

Single Axis Tracker



For most PV power plants, the Single Axis Tracker is the top pick due to its cost performance ratio. Compared to the fixed system there is about a 10 percent additional cost but a 10 to 25 percent increase of power generation. Thus, the Internal Rate of Return is a benefit. When selecting a solar system, there are three basic categories to consider: the product cost, the installation cost and the cost of 20 years of maintenance. According to American EPC companies such as SunPower, First Solar and others, there is an additional 10 maintenance cost for tracking systems compared to fixed systems. The benefits of trackers for investors should make them the preferred choice.

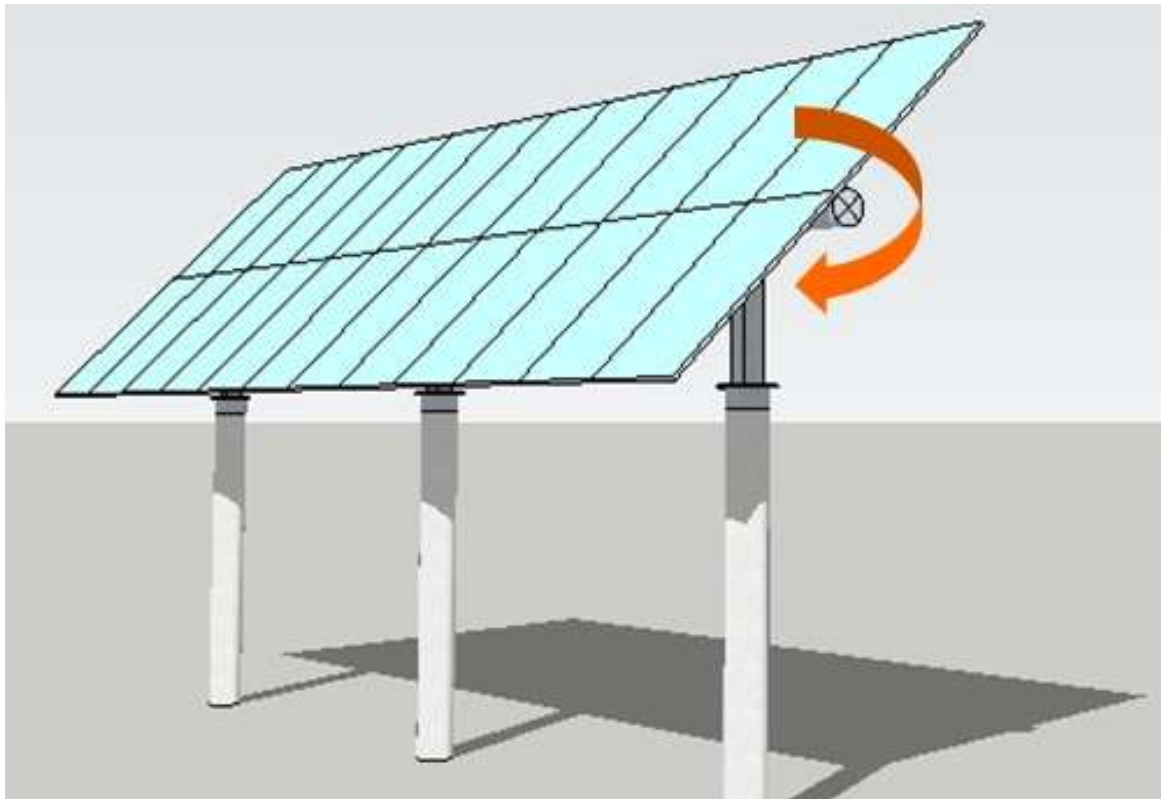
Main characteristics of MST's Single Axis Tracker are:

- Sound structural designs with hot dip galvanized steel within a tracking system composed of a linear actuator, distant remote hybrid controller, and anemometer resisting frequent typhoons in China
- North south arrays, 45 degree tracking east west
- Back-tracking feature
- One controller commanding 12 trackers with a quick installation program available
- Low power consumption with just 0.02 kWh per day per tracking array
- 485 communication features to properly relay system warning or error messages.
- 50 years of structural design that meet local building standard requirements
- Safety mode for high winds and typhoons
- System base built with optional driven pile, premade concrete pile or onsite pulled concrete block.



The actual data measured in Yun-Lin (Taiwan) in 2015
Average **+23.04%** power increased by Single Axis Tracker.

Horizontal Single Axis PV Tracker



According to the inverter series and parallel calculations, a HSAT that is best installed at 30 degrees south of a latitude to produce the most power generation. The HSAT has north south arrays with a 45 degree east west tracking design which can be installed with 22 or 24 of 60 cell panels. Additional backtracking is a great feature to avoid shading among arrays.



Main characteristics of MST's Horizontal Single Axis PV Tracker are:

Model: Horizontal Single Axis PV Tracker

Type of Solar Tracker: Single Axis Tracker with 1 linear actuator for rotation positioning.

