Life on Roofs

ZinCo Press Release

Synergy effects thanks to an intelligent design

Green and solar – 4 % increase in yield

The combination of green roof and solar energy is not in trend for no reason. It is already well known that this combination can produce significant synergy effects: the green roof provides the superimposed load required to protect the system against wind uplift. Therefore, there is no need for roof penetration or heavy individual point loads. In addition, green roofs provide for a lower ambient temperature compared with bare or gravelled roofs and as a result they help to increase the yield from a solar energy system.

Using testing equipment, ZinCo has provided the figures to prove precisely this effect over the past three years. The measured values from the test set up confirm that the temperature of the solar module was on average about 8 Kelvin lower above the green roof compared with the module over the bitumen waterproofing membrane. The efficiency of most solar modules depends on their ambient temperature. A rule of thumb says that for every degree of heat above 25 °C efficiency drops by up to 0.5 %. Applying this to the temperature difference of 8 Kelvin demonstrated in the ZinCo test, the solar module produces a greater yield across the entire green roof of 0.5 % / K x 8 K = 4 % compared with a solar module over a bitumen waterproofing membrane. And, a 4 % increase in yield with large-scale solar energy systems means a significant increase in profit.

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The system build-up "SolarVert"

ZinCo supplies the system build-up "SolarVert" for the combination of green roof and solar energy. It consists of the drainage and water storage channel Fixodrain® XD 20 together with the Solar Base SB 200 and the Solar Base Frame 35/90 for mounting the module. This is followed by the system substrate and the plant community "Sedum Carpet" which weighs down the solar base with its load.

Suitable for new buildings, renovations and for installation in existing green roofs.

The winning combination of green roof and solar energy is not only of interest for new buildings but also for roof renovations. A retrofitted solar energy system in an existing extensive green roof will also pay off for the client, so to speak.

Over fifteen years of experience in the sector in addition to approx. 950,000 m² of installed "solar energy roofing" combined with green roofing speaks for itself at ZinCo.
We will be happy to advise you!

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Photos

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File name: solar_2.jpg

Caption:
A combination of solar energy system and green roof will result in an increase in yield of 4 %.

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Caption:
The green roof provides for a cooler ambient temperature while providing a superimposed load.

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File name: 100_0602_a.jpg

Caption:
The solar base plates SB 200, each of which has a solar base frame SGR 35/90 for mounting the modules, are installed over the drainage channels Fixodrain® XD 20 (rolls), which are fitted across the entire area.

File name: Solarbasis.jpg

Caption:
Intelligent design: no roof penetration thanks to the superimposed load principle!