

A GUIDE TO

REPLACEMENT

WINDOWS



Do I Need New Windows?

The biggest secret in home building



“If I need to save money in my building budget, the easiest way to cut cost is windows and doors.”

- Chad Lawson
Double D Homes

The fact is, whether your house is 70 years old or 3 years old, you need energy efficient windows. A homebuilder looks at windows as a cheap necessity. To a builder, a window is no more than a frame, glass, and a lock. They are not interested in a future homeowners' true investment. WHY? The answer is simple, nobody pays attention to windows when they are looking for a house to buy. As long as the windows are not broken or don't have a ridiculous color the future homeowner does not care. Likewise, the homebuilder does not care and will buy the least expensive alternative that they can find. Contractors' supply houses have all grades of windows for the homebuilder to choose, but over 90% of window purchases for new home building are the lowest grade that a supply house carries. Traditionally, the only contractors that buy premium grade windows are remodeling contractors.



There's Nothing Wrong With My Windows!

Are you sure?--The 5 most common window pains

1. **“I can watch my curtains sway during a hard wind and we definitely can’t sit near our windows during the winter.”** - Margaret Cho, Wichita, KS

Air leakage, aka infiltration: If you can slide a credit card easily in the joint between sashes or between sash and frame that window leakage is the same as making a hole in the side of the house the size of one brick. Would you leave that size of a hole uncovered in your home? Suggestion: To find out whether infiltration is a concern for you, strike a match or lighter and run it along the joints of the window and if the flame flickers or goes out you have infiltration issues.

3. **“I cannot lock my windows. I should put a sign on them- BURGLARS WELCOME.”** - Pearl Jackson, Springfield, VA

Safety and Security: Can there be any more important reason to have good windows? The primary locks, balance system, tilt pins, and interlocking sash rails are the most important security features on premium replacement windows. Suggestion: When shopping for windows keep an eye on dual-action primary locks, steel balance systems, locking tilt pins, and a fully integrated interlocking sash system.

5. **“My windows have a permanent fog and I can not see through them.”**
- Lana Toler, Benton, AR

Bad Glass and Seals: The inability to clean the dreaded ‘fog’ from your windows is not rare. Aluminum windows and spacer/seals allow for condensation build-up. Condensation and humidity between your multi-pane window unit is promoted by faulty seals and clear, untreated glass. Suggestion: Demand a great glass spacer system and a low emissivity/gas system. Be alert to limited and/or prorated glass spacer warranties. Not all Lifetime Warranties are created the same.

2. **“I have to prop my window open with a broom handle.”** - Kyle Bergen, Aiken, SC

Non-functioning windows: Broken windows, not broken glass, can be a concern for any homeowner. Whether you open your windows to let the fresh air in or not, ‘broken’ windows can be a safety hazard in the home. Replacement windows are loaded with features that allow that window to function normally for a lifetime. Probably the most important features to proper window functionality is good installation and the balance system. Suggestion: Look for a company with trained and certified installers and a product that has long-life balances all backed by a detailed, true lifetime written warranty.

4. **“I may have the ugliest windows in America, but I do not have the husband, the time, or the money to scrape, caulk, paint, and so on.”**
- Sandra Warley, Snellville, GA

Upkeep and maintenance: Mainly a concern with old wood windows, but nevertheless it can be a time-consuming, sometimes expensive concern. Today’s vinyl replacement windows are maintenance-free and are a long term solution to the ‘upkeep hassle’. Suggestion: Vinyl is a clear-cut winner in this category. The only thing you have to do is clean your new windows and give the vinyl a dry wipe. There are even companies that offer a self-cleaning glass option so that you will not have to hand wash your windows ever again.

Can Windows Really Save Me Money?

2 things that your utility company will not tell you

1. The biggest energy wasters in your home are your windows.

Changing to all fluorescent light bulbs and over-insulating your attic will save you pennies, but if you really want to save energy and money, replace your old windows with premium, Energy Star® compliant windows. Indoor climate control is the most expensive monthly utility cost a homeowner has. Climate control can account for more than 2/3 of your total utility bill. And according to the U.S. Department of Housing and Urban Development (HUD) and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) windows are the biggest factor in a home's ability to gain or lose heat directly affecting indoor climate. HUD studies state that 70% of your heat and 46% of your air conditioning go right out your windows. ASHRAE's study compared heat loss/gain by your floors, walls, roof, doors, and windows. Windows and doors, by far, were the biggest culprits to the extent of over 75% of a home's heat energy loss/gain.

