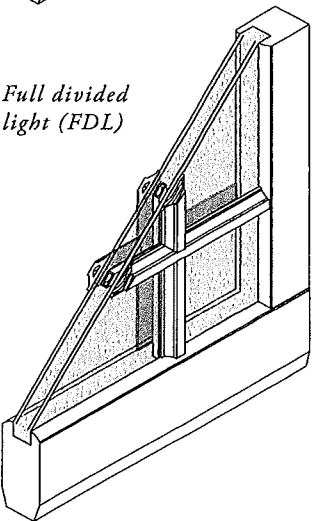
Interior wood grille (INTW)

Interior Wood Grille (INTW)

With the option of hardwood maple or oak, these grilles snap into clips placed around the interior side of the sash and may be removed to clean the glass. These high-definition interior wood grilles are available in two different widths.



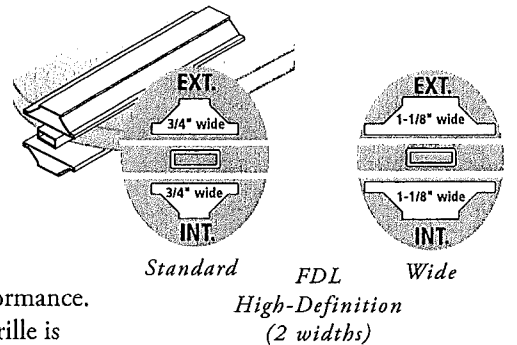
Interior wood grille clip



Full divided light (FDL)

Full Divided Light (FDL) Grille

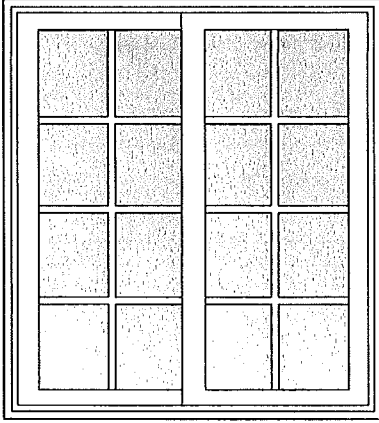
FDL grilles provide the classic look of a true divided light window. The high-definition exterior grille is made from Fibrex® material and is available in two different widths. Between the glass panes, an aluminum spacer stands slightly away from each pane to maintain thermal performance. The high-definition interior wood grille is available in hardwood, maple or oak and in two different widths, and may be permanently applied or removable.



GRILLE OPTIONS, cont.

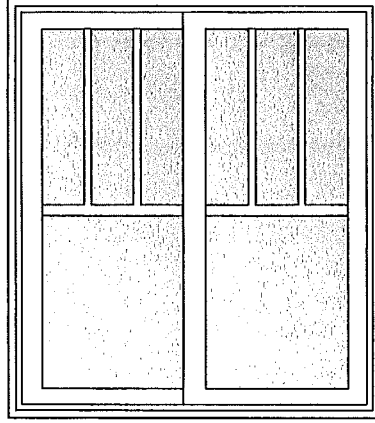
GLIDING WINDOW (GL) GLIDING-STATIONARY-FRACTIONAL (GL) AND GLIDING PICTURE (GT 1:1:1 AND GT 1:2:1) WINDOWS

- **Available Grille Patterns** –The following grille patterns are available for gliding, gliding-stationary, and gliding-picture windows: colonial, farmhouse, prairie, and modified prairie.



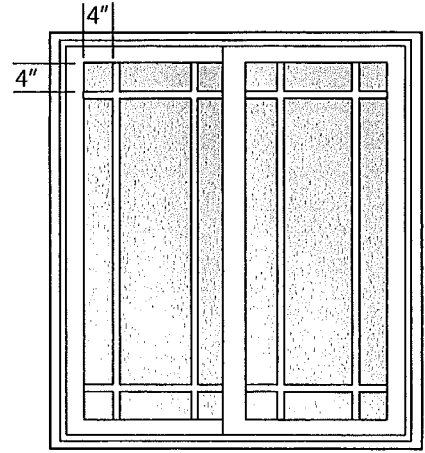
COLONIAL

For each sash, refer to colonial pattern grilles by pattern name and grille lites wide by grille lites high. Example shown is *colonial pattern, 2 by 4*, both sash.



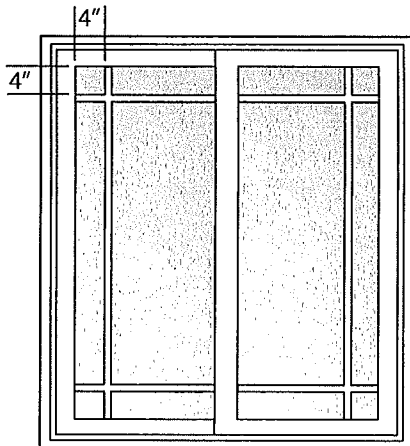
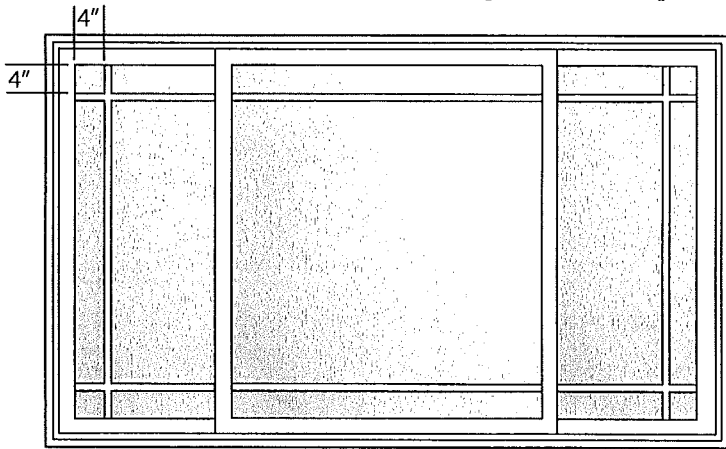
FARMHOUSE

Pattern consists of two evenly spaced vertical bars (3/4") over a 1-1/8" wide center bar to simulate a double-hung window. Horizontal bar divides visible glass into two equal lites.



PRAIRIE

Refer to prairie grilles by pattern name for each sash. Regardless of sash size, all prairie grilles intersect to form (approximately) 4" squares of visible glass in the corners of the sash.



MODIFIED PRAIRIE

Regardless of sash size, all modified prairie grilles intersect to form 4" squares in the outermost 4 corners of the window, rather than the sash.

The prairie grille pattern is not available on the following windows:

	Narrower than	Shorter than
Gliding/Gliding-stationary	40"	28"
Gliding triple (1:1:1)	58"	28"
Gliding triple (1:2:1)	74"	28"