

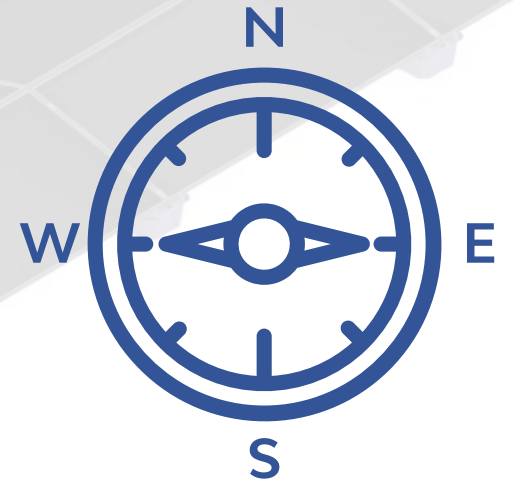


USE AND INSTALLATION MANUAL

# LANDBLOCK<sup>®</sup> EAST-WEST

**SUPPORTS WITH WATER BALLAST**

FOR SOLAR SYSTEMS ON ROOFTOPS OR PASSABLE FLAT SURFACES



**EAST-WEST  
CONFIGURATION**

[landatusolar.com](http://landatusolar.com)

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LANDBLOCK®



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Fast  
installation



Without  
perforating  
the rooftop



Without heavy  
machinery

 This use and installation manual must be followed for LANDBLOCK® installation.

# LANDBLOCK®

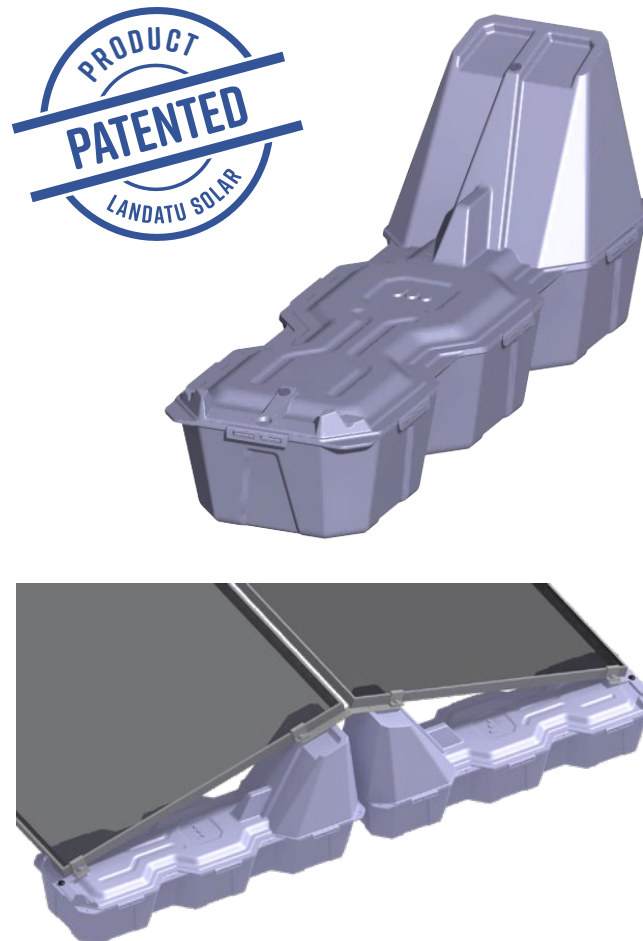
LANDBLOCK® is a support with water ballast that is perfect for installing solar systems on any flat surface (rooftop, ground, etc.).

**Simplify solar panel installation with LANDBLOCK® and forget concrete supports.**

## Technical Information

Composition	HDPE plástico
Support tilt	15°
Weight (without ballast)	<3 kg
Dimensions	380 × 1150 × 480 mm
Units/pallet	100 units
Ballast capacity	56 L (water), more than 100 kg (gravel, sand, concrete...)

## SUPPORTS WITH WATER BALLAST THE BEST SOLUTION FOR SOLAR SYSTEMS!



## Advantages

- ✓ Minimise costs and shorten installation time.
- ✓ Simplify everything:
  - ✗ No perforations
  - ✗ No foundation
  - ✗ No metal structures
  - ✗ No concrete
- ✓ Lightweight and stackable. Get rid of heavy supports and lower transport and storage costs.
- ✓ LANDBLOCK® lets you adjust the ballast weight depending on the rooftop.
- ✓ Evaporation tests have been done that show the water doesn't evaporate.

