TRACKER Vanguard™ -1P

Single-Row

TrinaTracker

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 ve consecutive years

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 guaratee 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

Trina Clamp is a proprietary product that is quick and easy to use with the 1P configuration, reducing the installation time and costs.

Highly stable with Bilateral - damper system

The bilateral damper system increases stability and structural flexibility of the tracker, improving the tracking system´s resistance to wind gusts from all directions by 20%.

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

The bilateral damper system can shorten the tracker oscillation time, thus preventing oscillation. Dynamic responses are reduced and the critical wind speed increased.

SPHERICAL BEARING

Global patented spherical bearings with up to 30% angle adjustability, alleviate the damage caused by uneven foundation settlement during operations.

The spherical bearings dissipate the extra stress caused by the deformation of the tracker system, thus reduce the load and failure rate of each component.

TÜV SÜD · CE 1035 · ISO 9001 ISO 14001 ISO 45001 BUREAU VERITAS Certification · DNV·GL

TECHNICAL SPECIFICATIONS

GENERAL FEATURES

Solar tracker type	Single row Single-Axis
Tracking range	±60° (120°)
Driver	Slewing 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, compatible with IPE, IPEA, HEA and HEB
Modules attachment	Bolts, Rivets and Clamps
Piles per MW (550Wp module)	~250 piles/MW (1)(87 modules per row)
(670Wp module)	~242 piles/MW (1)(64 modules per row)
Terrain adaptability	20% N-S (2)
Wind and snow loads tolerance	Tailored to site requirement

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: 0.15kW
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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