

SOL-X Utility Scale Single Axis Tracker

TRUE TERRAIN-FOLLOWING Single Axis Tracker.
The best-in-class single-axis tracker is supported by Polar Racking,
an industry leader in solar mounting solutions since 2009.

KEY PRODUCT BENEFITS



Flexibility & Adaptability

- Adaptable table lengths results in increased coverage of the site, increased system capacity, and more design



Superior True Terrain-Following

- Modular design accommodates slopes up to 30%



Pre-Assembly/Assembly Efficiencies

- Light-weight components require no heavy or specialized equipment to handle
- Fewest components out of all trackers on the market
- Fewer electrical components are required due to long rows of up to 180 modules
- Reduced labor through simple design that allows pre-assembly



**SOL-X T-Assembly
Ready to Ship!**



Advanced Tracking Algorithm

- 3D Backtracking
- Hail Protection Strategy
- Overcast strategy
- iStow



Simple Design, High Impact

- Higher density, longer rows, and minimal gaps
- Independent rows reduces O&M cost
- Compatible with all foundation types: Driven Posts or I-Beams, Groundscrews, Helicals, and Ballasted
- No dampeners required, eliminating a high risk failure point
- Less steel required because of reduced module loads and no torsional dynamic forces
- Easy to install driveshaft design



Bankability

- Bankability report is complete by third part and available upon request



Quality and Lifetime Value

- Every component has been tested in rigorous automotive testing standard
- Certified to UL 2703 and UL 3703 standards



Suitable for Agrivoltaics



GENERAL AND MECHANICAL

ROW LENGTH	Up to 180 individual 72-cell modules driven per controller/motor
TABLE LENGTH	6-24 modules per independent table connected by a driveshaft
DRIVE UNIT	Rugged design for 30-year field life in harsh environmental climates
TERRAIN FOLLOWING	Accommodates slopes up to 30% Up to +/- 10% grade within every table, limited to 8% grade change between tables
WIND SPEED DESIGN	Wind speed fully configurable, up to 150 mph (240 kmh), 3-second gust per ASCE7-10
ROTATIONAL RANGE (EAST / WEST)	60 degrees - 60 degrees
GROUND COVERAGE RATIO	Fully configurable by customer, typically between 0.20-0.65
DC CAPACITY	Up to 90kWp per tracker row
CODES AND STANDARDS	ETL certified, UL 3703, UL 2703 & ULC ORD 1703 (mechanical, electrical)
SENSORS	Wind Sensor and Snow sensor to protect the tracker
SYSTEM VOLTAGE	Compatible with 1,000V and 1,500V module circuits
MODULE ATTACHMENT	UL-listed top clamps and direct bolts, compatible with all module types
BIFACIAL FEATURES	High-rise module mounting rails
MATERIALS	Galvanized steel G90-G245
FOUNDATIONS	<ul style="list-style-type: none"> • Driven Piles • Ground Screws • Helical Piles • Ballast Options
POSTS PER TABLE AND MODULE	Up to 3 posts per table Up to 3 posts per 24 modules
WARRANTY	20 years for structural components • 10 years for drive unit • 5 years for motor and controller • Additional coverage available

ELECTRICAL AND CONTROLS

SYSTEM	Compatible with 1,000V and 1,500V module circuits
CONTROLLER	Self-powered with battery backup AC-powered 115V-240V
OPERATING TEMPERATURE	AC power: -40°C to +70°C (-40°F to +158°F) Self power: -30 C to +50 C (-22 F to +122 F)
TRACKING METHOD	Time and location-based algorithm with backtracking
REMOTE COMMUNICATION	Secure monitoring and control tracker array in real-time via an encrypted cloud portal and compatible with SCADA solution available
MOTOR TYPE	24V DC motor
COMMUNICATION	Zigbee wireless communications to all tracker rows and weather stations through network control unit
ADVANCED ALGORITHM	Severe Weather Protection System, 3D Backtracking, Overcast, iStow and Agrivoltaics stow strategies

SERVICES

INSTALLATION	Available upon request
GEOTECHNICAL AND FOUNDATION DESIGN	PE and P. Eng stamped Available upon request
DESIGN AND ENGINEERING	Complimentary site layouts Sealed and stamped structural engineering drawings (Canada, USA, and Caribbean)
CONSTRUCTION SUPPORT	Complimentary on-site installation training and commissioning

This document does not create any express warranty by Polar Racking or about its products or services. Polar Racking's sole warranty is contained in the written product manual for each product. The end-user documentation shipped with Polar Racking's products constitutes the sole specifications referred to in the product warranty. The customer is solely responsible for verifying the suitability of Polar Racking's product for each use. Subject to change without notice. Last updated in September 2024.