2. You are already paying for new windows whether you want to or not.

Premium replacement windows can save a homeowner a significant amount of money. Many dealers and manufacturers talk about energy savings, but be aware. Unless you see an energy savings pledge in writing there are no guarantees in quality or energy efficient properties. Premium windows are a real investment in your home. Depending on window price, windows can pay for themselves in 5 to 15 years.

Traditional Windows



Energy Star® Vinyl Windows



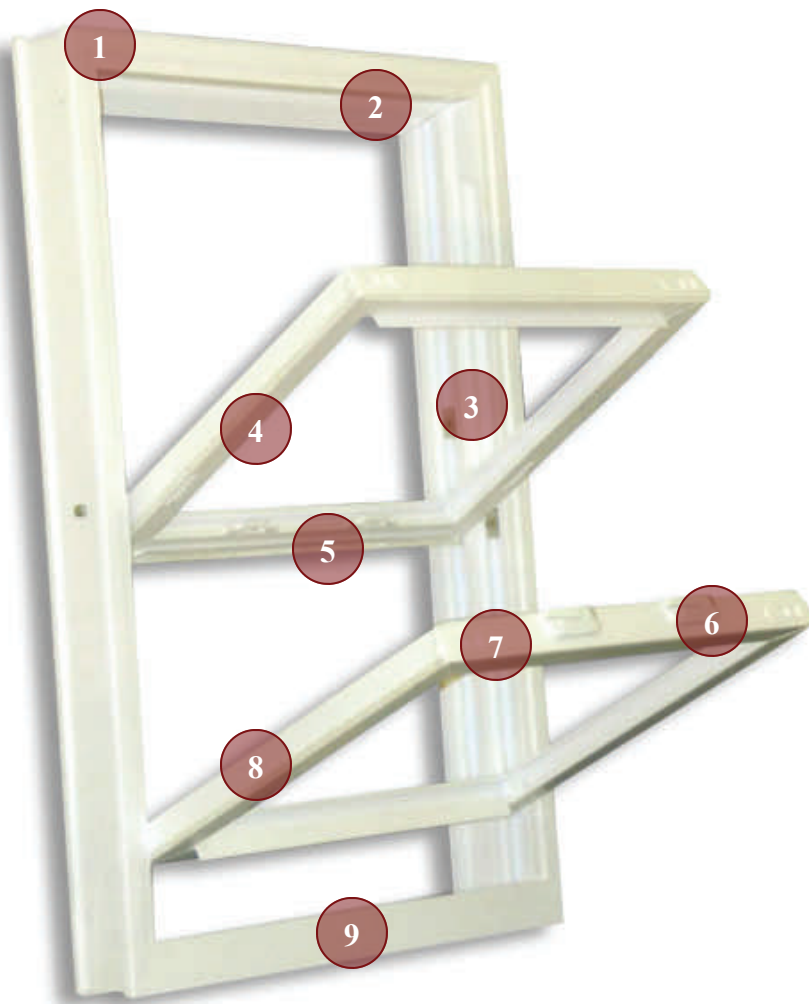
How Do I Choose The Right Window For My Home?

