



The problem: Humid basements

One of the first signs of humidity in the basement is the stale smell. The humidity will soon destroy items stored in the basement, such as textiles, cardboard boxes or furniture. In addition, the lack of regular ventilation will result in mould and harmful fungus. As a consequence the basement will become unfit for use.

Humid walls are the result of penetrating damp and the concurrent heat loss through the walls and floor.

Even with good building materials the temperature difference between the surrounding ground and the basement alone may cause high indoor humidity. To make the rooms fit for use again they have to be heated, mechanically dehumidified and vented on a regular basis. This usually results in high operating costs.



Humidity intrusion in the basement depends on the following factors:

- The heat loss in the basement depends on the following factors:
- The insulation of the walls and floor of the basement and the moisture barrier
- Drainage conditions
- The characteristics of the ground and vegetation surrounding the basement
- Level of groundwater

- The insulation of the walls, floor and windows
- The difference in temperature between ground and basement

The solution: The 2 phases of the effective dehumidification of your basement

Phase I: Ventilation/high airflow

A high air exchange is necessary. Within the first operating hour of the SolarVenti the replacement of the humid basement air is essential for the dehumidification rate. With the high airflow of the SolarVenti a rapid and significant effect is achieved.

Phase II: Heating + Ventilation

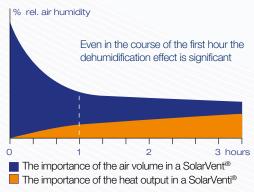
The heating effect is increased. After the first operating hour, the heating provides an increasing importance for the dehumidification. The moisture will evaporate from building materials and furniture. The high air exchange will carry the evaporated moisture out of the building.

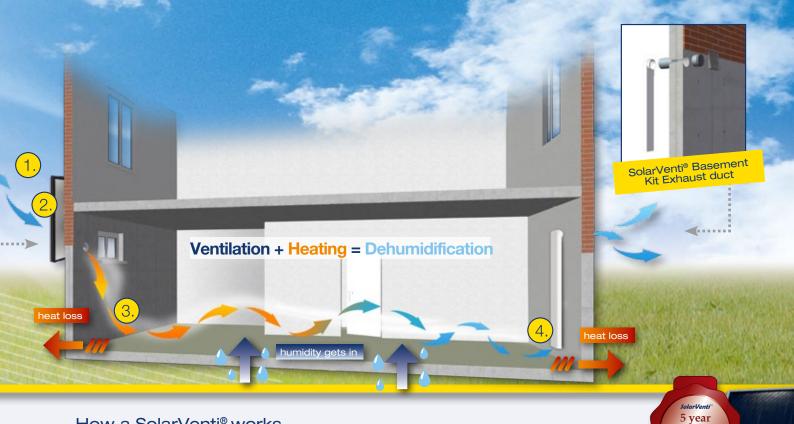
The process starts all over again:

The ability of the basement air to contain moisture is increased through the drying process. During the night the dry basement air will absorb moisture from the walls. When the SolarVenti begins operating again after sunrise, the ventilating Phase I will start all over again.

Ventilation + Heating

= Dehumidification





How a SolarVenti® works

The high dehumidification effect of the SolarVenti® is a result of the combination of the heating (injection of warm air) and ventilation (extraction of moist air).

- 1. The sunrays set the injection and exhaust system in motion.
- 2) Fresh air is sucked in through the perforated backplate of the solar air collector. The air circulates in the collector and is heated by the sun.
- 3. Due to the high air performance of the SolarVenti® app. 100-200m³ dry, hot air is injected into the basement. The injected air is app. 15-40°C warmer than the outdoor temperature.
- 4.) The extraction kit ensures that the moist air is sucked out of the basement, so that the air does not penetrate into the rest of the house.

Your benefits:

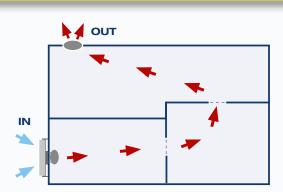
- Dehumidification without any operating costs
- Fresh air in your basement
- Avoid damage on the building and furniture as a consequence of moisture
- A basement with multiple functions: Hobby room, drying room, storage room, accomodation, etc.
- Maintenance-free
- 5 year warranty
- Effective dehumidification at a fair price

SolarVenti® Basement Kit:

The size of the needed SolarVenti® air collector depends on the area and ceiling height of the basement (volume in m3). The SolarVenti® Basement Kit includes a high performance SolarVenti® solar air collector with injection and heating of fresh outdoor air, which can be combined with an extraction kit suiting your basement. There are many possible combinations.

The SolarVenti® Basement Kit works independently of the electricity grid as both the injection and the extraction ventilators are run by the solar cell in the solar air collector.

The regulator in the SolarVenti® Basement Kit ensures that shut off basement rooms are optimally ventilated without your assistance - even while you are away.



warranty

Floor plan: The air flow in a basement with a SolarVenti®

The extraction kit ensures the optimal air flow in the basement thus the moist air doesn't go up into the upper part of the house.

Find the size suited for your basement:



The direct injection is the best if the ceiling height of the basement allow it.



Mounted with an angle the injected air will have a higher temperature during the summer - and thus a more effective dehumidification.



A tube can be used, if the basement is placed too far in the ground for a direct injection.

Model	SV14 K	SV20 K	SV30 K
Recommended max. basement area	55 m ²	70 m²	100 m ²
Max. air performance	110 m³/hour	140 m³/hour	200 m ³ /hour
Expected time for air exchange		app. 1 hour	
Estimated energy supplement SV-unit/year*	924 kWh	1340 kWh	2100 kWh
Temperature increase in injected air compared with outdoor temperature *	up to 30° C	up to 35° C	up to 40° C
Dehumidification capacity in basement **	up to 185 ml/hour	up to 235 ml/hour	up to 336 ml/hour
Dimension in mm (LxWxD)/weight in kg (solar air collector)	1974 x 704 x 55 / 14	1974 x 1004 x 55 / 15	3000 x 1020 x 75 / 29
Solar cell / ventilator in solar air collector - output	18 watt / 3,4 watt	18 watt / 3,4 watt	2 x 12 watt / 5,1 watt
Ventilator in extraction kit - output in watt		3,4 watt	
Air valve dimension - solar air collector/extraction kit		— Ø125 mm / Ø125 mm —	

** Based on basement conditions with the values: start 15 °C/ 85% RH, end 20 °C/ 55% RH

All prices and data are subject to alterations and printing errors

Our solar air collectors are tested by:











TIP: There are big differences on the performance quality of solar air collectors. Therefor we suggest always to check the documentation of air flow and power efficiency before buying.

See comparative tests here.

All models have an alu frame as standard. At an additional price the models are also available with a white or black frame.

"Before I had a SolarVenti installed, my basementwas humid and there was often an unpleasant stale smell. Now I dry my laundry in the basement - it dries quickly and smells fresh. '

Niels Rasmussen, teacher, Tarm (DK)



Installation and other products:

Visit out website www.solarventi.dk for further information or contact your local dealer to have an individual consultation.

Our products are also suitable for cottages, all-year houses, allotments etc. Find more information on our website.

