



Windows Defining Vision





Innovation

Window-Pro knows that windows should be the best investments you make in your home. That's why Window-Pro windows are manufactured with the highest quality standards and are a solid investment for the future. Window-Pro windows with their extensive range of styles and accessories not just embellish your home, but promise security and comfort for years to come.

Experience

In the fenestration industry, "Experience is everything". It is extremely important in an industry based on fractions of an inch that quality control is kept to the utmost maximum. Window-Pro and all of its dealers maintain a strict code of ethics above and beyond what our competition offers. Our experience has been that faster delivery combined with faster service equals satisfied customers.



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Service

Window-Pro is known for its extremely quick and efficient service. Residential windows, unlike commercial units, are completely serviceable, low maintenance and quick to repair.

At Window-Pro we believe service, combined with constant innovation, and decades of experience will allow you to always trust us to answer all of your questions, book a service, or make you quality windows.





CASEMENT

The casement window designed by Window-Pro is one of the most efficient and attractive operating windows on the market today. Extruded seals, bulb seals and Trust Hardware add to the efficiency of this great looking window that rarely requires service.

Features

- Fusion welded frames and sashes
- Bulb Seals and extruded seals creating a Triple Weather Sealing System resulting in more energy efficiency and maximum resistance to air-infiltration
- Standard Low E Argon annealed glass units for thermal efficiency making you stay warmer in winter and cooler in summer
- Design accommodating glass options
- Trust brand window operators and locks offering beauty, ease of use, security and durability
- Standard Multi Point Locks ensuring compression of weather stripping for superior performance
- Lock and Load screen system to simplify screen removal for cleaning hereby eliminating the pin and lock tabs





AWNING

Awning windows have the same simple, contemporary designs and easy installation as our Casement but are also very practical. This window with its Swing-Out feature and the industry's most reliable and subtle operating mechanism protects from rain allowing ventilation at the same time. An Awning window above doors or other windows is a great choice that allows abundant light and additional air flow.

Features

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SINGLE SLIDER TILT

The Single Slider Tilt windows are based on the swing-in shoe mechanism and this feature makes this window a popular choice. This mechanism features dual tabs that can easily swing in on the operating sash to facilitate exterior glass cleaning.

Single Sliders Tilts are preferred over Double Slider Tilt windows for style and simplicity as less surface is obstructed by screens.

Features

- Standard Energy Efficient Low E Argon glass units
- Standard Removal Screen
- Modern contoured frame
- Color matched cam locks
- Triple Weather Seals
- Low Profile Tilt Latches
- Fusion Welded Sashes and Frames





SINGLE HUNG TILT

Single Hung Tilt windows are chosen for their traditional, double hung beauty yet delivering additional security and energy efficiency. The Single Hung Tilt has an operating sash featuring swing-in shoe mechanism where the dual tabs allow for ease of cleaning. The aesthetics of our Single Hung Windows are often preferred for the front of the house as only the bottom half has a screen on the outside.

Features

- Standard Energy Efficient Low E Argon glass units
- Standard Removal Screen
- Modern contoured frame
- Color matched cam locks
- Triple Weather Seals
- Low Profile Tilt Latches
- Fusion Welded Sashes and Frames
- Modern spiral balancers simplifying raising and lowering of sashes





DOUBLE SLIDER TILT

The Double Slider Tilt window is our most popular window style - Its versatility works in a multitude of egress applications and architectural designs. Practical and easy to operate, both sashes slide and tilt for maximum ventilation and ease of cleaning-perfect for airflow in both large and small spaces in the home. This window is the obvious style of choice when it comes to bedrooms and offers the perfect solution for rooms that are tight for space where its clever design enables both sashes to open to the inside.

Features

- Standard Energy Efficient Low E Argon glass units
- Standard Removal Screen
- Modern contoured frame
- Color matched cam locks
- Triple Weather Seals
- Low Profile Tilt Latches
- Fusion Welded Sashes and Frames





DOUBLE HUNG TILT

Our Double Hung Tilt window combines classic styling with the ultimate in ventilation flexibility. Designed for comfort and energy saving, our Double Hung Window features tilt-in sashes for ease of cleaning. The upper lower sash can be vented as per your requirement.

Features

- Standard Energy Efficient Low E Argon glass units
- Standard Removal Screen
- Modern contoured frame
- Color matched cam locks
- Triple Weather Seals
- Low Profile Tilt Latches
- Fusion Welded Sashes and Frames
- Modern spiral balancers simplifying raising and lowering of sashes



FIXED CASEMENT

The fixed casement is designed specifically to match with operating casement windows. The fixed casement, sometimes referred to as a high profile window is contoured the same way as an operating casement for identical frame sizes to make windows look great without forcing the customer to have all windows operational.

Features

- Standard Energy Efficient Low E Argon glass units
- Modern contoured frame
- Fusion Welded Sashes and Frames



SLIM FIXED

The Slim Fixed windows are perfect to match up with the slimmer slider and hung frames. These windows when combined with sliders and hung windows add balance and symmetry throughout the home. The slim fixed, also known as Picture window is a good choice if you want to maximize light or your view.

