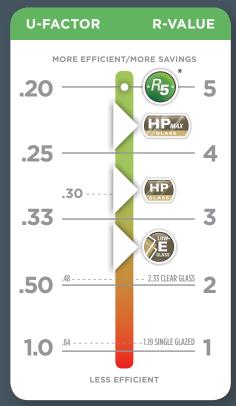


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## PERFORMANCE COMPARISON



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.

PMAX

#### **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 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 elevation applications.

Low-E — One lite of Low-E.

**Low-E**sc — 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**<sub>MAX</sub><sup>‡</sup> − Triple-pane with two lites of Low-E with an interior glass substrate

Low-E3<sub>MAX</sub><sup>‡</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 elevation 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 (sc) 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.

## HPMAX GLASS PACKAGES (triple-pane)

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

**HP3**мах — 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-5¹ windows are highly insulating windows with a whole-window R-Value of 5 (a U-Factor of around 0.2). Most of our Premium 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® 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>&</sup>lt;sup>1</sup>R-5 = U-Factor of .22 or lower for operating units; .20 for fixed units

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

## PREMIUM SERIES REPLACEMENT





#### **OVERALL FEATURES**

- Pinch fusion-welding construction creates a solid, one-piece unit with no excess variance for long-term durability
- 2 Heavy-duty weatherstripping provides a barrier to air and water, saving energy dollars
- **3** Sloped sill with unique SilLock design ensures natural water runoff
- 4 Premium Series comes standard with the vinyl mainframe filled with patented R-Core® insulation (pre-expanded high-density solid polyurethane), the same type used in many refrigerator/freezer doors; for enhanced performance Premium Series Energy Package options feature the mainframe and sash filled with patented R-Core
- 5 Interforce II™ reinforced meeting rails on double hung and sliding windows with Premium Series Energy Package options feature internal structural fiberglass extrusions for reinforcement along with an integral interlocking system, providing unsurpassed strength and durability without conduction
- 6 Glass systems with Warm Edge (standard) or Warm Edge+ (optional upgrade) spacer systems and HP or HPMAX glass package options (see page 6 for details) offer increased energyefficiency
- 7 New Generation uiPVC vinyl never needs painting or caulking and resists conducting











Fusion-welded strength

В

R-Core® insulated frames and sash



Interforce II™ fiberglassreinforced sash meeting rails



Warm Edge spacer (standard)

# DESIGN PRESSURE (DP) RATINGS



Ply Gem Premium 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 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.

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

#### **ENERGY PACKAGE UPGRADE OPTIONS**



The Energy Package Upgrade options include the HP Glass Package (see page 6 for glass package options) of your choice with the addition of R-Core to the sash and frame. R-Core is a patented process utilizing pre-formed polyurethane insulation. In addition, Interforce II™ fiberglass reinforcement is placed in the meeting rails of double hung and slide windows providing DP50 and DP45 product ratings. The Energy Package options provide unsurpassed strength, durability and energy-efficiency.

### LIMITED LIFETIME WARRANTY

#### One of Life's Few Guarantees.

Life comes with few guarantees. Fortunately, Premium 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.

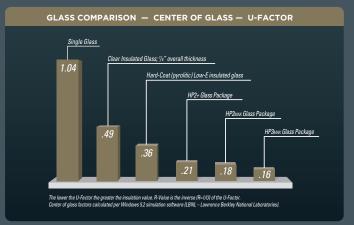
We believe so strongly in the durability of our windows that we back each window unit with our hassle-free Limited Lifetime Warranty. Lifetime means your windows are protected under the warranty for as long as you live in your home. And your warranty is transferable to the next homeowner, helping you 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?



