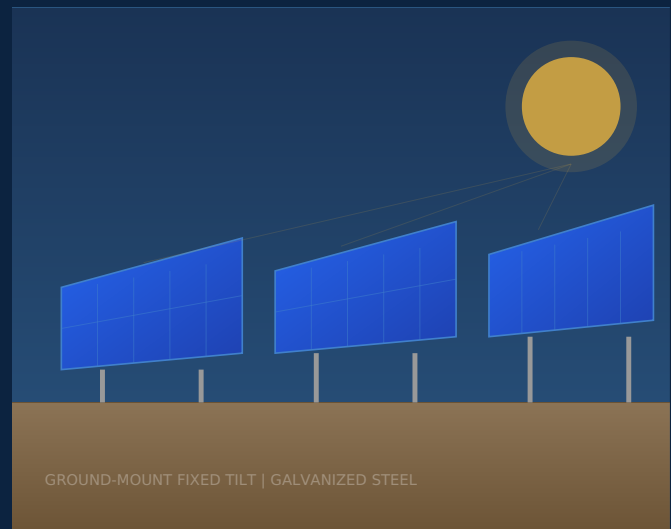


Solar Module Mounting Structures

Hot-dip galvanized steel mounting systems for utility-scale, commercial rooftop, and agri-solar installations. Engineered in India. Delivered CIF worldwide.

HS CODE 7308.90.90 • 40-50 MT PER MW



40-50

MT STEEL
PER MW

25+

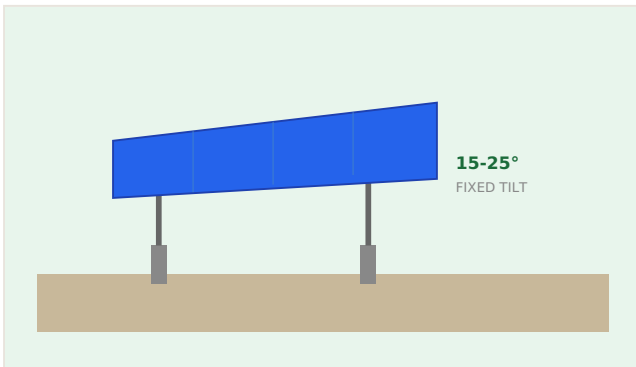
YEAR
DESIGN
LIFE

ISO

1461
GALVANIZING

CIF

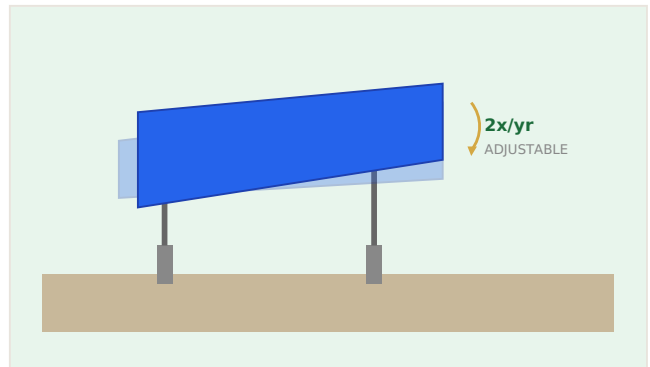
DELIVERY
WORLDWIDE



Ground-Mount Fixed Tilt

The workhorse of utility-scale solar. Steel columns embedded in ground with concrete foundations or driven piles. Purlins and rafters support modules at a fixed optimum angle. This is where 80% of the volume sits.

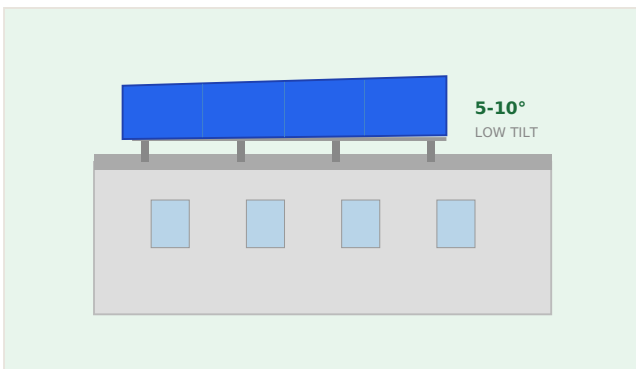
- 40-50 MT/MW
- 15-25° tilt
- Utility & Commercial



Seasonal Tilt

Same as fixed tilt but with slotted bolt holes allowing manual angle adjustment twice per year (summer/winter). 3-5% more energy yield at minimal extra cost. Popular in Africa where labor cost is low.

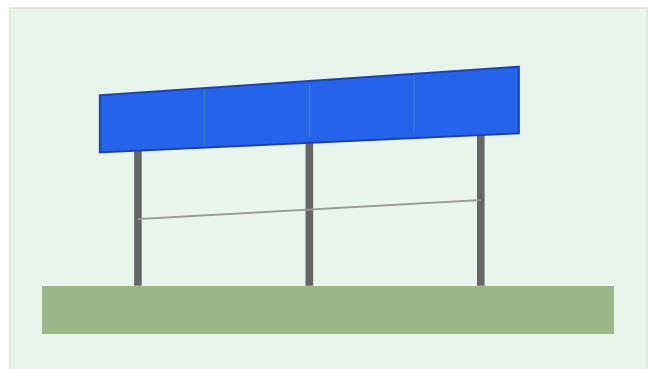
- Manual adjust
- +3-5% yield
- Slotted holes



Rooftop Mounting

Lightweight rail-and-clamp systems for commercial and industrial rooftops. Ballasted or penetrating options. Designed for wind uplift resistance and minimal roof loading. Typically 5-10 degree tilt.

