

2Power

Heat and electricity from one module



NELSKAMP

Photovoltaic and solar thermal energy



Producing warm water with collectors is an ecologically sensible and viable measure in order to spare resources of fossil fuel and your wallet.

So far the house owner had to decide for a photovoltaic system and a separate solar thermal system for the warm water production, which meant that always a portion of the roof area could not produce electricity. It always had to be pondered between the area for electric power production and the area for warm water production.

Now the only thing to be calculated is which portion of the roof area is going to be covered with photovoltaic modules and on which area 2Power modules are going to be installed.

2POWER

Heat and Electricity = 2Power-Modules!

A photovoltaic module heats up to 80C° in middle European summers. Therefore it makes sense to use this energy for heating sanitary and heating water: The 2Power module works with a solar liquid that circulates on the rear side of the module and transports the heat energy to the warm water reservoir.

A solar pump circulates the solar liquid reliably and continuously between the modules on the roof and the warm water reservoir. The thermal output of a Power module is higher than its electric output.

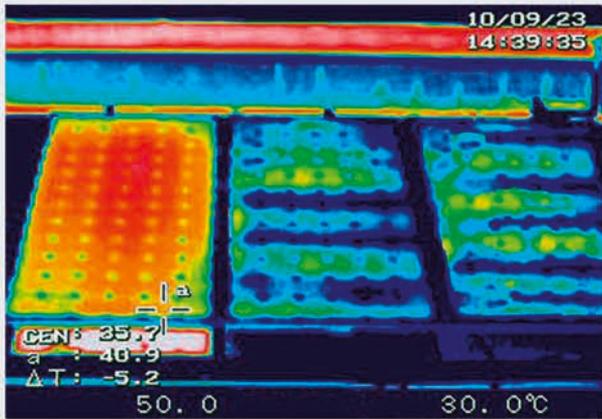


At a glance

- Valuable electricity – from all of the roof area
- Warm water and heating support – very cost effective
- Increase in electrical output from cooling
- Snow free in winter
- Optically homogeneous roof area
- Invest your capital securely and with high returns
- Tested by TÜV Rheinland

combined in one module

Higher returns due to cooling



Conventional module

2Power-module

A welcome side effect: The heat transfer to the solar liquid automatically cools the modules as the heat is deducted to the warm water reservoir. This lets the temperature of the photovoltaic cells decline. Due to this process the electric energy output increases because cool modules do have a higher efficiency factor than warm modules.

Cooling the modules therefore pays off in two ways: The production of sun heated water simultaneously increases the electric efficiency factor of the solar plant.

How much it rises due to the cooling effect depends on how much of the heat energy in Summer is taken off the collectors. The more the modules are cooled from heat deduction the more electricity they produce.

Snow-free through the winter



The 2Power modules have a defrosting function.

Free from snow and ice they can take full advantage of the often favorable winter weather conditions – clear air with bright sun at low temperatures.

While other solar system covered with snow hibernate, the 2Power modules continue to produce environmentally friendly electricity and optimize the return of the solar plant.

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Aesthetics on the roof

Optically the 2Power modules do not look different than conventional photovoltaic systems. They are same as flat and have the same dimensions and surface.

But they achieve much more: They deliver electricity and heat. The roof area becomes tidier as only one type of

collector needs to be installed. Therefore untidy roof areas with different types of collectors for heat and electricity production are a matter of the past.

2Power modules can be applied anywhere where an inclined area is available. As a basic principle: The higher the warm water requirements of a building in the summer the larger are the advantages of 2Power.



Range of applications

- Private households
- Hotels and restaurants
- Public and private swimming pools
- Housing complexes
- Public buildings
- Retirement homes
- Campsites
- Sport and leisure clubs
- Hospitals
- Industry
- Heat pump operators (geothermal regeneration)



Technical data

Electric power output:	260 Wp/module
Thermal power output:	ca. 719 Wp/module
Measures:	ca. 990 mm x 1650 mm
Weight:	25kg incl. solar liquid
Connections:	... supply line (hydraulic)
Module connections:	plug hoses DN8, pipe nozzles 10mm
Operating pressure:	< 4 bar
Recommended passage:	35l/h to max. 70l/h per 2Power module
Recommended storage volume:	ca. 75l per 2Power module

You have a suitable roof area?
We are looking forward to answer your request!

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