Features

- Standard Energy Efficient Low E Argon glass units
- Modern contoured frame
- Fusion Welded Sashes and Frames



BAY WINDOWS

Custom built Bow and Bay windows add value and style to your home. Bow and Bay windows are generally situated in the front of homes for maximum style and effect. You'll enjoy the additional space and seating a Bow or Bay can add to your home.

Bow windows are a striking design that complements virtually any home style. Our Bow windows consist of a combination of fixed and operating casement windows, angled in a semi-circular projection from a large room.

Add grills of all finishes and sizes, pencil to flat and don't be afraid to accent and customize your Bay or Bow window.



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Optional Pro-Hardware Solution Casements and Awnings

Casement Locking Handle

- Slim casement handle is designed to eliminate interference with blinds and window treatments
- Available in powdercoat and architectural finishes.
- Engineered to optimize security, ease of operation and flexibility
- Super low profile with only 8mm projection
- Handle Retainer features brush gasket to provide insect barrier



2-Bar Casement Hinges

- Hinges that deliver the ultimate in performance.
- Technology that supports and controls projecting sashes
- Simple snap on spring clip design for quick and easy window assembly
- Innovative track design to provide a pull out force resistance of up to 375 lbs
- Allow over 3.2 mm of adjustability for convenient sash alignment
- Support sash width of up to 42" and surpass weight of 125 lbs
- Provide maximum sash adjustability
- Stainless steel track and Reinforced slide shoe
- Awning hinge features friction adjustment to eliminate sash chatter





Operators

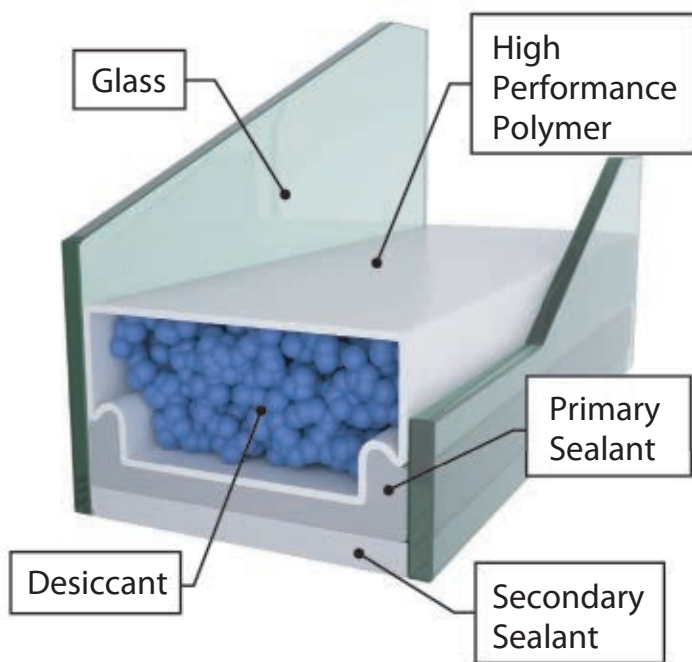
- Operator series for casements featuring dual arm, dyad and awning operators
- Optimized gear ratio for smooth operation of large sashes
- Two- directional fixing design and pre-fitted foam gasket for maximum Air/Water performance
- Operators with a design to provide superior strength and stability
- Convenient snap-on covers for styling flexibility



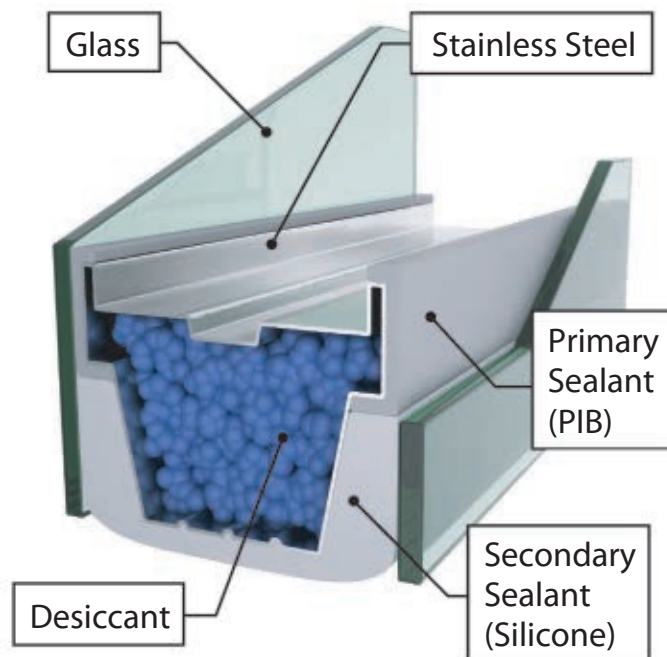
Casement Locking System

- Locking bar that provides high corrosion resistance, delivering the perfect balance of form and function
- Adjustable mushroom head roller pins to ensure smooth operation
- High strength all stainless steel locking bar design for impact applications

