Consumer's Guide For Replacement Windows

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Replacing Your Windows

If you are deciding to replace your windows, you may feel a little overwhelmed. How do you know if your windows need to be replaced? What kind of windows should you purchase? There are many questions to ask yourself and you may wonder if replacing your windows is really worth all the trouble - it is. This Consumer Guide For Replacement Windows is designed to give you objective information and to make your consideration of replacement windows as smart, beneficial, and as stress-free as possible. This brochure will inform you of common window problems, help you decide if your windows need replacing and provide useful information about the different window choices you have.

Your Windows May Need Replacing if...

- Your existing windows are drafty
- They have single pane, non-insulated glass
- You notice your home is warmer in the summer and colder in the winter
- Your windows are 20 years or older
- The windows are difficult to open and close, slam down when open or won't lock correctly
- Your windows are warped, rotting or peeling
- Your furniture, floor coverings and window treatments have begun to fade

These are all signs that your windows may not be as efficient as they should be, and may need to be replaced. Your windows play a significant role in the comfort of your home. Replacing your windows is one of the best investments you can make to cut energy costs and to enhance the appearance and value of your home.

Check Out All Your Window Options

Once you have established that your windows need replacing, the next step is to determine what window should be considered to provide you with the best price value for your investment. Match the design of your home – double hung windows are more traditional, sliders and casements are more contemporary. Shapes enhance the architectural appeal, while bays, bows and garden windows increase the size and brightness of a room.

Today's Windows

Most windows today feature insulated glass units, rather than the single pane glass of the past. Insulated glass has many benefits, including reducing condensation in the panes and keeping your home cozy throughout the seasons. Choosing a high performance glass option will further increase your home's comfort, and can save you money on your heating and cooling costs.

You'll Want to Select Windows Designed to Fit Your Needs

The availability of window styles is almost endless, allowing you the ability to create a distinctive look for your home. Combine picture windows or geometric shapes with any of our window styles to invent an interesting design and create a unique focal point. Add warmth and light to your home with a large window wall. Create a panoramic view of the outdoors with a bay or bow window. When space is limited, an outward swinging casement window or a slider is a modern and efficient choice. There are a wide variety of window styles to choose from that fit neatly and easily into the opening your old windows once occupied.

Key Factors and Steps to Remember

- **Energy Efficiency** - cost savings, reduction of heat loss
- **Price** - affordability, something that fits your budget
- **Style** - find the windows that will work best with your home
- **Security** - feeling safe at home
- **Durability** - won't rot, deteriorate or crack
- **Maintenance** - easy for anyone to maintain and clean
- **Durable Seals** - reduces drafts for a higher level of comfort in your home
- **Noise Reduction** - lessens the amount of outside noises
- **Appearance** - enhances the beauty of your home, both inside and out
- **Easy to operate** - open and close without hassle
- **UV Protection** - guards against the sun's damaging effects on furniture
- **Ease of Installation** - easy, neat and accurate

Steps to Follow

Step 1: Figure out which windows in your home need to be replaced. Do you want to replace all of them or just certain ones?

Step 2: Determine your budget so you know just how much you have to spend. The number of windows and setting your budget are determining factors as to what style of windows you can purchase.

Step 3: Examine various windows types and decide what style would best fit your home. Be sure to find the right windows to suit your needs and that are right for your climate area.

Step 4: Do research and gather all the information you can. Familiarize yourself with the products and options available to you. This is a great opportunity to write down any questions you want answered.

Step 5: Get in contact with several local replacement window distributors and dealers. Ask questions and receive price quotes.

Step 6: Visit showrooms to look at the products you want within your price range. This will allow you to converse one on one with the salespeople.

Step 7: Find out about the warranties and service support. Learn about the company itself and their qualifications. The credibility of a company is important.

Step 8: Based upon window type, price, service, and your impressions, select where you would like to make the purchase.

