

A WHOLE NEW POINT OF VIEW.

**It's more than a window. It's a whole new point of view.** At Ply Gem Windows, we have a different view for the way the window business should be run. We believe you should have access to all of the top quality styles and brands across the country. That's why we've taken our entire portfolio of brands, brands that you know and trust, and given them one name – Ply Gem Windows. With this one name comes a lot of big advantages, starting with a national manufacturing and distribution network. Pair that with our commitment to customer service, sustainable practices and wide variety of window styles that fit all of your design needs, and you'll get the right window for every project and every budget.

And, because we're part of the Ply Gem family, you know you'll always have access to leading brands. Windows, doors, siding and accessories, stone veneer, fence and rail, rainware, shutters and designer accents, we have something for every project. We work with residential builders, remodelers, architects, distributors and dealers to help build sales. When you combine over 50 years of experience, industry-leading customer service, and trusted local relationships you've got a company you can count on. **Ply Gem. Building products. Building success.**



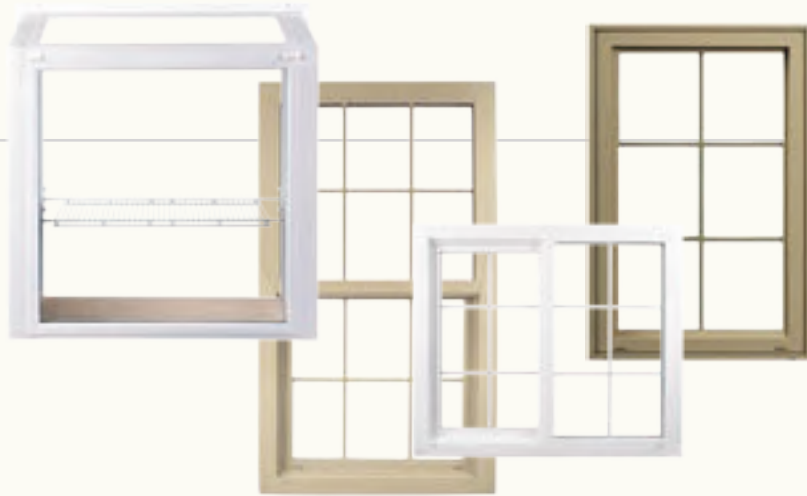


# 400 SERIES

W I N D O W S

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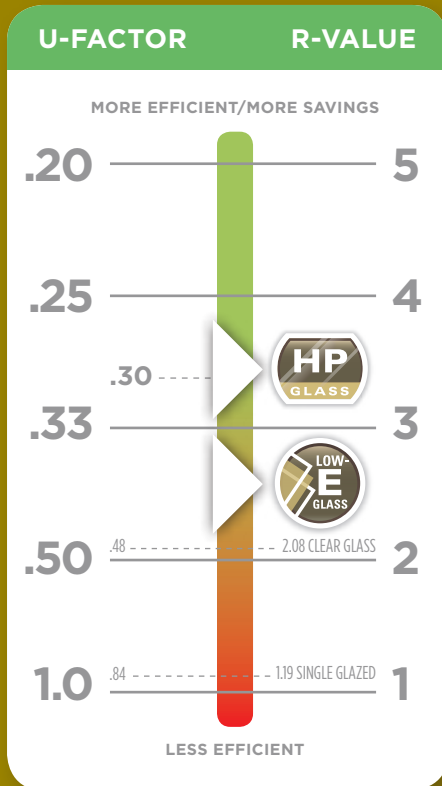
**Performance and value. Together at last.** Ply Gem Windows were designed to fit your needs. Every window is a reliable combination of performance and value. They provide you with all the features you've come to expect from Ply Gem Windows — energy efficiency, durability and low maintenance. With their convenient slimline frame depth, you'll not only add style and simplicity, you'll add a whole new level of comfort to any home. Wood or metal windows can stick when they swell or deteriorate from corrosion. Vinyl withstands harsh weather and wear-and-tear better. Ply Gem windows are constructed with rugged, maintenance-free 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.



A WHOLE NEW POINT OF VIEW.

# 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.



### LOW-E GLASS PACKAGES

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 package is 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 elevation applications.

**Low-E** — One lite of Low-E.

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



### 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. Our HP glass package is also available in asolar cooling (<sup>SC</sup>) glass package 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.

