

# PRO SERIES

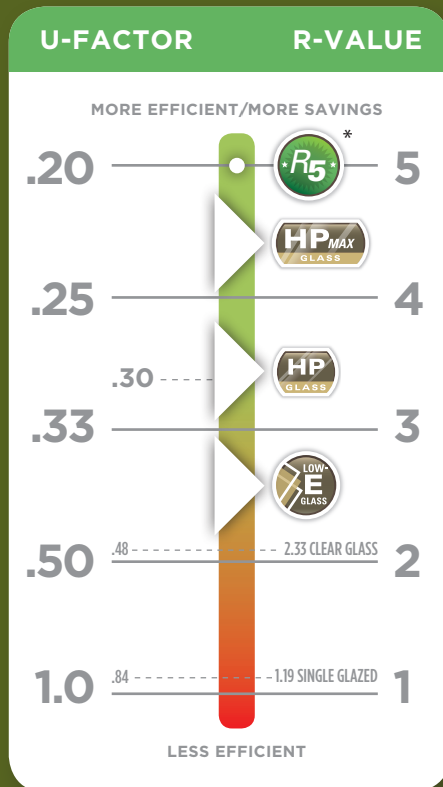
REPLACEMENT WINDOWS

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# EXPLANATION OF GLASS PACKAGES

## PERFORMANCE COMPARISON



The lower the U-Factor, the greater the insulation value. R-Value is the inverse ( $R=1/U$ ) of the U-Factor. Total Unit Factors determined per NFRC-100 (National Fenestration Rating Council). Chart shows relationship between performance and Ply Gem Windows glass package options, not including energy package upgrade.

\*Ply Gem Windows R-5 products meet or exceed a U-Factor of 0.20 on fixed units & 0.22 on operating units.



## LOW-E GLASS PACKAGES FOR HIGH ALTITUDES

Our Low-E glass packages combine Low-E and Warm Edge spacer options, providing insulating glass options to meet your specific needs. Our Low-E glass packages provide better performance in regions with hot summers and cold winters. Our Low-E<sup>SC</sup> (solar cooling) glass packages are optimized for regions with significant indoor cooling and glare reduction requirements. Our Low-E glass packages can be combined with capillary tubes to address performance needs in high altitude applications.

**Low-E<sup>+</sup>** — One lite of Low-E.

**Low-E<sup>SC+</sup>** — One lite of solar cooling Low-E.

**Low-E2<sup>+</sup>** — One lite of Low-E and one lite of Interior Surface Low-E.

**Low-E2<sup>SC+</sup>** — One lite of solar cooling Low-E and one lite of Interior Surface Low-E

**Low-E2<sup>MAX+</sup>** — Triple-pane with two lites of Low-E with an interior glass substrate

**Low-E3<sup>MAX+</sup>** — Triple-pane with two lites of Low-E and one lite of Interior Surface Low-E

‡ These glass packages are combined with capillary tubes to address performance needs in high altitude applications.



## HP GLASS PACKAGES

Our HP glass packages combine Low-E with argon gas fill and Warm Edge spacer options, providing high-performance insulating glass options to meet your specific needs. Argon is a safe, odorless, colorless gas, which is heavier or denser than air. When used in conjunction with Low-E glass, argon provides better insulation. That's because heat and cold do not pass through argon gas as easily as through air. Argon is nontoxic and presents no human health or environmental concerns. HP glass packages are also available in solar cooling (<sup>SC</sup>) glass packages for regions with significant indoor cooling and glare reduction requirements.

**HP** — One lite of Low-E and argon gas fill.

**HP<sup>SC</sup>** — One lite of solar cooling optimized Low-E and argon gas fill.

**HP2** — Two lites of Low-E with argon gas fill.

**HP2+** — One lite of Low-E and one lite of Interior Surface Low-E with argon gas fill.



## HP<sup>MAX</sup> GLASS PACKAGES (triple-pane)

Our HP<sup>MAX</sup> glass packages are triple-pane units that combine Low-E with two chambers of argon gas fill and Warm Edge spacer options, providing enhanced high-performance insulating glass options to meet your specific needs.

**HP2<sup>MAX</sup>** — Triple-pane with two lites of Low-E with an interior glass substrate and two chambers of argon gas fill.