#### **ENERGY EFFICIENCY**





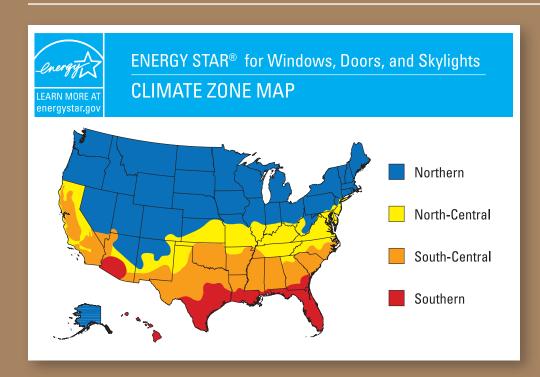
#### **ENERGY TAX CREDIT**



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.energstar.gov or www.irs.gov. Consumers should consult with their tax adviser for further guidance.



Ply Gem Replacement
Contractor 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 CONTRACTOR SERIES WINDOWS HAVE BEEN GREEN APPROVED BY THE NAHB RESEARCH CENTER.

This means you can be assured that Ply Gem Contractor Series windows comply with specific green practice criteria in the National Green Building Standard. Visit www.GreenApprovedProducts.com for more details.



## **DOUBLE HUNG WINDOW**









- 2 Meeting rails have integral interlock for a weather-tight
- mainframe for protection against air, dust and moisture 4 7/8" IGU glass systems offer energy-efficient Warm Edge standard and optional Warm Edge+ for

3 Fin and pile weatherstripping on both sash and



5 Triple weatherstripped check rail and sash ensures long-term performance



6 Ventilation limit latches for added security when windows are partially open; optional child safety vent



7 Interforce II™ fiberglass reinforcement in the meeting rails for unsurpassed strength and durability with Premium Series Energy Package option

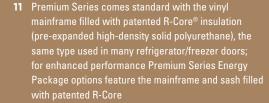




Top and bottom lift rail for ease of operation and both sash tilt-in for easy and safe cleaning of the exterior of window



10 Equal sight lines for traditional wood window aesthetics



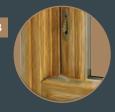


- 13 Comes standard with aluminum extruded half screen with fiberglass mesh



LIFETIME

Flush-mounted cam-action locks



Ventilation limit latches



Interforce II™ fiberglassreinforced sash meeting rails



Ergonomically designed tilt-latch for ease of cleaning



Top and bottom lift rail for ease of operation



Optional child safety vent latch



## **SLIDING WINDOW**











#### **FEATURES**





- Integral interlock with Interforce II™ reinforces the meeting rails for unsurpassed strength, warmth and durability with Premium Series Energy Package upgrade
- Full-perimeter, high-performance weatherstripping provides maximum energy-efficiency
- 4 7/8" IGU glass systems offer energy-efficient Warm Edge standard
- 5 Fully fusion-welded New Generation uiPVC vinyl sash and mainframe for extra strength and enduring beauty featuring a sloped sill to keep windows dry while ensuring a weather-tight seal at sill
- 6 Ventilation limit latch for added security when windows are partially open; optional child safety latch available











Flush-mounted cam-action locks



Left and right pull rails for ease of operation



Optional child safety vent latch



Ventilation limit latches



Interforce II™ fiberglassreinforced sash meeting rails



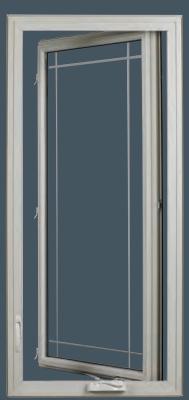
## **CASEMENT & AWNING WINDOW**

















- 1 Premium Series comes standard with the vinyl mainframe filled with patented R-Core® insulation (pre-expanded high-density solid polyurethane), the same type used in many refrigerator/freezer doors; for enhanced performance Premium Series Energy Package options feature the mainframe and sash filled with patented R-Core
- 2 Fusion-welded frames and sash stay strong and in place for a lifetime of dependable performance
- 3 Easy-to-reach multi-point locking system provides increased security with a single conveniently located handle
- 4 Folding/nested operating handle standard
- 5 New Generation uiPVC vinyl never needs painting or caulking and resists conducting heat and cold
- 6 Aluminum extruded screens with low profile retention clips
- 7 Upgrade casement windows with the optional Premium Series stainless steel hardware for protection against corrosion in coastal areas; this option includes the operator mechanism arms, sash brackets, hinges, snubbers, tiebars and keepers
- 8 7/8" IGU glass systems offer energy-efficient
  Warm Edge standard and optional Warm Edge+
  for improved performance













Upgrade casement windows with the optional coastal hardware package.





