Sertel Solar Tracker

Overview

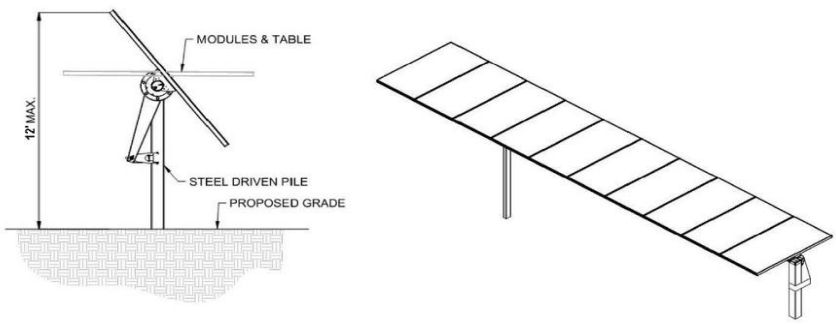
A solar tracker is a device that directs a payload toward the sun. Payloads are typically solar panels or modules. The solar trackers device follows the sun; they constantly have to change their orientation throughout the day so as to maximize energy capture.

Description

Sertel solar trackers offers an end-to-end tracking solution that comprises hardware, tracker controller and structure designs. Sertel aims to be the world's premier solar tracking solutions provider, with a unique mechanical and software tracking solution, which enables users to achieve the lowest cost of power generation per installed kWHr.

Features

- ✓ Trackers generate more electricity than their stationary counterparts due to increased direct exposure to solar rays.
- ✓ Tracker generates 10 to 25% more energy comparing to Fixed Tilt System based on site location.
- ✓ An advancement in technology and reliability in electronics and mechanics have drastically reduced long-term maintenance concerns for tracking systems.
- ✓ Affordability - Best in class quality at affordable cost.
- ✓ Tracker system power consumption per day < 5 watt.
- ✓ Solar panel chasses are expandable.
- ✓ Data logger system for continuous data collection of solar panel voltage, Current, temperature and solar radiation.
- ✓ Auto grid change over system with timer.
- ✓ Algorithms for E-W slope. High wind speed stow.
- ✓ wireless communication: long range, lower power.
- ✓ Strong wind-resistance capability.
- ✓ 100% frictionless movement ZERO maintenance, no lubricant. A complete plant layout is created by using multiply tracking blocks. For example, a 1MW plant will have 5 tracker blocks of 200kW each.
- ✓ Each tracking block requires a single controller and a single unit of drive/motor/actuator.



SINGLE AXIS TRACKER
NOT TO SCALE

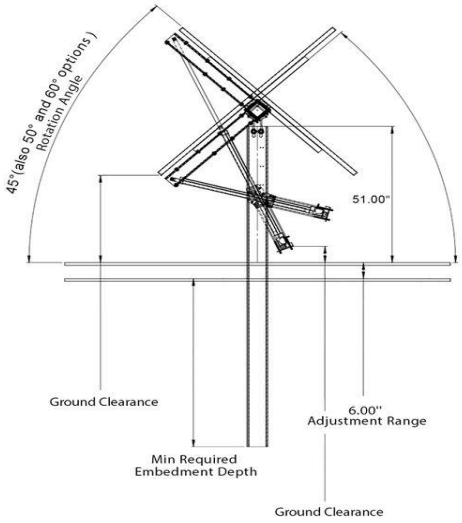
TECHNICAL DATA	
Tracking Technology	Horizontal Single-Axis balanced-mass tracker
Solar Tracking Method	Astronomical DGPS based algorithm
Tracking Range	(± 45°)
Tracker Mechanism	Hot Redundant Tracking
Driving System	Linear Actuator, Slew Drive
Modules per Tracker	Upto 60 modules per tracker
Safety Stowing	Automated wind,rain and snowing
Ground Coverage Ratio	Typical range 33% -50% depending on site conditions
Other Features	Power backup for tracking: Autostow at night & during high wind

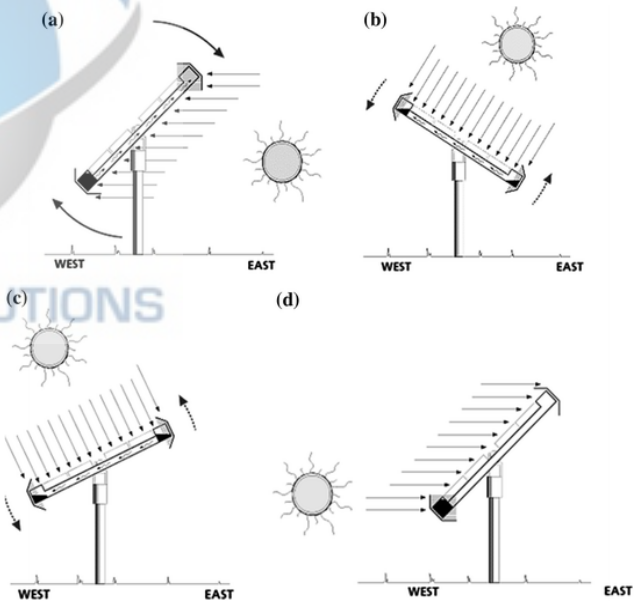
MECHANICAL DATA	
Principal Materials	Horizontal single-axis balanced-mass tracker
Torsional Limiter	Astronomical DGPS based algorithm
Motor & Slew drive	Fully sealed, lubricated for life. No annual Maintenance
Structural Connections	Vibration proof, permanent swaged fasteners. No re-torquing required
Real Time Sensors	Rain sensor, Wind sensor, Night position sensor.

ELECTRONIC CONTROLLER	
Control System	1,2 or 3 Tracker per controller
Control Algorithm	Astronomical algorithms close loop
Tracking Accuracy	≤±2°
Self Powered	Yes
Back Tracking	Yes
Communication Options	Wireless / R485 Cable
Night Position	Yes
Weather Monitoring	Wind measurement standard, snow and flood optional

COMPLIANCE	INSTALLATION
Grounding / Bonding : UL2703 Structural Design : ASCE7-10 Tracker : UL 3703	Rapid field installation of pre-manufactured components. No welding, Cutting or drilling

WARRANTY	
Comprehensive Warranty	10 years on structural components; 5 years on drive and control systems.





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