

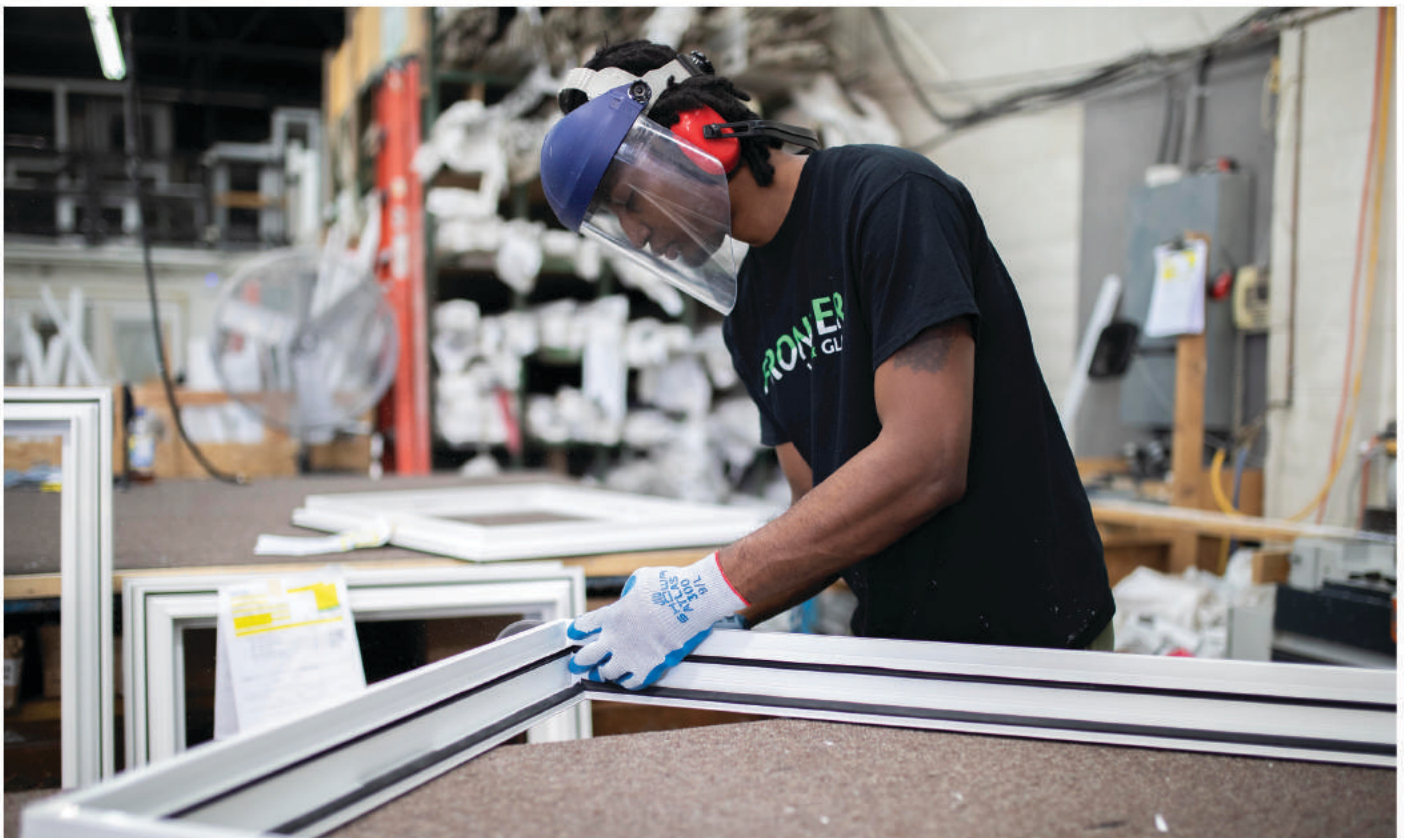
# PVC WINDOWS

PRODUCT GUIDE





**FVG**  
FRONTIER VINYL & GLASS





## WHY FRONTIER

Frontier Vinyl & Glass is a local company that makes all our windows right here in Saskatoon. Being a local company, we understand the harsh weather we get on the prairies.

That's why all of our components, all the way down to the last screw are carefully chosen and tested to withstand whatever mother nature can throw at us. Since 1999, we have been a supplier and manufacturer of hand-made, energy efficient PVC windows.

