



Stay Cool This Summer With Awnings

Q *I have always liked the appearance of window awnings. The salesman told me installing them can save a lot of energy. Do they really save energy, and what awning choices are best?*

A The awning salesman wasn't just blowing smoke to get a sale. Installing window awnings can significantly reduce the cooling energy use in a home.

There are also other benefits, such as reduced color fading of furniture, drapes and carpeting, and the same ultraviolet (UV) rays that fade your furniture can slowly degrade window frame materials over time.

Even though energy savings are highest in northern regions of the country, total dollar savings are actually greater in warmer climates, where air-conditioning costs are higher. Actual savings will depend on the overall energy efficiency of a particular home, the amount of natural shading from trees and orientation of the windows to the sun.

Many window awning options are available. The first decision to make is if you want fixed or adjustable awnings. They both are equally effective during the summer at reducing peak electricity use in midafternoon.

The advantage of adjustable awnings is the



level of shading can be changed throughout the day and during various seasons. Fixed and adjustable ones are available in all aluminum or fabric over an aluminum frame.

Adjustable fabric awnings offer better protection from severe weather because some models can be lowered almost flat over the window opening. They also can be raised to expose most of the window glass.

The maximum projection from the wall for an adjustable aluminum awning is determined by the frame and the down-arm length. To open them, the aluminum awning slats roll up above the frame and the hinged arms swing upward. The advantage of aluminum is its strength and its resistance to degradation from the sun's UV rays.

Sideless awning designs, called Venetian awnings, are effective for true south-facing windows

because the most intense sun rays come from overhead. Actually, just a relatively short, flat board over the window, such as a large roof overhang, is effective at blocking the sun over these windows.

If you need to block the late-afternoon sun at those south-facing windows, install hood-style awnings with sides. For casement windows, hip-style awnings provide clearance for the window sash to open outward.

Proper sizing of window awnings is important for blocking the summer sun and for allowing the winter sun to shine through the windows for passive solar heating. This is particularly true if you install fixed awnings, because the extent of their shading

cannot be changed.

The orientation of a window to the sun affects the proper awning size, because the sun is lower in the sky during early morning and late afternoon.

If you still remember some of your high school geometry, you should be able to calculate the size of awnings needed for various windows in your house. The latitude angle for your area determines how high the sun is in the sky and its angle of incidence on your windows.

The sun's height varies throughout the day and seasons. You can find the sun location for various regions, seasons and times of day in most basic solar energy books. If you are not a math wiz, just make some test awnings with cardboard to determine the proper size. ■

The following companies offer window/door awnings: Awntech, (800) 200-5997, www.awntech.com; Craft-Bilt, (800) 422-8577, www.craftbilt.com; Durasol Awnings, (888) 387-2765, www.durasol.com; Eastern Awning, (800) 445-4142, www.easternawning.com; and Try-Tech Industries, (866) 337-2381, www.try-tech.com.



To ask a question, write to James Dulley, Energy Report, 6906 Royalgreen Drive, Cincinnati, Ohio 45244, or check his Web page at www.dulley.com.