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It's Not Easy Being Green

Ric Berg

Roller Shades and Energy Savings

Get Things Rolling

Roller shades are the perfect solution for modern energy savings

The benefit of installing roller shades to reduce solar heat gain through windows has been an important research topic for many years. The ability to accurately quantify the reduction in cooling loads is an asset to architects, engineers, building designers and restaurant facility managers.

Roller shades affect energy use by reducing solar gains and modifying thermal losses through windows. They also increase natural daylight without obstructing views.

Shading is therefore closely connected with energy use in buildings for heating, cooling and lighting, with the occupants' visual and thermal comfort in mind. Both energy use and comfort are crucial issues. Energy use is important for economic and environmental factors while comfort affects customers' well-being and occupants' productivity.

Energy Conservation Shades

To block out the sun's rays, consider the "shading coefficient" of roller shades. The shading coefficient measures the ability of the window treatment to reduce solar heat gain. The lower the number, the less solar heat enters your location and the lower your cooling or heating bills. Roller shades offer some of the lowest shading coefficients for window treatments.

Solar screen shades are excellent for temperature control, reducing glare and diffusing light. The shear-weave fabric is designed as a screen to block ultraviolet rays while not compromising aesthetics. The energy-efficient solution of screen shades are perfect for light control, visibility and heat reduction.

A variety of fabrics offer a wide range of UV protection; for example, fabrics with densities ranging from opaque to 25-percent openness. These options provide a stylish way to reduce your heating and cooling costs. The roller shades have a shading coefficient ranging from 0.21 to 0.54, blocking solar heat intrusion and lowering energy costs.

Studies comparing energy conservation for identical buildings located in major U.S. cities for one year, using 5-percent openness window shades versus no shades, show a savings of approximately 15 to 75 percent on cooling costs. This varies slightly, depending on the location, climate and the fabric.

Better yet, roller shades can also add up to 10 LEED points for LEED-certified buildings.

Benefits of Roller Shades

Roller shades are an excellent way to save energy. They provide insulation during the cold winter months and repel heat during the summer. The benefits of deflecting the sun's heat during the summer months include:

- . Reduced energy consumption and carbon footprint
- . Lower energy bills
- . Less fading and melting of other products on shelves

- . A consistent and comfortable inside temperature for your customer
- . A comfortable environment for your customer without glare

For a typical restaurant, windows account for nearly 50 percent of the heat gain or loss, depending on the season. This in turn places close to 50 percent of the workload on your air conditioning or heating system, which is more than the roof, walls and attic combined. Untreated windows allow about 20 times more heat into a location than an equal amount of insulated wall space. By controlling the way the sun's energy enters, you can save on summer energy bills and take advantage of "free" heating in the winter.

Let Some Sun In

With a little sun management, natural light can be a beautiful design element. Managing the sun's heat and glare can be accomplished with sun-control fabrics.

To make any location more comfortable, the light-filtering qualities of sun-control fabrics diffuse light, reduce glare and help control interior temperatures. As these fabrics filter and diffuse light, they also help reduce the fading of carpet and interior furnishings. Sun-control fabrics effectively provide energy-efficient solutions by reducing the amount of solar heat gain.

While lighter-color fabrics reflect the sun's rays and illuminate the interior with the right amount of light, darker fabrics provide a superb view to the outside while also absorbing light. This makes them ideal for viewing computer and television screens. For applications where natural light and view are desired, roller shades provide the ideal combination of light control, visibility, solar protection and heat reduction.

Immediate and Long-term Results

Restaurants that install roller shades can discern an immediate difference with comfort levels, namely a drop in interior temperature levels. This creates a comfortable environment for customers and results in lower cooling costs and an increased positive customer experience.

If possible, restaurants should budget for the installation of roller shades during the planning process to realize the significant savings on cooling costs over the time of occupancy in that location.

Roller shades come in a variety of offerings, including manual and motorized shade systems. Shop around to find the design that works best for your facility.

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