**HP3<sup>MAX</sup>** — Triple-pane with two lites of Low-E and one lite of Interior Surface Low-E and two chambers of argon gas fill.



## WHAT ARE R-5 WINDOWS?

High-performance R-5<sup>1</sup> windows are highly insulating windows with a whole-window R-Value of 5 (a U-Factor of around 0.2). Most of our Contractor 2000 series products can be configured as R-5 units. These products are the top tier of energy-efficient windows for cold and mixed climates.

ENERGY STAR<sup>®</sup> windows have a U-Factor of around 0.3. Reducing the U-Factor from 0.3 to 0.2, with high-performance R-5 windows, reduces average heat loss through the window by more than 30%,<sup>2</sup> and saves consumers money on energy bills.

<sup>1</sup> R-5 = U-Factor of .22 or lower for operating units; .20 for fixed units

<sup>2</sup> U.S. Department of Energy – Energy Efficiency and Renewable Energy EERE News, May 27, 2010





## OVERALL FEATURES

- 1 Glass systems with Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 2 Vinyl won't conduct heat or cold, dramatically reducing frost and condensation
- 3 Pinch fusion-welded sash and mainframes for high strength and high energy-efficiency
- 4 Double hung windows feature integral interlock for a weathertight seal and extra security
- 5 New Generation uiPVC vinyl never needs painting or caulking and resists conducting heat and cold
- 6 Limited lifetime warranty means your windows are protected under the warranty for as long as you own your home
- 7 Sloped sill with unique SilLock design ensures natural water run-off
- 8 Warm Edge glass spacer systems reduce thermal transfer around the glass perimeter by using a unique U-shaped channel to separate glass panes and interrupt the natural flow of heat to cold



A



Fusion-welded strength

B



Warm Edge spacer

## DESIGN PRESSURE (DP) RATINGS



Ply Gem Pro Series products are tested to meet the air, water and structure requirements of AAMA/WDMA 101/I.S.2. Our products meet a Design Pressure (DP) rating of 35 (double hung) to as high as 70 (operating casement gateway size of 24" x 60").

With advanced level engineering and top-notch innovation, you are assured of the most durable, high-performing windows available nationwide.

Ask your Ply Gem Windows dealer or distributor for specific DP ratings for each Pro replacement style.



## LIMITED LIFETIME WARRANTY

### One of Life's Few Guarantees.

Life comes with few guarantees. Fortunately, Pro Windows offer you a permanent solution. Our custom vinyl windows offer more than construction quality, unmatched energy- efficiency and low maintenance. They also offer a Limited lifetime warranty.

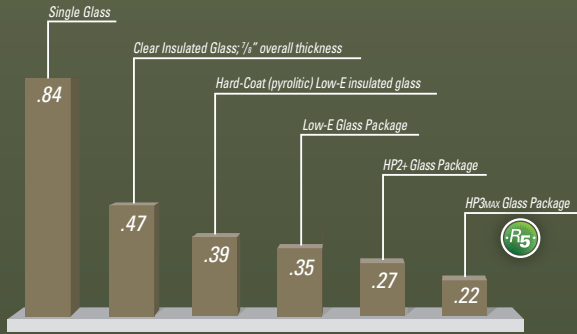
We believe so strongly in the durability of our windows that we back each window unit with our hassle-free Limited lifetime warranty. Lifetime means your windows are protected under the warranty for as long as you live in your home. And your warranty is transferable to the next homeowner helping you protect your investment by increasing your home's resale value.

Wouldn't it be nice if you could feel so confident about everything you bought?



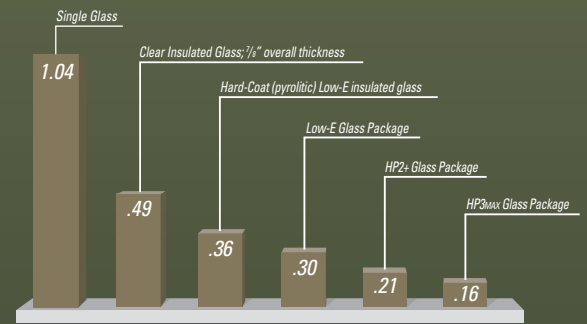


## GLASS COMPARISON — TOTAL UNIT — U-FACTOR



The lower the U-Factor the greater the insulation value.  
Total Unit Factors determined per NFRC-100 (National Fenestration Rating Council). The HP glazing option is certified to NFRC-100, and HP Plus meets all ENERGY STAR requirements. Based on double hung product style.