The 15 most frequently asked questions by replacement window customers

- **Will adding new windows to my home help me sell it faster or get more money?**
Yes. According to studies by home improvement and real estate experts, you can raise the value of your home 50-80% of the retail amount paid for the windows up to \$10,000. The ability to pass along the warranty to the new buyer will also add value.
- **Can windows change the look of my house?**
Yes. There are many architectural styles, grille (grid) patterns, and color combinations that can drastically change the appearance of a home.
- **If I “fix up” my old windows can I save energy?**
Yes, but. There are many factors that make a window energy efficient. You can block the infiltration, but you cannot change the radiation and conduction properties of an old window.
- **Should I install my own replacement windows?**
Depends. Most manufacturers do not cover ‘do-it-yourself’ in their written warranties. You take the risk.
- **I have old wood windows, do I really need to wrap the exterior if I buy new windows?**
Exterior vinyl wrap or “cap” is necessary if you do not want to repeatedly paint or weatherize the wood around your new window. On a wood window extraction just the sash come out and the wood frame stays.
- **If I get new windows will I still need my old storm windows?**
No, unless. A properly installed window will be air tight, but if you choose new wood replacement windows the storms will be needed within a few seasons.
- **Should the window manufacturer matter to me?**
Yes. Not all windows are made the same. A good warranty is a fool-proof method of what a manufacturer thinks about their window and the quality they provide.
- **Why would I want plastic (vinyl) windows?**
True, vinyl is another term for plastic, but it is far more involved. The vinyl used is a PVC resin and if constructed correctly is structurally sound. The key is to choose 100% virgin vinyl windows.
- **Do I have to take a second mortgage on my home to afford new replacement windows?**
No. Granted, there are many companies out there that ask you to pay \$1000+ per window for their product, but there are low price alternatives that will give you the quality and energy efficiency that you should demand.
- **Do I need metal-reinforcement in a vinyl window?**
No, but. Many manufacturers “bulk up” their vinyl window with metal because of their poor vinyl quality, but most manufacturers include metal in order to give a permanent anchor point for the primary lock & keeper and the tilt pins in the bottom rail of each sash.
- **Is foam filled frame and sash necessary?**
No, but. Dead air space in the vinyl ‘honeycomb’ construction of the window is good insulation. Foam filling is used for better insulation value and structural integrity.
- **What is U-factor?**
The insulating value used in the fenestration (window) industry. When insulating, most people know R-value, the bigger the R the better. With U-factors the smaller the number, the better the energy efficiency of that window. Energy Star® compliant windows carry a U of .35 or below.
- **Can argon or krypton gas harm my family if the window glass breaks?**
No. Argon and krypton are inert gases that are found in the air that we breath. In the right amount they are excellent insulators.
- **What is a “super-window”?**
The industry has adopted this term for a triple-pane, krypton (superman reference) filled, double lowE, insulated vinyl window. The most energy efficient window in the business.
- **Do I need a “super-window”?**
Depends. Do you want the best energy efficiency, the best sound reduction, and the best security features in the window that you buy? If you answer yes, then you need a super-window.

Aren't All Windows The Same?

The anatomy of a premium vinyl replacement window



1. Fusion Welded Frame & Sash

All 12 corners on a vinyl window should be heat welded to create air and water tight components that are stronger and more durable than mechanically fastened corners.

2. Dead Head Pocket

A deep head pocket allows the upper sash to seat firmly between the weather seals on either side and provides a maximum barrier to air or water infiltration.

3. Constant Force Balance System

A good balance system supports the sash and provides smooth and dependable sash movement.

4. Spring Loaded Vent Latches

Vent latches limit the movement of the lower sash to restrict the size of the ventilated opening.

5. Sash to Sash Vinyl Interlock

Vinyl interlock engages when both sash are fully closed and prevents air and water leakage through the most susceptible area of the window.

6. 180° Cam Lock & Keeper System

Dual cam locks secure and seal both sash reducing air infiltration at the meeting rail.

7. Tilt Latches

Allow for fingertip operation of the tilting feature which allows easy cleaning from inside the house.

8. Triple/Twin Fin Weather Seals

Fin seal around the sash and in the frame block dust and air infiltration reducing drafts and improving the window insulating power.

9. Sloped Sill and Water Dam

An exterior sloping sill and tall water dam keep air and water from the interior of the home.