# INTENDED USE

# LANDBLOCK® MATERIALS



## Intended use

- ✓ LANDBLOCK® is designed exclusively for use on rooftops or flat surfaces (max. 5°).
- ✓ Different ballast materials, like water or gravel, can be used with the support depending on the project requirements.
- ✓ The solar panels are installed **horizontally** directly on the support using the connectors without having to assemble a metal or concrete structure.
- ✓ The complete support has a mass of < 3 kg, so you DON'T need to use a forklift or other lifting device.
- ✓ The lugs on the LANDBLOCK® can be used to channel the electrical wiring in a safe organised way.

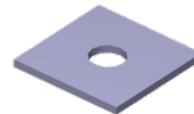
### Supplied



Cover



Base



Square washers



Shim



Plug

### Not supplied

- 4.5 mm screws (or ø4.8 mm pop rivets)

### Provided on order

- Omega profile + M8 bolt
- Z profile + M8 bolt
- M8 countersunk bolts

### Tools required

- M8 allen key
- M8 spanner
- Electric screwdriver (riveter)

# INSTALLATION IN JUST 4 STEPS

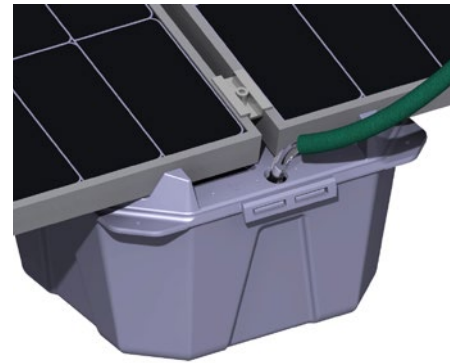
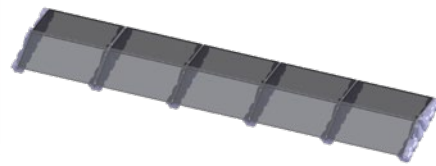
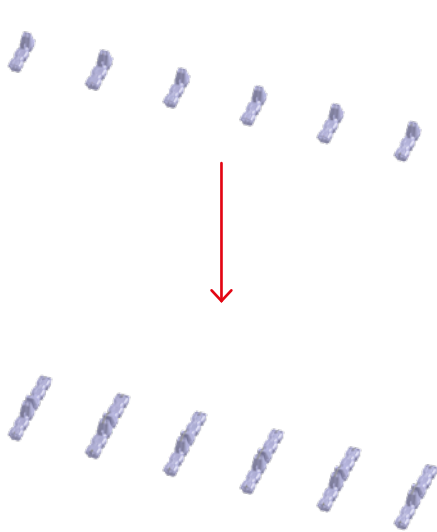


1 POSITION THE SUPPORTS

2 ATTACH THE PANELS TO THE LANDBLOCK®

3 USE WATER FOR BALLAST

4 PLACE THE PLUG



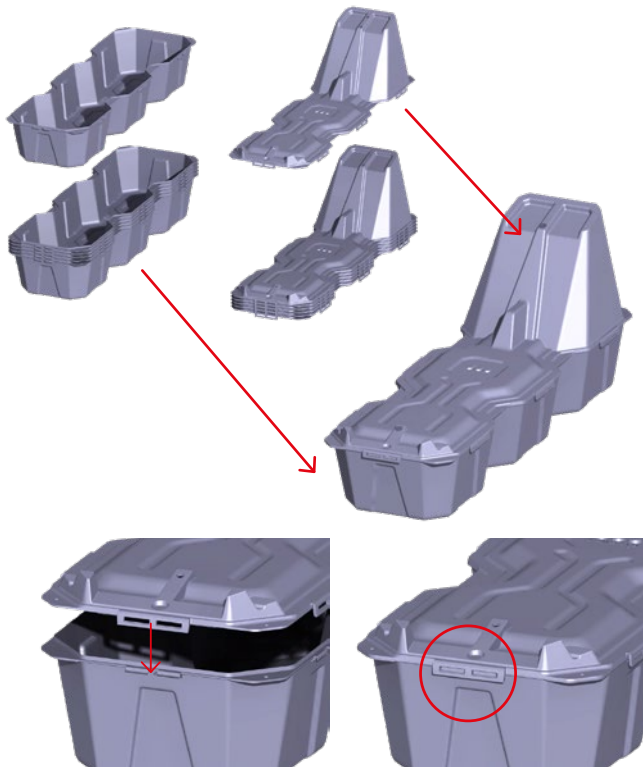
# 1

## LANDBLOCK® positioning

### Step 1 A

To assemble the LANDBLOCK® put a cover on each base and push the 'click' closure (without tools).