## WHAT IS LOW-E?

Low-E glass has a secondary, very thin metallic dual layer coating. This allows the sun's heat and light to pass through the insulating glass, but, at the same time, actually works to reflect radiant heat back toward its source. Since Low-E coating reflects radiant heat waves, it helps keep your home warmer in the winter by trapping radiant heat and cooler in the summer by blocking it from your home.

### NATURAL LIGHT WITHOUT THE GLARE.

Ply Gem's Low-E glass has many advantages such as minimal visible darkening. Our glass minimizes interior glare, reducing eyestrain and making it easier to watch television or look at a computer screen when bright sunlight fills a room.



## 400 SINGLE HUNG

	R Value	NFRC CERTIFIED		
		U Value	SHGC	VT
WITH WARM EDGE				
<sup>11</sup> / <sub>16</sub> " Clear	2.04	0.49	0.62	0.65
<sup>11</sup> / <sub>16</sub> " HP	3.23	0.31	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.33	0.30	0.22	0.43
WITH WARM EDGE+ (METAL)				
<sup>11</sup> / <sub>16</sub> " HP	3.33	0.30	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.45	0.29	0.22	0.43
WITH WARM EDGE+ (NON-METAL)				
<sup>11</sup> / <sub>16</sub> " HP	3.45	0.29	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.57	0.28	0.22	0.43

## 400 SLIDING WINDOW

	R Value	NFRC CERTIFIED		
		U Value	SHGC	VT
WITH WARM EDGE				
<sup>11</sup> / <sub>16</sub> " Clear	2.04	0.49	0.62	0.65
<sup>11</sup> / <sub>16</sub> " HP	3.23	0.31	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.33	0.30	0.22	0.43
WITH WARM EDGE+ (METAL)				
<sup>11</sup> / <sub>16</sub> " HP	3.33	0.30	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.45	0.29	0.22	0.43
WITH WARM EDGE+ (NON-METAL)				
<sup>11</sup> / <sub>16</sub> " HP	3.45	0.29	0.29	0.55
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.57	0.28	0.22	0.43

## 550 CASEMENT & AWNING

	R Value	NFRC CERTIFIED		
		U Value	SHGC	VT
WITH WARM EDGE				
<sup>3</sup> / <sub>4</sub> " Clear	2.33	0.43	0.52	0.54
<sup>3</sup> / <sub>4</sub> " HP	3.57	0.28	0.25	0.46
<sup>3</sup> / <sub>4</sub> " HP <sup>SC</sup>	3.57	0.28	0.19	0.36
WITH WARM EDGE+ (METAL)				
<sup>3</sup> / <sub>4</sub> " HP	3.57	0.28	0.25	0.46
<sup>3</sup> / <sub>4</sub> " HP <sup>SC</sup>	3.70	0.28	0.19	0.36
WITH WARM EDGE+ (NON-METAL)				
<sup>11</sup> / <sub>16</sub> " HP	3.70	0.27	0.25	0.46
<sup>11</sup> / <sub>16</sub> " HP <sup>SC</sup>	3.70	0.27	0.19	0.36

## 460 SLIDING PATIO DOOR

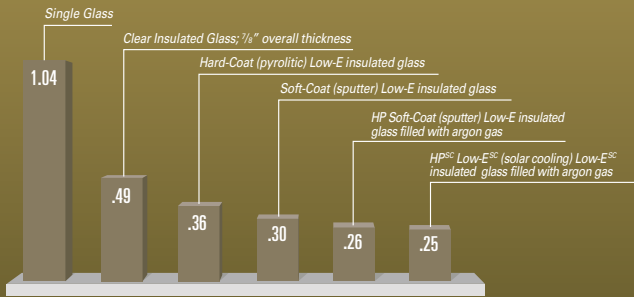
	R Value	NFRC CERTIFIED		
		U Value	SHGC	VT
WITH WARM EDGE				
<sup>3</sup> / <sub>4</sub> " Clear	2.04	0.49	0.61	0.64
<sup>3</sup> / <sub>4</sub> " HP	3.23	0.31	0.29	0.54
<sup>3</sup> / <sub>4</sub> " HP <sup>SC</sup>	3.23	0.31	0.22	0.42
WITH WARM EDGE+ (METAL)				
<sup>3</sup> / <sub>4</sub> " HP	3.23	0.31	0.29	0.54
<sup>3</sup> / <sub>4</sub> " HP <sup>SC</sup>	3.33	0.30	0.22	0.42

All units are NAMI certified and rated in accordance with NFRC 100/200 standards by an AAMA accredited lab. Performance values reflect the performance of units tested with the following configuration: 3mm glass, no grilles and IGU thickness specified in the chart.