Whether you're renovating your home or building a new one, we can customize a window package to suit your needs. Using the highest quality materials, we offer the best products for competitive prices.

In addition to windows, Frontier Vinyl & Glass also offers interior and exterior doors, glass railing, and glass for showers and cabinets. Stop in our showroom today or contact us to schedule a consultation and estimate.

Frontier Vinyl & Glass is owned and operated by Darren Zerebeski and Andrew Cook. Together, we bring over 40 years of experience in the glass industry to the business, including residential and commercial. Frontier Vinyl & Glass manufactures high quality, custom PVC windows. Both of us were born and raised in Saskatoon. We have a strong commitment to supporting local businesses. We strive for excellence and customer satisfaction



# WINDOWS



**FVG**  
FRONTIER VINYL & GLASS





## PVC WINDOWS

Our PVC windows virtually don't have any service issues, require minimal maintenance during their lifetime, and you can be rest assured you will never have to paint your windows again. We at Frontier truly believe that our pvc windows offer the best practical and economical option for most homeowners.

Quality is maintained by using all metal Truth Hardware, energy efficient sealed units, and highest grade sealants and materials. All windows have an engineered weep hole design for proper drainage. Windows can be built with a custom jamb to fit any wall size. We also offer two sizes of brickmould or nailing flange.



# WINDOWS

## YOUR OPERATING STYLE

### SINGLE HUNG



Your rooms will come to life with our single hung windows. They blend the charm of a traditional look with today's innovative technology, making them timeless as well as energy efficient. Our single hung windows are easy to operate and compatible with most home styles. This type of window has spring balances built in for easy, quiet operation and to hold the sash open at any height. Choose from multiple grille types in an array of colors.

### FIXED



Fixed windows are similar in design to a casement window, but they do not open. This type of window is suitable for areas of the home where you want to let light in, but don't need air to come in. These work well in all areas of the house and can be designed with one or several panels or combined with most other window types.

### PICTURE



Picture windows are also available, which are installed in living rooms, formal dining rooms, and other areas of the front of the home. They are non-opening and can have one large panel or several smaller adjacent panels, creating a customized design according to your preferences. Our team can design any size window and it can extend to any height, even floor to ceiling. Make your picture window the centerpiece of your home's exterior with a high quality product from Frontier Vinyl & Glass.

### CASEMENT



Casement windows are the ultimate weather barrier, offering the best protection against wind, rain, cold, and heat. They are maintenance-free for life and have an attractive design with a watertight and airtight surface and features a multi-point locking system with a folding handle. You won't experience any leaks or moisture with these windows, and they are also draft and energy loss free. Made with multiple air chambers, they provide excellent sound reduction and various types of glazing can be applied, from double to triple with or without low-E glazing. These windows are the ultimate investment for adding value and comfort to your home.

### AWNING



Awning windows from Frontier Vinyl and Glass crank outward to bring in warm breezes and seal tight to keep out cold, wet weather. If fresh air and light are a priority in your home, this type of window provides that. The awning style is a popular choice in kitchens and features a multi-point locking system for larger sized openings.

### BAY & BOW



Another type of window predominately displayed in the living room, bay windows are often made of three window sections of varying sizes, with a larger section in the middle surrounding by two small windows. Bow windows have four to six window panels that are all the same size with a gradually curved look and feel. Bow windows can be fixed, but are often installed with casement, or single hung designs, meaning you'll be able to open several sections of the bow window for ventilation.

### HOPPER



Hopper windows from Frontier Vinyl & Glass in Saskatoon are usually installed for basements, featuring 2 single lock points and opening to the inside. These have a basic rectangular shape with a white frame and an open window panel. They are quick and easy to install and keep drafts out of basement rooms.

### SLIDER



Frontier Vinyl and Glass also offers slider windows which offer an unobstructed view of your yard. They are also energy efficient and virtually maintenance-free. Available in 2 or 3-lite configurations, these windows operate effortlessly, providing ventilation and a design that works well with contemporary style homes. The slider saves space and is optimized for strength and thermal efficiency.

**Frontier**  
Vinyl and  
Glass  
windows  
are made  
of high  
quality  
virgin PVC.

# WINDOWS



## GLASS OPTIONS

### DUAL GLAZING

Our dual glazing consists of two panes of glass separated by a spacer, which creates a sealed air space.