**Important:** Fit the cover on the base properly so it closes properly and the water doesn't evaporate.



**Nota:** en caso de querer realizar el lastre con otro material distinto al agua (hormigón, grava, arena...) deberá hacerlo antes de colocar la tapa.

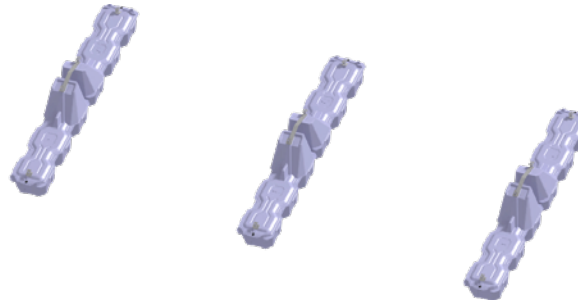
### Step 1 B

Place the first line of LANDBLOCK® leaving space between the supports. The distance will depend on the size of the panel.



### Step 1 C

Next, position the LANDBLOCK® facing each other as shown in the image below.

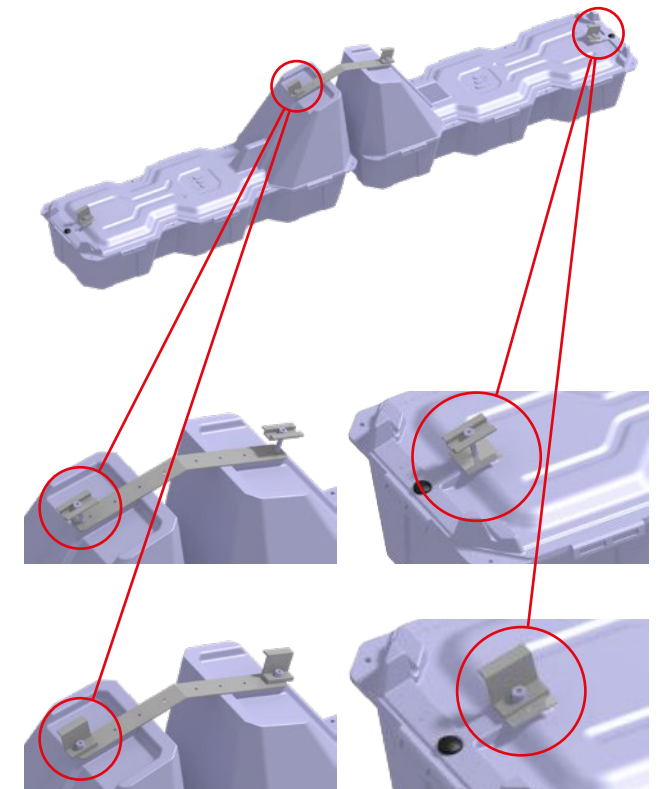


**Recommendation:** Put the first and last LANDBLOCK® on every row in the area and run a line from the first lug to the last one to use as a guide for levelling and lining up the rest of the LANDBLOCK®.

### Step 1 D

Place the square washers together with the intermediate (or end of the line) clips on the front inserted nuts of the LANDBLOCK®.

Join both supports facing each other at the top, using the shim and the end of line connectors (without the square washer) threading the end of line clips into the top insert nuts of the support as shown.



## 2

# Fasten the panels to LANDBLOCK®

LANDBLOCK®



### Step 2 A

With the LANDBLOCK® supports positioned, support the solar panel on them horizontally.

**Recommendation:** first support the panel on the lower plane of the support.

**Important:** make sure that the panel rests correctly on the square washers and on the shims before tightening the end of line clips.