R VALUE: Restrictive ambient air flow  
 U VALUE: Rate of heat loss  
 SHGC: Solar Heat Gain Coefficient  
 VT: Visible Transmittance

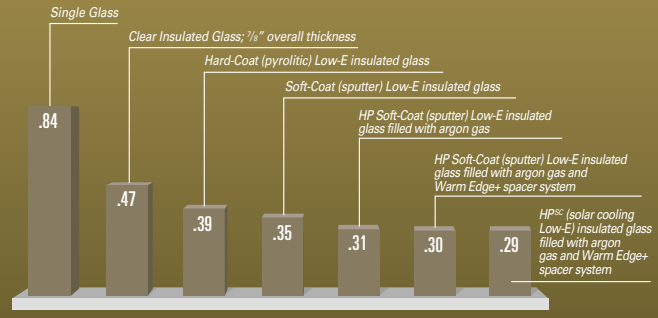
# ENERGY EFFICIENCY

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



The lower the U-Factor the greater the insulation value. R-Value is the inverse (R=1/U) of the U-Factor. Center of glass factors calculated per Windows 5.2 simulation software (LBNL – Lawrence Berkeley National Laboratories).

## GLASS COMPARISON — TOTAL UNIT\* — U-FACTOR

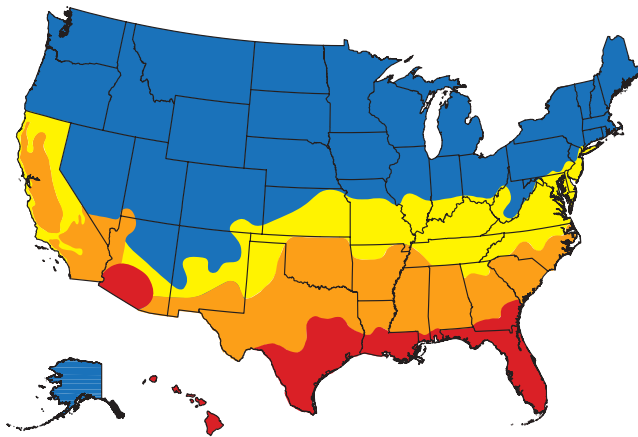


The lower the U-Factor the greater the insulation value. R-Value is the inverse (R=1/U) of the U-Factor. Total Unit Factors determined per NFRC-100 (National Fenestration Rating Council). The HP glazing option is certified to NFRC-100, and HP R-Plus meets all ENERGY STAR® requirements. \*Based on single hung product style.

# ENERGY STAR®



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



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

Ply Gem 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.



**Home Innovation**  
NGBS GREEN CERTIFIED™

PLY GEM 400 SERIES WINDOWS HAVE BEEN GREEN CERTIFIED BY THE NGBS HOME INNOVATION RESEARCH LABS.

This means you can be assured that these Ply Gem 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.





## LIMITED LIFETIME WARRANTY



### One of Life's Few Guarantees.

Life comes with few guarantees. Fortunately, Ply Gem 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?



## CUSTOM SIZING

Ply Gem windows and patio doors can be ordered in  $\frac{1}{8}$  inch increments for any application providing a perfect fit and minimizing installation time and special trimming requirements.



## 400 SINGLE HUNG

**400 SINGLE HUNG WINDOWS.** Now you can have it all with these single hung windows that deliver classic style, value and performance. They will brighten your spaces with timeless beauty and deliver the energy efficiency, durability and performance you'll appreciate every day.



