



SOLAR MOUNTING SOLUTIONS GROUND

www.structurametal.in

PRODUCTS GUIDE

Your solar investment relies heavily on the integrity of its backbone - the mounting system. The reliability of these systems ultimately determines the longevity and performance, which directly impacts your expected returns. At Structura, we specialize in crafting robust, high-quality steel solar mounting systems, meticulously designed to withstand the test of time and the most challenging environmental conditions. Our ground-mounted systems exhibit remarkable load-bearing capacity, ensuring peak performance with minimal maintenance. We firmly believe in providing the right solution for every terrain and climate requirement, rather than applying a one-size-fits-all approach. Explore our diverse range of ground mount systems, meticulously tailored to ensure the durability and performance your solar project deserves.



**SINGLE POST
SYSTEM**



**DOUBLE POST
SYSTEM**



**SEASONAL TILT
SYSTEM**



**POLE MOUNT
SYSTEM**

PRODUCT PHILOSOPHY

Our mounting systems are designed with your needs in mind. With a focus on Quality, our expertly crafted systems utilize premium materials and undergo rigorous testing to ensure optimal performance and longevity. We take pride in offering Value, making solar energy accessible with competitive pricing and easy installation, providing a cost-effective investment.

QUALITY:

1. Premium Materials
2. Rigorous Testing
3. Expert Craftsmanship

AFFORDABILITY

1. Competitive Pricing
2. Fast Easy Installation
3. Long-Term Warranties



SUSTAINABILITY:

1. Sustainable Materials & Approach
2. Lifecycle Consideration
3. Energy Efficiency

SINGLE POST SYSTEM



Introducing our Single Post Mounting System, a trusted and field-proven solution recognized for its simplicity and robust design. This versatile system has made its mark in numerous projects throughout India, excelling in diverse terrains and climates. Its adaptability allows it to seamlessly integrate with various foundation types, ensuring a hassle-free installation process tailored to specific terrain requirements. This system's lightweight construction not only makes it cost-effective for shipping but also contributes to its low Levelized Cost of Electricity (LCOE), further solidifying its reputation as a reliable choice for sustainable energy solutions.

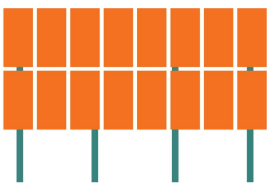


Cost-Efficient Solution for Large-Scale Projects

Our mounting system is constructed with a range of specialized coating options, carefully selected to suit the diverse climates and terrains across India. By optimizing material use and support distances, this steel system presents a compelling option for the execution of large-scale projects, catering to the nation's growing renewable energy demands.

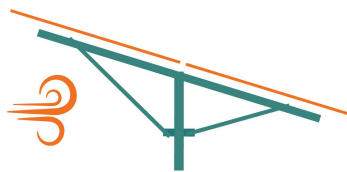
The Structura Single Post Mounting System can be acquired either as individual components or, upon request, delivered maximally pre-assembled. In large scale projects, by utilizing rammed steel foundations, we reduce the need for conventional concrete foundations in most scenarios. This not only translates to significant savings in materials and labor but also ensures optimal accessibility and minimizes sealed ground area, making it environmentally friendly. Our solution is ideal for deployment in various contexts, including challenging landscapes that may require pre-drilling.

2P/4L



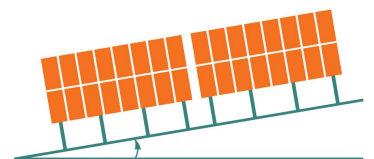
Up to 2 modules in portrait
or 4 in landscape

200 km/h



Tested to withstand wind
speed up to 200 km/h

UP TO 15°



Engineered for E/W terrain
slope $< 15^\circ$ & N/S $< 30^\circ$

SINGLE POST SYSTEM

TECHNICAL SPECIFICATIONS



MATERIAL	
Foundation	Steel, Galvanized to G90 or up to G235 for Corrosive Environments
Structural Material	Steel for Rafter, Purlins, Girder, with Zinc-Aluminium-Magnesium Alloy Coating or HDG/GP/POSMAC
Fixing Elements, Screws	SS304, Zinc-Flake Coated Steel, Aluminium 6063
Module Clamps	Aluminium 6063