Fusion-welded strength



Folding/nested operator handle





Matching lock features a sleek operating design



## **BAY & BOW WINDOW**











#### **FEATURES**

- 2 Fusion-welded New Generation uiPVC vinyl frames and sash for extra strength, dependable performance and enduring beauty
- **3** Available in casement or double hung styles
- 4 Heavy-duty weatherstripping ensures a tighter seal
- **5** Bays & bows with double hung or casement style
- **6** For bay or bow configurations with casement style windows, multi-point locking system secures the window in several locations simultaneously with a single handle
- Pre-finished interiors are sealed for beauty and durability and available in golden oak, natural oak and colonial cherry
- 8 Laminated interiors available in three woodgrains and two solid colors: golden oak, natural oak, colonial cherry, white and beige











## **Pre-finished or Laminated Interior Options**







#### **Solid Surface Seat Options**







Sandstone



Dusk





Dark Brown

## **Support and Insulation Systems**

#### (2) Cable Kits Standard

#### **External Knee Braces**

- 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

#### **Superior Insulated Seats**

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



<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.



## **GARDEN WINDOW**







## **Pre-finished Laminated Seats, Jambs and Heads** are Available in White and Beige



#### **Solid Surface Seat Color Options**





Dusk





Dark Brown

Add custom style to your garden window (available for bays/bows also) by adding a solid surface seat available in six colors

#### **FEATURES**

- New Generation uiPVC vinyl never needs painting or caulking and resists conducting heat and cold
- 2 Tempered glass interior shelf adds space for plants (standard on units under 50")
- **3** Operating trapezoid casement side panels feature easy-to-operate, easy-to-reach, multi-point locking system
- 4 Fusion-welded frames and sash for extra strength
- 5 Add custom style to your garden window (available for bays/bows also) by adding a solid surface seat available in six colors
- 6 Available in white, beige or earthtone color options on exterior and white on interior
- 7 Sloped top lite is only available with a dual pane insulated glass unit







## **Support and Insulation Systems**

#### **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

#### **Superior Insulated Seats**

- 1 Insulated with high-density polystyrene insulating board combined with a ¾" exterior grade plywood surface - 3" overall thickness
- 2 R-Value of 7.6 six times that of typical noninsulated bay/bow windows
- 3 Available in white or beige (earthtone units are clad with brown coil)



<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.



## **SLIDING PATIO DOOR**













Oversized tandem steel rollers for smooth, effortless operation. Access to adjustment screw for ease of panel alignment through exterior face of panel eliminates unsightly screw caps on the interior and ensures proper operation.

#### **FEATURES**

- 1 "IGU glass systems offer energy-efficient Warm Edge standard and optional Warm Edge+ for improved performance
- 2 Custom-fit interlock system provides extra protection against air infiltration for enhanced energy performance
- 3 Our doors glide on oversized tandem steel rollers and provide smooth and effortless operation
- 4 A heavy-duty vinyl sill with a stainless steel roller guide delivers superior strength, resists frost and condensation
- 5 Anti-take-out device in the head of every door makes it virtually impossible to remove the active panel even with the rollers in their lowest adjustment position, providing comfort and peace of mind
- 6 While Ply Gem Replacement Series patio doors come standard with a rugged locking system, for optimum security, choose our optional dual-point lock and/or our optional footbolt lock with vent latch position
- 7 Available on Ply Gem Replacement Series patio doors, optional pet-resistant screen is seven times stronger than standard insect screening and offers excellent outward visibility, is made from vinyl-coated polyester and is not harmful to pets
- 8 Constructed of New Generation uiPVC vinyl for enduring beauty with fusion-welded panels for added strength and durability









