WATER BALLAST

Water ballast mounting system

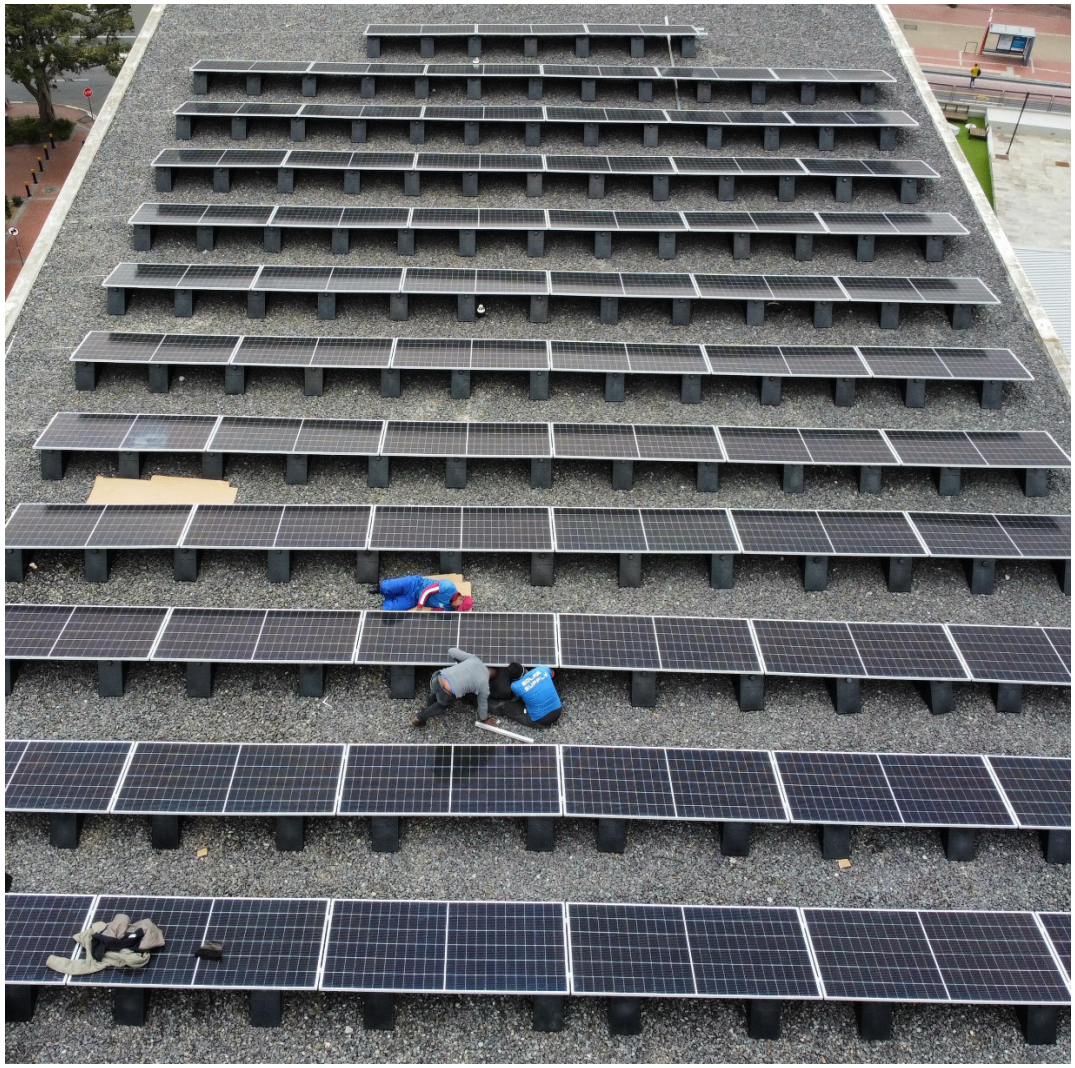
Landscape modules. Fixed 15° tilt.
For suitable flat roofs and prepared ground surfaces.

FULL-LENGTH RAILS RECOMMENDED

JC Solar Panels recommends full-length rails as the preferred mounting option for standard 550W panels and larger.

Continuous rails improve mounting rigidity and help limit flexing in larger panels. Short rail sections remain an alternative for smaller modules where the approved design permits.

