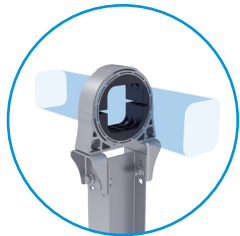


Tracker

Vanguard 1P-Multi Drive

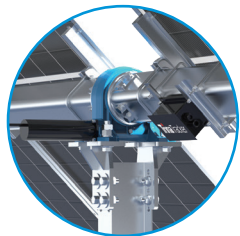
Vanguard 1P

Single-Row and Electrical Multi-Drive Tracking System



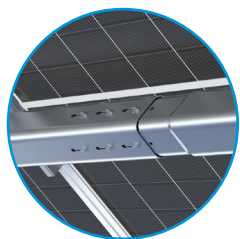
Spherical Bearing

- Global patented spherical bearing
- With up to 30% adjustment capability
- Reduce the load on the drive system and lower the failure rate



Electrical Multi-Drive System

- 34% fewer parts compared with mechanical transmission
- Less installation time, less mechanical failure



Adjustable Shrink Tube

- Rivet connection process, no component positioning required
- Larger construction tolerance and square tube adjustment range
- 50% square tube installation time saved
- Better reliability of connection nodes



Smart and Strong Adaptability

- Compatible with latest modules -700W+ N type bifacial modules
- Long string design up to 120 modules per tracker
- Equipped with smart control system (smart controllers + smart tracking algorithm+ smart Cloud)
- Compatible with cleaning robot



Higher Wind Resistance

- The maximum design wind speed reaches 60m/s
- Increase the working wind speed up to 20~22m/s
- Near 0° stow protection, reducing wind load and increasing reliability (on PV module by 30 to 50%)



Electrical Multi-Drive System

- 34% reduction in transmission components with improved installation efficiency
- Increased torsional stiffness for better wind resistance capability
- Self-sensing and self-adjusting synchronization mechanism reduces transmission failure risks



Quicker Construction

- 13% fewer pile foundations and columns
- Less installation time, less mechanical failure
- Easy-to-install and streamline solar setup
- Saving time and reducing labor costs



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.)

Vanguard 1P-Multi Drive

TECHNICAL SPECIFICATIONS

GENERAL FEATURES

Solar tracker type	Single row, Single axis
Tracking range	± 60° (120°)
Driver	Multi-slewing drive
Configuration	1 module in portrait (1P) 3-4 string big format module (1500V string) ⁽¹⁾
Solar module supported	Framed
Foundation options	Direct ramming / Pre-drilling + ramming / Micropile / PHC piles
Pile section	W type, C type
Modules attachment	Bolts, Rivets
Piles per MW	~ 211 piles/MW (4-string module)
Terrain adaptability	15% W-E, 15% N-S ⁽²⁾
Wind and snow loads tolerance	Tailored to site requirement
GCR	≥ 25%
Design wind speed	60m/s ⁽³⁾

STRUCTURE

Material	High yield strength steel
Coating	HDG, pre-galvanized & ZM ⁽⁴⁾

CONTROLLER

Protection Level	IP66
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 communication: LoRa
Operating conditions	Altitude < 4500m Temperature: -30~60°C
Sensors	Digital inclinometer
Tracking accuracy	< ±1°
Power supplier	String-powered

⁽¹⁾ TrinaTracker adapts to various types of modules.

⁽²⁾ For scenarios that are out of scope, consult TrinaTracker.

⁽³⁾ The wind speed is based on ASCE 7-16. If the wind speed is out of scope, please consult TrinaTracker.

⁽⁴⁾ This is standard configuration and the coating can be customized according to needs.

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

Tracker

TrinaTracker

www.trinasolar.com