## FEATURES

- Multiple frame options - nail fin (shown), no fin, or single wall flush fin for you applications and enduring beauty
- Low-point, high-pressure weep system helps rain water drain efficiently from frame
- Maintenance-free multi-chamber PVC construction with fusion welded corners for durability, weather-tight performance and beauty
- Removable side loaded bottom sash
- Continuous weatherstripping and dual action sash lock provides security while sealing out the weather and sealing in your comfort
- Energy-efficient warm edge insulating glass for enhanced energy performance; optional Warm Edge+ spacer system for enhanced performance
- Corrosion-resistant stainless-steel screws and hardware for lifelong durability
- Reinforced meeting rail for added strength and durability
- 2 5/8" frame depth to simplify replacement window installation



No Fin



Single Wall Flush Fin for Enduring Beauty.

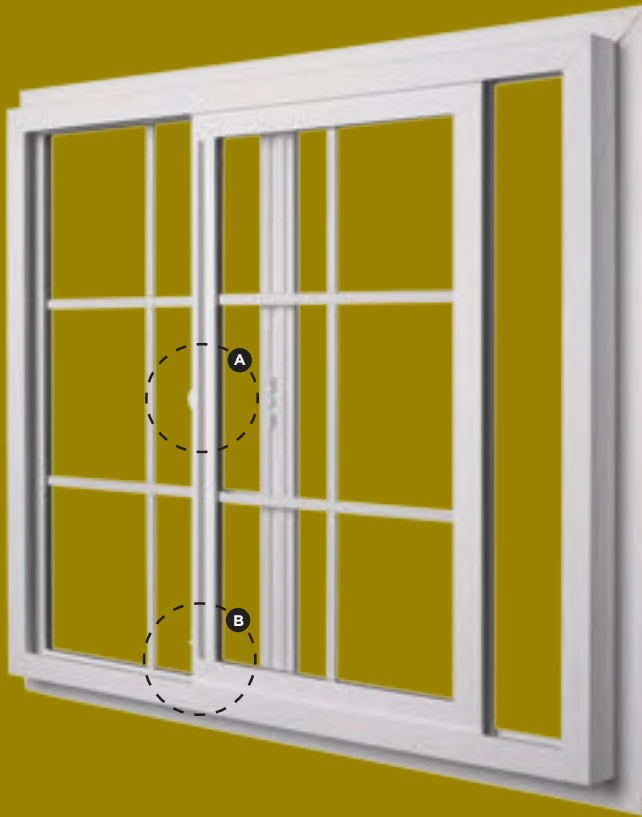
1. HR-40 rated up to 48"x60". Insulair units rate HR-30. 2. Optional Warm Edge+ spacer system for enhanced performance. 3. Low-E with argon.



## 400 SLIDING WINDOW

**400 SLIDING WINDOWS** are all things bright and beautiful. You'll be surprised by how easy they are to open and close, how they enhance the look of your rooms and how easy they are on your budget. Say goodbye to windows that stick, let in drafts and aren't well secured and hello to a stunning new room.





## FEATURES

- Multiple frame options - nail fin, no fin, or single wall flush fin (shown) for your applications and enduring beauty
- Low-point, high-pressure weep system helps rain water drain efficiently from frame
- Maintenance-free multi-chamber PVC construction with fusion welded corners for durability, weather-tight performance and beauty
- Wide brass adjustable roller for smooth operation
- Limited sash stop and removable sash
- Continuous weatherstripping and dual action sash lock provides security while sealing out the weather and sealing in your comfort
- Energy-efficient warm edge insulating glass for enhanced energy performance; optional Warm Edge+ spacer system for enhanced
- Corrosion-resistant stainless-steel screws and hardware for lifelong durability
- Aluminum-reinforced meeting rail for added strength and durability
- 2 5/8" frame depth to simplify replacement window installation



A



Cam action sash lock

B



Sash stop



## 550 CASEMENT & AWNING

**550 CASEMENT & AWNING WINDOWS** allow you to let in the sun and breeze with just the twist of a crank. Durable, secure and attractive, these versatile windows are a perfect option when you want to enjoy the unobstructed view outside and open up effortlessly whenever you want.



## FEATURES

- Maintenance-free multi-chamber PVC construction with fusion welded corners for durability, weather-tight performance and beauty
- Color-coordinated crank handle and lock handle; optional push out hardware available
- Dual row of weatherstripping seals out the weather and seals in your comfort
- Multi-point lock with stainless steel hardware and fasteners for durability and added security
- Energy-efficient Warm Edge insulating Low-E glass for enhanced energy performance; optional Warm Edge+ spacer system for enhanced performance
- 2 5/8" frame depth to simplify installation of replacement windows



**A**  
Color-coordinated handle



**B**  
Multi-point sash lock



Integral pre-punched nailing fin for easy and accurate installation

1. Most casement units rated DP20 standard. Most awning units are DP40 rated standard and are rated for light commercial application.  
2. Optional Warm Edge+ spacer system for enhanced performance. 3. Low-E with argon.