DESIGN	
Foundation Options	Tailored based on soil analysis: cement pier, driven pile, anchor bolts, cement ballast
Modular Design	Customizable to Project Requirements, Optimized for Efficient Installation
Supported Module Types	All market-available modules, including bifacial & thin films

MODULE ATTACHMENT	
Module Type	Framed (standard), Bifacial (standard), Frameless (additional horizontal rail)
Attachment Method	Direct module bolt or top clamp

MODULE CONFIGURATION	
Landscape Format	Up to 12 x 4 modules
Portrait Format	Up to 12 x 2 modules

WIND LOAD AND TERRAIN TOLERANCE	
Wind Load Resistance	Tested to withstand wind speed up to 200 km/h
Terrain Slope Tolerance	East/West Inclination: Up to 15 Degrees North/South Inclination: Up to 30 Degrees

WARRANTY	
Structural Warranty	15 years

STRUCTURAL ANALYSIS	
Geotechnical Analysis	Site-specific for precise foundation design
Structural Analysis	Based on Indian structural codes and standards (e.g., IS 800, IS 875 for loads, IS 456 for materials) and additional or corresponding country-specific standards
Component Verification	FEM calculations for all construction components
Vibration Simulations	(Optional) Available for wind force assessment

ON-DEMAND SERVICES	
Foundation Services	Comprehensive geotechnical investigation, pull-out tests, corrosion testing, etc.
Design & Engineering Services	Feasibility studies, site layout optimization, detailed structural analysis, etc.
Installation Services	Available upon request for seamless project execution

DOUBLE POST SYSTEM



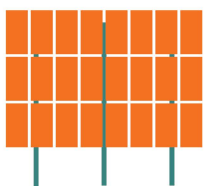
In the quest for clean, sustainable energy, every element counts, and none more so than the foundation of your solar array. At Structura, we've developed the Double Post Mounting System, designed to provide an answer to a crucial question: how do you ensure your solar installation stands the test of time and environmental rigors? This system is your key to superior stability, particularly in regions with high wind speed and rain loads. When confronted with the need for a resilient solar mounting solution that accommodates larger panels and challenging conditions, look no further. The Structura Double Post Mounting System offers the promise of unwavering performance, enabling you to maximize your solar project's efficiency and lifetime.



Doubling Down on Reliability

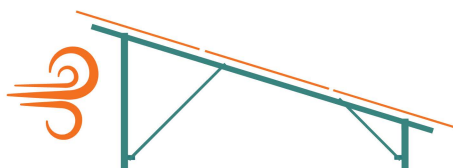
Investing in a Double Post Mounting System is akin to doubling down on the reliability of your solar installation's structural integrity. These systems, with their innovative design, excel in load-bearing capacity. They achieve this through optimized load distribution, increased moment resistance, and an efficient weight-to-strength ratio. By evenly distributing forces, they minimize localized stress, ensuring a longer lifespan for your solar installation. Additionally, the enhanced moment resistance enhances the system's suitability for regions with demanding environmental conditions, like high wind loads or heavy rainfall. Furthermore, these systems broaden the horizon of foundation choices, making economical and secure options like driven piles or screw piles viable. The result? A solar mounting system that not only performs exceptionally well but also offers cost-effective and reliable solutions for your solar project.