- Rail + clamp system
- Low profile
- Commercial/Industrial



Elevated / Agri-Solar / Carport

High-clearance structures for dual land use. Farming continues underneath while panels generate power above. Also used as solar carports for parking lots. Higher steel content per MW but premium pricing.

- 3-5m clearance
- Dual land use
- Premium margin

1 MW = 40-50 MT

One 100 MW solar farm needs 4,000-5,000 MT of galvanized steel structures. That is more tonnage than 100 telecom towers.

Material & Quality Standards

PARAMETER	SPECIFICATION	STANDARD
Primary Steel Grade	IS 2062 Grade A (E250) / S235JR / S355JR	IS 2062 / EN 10025
Section Types	C-Channel, Z-Purlin, L-Angle, Hat Section, Sigma, Custom rolled	As per drawing
Thickness Range	1.6mm to 12mm	As per design load
Galvanizing	Hot-Dip Galvanized, 80-120 micron (550 gsm)	IS 2629 / ISO 1461 / ASTM A123
Alternative Finish	Pre-Galvalume (AZ150), Pre-Galvanized (Z275)	AS 1397 / EN 10346
Bolt Grade	Grade 8.8 (structural), Grade 4.6 (secondary)	IS 1367 / ISO 898
Design Wind Speed	Engineered to site-specific wind zone (up to 200 km/h)	IS 875 / EN 1991
Design Life	25-30 years	IEC 62817
Module Compatibility	Monofacial and bifacial, all major module sizes	As per module datasheet
Foundation Types	Concrete pedestal, driven pile, screw pile, ballasted	Site-specific geotechnical

Key Components We Supply

Columns / Posts

Hot-rolled or built-up steel columns. Driven piles or embedded in concrete pedestals. Site-specific lengths.

Rafters / Beams

Main load-bearing members connecting columns. Carry the module mounting rails. Typically C-channel or I-section.

Purlins / Rails

Module mounting rails in C, Z, or hat sections. Direct interface with solar panels. Pre-drilled for clamp placement.

Bracings

Diagonal and horizontal bracing for wind and seismic stability. Rod bracing or angle bracing depending on design load.

Clamps & Fasteners

Mid-clamps, end-clamps, module clamps, T-bolts, U-bolts, spring nuts. Complete hardware kit per table.

Foundation Hardware

Anchor bolts, base plates, pile caps, leveling shims. Ramming piles available for driven-pile foundations.

HS Codes for Export

MAIN STRUCTURES

7308.90.90

BOLTS & FASTENERS

7318.15.00

ALUMINIUM RAILS

7610.90.90

⚙️ Steel Fabrication

CNC cutting, drilling, punching, shearing, and welding. Roll-forming for C/Z purlins. Plate bending and section forming. All operations in-house at our Kolkata facility.

L Hot-Dip Galvanizing

In-house galvanizing plant. No subcontracting — faster turnaround and complete quality control. Galvanizing thickness tested per IS 2629 / ISO 1461 on every batch.

IX Quality Assurance

ISO 9001:2015 certified. Material test certificates from accredited mills. Dimensional inspection reports. Galvanizing thickness reports. Third-party inspection accepted.

🚢 Logistics & Shipping

Bundle-packed, tagged by assembly drawing, containerized at factory. Shipped from Kolkata/Haldia port. CIF/CFR delivery to any global port. Packing lists matched to BOM.

Other Steel Products from Mahabir

Same factory. Same quality. One supplier for all your steel infrastructure needs.



Transmission Towers

66kV-400kV lattice towers. Hot-dip galvanized. Complete with stubs, bolts, and accessories.



Telecom Towers

30m-48m lattice towers with steel grillage foundations. In partnership with TowerPlan Africa.



Substation Structures

Gantries, bus structures, equipment frames for 66kV-400kV electrical substations.



Pre-Fab Buildings

Portal frame warehouses, factories, and industrial sheds. Shipped in containers, assembled on site.



Fencing & Hardware

Palisade fencing, gate assemblies, razor wire, and complete fastener kits (Grade 4.6/8.8).



Structural Steel & GI

Roofing sheets, GI pipes, cable trays, steel water tanks, hand pumps, and structural components.

01

One Factory, Complete Supply

Solar MMS, transmission towers, substation steel, and PEB — all from the same facility. Consolidate your vendor list. Reduce procurement complexity. Get consistent quality across product lines.

02

In-House Galvanizing

No subcontracting your most critical quality parameter. We control the entire chain from raw steel to galvanized finished product. Every batch tested for coating thickness. ISO 1461 compliant.

03

Proven CIF Delivery to Africa

We have delivered transmission tower components CIF Walvis Bay for NamPower, Namibia. We know the shipping, documentation, and customs process. One price, delivered to your port.

04

Built to Your Drawing

We fabricate to your approved engineering drawings. You provide the design, we manufacture. No design ambiguity. No scope confusion. What you draw is what you get — tagged, packed, and shipped.

DELIVERY TERMS	DETAILS
Incoterms	EXW Kolkata • FOB Kolkata/Haldia • CIF any global port
Lead Time	4-6 weeks from drawing approval (standard orders)
Minimum Order	50 MT or 1 x 40' container
Indicative Pricing	USD 1,350-1,725/MT CIF Africa (ground-mount fixed tilt, galvanized, incl. bolts)
Certifications	ISO 9001:2015 • ISO 14001:2015 • Mill test certs • Galvanizing reports
Payment Terms	LC at sight preferred • TT negotiable for repeat orders

Send us your specifications.

Share your site coordinates, module datasheet, and required capacity. We will return a detailed budgetary quotation within 48 hours — complete with material breakdown, galvanizing spec, packing plan,