## **Optional Solar Blinds or Shades Between the Glass**

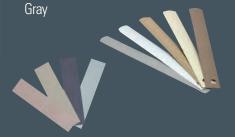
#### **Solar Blind Colors:**

Gray White Gold Almond Tan

Available in lift and tilt operation

#### **Solar Shade Colors:**

INTERIOR EXTERIOR Taupe Reflective Almond Charcoal





Optional blinds or solar shade with lift operation.



Multi-position optional footbolt



Exterior keyed lock in optional brass (brass is standard on woodgrains and two-tone options)



optional brass (brass is standard on woodgrains and two-tone options)



Optional dual-point lock available with keyed metallic finish handle or with nonkeyed standard handle

#### **Standard**



WHITE BEIGE

## **Optional Handle Colors**



SATIN CHROME

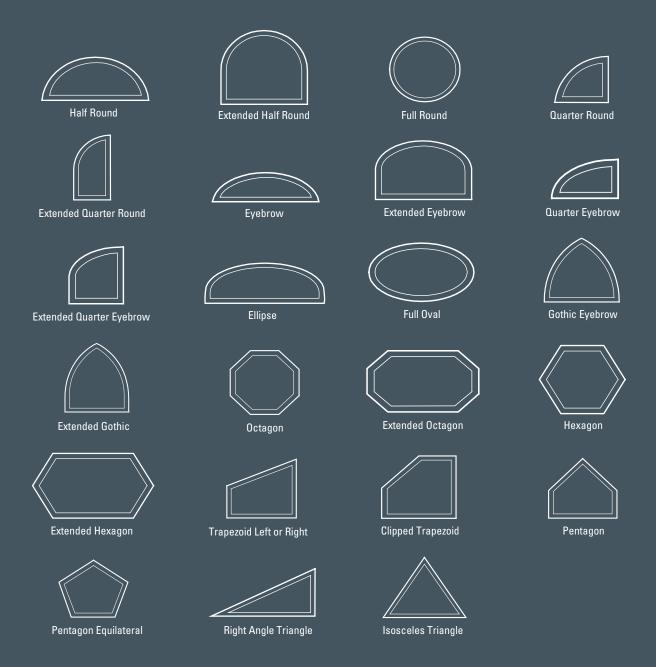


OIL-RUBBED

CLASSIC **BRASS** 



## **ARCHITECTURAL SHAPES**



## **CUSTOMIZE YOUR VIEW**

From the road and from within your home, windows tell a story. Every choice adds distinction: from the woodgrain or solid colors that surround each window to the grilles or subtle elegance of Regal V-grooved cut glass. Ultimately, the story of your home is what you see through your eyes.

Premium Windows feature our two-color vinyl extrusion process allowing you design flexibility to match your exterior style with an easy to coordinate white interior.

Now share your Premium Windows with the world.



EXTERIOR

WHITE BEIGE EARTHTONE

# COLONIAL CHERRY WOODGRAIN



NATURAL OAK WOODGRAIN



EXTERIOR

WHITE BEIGE



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 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 SCREEN**

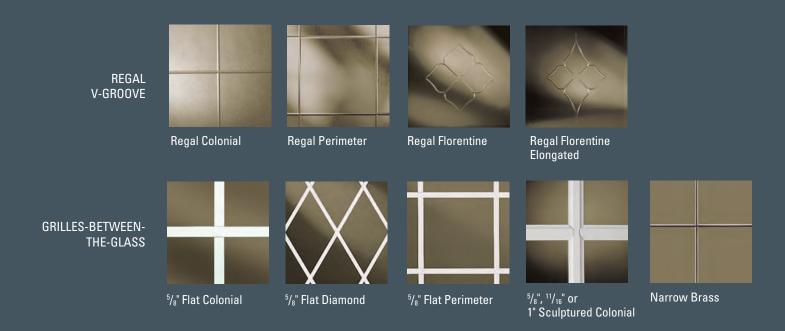
Blocks 70% of the sun's heat and glare. Keeps living spaces cooler, reduces energy costs and protects furnishings against fading.

