新恒源
Evershine Energy Technology

Evershine Energy Technology

Integrated Solution Provider
For Solar Tracking & Racking System

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CONTENT

Born with the sun, Energizing the future.

Vision

Support the sustainable development of the global renewable industry by providing superior products and services to customers.

Mission

To be the most trustworthy solar mounting system solution provider for global PV station's key developer and EPC.

Core Value

Earnest, Openness, Courage, Responsibility

Group Profile

METAVAST Group is an innovative enterprise oriented by customer needs and led by technology research and development.

After more than 40 years development, METAVAST has become now an comprehensive group with 9 subsidiaries, dedicating to provide one-stop solutions for customers in 8 business units: new power system, metal processing, metal surface treatment, intelligent coating equipment, laser equipment, new materials, solar tracking & energy storage system, as well as industrial vertical e-commerce.

9 Subsidiaries
2800+ Employees
300+ R&D Engineers
50+ Countries reached

ESET is a company which has been being committed to the research and development of green renewable energy technology. So far ESET has become the leading manufacturer and integrated solution provider for solar tracking and racking system.

220000m²
Factories

100+
R&D team

40
CNC Steel profile production lines

750,000 tons
hot-dip galvanizing capacity

30GW/Year
Capacity

Certification

ISO14001

ISO9001

ISO45001

CPP

TUV

CE

RETIE-Colombia

National Grid Corpof Phillipines

Republic of Irag Ministry of Electricity

UL Certification

Green Galvanizing Production Demonstration Enterprise

International Galvanizing Technology (China) Training Center

International Zinc Association (China) Metal Coating Technology Research Center

- We completed static and dynamic testing, marking that our products have entered the world's top ranking.
- Our test reports can be provided to support the project owner's financing.
- TUV (IEC 62817)

Advantages

ESET is deeply focusing on the photovoltaic industry, and leading the development & utilization of new energy to a new height, depending on the strong technological innovation and product application practices.

One-stop solution of design, manufacturing, supply, training and on-site service etc, makes delivery under control and proposal more cost-effective.

Strictly implement the company management and whole process quality control system.

Perfect global distribution network with professional local teams for commercial and technical support.

The unique supplier in China that can provide solar mounting system, BESS, and transmission tower and pole together.

Strong R&D Team

100+ engineers/experts, with 30% having Master/ Doctor degree, involving in the area of Wind Engineering, Civil, Geotechnical Engineering, Mechanical Automation, Simulation, Power electronics and AI etc, with 30+ patents & software copyrights.

100+
Engineers/experts

30+
Patents & software copyrights

>30%
Having Master/ Doctor degree

50+ experimental instruments for various controller development & testing, and be able to carry on relevant tests independently.

50+
Experimental instruments

Close cooperation with worldwide authorities on wind engineering research & product standardization certification.

Wind Tunnel Testing

Self-owned Plants & Advanced Equipment

Large Scale & Capacity

220,000m² self-owned factories, 40 CNC steel profile production lines and 10 automatic hot-dip galvanizing production lines, with the capacity reaching 30GW/year.

220000m²

Newly built ZAM (Zinc-Aluminum-Magnetic) material production line (450,000 tons/year) realizing a complete industrial chain.

Intelligent & Green Production Line

Cold Roll Forming Production Line*19

Tube Production Line*6

10 world-class, intelligent-digital, and environmental hot-dip galvanizing production lines, which can provide various tailor-made HDP services, and the capacity reaching 750,000 tons/year.

Zinc Kettles(Length*width*depth):
No.1 ---- 15.2*2.8*3.2m
No.2 ---- 12.5*1.8*2.8m
No.3 ---- 10.5*1.6*3.0m
No.4 ---- 5.0*2.0*3.2m
No.5 ---- 2.4*1.8*1.5m
No.6 ---- 2.8*2.2*1.5m
No.7 ---- 8*2*3.2m
NO.8----13.3*2.38*3.3m
NO.9----6.5*2.2*3.5m
NO.10----6.5*2.2*2.8m

Self-owned ZAM (Zn-Al-Mg) material production line, 450,000 tons/year

Advanced laser cutting machines, 3200 ton bending machines, punching machines, cold roll forming equipments, welding equipments, and high-precision testing equipments.

Laser Cutting Machine

CNC Plasma Cutting Machine

3200 ton Bending Machine

Punching Machine

Welding Machine

Sub-merged Arc Welding Machine

Strict Quality Control System

ESET has built strict quality control system with various testing programs during production and on finished products, from raw material to structure, from mechanical system stability to electronic control system stability, to ensure the product high quality.

