



# TRACKER Vanguard™ -1P Single-Row



## About TrinaTracker

### Excellent Bankability

100% bankability from Bloomberg in 5 consecutive years and multiple endorsement from DNV.GL

### Multiple Product Line For All Applications

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

### Superb Reliability and High Quality Total Solution

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 Product Delivery Service

Global supply chain layout for core equipments in solar farm (modules and tracker) and unified delivery channel for unique experience in customer service



## Compatible with Larger Modules

Vanguard™-1P is designed to reduce LCOE with larger modules. Compatible with modules up to **670W+**



## Highly reliable with strengthened structure

Optimized torque tube improves the torsional resistance by **29.6%** and the bending resistance by **12.4%**



## Less Installation Time & Costs

Innovative modular design enable faster installation. Up to **17.5%** installation time saving.



## Highly stable with Bilateral - damper system

Bilateral damper system increases structural flexibility and stability of the trackers, a **20%** improvement in the tracking system's resistance of wind gusts in all directions.



## Innovative SuperTrack Technology

SuperTrack can improve power generation under highly diffused irradiation weather, reduce generation losses due to row-to-row shading. Up to **8%** yield gain compared with conventional tracking algorithm.

### BILATERAL DAMPER SYSTEM

Bilateral damper system can shorten the time of tracker oscillation, prevent the oscillation spread, reduce the dynamic response and increases the critical wind speed.



### SPHERICAL BEARING

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.



# TECHNICAL SPECIFICATIONS

## GENERAL FEATURES

Solar tracker type	Single row Single-Axis
Tracking range	±60° (120°)
Driver	Slew driver
Configuration	One module in portrait (1P) up to 90 modules per tracker (1500V string)
Solar module supported	Framed
Foundation options	Direct ramming / Pre-drilling + ramming / Micropile / PHC piles
Pile section	W
Modules attachment	Bolts, Rivets and Clamps
Piles per MW (550Wp module)	~250 piles/MW <sup>(1)</sup> (80 modules per row)
(670Wp module)	~242 piles/MW <sup>(1)</sup> (68 modules per row)
Terrain adaptability	20% N-S <sup>(2)</sup>
Wind and snow loads tolerance	Tailored to site requirement

## STRUCTURE

Material	Steel S275 & S355 (EN 10025) or equivalent
Coating	HDG, Z275 (G90) and ZM310 <sup>(3)</sup>

## CONTROLLER

Controller	Electronic board with microprocessor
Ingress protection marking	IP65
Tracking method	Astronomical algorithms + SuperTrack technology <sup>(4)</sup>
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 <sup>(5)</sup> Temperature: -30°C to 60°C <sup>(5)</sup>
Sensors	Digital inclinometer
Power (motor drive)	DC motor: 0.15kW
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, please consult TrinaTracker

(4) Includes smart tracking algorithm and smart backtracking algorithm

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

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

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