Some Helpful Tips

- Choose high quality windows with a reliable warranty
- Choose windows with LoE² glass for maximum energy efficiency
- Select windows that require minimal maintenance
- To improve your home's style consider window accessories such as grilles between glass
- Be creative and add to your home's curb appeal by creating different window combinations
- If the per window estimate you are given is more than a few hundred dollars, get more estimates. You do not have to pay high prices to buy top-quality windows today
- Make sure that you see and inspect a sample of the window that you are about to purchase
- Inquire about the type of locks on the windows and its security features
- Depending on the number of windows, the project can take several days to complete, so take that into consideration when planning
- Select a qualified replacement window company and ask for references. It's important to know how long the company has been in business
- Inquire about an in-home, free, no obligation estimate
- When shopping for windows look for the ENERGY STAR® label
- Have your windows installed by trained professionals
- Ask the supplier how long delivery will be
- Ask about the windows fire escape features
- Ask other homeowners about their windows and if they have any recommendations about where to purchase them

Where to Purchase Your Windows

Things to look for in the company:

- Excellent service
- Quality products
- Fast delivery
- Reliable warranty, be sure that they fully support the quality of each and every one of their windows
- Provide energy efficient products that meet requirements for your climate
- Knowledgeable about the NFRC labeling and ENERGY STAR® products
- Check with your Better Business Bureau for any complaints that may have been filed against the company
- A company that is established and with a local presence

How to Choose the Right Window Distributor or Dealer

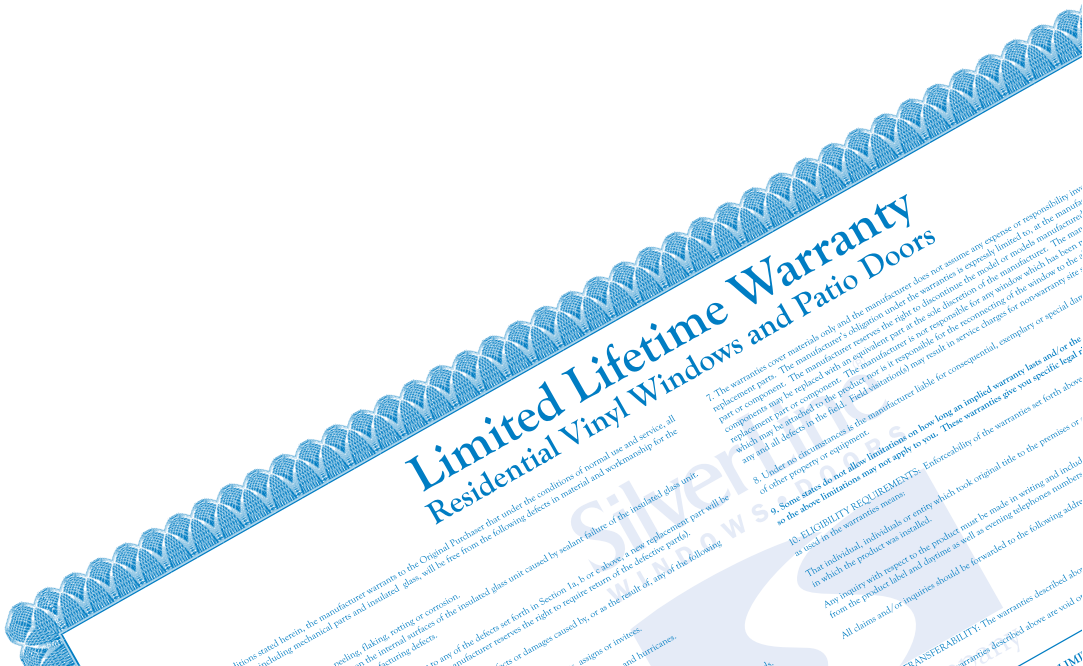
There are several factors that should be taken into consideration when trying to find the right distributor, or dealer, for your replacement window needs.

A good place to start is with their advertising. Do they avoid including the price of their windows in their advertising messages. If so, it could be that they know if you saw the "asking price" for their windows that you would no longer be interested. Most companies do not include the price of a replacement window in their ad for this reason. They do not want you to know the price until they are in your home and can attempt to "pressure" you into buying replacement windows at their inflated price. Also, if they do list price, take special care to note what is included in the replacement window that they are advertising. If you invite them into your home for a FREE estimate and consultation, you want to know that the low price that may have captured your attention in an advertisement is in fact the quality window that they will present to you. You do not want to be in a position to be told that the advertised price was not for the "quality" replacement window that they now recommend in your home.