Spacer Options



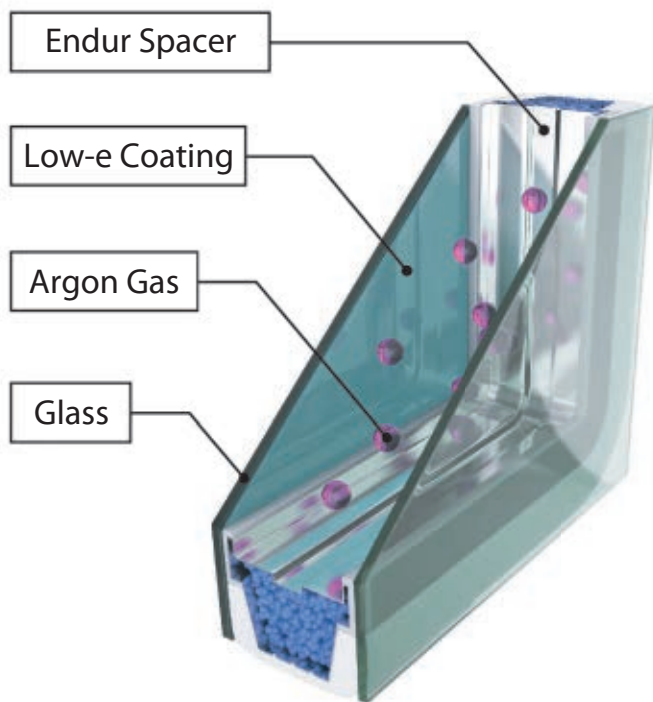
Climatec Spacer



Endur Spacer

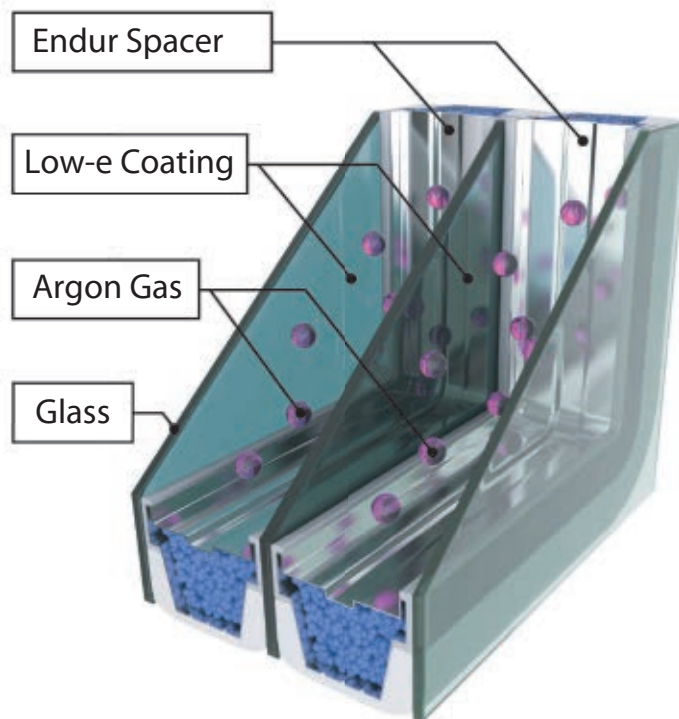
Glass Options

Triple Pane units offer a better energy efficiency than double pane units



Standard Double Pane

Energy rating for casement (180 double pane) 31



Optional Triple Pane

Energy rating for casement (180 triple pane) 34



Colour Options

Colours Apply to exterior and interior windows and grill options except plated grills.