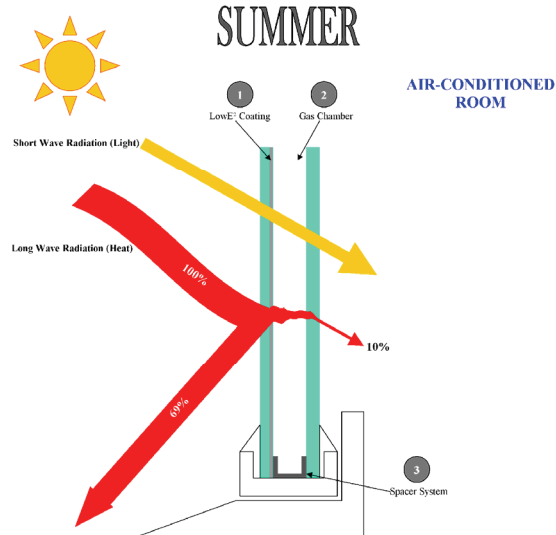
Aren't All Windows The Same?

The anatomy of energy efficient glass systems

When considering replacement windows and the benefits they provide to the homeowner, by far the best reason to replace your windows is to save energy and lower your utility bills. Premium vinyl windows do that by slowing down conduction, blocking radiation and stopping air infiltration. The mainframe and sash material and construction can help in these areas, but the biggest key to saving a homeowner money is the glass. Remember, over 80% of a window is glass. So, let's take a moment to talk about glass systems and the components that will allow you to choose the proper window for you and your energy saving concerns.

1 Low-emissivity (LowE)

LowE coatings are microscopically thin, virtually invisible, metal or metallic oxide layers deposited on a window to reduce the U-factor by suppressing radiative heat flow. The principal mechanism of heat transfer in multilayer glazing (multi-pane windows) is thermal radiation from warm surfaces to cooler surfaces. Coating a glass with LowE material reflects a significant amount of this radiant heat, thus lowering the total heat flow through the window. LowE coatings are transparent to visible light and opaque to infrared radiation. During winter months, LowE will allow some exterior light in to help heat the house.

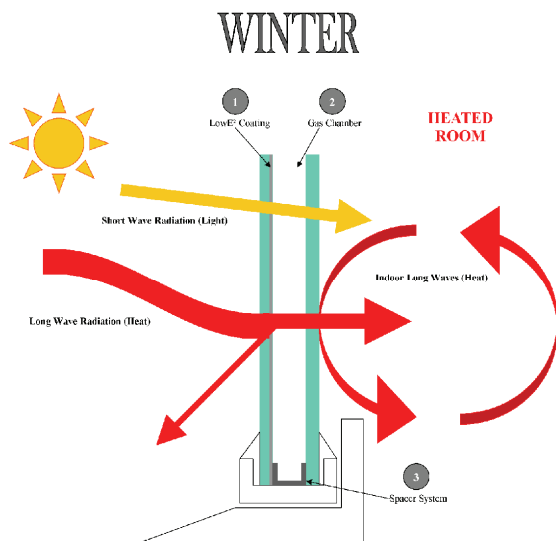


2 Gas filled chamber

An improvement that can be made to the thermal performance of insulating glazing units (windows) is to reduce the conductance of the air space between the layers. Originally, the space was filled with air just prior to sealing. Filling the space with a less conductive, more viscous, or slow-moving gas minimizes the convection currents within the space, conduction through the gas is reduced, and the overall transfer of heat between the inside and outside is reduced. The two inert gases that were introduced for this job are argon and krypton.

3 Spacer systems

A fact that homeowners do not know is that a window's R-value is found in the center of the glass and can drastically reduce as you move towards the edge of the glass. For this reason, PPG and other manufacturers have introduced "warm edge" technology. "Warm edge" refers directly to the seal/spacer. Older window units utilized aluminum box spacers which have created problems from the moment they were put into windows. The old spacer allowed for condensation build up and very low energy efficiency ratings. "Warm edge" spacers are U-shaped, to allow for glass shift and pressure and are built from less conductive materials in order to keep the energy efficient properties of the whole window.



Who Do I Choose?

Choose the company that cares about you, your home, and your wallet

- **A national company with tens of thousands of happy customers**
- **Locally owned businesses providing the best customer service**
- **The most technologically advanced products in the industry**
- **Three collections to suit your needs and wants**
- **Every window style with multiple colors and grid patterns**
- **Transferable non-prorated lifetime product warranties**
- **Certified consultants to match you to the perfect window**
- **30% and 40% energy saving pledges in writing**
- **Licensed, insured and WDUSA factory certified installers**



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