FIXED TILT	EMPTY MASS	FILLED MASS
15°	5 kg	70 kg



ACTUAL JC SOLAR PANELS INSTALLATION

WATER BALLAST MOUNT

Product overview

Designed to support framed solar modules in landscape orientation without routine roof penetrations, subject to site-specific structural and wind-load verification.

WHY USE A WATER BALLAST SYSTEM?

The ballast is positioned on a suitable flat surface and filled with water after the array has been aligned. The resulting mass helps stabilise the mounting structure while reducing the need to penetrate the roof membrane.

Its fixed 15° angle promotes drainage and solar exposure. The final layout, ballast quantity and rail arrangement must be confirmed for the actual module dimensions, roof loading and environmental conditions.

TECHNICAL SPECIFICATIONS

Overall length	**1 116 mm**
Overall width	**378 mm**
Overall height	**280 mm**
Fixed module tilt	**15°**
Mass - empty	**5 kg**
Mass - water-filled	**70 kg**
Module orientation	**Landscape**

TYPICAL APPLICATIONS

Flat concrete roofs

For suitable structures with verified load capacity and protected waterproofing.

Prepared ground surfaces

For level, stable areas where a low-profile solar array is required.

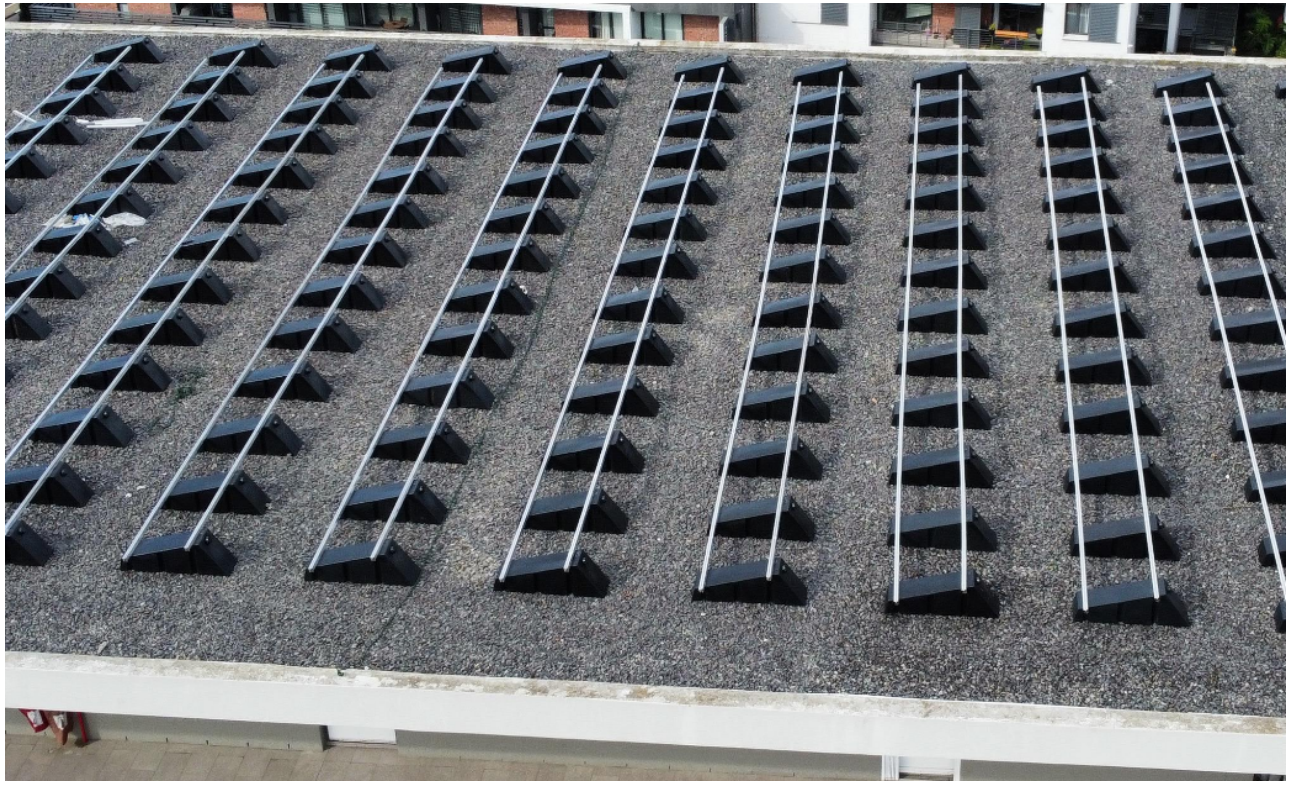
Non-penetrating layouts

Helps minimise routine roof penetrations when the engineered design permits.