3P/6L



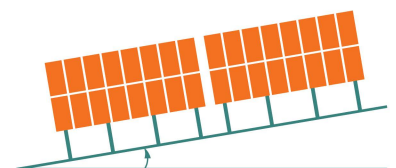
Up to 3 modules in portrait
or 6 in landscape

200 km/h



Tested to withstand wind
speed up to 200 km/h

UP TO 10°



Engineered for E/W terrain
slope < 10° & N/S < 25°

DOUBLE POST SYSTEM

TECHNICAL SPECIFICATIONS



MATERIAL	
Foundation	Steel, Galvanized to G90 or up to G235 for Corrosive Environments
Structural Material	Steel for Rafter, Purlins, Girder, with Zinc-Aluminium-Magnesium Alloy Coating or HDG/GP/POSMAC
Fixing Elements, Screws	SS304, Zinc-Flake Coated Steel, Aluminium 6063
Module Clamps	Aluminium 6063

DESIGN	
Foundation Options	Tailored based on soil analysis: cement pier, driven pile, anchor bolts, cement ballast
Modular Design	Customizable to Project Requirements, Optimized for Efficient Installation
Supported Module Types	All market-available modules, including bifacial & thin films

MODULE ATTACHMENT	
Module Type	Framed (standard), Bifacial (standard), Frameless (additional horizontal rail)
Attachment Method	Direct module bolt or top clamp

MODULE CONFIGURATION	
Landscape Format	Up to 12 x 6 modules
Portrait Format	Up to 12 x 3 modules

WIND LOAD AND TERRAIN TOLERANCE	
Wind Load Resistance	Tested to withstand wind speed up to 200 km/h
Terrain Slope Tolerance	East/West Inclination: Up to 10 Degrees North/South Inclination: Up to 25 Degrees

WARRANTY	
Structural Warranty	15 years

STRUCTURAL ANALYSIS	
Geotechnical Analysis	Site-specific for precise foundation design
Structural Analysis	Based on Indian structural codes and standards (e.g., IS 800, IS 875 for loads, IS 456 for materials) and additional or corresponding country-specific standards
Component Verification	FEM calculations for all construction components
Vibration Simulations	(Optional) Available for wind force assessment

ON-DEMAND SERVICES	
Foundation Services	Comprehensive geotechnical investigation, pull-out tests, corrosion testing, etc.
Design & Engineering Services	Feasibility studies, site layout optimization, detailed structural analysis, etc.
Installation Services	Available upon request for seamless project execution

SEASONAL TILT SYSTEM



Our Seasonal Tilt Structures offer a smart approach to enhance your solar project's performance year-round. These innovative solutions adapt to the changing angle of the sun, maximizing energy yield. By adjusting the tilt angle of solar panels multiple times a year, you can boost your PV output by up to 6%. This economical alternative to tracking systems ensures simplicity, durability, and minimal maintenance. Our structures feature built-in slots for easy manual adjustments, tailored to different seasons. Unlock your solar installation's full potential, optimizing energy production without the complexity of tracking systems. Explore a smarter way to maximize efficiency across all seasons.



Highlights:

- Enhanced energy yield and ROI
- Safe angle adjustment with built-in protection.
- Effortless & quick tilt Adjustment
- Stable, strong, and pre-assembled components
- Adaptable to any ground terrain & flat roof

General Guidelines:

- Consider tilt margins for wirings & other hinderance
- Implement fall protection during adjustments
- Use torque wrench for precise bolt tightening

Technical Specifications:

Application	Ground / Flat Roof
Ground Clearance	500 to 1000 mm
Structure Inclination	5° to 30° customizable
Module Configuration	4L/2P x 12
Wind load	Up to 180 km/h
Material	Steel HDG & other coatings
Terrain Slope	Up to E/W : 15° N/S : 30°
Module Attachment	Direct module bolt / clamp
Structural Warranty	15 years



5°



15°



25°

POLE MOUNT SYSTEM



At Structura Metal, we present our Pole Mount System, meticulously engineered for solar module installations while excelling in its role as a reliable foundation for solar pump systems across India. This versatile solution boasts streamlined installation, unmatched durability with high-strength steel components, and six tilt-angle settings for year-round energy optimization. Designed to withstand India's diverse climate, it seamlessly integrates with solar pumps, empowering agricultural practices and contributing to a sustainable, greener future. Harness the power of the sun for both energy and irrigation needs with Structura Metal's Pole Mount System.



