

PHLEGON® FIXED-TILT RACKING SOLUTIONS

MORE PRODUCT. LESS INSTALL AND MAINTENANCE.

Innovation is the cornerstone of our PHLEGON® FIXED ground mount racking system. Because solar PV assets need a longer life span to support on-going improvements in module and storage technology, this ingenious rack is built tough with stronger materials and corrosion resistance while being remarkably smart and quick to install. PHLEGON® FIXED stands up to the most extreme environments, while our pile-sharing and EZ-Up concepts allow for a safe and time-efficient construction. We combine this unique value proposition with our in-house EPC services to deliver the lowest cost per kilowatt hour.



ULTIMATE TIME-SAVER BUILT TO ENDURE

Innovative PHLEGON® FIXED streamlines installations, helping projects get built cost-effectively in tough climates, challenging terrains or high-labor cost markets. Leveraging a smart kit philosophy, our pre-engineered foundation and racking system brings more galvanized steel to the project while requiring fewer piles to drive and hardware to connect, off-load and handle. Kits come optimized and stamped by local engineers to suit any site and soil conditions, loads and modules. First in the industry, our revolutionary EZ-Up feature allows panels and connectors to be secured horizontally at ground level for a safer, faster and simpler installation before they are adjusted to their final tilt.

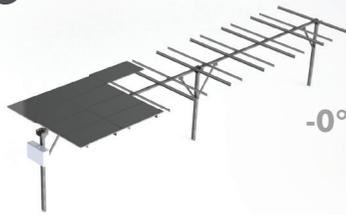
EZ-UP INSTALL OPTION

Labor and Equipment Cost Savings

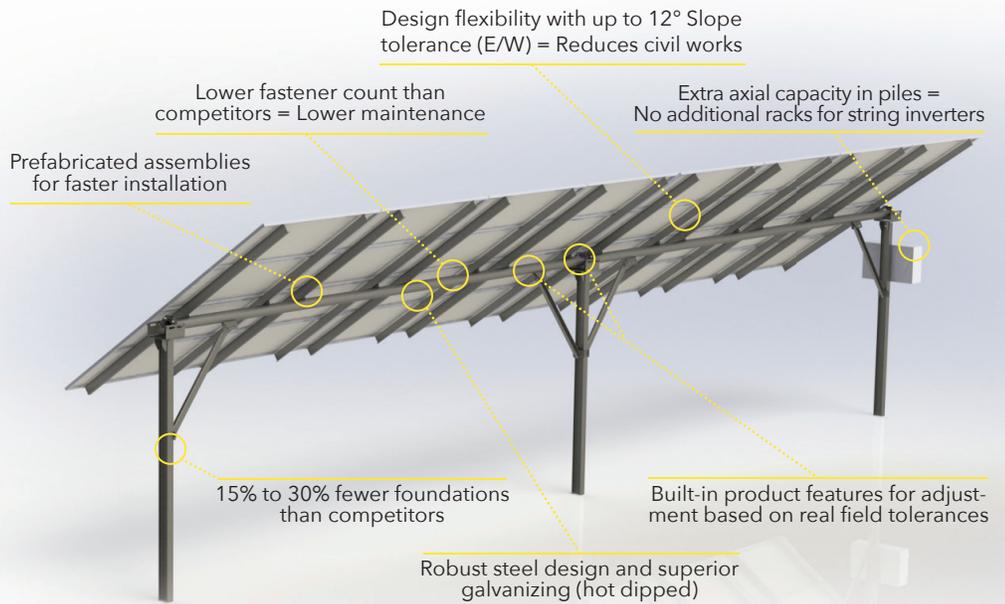
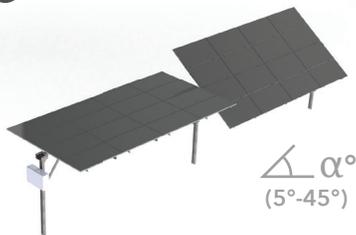
1 Load torque tubes and rails



2 Secure modules



3 Tilt safely at final angle



FOUNDATION OPTIONS

Helical	Ground Screw	Ballasted	Micro Piles	Driven I-Beam
Soft soil / clay freeze / thaw cycles	Dense soils Sites w/ cobble	Landfill or hazardous conditions	Concrete footings boulders or bedrock	Locations with no freeze / thaw cycles

DESIGN	
Orientation	4 landscape ; 2 portrait (optimized for Bifacial)
Tilt Angle	5° - 45° (custom tilts can be accommodated)
Adjustability	12° E/W slope ; +/- 2" post E/W, N/S ; 1.5° plumb
Wind Speed	120 mph 200 kmh Standard
Snow Load	Up to 50 psf
Module	Framed 60C & 72C Mono/Poly and Bifacial
Module Mounting	Direct Bolt to Frame (bonded connection)
Engineering	PE stamped drawings and calculations
Warranty	20 years

MATERIALS AND CERTIFICATIONS	
Hardware	High strength, Grade 8
Racking Structure	Hot rolled steel and cold formed
Foundations	Hot rolled steel or cold formed (see types above)
Corrosion Resistance:	Structure: HDG ASTM A123 Module and bracing rails: Pre-Galv G90/G135/G245 Foundations: HDG or Sacrificial Steel ; Pre-Galv Hardware: Magni-coated; HDG
Compliance	UL 2703 (USA) ; CSA LTR AE-001:2012 (CAN) - Intertek
Wind Tunnel Testing	RWDI Third Party Testing Laboratory
Code Compliance	Per governing/building codes (wind, snow, seismic)

WHY PHLEGON® FIXED?