## GLASS COMPARISON — CENTER OF GLASS — U-FACTOR



The lower the U-Factor the greater the insulation value.  
Center of glass factors calculated per Windows 5.2 simulation software (LBNL - Lawrence Berkeley National Laboratories).



## ENERGY TAX CREDIT

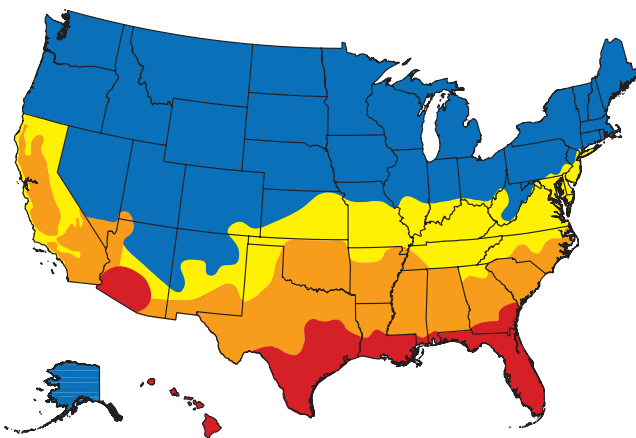
ENERGY STAR® qualified windows and patio doors are eligible for the 2011 federal energy tax credit. See the specific product series NFRC test summary to determine qualifying products.

Qualifying products must be installed in a consumer's existing primary residence; new construction is not eligible.

The new tax credit is in effect for products installed between January 1 and December 31, 2011. Details of the credit are available at [www.energystar.gov](http://www.energystar.gov) or [www.irs.gov](http://www.irs.gov). Consumers should consult with their tax adviser for further guidance.



## ENERGY STAR® for Windows, Doors, and Skylights CLIMATE ZONE MAP



- Northern
- North-Central
- South-Central
- Southern

Ply Gem Replacement Pro Series windows and patio doors can be configured to meet a specific ENERGY STAR zone in all states. Your investment in ENERGY STAR products will pay for itself over time in reduced energy bills, not to mention increase the comfort level inside your home.



**PLY GEM PRO SERIES WINDOWS HAVE BEEN GREEN APPROVED BY THE NAHB RESEARCH CENTER.**

This means you can be assured that Ply Gem Pro Series windows comply with specific green practice criteria in the National Green Building Standard. Visit [www.GreenApprovedProducts.com](http://www.GreenApprovedProducts.com) for more details.



## DOUBLE HUNG WINDOW

**DOUBLE HUNG WINDOWS** offer beauty, maintenance freedom and peace of mind at a price you can live with. Configurations include operating, fixed and factory mullied units.

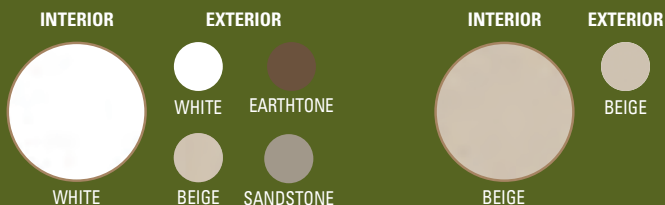


## FEATURES

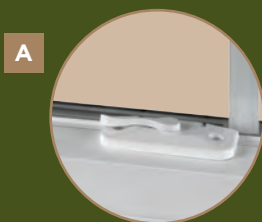
- 1 New equal sightline sash to match traditional wood window appearance
- 2 Ventilation limit-locks for added security when windows are partially open. Optional child safety vent latch available
- 3 Fusion-welded frames and sash stay strong and in place for a lifetime of dependable performance
- 4 Fin and pile weatherstripping on both sash and mainframe for protection against air, dust and moisture
- 5 Constant force balance system
- 6 New sleek, low-profile design — two cam-action locks on windows over 25" wide
- 7 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 8 Lift rail for ease of operation
- 9 Ergonomically designed tilt latch buttons for easy tilting in of both sash makes it easy and safe to clean the exterior of window
- 10 New Generation uPVC vinyl never needs painting or caulking and resists conducting heat and cold
- 11 Extruded aluminum half screen with fiberglass mesh
- 12 SilLock design — featuring sloped sill to keep windows dry and weather-tight seal at sill
- 13 Integral interlock and dual fin and pile weatherstripping on both sash and airframe for protection against air, dust and moisture



## Color Options



Colors are reproduced as accurately as printer technology allows. Please see your authorized Ply Gem Windows representative for actual samples.