#### **OPTIMAL VIEWING SCREEN**

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

#### PET-RESISTANT SCREEN<sup>1</sup>

Strong vinyl-coated polyester provides a screen seven times stronger than traditional insect screening with excellent outward visibility.



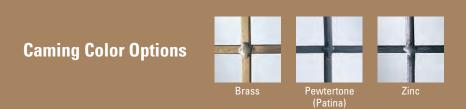
## **CUSTOM DESIGNER WINDOW GLASS**

## Brighten your outlook with decorative options.

How do you make an endearing home absolutely exquisite? Add a spectacular accent, with custom designer glass. Designed and crafted by hand as fine decorative glass has always been, Premium Windows custom designer glass brings invaluable character and distinction to your home.



Shown above is a small selection of the Custom Designer Window Glass options available



## **GLASS OPTIONS**

- Low-E
- Low-E<sup>SC</sup>
- Low-E2
- Low-E2<sup>SC</sup>
- Low-E2MAX\*
- Low-E3MAX\*
- HP
- HPsc
- HP2
- HP2+

- HP2*MAX*\*
- HP3*MAX*\*
- Tinted
- Double Strength glass
- Obscure

- Glue Chip Obscure
- Tempered
- Laminated (security)
- Sound Package



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.



<sup>\*</sup> See page 6 for explanation of glass packages. Low-E2MAX, Low-E3MAX, HP2MAX and HP3MAX 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.

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.



#### **CUSTOM SIZING**

Ply Gem Premium Series Replacement windows and patio doors can be ordered in \(^{1}\)2 inch increments to accommodate any replacement application, providing a perfect fit and minimizing installation time and special trimming requirements.



#### R-CORE® INSULATION

The vinyl mainframes of Ply Gem Premium Series windows are filled with patented \*† R-Core\*\* insulation (pre-expanded high-density solid polyurethane), the same type used in many refrigerator/freezer doors. It prevents voids and settling and results in even distribution of the maximum insulating barrier. Premium Series windows with Energy Package (EP – see page 9 for details) upgrades feature R-Core in both the frame and sash for the ultimate in thermal performance.

†U.S. Patent Number: 4,516,356



#### **DP CERTIFIED**

Ply Gem Premium 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 Press (DP) rating of 35 (double hung) to as high as DP70 on our operating casement (gateway size 24" x 60"). With advanced-level engineering and top-notch innovation, you are assured of the most durable, high-performing windows available nationwide.



#### NEW GENERATION VINYL

Wood or metal windows can stick when they swell or deteriorate from corrosion. New Generation Vinyl withstands harsh weather as well as wear and tear better. Ply Gem Premium Series Replacement windows are constructed with rugged, maintenance-free New Generation uiPVC. 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.



#### INTERFORCE II™

Our Premium windows feature Interforce  $\Pi^{\mathbb{M}}$  internal fiberglass reinforced meeting rails for unsurpassed strength and durability.



#### WARM EDGE TECHNOLOGY

The Warm Edge glass spacer system within Ply Gem Premium 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.



#### PINCH FUSION WELDING

Ply Gem Premium 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.



#### 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.



#### SIL LOCK

Premium 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.



#### COASTAL HARDWARE

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

## PREMIUM SERIES REPLACEMENT

**PREMIUM SERIES REPLACEMENT** windows are available in double hung, sliding, casement & awning, garden, bay & bow and sliding patio doors. A number of grilles, glass packages and color options as well as designer glass are also available.