



MULTIPLE-ROW SINGLE AXIS TRACKER SP1000

The differentiating features of the TrinaPro SP1000 tracker are:



1. Horizontal single-axis tracker with up to 18 rows driven by one linear actuator. Up to 400 kW per tracker block.



6. Several adjustment points create a broad window for raming and assembly tolerances.



2. Field proven, robust, and reliable tracking systems. More than 3 GW installed worldwide.



7. TrinaPro linear actuator and polymer bearing have been age tested under extreme atmospheric conditions, proving their high quality and reliability.



3. Maintenance-free patented polymer spherical bearings. Field tested under harsh environmental conditions.



8. The strength of the 3-phase AC motor driven by a Variable Frequency Drive enables low speed for tracking, but high speed protection response. This extends reliable system life.



4. Easy to install rapidly on uniform slopes (N-S and E-W).



9. Control system based on industrial-grade Omran PLC integrates advanced wind control software with prestow positions for tracker safety.



5. Most adaptable bearings in the industry - TrinaPro is easy to install and operate in complex terrains.

TrinaPro is designed to reduce project risks for utility scale applications, integrating premium performance modules, time-tested tracker design, and high quality inverters from one bankable source. With smart O&M, monitoring, and power guarantees TrinaPro enables LCOE reduction from individual components, system, and performance. TrinaPro is an intelligent, service-supported, high-return utility solution.

TECHNICAL SPECIFICATIONS

GENERAL CHARACTERISTICS

Solar tracker	Horizontal, single-axis, multi-row
Tracking range	110° (±55°)
Module surface per tracker	Up to 23250 ft ² /2160 m ²
Foundation options	Direct ramming /Pre-drilling /Concrete micro-piling
Terrain adaptation	Up to 6% global inclination
Ground Coverage Ratio (GCR)	Configurable: standard range (28-50%)
Structure	HDG high strength steel S275 and S355 and Magnelis®
Hardware	8.8 grade / ZnNi + seal
Drive unit	Linear actuator
Allowable Wind and Snow Loads	Tailored to site requirements
Standards & regulations	Structural calculations according to IBC and USA standards
Module configurations	1000 V version 1500 V version
Compatible solar panels	Framed Standard, Dual Glass, Bifacial

ELECTRONIC CONTROLLER SPECIFICATIONS

Controller	Industrial quality Omron PLC
IP Marking	IP65
Tracking algorithm	Astronomical calculations (error < 0.0015°) with backtracking
Advanced Wind Control	High wind, medium wind, and low wind
Night-time parking position	Configurable
Communication options	Wire option RS-485/ RS-422/ Ethernet / Optical - Fiber
Operating temperature	Altitude < 3280 ft.: 23 °F to 122 °F
Sensors	Analogic inclinometer
Motor type	Asynchronous 3-phase AC motor driven by VFD 1.1 / 1.5 kW
Parasitic power consumption	Control 0.26 kWh/day; Motor 0.22 kWh/day; Total 0.48 kWh/day
Required power supply	Single phase 230 Vac - 50/60 Hz

MAINTENANCE

Maintenance-free bearings	Yes
Structural maintenance	Minimum (grease gear drive once every 2 years); Optional maintenance every 10 years

WARRANTY (Expandable)

Structure	10 years
Corrosion protection	20 years according to ISO 14713 C3