Double glazed windows are an ideal energy efficient choice with the added benefit of minimising noise. The sealed air gap between the two panes acts as an added layer of insulation. This added thermal resistance reduces the amount of heat escaping in winter and keeps your home at a more comfortable temperature. Double glazing has the reverse effect in summer, preventing unwanted heat from coming into the home. This extra insulation lessens your reliance on artificial heaters and air conditioners and can ultimately reduce your energy costs.

### TRIPLE GLAZING

Triple glazing from Frontier Vinyl & Glass consists of three panes of glass separated by spacers, which creates two sealed air spaces. It offers a better insulating value than dual glazing and decreases the outside noise level. Triple pane windows are an exclusive step up from double glazed windows. With the difference in cost only being about 10%, the upgrade to triple pane is a popular choice for most home owners. The reason why people are much more attracted to choosing triple pane windows is because there is a great difference in performance between a double and triple pane window.



# WINDOWS



## CUSTOMIZE YOUR WINDOW



## One-of-a-Kind Window

When you'd like a custom built window or door not found in our standard, made-to-order offering, FRONTIER makes it possible.

Extra-tall to  
extra-wide  
sizes.

Unique  
shapes.

Curved or  
angled frames.

Intricate grille  
designs.

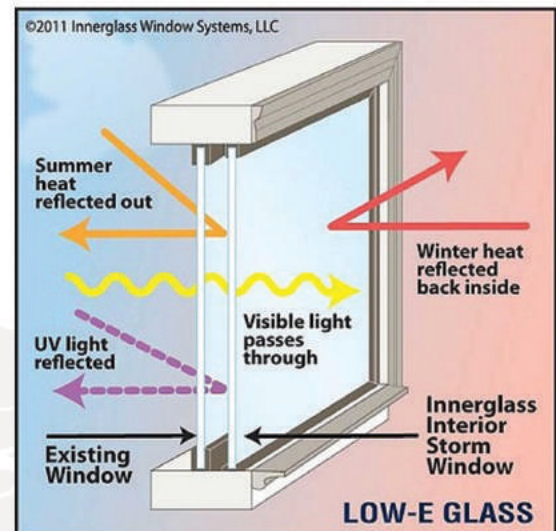
Reflective or  
patterned glass

## CHOOSE YOUR GLASS

### SOLARBAN® 60 Solar Control Low-E Glass

#### The original environmental performer

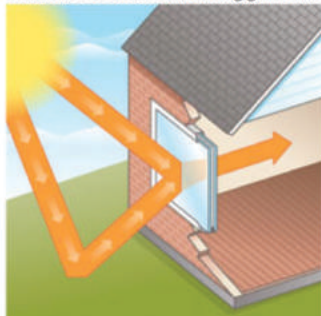
With its ability to block 62 percent of total solar energy while allowing 70 percent of visible light to pass through, PPG's Solarban 60 glass can help you achieve a building design that provides year-round comfort with heating and cooling cost savings. In addition to functioning as a clear glass, Solarban 60 glass also can be combined in insulating glass units (IGUs) with an outboard lite of PPG tinted or reflective-tinted glass to increase aesthetic and performance options.



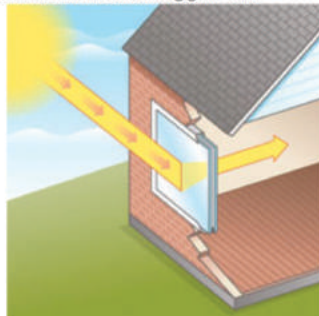
	Standard Insulating Glass Unit	Solarban® 60 Insulating Glass Unit	Benefits
<b>Solar Heat Gain Coefficient</b>	0.76	0.40	Transmits almost 50% less solar energy to help keep homes cooler in the summer and reduce cooling energy costs
<b>Visible Light Transmittance</b>	81%	72%	Allows high level of visible light transmittance and exterior clear glass appearance
<b>U-Value</b>	0.48	0.25	Insulates as much as 50% better than standard clear insulating glass
<b>Ultraviolet Energy</b>	59%	20%	Blocks 80% of UV energy, a common contributor to fabrics, carpet and furniture fading
<b>Damage Weighted Transmittance *</b>	0.74	0.55	Minimizes the total potential for fading damage by 26%

