

TRACKER Vanguard™-2P

Single-Row / Multidrive System



About TrinaTracker

Excellent Bankability

Trina Solar was ranked top in the list of "Top Bankable Module Supplier" released by Bloomberg New Energy Finance (BNF) for five consecutive years

Multiple Product Lines For All Applications

Multiple product lines developed by experienced International R&D team for meeting market demands in all application scenarios

Superb Reliability and High Quality

Leading quality management system and over 20 years product quality control experience in the industry

Efficient Engineering Design Expert

Systematic and high efficient workflow for presales service to guarantee prompt engineering design

Unified Products Delivery Management

Global supply chain management of core equipments in solar farm (modules and trackers) with unified delivery channel



Compatible with Larger Modules

Vanguard™-2P is designed to reduce LCOE with larger modules. Compatible with modules up to 670W+.



Upgraded Multidrive System

Better wind tolerance, high adaptability and synchronization, greatly improving the stability of the system.



Innovative SuperTrack Technology

According to real-time weather and actual terrain conditions, smart algorithm dynamically optimizes tracking angle, increases receiving radiation and reduces shading loss.

UP TO 8% yield gain



More Modules Per Tracker

Designed with two-in-portrait configuration (2P), up to 4 strings of 1500V system per row.

UP TO 120 modules per tracker



Fewer Piles Per MW

7 piles per row (standard configuration), number of piles per MW has been optimized.

UP TO 45% fewer piles

OPTIMIZED BEARING DESIGN

- Global patented spherical bearings, up to 30% angle adjustability.
- Alleviate the damage caused by uneven foundation settlement during operation.
- Release the extra stress caused by the deformation of the tracker system, reduce the load and failure rate of each component.



WIND TUNNEL TESTED BY RWDI

Static load + dynamic load dual test
3D flutter stability analysis and shock response
Evaluation of precise wind load distribution on tracker system.



Full aeroelastic model test.



TECHNICAL SPECIFICATIONS

GENERAL FEATURES

Solar tracker type	Single row Single-Axis
Tracking range	±55° (110°)
Driver	Multiple linear actuator
Configuration	Two modules in portrait (2P) up to 4 strings per tracker (1500V string)
Solar module supported	Framed
Foundation options	Direct ramming / Pre-drilling + ramming / Micropile / PHC piles
Pile section	W, compatible with IPE, IPEA
Modules attachment	Bolts, Rivets and Clips
Piles per MW (550Wp module)	~106 piles/MW ⁽¹⁾ (120 modules per row)
(670Wp module)	~102 piles/MW ⁽¹⁾ (102 modules per row)
Terrain adaptability	15% N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requiriement
Rear shading factor	0.8%
Critical wind speed	47m/s

STRUCTURE

Material	High Yield Strength Steel
Coating	HDG, Pregalvanized & ZM ⁽³⁾

CONTROLLER

Controller	Electronic board with microprocessor
Ingress protection marking	IP65
Tracking method	Astronomical algorithms + SuperTrack technology ⁽⁴⁾
Advanced wind control	Customizable
Anemometer	Cup/Ultrasonic
Night-time stow	Configurable
Communication with the tracker	Wired option: RS485 Wireless option: LoRa/Zigbee
Operating conditions	Altitude < 4000m ⁽⁵⁾ Temperature: -30°C to 60°C ⁽⁵⁾
Sensors	Digital inclinometer
Power (motor drive)	DC motor: 0.2kW
Power supply	Grid connection / String powered / Self-powered with battery

WARRANTY

Structure	10 years
Driver and control components	5 years

(1) Depending on layout

(2) For scenarios beyond the scope of use, please consult TrinaTracker

(3) Standard configuration. Other coating under request

(4) Includes smart tracking algorithm and smart backtracking algorithm

(5) Standard configuration. Different conditions under reques, please consult TrinaTracker

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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