Built Tough for Superior Reliability

Designed for extreme temperatures and high loads, our robust design is warranted for 20 years. Superior hot-dipped galvanized steel and use of sacrificial steel ensures extended lifetime.



Reduced Pre-Construction Civil Work

With East-West slope capabilities up to 12°, our terrain flexibility minimizes grading and storm-water management, eliminating grading and compaction additional costs.



Lowest Cost per kWh and Better Warranty

Combining our integrated systems with our EPC services offers substantial \$/kWh advantages and secures our 2-year workmanship warranty on both racking and foundations.



Ground-Level Install Reduces Hazards

Our unique EZ-Up feature means no work at height lessening costs and the risk of falls and other health and safety issues. This reduces damages to modules and lowers potential injuries.



Headache-Free Project Management

Our one-stop shop for engineering, procurement and installation services means working with one partner under one contract. Even better, we can do your civil and electrical work, too.



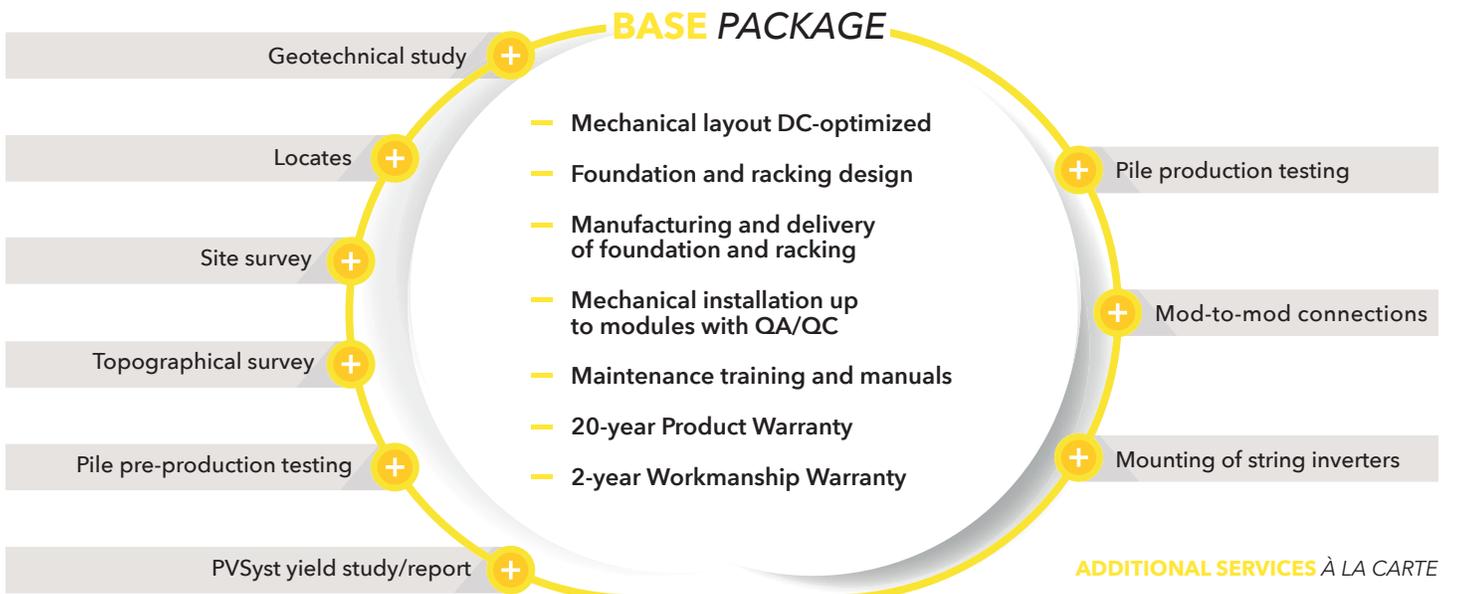
Low Maintenance Costs

Maintenance-free components and low number of field connections means reduced potential failure and check points. Single post design without A-frames and up to 35% fewer piles means easy access for land and system maintenance.

TAILORED INTEGRATED SOLUTIONS

Whether you are an EPC seeking a mechanical partner or a developer looking for a turnkey package, we customize our solutions to match your yield, timing, cost and warranty objectives. Select our PHLEGON® FIXED base package with or without our optional services, or consult with our EPCM specialists for additional permitting, civil, electrical and commissioning support. Our commitment is to provide flexible solutions that simplify contracting and execution, reduce timelines, and ultimately deliver the lowest cost per kWh for commercial and utility scale PV projects.

ADDITIONAL SERVICES À LA CARTE



OUR COMMITMENT

Deliver the lowest total cost of energy with integrated racking solutions.

Because we develop and own projects just like yours, we understand the need to deploy high-performing and long-lasting solar assets quickly and efficiently. That's why we've designed our integrated fixed racking solution to expedite your project schedules and reduce your total installed costs.

GP JOULE offers more than 15 years of experience bringing high-performing renewable systems online globally. With roots in industrial-scale agriculture, we combine a deep commitment to clean energy with a keen sense of productivity and profitability.

GP JOULE got its start deploying solar plants in Germany in 2003. Since then, the company has added wind and biomass to its clean-energy portfolio and has invested in storage and EV charging technologies. With more than 550 MWs of solar PV installed and 600 MWs of assets under management, GP JOULE's footprint extends across Germany, France, Italy, Canada, and the United States. As your global renewable energy partner, we bring an extensive track record developing, engineering, constructing, operating, and financing commercial and utility-scale ground mount installations.

Join the investors, developers, and contractors who have trusted GP JOULE for reliable and bankable PV. Visit www.gp-joule.com to see how you can apply our skillful execution and dedicated project management to your solar project today.



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