



UA\_250

**UA\_250**  
The new Single Axis Tracker

Up to  
**+30%**  
Extra Energy

KSI offers the world's most reliable and comprehensive solution for tracking systems. Following success in Europe, KSI continues to focus on driving global energy transformation with its advanced Solar Trackers.

Single-Axis Tracking systems optimise solar energy capture by tracking the Sun's path throughout the day, along a single rotational axis from East to West. By combining intelligent software technology with rotation-control hardware, KSI's trackers offer highly efficient solar power generation capabilities.

With the UA\_250's '1P' formation, efficiency meets elegance with a single row of panels arranged in portrait orientation. Its central axis gracefully aligns along the midpoint, ensuring optimal solar tracking performance.

#### Key Features:

- Reduced installation man-hours and costs
- Online remote monitoring and maintenance
- Realtime intelligent back tracking mode for optimised energy generation
- Night-Flip function for self-cleaning effect against soiling and snowfalls
- Flexible installation height to allow dual-use applications (e.g. Agri-Photovoltaic, carparks)
- Low power consumption slewing drive with optimized offset on axis of gravity
- Suitable for Single and Double row PV panels installation
- Extreme versatility for adaptation to a wide range of PV module power capacity and form factors
- Suitable for bi-facial and mono-facial PV module

**KSI Solar Srl.**

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## Tracking

- Tracking method:** Single-Axis, horizontal (N-S installation)
- Tracking range:**  $\pm 160^\circ$  ( $320^\circ$  rotational range) with Nightflip mode
- Backtracking:** Configurable to terrain
- Tracking accuracy:**  $0.1^\circ - 0.25^\circ$  on azimuth
- Night Position:**  $\pm 20^\circ$  module face with respect to ground



## Configuration (Per tracker)

- Number of panels:** 80 modules ( $\approx 248.5 \text{ m}^2$ ) depending on module dimensions
- Tracker layout:** 2 array each 8 sections (5 modules per section)
- Tracker unit:** 2 arrays with 1 controller
- Drive type:** Slewing drive with DC motor
- Tracker per MWp:** Approx. 19 tracker
- Two arrays are mechanically independent, but each Soltrk controller, manage 2 arrays

## Installation Tolerances

- North-South slope:**  $6^\circ$
- Pole height:**  $\pm 25 \text{ mm}$
- Pole plumb:**  $\pm 1^\circ$
- Pole twist:**  $\pm 2^\circ$