**A** Cam-action locks



**C** Optional child safety vent latch



**B** Ventilation limit latches



**D** Tilt-latch for ease of cleaning



## SLIDING WINDOW

**SLIDING WINDOWS.** Panoramic vistas meet ultimate convenience with our sliding windows. Their undeniable beauty is matched only by their superior thermal performance, letting you enjoy your view ever so comfortably. Available sliding window configurations include two- and three-lite configurations. Three-lite configurations available in  $\frac{1}{4}$ - $\frac{1}{2}$ - $\frac{1}{4}$  lite and  $\frac{1}{3}$ - $\frac{1}{3}$ - $\frac{1}{3}$  equal lite.





## Color Options

### INTERIOR



WHITE

### EXTERIOR



WHITE



EARTHTONE



BEIGE



SANDSTONE

### INTERIOR



BEIGE

### EXTERIOR



BEIGE

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## FEATURES

- 1 State-of-the-art track and adjustable roller system for easy gliding
- 2 Fully fusion-welded sash and mainframe for extra strength
- 3 Ventilation limit-locks for added security when windows are partially open. Optional child safety vent latch available
- 4 New sleek, low-profile design, cam-action locks on windows over 25" tall
- 5 In-home removable sash for safe, easy cleaning
- 6 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 7 Integral interlock and dual fin and pile weatherstripping on both sash and mainframe for protection against air, dust and moisture
- 8 Extruded aluminum half screen with fiberglass mesh
- 9 Trim line design for maximum viewing area
- 10 New Generation uPVC vinyl never needs painting or caulking and resists conducting heat and cold



A



Cam-action locks

C



Ventilation limit lock open

B



Ventilation limit lock closed

D



Optional child safety vent latch



## CASEMENT & AWNING WINDOW

**CASEMENT & AWNING WINDOWS.** Dressing up your home with European flair has never been so rewarding. With a full 90° sweep, these windows give nature a warm welcome in nice weather. But they work even better at giving bad weather the cold shoulder. Configurations include single, twin, triple and quad with integral or factory mulled options.



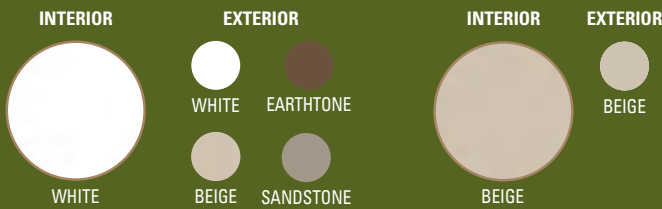


## FEATURES

- 1 Fusion-welded frames and sash stay strong and in place for a lifetime of dependable performance
- 2 Casements open a full 90° for easier, safer cleaning
- 3 Aluminum extruded screen with low profile retention clips
- 4 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 5 Easy-to-reach multi-point locking system provides increased security with a single conveniently located handle
- 6 New Generation uPVC vinyl never needs painting or caulking and resists conducting heat and cold
- 7 Folding/nested operating handles are standard on all Pro Series casement & awning windows
- 8 Upgrade casement windows with the optional stainless steel hardware for protection against corrosion in coastal areas; this option includes the operator mechanism arms, sash brackets, hinges, snubbers, tiebars and keepers



## Color Options



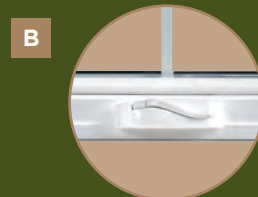
Colors are reproduced as accurately as printer technology allows. Please see your authorized Ply Gem Windows representative for actual samples.