## 400 GARDEN WINDOW

**400 GARDEN WINDOWS.** You don't have to have the greenest thumb in the family to watch nature blossom in your garden window. The bountiful sunlight they provide will keep your plants thriving year round.





## FEATURES

- No fin or flange style nail fin with unfinished seatboard
- New Generation PVC vinyl never needs painting or caulking and resists conducting heat and cold
- Durable powder coated steel wire shelf maximizes the area for your herb garden and plants
- Operating single hung windows on each side allow for ventilation
- Fusion-welded frames and sash for extra strength and dependable performance
- Available in white or sand color options
- Sloped top lite is only available with a dual pane insulated glass unit
- Energy-efficient Warm Edge insulating HP glass, combining Low-E with argon gas fill, reduces energy costs and fabric fading; optional Warm Edge+ spacer system for enhanced performance



A



Durable Powder Coated Steel Wire Shelf



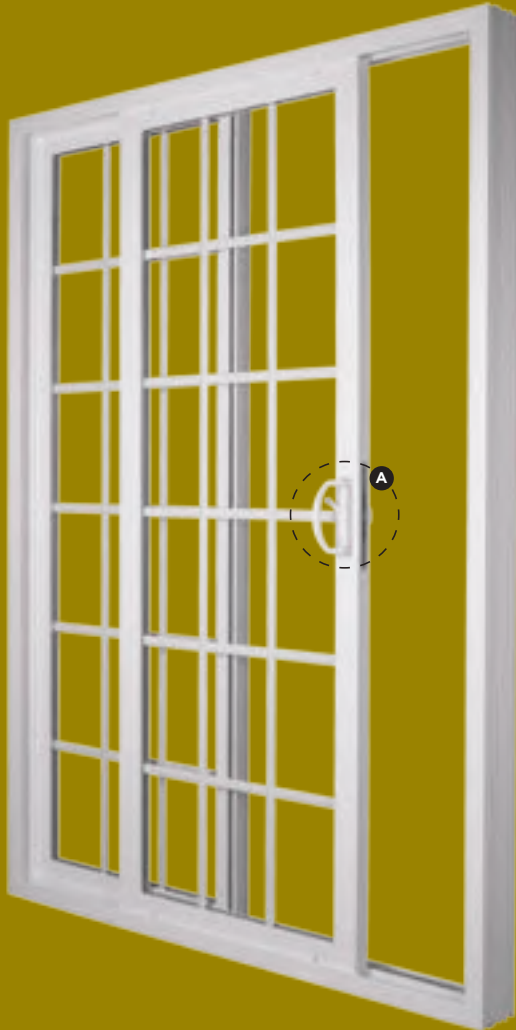
### External Knee Braces

- 1 Provides exterior support for garden windows<sup>3</sup>
- 2 Available in white and sand
- 3 Pre-finished to be maintenance free



## 460 SLIDING PATIO DOOR

**460 SLIDING PATIO DOORS** are easy to open yet seal so tightly you'll never have to worry about drafts or leaks again. Maintenance free and weather resistant, these hard-working doors are as attractive as they are efficient. Install them and let the good times roll.



## FEATURES

- No fin for easy replacement application
- Maintenance-free multi-chamber New Generation PVC vinyl construction with fusion welded corners for durability, weather-tight performance and beauty
- Smooth gliding rollers ensure effortless operation
- Energy-efficient Warm Edge insulating tempered glass for enhanced energy performance; optional Warm Edge+ spacer system for enhanced performance
- Reversible panels — even after installation
- 4 1/4" frame depth with heavy vinyl walls for strength and stability
- Low-point, high-pressure weep system pulls water out of the frame