## Dimensions (Per array with panels)

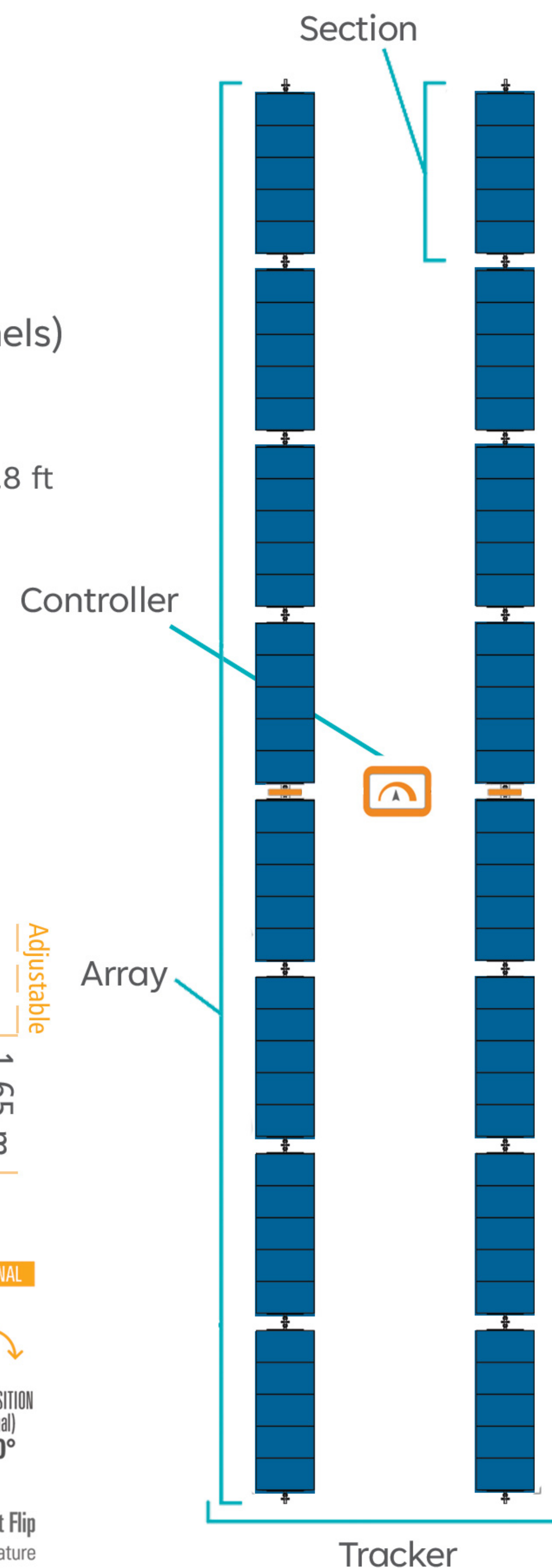
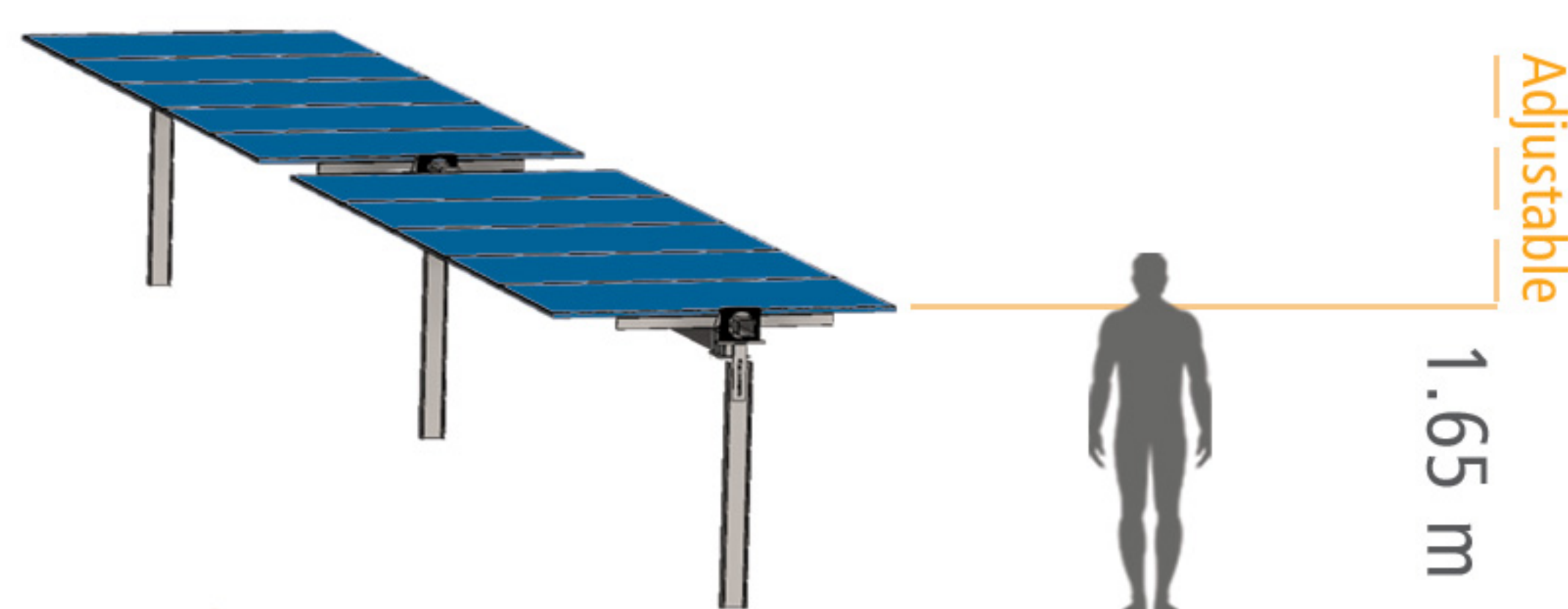
- Length:** 60 m / 193.5 ft
- Width:** 2.4 m / 7.9 ft
- Height:** 1.65m up to 3m / 5.4 ft up to 9.8 ft

