

# VersaTrack™ Ground Mount PV Tracker

## Technical Data Sheet

Solargik



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### SMART

Solargik's PV trackers use smart software to boost energy production, reduce hardware degradation, and optimize overall site performance. Our proprietary solar optimization algorithms are explicitly designed to enhance our unique, lightweight, 2-landscape design. Our shorter tracker and 2-landscape configuration allow us to improve industry-standard tracking algorithms, with our own algorithms that reduce shading losses, optimize bifacial gains, and allow for different tracking angles within each row. Integrating onsite weather sensors with satellite forecasting means we can maximize energy production over time. Our improved diffuse optimization algorithms combine reaction to onsite conditions with advanced weather forecasting capabilities to preemptively rotate each tracker to its unique optimal angle. Our real-time decision-making integrates all site components to create smarter, optimized, and more profitable solar arrays.



### LIGHTWEIGHT

Solargik's trackers weigh only 25-30kg/kWp, with less steel than standard trackers, for lower LCOE. The lighter tracker actually simplifies installation. Each component can be easily lifted and installed by two

people, with no need for complex tools or machinery. Our motion unit is highly cost-effective and lightweight. Its zero maintenance durable design helps reduce OPEX too.



### VERSATILE

Historically, the tracker industry focused on maximizing the number of panels per motion unit, but recent price shifts have allowed Solargik to flip the paradigm. Our tracker table size ranges from 8-24 panels, making it the shortest tracker available on the market. This allows us to create highly versatile and efficient arrays, and in many cases, "unlocks" projects in places typically considered unsuitable for solar trackers. Our cost-effective motion unit can be used in higher quantities, without increasing overall CAPEX. These short and versatile trackers allow for installation flexibility on slopes up to 30°, around obstacles, and on land that is inaccessible to longer trackers. Our solution supports highly tailored designs that optimize power density and improve project profitability.

Increase energy production in your projects and lower LCOE with Solargik's tracker solution.



Boundary Layer Wind Tunnel  
Testing of Structures

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### GENERAL

Tracking Range	120° (-60° to +60°) , 155° (-60° to +95°)
Tracking System	Single axis
Panel Orientation	2-Landscape
2L Benefits	Higher bifacial gains, optimized shading, rotation around center of gravity
Tracker Size	Tracker length ranges between 8-24 modules
Ground Coverage Ratio	GCR 30-65%
Modules Supported	All available modules
Energy Gain vs. Fixed Tilt	Up to 25%, site specific
Tracker Output	Up to 13 kW DC
Slope Tolerance	N-S: up to 30% E-W: any slope
String Voltage	Compatible with any string size

### TRACKER CONTROL / HARDWARE AND INSTRUMENTATION

Drive Unit	Three gear cascade - planetary, worm, chain		
	Overall reduction ratio ~13,000:1		
	Drive system - stepper motor		
	Proprietary controller		
Tracker Control Unit (TCU)	<b>Option 1:</b> Self-powered tracker 20-50V, li-on 11.1V 40Wh battery Battery protection	<b>Option 2:</b> Grid version, 20-30V	
Tracker Power Consumption	Idle: 1.5W	Standard motion: 5W	Maximum: ~15W ~13kWh/year/tracker
Control Electronics	One MCU (Master Control Unit) per cluster and one TCU (Tracker Control Unit) per tracker		
Drive Unit	Weight: 8 kg (17.6 lbs)		

### TRACKER CONTROL / SOFTWARE AND ALGORITHMS

Tracking and Algorithms	Backtracking Smart Backtracking Diffuse Optimization Intermittency Mitigation Dirt Minimization Algorithm
Tracking Accuracy	± 2°



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### TRACKER CONTROL / SOFTWARE AND ALGORITHMS (Continued)

Stow	Nighttime stow: configurable, prevents dust accumulation Dynamic stowing based on weather conditions
Communication Architecture / SCADA	MODBUS over Ethernet or wired RS485 to third-party SCADA <b>SolarGik proprietary SCADA solution - optional</b>
Monitoring	Portal interface displaying tracker status and generation, performance, weather and irradiance data
Tracker Control Unit (TCU)	WiFi 2.4 GHz or WiFi Mesh 2.4 GHz

### TRACKER CONTROL / SENSORS

Weather System	Irradiance: GHI (default) GTI, RH, BM, temperature (optional)
	Wind speed (default) Wind direction (optional)
	Snow sensor (site dependent)
Camera System	Fish-eye cloud camera (optional) HD & IR camera (optional)

### STRUCTURAL

Total Length	Between 14.5-28.4 m (47.5-93.2 ft)
Tracker Weight	25-30 kg/kW
Axis Height	1.5 m (5 ft)
Tracker Body	Standard profile
	2 support beams per module
Tracker Mounting	C or I shape
	4-7 poles per tracker 300-450 poles per MW (typical)
Materials	Galvanized steel
Ballasted	Ballasted installation capability

### ENVIRONMENTAL

Design Wind Speed	ASCE 7-22 Standard operating wind load 145-185 kmh (90-115 mph) Special design up to 240 kmh (150 mph)
Temperature Range	Operation: -25°C to 50°C (-13°F to 122°F) Survival: -40°C to 60°C (-40°F to 140°)



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### ENVIRONMENTAL (Continued)

Snow Load	Tailored to site requirement
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### STANDARDS AND CERTIFICATIONS

Standards and Certifications	ANSI, NEMA, NFPA, IEC, UL, CE
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### INSTALLATION, SERVICES, MAINTENANCE & WARRANTY

Wind Tunnel Testing	Tested by RWDI
Maintenance	Zero maintenance design (regular maintenance not required)
Installation Requirements	No fabrication required Light structure without the need to work at elevation
Warranty	10-year Structural 5-year Drive Unit



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