## Glass Comparison

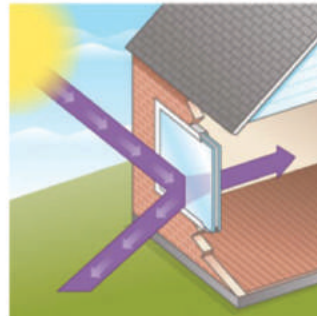
Solarban® 60 double insulating glass unit vs. standard clear insulating glass unit



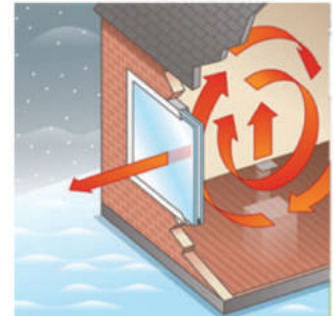
Solar Heat Gain Coefficient



Visible Light



Ultraviolet Energy



Winter Furnace Heat

# SOLARBAN® 60

Solar Control Low-e Glass



Comfort in any Climate

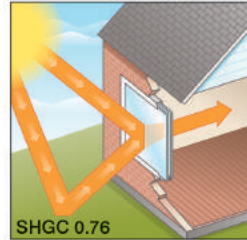
## Double-IGU Features/Benefits Comparison

### Cooler in Summer

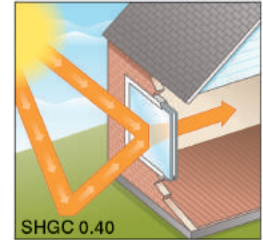
The total solar energy transmitted through **Solarban 60 (2)** glass is almost **50%** less than that transmitted by standard clear insulating glass.

- Lower SHGC numbers mean less summer heat
- Keeps interiors cooler
- Helps reduce cooling energy costs

Standard  
Clear Insulating Glass



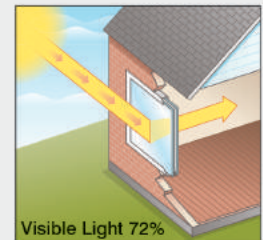
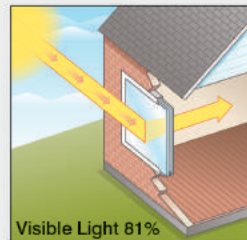
Solarban 60 (2)  
Insulating Glass



### Transmits Visible Light/Appearance

The window with **Solarban 60 (2)** glass transmits almost **90%** as much desirable visible light as standard clear insulating glass.

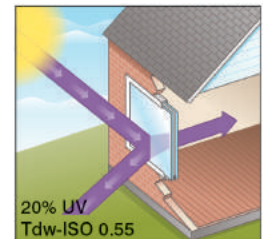
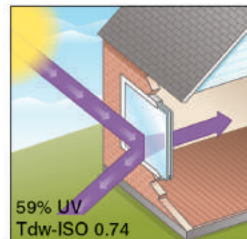
- Provides exterior appearance similar to clear glass
- Provides glare control in bright, sunny climates



### Fading Factors

While **Solarban 60 (2)** glass blocks **80%** of damaging UV energy, it also blocks other contributors to fading — in all, **26%** better than standard clear insulating glass.

- Helps protect interior furnishings, fabrics and carpets from fading



### Warmer in Winter

The winter nighttime U-value (insulating value) of **Solarban 60 (2)** glass is almost **50%** better than standard clear insulating glass.

- Lower U-values mean higher performance
- Reduces heat furnace loss
- Helps reduce heating energy costs



Note: Tdw-ISO represents potential fading damage caused by both UV and visible light. It is considered by the U.S. Department of Energy and the International Standards Organization (ISO) to be a more accurate barometer of fade resistance than UV transmittance alone. All comparisons are center of glass based on an insulating unit containing 3/4" insulating units, two 1/8" (3mm) glass lites and a 1/2" (12mm) air-filled space for the standard clear insulating glass and 90% argon gas-filled space for the Solarban® 60 insulating glass. Actual glass performance may differ due to glass thickness, gas fill and glass to frame ratio.

Solar Heat Gain Coefficient (SHGC) measures how well a window blocks (or shades) the heat from sunlight. SHGC is the fraction of solar radiation transmitted through a window, as well as the amount that is absorbed by the glass and reradiated to the interior. Figures may vary due to manufacturing tolerances. All tabulated data are based on the National Fenestration Rating Council (NFRC) methodology, using the Lawrence Berkeley National Laboratory's Window 7.3 software.

