

Tracker

Vanguard 1P

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Single-Row



BI-DAMPER SYSTEM

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



SPHERICAL BEARING

Globally patented spherical bearings with self-adjusting capability 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 reducing the load and failure rate of each component.



Compatible with Latest Modules

Compatible with 700w+ N module, equipped with the latest smart tracking algorithm and monitoring platform, effectively improve system power generation and O&M efficiency.



Higher Reliability

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



Higher Stability

The behavior of the tracker against the wind is improved by 20%.



SuperTrack Smart Tracking Algorithm

Compared with conventional tracking algorithm, increase energy generation by as much as 8%.



Warranty period of 10 years for the structural set of elements which comprises the tracker and have been supplied by Trinasolar.

Warranty period of 5 years for commercial components. (Including but not limited to drive system electrical system, bearing set, fasteners, etc.)

GENERAL FEATURES

Solar tracker type	Single row, Single-Axis
Tracking range	$\pm 60^\circ$ (120°)
Drive	Slewing drive
Configuration	One module in portrait (1P) up to 93 modules per tracker (1500V string)
Solar module supported	Framed
Foundation options	Direct ramming / Pre-drilling + ramming / Micropile / PHC piles
Pile section	W type, C type ⁽¹⁾
Modules attachment	Bolts, Rivets
Terrain adaptability	15% W-E, 15 % N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requirement
GCR	$\geq 25\%$
Design wind speed	55m/s ⁽³⁾

N-S TERRAIN FOLLOWING

Slope between two posts	Up to 1.5 degree
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STRUCTURE

Material	High Yield Strength Steel
Coating	HDG, Pregalvanized & ZM ⁽⁴⁾

CONTROLLER

Controller	Electronic board with microprocessor
Ingress protection marking	IP65
Tracking method	SuperTrack Smart Tracking Algorithm ⁽⁵⁾ / Conventional Tracking Algorithm
Advanced wind control	Customizable
Anemometer	Cup / Ultrasonic
Night-time stow	Configurable
Communication with the tracker	Wireless option: LoRa / Zigbee
Operating conditions	Altitude < 4000m ⁽⁶⁾ Temperature: -30~60°C ⁽⁶⁾
Sensors	Digital inclinometer
Motor power	0.15kw·h/Day
Power supplier	String-powered / Self-powered / AC-powered

⁽¹⁾ To be checked during the design phase.

⁽²⁾ N-S: max 15%, for slopes higher than 15% consult with TrinaTracker.
E-W: slope higher than 15% consult with TrinaTracker.

⁽³⁾ This value depends on projected conditions.

⁽⁴⁾ Standard configuration. Other coating under request, please consult TrinaTracker.

⁽⁵⁾ Includes smart tracking algorithm and smart backtracking algorithm.

⁽⁶⁾ Standard configuration. Different conditions under request, please consult TrinaTracker.

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