Tint/Frost Options



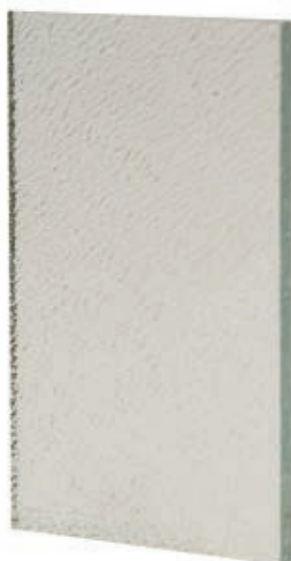
Grey



Bronze



Satin



Obscure



Rain

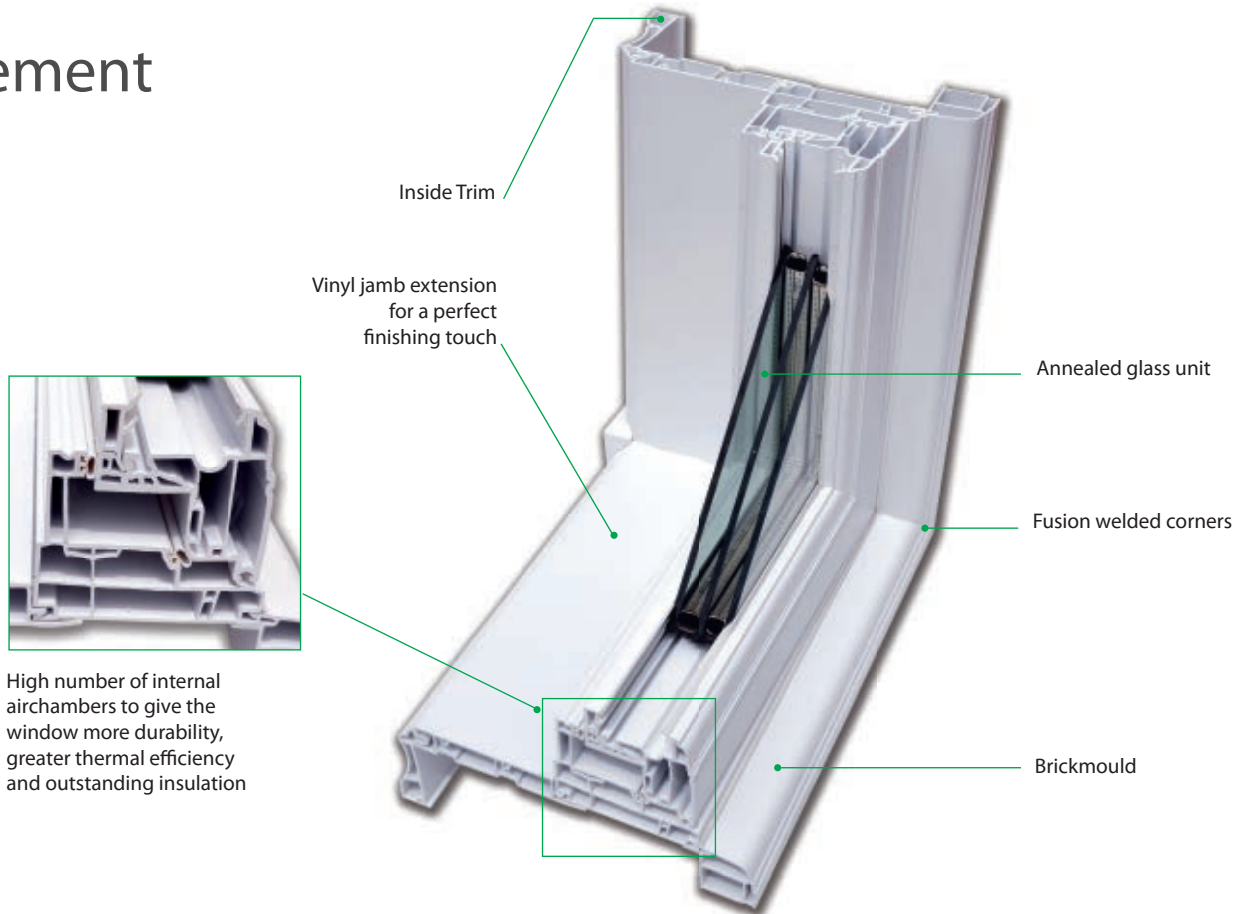


Glue Chip

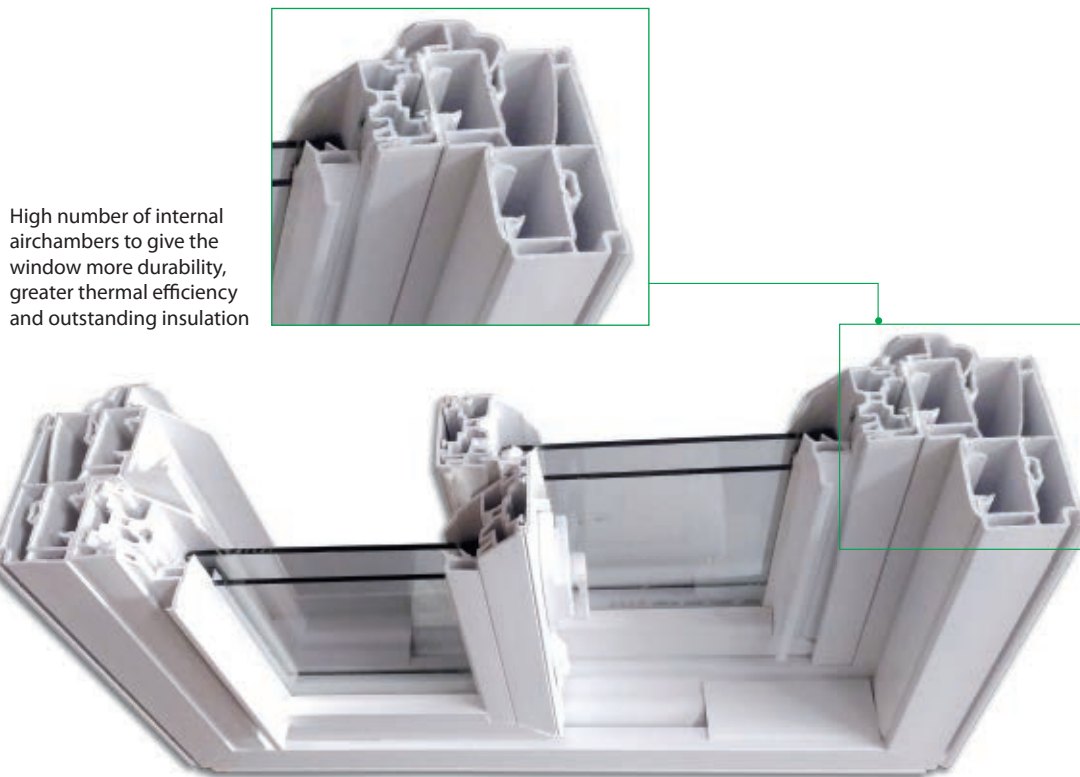


WINDOW CROSS SECTIONS

Casement



Double Sliders



Endur IG

SUPERIOR IG UNITS



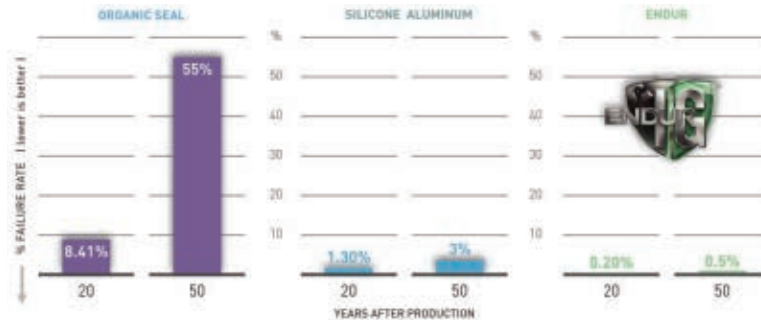
Endur IG delivers the industry's lowest failure rate, the only comprehensive 20-year factory warranty plus outstanding thermal performance and solar control. The LoE® glass that optimizes your home's performance, and know that Endur IG will stand up to the extremes of your weather.

Through the hottest summers and coldest winters, Endur IG is engineered for maximum seal durability. With its proven durability Endur IG will save heating and cooling energy for years to come.

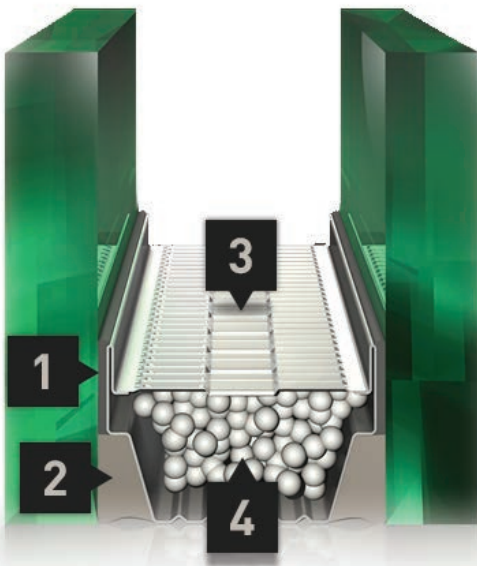
CARDINAL IG SEAL DURABILITY

A Comparison of our warranty and long-term projections

20 YEARS: ACTUAL DATA || 50 YEARS: PROJECTED || LOWER IS BETTER



WHAT'S INSIDE AN ENDUR IG UNIT?



Endur IG units consist of two or three lites of glass separated by an inorganic metal spacer.

1. **Primary Seal:** Polyisobutylene (PIB) minimizes moisture permeation, is UV resistant and provides an outstanding argon barrier.
2. **Secondary Seal:** Specially formulated silicone for IG units provides long-term adhesion, is unaffected by UV exposure and provides excellent durability when exposed to moisture. Silicone also provides structural integrity.
3. **Spacer:** Stainless steel spacer features a roll form design to provide maximum area for primary and secondary sealant coverage. It provides increased resistance to condensation and less stress on IG seal system. No polymer content eliminates the risk of chemical fogging.