# SOLARBAN® 60

Solar Control Low-e Glass



Comfort in any Climate

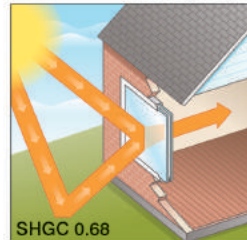
## Triple-IGU Features/Benefits Comparison

### Cooler in Summer

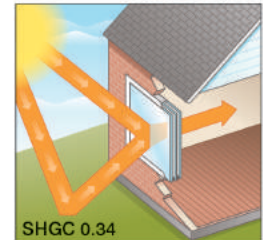
The total solar energy transmitted through **Solarban 60 (2)(5)** glass is **50%** less than that transmitted by standard clear insulating glass.

- Lower SHGC numbers mean less summer heat
- Keeps interiors cooler
- Helps reduce cooling energy costs

Standard  
Clear Insulating Glass



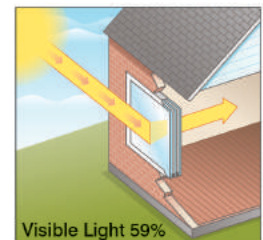
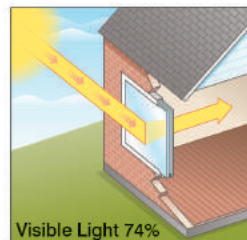
Solarban 60 (2)(5)  
Insulating Glass



### Transmits Visible Light/Appearance

A window with **Solarban 60 (2)(5)** glass transmits almost **80%** as much desirable visible light as standard clear insulating glass.

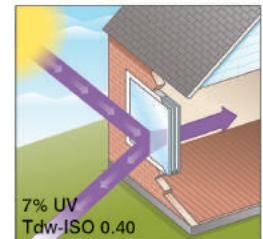
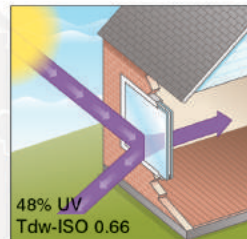
- Provides exterior appearance similar to clear glass
- Provides glare control in bright, sunny climates



### Fading Factors

While **Solarban 60 (2)(5)** glass blocks **93%** of damaging UV energy, it also blocks other contributors to fading — in all, **39%** better than standard clear insulating glass.

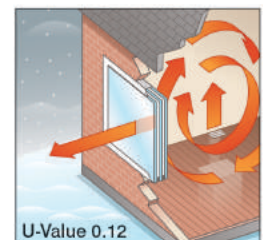
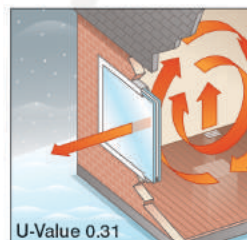
- Helps protect interior furnishings, fabrics and carpets from fading



### Warmer in Winter

The winter nighttime U-value (insulating value) of **Solarban 60 (2)(5)** glass is more than **61%** better than standard clear insulating glass.

- Lower U-values mean higher performance
- Reduces furnace heat loss
- Helps reduce heating energy costs



Note: Tdw-ISO represents potential fading damage caused by both UV and visible light. It is considered by the U.S. Department of Energy and the International Standards Organization (ISO) to be a more accurate barometer of fade resistance than UV transmittance alone. All comparisons are center-of-glass based on a 1 3/8" (overall dimension) insulating unit containing three 1/8" (3mm) glass lites and two 1/2" (12mm) air-filled spaces for the standard clear insulating glass and 90% argon gas-filled spaces for the Solarban® 60 insulating glass. Actual glass performance may differ due to glass thickness, gas fill and glass to frame ratio.

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# WINDOWS

## Additional Glass Options

For privacy or style, decorative glass gives you a whole range of options. With many different options to choose from, Frontier has all your visions covered from classic to contemporary. Patterned glass allows maximum light in while maintaining your chosen level of privacy. Patterned glass can be added to any of our window configurations.

ARCTIC



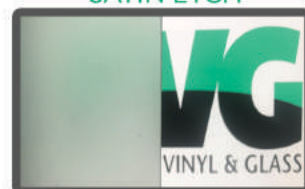
NARROW REED



FLUTELITE



SATIN ETCH



PINHEAD



GLUECHIP



RAIN



CROSS REEDED



SPARKLE



Another option is reflective or tinted glass. They offer aesthetic and performance benefits. In fact, some reflective glasses can provide solar control benefits like a Low-E coating.