Highlights:

- Elevation for enhanced sun exposure
- Durable and rugged to withstand harsh environment
- Seasonal elevation adjustments from 5° to 35°
- Safe angle adjustment with built-in protection
- Effortless & quick tilt adjustment
- Module-specific design cuts assembly time
- 4 to 15 panel pole mounts available

Pole mount structures are the preferred choice for solar pump applications, offering optimal sun exposure and efficient space utilization.

Technical Specifications:

Application	Commercial & Open Field
Foundation	Tilt adjustable fixed pole
Ground Clearance	> 500 mm
Structure Inclination	5° to 30° customizable
Module Configuration	2P x 1 to 3P x 5
Wind load	Up to 180 km/h
Material	Steel HDG & other coatings
Terrain Grade	Any
Module Attachment	Direct module bolt / clamp
Structural Warranty	15 years



Industrial-Grade Adjustable Tilt Brackets

FOUNDATIONS

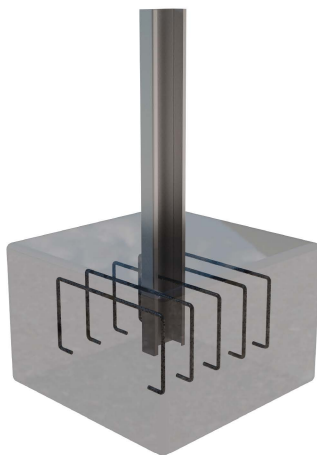
Our mission is to ensure that no site is beyond the reach of Structura mounting systems. We collaborate closely with you to determine the optimal foundation for your system, enhancing site viability and overall yield. Our mounting systems offer secure ground installation, with a range of foundation choices available. Whether you opt for a single or double-post mounting system, we have adaptable solutions to suit various ground and soil conditions. The selection of the most suitable foundation type hinges on the site's geotechnical report, project scale, and other viability factors.



CEMENT PIER



DRIVEN PILE



CAST BALLAST



ANCHOR BOLT

With ground mount systems, the subsoil must be regarded as the part of the substructure, as the effective forces of the plant are transmitted to the soil. In order to safeguard the structural safety, we collaborate with renowned geotechnical engineers to deliver our clients with a trusted source for solar foundation design and geotechnical assessments. These partners, much like Structura Metal, are specialists in addressing the challenges posed by harsh weather conditions and load factors when it comes to solar mounting systems and foundations. Together with our engineering associates, we also provide professional installation services in partnership with trusted experts nationwide, ensuring seamless, top-quality work for our clients.

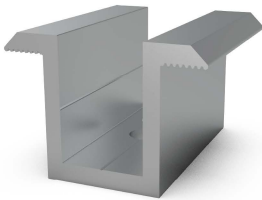
ACCESSORIES



Your solar investment is as solid as its weakest link. Don't jeopardize your investment with sub-par choices for mounting systems and accessories – the risk to your investment is real. Explore our extensive range of premium components and accessories, curated to ensure reliability and performance. Choose Structura for a secure solar future.

Structura manufactures mounting components and accessories in-house or source from genuine & reliable vendors after strict quality checks and incisive scrutiny.

