



## Energy Efficient Homes with Shutters and Blinds

The hot topic is the rising cost of energy, so it makes sense to reduce the amount we use! Did you know that heat gain and heat loss through windows are responsible for 25 – 30% of residential heating and cooling energy use? So, there's no better time to start thinking about taking practical steps to improve energy efficiency in your homes. Not only are shutters and blinds stylish, they're practical too, and they add another insulating barrier to your window, helping to improve temperature and comfort in your homes.

It's worth considering how you use shutters and blinds....For optimal cooling benefits, they should be closed when it is hot outside and there is direct sun glare shining on that window. Then they should be opened when the window is in shade, or the sun has set to allow a cooler breeze in. In the winter, shutters and blinds should be opened in the morning to harvest solar energy. Then closed when the sun goes down to help retain heat. Automating shutters and blinds will save you time and effort because you can programme them to close at sunset.

### THE 4 KEY AREAS TO HELP YOU SAVE ENERGY

#### Reduce Heat Loss:

Adding shutters or blinds to your windows improves insulation. Shutters can reduce heat loss by **64%\*1!**

#### Reduce Heat Gain:

Shutters and blinds prevents overheating. Solar energy transmittance (G<sub>tot</sub>) with a double glazed window can be reduced from 0.85 to 0.24, with a shutter or a blind you can reduce this further to 0.15 g<sub>tot</sub>\*2.

#### Control HVAC:

Blinds and shutters are considered a passive cooling technique and are identified as non-energy intensive means of reducing or eliminating the need for **Heating, Ventilation, and Air Conditioning units.**

#### Control Light & Glare:

Artificial lighting can be reduced by controlling and optimising the amount of daylight with shutters and blinds. They also help prevent overheating and reduce solar glare, therefore reducing the g-value (solar gain).

### REDUCE HEAT LOSS



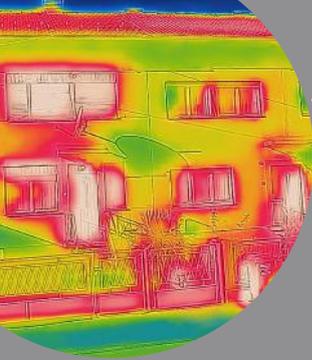
### REDUCE HEAT GAIN



### CONTROL LIGHT & GLARE



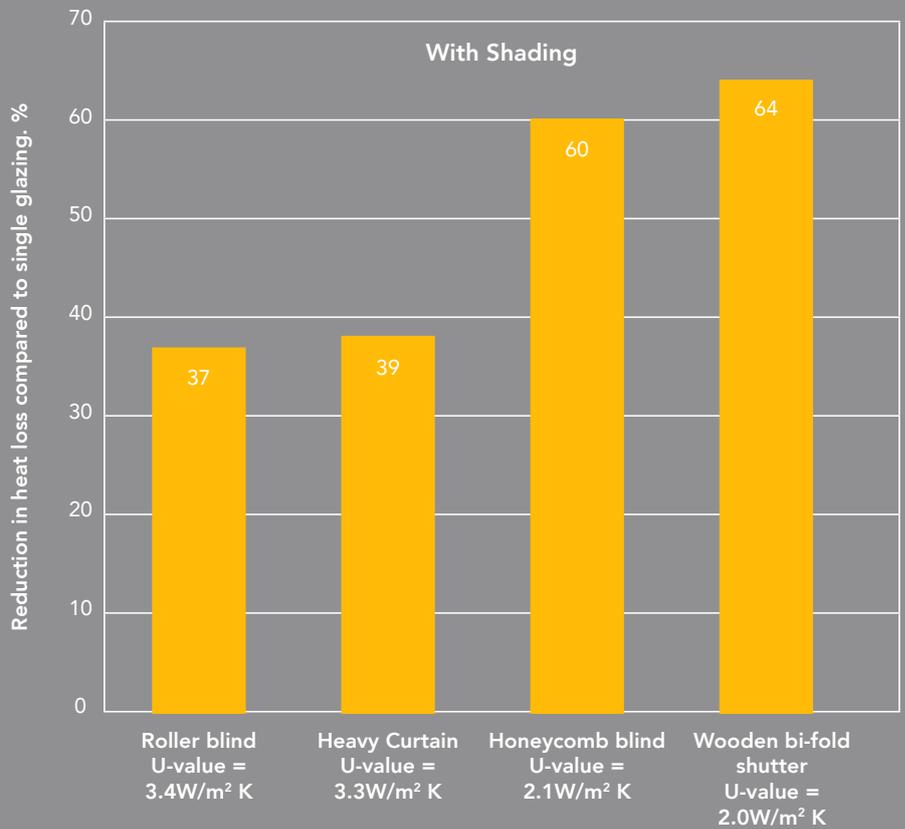
### CONTROL HVAC



Windows are often the biggest cause for energy loss.

A simple and lower cost option, as opposed to replacing the whole window, is to install a shutter or a blind. Shutters and blinds will always improve the U-Values and have the potential to improve the windows U-values by over 40%!

Improving the U-values will reduce heating bills and will save you money. What is a U-value? A U-value, or thermal transmittance, is the rate of transfer of heat through a structure, divided by the difference in temperature across that structure. The units of measurement are  $W/m^2 K$ . The better insulated a structure is, the lower the U-Value will be.



The graph above displays the reduction in heat loss with different window coverings compared to a single glazed window alone.

### DID YOU KNOW?...



#### SHUTTERS

**64%** reduction in heat loss with wooden shutters, compared to a single glazed window alone.

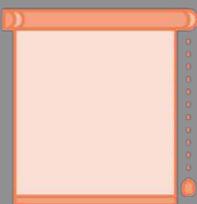
U-value =  $2.0W/m^2K^{*1}$ .



#### HONEYCOMB

**60%** reduction in heat loss with honeycomb blinds, compared to a single glazed window alone.

U-value =  $2.1W/m^2K^{*1}$ .



#### ROLLERS

**37%** reduction in heat loss with roller blind, compared to a single glazed window alone.

U-value =  $3.4W/m^2K^{*1}$ .



#### SUSTAINABILITY

**80 million tonnes** of CO<sub>2</sub> could potentially be saved by installing shutters and blinds, as quantified by an ESCORP/EU25 study<sup>\*2</sup>.

<sup>\*1</sup> <https://courses.shadeit.org.uk/>

<sup>\*2</sup> <https://www.shadeit.org.uk/resource/solar-shading-saves-energy-thats-just-start/>