**GREY**

**SOLARCOOL  
BRONZE**

**BRONZE**

**SOLARCOOL  
GREY**

**GRLITE#14**



WINDOWS



**FVG**  
FRONTIER VINYL & GLASS



# Options

## WINDOWS

**Brickmould:** Attached to the window and covering the gap between your home's exterior and the window frame, it allows you to change out your current windows without disturbing the exterior of your home.



Enhance your home's curb appeal by installing exterior brickmould. Choose from different colours and styles to add more prominence and beauty to your windows.

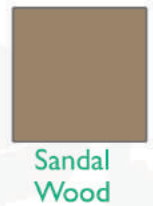
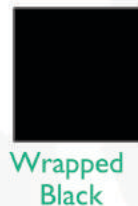
Windows can be built with a custom jamb to fit any wall size. We also offer two sizes of brickmould or nailing flange.



### Brickmould Colour Options:



### Frame Colour Options:



# WINDOWS

## OPTIONS

Internal Grilles are installed between panes of glass, leaving the exposed interior and exterior glass surfaces smooth and easy to clean. These grilles provide that beautiful look of divided light, while being maintenance free.



### GRILLE PATTERNS:



Single Top Ladder



Double Top Ladder



Rectangular



Perimeter



Empress



Double Perimeter

### INTERNAL GRILLE WIDTHS:



5/16"



5/8"



Round

### INTERNAL GRILLE COLOURS:



Pewter



Black



Bronze



Clear Anodized



White



Sandal Wood



Polished Gold



Brushed Brass



Brushed Gold

### Hardware Colours



WHITE



DESERT SAND



SANDAL WOOD

### STYLES:



Awning



Casement



Picture



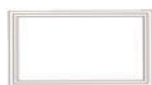
Fixed



Bay



Bow



Hopper



Single Hung



Slider





**FRONTIER VINYL & GLASS**

**WE ARE YOUR LOCAL MANUFACTURER OF THE HIGHEST QUALITY PVC WINDOWS USING ONLY  
THE BEST BRANDS AVAILABLE IN THE INDUSTRY**





# FVG

FRONTIER VINYL & GLASS



# Warranty Information:

Frontier Vinyl & Glass stands by its products. If any window shows any defects in workmanship or material, we will (at our option), repair or replace the original product or part as long as it has resulted in a substantial deficiency in operation or usage as determined by Frontier Vinyl & Glass. If a sealed unit should fail (indication of moisture within the unit caused by failure of the seal), Frontier will supply a new unit for the failed unit at no charge for 10 years. Spontaneous glass breakage will be warranted for 1 year. Spontaneous glass breakage is when glass breakage arises from no reason or cause (showing no signs of impact). Frontier Vinyl & Glass warrants our PVC against cracking, fading or chipping for life as long as it does not fall under any of the exclusions included in this warranty page. Frontier will warranty our Truth window hardware for life against everything, excluding paint chipping or abuse (Limited life time warranty as per TRUTH Hardware). Our Acme window hardware for basement windows is warranted for a period of 2 years. This also excludes paint chipping. Window installation warranty will be covered for a period of 2 years. Should a seal become affected within this time period, Frontier will repair the seal at no charge. Frontier's warranty is fully transferable. Frontier does not warranty any installation or defects caused by any installation not done by Frontier Vinyl & Glass directly. This includes but is not restricted to installation in non-vertical, upside down, on the side or out of square locations. Frontier does not warranty frost or condensation as these are natural occurrences that can be caused by humidity or changes in the interior/exterior temperature. This is not a defect. Frontier does not cover product deficiencies caused by any changes, modifications or any unauthorized repair by the customer such as any paints, films tints, etc. Any situations caused by mistreatment, abuse, vandalism, improper maintenance, harmful cleaning, or mishandling are not covered by warranty. Replacement vinyl or metal parts may vary slightly in color from the original part or component. Frontier Vinyl & Glass is not responsible for this. Any applied paints or films are not covered by warranty. Ripped, torn, bent or creased screens not caused by Frontier Vinyl & Glass are not covered under warranty. Slight imperfections or color variation in the glass not impairing the vision or fundamental reliability are not covered. Fires, floods, storms or any acts of nature are not covered under any warranty. Any warranty claims made beyond the dates specified will not be covered under warranty. Warranty is measured from the date of invoice. Frontier Vinyl & Glass reserves the right to discontinue or modify any of our products. In the event that products covered by these warranties aren't available, Frontier reserves the right to substitute a product or component of equivalent quality or price. If you have a warranty claim with a Frontier Vinyl & Glass window you must immediately contact us within 30 days of the product failure.