Raw Material Testing

Mechanical Testing

Chemical Composition Testing

System Stability Testing

EMC Testing

Temperature Testing

Prototype Testing

Structure Testing

Test of Loading

Test of Joint Section

Test of Durability

Damage Test of Purlin and Clamp

Test of Overload 140%

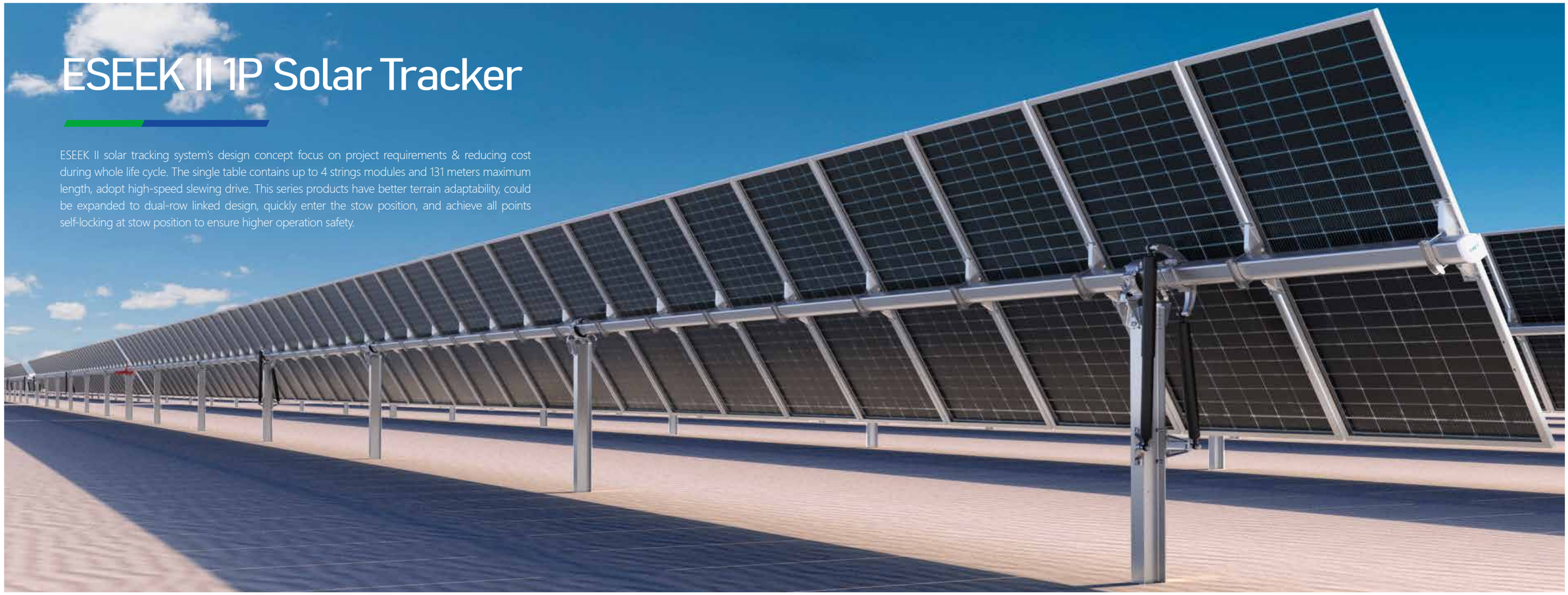
Damage Test of Torque Tube

Product Solutions

For different application environments, such as wasteland, desert, mudflat, mountain area etc., ESET can provide customers with tailor-made integrated solar tracking & racking system solutions, with the characteristics of strong adaptability to various topography, large installed capacity, stable structure and convenient installation.

ESEEK II 1P Solar Tracker

ESEEK II solar tracking system's design concept focus on project requirements & reducing cost during whole life cycle. The single table contains up to 4 strings modules and 131 meters maximum length, adopt high-speed slewing drive. This series products have better terrain adaptability, could be expanded to dual-row linked design, quickly enter the stow position, and achieve all points self-locking at stow position to ensure higher operation safety.



Advantages

1. All points self-locking function at stow position, ensure the system more stable and higher critical wind speed.

2. The diamond-shaped torque tube combines the excellent torsional resistance of round section and the bending resistance of square section, making the structure more reliable and cost-effective.

3. Bearing seat is made of one-piece casting and has a flip-top design, which makes installation and maintenance more convenient.

4. Torque tube connection adopts shrinkage process and patented carriage bolts, which makes the joints stronger and the installation efficiency higher.