A

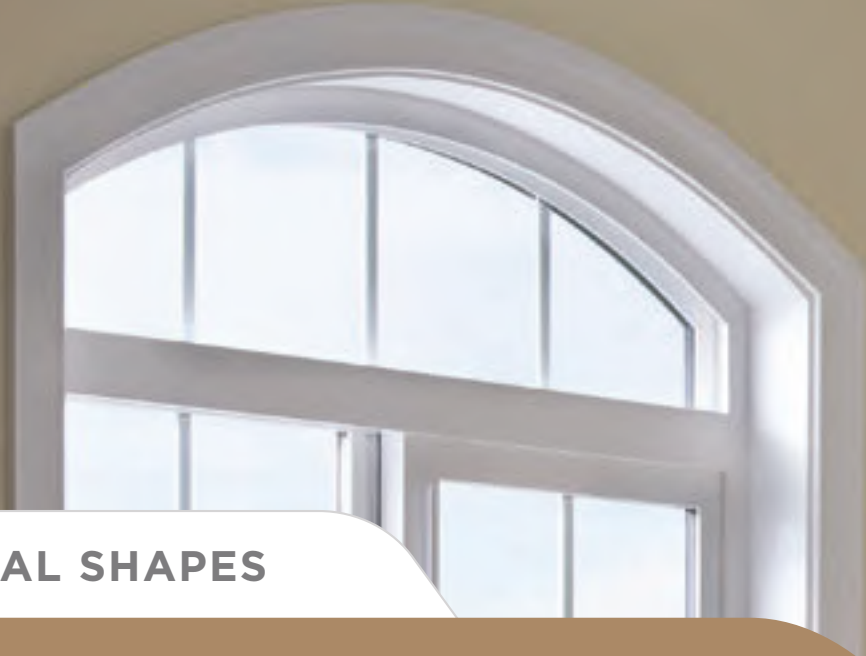


Standard color-coordinated exterior handle

A



Standard color-coordinated interior handle



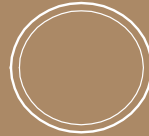
## ARCHITECTURAL SHAPES



Half Round



Extended Half Round



Full Round



Quarter Round



Extended Quarter Round



Eyebrow



Extended Eyebrow



Quarter Eyebrow



Extended Quarter Eyebrow



Ellipse



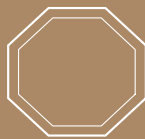
Full Oval



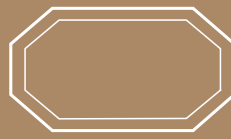
Gothic Eyebrow



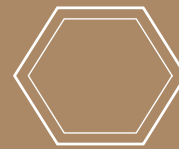
Extended Gothic



Octagon



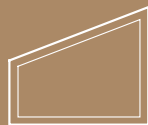
Extended Octagon



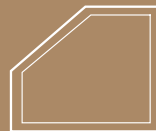
Hexagon



Extended Hexagon



Trapezoid Left or Right



Clipped Trapezoid



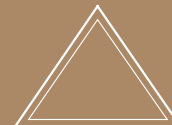
Pentagon



Pentagon Equilateral



Right Angle Triangle



Isosceles Triangle

Availability of specific shapes limited by size of unit and frame type. For your specific application consult with your Ply Gem Windows sales representative.

## GLASS OPTIONS

- HP GLASS  
(standard)
- HPSC Glass
- Tinted<sup>1</sup>
- Obscure<sup>2</sup>
- Sound Package  
(off-set glass)
- Tempered<sup>3</sup>
- Laminated  
(security)

**NOTE:** See page 6 for explanation of glass packages.

1. Consult your Ply Gem representative for a complete list of tinted glass types.
2. Consult your Ply Gem representative for a complete list of obscure glass types.
3. Tempered glass standard on patio doors.

## GRILLE OPTIONS

GBG = Grilles-between-the-glass



5/8" Flat GBG

## FRAME OPTIONS

Single wall flush fin, no fin, 1" and 1<sup>3</sup>/<sub>8</sub>" nail fin setback with stucco key, or 1 3/8" nail fin setback J-Channel; Not all frame options available for all styles. Consult your Ply Gem Representative.

## COLOR OPTIONS

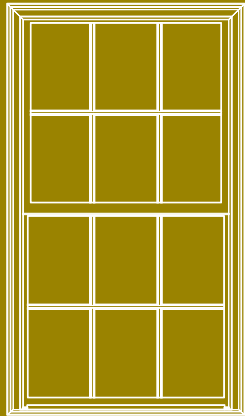


Colors are reproduced as accurately as printer technology allows. Please see your authorized Ply Gem Windows representative for actual samples.

