Purposes of using solar air collectors from SolarVenti®

Drying and ventilating houses, summerhouses, garages, basements, storage rooms to avoid humidity and mould etc. It prevents for rust on metal etc. on cars, motor bikes and tools

For this purpose you normally use:
a) 1 m2 of collector for each 50 m2 space to ventilate.
b) an airflow of 100 m3 air/hour/m2 collector.

SolarVenti always use fresh air for the purpose. You save much heating by doing this - because a dry house is easier to heat than a humid. This usage primary ensures a dry interior with fresh air.

Heating houses:

For this purpose you normally use:
a) 1 m2 of collector for each 10 - 20 m2 space to ventilate and heated.
b) an airflow of 50 - 60 m3 air/hour/m2 collector.

The reduced air flow ensures a higher temperature for the inlet air. Hereby it gets a higher heating effect.

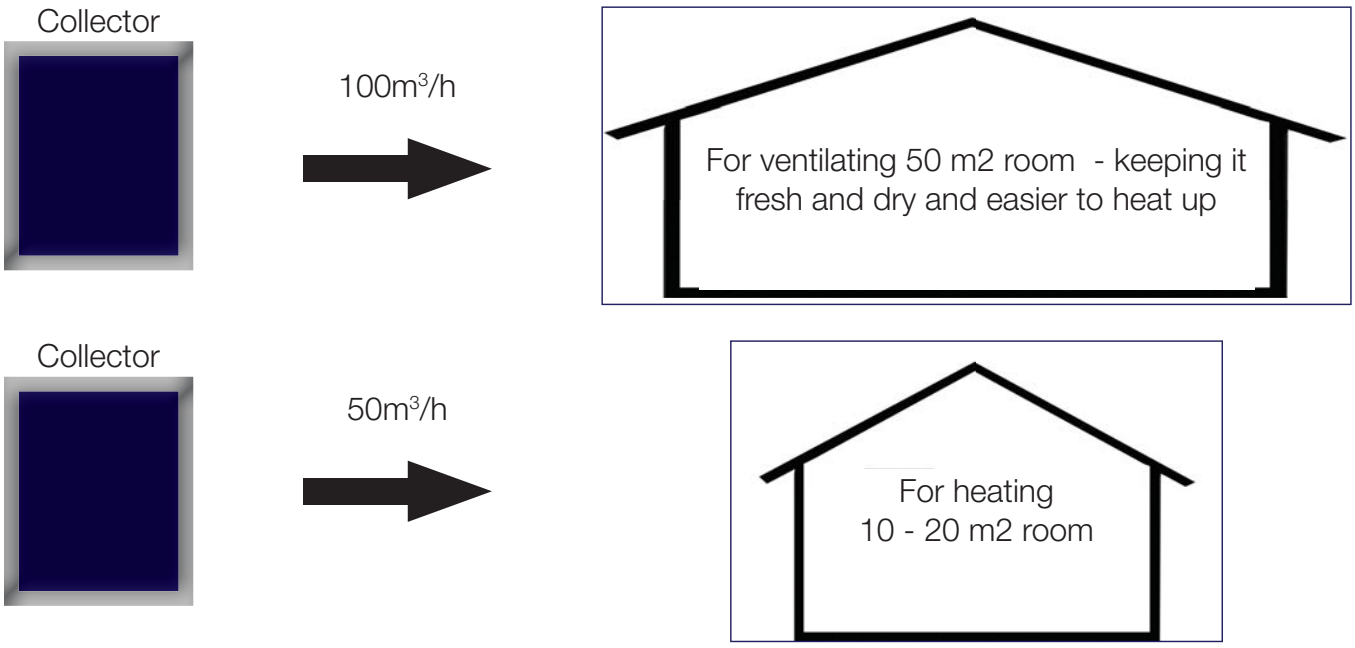
Drying crops etc.:

Each 10 degrees you rise the air temperature you double the ability of removing humidity from an object.

By using an airflow of 100 m3 air/hour/m2 collector you rise the temperature approx. 20 degrees in normal sunshine - that means that you may 4-double the drying speed.

To remove 1 litre of water from an object you must use about 1 kWh of heating energy.

Typically you may have this energy by using 2 m2 collector in 1 hour. (depending on radiation)



Control Scheme

Which SolarVenti® model should I install?

With this scheme we want to give some ideas of how to size the model to be installed, and things to consider before choosing.

First it is important to know the surface area (m2) and volume (m3) of the enclosure.

The m2 stated in the catalogs with SolarVenti® solar air collectors are designed for a maximum height of 240 cm.

Model	Max m^2		Max hight		Max m^3	Max M^2 & M^3 for heating*
SV3	25 m^2	X	2,40 M	=	60 m^3	Only dehumidification & ventilation
SV7	50 m^2	X	2,40 M	=	120 m^3	m^2 > 21 ** | m^3 > 50 **
SV14	80 m^2	X	2,40 M	=	192 m^3	m^2 > 41 | m^3 > 99
SV20	100 m^2	X	2,40 M	=	240 m^3	m^2 > 59 | m^3 > 141
SV30E	150 m^2	X	2,40 M	=	360 m^3	m^2 > 90 | m^3 > 220

* This is a guide only as all homes are different.

** We strongly recommend the larger models for heating.

<u>Other things to consider are:</u>

If the house is little, poorly or not insulated.
If the windows are single or double glazing.
If there are many leaks, for example under doors, in the frames of the windows and others.
If there are fireplaces pulling air.
If there are extractors, passive and / or forced.
If there are cooker hood, passive and / or forced.
If there are open windows or doors or if they are often opened.
If the house is several floors or very long.

All these things can do, that you might need to be increased in size or install multiple collectors.

The SV residential models are not suitable for industrial or large halls.

Control Scheme

Installations with ducts:

Ducts, angles, curves, etc... will lower the fair flow. Always try to minimize the use of excessive meters and preferably through the use of smooth pipes.

Recommendations when installations ducts:

Use in-line fan. Fan installed in the tube and not on the panel, then you pull the air rather than pushing the air. It is more effective, approximately 30%.

In installations of more than 5 meters use an extra fan. (Only the SV30 is suitable for pipe of 5 m or more.)

Never use an angle right at the air outlet or after a fan. It can produce turbulence and prevent normal airflow.

General sales guides:

It is better to say that SolarVenti® removes cold rather than heating.

Why is that?

It is difficult to raise the temperature with a solar air collector. Usually the temperature is raised only a degree or two all depending on each house. There are examples of rises 7-8 degrees but is not the norm.

When removing moisture or water from the air, the perceived temperature is about 3-4 degrees warmer and at the same time it is much easier to heat when there is no excessive moisture in the air. So you get to save on heating.

If you talk about heating, it is common to look at the thermometer and although the house feel much warmer, some people are just looking at the numbers on the thermometer and might therefore not be satisfied while the ones “feeling” the temperature are always satisfied.

Always listen to the customer and ensure that customer expectations are within what we can achieve.

It is better not to sell, than to sell and have a dissatisfied customer.

Some people have the idea that we can reach temperatures of 24-26 degrees, it is simply not possible.

Also remember that the relative humidity must be between 40 and 60% less is not healthy either.