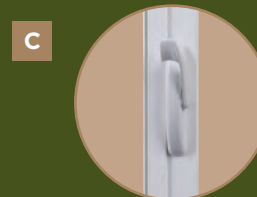
Stainless steel operating components provide protection against corrosion in coastal areas. Upgrade casement windows with the Pro Series stainless steel hardware option.



**A** Fusion-welded strength



**B** Folding/nested operator handle



**C** Matching lock features a sleek low-profile design that, in either the locked or unlocked position, won't interfere with curtains or blinds

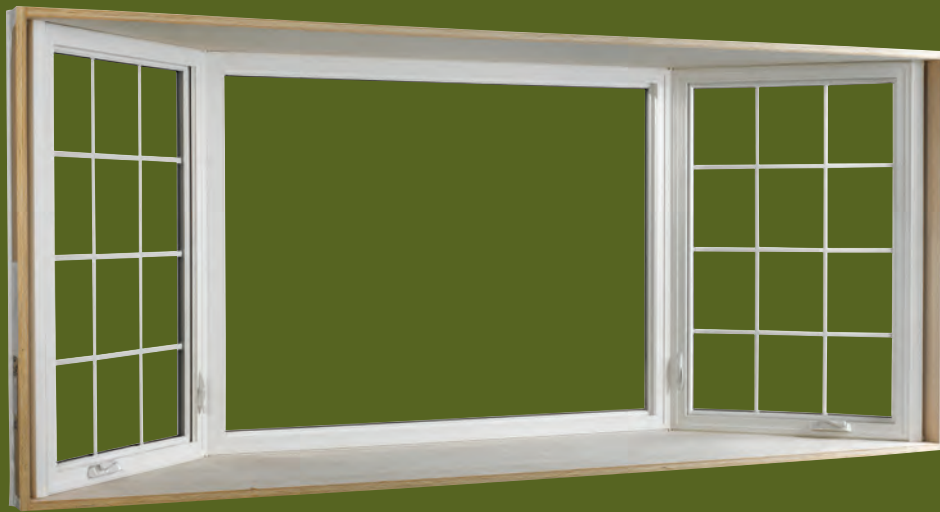
1. Most awning and operating casement windows meet a Design Pressure (DP) rating of 70 (gateway size of 24" x 60") and most fixed casement windows meet a Design Pressure (DP) rating of 45.



## BAY WINDOW

**BAY WINDOWS.** All the world's a stage, and this is your personal theater. The best part is that while the drama happens outdoors, award-winning performances for beauty and energy-efficiency go on and on inside. Bays available in 3 or 4 window, 35° and 45° configurations.





Knee Braces

## Pre-finished or Laminated Interior Head, Seat and Jamb Options

BIRCH



OAK



## Solid Surface Seat Options



Cameo White



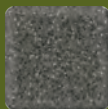
Beach



Sandstone



Dusk



Dark Brown



Black

## Color Options

INTERIOR



WHITE

EXTERIOR



WHITE



EARTHTONE



BEIGE



SANDSTONE

INTERIOR



BEIGE

EXTERIOR



BEIGE

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## FEATURES

- 1 Custom made to ensure a good fit in your home
- 2 Fusion-welded frames and sash for extra strength and dependable performance
- 3 Available in casement or double hung styles
- 4 Choose from four available grille options
- 5 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 6 Heavy-duty weatherstripping ensures a tighter seal
- 7 Multi-point locking system secures the window in several locations simultaneously with a single handle
- 8 New Generation uPVC vinyl never needs painting or caulking and resists conducting heat and cold



## Support and Insulation Systems

### (2) Cable Kits Standard

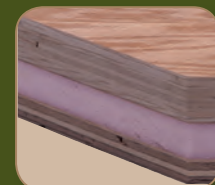
#### External Knee Braces

- 1 Provides exterior support for bay, bow and garden windows<sup>1</sup>
- 2 Available in white, beige, earthtone and sandstone
- 3 Pre-finished to be maintenance free

<sup>1</sup> Required and included standard with garden window. Knee braces and cable system are required for bay/bow windows and are included with the window.