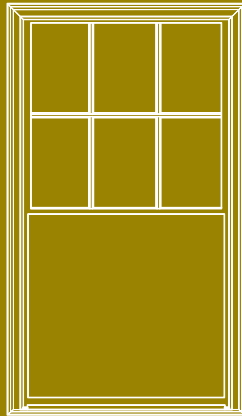
## SCREEN OPTIONS

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

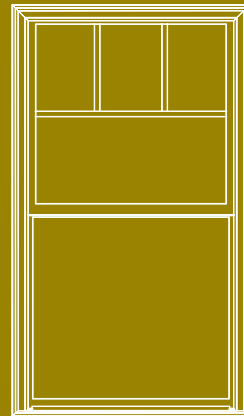
# STANDARD GRILLE PATTERNS



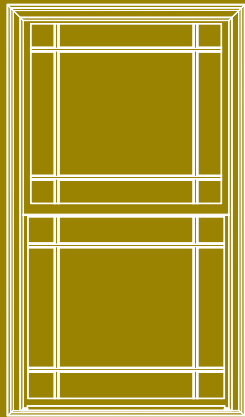
Colonial



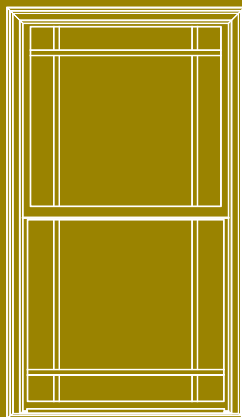
Half Colonial  
(shown on casement)



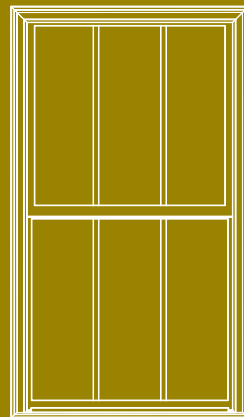
Plaza



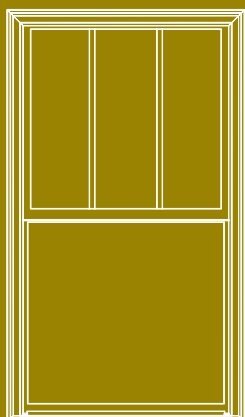
Prairie



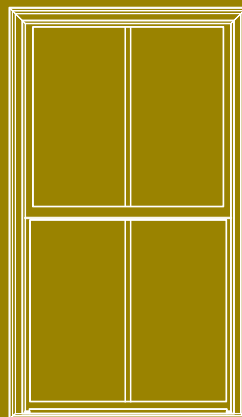
Perimeter Prairie



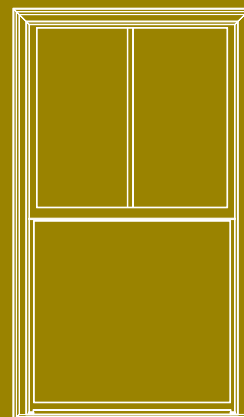
Three over Three



Three over One



Two over Two



Two over One

Consult your Ply Gem representative for optional grille patterns

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



## CUSTOM SIZING

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



## WARM EDGE TECHNOLOGY

Standard Warm Edge glass spacer system within Ply Gem 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.



## TRADITIONAL SIZING

Ply Gem windows and patio doors can be ordered in industry standard sizes used for vinyl windows which is ideal for new construction projects or replacing standard size units quickly and easily.



## WARM EDGE+ TECHNOLOGY

Optional Warm Edge Plus 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.



## DP CERTIFIED

Ply Gem windows are tested to meet the air, water and structure requirements of AAMA/WDMA 101/I.S.2. With advanced level engineering and top-notch innovation, you are assured of the most durable, high-performing windows available nationwide.



Ply Gem, the Ply Gem logo, the "Building Products. Building Success." slogan, Ply Gem Windows and the Ply Gem Windows logo are trademarks of Ply Gem Industries, Inc. ENERGY STAR® is a registered trademark of the U.S. Environmental Protection Agency. ©2015 Ply Gem Industries, Inc.

For more information, call 888-9PLYGEM.