How effective is the Sun Lizard Solar Climate Control System?

Works when there is sunlight	The Sun Lizard relies on the sun. Its performance is directly related to how much sun you get each day and will vary depending on your location and solar radiation you receive.
4° – 6 ^{o} warmer in winter	If you have the Sun Lizard installed and sized to your building correctly, you can expect a 4 to 6 degrees warmer space in winter
Recommended area: **100m^2 for single collector** **150m^2 for dual collector**	The single collector naturally warms an area of 100m^2. The dual collector will service an area of approximately 150m^2. Both assume an average 2.7m ceiling height.
Up to 10° cooler in summer	A Sun Lizard installed and sized to your building correctly assisted by cooling vents that allow cooler air to enter from a different part of the building, will cool the building by up to 10 degrees in summer.
Requires reasonable insulation and thermal mass in the building	In all cases we assume that you have adequate insulation and thermal mass and that you have sealed up any significant drafts in the building. If you have a very energy efficient and well designed home, the effective area may be larger.

Other products in the Sun Lizard climate control suite include

Solar Heat Extractor
Effectively remove heat from a building and introduce cooler air and ventilation.

Solar Air Shifter
Distribute warm or cool air more effectively throughout a building to improve comfort and reduce the need for other expensive systems.

Solar Heat Collector
Smart and efficient solar collector for preheating air in existing heating systems or custom solar systems

For local distributors and installers or for more information, please visit our web site or contact our head office.

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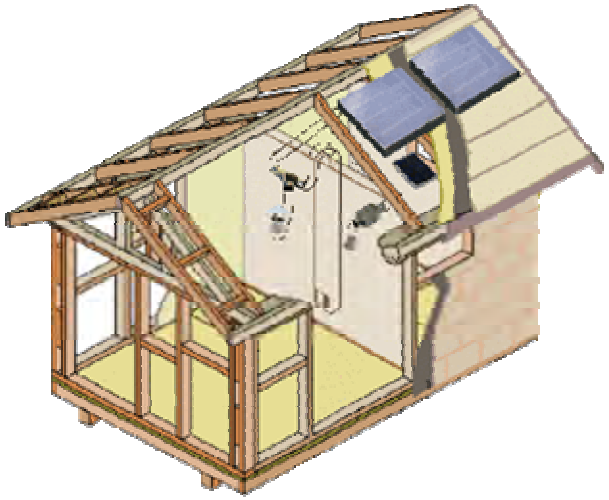
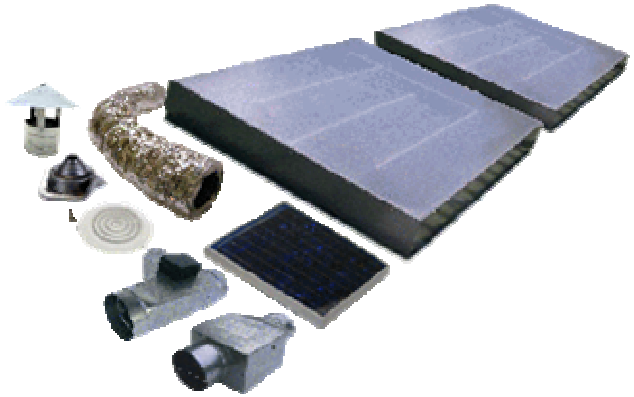
Sun Lizard
SOLAR CLIMATE CONTROL





Sun Lizard Solar Climate Control

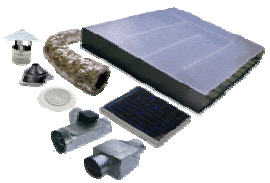
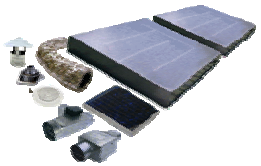
The Sun Lizard Solar Climate Control system is a unique way of heating and cooling your building. It uses solar energy, natural air movements, and heating and cooling dynamics to harmoniously moderate the comfort of your home or building. It can be retrofitted into existing building or installed on new buildings.

In heating mode the system operates when there is sufficient sunlight to generate heat energy. It uses the building as a thermal heat bank to store the generated heat so the need for additional heating is minimised.

In cooling mode, the system works both day and night to extract the hot air out of the building. A mains powered plug pack is included to continue extracting hot air after sunset.

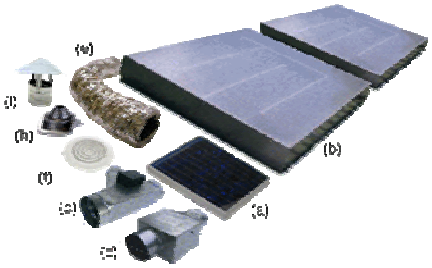
Available Systems

The Sun Lizard Solar Climate Control Systems are available in two sizes:

	
Single Climate Control Suitable for pitched roof with ceiling cavity. Recommended for areas up to 100m^2	Dual Climate Control Suitable for pitched roof with ceiling cavity Recommended for areas up to 150m^2

How Does the Climate Control Work?

All year round, the Sun Lizard Climate Control uses sunlight and converts this free energy into heat and electricity to moderate the temperature of your building – warming in winter and cooling in summer. Both climate control systems come with the following key components:



(a) Photovoltaic Panel (PV) - generates electricity for fans and electronic control system
(b) Solar Heat Collector - creates heat in the specially designed, insulated collector.
(d) Fan Box – moves air through the ducting and collector.
(e) Air Flow Control Box - controls whether the system is in heating or cooling mode
(f) Insulated Ducting – is the passageway for air to travel between different components
(g) Ceiling Diffusers – sits on the ceiling to allow air to exit or enter the rooms from the systems
Electronic Control System – controls system functions between Hi/Low and Heating/Cooling.

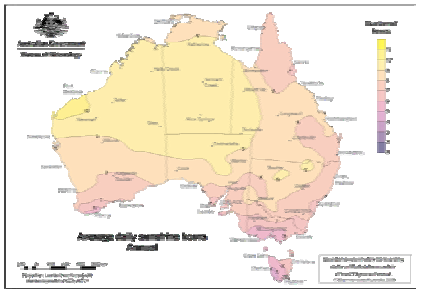
In Winter

In winter, the Sun Lizard allows you to capture the warmth of the sun into the air space where you live, work and breathe.

Solar powered fans draw air from the building through an inlet vent. The air is forced through the solar heat collector sun baking on top of the roof, boosting the air temperature to over 50 degrees C. This hot air is blown back through the heating outlet vent, giving you free and natural warmth from the sun. This closed loop system is very efficient at heating your building.

In Summer

In summer, hot air is often trapped inside the building by the ceiling, roof and insulation. The Sun Lizard removes the hot air from the room so you don't get a build up of heat in either the air or the thermal mass of the building. You then tap into the natural cool air of your building and reduce the need for air-conditioning.



To find the potential amount of hours of free heating, cooling and ventilation, visit the Bureau of Meteorology web site. You can view maps of the average daily sunshine hours for each area of Australia.

http://www.bom.gov.au/climate/averages/climatology/sunshine_hours/IDCJCM0013_sunshine-hours.shtml

City	Average Sunlight Hrs per day (May- Sept)	Average Sunlight Hrs per Day (Oct – Apr)
Sydney	6-7 hours	7-8 hours
Melbourne	4-5 hours	7-8 hours
Brisbane	7-8 hours	7-8 hours
Adelaide	5-6 hours	8-9 hours
Perth	5-6 hours	9-10 hours
Hobart	4-5 hours	6-7 hours
ACT	5-6 hours	8-9 hours