SOLAR HEAT EXTRACTOR – A FRESH APPROACH

The concept of passive cooling a home has been around for a long time. A fan extracts hot air from a high point within a room and vents it outside. This action draws replacement air into the room via the easiest path. If this happens to come from a basement or sub-floor area it is likely to be several degrees cooler than the living space above. For the low 20-30 watts of energy (mains or solar powered) consumed by a carefully designed extraction fan system, it can greatly reduce the need for air conditioning.

The problem with existing simple extractors is that without manual intervention, the same system can act like a chimney and draw the heat from a room later at night when the room needs to be kept warm.

The new system manufactured by Solar Source, solves this problem with an active control system. When the cooling fan is inactive, a butterfly valve seals off the airflow. When a thermostat control decides that it is ready to withdraw the warm air, a small control motor automatically opens the duct path and the extraction fan is activated.

This feature is particularly effective with modern two-level homes joined by an open stairwell. In these situations the accumulated heat in the upstairs section can be quit unbearable in the summer. The hot air needs to be removed by early evening if bedrooms are to be made comfortable enough for sleeping at night.

To maximize the cooling effect, some thought needs to be put into the source of the cooler air being drawn into the room. If sub-floor space is not available, then an adjacent building or garage on the shady side of the house may have a large volume of cooler air available for use. Even a shady, treed area near the building may have a temperature much lower than the accumulated heat in the living space.

Solar Source Extraction Features

Power sources.

Solar power only
Mains power only
Solar and/or mains power, but at very low energy use. It will only draw mains power when there is insufficient solar energy i.e. at night.

The Solar Source System is an expandable system with 1, 2 or 3 fans. Each pickup point has a designated fan rated at 135 CFM.
It is able to pickup from up to 3 points e.g. 1, 2 or 3 room points, or from a ceiling space or a combination of both.

Control Options

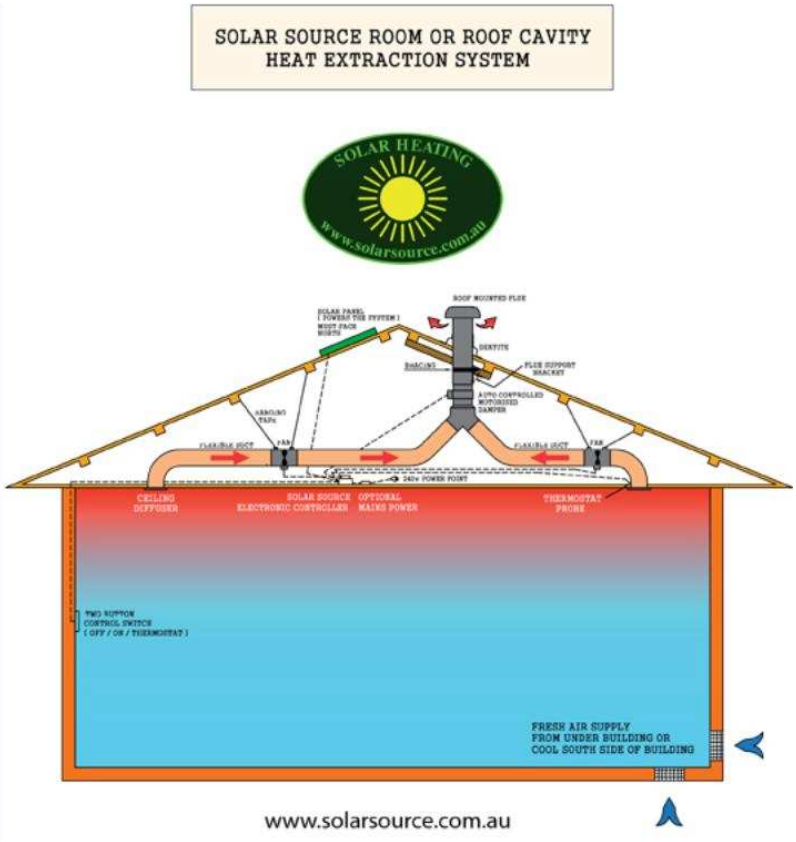
Thermostat Control
Set & forget
Will turn on when temp reaches approx. 28˚ and turn off when temp drops to approx 20˚.

Control by the Sun
Will turn on & off depending on available sunlight. (no mains power pack attached)

Manual Control
Turn on or off to suit the individuals preferences.

No Chimney effect meaning the system cannot act like a chimney & draw heat from a room that needs to retain its heat. The automatic butterfly valve cuts off the airflow, when fans are inactive.

Ducting Features the latest industry, snap together technology, duct fittings.

Stand Alone Not reliant on wind to operate (i.e. whirlybird)

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