GENIUS TRACKER™ 2P
WORLD’S HIGHEST POWER PRODUCING & FASTEST INSTALLING 2P SOLAR TRACKER

PRE-ASSEMBLED DRIVE SYSTEM
50% FASTER than typical competitor drive systems. No machines or driveline for industry’s fastest install.

ACTUATOR
Rugged design for harsh environmental climate: IP66 rated

SADDLE BRACKET
Allows efficient alignment with row tube

DRIVE POST
Wide Flange

SPEEDTABS™
Up to 40% higher module install

CONTROLLER
24V battery charged by small solar module drives
24V actuator motor, ZigBee wireless communication

SELF-LUBRICATING DRIVE BEARING
Self lubricating open form polymer bearing that improves damping

OWNER BENEFITS
1.25% MORE POWER PRODUCTION
RESULTS IN HIGHER KWH OUTPUT AND HIGHER ROE

INSTALLER BENEFITS
- FEWER POST COUNT PER MW
- SHORTER 200 FT [61 M] TRACKERS
- UP TO 40% HIGHER MODULE INSTALL USING SPEEDTABS™
- FASTEST INSTALLING DRIVE SYSTEM

GLOBAL LEADER FOR FIXED TILT STRUCTURES & TRACKERS
OVER 10 GW SOLD
### Owner Benefits
**Up to 1.25% More Power Production and Higher ROE**
Combine to increase owner cash flow.

### WeatherSmart™
Proprietary algorithm optimizes tilt angle based on weather data to maximize power production, adds up to 1.25% additional power production.

### Lowest O&M Cost
Lowest grass cutting & module washing cost.
Zero maintenance drive system.

### Installer Benefits
**Fastest Installing System**
Advanced design innovations & pre-assembled components.

**Pre-Assembled Drive Arm**
Can be lifted by one worker, no machine required. 50% faster than typical competitors.

**PE Stamped Drawings**
Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, GB 50009.

**Proprietary Integrated Hardware™**
For faster structure assembly, module mounting and reduced O&M cost. Oversized Serrated Flange Nyloc Nut and Oversized Flange Star Bolt with integrated star washer eliminates the need for washers and star washers.

### SpeedTabs™
Up to 40% higher module install.

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### Modules
**Modules Supported**
Most commercially available modules, including frameless crystalline and thin film.

### Civil
**Slope Tolerance (N-S)**
7% standard, can go to 10% special order.

**Slope Tolerance (E-W)**
15%

### Structural
**Drive Type**
Robust linear actuator stainless steel & aluminum

**Posts per MW**
170/MW for normal wind conditions

**Design Wind Load**
- 105 mph [46.9 m/s] (Std) / 115 mph [51.4 m/s] (Premium 1)
- 130 mph [58.12 m/s] (Premium 2)

**Snow Load**
- 5 psf [24 kPa] (Std) / 20 psf [96 kPa] (Premium 1)
- 40 psf [192 kPa] (Premium 2)

**Tracking Range (Std)**
- 45°, 52°

**Tracking Range (Premium)**
- 60°

**Post Sections**
- HDG wide flange steel

**Post Size (Interior) & (Exterior)**
- W6x9 to W6x20 Wide Flange

**Motor Foundation**
- W6x15, W6x20 or larger Wide Flange

**Standard Embedment**
- 5 - 9 ft. [1.52 - 2.75 m]

**Flood Plain Allowance**
- Up to 6 ft. [1.83 m]

**Design**

**Module Configuration**
- 2 up in portrait for crystalline & First Solar Series 6™
- 2 up in portrait for Bifacial, 6 to 8 up landscape for First Solar Series 4™

**Length per Table**
Up to 205 ft. [62.48 m] (for example 120 crystalline modules)

**Module Attachment**
- Bottom mount for framed modules
- or clamps for glass on glass modules

**Ground Coverage Ratio**
- 0.3 to 0.65

**Rows per Drive**
1 drive per tracker/table, distributed drive system

**Powering System**
- Onboard solar module with battery

**Ground Clearance To Module**
- 18 - 48 in. [45.7 - 121.9 cm] typical

**Rows per Drive**
1 drive per tracker/table, distributed drive system

**Ingress Protection**
- IP66 stroke end / IP67 motor end (NEMA 4/4x equivalent)

**Motor Foundation**
- W6x15, W6x20 or larger Wide Flange

**Tracking Range (Premium)**
- 60°

**Manufacturer of Record**
- Robust linear actuator stainless steel & aluminum

**Electrical**

**Tracking Method**
Time and location based algorithm

**String Design**
Compatible with any string size

**Cable Supports**
- Hole punching as per customer requirement for nominal cost

**Linear Actuator Motor**
- 24V DC UL Listed

**Parasitic Loss**
0 amps

**Controller Box**
- ZigBee® wireless communications, 24V solar module and battery

**Control System**
- Master to Node: ZigBee® wireless communications
- Master to SCADA/DAS: Modbus TCP communications

**# of Motors**
- 25/MW for typical conditions, depending on module wattage and loading

**1000V System or 1500V System**
Both

**Grounding Method**
- Tracker structure is part of grounding path per UL 2703

**UL Compliance**
UL 2703 / UL 3703

**Ingress Protection**
- IP66 stroke end / IP67 motor end (NEMA 4/4x equivalent)

**# Weather Station**
1 per 6 MW - 10 MW typical

**Monitor System**
Web portal interface available

**Snow & Flood Sensors**
Move modules to optimum location for weather events

**Backup Power**
Solar module and battery providing integrated backup - 3 days

**O&M**

**Warranty**
- 5 year drive & control, 10 year structural standard, 10 /20 also available

**Shipping**

**Max Load**
International - 18.5 to 22.5 metric tons per container
USA - 45,000 lbs. [20,411 kg] per truckload, 5,000 lbs. [2,267 kg] maximum bundle size, 2,900 lbs. [1315.4 kg] or other maximum as requested by customers

**Shipping Containers or Flatbeds**
- Flat beds for structure, dry vans for hardware

**Commissioning**
- Backfeed required?
  - No, Generator for power as alternative

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