



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 in all application scenarios in

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+**



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



String Power

Vanguard™-1P is able to string powered from 1500V DC, reducing the cost of cable, cable construction and ultimately the total BOS. Equipped with lithium battery as backup power for redundancy protection of tracker operation.



Less Installation Time & Costs

One-in-portrait configuration and Trina Clamp reduce the installation time and costs.

65% less installation time



Higher flexibility and adaptability

Can adapt to large slopes and varied terrain.

Up to **20%** N-S slope.

TRINA CLAMP

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



SPHERICAL BEALING

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)	~295 piles/MW ⁽¹⁾ (80 modules per row)
(670Wp module)	~285 piles/MW ⁽¹⁾ (68 modules per row)
Terrain adaptability	20% N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requirement

STRUCTURE

Material	Steel S275 & S355 (EN 10025) or equivalent
Coating	HDG, Z275 (G90) and ZM310 ⁽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.

© 2021 Trina Solar Co., Ltd. All rights reserved. Specifications included in this datasheet are subject to change without notice.

Doc.number: DT-T-0004 Rev: A