4. **Desiccants:** Beaded molecular sieve provides initial frost points below -65°F. Desiccant assures optimum moisture adsorption while minimizing the effects of temperature-related pressure changes.



LoE-180 Glass

PASSIVE SOLAR CONTROL GLASS



When the weather turns frigid, Cardinal LoE-180™ glass is the perfect cold remedy. It keeps homes warmer and more comfortable by blocking heat loss to the outside and letting the sun's heat stream in. With a glass U-Factor of just 0.26 and an SHGC of 0.69, LoE – 180 is the ideal product for passive solar applications. It extends a warm welcome home while achieving the highest ER values.

LoE-180™ glass provide you with the highest level of comfort and energy savings year-round . Go beyond ordinary low-e glass – choose Cardinal LoE-180, the ideal choice for passive solar designs.



INSIDE GLASS AND OUTSIDE TEMPERATURES

The superior insulating capability of Cardinal LoE-180 is a key factor in the construction of comfortable windows for cold climates. The dramatic comfort improvement from windows with warm glass surfaces also means the relative humidity of the indoor air can be controlled and maintained properly. Proper humidity levels (not too much, not too little) will improve comfort and promote a healthier living environment.

IG TYPE AND COATING	OUTSIDE TEMP °F / °C	
	VERY COLD OUTSIDE INSIDE TEMP	COLD OUTSIDE INSIDE TEMP
Single-pane, Clear	0°	31°
Double-pane, Clear	37°	51°
Ordinary low-e (air fill)	46°	57°
LoE-180 (air fill)	48°	58°
LoE-180 (argon fill)	51°	60°

The table below compares the room-side center of glass temperatures of different glass types against two different winter conditions.