Mid Clamp



Aluminium 6063-T6
Compatible with all PV modules

End Clamp



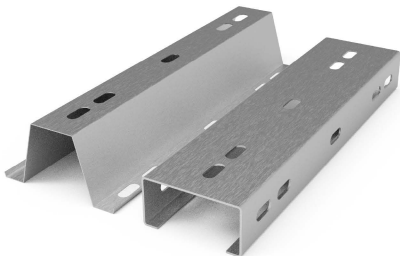
Aluminium 6063-T6
Sizes Available - 30 to 45 mm

L Clamp



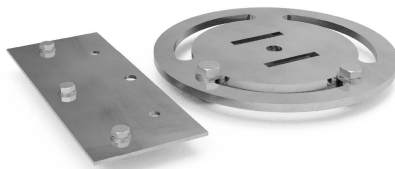
Aluminium 6063-T6
L85 x W50 x T5 mm

Rail Connector



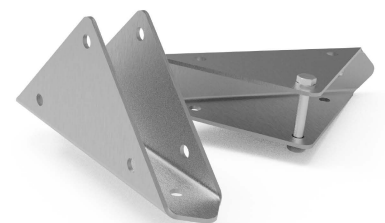
HDG Steel
Length 400 mm | Customizable

Connector Plate



GI, HDG Steel
Custom Size

U Brackets



HDG Steel
100 mm Height, 50 mm Width

ACCESSORIES



Allen Key Bolt



T - Bolt



Hex Bolt



Self Driving Screw



Rivets



Adhesive Glue



Spring Washers



Flange Nut

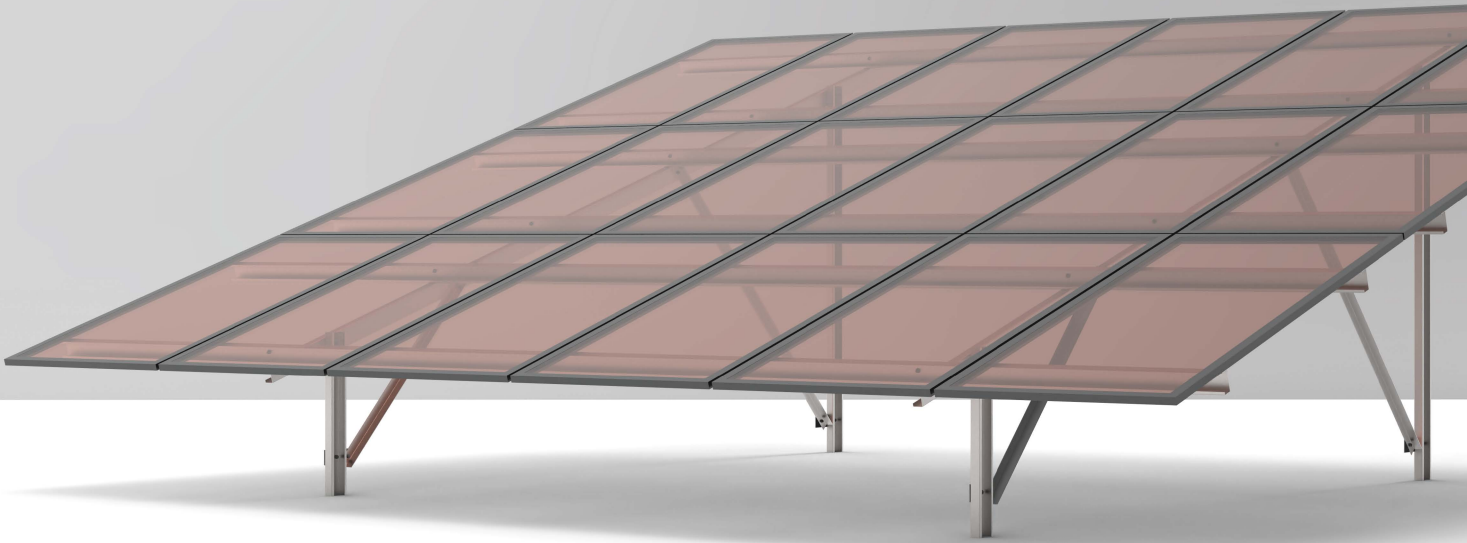


EPDM Tape



Discover our mounting system-specific accessories kit, available without any minimum requirements. Product certification provided upon request.

Our accessories and components are regularly updated; actual products may differ from images.



BUILDING THE FUTURE

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