



Windows

Windows can be one of your home's most attractive features. Windows provide views, day lighting, ventilation, and solar heating in the winter. Unfortunately, they can also account for 10% to 25% of your heating bill. During the summer, your air conditioner must work harder to cool hot air from sunny windows. Install ENERGY STAR qualified windows and use curtains and shade to give your air conditioner and energy bill a break. If you live in the Sun Belt, look into new solar control spectrally selective windows, which can cut the cooling load by 10% to 15%.

If your home has single-pane windows, consider replacing them. New double pane windows with high-performance glass (e.g., low-e or spectrally selective) are available on the market. In colder climates, select windows that are gas filled with low emissivity (low-e) coatings on the glass to reduce heat loss. In warmer climates, select windows with spectrally selective coatings to reduce heat gain. If you are building a new home, you can offset some of the cost of installing more efficient windows because doing so allows you to buy smaller, less expensive heating and cooling equipment.

If you decide not to replace your windows, the simpler, less costly measures listed below can improve their performance.

Cold-Climate Window Tips

- You can use a heavy-duty, clear plastic sheet on a frame or tape clear plastic film to the inside of your window frames during the cold winter months. Remember, the plastic must be sealed tightly to the frame to help reduce infiltration.
- Install tight-fitting, insulating window shades on windows that feel drafty after weatherizing.
- Close your curtains and shades at night; open them during the day.

- Keep windows on the south side of your house clean to let in the winter sun.
- Install exterior or interior storm windows; storm windows can reduce heat loss through the windows by 25% to 50%. Storm windows should have weather-stripping at all moveable joints; be made of strong, durable materials; and have interlocking or overlapping joints. Low-e storm windows save even more energy.
- Repair and weatherize your current storm windows, if necessary.

Warm-Climate Window Tips

- Install white window shades, drapes, or blinds to reflect heat away from the house.
- Close curtains on south- and west-facing windows during the day.
- Install awnings on south- and west-facing windows.
- Apply sun-control or other reflective films on south-facing windows to reduce solar gain.
- **\$ Long-Term Savings Tip:** Installing new, high-performance windows will improve your home's energy performance. While it may take many years for new windows to pay off in energy savings, the benefits of added comfort and improved aesthetics and functionality may make the investment worth it to you. Today, many new window technologies are available that are worth considering. Glazing materials (the glass part of the window) now come with a variety of selective coatings and other features; frames are available in aluminum, wood, vinyl, fiberglass, or combinations of these materials. Each type of glazing material and frame has advantages and disadvantages.

Shopping Tips for Windows

- Remember, the lower the U-value, the better the insulation. In colder climates, a U-value of 0.35 or below is recommended. These windows have at least double-glazing and a low-e coating.

- In warm climates, where summertime heat gain is the main concern, look for windows with double-glazing and spectrally selective coatings that reduce heat gain.
- Select windows with air leakage ratings of 0.3 cubic feet per minute or less.
- In temperate climates with both heating and cooling seasons, select windows with both low U-values and low solar heat gain coefficient (SHGC) to maximize energy benefits.
- Remember that new windows must be installed correctly to avoid air leaks around the frame. Look for a reputable, qualified installer.