Best Energy-Efficient Windows for Hot Climates - Lower Your Utility Bills with Energy Saving Windows

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The best energy-efficient windows make it possible for you to maintain the ideal temperature in your home. You can reduce your energy consumption while increasing the cool comfort level of your living space during even the hottest desert days. The most energy-efficient windows allow sunlight to deliver beautiful natural light while substantially blocking heat. This means more comfort for less energy use impacting the environment and less electricity cost for air conditioning.

Here are some tips to help you in selecting the type of energy efficient windows that will perform best for your home in hot climates.

Don't let the heat get the best of you! Upgrade to the best energy-efficient windows for hot climates and experience significant savings on your utility bills. Contact us now for a free estimate on upgrading your home with our superior window solutions!

Call Now

Best Window Features for Area With Hot Climate

Choosing the Right Window Frames

The window frame type you choose will significantly affect the level of energy efficiency you can expect from your new <u>replacement windows</u> in our extreme southwestern temperatures. Frames for energy-efficient windows can be constructed of one of various highly durable and appealing materials, including wood, aluminum, or vinyl.

Wood and <u>vinyl window frames</u> offer the highest performance in energy efficiency. Wood is higher in cost than vinyl. <u>Vinyl frames</u> have become increasingly popular due to their affordability and excellent energy efficiency.

Performance Ratings of Windows

The performance of the glass is obviously fundamental to the quality of a window designed for energy efficiency. These three efficiency factors determine the effectiveness of the glass panels in energy-saving windows:

- Visible Transmission (VT) Amount of solar light being transferred through the glass
- Solar Heat Gain Coefficient (SHGC) Amount of solar heat being transferred through the glass
- U-Value Amount of heat emanating through the glass by convection, conduction, and radiation.

High-VT glass permits a lot of natural light to enter the home throughout the day, which saves energy use by reducing the need for electrical lighting during daylight hours. The glass's VT value, recommended by energy efficiency experts, is about 60% to 80%.

For the hottest climate regions, such as the Arizona desert, SHGC should ideally be as low as can be achieved with <u>energy-efficient windows and doors</u>. Window glass providing low SHGC allows only a smaller amount of heat from the sun to enter the home through windows, thereby saving on HVAC costs for air conditioning. An SHGC of under 0.4 is optimum for homes in hot climates, as in the Sonoran Desert, and glass with a low U value is suggested for residential window applications in all climate types to optimize energy efficiency.

Energy Star Certified Windows

To earn the <u>ENERGY STAR label</u>, windows must meet certain performance criteria, which include U-factor, solar heat gain coefficient (SHGC), and air leakage ratings. These windows are designed to meet stringent energy efficiency guidelines set by the U.S. Environmental Protection Agency (EPA).

<u>Energy Star Certified Windows meet strict standards for energy efficiency</u> and are an excellent choice for homeowners living in hot climates like the Arizona desert and offer several benefits, including reduced energy costs, improved indoor comfort, and increased energy efficiency. These windows are made of high-quality glass and frames that are specifically designed to block solar heat gain and enhance insulation, so you can keep your

home cool and comfortable without relying too heavily on your air conditioning system. By installing Energy-Star certified windows, you can significantly reduce your carbon footprint and contribute to a healthier environment while saving money on energy bills.

Double-Pane and Triple-Pane Windows

Today's triple-pane or double-pane windows are the most highly recommended for maximum energy efficiency in virtually all climate zones. The insular space between the window panes saves energy and helps reduce electricity costs.

For significantly enhanced efficiency, argon, krypton, and other gases are utilized between glass panes as insulators. Such gases are denser than air, so they provide more effective insulation and better window energy saving.

Argon is the most popular gas for filling double-pane energy-efficient windows because it is a highly efficient insulator and costs considerably less than krypton gas. Krypton is used in narrower spaces between triple glass panes. It is a more scarce gas and much higher in price than argon.

Low-E Window Glass for Energy Efficiency

Low emissive, known as Low-E glass, is used to increase the energy efficiency of windows and doors. This glass is coated with a layer of metallic oxide material, which helps prevent the transfer of heat between the glass panes. Low emissive glass minimizes heat penetrating through windows in the southwest region's most efficient windows manufactured for the desert climate. So, when choosing windows, be aware of their NFRC rating.

Warm Spacers

Warm spacers are a vital component in energy-efficient windows for hot climates like Arizona. They minimize heat transfer through the window, providing consistent temperatures and reduced energy consumption. Energy Shield Window & Door Company incorporates warm spacers into our window designs to ensure top-quality products tailored for hot climates.

These spacers separate glass panes in double or triple-glazed windows, creating an insulating barrier that keeps heat out during summer and retains warmth in cooler months. Homeowners enjoy increased comfort and lower energy bills year-round. Our windows address heat reflection, dust control, and noise reduction for optimal performance in hot climate regions.

Upgrade your home with Energy Shield Window & Door Company's high-performance windows featuring warm spacers for unparalleled comfort and energy savings.



Frequently Asked Questions About Windows for Hot Climate

Why are Vinyl Windows Good for Desert Climates?

Vinyl windows are an excellent choice for desert climates due to their unique properties and benefits, which include:

Energy Efficiency: Vinyl windows have excellent insulation properties, reducing heat transfer between the interior and exterior of your home. This helps maintain a comfortable indoor temperature, even in extreme desert conditions, leading to lower energy consumption and reduced utility bills.

Durability: Vinyl is a strong and long-lasting material that can withstand harsh desert conditions such as intense sun exposure, extreme temperature fluctuations, and wind-blown dust without warping or fading over time.

Low Maintenance: Unlike wood or aluminum windows, vinyl windows require minimal maintenance. They don't need painting or sealing to protect them from the elements and can be easily cleaned with soap and water.

Cost-Effective: Vinyl windows are an affordable option compared to other window materials while still providing excellent energy efficiency and durability benefits.

Customization Options: Vinyl windows come in various styles, sizes, colors, and finishes that can be customized to match your home's aesthetic while meeting specific performance requirements for desert climates.

In summary, vinyl windows are an ideal choice for homes in desert climates due to their energy efficiency, durability, low maintenance requirements, cost-effectiveness, and customization options. These qualities make them well-suited to handle the unique challenges posed by hot temperatures and harsh environmental conditions found in arid regions like Arizona.

How Do Energy Efficient Windows Impact Utility Bills in Hot Climates?

Are There Tax Incentives for Installing Energy Efficient Windows in Hot Climates Like Arizona?

Energy Shield Window & Door Company, Phoenix, AZ

We have been manufacturing energy-efficient windows and doors in Arizona since 1996. Our Earthwise and Energy Star® rated products are all designed especially for premium performance in our southwest desert climate. Our beautiful energy-efficient windows and doors are designed with state-of-the-art heat reflection, noise reduction, and dust control features. Our replacement window installation specialists are all factory trained and hold our industry's professional certifications. We offer frequent special offers.

Schedule a Free In-Home Estimate on the Most Energy-Efficient Windows for your Arizona home. Call the Energy Shield Window & Door Company at (623) 349-7120.