

OUT IN FRONT

Simple changes with sudden impact



Specifications

PRODUCT SolarChoice Heaters

MANUFACTURER SolarChoice Heat

APPROX. BTU OUTPUT 69 btu/sq. inch/hr.

COST \$30 per sq. ft.

MATERIALS PETG plastic (outer shell);
aluminum (inner heat absorber)

AIRFLOW 1.2 meters/second per vane

www.solarchoiceheat.com

DISTRIBUTOR

www.thegreenproductscompany.com



Blind Heat

Here's something we hadn't seen before: a low-tech solar heating system that replaces standard window blinds. **By Matthew Power**

Here's a simple solar innovation that might make you smack your forehead and say "Why didn't I think of that?" Using the same principle as a passive solar panel these blinds do more than block the sun. As solar heat penetrates an outer plastic blind, it heats an aluminum "fin" inside each vane.



The manufacturer claims that researchers at the University of Minnesota/Duluth measured as much as a 60 degree difference between air entering the bottom of each chamber, and air exiting the top.

Past research has shown that in a cold climate, a good quality, tightly installed, south-facing Low-E window with no insulating cover (at night) will add about as much heat to the home during a sunny day as it loses overnight. In other words, it's an energy wash. Can these new solar

blinds improve on that equilibrium?

To answer that I found some figures suggesting how much heat a typical south facing window brings into a building. Building experts at Tombling.com estimate the heat gain for a typical window at 868 btu/hr. per square meter. So a 6' x 8' sliding glass door would introduce roughly 3,862 btu/hr. to the home under optimal sunny conditions, or 30,896 btu over an 8-hour sunny day.

Compare that with the estimated 40,000 btu from this new blind system over the same sized slider for the same time frame. The product should increase heat gain by about 20%.

We asked David Strandberg, spokesperson for SolarChoice, to comment on this calculation, and he noted that other variables probably make the net gain higher than 20%.

"Paint color of the room, furnishings, quality of window installation, and other factors could influence those figures," he says. "And if you have no window coverings at all, research shows that you're going to have more heat loss." He says studies currently under way will provide more accurate performance estimates. GB

INSULATING BLINDS—WHAT'S THE SAVINGS?

Energy-saving window treatments have come back into favor in recent years. Most so-called insulating blinds are really shades—vanes connected by way of an expanding honeycomb.

such as the Odysee www.odysee.com brand (shown). How well do insulated shades work? Generally

speaking, a single honeycomb insulating blind provides about an R-2 value. Double the honeycomb, and you get to about R-5. The blinds perform much better if they are combined with a "track," such as the one made by Comfortex www.comfortex.com, which seals the edges of the blind more securely to the window casing.

