

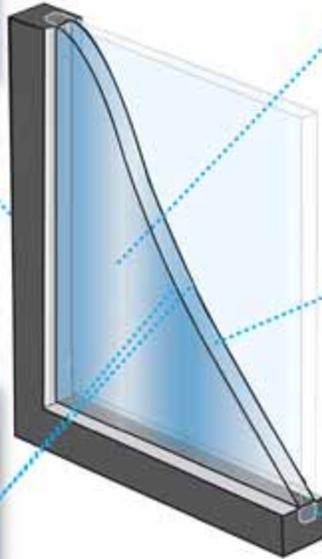
## WHAT MAKES A WINDOW ENERGY EFFICIENT?



Today, manufacturers use an array of **advanced technologies** to make ENERGY STAR-qualified windows.

### IMPROVED FRAME MATERIALS

Wood composites, vinyl, and fiberglass frames reduce heat transfer and help insulate better.



### LOW-E GLASS

Special coatings reflect infrared light, keeping heat inside in winter and outside in summer. They also reflect damaging ultraviolet light, which helps protect interior furnishings from fading.

### GAS FILLS

Some energy-efficient windows have argon, krypton, or other gases between the panes. These odorless, colorless, non-toxic gases insulate better than regular air.

### MULTIPLE PANES

Two panes of glass, with an air or gas-filled space in the middle, insulate much better than a single pane of glass. Some ENERGY STAR-qualified windows include three or more panes for even greater energy efficiency, increased impact resistance, and sound insulation.

### WARM EDGE SPACERS

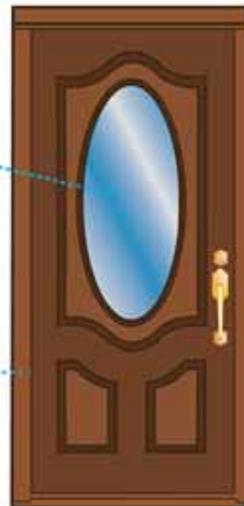
A spacer keeps a window's glass panes the correct distance apart. Today's warm edge spacers—made of steel, foam, fiberglass, or vinyl—reduce heat flow and prevent condensation.

## WHAT MAKES A DOOR ENERGY EFFICIENT?



### MULTIPLE GLASS PANES

Double or triple-paned insulating glass is used to reduce heat flow.



### IMPROVED CORE MATERIALS

Fiberglass, wood cladding, and steel with polyurethane foam core are among the most energy-efficient door materials available today.

### TIGHTER FIT AND IMPROVED WEATHER STRIPPING

New frames may include a magnetic strip to create a tighter seal that reduces air leakage around the edges.

The **National Fenestration Rating Council (NFRC)** energy performance label can help you determine how well a product will perform the functions of helping to cool your building in the summer, warm your building in the winter, keep out wind, and resist condensation. By using the information contained on the label, builders and consumers can reliably compare one product with another, and make informed decisions about the windows, doors, and skylights they buy.

NFRC adopted a new energy performance label in 2005. It lists the manufacturer, describes the product, provides a source for additional information, and includes ratings for one or more energy performance characteristics.

**NOTE:** All energy performance values on the label represent the rating of windows/doors as whole systems (glazing and frame).

The information contained on the label is also available in the NFRC's online [Certified Products Directory](#).

		<b>World's Best Window Co.</b> Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: <b>Vertical Slider</b>	
<b>ENERGY PERFORMANCE RATINGS</b>			
U-Factor (U.S./I-P)		Solar Heat Gain Coefficient	
<b>0.35</b>		<b>0.32</b>	
<b>ADDITIONAL PERFORMANCE RATINGS</b>			
Visible Transmittance		Air Leakage (U.S./I-P)	
<b>0.51</b>		<b>0.2</b>	
Condensation Resistance		<b>—</b>	
<b>51</b>			
<small>Manufacturer stipulates that these ratings conform to applicable NFRC procedures for determining whole-product performance. NFRC ratings are determined for a fixed set of environmental conditions and a specific product size. NFRC does not recommend any product and does not warrant the suitability of any product for any specific use. Consult manufacturer's literature for other product performance information. <a href="http://www.nfrc.org">www.nfrc.org</a></small>			

### U-Factor

U-factor measures how well a product prevents heat from escaping. The rate of heat loss is indicated in terms of the U-factor (U-value) of a window assembly. U-Factor ratings generally fall between 0.20 and 1.20. The lower the U-value, the greater a window's resistance to heat flow and the better its insulating value.

### Solar Heat Gain Coefficient

Solar Heat Gain Coefficient (SHGC) measures how well a product blocks heat caused by sunlight. The SHGC is the fraction of incident solar radiation admitted through a window (both directly transmitted and absorbed) and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's solar heat gain coefficient, the less solar heat it transmits in the house.

### Visible Transmittance

Visible Transmittance (VT) measures how much light comes through a product. The visible transmittance is an optical property that indicates the amount of visible light transmitted. VT is expressed as a number between 0 and 1. The higher the VT, the more light is transmitted.

### Air Leakage\*

Air Leakage (AL) is indicated by an air leakage rating expressed as the equivalent cubic feet of air passing through a square foot of window area (cfm/sq ft). Heat loss and gain occur by infiltration through cracks in the window assembly. The lower the AL, the less air will pass through cracks in the window assembly.

### Condensation Resistance\*

Condensation Resistance (CR) measures the ability of a product to resist the formation of condensation on the interior surface of that product. The higher the CR rating, the better that product is at resisting condensation formation. While this rating cannot predict condensation, it can provide a credible method of comparing the potential of various products for condensation formation. CR is expressed as a number between 0 and 100.

\* This rating is optional and manufacturers can choose not to include it.

 National Fenestration Rating Council® <b>CERTIFIED</b>	<b>World's Best Window Co.</b> Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: <b>Vertical Slider</b>	 National Fenestration Rating Council® <b>CERTIFIED</b>	<b>World's Best Window Co.</b> Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: <b>Vertical Slider</b>	 National Fenestration Rating Council® <b>CERTIFIED</b>	<b>World's Best Window Co.</b> Millennium 2000+ Vinyl-Clad Wood Frame Double Glazing • Argon Fill • Low E Product Type: <b>Vertical Slider</b>
<b>ENERGY PERFORMANCE RATINGS</b>		<b>ENERGY PERFORMANCE RATINGS</b>		<b>ENERGY PERFORMANCE RATINGS</b>	
U-Factor (U.S./I-P) <b>0.35</b>	Solar Heat Gain Coefficient <b>0.32</b>	U-Factor (U.S./I-P) <b>0.35</b>	Solar Heat Gain Coefficient <b>0.32</b>	U-Factor (U.S./I-P) <b>0.35</b>	Solar Heat Gain Coefficient <b>0.32</b>
<b>ADDITIONAL PERFORMANCE RATINGS</b>		<b>ADDITIONAL PERFORMANCE RATINGS</b>		<b>ADDITIONAL PERFORMANCE RATINGS</b>	
Visible Transmittance <b>0.51</b>	Air Leakage <b>0.1</b>	Visible Transmittance <b>0.51</b>	Air Leakage (U.S./I-P) <b>0.2</b>	Visible Transmittance <b>0.51</b>	Air Leakage (U.S./I-P) <b>0.2</b>
Condensation Resistance <b>51</b>	<b>—</b>	Condensation Resistance <b>51</b>	<b>—</b>	Condensation Resistance <b>51</b>	<b>—</b>
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