

Clenergy EzTracker M2 Solar Tracker



Clenergy EzTracker tracking system developed by Clenergy provides the next-generation tracking solution via “linear actuator+clutch slip devices”. It can automatically track the Sun based on the “astronomical algorithm +closed loop control” and ultimately increase the power generation by 20%, compared to the fixed-tilt system. Furthermore, the overall system lowers the levelized cost of energy (LCOE), achieving a much higher yield.

Design Philosophy





Design from the perspective of investors to lower LCOE with a guarantee of higher yield

- ◆ High power capacity: More panels per unit to increase land use capacity;
- ◆ High installation efficiency: Minimum construction period to optimize capital utilization;
- ◆ High reliability and performance: More reliable system to increase power generation;
- ◆ Routine maintenance free: Minimum maintenance to lower O&M cost.

Features and Advantages

1. Flexible rotary drive shafts enable a great slope tolerance – “North-South 10°, East-West 40°”;
2. Torque clutch adopted to protect the system from overload damages (foundation settlement and etc.);
3. Self lubricating bearing and full sealing gear assembly equipped to accommodate outdoor environment, making it 25 years maintenance free;
4. Innovating self-calibrate system allows each row to work independently, achieving $\pm 1^\circ$ tracking accuracy, thus increasing power generation;
5. No welding or other heavy equipments needed on site, greatly increasing the installation efficiency and making installation extra convenient;
6. Three-axis post adjustment increase the installation efficiency.

Application

Mountainous Area	Desert Area	Agriculture+PV project	Fishery+PV project
			

Specification

Structural and Mechanical Features	
Tracking Type	Horizontal single axis
kW per Drive Motor	500-650KW
Tracking Range of Motion	±45°
Tracking Accuracy	±1°standard, field adjustable
Maximum Row Size	80 modules
Maximum Linked Rows	25
Array Height	1.37m standard 1.17m minimum
Drive Type	Linear actuator with flexible rotary drive shaft
Supported Modules	Framed and frameless crystalline and thin film modules
Structural Materials	Hot dip galvanized steel/ Aluminum components
Foundation	Steel pile, PHC pile, concrete foundation
Electronic Controller Features	
Motor Type	1.5kw/3PH/400VAC
Solar Tracking Method	astronomical algorithm + closed loop control
Control System	PLC or MCU
Data Feed	Modbus over RS485
Backtracking	Yes
Manual Control Mode	Yes
Protection Features	
Night-time	Yes
Safety Stowing	Automated wind and snow stowing
Limit-angle	Yes
Motor	Yes
Motor	Yes
Installation, Operation and Maintenance	
Connection type	Fully bolted connections, no welding
Grounding Fabrication	Self-grounding structure
In-field Fabrication	None required
On-site Training & System Commissioning	Yes
General	
Slope Tolerance	North-south 10°, East-west 40°
Wind Load	40m/s
Operating Temperature	-30°C to +60°C
Annual Power Consumption	400 kWh per MW per year, estimated
Land Area Required per 1MW	5 to 5.75 acres per MW, 33% GCR
Ground Cover Ratio	28-45%
Warranty	5 years parts only, 10 years extended available
Codes and Standards	GBT29320-2012 UL3703/2703
Patent Number	CN patent: 201721370623.3