## Performance

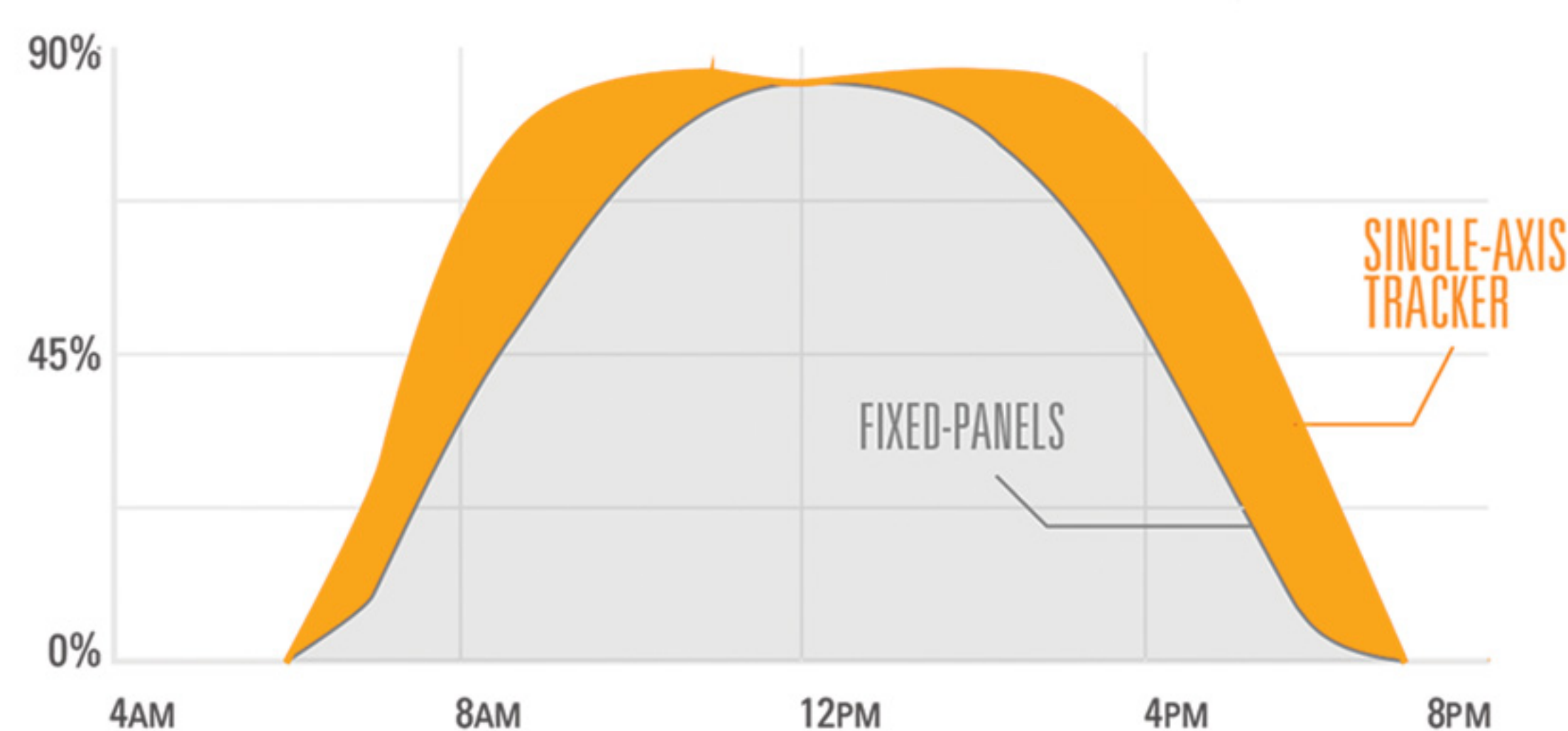
- Capacity per tracker (depending on panel type):** Up to 60kWp
- DC motor operating voltage:** 24V/DC
- PV nominal power range:** +600W
- Performance temperature range:**  $-40^\circ\text{C}$  up to  $+50^\circ\text{C}$

## Additional Features

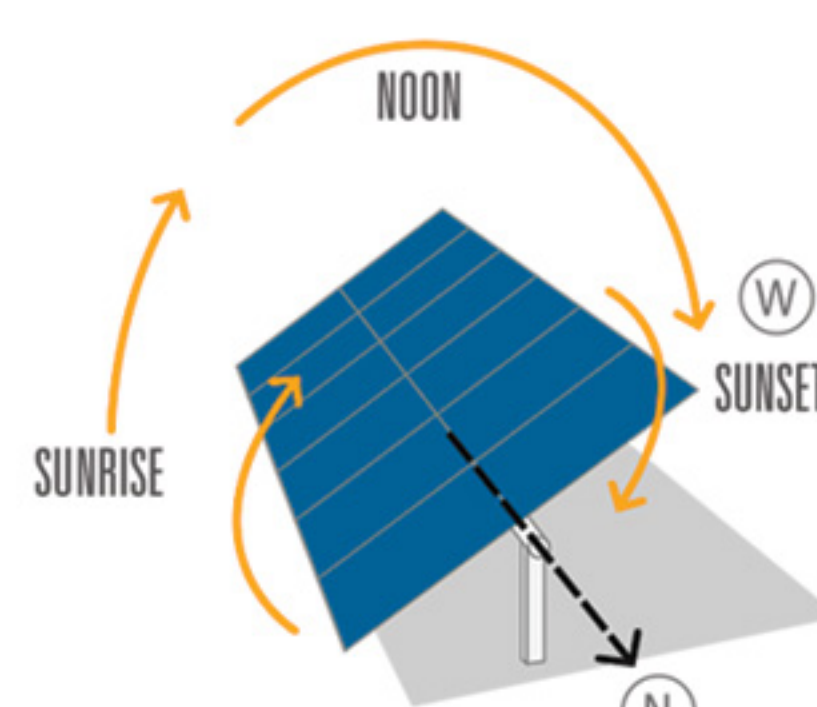
- Monitoring:** Real-time documentation
- Over current protection:** Yes
- Motor torque control:** Yes
- Remote control:** Yes
- Warranty:** Up to 20 years



### Energy Yield



### Daily Tracking



### Night Flip

OPTIONAL



## Astronomical Control

The first generation of the astronomical control unit was developed in Germany in 1999 and has since been installed in thousands of tracking systems worldwide. This system has proved itself as the most reliable, robust and accurate tracking control unit in operation across climates ranging from sub-Saharan Africa to Northern Ontario's deep winters. The latest generation of KSI's control unit is being developed on the same concept while benefitting from improved chipsets and communication protocols. The motor torque management functionality built into this smart controller reduces mechanical stress and fatigue on tracker components to reach the highest safety standards and extend lifetime of the structure.

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