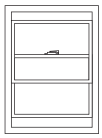
Another thing to identify in their advertising is information about the warranty they provide. If it is not mentioned, chances are that it is not very strong which could be an indication of a window product that is below industry averages in terms of its quality and service longevity. A very strong warranty is something that includes a "Fully Transferable Lifetime Warranty" as well as a "100% Glass Breakage Warranty". A company that offers this type of comprehensive warranty program is a company that is confident in the quality of its replacement windows not only just after installation, but for many years to come. A warranty that is transferable to a new owner also provides you with another valuable selling feature should you ever decide to sell your home.

When choosing the right window distributor or dealer, you will want to know who manufacturers their window products. You will want to work with a company who has a top quality manufacturer with a well known and trusted national name BRAND. If you will pardon the slight commercial, there is no better window product name BRAND anywhere than Silver Line, an Andersen Company.

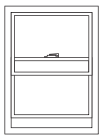
Finally, make sure you do your research carefully and that you look for all the details offered verbally and in writing, and don't be afraid to ask questions. Also, do not be afraid to ask for past customer references so that you can make contact to determine if the sales, project management, and installation services provided resulted in a positive experience and, most importantly, if the replacement windows are performing above, or beyond, the standards advertised. A replacement window purchase can be a wonderful investment. Just make sure you know the facts. Knowledge will put you in the best position to choose the best replacement window option.



Types of Windows

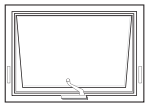


Double Hung Windows
- A traditional, easy to clean design
- A window consisting of two sashes operating in a rectangular frame in which both the upper and lower halves slide up and down

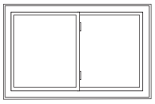


Single Hung Windows
- Conservative styling with a tilt-in sash for convenience
- A window consisting of two sashes of glass, the top one stationary and the bottom movable

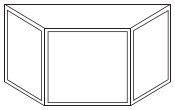
Casement Windows
- A contemporary look for your home, operating smoothly with a fold in handle
- A projecting window with a single sash hinged at the sides and usually opens outward like a door



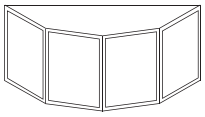
Awning Windows
- Opens out for ventilation and seals weather-tight when closed
- Hinged at the top, projecting outward to provide ample ventilation



Sliding Windows
- A modern style, perfect for rooms with limited space
- A window where the sash moves horizontally

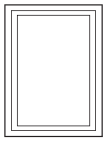


Bay Windows
- Creates a dramatic focal point and a cozy spot to curl up in
- An arrangement of three or more individual window units that project from the building from various angles, usually 30° and 45° configurations mounted with a head and seatboard

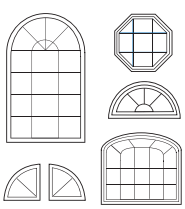


Bow Windows
- An elegant curve offering a panoramic view
- An angled combination of windows in 3, 4 or 5 lite configurations. The windows are attached at 10-degree angles to project a more circular, arced appearance

Garden Windows
- A unique design, adding dimension and functionality
- A three-dimensional window that projects from the exterior wall and usually has glazing on all sides except the bottom, which serves as a shelf



Picture Windows
- Adds openness and increases natural light
- A large, non-operating window that provides a panoramic view



Geometric Shapes
- Creates an original, one-of-a-kind configuration
- Specially designed windows classified as either Straight Line Geometrics such as rectangles, triangles, trapezoids, octagons, pentagons etc., or Radius Geometrics which include half-rounds, quarter-rounds, full-rounds, sectors, ellipses, eyebrows, etc.

Types of Window Materials

Aluminum

• Considered to be the most secure of all window frames, strength and durability are the defining factors of aluminum windows. This type of frame can withstand demanding structural conditions, which other window materials may not. It won't rust or rot and is resistant to warping. However, aluminum is prone to condensation and conducts heat easily, reducing its energy efficiency. Although aluminum is rarely used in residential construction, they are still common in commercial applications.