5. Adopting cell phone APP debugging, avaliable for Android and IOS, improve commissioning efficiency.

Basic Parameters	
Tracking Type	Horizontal single-axis tracker, independent row
Module Configuration	1 in portrait (1P)
Tracking Range	±60°
Drive Mode	High accuracy slew gear, single point
Module Strings / Tracker	1-4 strings avaliable
System Voltage (DC)	1000 V or 1500 V
Foundation Options	Ramming post / Predrill + concrete pile / PHC Pile
Structure Material	Hot-dip galvanized / ZAM
Power Supply	String (default) / Self / AC
Daily Power Consumption	0.03 kWh / day / tracker
Design Wind Speed	Up to project condition
Module Supported	Compatible with all type of modules
Operating Temperature	-20°C to 60°C (-40°C to 60°C Optional)
Slope Adaptation	≤20% (S-N), Unlimit (E-W)

Electronic Controller Datasheet	
Tracking Method	Astronomical algorithms & position sensor closed loop control
Tracking Accuracy	≤ 1°
Backtracking	Intelligent algorithms for terrain adaptation
Communication Options	LoRa / ZigBee / RS485
Other Optional Modes	Night Return / Snow Mode / Hailstone Mode
Backup Power	Lithium battery backup when powered by string or self powered
Flood Mode	Horizontal stow position (Optional)
Snow Mode	Max tilt angle (Optional)
Cleaning Mode	Configurable angle, convenient for robot cleaning
Maintain Mode	Configurable angle convenient to maintain
Manual Mode	Artificially control the target angle
Protection Grade	IP65

EXCEED 2P Solar Tracker

EXCEED Solar tracking system is a 2 in potrait installed vertically with electrical linked multi-point synchronous drive system. Capacity per table of multi-point system is significantly higher than single-point system, have less number of foundations and lower steel structure weight. The application of multi-point drive technology solves the problem of aerodynamic stability under high wind speed, making the tracker safer.

Advantages

1. Patented unequal octagonal torque tube, better bending and torsion resistance.
2. Electrical synchronous multi-point driving/locking to improve system start-up stability and reliability.
3. Strong expansion capability, flexible configuration of string number .
4. Patented bearings for smoother operation.
5. Adopting cell phone APP debugging, avaliable for Android and IOS, improve commissioning efficiency.

Basic Parameters		Electronic Controller Datasheet	
Tracking Type	Horizontal single-axis tracker, independent row	Tracking Method	Astronomical algorithms & position sensor closed loop control
Module Configuration	2 in portrait (2P)	Tracking Accuracy	≤ 1°
Tracking Range	±60°	Backtracking	Intelligent algorithms for terrain adaptation
Drive Mode	High accuracy slew gear, single Point	Communication Options	LoRa / ZigBee / RS485
Module Strings / Tracker	2-6 strings avaliable	Other Optional Modes	Night Return / Snow Mode / Hailstone Mode
String Voltage (DC)	1000 V or 1500 V	Backup Power	Lithium battery backup when powered by string or self powered
Foundation Options	Ramming post / Predrill + concrete pile / PHC Pile	Flood Mode	Horizontal stow position (Optional)
Structure Material	Hot-dip galvanized / ZAM	Snow Mode	Max tilt angle (Optional)
Power Supply	String (default) / Self / AC	Cleaning Mode	Configurable angle, convenient for robot cleaning
Daily Power Consumption	0.05-0.08 kWh/day/tracker	Maintain Mode	Configurable angle convenient to maintain
Design Wind Speed	Up to project condition	Manual Mode	Artificially control the target angle
Module Supported	Compatible with all type of modules	Protection grade	IP65
Operating Temperature	-20°C to 60°C (-40°C to 60°C Optional)		
Slope Adaptation	≤20% (S-N), Unlimit (E-W)		

Fixed Tilt Mounting System

Fixed tilt mounting system is a structure type of fixing modules tilt, which can't move automatically according to the sun's track.
It is mainly used in the construction of utility scale ground solar plants in mountains, wasteland, Gobi , desert etc., including:
--Single Post solar mounting system: less piles and strong adaptability for any terrain.
--Dual Post solar mounting system: better structural stability

Advantages

1. Simple structure, safe and reliable.
2. Easy to construct, lower installing cost.
3. Easy to expand, modular and fast design.
4. The whole structure adopts the profile design, cost-effective.