GLASS PERFORMANCE

IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	IP/SI
	TRANSMITTANCE	EXTERNAL REFLECTANCE	INTERNAL REFLECTANCE	UV	ISO	HEAT GAIN COEFFICIENT	AIR FILL	ARGON FILL
Single-pane, Clear	90%	8%	8%	0.71	0.84	0.86	1.04	--
Double-pane, Clear	82%	15%	15%	0.58	0.75	0.78	0.48	--
Ordinary low-e	76%	17%	17%	0.50	0.68	0.72	0.34	0.30
LoE-180	79%	15%	15%	0.28	0.62	0.68	0.31	0.26

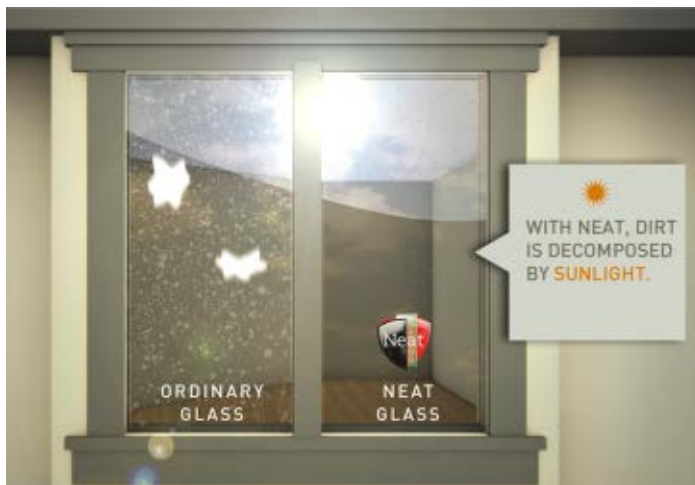


Neat Glass

LOW MAINTENANCE, EASY TO CLEAN



Cardinal introduces Neat® naturally clean glass. It harnesses the sun's UV rays to loosen dirt so water can rinse it away, leaving windows virtually spotless. Your windows will stay cleaner longer and will clean easier. Homeowners and builders will enjoy the effects that a little sun, rain and Neat glass brings to windows. Not only that, because Neat is applied to Cardinal's LoE® coated glazings, homes stay cooler in the summer and warmer in the winter. Clearly, Neat glass is the choice for your windows.

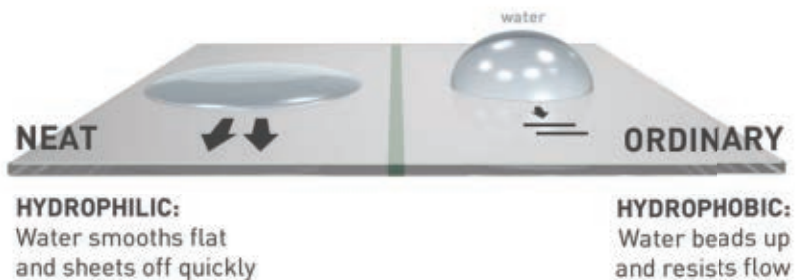


It starts with the sun.

The titanium dioxide layer of Neat glass reacts chemically with the sun's UV rays and causes organic materials that are on the glass to decompose. It works even on cloudy days, as 80% of UV radiation gets through cloud cover. Thus when it rains, the decomposed dirt no longer clings to the glass, easily rinsing away.

Smoother glass is cleaner glass.

And Neat glass is ultra smooth. A thin layer of silicon dioxide makes Neat glass exceptionally smooth and hydrophilic, much smoother than ordinary hydrophobic glass. This allows water to disperse evenly or "sheet off" and evaporate quickly, greatly reducing water spotting.



LoE comfort and efficiency.

When Neat glass is fabricated with Cardinal's low-emissivity LoE coatings, it provides maximum comfort indoors. Therefore, you enjoy year-round comfort inside the home and an average of 25% energy savings annually.



LoE³-366 Glass

ULTIMATE GLASS FOR ALL CLIMATES

Cardinal LoE³-366® glass is the ultimate performance glass. LoE³-366 delivers the ideal balance of solar control and high visibility. And it provides the highest levels of year-round comfort and energy savings. It's also the one glass you can use to be compliant in every ENERGY STAR zone



BEATS THE HEAT. KEEPS THE VIEW.

When the temperature soars, LoE³-366 has been specially formulated to reject the sun's heat without affecting the view. It lets more light in and keeps more heat out. So your home stays cool and comfortable. LoE³-366 provides exceptional fading protection as well. It blocks 95% of the sun's damaging ultraviolet rays.



IT'S THE PERFECT COLD REMEDY, TOO.

During cold weather, the insulating effect of your windows has a direct impact on how your rooms feel. Typically, 75% of the exposed surface of a window is glass, and the temperature of the room-side of the glass directly affects the air temperature in the room. The better insulated the window glass, the warmer your room will be. When glass surface temperatures fall below 52°F, there is a risk of thermal discomfort. To maintain the best comfort during the winter, select a glass product that produces surface temperatures that will stay above this point during the coldest outdoor conditions.

INSIDE GLASS AND OUTSIDE TEMPERATURES.