Vinyl

• Vinyl is among the most popular types of window frame materials. They are affordable, extremely sturdy and easy to install. Vinyl is especially energy efficient due to its multi-chambers that give it great insulating stability. This frame is virtually maintenance free and will not rot, peel, flake or corrode, therefore never needs painting. Vinyl frames are available in a wide variety of styles and sizes and can be built to fit any size opening. Vinyl windows are one of the least expensive choices of frames and come in variety of price ranges.

Fiberglass

• Fiberglass is the newest type of window material on the market and has become more accepted in the window industry. This material is stronger than vinyl and has lower maintenance requirements than wood. Its durability exceeds all other types of windows and is structurally sound. Like vinyl, fiberglass won't rot or decay and requires minimal maintenance. A fiberglass frame is good for larger windows because it can support the weight of the glass panes. With fiberglass being new to the market its style and color choices are minimal.

Wood

• Wood windows are aesthetically pleasing, giving an attractive natural look and are readily available and easily customizable. This classically styled window is durable, strong, and highly energy efficient. Wood is a natural insulator that doesn't transmit cold or heat from the outside. Due to wear from wind, sun and moisture, upkeep is especially needed. Unless properly maintained and protected, wood windows are subject to swelling, rotting and warping.

Vinyl-Clad

• Vinyl-Clad is a window with an attractive wood interior profile and a vinyl protective exterior covering. This framing allows you to maintain the look of wood but without the required maintenance. By using multiple materials, it gives you the classic beauty of wood windows but with no exterior upkeep. You still have the ability to paint, stain and customize your windows.

Composite

• This window combines the strength and stability of wood with the low-maintenance features of vinyl. The composite material is a blend of wood fiber and a specially formulated thermoplastic polymer. It comes from a whole family of materials – each formulation customized to meet the unique needs of many window products and components. This window will not rot, or need maintenance of any kind. It is not a wood clad product so there is no natural wood at all that could deteriorate over time. In addition, it can be painted and has more of a traditional wood window look than an all vinyl model. This product line is very expensive relative to all other lines that are out there and thus suffers from a reputation of being overpriced.

Definition of Windows Parts

Jamb 1
- A vertical member at the side of a window frame, or the horizontal member at the top of the window frame, as in head jamb.

Frame 2
- Outside member of a window unit which encloses the sash. Composed of side jambs, head jamb, and sill.

Sash 3
- The portion of a window that includes the glass and the framing sections directly attached to the glass. Composed of stiles (sides) and rails (top and bottom).

Pane 4
- A sheet of glass for glazing a window. After installation, the pane is referred to as a "light" (lite) or "window light".

Glazing 5
- The glass panes in the sash of a window. Also the act of installing lites of glass in a window sash.

Grille 6
- Ornamental simulated muntins and bars which don't actually divide the lights of glass.

Sill 7
- The lowest horizontal member of a door, window, or sash frame.

Weatherstripping 8
- A strip of resilient material for covering the joint between the window sash and frame in order to reduce air leaks and prevent water from entering the structure.

Balance 9
- A mechanical device (normally spring-loaded) used in single and double hung windows as a means of counterbalancing the weight of the sash during opening and closing.

Mechanically Fastened Frame 10
- Refers to frames fastened with screws.

Fusion Welded Frame 11
- The process of joining materials by melting them together with extreme heat, resulting in the materials uniting into a one-piece unit.

Airspace 12
- This is the sealed gap between the window panes in double or triple paned windows. It can be filledwith air or another gas such as Argon or Krypton to help with insulation and noise reduction. The airspace should be between 1/2 and 3/4 inches thick or it will not work effectively.

Desiccant (same as #12)
- This term is the name of any substance placed in the airspace between the glass window panes to absorb any moisture and prevent fogging.

Muntins (same as #6)
- This term is for a set of bars, either horizontal or vertical, that divides up a large area of glass in a window into smaller areas.

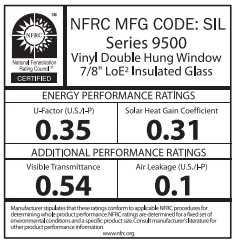
Rough Opening
- The opening in a wall into which a door or window is to be installed.

