



Abstract

For a better future, we need to invest in sustainable energy solutions.

Customized services and the widest portfolio of products across the entire value chain.

TrinaTracker's highly qualified team and state of the art R&D department offer responsive support to our clients' needs.

Quality

TrinaTracker has a worldwide reputation of delivering high quality and reliable solutions. TrinaTracker solutions are designed to provide the best leveled cost of electricity.

TrinaTracker's production facility and supply chain network offer the highest quality with reduced lead times ensuring the best client support.



Configuration

Vanguard 550-2P is designed to reduce LCOE with larger modules.

Compatible with **210 mm** wafer size

Uptime

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



Intelligent System

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



Module

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

UP TO **120** modules per tracker



Foundation

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.



WIND TUNNEL TESTED BY RWDI

Static load + dynamic load dual test



TECHNICAL SPECIFICATIONS

GENERAL FEATURES

Solar tracker type	Single row Single-Axis
Tracking range	±55° (110°)
Driver	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
Modules attachment	Bolts, Rivets and Clips
Piles per MW (550Wp module)	~106 piles/MW ⁽¹⁾ (120 modules per row)
(450Wp module)	~130 piles/MW ⁽¹⁾ (120 modules per row)
Terrain adaptability	15% N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requirement
Rear shading factor	0.8%

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	Smart wind gust alarm
Anemometer	Electric pulse/Ultrasonic
Night-time stop	Configurable
Communication with the tracker	Wired option: RS485 Wireless option: LoRa/Zigbee
Operating conditions	Altitude < 5000m ⁽⁵⁾ Temperature: -30°C to 60°C
Sensors	Digital inclinometer
Power (motor drive)	DC motor: 0.15kW
Power supply	Grid connection / String powered / Self-powered with battery

WARRANTY (10 years)

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 request

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

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