IG TYPE AND COATING	OUTSIDE TEMP °F / °C	
	-20°F VERY COLD OUTSIDE	20°F COLD OUTSIDE
	INSIDE TEMP	INSIDE TEMP
Single-pane, Clear	0°	31°
Double-pane, Clear	37°	51°
Ordinary low-e (air fill)	46°	57°
LoE ³ -366 (air fill)	49°	58°
LoE ³ -366 (argon fill)	52°	60°

The table above compares the room-side center of glass temperatures of different glass types against two different winter conditions.

GLASS PERFORMANCE

IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	IP/SI
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Double-pane, Clear	82%	15%	15%	0.58	0.75	0.78	0.48	--
Ordinary low-e	76%	17%	17%	0.50	0.68	0.72	0.34	0.30
LoE ³ -366	65%	11%	12%	0.05	0.43	0.27	0.29	0.24



LoE-i89 Glass

ENHANCED WINTER PERFORMANCE GLASS



DOUBLE-PANE WINDOWS BECOME TRIPLE-PANE PERFORMERS.

LoE-i89 is sputtered onto the indoor lite, the #4 surface, thus reflecting escaping heat back into the room and lowering U-factors. Coupled with our LoE² or LoE³ glass and argon fill, this double-pane unit delivers performance much better than clear triple-pane – a center of glass U-factor of just 0.20 compared to 0.37 with clear triple-pane.

To surpass the U-factor performance of our LoE-i89 double-pane unit, you would need to go to a triple-pane unit with a low-E coating in each gap.

LoE-i89 offers several other customer-pleasing benefits. Its surface is smooth and scratch resistant, making it easier to clean. Rather than absorbing internal heat, LoE-i89 reflects it back into the room, making your living space feel warmer and more comfortable.



GLASS PERFORMANCE

Double Pane with LoE-i89

IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	IP/SI
	TRANSMITTANCE	EXTERNAL REFLECTANCE	INTERNAL REFLECTANCE	UV	ISO	HEAT GAIN COEFFICIENT	AIR FILL	ARGON FILL
LoE-180, LoE-i89	77%	15%	14%	0.27	0.61	0.62	0.24	0.21
LoE ² -272, LoE-i89	70%	11%	11%	0.16	0.53	0.41	0.23	0.20
LoE ² -270, LoE-i89	69%	12%	12%	0.14	0.51	0.36	0.23	0.20
LoE ³ -366, LoE-i89	63%	11%	11%	0.05	0.41	0.27	0.23	0.20

7/8" Triple Pane

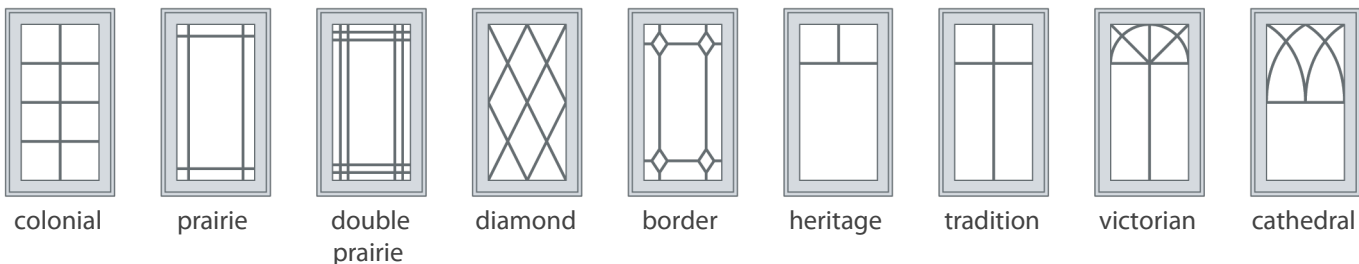
IG TYPE AND COATING	VISIBLE LIGHT			FADE TRANSMISSION		SOLAR	U-FACTOR	IP/SI
	TRANSMITTANCE	EXTERNAL REFLECTANCE	INTERNAL REFLECTANCE	UV	ISO	HEAT GAIN COEFFICIENT	AIR FILL	ARGON FILL
LoE -180, LoE-180	70%	20%	20%	0.13	0.50	0.56	0.26	0.20
LoE ² -272, LoE-180	63%	15%	18%	0.08	0.44	0.38	0.25	0.20
LoE ² -270, LoE-180	62%	16%	19%	0.07	0.43	0.34	0.25	0.20
LoE ³ -366, LoE-180	57%	14%	18%	0.02	0.36	0.25	0.25	0.20



