

WAVE

PHOTOVOLTAIC FLAT ROOF MOUNTING SYSTEM

Short Description:

Ballasted, aerodynamic flat roof mounting system for photovoltaic modules, without roof penetration, suitable for south-facing or east-west configurations.

Technical Specification

Supply and complete installation of an aerodynamic, ballasted mounting system for photovoltaic modules on flat roofs.

The system shall be installable without penetrating the roof waterproofing membrane and shall be suitable for commercial and industrial rooftop applications.

Manufacturer: PanelClaw Wave or technically equivalent.

Minimum Technical Requirements

- Aerodynamically optimized mounting system for reducing wind loads.
- Ballasted system without mechanical attachment to the roof structure.
- Application range: flat roofs with roof pitches from 0° to 5°.
- Landscape module orientation.
- Tilt angle approximately 10°.
- Maximum array size: up to 40 m × 40 m per continuous PV array without additional expansion joints.
- Permissible module dimensions:
 - Length: 1,550 mm to 2,500 mm
 - Width: 990 mm to 1,150 mm
 - Frame height: 29 mm to 50 mm
- Available as an east-west system or south-facing configuration.
- Module attachment shall be achieved using integrated, frame-friendly fixing elements on the long side of the module frame, without additional module clamps.
- Integrated fixing and retaining components shall ensure uniform load transfer into the module frame, minimize mechanical stress and point loads, and enable installation with minimal tools.
- Suitable for the following roof constructions: bitumen, PVC (subject to required protective measures), EPDM, polyolefin membranes (e.g., TPO), and concrete roofs.

- Electrical properties: The mounting system shall be lightning-current carrying in accordance with DEHN requirements, include an integrated equipotential bonding (grounding) function, and ensure electrical conductivity throughout all system components.
 - Warranty: Minimum 20-year manufacturer's warranty for the mounting system.
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Material Requirements

- Structural components manufactured from corrosion-resistant steel (e.g., zinc-magnesium coated steel) and UV-resistant plastics.
 - All plastic components shall be free of plasticizers.
 - Materials shall be selected to ensure long-term compatibility with commonly used roof waterproofing membranes.
 - Special requirement for PVC roof membranes: Appropriate protective separation mats with aluminum lamination shall be installed to prevent interactions caused by plasticizer migration between the roofing membrane and the mounting system.
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Standards, Verification and Certifications

- Structural calculations in accordance with DIN EN 1991-1-3 and DIN EN 1991-1-4.
 - Project-specific ballast calculation and layout plan generated using the PanelClaw Configurator.
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Commercial Terms

- Unit: EUR/kWp (alternatively: EUR/module)
- Quantity: _____
- Unit Price: _____ €
- Total Price: _____ €