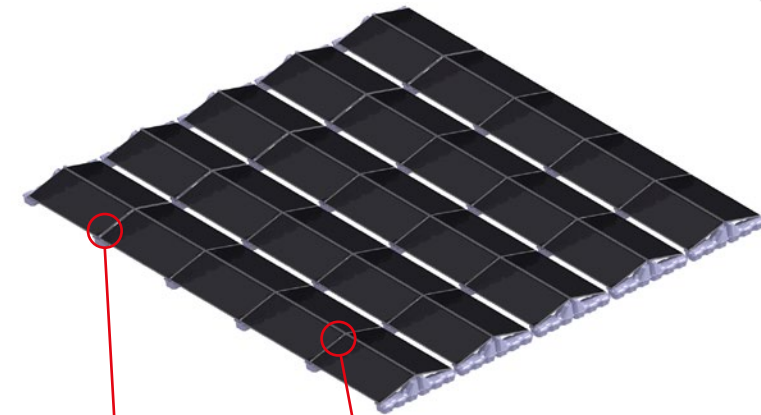
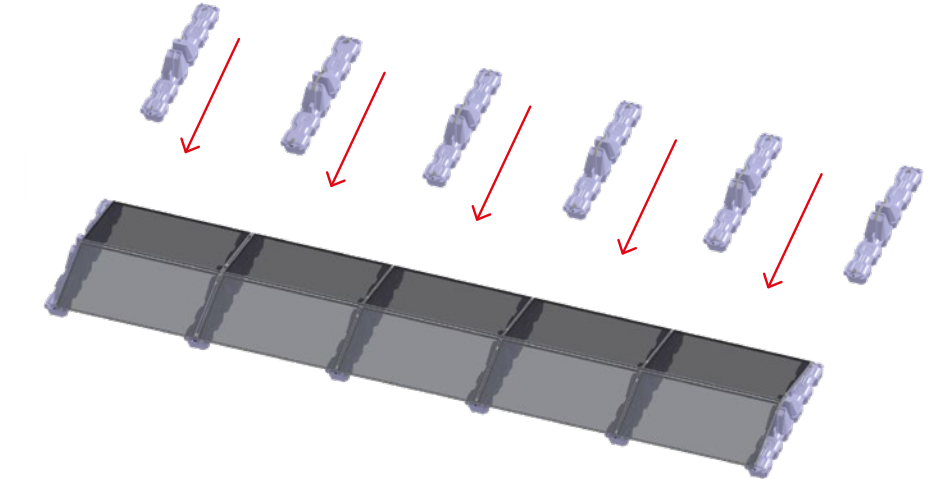
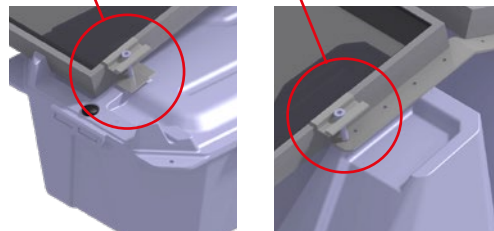
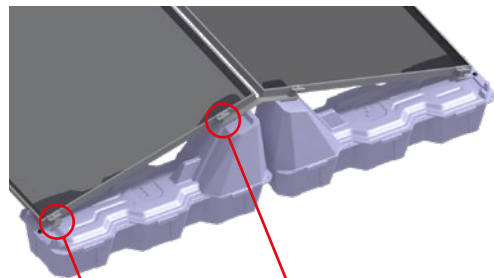
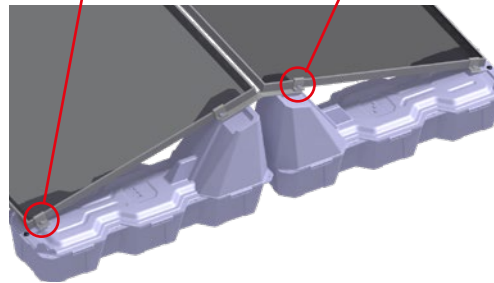
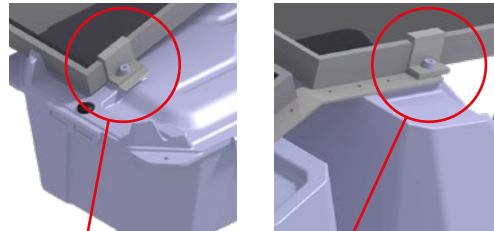
### Step 2 B

Tighten down the end of line clips using the M8 tools to attach the panel onto the support.

**Recommended tightening torque: 10 Nm.**

### Step 3 B

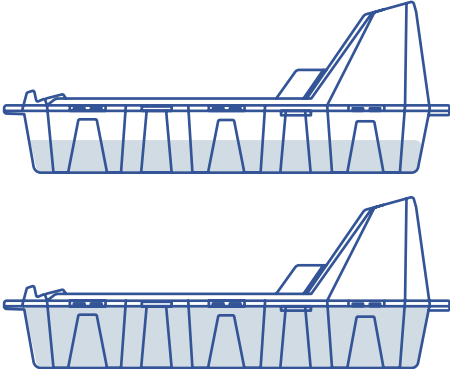
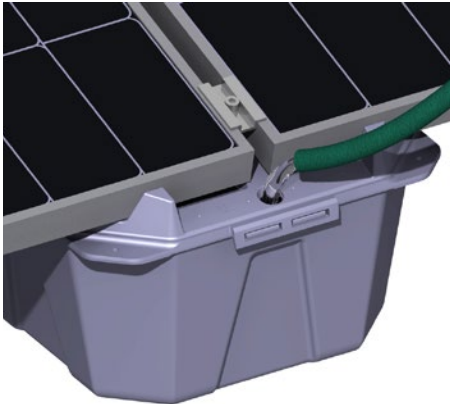
Repeat the above steps until the installation is complete.



