

# Tracker

Vanguard 1P-Multi Drive

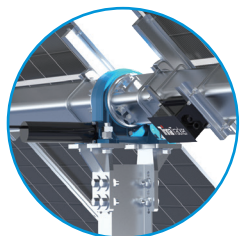
## Vanguard 1P

### Single-Row and Electrical Multi-Drive Tracking System



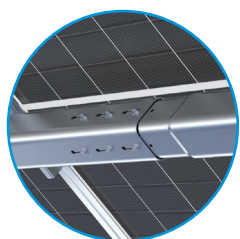
#### Spherical Bearing

- 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



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.)



#### 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



# Vanguard 1P-Multi Drive

## TECHNICAL SPECIFICATIONS

### GENERAL FEATURES

|                               |                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------|
| Solar tracker type            | Single row, Single axis                                                                 |
| Tracking range                | $\pm 60^\circ$ (120°)                                                                   |
| Driver                        | Multi-slewing drive                                                                     |
| Configuration                 | 1 module in portrait (1P)<br>3-4 string big format module (1500V string) <sup>(1)</sup> |
| 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 <sup>(2)</sup>                                                         |
| Wind and snow loads tolerance | Tailored to site requirement                                                            |
| GCR                           | $\geq 25\%$                                                                             |
| Design wind speed             | 60m/s <sup>(3)</sup>                                                                    |

### STRUCTURE

|          |                                         |
|----------|-----------------------------------------|
| Material | High yield strength steel               |
| Coating  | HDG, pre-galvanized & ZM <sup>(4)</sup> |

### CONTROLLER

|                                |                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------|
| Protection Level               | IP66                                                                                    |
| Tracking method                | SuperTrack Smart Tracking Algorithm <sup>(5)</sup><br>/ 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              | $< \pm 1^\circ$                                                                         |
| Power supplier                 | String-powered                                                                          |

<sup>(1)</sup> TrinaTracker adapts to various types of modules.

<sup>(2)</sup> For scenarios that are out of scope, consult TrinaTracker.

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

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

<sup>(5)</sup> Includes smart tracking algorithm and smart backtracking algorithm.

# Tracker

**Trina**Tracker

[www.trinasolar.com](http://www.trinasolar.com)



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