# GLOSSARY

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## BRICKMOULD

Attached to the window and covering the gap between your home's exterior and the window frame, it allows you to change out your current windows without disturbing the exterior of your home.

## MULLION

A mullion is the vertical piece that connects side-by-side units of a window.

## PASSIVE SOLAR HEAT GAIN

Solar heat that passes through a material and is captured naturally, not by mechanical means.

## RELATIVE HEAT GAIN

A calculated relationship of heat gain [through a window system] that accounts for centre-of-glass U-Value and centre-of-glass shading coefficient based on a standard inside and outside temperature.

## SASH

The framework that holds the panes of a window in the window frame. Most commonly refers to the moving part of a window that opens but is also available in a non-opening fixed and picture sash window style.

## SHADING COEFFICIENT

A glass measurement comparing solar heat transmission, related to 1/8 inch clear glass.

## U-VALUE

A measure of the rate of nonsolar heat flow through a material or assembly. The lower the U-Value, the greater a window's resistance to heat flow and the better its insulating value.

## VISIBLE LIGHT TRANSMITTANCE

The percentage or fraction of the visible light spectrum that is transmitted through the glass of a window or skylight as reduced by the sash material and reluctance of the glass.

## WARM EDGE SPACER

Spacers appear around the perimeter of the sealed glazing unit to provide uniform separation between the panes of glass in multiple-paned windows. They absorb moisture from the trapped air in the space between the glass, preventing fogging and condensation. A high-performance warm edge spacer can increase the energy efficiency of a window.

## WEATHERSTRIPPING

Weatherstripping is a component of a window that provides a seal between the frame and the sash. It is used to prevent air leakage. The better the weatherstripping, the better the window performance.

## WINDOW JAMBS

Window jambs are located inside the framing of a window, along the top and sides for structural support. Inferior jambs can be a weak point in a window, allowing for leaks or security concerns.





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WWW.FVGSASK.COM



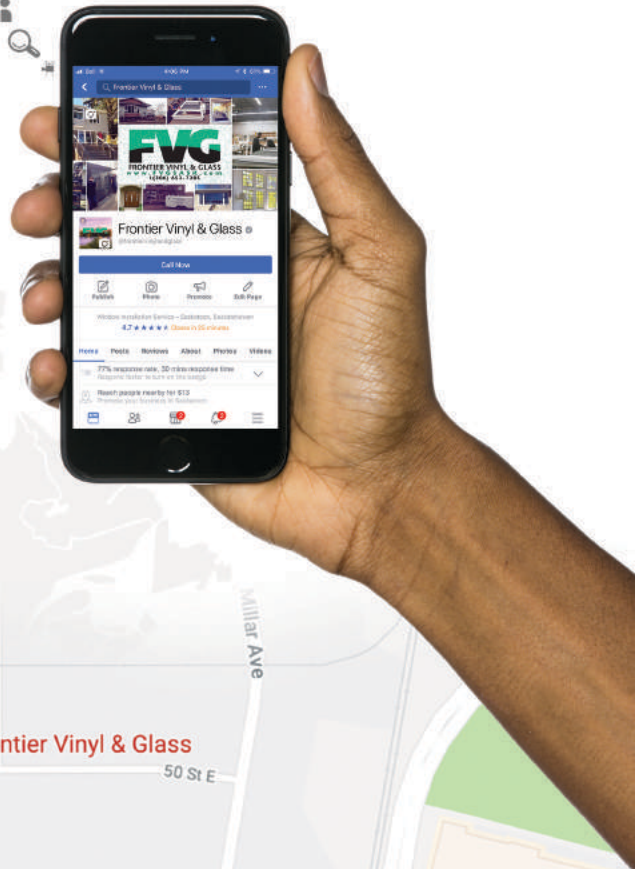
@FRONTIER VINYL & GLASS



@FRONTIERWINDOWS\_



@FRONTIER VINYL & GLASS



# NOTES

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