### 3 Using water for ballast

**Step 3**

After completing **Step 2**, and with the LANDBLOCK® and the panels installed in the appropriate position, fill the support with water using the hole.



### 4 Put the plug in

**Step 4**

Close the hole with the cover after you've finished filling the LANDBLOCK®.



**Your system is ready!**



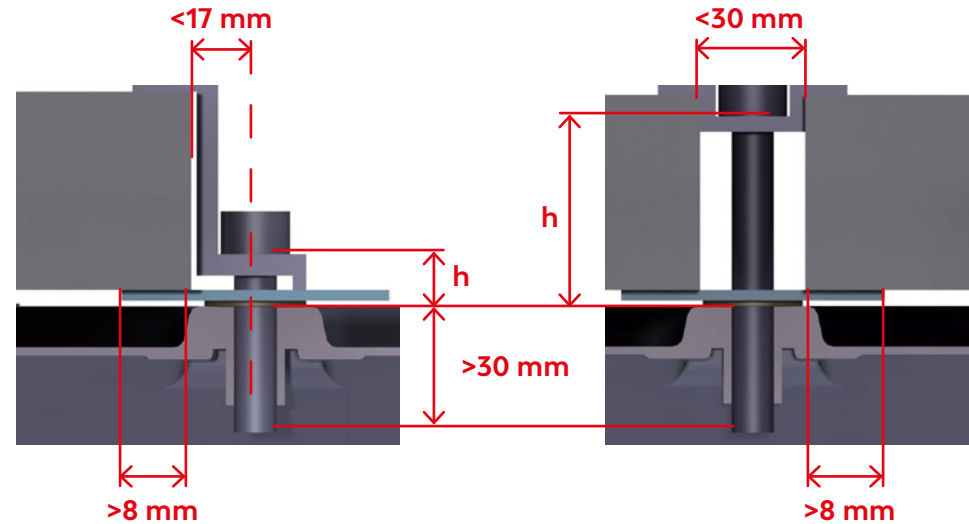
# ANEXXE.

## Specifications for omega and Z connectors

### Z profile

For correct Z profile installation you must make sure that the photovoltaic module or modules support on the square washer at least **8 mm**.

That means that the Z bracket must not be more than **17 mm** from the bolt shaft and the vertical support plane of it.



### Omega bracket

Likewise, to make sure the modules support a minimum of **8 mm** over the washers the distance between the support plane of the omega profiles and the panel should not exceed **30 mm**.

### Required bolt length

The length will depend on the thickness of the panel and the design of the connectors (Omega and Z profiles). The installer will be responsible for checking and installing a bolt that is inserted and threaded into the M8 nuts of the support is at least **30 mm**. (panel support plane or square washer support plane)

Likewise, the required bolt length must be greater than the sum of the distance of the horizontal plane (**h**) + the **30 mm** length of the threads.

Length required=  $>h + 30\text{mm}$

**⚠** The installer is responsible for using connectors that meet those conditions. Landatu Solar can provide suppliers of connectors that meet the specifications on request.



## Factors to be taken into account depending on the type of rooftop, surface, wind load and evaporation

- ✓ LANDBLOCK® should only be used as a ballasted support for solar panel systems. Using the support for any other purpose is outside the scope of the intended use and is not allowed.
- ✓ The design of the system is the responsibility of the installer. You must make sure that the solar system meets the requirements set forth in the building code.
- ✓ It is important to be aware of the meteorological conditions of the country /region where the system is being installed to calculate the ballast and adjust the supports. Landatu Solar S.L. can provide a spreadsheet for calculating the ballast needed for a system on request.
- ✓ To improve the friction coefficient you can:
  - Use an adhesive between the support and the ground
- ✓ The LANDBLOCK® has been tested to show the ballast water doesn't evaporate.



## Basic Maintenance

LANDBLOCK® maintenance is simple and economical.

Suitable PPE (personal protective equipment) for the job you will be doing must be used.

Recommended at least once a year

- ✓ Check that the supports are in good condition and there are no water leaks
- ✓ Confirm that the weight of the ballast matches the weight it was designed for.
- ✓ Check the condition of the bolts and whether they are tightened correctly

Check the rest of the parts of the structure, if there are any (non-slip mats, adhesives, guylines).

The entire photovoltaic system should be checked at least once a year (module cleanliness, connections, protective devices, etc.). If you need to open a LANDBLOCK® for any reason you should use pliers and pry from the centre of the closure.



**We simplify the installation of solar panels to generate clean and sustainable energy**



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