Guidlines on How to Get the Best Value

National Fenestration Rating Council ®
CERTIFIED

Carefully compare the features, benefits and performance of the windows you are considering. Specifically, look for windows that require little maintenance, are easy to clean and include a comprehensive warranty. Equally important to consider are energy efficiency (U-factor) and strength (design pressure). To ensure an unbiased comparison of the performance criteria for windows, make sure to look for the NFRC label.

The National Fenestration Rating Council (NFRC) is a non-profit organization created to provide accurate information for measuring and comparing the energy performance of window, door and skylight products. It is comprised of manufacturers, builders, architects and designers, code officials, utilities and government agencies.



NFRC rates windows, doors and skylights for the following:

- U-factor: How well a window keeps heat inside of a home or building. The lower the U-factor, the greater the insulating value.
- Solar Heat Gain Coefficient (SHGC): Measures how well a window blocks heat caused by sunlight. The lower a window's SHGC, the less solar heat it transmits.
- Visible Transmittance (VT): Determines how much light passes through a product. The higher the VT, the more light is transmitted.

The American Architectural Manufacturers Association (AAMA) has become widely recognized for developing voluntary standards to test and validate the performance and quality of windows, doors and skylights. The current AAMA/NWWDA 101/I.S.2 specification establishes stringent standard for the testing of windows in the following categories:

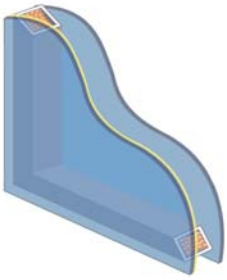
- Design Pressure (DP): Resistance to wind and other dynamic pressures. The higher the DP rating of a window or door, the more resistant it will be to the effects of wind and other pressures.
- Air Infiltration: Air Infiltration is the amount of air leaking through a window or door. The lower the air infiltration rating, the better. To pass, a window cannot exceed 0.3 CFM/Sq Ft of air infiltration with a 25 mph wind.
- Water Resistance: The ability of a window to withstand leakage from a wind driven rain. Windows are rated on a pass/fail basis.
- Forced Entry Resistance: A skilled/trained lab technician attempts to gain entry with common tools. A window must pass the forced entry resistance test to be certified to the AAMA/NWWDA 101/I.S.2 specification.

When shopping for windows and doors, look for the gold certification label. Under this certification program window and door manufacturers submit products to an AAMA accredited independent testing laboratory where they are tested to the AAMA/NWWDA 101/I.S.2 specification. Manufacturers also allow an independent agency to randomly inspect products at the factory to assure products conform to specifications.

Pane Options and Benefits

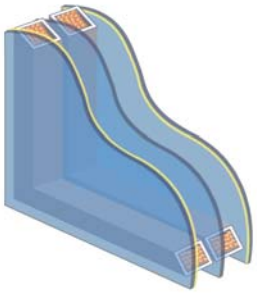
Single Pane Windows

It's true that more replacement windows have double pane glass, but there are still reasons to consider single pane windows. Even though the price of insulated (multi-paned) windows are dropping, they will still be generally more expensive than single pane windows. As well as doing better in a cost comparison, a window with single glazing will also weigh less. This may or may not be a concern to some homeowners. However when it comes time to repair the glass, single pane units are a lot simpler and cheaper. Most of these single pane windows are divided up into different sections (or lites). If one part gets broken then it's a relatively straightforward matter to just replace the broken pane without disturbing the whole window. A single glazed window with clear glass also allows more daylight to pass through it than any other type. However the single windowpane design also has the least impressive ratings when it comes to the important consideration of the U-Factor. So long term a single glazed window won't be best for your energy costs, but installing a quality storm window can help a lot with insulation.