### Superior Insulated Seats

- 1 Insulated with high density polystyrene insulating board combined with a 3/4" exterior grade plywood surface – 3" overall thickness
- 2 R-Value of 7.6 – six times that of a typical non-insulated bay/bow windows
- 3 Available in white or beige (earthtone units are clad with brown coil)





## BOW WINDOW

**BOW WINDOWS.** All the world's a stage, and this is your personal theater. The best part is that while the drama happens outdoors, award-winning performances for beauty and energy-efficiency go on and on inside. Bows available in 3, 4 or 5 window configurations.





Knee Braces

## Pre-finished or Laminated Interior Head, Seat and Jamb Options

BIRCH



OAK



## Solid Surface Seat Options



Cameo White



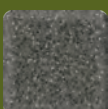
Beach



Sandstone



Dusk



Dark Brown



Black

## Color Options

INTERIOR



WHITE

EXTERIOR



WHITE



EARTHTONE



BEIGE



SANDSTONE

INTERIOR



BEIGE

EXTERIOR



BEIGE

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## FEATURES

- 1 Custom made to ensure a good fit in your home
- 2 Fusion-welded frames and sash for extra strength and dependable performance
- 3 Available in casement or double hung styles
- 4 Choose from four available grille options
- 5 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
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## Support and Insulation Systems

### (2) Cable Kits Standard

#### External Knee Braces

- 1 Provides exterior support for bay, bow and garden windows<sup>1</sup>
- 2 Available in white, beige, earthtone and sandstone
- 3 Pre-finished to be maintenance free

<sup>1</sup> Required and included standard with garden window. Knee braces and cable system are required for bay/bow windows and are included with the window.

### Superior Insulated Seats

- 1 Insulated with high density polystyrene insulating board combined with a 3/4" exterior grade plywood surface – 3" overall thickness
- 2 R-Value of 7.6 – six times that of a typical non-insulated bay/bow windows
- 3 Available in white or beige (earthtone units are clad with brown coil)





## SLIDING PATIO DOOR

**SLIDING PATIO DOORS** are your home's way of welcoming guests with arms wide open. But when heat, cold, rain, wind or intruders come knocking, this beauty is tough as nails. Configurations include two-panel units with optional complementary side lites and transoms.





## FEATURES

- 1 Both the panels and frame are fully welded for superior strength and durability
- 2 Full perimeter, high performance weatherstripping
- 3 Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HP<sub>MAX</sub> glass package options offer increased energy-efficiency
- 4 Our doors glide on tandem steel rollers which provide smooth and effortless operation, no matter how many times they are opened and closed
- 5 Add the convenience of an easy-to-activate security lock that allows you to vent your home while providing peace-of-mind
- 6 Standard sizes: 5' x 68", 6' x 68" and 8' x 68"
- 7 Side lites and transoms available
- 8 New Generation uPVC vinyl never needs painting or caulking and resists conducting heat and cold



Optional footbolt

## Color Options

INTERIOR / EXTERIOR



WHITE

INTERIOR / EXTERIOR



BEIGE

Colors are reproduced as accurately as printer technology allows. Please see your authorized Ply Gem Windows representative for actual samples.

Pro Replacement Series Sliding Patio Doors are available in white (interior/exterior) and beige (interior/exterior) only.

## Standard handle colors:

WHITE



BEIGE

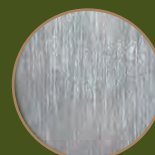


## Optional handle colors:

CLASSIC BRASS



BRUSHED CHROME



Handle

Colors are reproduced as accurately as printer technology allows. Please see your authorized Ply Gem Windows representative for actual samples.

# GLASS OPTIONS

- Low-E
- Low-E<sup>SC</sup>
- Low-E2
- Low-E2<sup>SC</sup>
- Low-E2<sup>MAX</sup>\*
- Low-E3<sup>MAX</sup>\*
- HP
- HP<sup>SC</sup>
- HP2
- HP2+
- HP2<sup>MAX</sup>\*
- HP3<sup>MAX</sup>\*
- Tinted
- Double Strength glass
- Obscure
- Glue Chip Obscure
- Tempered
- Laminated  
(security)
- Sound Package  
(off-set glass)

\* See page 6 for explanation of glass packages. Low-E2<sup>MAX</sup>, Low-E3<sup>MAX</sup>, HP2<sup>MAX</sup> and HP3<sup>MAX</sup> are not available on all products, see product pages for details. Contact your Ply Gem sales representative for a full list of Contractor Series glass thickness options and ratings.



