

TECHNICAL DATA SHEET - PART 1

System components for the Nophadrain Bio-Solar Roof System: ND Solar Centre Clamps, ND Solar End Clamps, ND Solar Coupling Plates, ND Solar Wind Bracing, ND Solar Module Mounting Profile



ND Solar Centre Clamps



ND Solar End Clamps

ND Solar Centre Clamps

The ND Solar Module Centre Clamps, together with the ND Solar Module End Clamps, secure the solar panels onto the ND Solar Module Mounting Profile. The profile is attached to the ND Solar Mounting System for Green Roofs. These clamps are designed to accommodate solar panels with frame heights ranging from 28 mm up to 50 mm.

They can be slid or screwed into the ND Solar Module Mounting Profile, allowing the ND Solar Module Centre Clamp to be mounted at any desired position on the module mounting profile. When installing a row of solar panels, the first and last panels in the row are secured on the outer edges using the ND Solar Module End Clamps. The ND Solar Module Centre Clamps secure the remaining sides of the solar panels.

The solar panels have a designated clamp area marked by the manufacturer. Pay attention to this when attaching the clamps. The ND Solar Module Centre Clamps should be tightened with a torque of 6-7 Nm.

Properties ND Solar Centre Clamps

- Material: aluminum with plastic elements
- Weight: approx. 0.051 kg

ND Solar End Clamps

The ND Solar Module End Clamps, together with the ND Solar Module Centre Clamps, secure the solar panels onto the ND Solar Module Mounting Profile. The profile is attached to the ND Solar Mounting System for Green Roofs. These clamps are designed to accommodate solar panels with frame heights ranging from 28 mm up to 50 mm.

The clamps can be slid into the ND Solar Panel Mounting Rail. Each solar panel has attachments on two sides to the mounting rails. When installing a row of solar panels, the first and last panels in the row are secured on the outer edges using the ND Solar Module End Clamps. The ND Solar Module Centre Clamps secure the remaining sides of the solar panels.

The solar panels have a marked clamp area indicated by the manufacturer. Pay attention to this when attaching the clamps. Since the ND Solar Module End Clamps are used as end clamps, one side has a grid. Before screwing this in place, the clamp should be clamped onto the module frame. Then it should be clicked into place, and the built-in screw should be tightened with a torque of 6-7 Nm.

Properties ND Solar End Clamps

- Material: aluminum with plastic elements
- Weight: approx. 0.075 kg

Product	Weight	Packaging
ND Solar Centre Clamps	approx. 0.051 kg	per piece
ND Solar End Clamps	approx. 0.075 kg	per piece

TECHNICAL DATA SHEET - PART 2

System components for the Nophadrain Bio-Solar Roof System: ND Solar Centre Clamps, ND Solar End Clamps, ND Solar Coupling Plates, ND Solar Wind Bracing, ND Solar Module Mounting Profile



ND Solar Coupling Plate

ND Solar Coupling Plate

The ND Solar Coupling Plate connects two ND Solar Mounting Profiles together. The coupling plate is supplied with 4 pre-assembled hammerhead bolts.

First, 2 out of the 4 hammerhead bolts need to be inserted into the first profile. Then, these 2 bolts should be tightened with a torque of 15 Nm. Next, the second profile should be installed. Finally, the remaining 2 hammerhead bolts are inserted and tightened.

It is important to ensure that expansion and expansion joints marked in the assembly and module layout plan are definitely not connected to a coupling plate.

Properties ND Solar Coupling Plate

- Material: aluminium
- Weight: approx 0.154 kg

Product	Dimensions (H x W)	Packaging
ND Solar Coupling Plate	approx. 50 x 50 mm	per piece



ND Solar Wind Bracing

ND Solar Wind Bracing

The ND Solar Wind Bracing provides support to the ND Solar Mounting System for Green Roofs. According to the project plan, there must be at least one ND Solar Wind Bracing mounted per row of solar panels on both the short and long sides of the adjustable riser.

Each wind bracing consists of 4 brackets, 4 bolts with nuts, and 4 hammerhead bolts. Each of the brackets must be attached to the ND Solar Panel Mounting Profile using one hammerhead bolt and one bolt with nut in accordance with the labels. Use a torque of 20 Nm.

Properties ND Solar Wind Bracing

- Material: aluminium
- Weight: approx. 2 kg/set
- Packaging: per set; 4 U-profiles, 4 bolts with nuts, and 4 hammerhead bolts

Product	Dimensions (L x W x H)	Packaging
ND Solar Wind Bracing	approx. 62 x 6 x 3 cm per U-profile	per set

TECHNICAL DATA SHEET - PART 3

System components for the Nophadrain Bio-Solar Roof System: ND Solar Centre Clamps, ND Solar End Clamps, ND Solar Coupling Plates, ND Solar Wind Bracing, ND Solar Module Mounting Profile



ND Solar Panel Mounting Profile



ND Solar Panel Mounting Profile

ND Solar Panel Mounting Profile

The solar panels are mounted with ND Solar Module Centre Clamps and ND Solar Module End Clamps on the ND Solar Panel Mounting Profile. One mounting profile can accommodate the placement of 4 solar panels.

The lengths of the panel mounting profiles are tailored to panel widths of 1.13 meters and are available in various lengths. This means that 4 panels can be mounted on a profile with a standard length of 4.67 meters.

Multiple mounting profiles can be connected together using the ND Solar Coupling Plates.

Properties

- Material: aluminium
- Length: approx. 4.67 m / 3.52 / 2.37 m per piece
- Weight: approx. 4.3 kg / 3.3 kg / 2.2 kg per piece

Product	Dimensions (H x W)	Packaging
ND Solar Panel Mounting Profile	approx. 50 x 50 mm	per piece

Application

The system components for the Nophadrain Bio-Solar Roof System can only be used in combination with the ND Solar Mounting System for Green Roofs, ND SolarDrain Drainage System, the ND Solar Ballast Support.