WINDOW OPTIONS

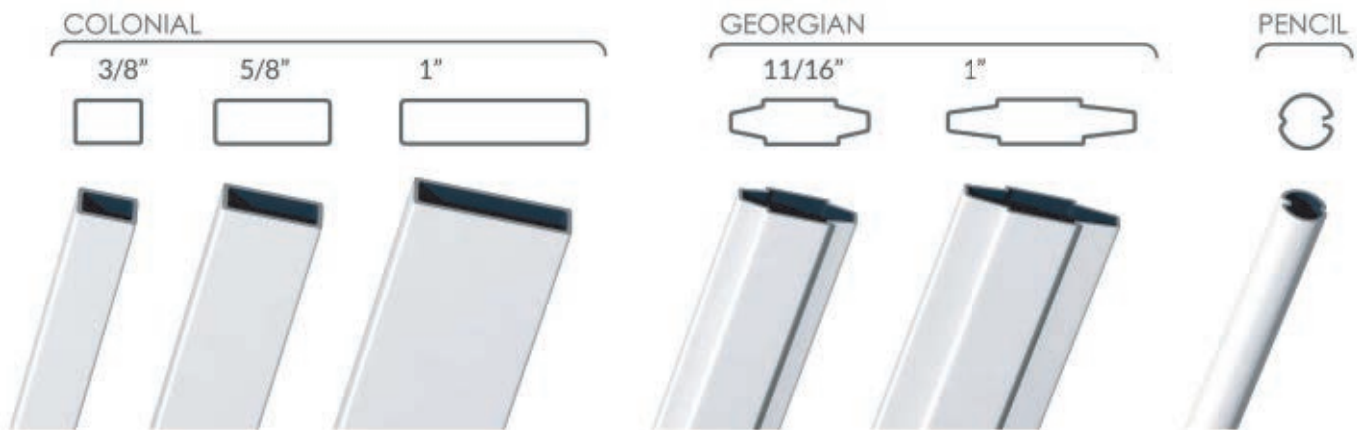
Grill Patterns

Grills are made in a variety of patterns for your window. These are just a few of the standard patterns. Almost any type of custom pattern is available.



Grill Styles

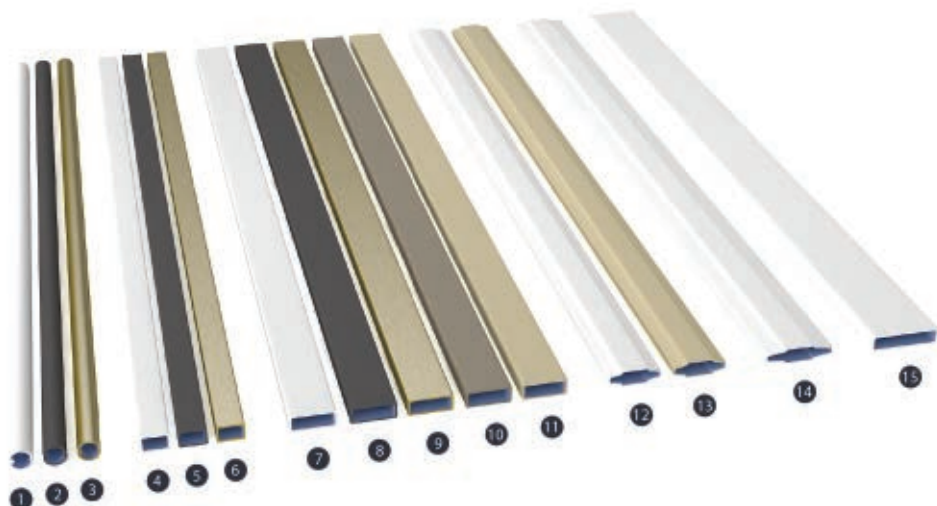
There are 3 different styles of grill available, that each comes in specific sizes.



Grill Colours

There are a few standard colours for grills, however almost any colour is available, including two-tone; a different colour on either side of the grill to match interior and exterior colours.

- ① Pencil, White
- ② Pencil, Pewter
- ③ Pencil, Brass
- ④ 3/8" Colonial, White
- ⑤ 3/8" Colonial, Pewter
- ⑥ 3/8" Colonial, Brass
- ⑦ 5/8" Colonial, White
- ⑧ 5/8" Colonial, Pewter
- ⑨ 5/8" Colonial, Brass
- ⑩ 5/8" Colonial, Sandalwood
- ⑪ 5/8" Colonial, Cream
- ⑫ 11/16" Georgian, White
- ⑬ 11/16" Georgian, Cream
- ⑭ 1" Georgian, White
- ⑮ 1" Colonial, White



*Beveled glass and V-groove also available on special order

Architectural Shapes

Our 100% lead-Free uPVC - environmentally safe vinyl technology allows you the freedom to explore new heights in window engineering. Non-standard polygons can turn into full circles, egg shapes into hexagons, angles or curves no shape is unattainable. Due to Window-Pro's innovation of template design. Feel comfortable with shapes.



Circle Top



Equal Leg Arch



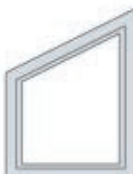
Cathedral



Peak Pentagon



Right Triangle



Trapezoid



Quarter Circle



Octagon

Casing Options

- Standard Wood
- Mahogany Finish
- Oak Finish
- Custom Finish
- Colonial Vinyl
- Executive Vinyl



Colonial Vinyl



Executive Vinyl

Jamb Options

- Standard Wood
- Mahogany Finish
- Oak Finish
- Custom Finish
- Vinyl



Oak Finish



Vinyl





Windows Defining Vision



TORONTO

185 Carlingview Drive, Unit 5 & 6
Etobicoke, ON, M9W 5E8
TEL 416-749-4449
FAX 416-749-4969

