Installation

It is recommended to install your SAM collectors at a high angle (approx. 55 degrees depending on latitude) to capture the maximum available amount of heat in the collector during the cooler months of Autumn, Winter and Spring.

SAM can be installed individually or in a bank with up to 5 collectors per fan. Multiple SAM collectors in a bank increase the temperature of the air supplied by the system into your home.

SAM units are normally roof mounted, but for smaller installations, may be wall mounted. Mounting kits for the different standard configurations are available for both tile and metal roofs.

Each air supply requires a fan kit including a thermostat. Both 8 and 16 watt fan kits are available and are used depending on the number of modules and the application.

SAM Applications

- New & Old Homes
- Offices
- Holiday Houses
- Schools
- Day-Care Centres
- Sports clubs
- Self-contained Accommodation
- Community Buildings
- Granny Flats
- Drying Rooms
- Sheds
- Indoor Pools
- Sub-floor Ventilation
- Workshops

SAM Heating and Ventilation Systems help you stay comfortable, whether at home or work by providing free heating from the sun. SAM also increases the efficiency of existing heating and improves indoor air quality.

SAM is also a great way to address mould, mildew, humidity and condensation issues in your home or work environment.

GES is the Australian solar heating, cooling and ventilation specialist. We have sustainable and cost effective ventilation solutions for your home, business, caravan, boat, car and more! To find out more about these products please visit:
www.ges.com.au

Global Eco & Environmental Solutions

Visit our showroom at:

1135 Toorak Road, Camberwell, VIC 3124

Call us: 1300 655 118

www.heatwithsolar.com.au

Or contact your local dealer:

Warranty

SAM is specifically designed and developed for Australian conditions based on many years experience with European solar air heat collectors in our harsh Australian environment.
We offer a 10 year warranty on PV panels and a 2 year warranty on all other components.
An extended warranty is also available on request.

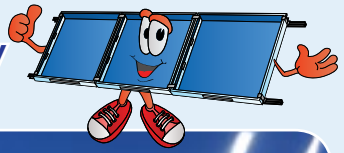
Delivery available Australia wide

SAM Solar Air Module

Fresh Air & Solar Heating

Solar Heating and Ventilation Systems

Looking for a Solar heating option?
Do you have issues with mould, mildew or condensation?



SAM-Solar Air Module is the Solution!

SAM effectively harnesses the energy created by the sun and transfers it without any running cost whatsoever!

SAM systems contribute towards heating, while ensuring a healthy and comfortable indoor climate.
The fresh, preheated air produced by SAM also combats condensation and reduces the risk of mould and mildew.

www.heatwithsolar.com.au

The SAM Concept

• SAM collectors are designed to allow you to select the optimal number of Solar Air Modules for your home or commercial building and offer maximum flexibility in installation and location of the modules.

• In Australia we receive heat radiation up to 1,100 watts per square meter during Spring/Autumn and 1,000 watts per square metre in Winter. SAM helps you effectively direct this heat into your home or commercial building whilst improving the indoor climate by ventilating the building with fresh preheated air.
• The fresh, preheated air reduces condensation, mould, mildew, musty smells and dampness.
• A SAM system will increase the baseline temperature which makes it much easier for your existing heating system to reach or maintain your desired temperature.
• The warm dry air from the SAM collectors reduce the amount of moisture accumulated in the building, which means that the efficiency of existing heating will be increased. The higher the humidity levels in your home, the more noticeable the benefit of the drying effect will be.
• The fans are designed for the highest level of performance with our custom made solar panels, ensuring the SAM systems operate even in partially overcast conditions.
• The solar operation ensures that the fan runs at correct speed and the system operates when beneficial - without any cost.
• SAM is thermostatically controlled ensuring warm air is only being brought into the house when required.
• The excess power from the PV panel may, via the thermostat, be used to power an in-ground cooling system or a solar heat extraction fan during warm weather, if desired.

Mounting Hardware

SAM units are mounted on a tilt frame racking system allowing for the collector angle to be adjusted to maximise the solar gain. The collectors are positioned and secured by custom made clamps similar to the type used for the PV panels.

SAM Operating Principle

The SAM collectors have been designed as the centre piece of our complete Solar Air Heating and Ventilation Systems; incorporating PV panels, solar fans and mounting systems.
These systems require no external power supply and therefore operate without any ongoing costs. If desired – SAM may also be operated using a low voltage power supply controlled by a differential temperature thermostat.

In a standard installation, a PV panel is use to power a solar fan, mounted in a convenient and effective position for supplying warm dry air into a building.

The fan will draw fresh air through a filter and into the collector, where the sun will heat the air before it is supplied into the building. The number of modules used will depend on the area to be ventilated and/or heated.

There are many views on how to optimise solar heating, however, an effective collector is always required! If you have your own view, SAM may be used in powered systems with a variety of airflow volumes, as well as different types of controls and thermostats. Operating SAM with a powered differential temperature thermostat allows you to maximise running time and benefits, by giving the option of operating the system regardless of solar conditions.

During warm weather the above option also enables the system to take advantage of the night sky's radiation principle to introduce cool air into the building at night.

A bank of collectors may also be used as a simple and cost effective way of pre-heating air for ventilation and air condition systems. SAM may even be used for boosting performance of roof based heat recovery systems.

Benefits

- Provides free heat from the sun
- Increases efficiency of existing heating systems
- Ensures a healthy & comfortable environment
- Keeps buildings fresh & dry
- Eliminates mould & mildew
- Improves air quality
- Minimises condensation
- Simple installation
- Saves you money!

Specifications

Type	Solar Air Module for heat collection and ventilation
Colour	Anodised Aluminium
Material	Aluminium Frame and Back
Duct Diameter	150 mm
Dimensions	1000mm x 1000mm x 92 mm
Weight	14kg
Shipping Dimensions	1120mm x 1120mm x 140mm
Shipping Weight	15kg
Front Cover	4 mm Safety Glass Tempered and Patterned
Filter	3mm Felt
Solar Panel	Mono Crystalline
Fan Alternatives	8 Watt/12V DC 1600 RPM (40 dBA. Max. 300 m3 per hour) 16 Watt/12V DC 2300 RPM (43 dBA. Max. 450 m3 per hour)
Estimated Temperature Rise (above ambient temp.) with 8 watt fan. (Clear sun - midday) A bigger fan increases airflow resulting in lower temperature readings but from 3 module systems and up total heat contribution generally is increased.	1 unit: 15°C 2 units:24°C 3 units:32°C 4 units:39°C 5 units:45°C
Ventilation Area per Module (approx.)	80 Square Metres
Heat Contribution per Module (indication only)	30 Square Metres
Accessories	Fan Kit (1 per unit) Includes Thermostat
Options	Roof Mounting Kit Heat Extraction Fan Differential Thermostat In Ground Cooling System

* Global Eco & Environmental Solutions reserves the right to alter any of the information in this document without notification.