Single Post Fixed Tilt Mounting System	
Type	Single post
Foundation Type	Concrete, Ramming pile
Wind Speed	Up to 83.3 m/s
Snow Load	≤1.2 KN/m^2, customization
Tilt	10°C - 60°C, customization

Dual Post Fixed Tilt Mounting System	
Type	Dual post
Foundation Type	Concrete, Ramming pile, Screw pile
Wind Speed	Up to 83.3 m/s
Snow Load	≤1.2 KN/m^2, customization
Tilt	10°C - 60°C, customization

Fixed Adjustable Mounting System

The fixed adjustable mounting system could adjust the modules tilt according to the seasonal change of the solar altitude angle, to adapt to the direct solar angle at different latitudes and seasons, increasing the power generation and higher economic benefits.

Basic Parameters		Modules and Arrangement	
Tracking Type	Single row independent system	Module Supported	Compatible with all kinds of module
Tracking Range	Determined by project	Module Configuration	2 in portrait (2P)
Drive Mode	Linear actuator	Operating Temperature	-40°C-60°C
Max Wind Velocity	As per project design		
Slope Adaptation	≤20% (S-N slope), Unlimit (E-W slope)		

Advantageous

1. Multiple independent manual push rods provide stable adjustment driving force and maintain locking force.

2. Stepless angle adjustment, range between 0° and 60°.

3. Simple structure, fewer wearing parts, more stable.

4. Adopt wireless signals to control multiple independent push rods for synchronous adjustment, better angle adjustment consistency and higher accuracy.

5. One-button remote control, faster adjustment that could adjust 5MW/personnal/day maximum.

Flexible Mounting System

The flexible mounting system, modules is installed on rows of steel cables , the two ends of the steel cables are connected by rigid support.
In order to reduce the bending moment of the top support at both ends, the two ends of the support are mostly use external tensible cable or internal rigid diagonal support.
The longer span, the more cost-effective of the single-row bracket, and the total length should be controlled between 200-500 meters.

Advantages

1. Neat arrangement and large installed capacity.

2. Wide terrain adaptability and flexible arrangement.

3. Large span, high clearance, high land utilization rate.

4. Wider application range compared with traditional fix tilt structure (complex terrain such as mudflats, fishponds, sewage treatment plants, mountains, etc.)

Power Transmssion And Substation

One-stop solutions for solar projects: trackers + steel towers.
15+ years experiences in steel structure designing and application.

Steel Tower (Up To 750kV)

Steel Pole (Up to 500kV)

Substation Structure

Gantry

Customer Services

7*24 Agile Response,

One-stop Solution and professional End-to-End service.

01

Multilingual
One-to-One customer service

02

Techincal support
Program consulting & optimization in design;
On-site technical support, like installation training, debugging, etc.

03

An exclusive project manager's total management, design, product manufacture & delivery, on-site inspection & receiving, installation training & debugging, project acceptance inspection, etc.

Projects

Single-axis Tracker

Fixed Tilt Mounting System

Fixed Adjustable Mounting System

Flexible Mounting System

300MW

Longwanggou PV Generation Project,
Fixed Adjustable Mounting System

250MW

Tibet Huadian Mangkang Ondo PV Power Generation Project, Fixed Tilt Mounting System

770MW

Jiayuguan PV Power Station Project,
Fixed Tilt Mounting System

450MW

Fushan Gonghe PV Power Station Project,
Single-axis Tracker

200MW

GuanLing Agricultural And Fishery
PV Station Project,
Fixed Tilt Mounting System

200MW

Jinchuan Shuangwan PV Station Project,
Fixed Tilt Mounting System

150MW

The Fishery-Optical Complementary Project,
Fixed Tilt Mounting System

110MW

Bulgaria PV Power Station Project,
Fixed Tilt Mounting System

136MW

Brazil Tocantins PV Power Station Project,
Single-axis Tracker

100MW

Guangxi Taohua Flexible PV Bracket Project,
Flexible Mounting System

120MW

Xinjiang Wujiaqu PV and Storage
Integrated Power Station Project,
Fixed Adjustable Mounting System

100MW

Datang Suining Fishery-Optical
Complementary Project,
Fixed Tilt Mounting System

119MW

Shuifa Zouping PV Station Project,
Fixed Tilt Mounting System

100MW

Tianzhen PV and Storage Integrated
Power Station Project,
Flexible Mounting System

68MW

Henan Horizontal Single-axis Tracking
Power Station Project,
Single-axis Tracker

50MW

Greece PV Power Station Project,
Single-axis Tracker

11MW

Namibia PV Power Station Project,
Single-axis Tracker

7.5MW

Philippines PV Power Station Project,
Fixed Tilt Mounting System