PREFERRED OPTION FOR 550W AND LARGER MODULES

Full-length rails

Use continuous rails across the ballast row, with approved joins and support spans where required.



Installation photograph: continuous rails fitted across water ballast rows before module mounting.

JC SOLAR PANELS RECOMMENDATION

Greater continuity. Less flexing.

Full-length rails link the supports into a more rigid mounting arrangement and help reduce bending in larger solar panels.

Plan rails before adding ballasts

A suitable full-rail layout may avoid extra centre ballasts added solely for panel support. Required wind ballast must still be retained.

Rail and mounting components

4.8 m LDIP aluminium rails, compatible rail joins where needed, mid/end clamps and suitable fasteners. Confirm quantities for the final layout.

Select by actual module dimensions, frame, clamp zones and rail spans - wattage is a JC Solar Panels selection guide.

ALL MOUNTING OPTIONS

Rail options and additional support

RECOMMENDED

01 FULL-LENGTH RAILS

Preferred for standard 550W panels and larger. Continuous support for improved rigidity and reduced panel flexing.

SMALLER MODULES

02 SHORT RAIL SECTIONS

A good alternative for smaller panels where permitted by the mounting design. Typical sections: approximately 400 mm; two per ballast.

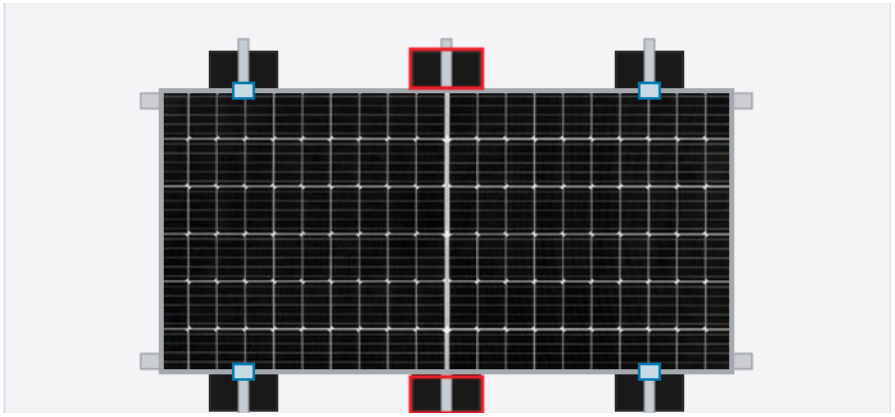
ADDITIONAL SUPPORT

03 CENTRE BALLAST

Optional where the approved rail/frame arrangement needs centre support. Not automatically required when full rails provide adequate support.



ACTUAL BALLAST / RAIL CONNECTION DETAIL



SINGLE MODULE - FOUR END CLAMPS

An optional centre ballast supports the module through suitable connected rails. Use four end clamps for a standalone module in its approved clamp zones. Continuous rows use end clamps at the row ends and mid clamps between modules.

PLAN THE COMPLETE MOUNTING SYSTEM

Installation essentials

01 CHECK THE SITE

Confirm a stable, even support surface, drainage, roof condition and access.

02 CONFIRM THE DESIGN

Verify roof capacity, wind loads, ballast quantity, row spacing and module clamp zones.

03 SELECT THE RAILS

Full-length rails recommended for 550W and larger panels. Verify rail spans and joins.

04 ALIGN AND SECURE

Align empty ballasts and rails. Fit compatible clamps and tighten to specified torque.

05 FILL AND INSPECT

Fill to the specified level, secure caps and check alignment, fixings and cable clearances.

Do not support the glass or backsheet. Do not drill the panel frame or use unapproved clamping positions.



Actual JC Solar Panels installation: full-length rails before panel mounting.

MAINTENANCE

Inspect at least twice yearly and after severe weather. Check water levels, caps, rails, clamps, fixings, drainage and roof protection.