Double Pane Windows

The most popular window replacement choice of today is the double pane window. These double pane windows (also known as dual pane or double glazed) insulate much more than a single windowpane while being a lot more affordable than the triple paned type. Dual windowpanes (or lights/lites as they are also referred to) of glass that make up the unit are held apart by what is known as a spacer. This goes all the way around the perimeter edge on the inside and is made of either aluminum or different types of steel such as stainless, coated, or galvanized. The spacer also contains an absorbent substance called a desiccant, which acts to prevent moisture from getting inside the unit which would cause fogging. Also called insulating glass (IG) windows, these are windows with two or more panes of glass that have a layer of air between them. Sometimes this can be an exotic fill gas like Argon or the more expensive Krypton trapped between the two window panes. A quality dual pane window can therefore greatly reduce energy requirements and subsequent heating bills.



Triple Pane Windows

When it comes to saving energy, a triple pane window is another option that is available in some areas. The difference in energy savings between triple and double pane windows, however, is very small. So, if you are considering this as an option, please make sure that this feature does not raise the price beyond its value. The point is to stop all that heat from transferring to the outside straight through the windows and a triple pane window can do just that. Triple pane (also known as triple glazed) windows are of course heavier and more expensive than double pane windows, as you might expect. A window with three panes is an investment rather than a purchase. This is the choice for the homeowner who wants to make excellent long term savings to energy costs. The initial price of the window will not be made up in heating bill reductions for quite a few years. Remember that three panes of glass, means six surfaces of windowpane. This in turn means more surfaces for Low-E coatings that can keep the thermal energy produced indoors where it belongs.

Glass Options for Your Consideration

LoE² Glass is coated with two microscopically thin metallic layers, which reflect radiant heat while permitting the passage of visible light. In hot climates, LoE² glass reflects unwanted solar heat, helping to keep your home cooler and reduce cooling costs. LoE² glass helps keep your home warmer in the winter as well by reflecting radiant heat back into your home. This not only keeps you more comfortable, but also helps to reduce heating expenses. LoE² Glass blocks 84% of ultraviolet rays, which will protect your drapes, furnishings and carpets from fading caused by the sun. **Argon Gas** is an odorless, colorless, tasteless, non-toxic gas which is six times more dense than air. It is used to replace air between the glass panes to reduce temperature transfer.

Left side - water beads on untreated glass, resulting in streaking and spotting when it dries. Right side is treated with glass-on-glass technology

Laminate Glass, created by bonding two pieces of glass together with an inner layer of rugged, transparent plastic, is widely used in auto windshields. Although it is transparent, this tough film is 99.9% effective in blocking ultraviolet rays, prolonging the life of your furnishings. Laminate glass provides superior noise reduction, reducing sound transmission by as much as 50% when compared to ordinary glass. If broken, the glass will adhere to the plastic inner layer, helping to prevent injury caused by shards of glass, therefore making it safer than other types of glass.

Tinted Glass works to reduce heat transfer by filtering out ultraviolet light and infrared radiation. Because tinting can also reduce the amount of light transmitted, it is reserved primarily for warm climates, or windows with a southern or western exposure. Tinted glass may also be combined with LoE² Glass for maximum energy efficiency.

Tempered Glass, sometimes referred to as safety glass, is 4 to 5 times stronger than ordinary annealed window glass. This provides an extra measure of protection for your family. When tempered glass breaks, it breaks into small pieces that are not sharp or jagged. In the event of an accident, someone is much less likely to be hurt.

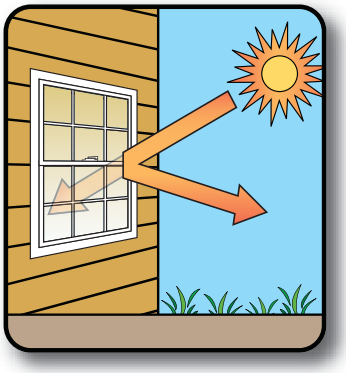
Obscure Glass offers privacy where window coverings are not desired, in areas such as bathrooms or for use in sidelights. Obscure glass provides a translucent, rather than transparent appearance.