Tracking Accuracy (Up to 16m/s) : $\pm 5^\circ$

Design Temperature Range: -40°C to $+70^\circ\text{C}$

Operation temperature range: -30°C to $+55^\circ\text{C}$

Maximum Operational Wind Speed: 18m/s (70km/hr) - at which speed the system moves into stow position

Absolute Maximum Wind Speed: 37 m/s (At horizontal position)

Array Area: Up to 20 m² / (1.65 m x 1 m panel size)

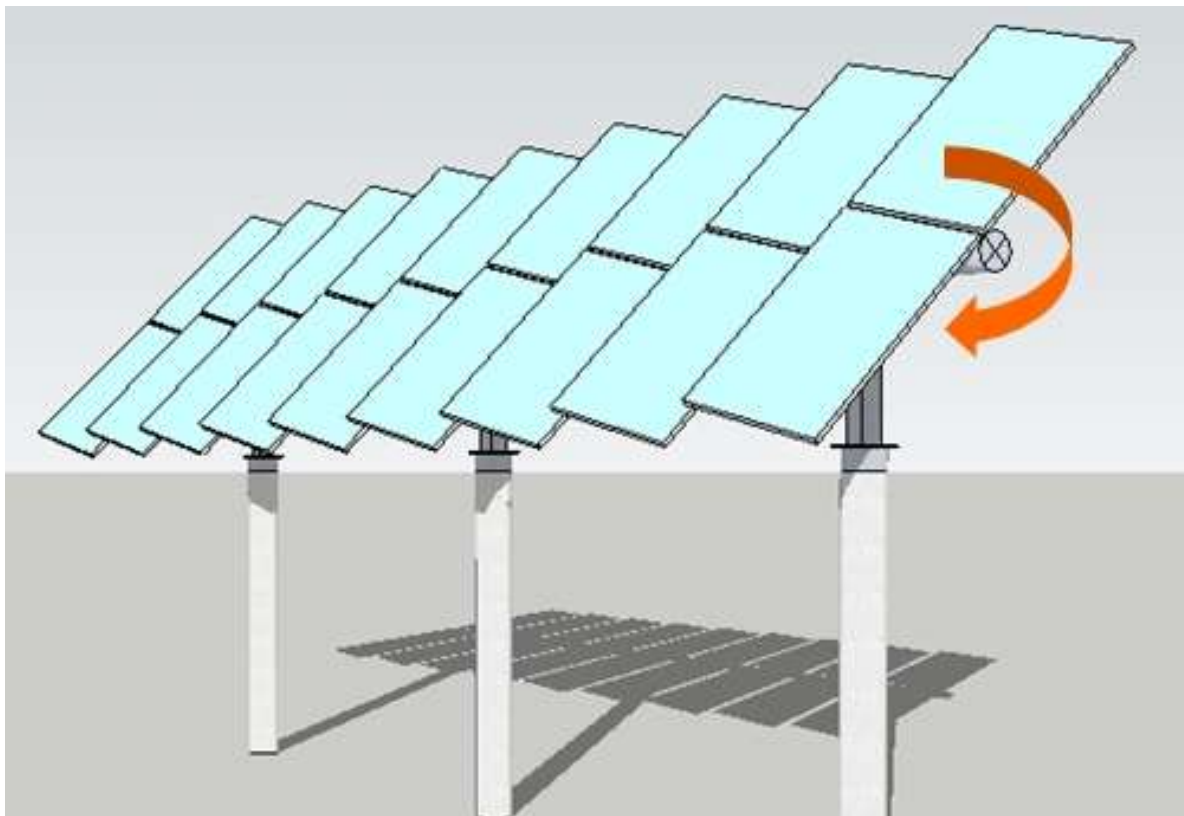
Post Height: 1m

Maximum Height: 1.7 m

Weight: 300 kg (excluding modules)

Payload: 19 kg X 12 (Solar modules only)
System Design Lifetime: 25 years
Rotation (E-W) Tracking Range: 45° from horizontal in E-W direction
Tilting (N or S facing angle): 0°
Control Type: Solar calendric programming
Tracking Type: Single- axis tracking
Safety Feature: Automatic high-wind stow function
Control Box Power Supply Source
Emergency stop button on tracker
Safe positions for maintenance operations: IP Rating IP 65
Remote monitoring (available)
110/ 220V AC

Horizontal Tilted Single Axis PV Tracker



The HTSAT is recommended to be installed in areas that are 35 degrees north of the desired latitude. With a tilted angle of 20 degrees, the model is designed to have the ultimate efficiency according to sun's position. Compared to TSAT (Tilted Single Axis Tracker), the HTSAT has better structural design because it tilts south to avoid wind resistance and shade. It also is more land efficient.



Main characteristics of MST's Horizontal Tilted Single Axis Tracker are:

Model: Horizontal Tilted Single Axis PV Tracker

Type of Solar Tracker: Single Axis Tracker with 1 linear actuator for rotation positioning.

Tracking Accuracy (Up to 16m/s) : $\pm 5^\circ$

Design Temperature Range: -40°C to $+70^\circ\text{C}$

Operation temperature range: -30°C to $+55^\circ\text{C}$

Maximum Operational Wind Speed: 18m/s (70km/hr) - at which speed the system moves into stow position

Absolute Maximum Wind Speed: 37 m/s (At horizontal position)

Array Area: Up to 20 m² / (1.65 m x 1 m panel size)

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Payload: 19 kg X 12 (Solar modules only)

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Rotation (E-W) Tracking Range: 45° from horizontal in E-W direction

Tilting (N or S facing angle): 20°

Control Type: Solar calendric programming

Tracking Type: Single-axis tracking

Safety Feature: Automatic high-wind stow function

Emergency stop button on tracker

Safe positions for maintenance operations

Control Box Power Supply Source: IP Rating IP 65

Remote monitoring (available)

110/ 220V AC