

VersiDrain® BST

Modular Extensive BioSolar Tray Planting System



We make the difference.
The Elmich Difference.



What is a biosolar roof?

Biosolar roofs are a fusion between green roofs and solar energy technologies, designed to optimise urban spaces for environmental and energy benefits. These roofs combine vegetation with solar panels, allowing for the simultaneous production of renewable energy while supporting biodiversity and reducing the urban heat island effect. The vegetation layer helps to cool the solar panels, improving their efficiency, while also providing insulation to the building, reducing energy consumption.

The efficiency of solar energy generation from photovoltaic panels increases when the roof's temperature is lower, which green roofs can achieve. However, vegetation is rarely installed directly underneath the panels as the vegetation would not receive adequate rainwater.

About VersiDrain® BST

VersiDrain® BST is an extensive green roof planting tray used to create biosolar flat roofs. The modular trays are made from UV-stabilised recycled polypropylene, which makes them lightweight and robust. Wall extenders can be affixed on any of the four sides of each tray to accommodate deeper planting depths and the possibility of establishing a border around the green roof.

VersiDrain® BST creates a monolithic reservoir on the green roof, allowing maximum greenery and higher efficiency of solar energy generation. Rainwater that falls onto the unsheltered tray filters through the planting media and is collected in the tray's reservoir. As the rainwater levels out in the reservoir, excess water is distributed to adjacent trays sheltered by solar panels or roof structures. This ensures adequate irrigation for the entire green roof.

Irrigation Supplement
Water may be supplied directly into the reservoir using a 50 mm pipe, removing the need for irrigation lines or sprinkler systems.

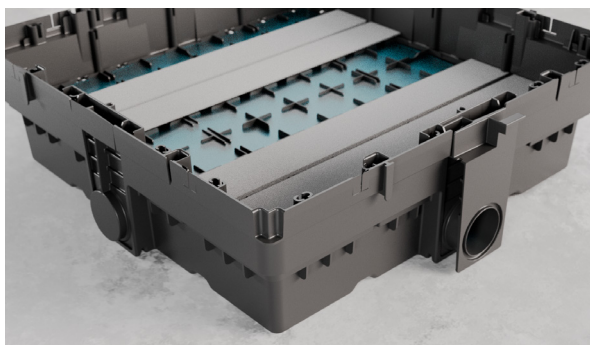
Wall Extender
Increase wall heights by 75 mm to accommodate deeper planting depths or establish a green roof border.

Geotextile
Used to create the QwickWick® system and provide a filter layer to contain planting media above the reservoir.

Linked Reservoirs
All sides of each tray have Open Joiners to create cross directional flow paths for quick water distribution between trays.

Create Maintenance Walkways
Created for the green roof and solar panel maintenance staff to navigate around and in between the green roof.

Distinctive Features



Self-Watering

QwickWick® conveys water to planting media, ensuring they are kept moist to promote plant growth, decreasing the need for frequent irrigation.



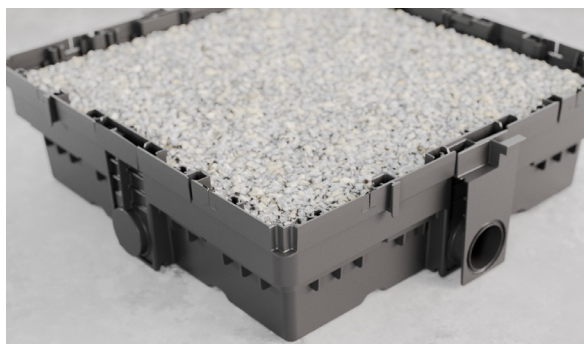
Linked Reservoirs

Rainwater collected from unsheltered trays is distributed evenly across the VersiDrain® BST system with proprietary Continuous Joiner.



Fittings Around Obstacles

Trays can be connected with 50 mm pipe fixings to speed up water distribution among adjoining trays.



Create Maintenance Paths & Walkways

Trays may be filled with gravel and joined with adjacent trays to form maintenance paths and walkways.

Technical Specifications

Material	PP
Dimensions	500 mm x 500 mm x 150 mm
Planting media height	75 mm
Reservoir capacity	40 l/m ²
Weight	
Empty	12 kg/m ²
Planted	150 kg/m ²

Key Benefits

- Vegetation and solar panels complement and do not compete for roof space
- Rainwater collected from unsheltered trays is distributed to sheltered and obstructed trays
- Configurable to spaces with solar panel installations
- Optimised water supply from a single source compared to drip lines, where supplementary irrigation is required



The Elmic security hologram ensures authenticity of the products.



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