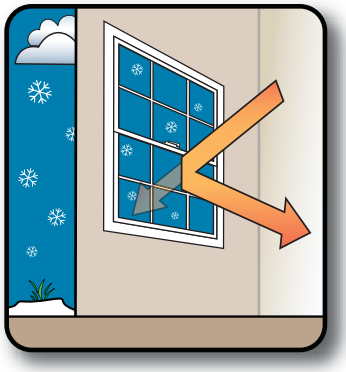
Low Maintenance Glass is treated with a chemical so that it's easy to clean and stays cleaner, longer. This unique glass-on-glass technology creates an ultra-smooth surface, which sheds dirt and grime. Glass is hydrophilic, which means that water sheets across the surface, allowing it to evaporate quickly, while reducing streaking and spotting. Most importantly, it will allow you to have more time to do the things you want to do instead of cleaning your windows.

Energy Efficiency is Essential

They may look great, but windows can be the single greatest cause of inefficient energy consumption. Windows make up about 10% of your home, however they can account for as much as 40% to 50% of the heat lost or gained. With fuel costs on the rise, keeping energy bills down has become a major concern for homeowners. Replacing your single pane windows with insulated glass windows will increase the energy efficiency of your home. Another way to combat this problem is to add optional LoE² Glass to your windows. LoE² (low emissivity) Glass provides year round comfort as well as energy and cost savings up to 35%. Two thin, transparent metallic coatings applied to the glass selectively filter solar radiation. LoE² Glass reflects heat back to its source, keeping your home cooler in the summer and warmer in the winter. LoE² Glass can also reduce UV ray transmission by up to 84%, preserving the color of your furniture, floor coverings and window treatments. The coating has almost no effect on the view through the glass, allowing clear visibility to the outside.

Summer





Winter

When in Doubt Look for the ENERGY STAR® Logo

If you are unsure about the energy performance of a window, look for windows and patio doors that have earned the ENERGY STAR® rating in your state. The ENERGY STAR program rates the energy efficiency of windows based on regional requirements and climates. ENERGY STAR windows improve the thermal efficiency of your home and help the environment. For more information visit **www.energystar.gov**.

Frequently Asked Questions

Q. What is a replacement window?
A. A true replacement window is a window that's custom built to fit within the opening of an existing window. It's built to fit precisely and can be installed without disturbing the interior and exterior areas around the window.

Q. What are the advantages of custom replacement windows over pre-made, standard-size windows stocked at home centers and lumber yards?
A. Because custom windows are made to fit perfectly, they provide the best energy efficiency (which saves energy costs) and install much more easily and with very little mess. Also, because of the myriad of options available that affect appearance and efficiency, custom windows allow consumers to design the exact windows they need or want. Standard windows typically cost less in the beginning, but other expenses and factors - like additional labor and the disruption to the home - far outweigh the original savings. For example, installing stock windows requires that you add brick or siding to the exterior, and drywall or other materials to the interior. In addition, custom-made windows allow you to choose the best solution to the problems you want to solve by replacing a window

Q. Do replacement windows really pay for themselves or is that just a sales line?
A. It's true, if you select high quality, energy efficient windows they will save you money. Savings will vary, but expertly engineered and well-built windows lower home energy consumption. With vinyl-framed windows, maintenance is also virtually eliminated. No need to scrape and paint windows. These energy and maintenance savings will allow you to recoup your window investment over time.

Q. How do vinyl windows compare with windows made from other materials, such as wood and aluminum?
A. The performance and longevity of vinyl windows compare very favorably to those of other building materials, and vinyl often costs less to produce. Vinyl windows and doors are rapidly capturing a major market share as more builders and homeowners learn about vinyl's outstanding value and economy.

Q. How are replacement windows any different from older windows in terms of cleaning?
A. Many high quality windows are actually engineered to make cleaning easier. For example, double hung windows with the latest internal constant force balance system allow a home owner to easily maneuver the sashes up and down. They tilt in and lock securely in place for safe, easy cleaning. Quite a difference from old wood windows that stick and are difficult to move up and down.

Q. What is condensation and what causes it?
A. Condensation is the result of excess humidity, or excess water vapor in the air coming into contact with a cooler surface such as a window causing visible droplets of water. To minimize this effect, windows are built with features to keep the surface of the glass warmer. When the humidity conditions are extremely high, use the following suggestions to help reduce the moisture in the air:

- Open windows frequently to "air-out" your home
- Use a dehumidifier
- Use venting fans in the kitchen, bathroom and laundry room

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