



# Thermal Insulation Properties of Roller Shutters

Computer modeling tests using the NatHERS (National Housing Energy Rating Software) have been carried out on a typical project home and typical residential units located in Sydney, Melbourne and Perth with Ultimate window roller shutters fitted to the windows. NatHERS gives an estimation of heating and cooling loads on a given dwelling and results have shown the energy reductions and benefits of fitting our window roller shutters.

Potential savings on heating and cooling energy consumption for a whole year, when using Ultimate window roller shutters in a detached residence, is shown in table 1.

**Table 1**

	Sydney	Melbourne	Perth
Possible total annual heating and cooling energy savings	30%	25%	40%

Potential savings on heating and cooling energy consumption for a whole year, when using Ultimate window roller shutters in residential units, is shown in table 2.

**Table 2**

	Sydney	Melbourne	Perth
Possible total annual heating and cooling energy savings for both North and South facing windows	27%	23%	59%
% Total annual heating and cooling energy savings for both East and West facing windows	34%	26%	44%

### Conclusions

The use of our roller shutters, on the windows of a detached residence and residential unit complex in Sydney, Melbourne and Perth were found to provide significant energy savings for heating and cooling and therefore, reduced energy bills for consumers and also a reduction in greenhouse emissions. The window roller shutters provide an environmentally friendly and energy saving cost efficient solution to heat loss in winter and summer heat gain.

Notes: Tests were carried out on a randomly chosen home design and also on residential unit plans provided by the University of New South Wales. It is assumed that thermal insulation would exist in the ceiling and walls of the house. The shutters would be closed in summer when high levels of sunlight were on the windows. The shutters would be open in winter to let the sunlight in and closed at night to keep the heat in. Results will vary depending on the orientation of the house, the type of construction and the position and size of windows. Results will also vary depending on how the roller shutters are operated and the actual weather experienced.