**Optional Advanced Easy Clean® Glass** is a remarkable advancement in glass design that eliminates frequent exterior window cleaning. Windows and doors with special Easy Clean Glass require less effort than windows with ordinary glass.

# SCREEN OPTIONS

Fiberglass mesh is the standard insect screening material used on all Ply Gem Windows replacement products with available half or full screens. This product provides good outward visibility and ventilation and will not rust, corrode or stain. Additional options available include:

### ALUMINUM MESH

Provides added protection against aggressive regional insects that eat through normal fiberglass mesh. Charcoal finish reduces glare.

### SOLAR BLOCK MESH

Blocks 70% of the sun's heat and glare. Keeps living spaces cooler, reduces energy costs and protects furnishings against fading.

### OPTIMUM VIEWING MESH

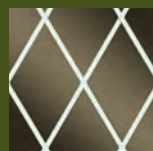
Thinner fiberglass material allows maximum viewing while tighter mesh pattern keeps out tiny insects.

# CUSTOM GRILLES

GRILLES-BETWEEN-THE-GLASS



3/8" Flat Colonial



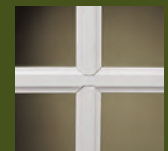
3/8" Flat Diamond



3/8" Flat Perimeter



1/8" Sculptured Colonial



1" Sculptured Colonial



Below is a glossary of our icons that you will see throughout the Ply Gem Windows Replacement brochures. These icons identify features and benefits for each window so you can easily understand what is available to you with each style.



### WARM EDGE TECHNOLOGY

The Warm Edge glass spacer system within Ply Gem Pro Series Replacement windows reduces thermal transfer around the glass perimeter by utilizing a unique U-shaped channel to separate glass panes and interrupt the natural flow of heat to cold. Warm Edge is one continuous piece creating a stronger, more energy-efficient insulated glass unit. Plus it flexes with glass expansion and contraction to ensure a strong seal for the life of the window.



### WARM EDGE+ TECHNOLOGY

The Warm Edge+ Spacer System has all of the features of the Warm Edge Spacer, but utilizes a new, less conductive material which provides a lower U-Factor.



### R-CORE® INSULATION

Available as an option on the Ply Gem Windows Pro Series, the vinyl mainframes can be filled with patented\* R-Core® offers more than twice the insulating performance as the typical wood frame and nearly four times more than hollow vinyl or aluminum frames.

\* U.S. Patent Number: 4,516,356



### NEW GENERATION VINYL

Wood or metal windows can stick when they swell or deteriorate from corrosion. New Generation Vinyl withstands harsh weather and wear-and-tear better. Ply Gem Pro Series Replacement windows are constructed with rugged, maintenance-free New Generation uPVC. Its low conductivity and high energy-efficiency properties are ideal for Ply Gem's advanced window construction. And because vinyl's base color is solid through-and-through, you'll never need to paint or stain these windows.



### PINCH FUSION WELDING

Ply Gem Pro Series Replacement windows are entirely fusion-welded – sashes and mainframes – to create a solid, one-piece unit that maintains its strength over the years. Our state-of-the-art fusion process ensures frame and sash corners won't have the excess variance found with other welding techniques.



### SIL LOCK

Pro Series Replacement double hung windows with SilLock are built with a sloped sill which forces water to drain to the exterior of the window, keeping your windows dry. This unique design also ensures a tight weatherstrip contact at the sill.



### CUSTOM SIZING

Ply Gem windows and patio doors can be ordered in 1/8 inch increments to accommodate any replacement application providing a perfect fit and minimizing installation time and special trimming requirements.



### COASTAL HARDWARE

Typical hardware can easily become corroded or damaged when exposed to constant salt in the air. Ply Gem windows with coastal hardware will consistently stand up to saltwater and other harsh coastal conditions.



### DP CERTIFIED

Ply Gem Pro Series Replacement windows are tested to meet the air, water and structure requirements of AAMA/WDMA 101/I.S.2. Our products meet a Design Pressure (DP) rating of 35 (double hung) to as high as DP70 operating casement (gateway size of 24" x 60"). With advanced level engineering and top-notch innovation, you are assured of the most durable, high-performing windows available nationwide.

