

What to Know About Passive House Windows

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Passive House is an energy efficiency standard for maximized comfort and reduced ecological footprints in homes. It is the only recognized body of international energy efficiency standards in building construction. There are multiple Passive House organizations, including the Passive House Institute (PHI), the International Passive House Association, and others. These expert groups verify conformance, including for energy-efficient windows. They research and develop standards and educate builders and the public on these building efficiency standards.

A residential building rated as a Passive House is designed to provide an excellent level of comfort for occupants and a level of energy efficiency that minimizes energy waste. A stringent set of Passive House engineering principles are applied to optimize the performance of the structure in meeting the standards. That, of course, includes criteria for energy efficient doors and windows.

Benefits of Passive House Windows and Doors

A home that meets the Passive House Standard has continuous heavy insulation around the building envelope, including windows and doors. No thermal bridges or gaps are left anywhere on the circumference. As a result, homes that meet the Passive House standards use only a small amount of heating and cooling energy.

Energy-efficient doors and windows designed to meet the criteria deliver these top benefits to homeowners:

- Comfortable, cool home interior even in the hottest weather.
- Up to 30% greater heating and cooling energy savings.

- Reduced use of HVAC systems all year-round.

Window & Door Requirements for a Passive House

Passive House window and door construction focuses on premium glass packages that meet the optimum U-Factor and R-Value benchmarks.

- U-Factor: This is the measure of the rate that heat transfers through a door or window. A low U-Factor means better insulative efficiency of the window or door glazing.
- R-Value: This measures the performance of the insulation in preventing unwanted hot or cold temperature transfers into the house. A high R-Value means better insulation.

Desert Climate Solutions

The most insulative window and door products provide the greatest home comfort, cost savings, and reduction of carbon in any given land area. Passive House researchers have applied unique data for multitudes of locations worldwide. Energy Shield utilizes top-grade framing materials, various high-performance glazing solutions, and other components to meet the tough Passive House standards at specific residential building locations.

Airtight Window & Door Construction

High-efficiency frame construction is essential for achieving home window and door designs that meet Passive House standards. Energy Shield Energy Star® certified windows and doors test above the industry standards in minimizing heat transfer, making our products the most energy efficient on the market — especially our next-level [vinyl window replacements](#) and door designs.

Top Quality Installation

Proper door and [window installation](#) is critical to achieving an airtight envelope in home construction and in later updates with replacement windows or doors. The ideal seal around raw openings between walls and frames further qualifies Energy Shield products as Passive House quality windows and doors.

Design Features of Energy Shield Passive Windows & Doors

All energy-efficient Energy Shield window and door products meet Passive House standards. Every detail of our doors and windows is optimized for the highest possible performance as a home insulator.

State-of-the-art energy efficiency solutions Triple or double gas-filled glass panels filled with inert krypton, argon, or other insulative gasses slow the heat transfer through windows and glass doors. Premium double glass construction, Low-E glass coating, argon gas fill, top-quality framing, and innovative spacers all together optimize insulative performance.

Window and door efficiency testing Energy Shield doors and windows are engineered for maximum insulative effectiveness, factory joined, and subjected to strenuous structural testing in quality evaluations.

Temperature consistency Energy Shield Energy Star windows and glass doors are manufactured to prevent air leaks and drafts to keep living spaces ideally comfortable and temperature controlled in all seasons.

Exceptional wind and water resistance To maximize strength, durability, and leak-resistant performance, Energy Shield glass window, and door products feature reinforced framing with industry-leading sealants and revolutionary warm-edge spacers.

Best Passive House Windows By Energy Shield

Beautiful Energy Shield passive house windows and doors are engineered for the highest level of comfort, energy savings, and durability in the harsh desert conditions of Arizona and the surrounding region.

For the industry's best energy-efficient replacement windows, call Energy Shield Window & Door Company at (623) 349-7120, or contact us here online any time!
