

Genius Tracker™



Technical Data Sheet

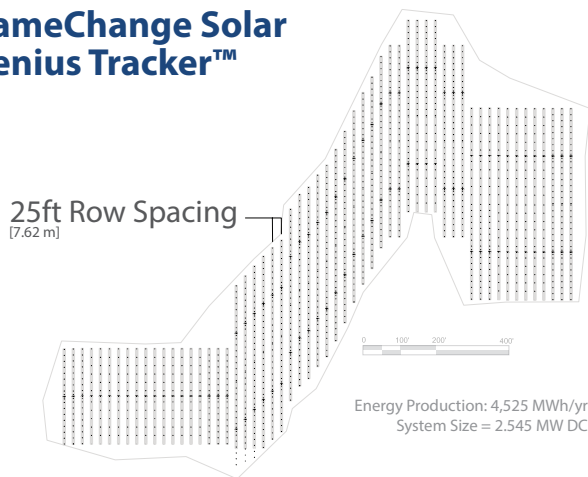
World's Highest Power Producing Tracker

20% MORE
ENERGY PRODUCTION
THAN FIXED TILT SYSTEMS
5% MORE
ENERGY PRODUCTION
THAN TRACKER COMPETITORS
20% HIGHER
LEVERAGED ROE

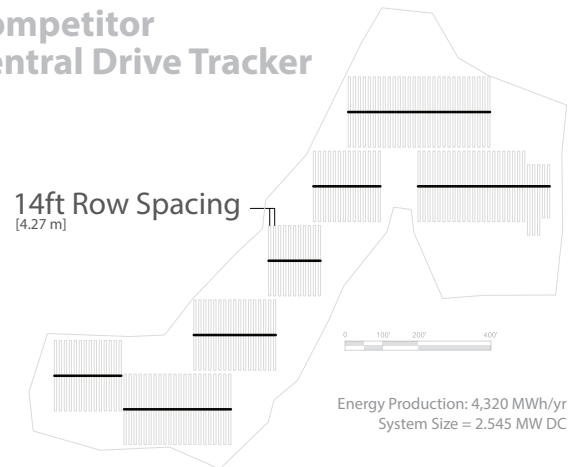
MORE POWER OUTPUT AND HIGHER ROE

With GameChange, modules pack onto shorter rows and use less space than leading competitors. The extra space is used to widen rows. Increased row spacing gives higher kWh output and higher ROE.

GameChange Solar Genius Tracker™



Competitor Central Drive Tracker



INCREASES LEVERAGED ROE UP TO 20% FOR SOLAR PROJECT OWNERS

Shorter north-south rows use less space than leading competitors, extra space used to increase row spacing which results in higher kWh production and ROE

WORLD'S FASTEST INSTALLING SINGLE AXIS SOLAR TRACKER

Pre-assembled drive system and easily assembled components combine to make the fastest install

LEADING BANKABILITY

Black & Veatch technical assessment, CPP wind tunnel tested and rated 150 mph [67.06 m/s], and ETL / UL 2703 tested

HIGHEST POWER DENSITY

Highest power density of any single axis tracker, 99.5% module density on rows vs. 97.0% best competitor

GREATEST RELIABILITY

Rugged design for 30 year field life in harsh environmental climate: -30/+65°C [-22 /149°F] rated actuators IP67 submersible rated motor end/ IP66 rated front end

ULTRA-EFFICIENT INSTALLATION

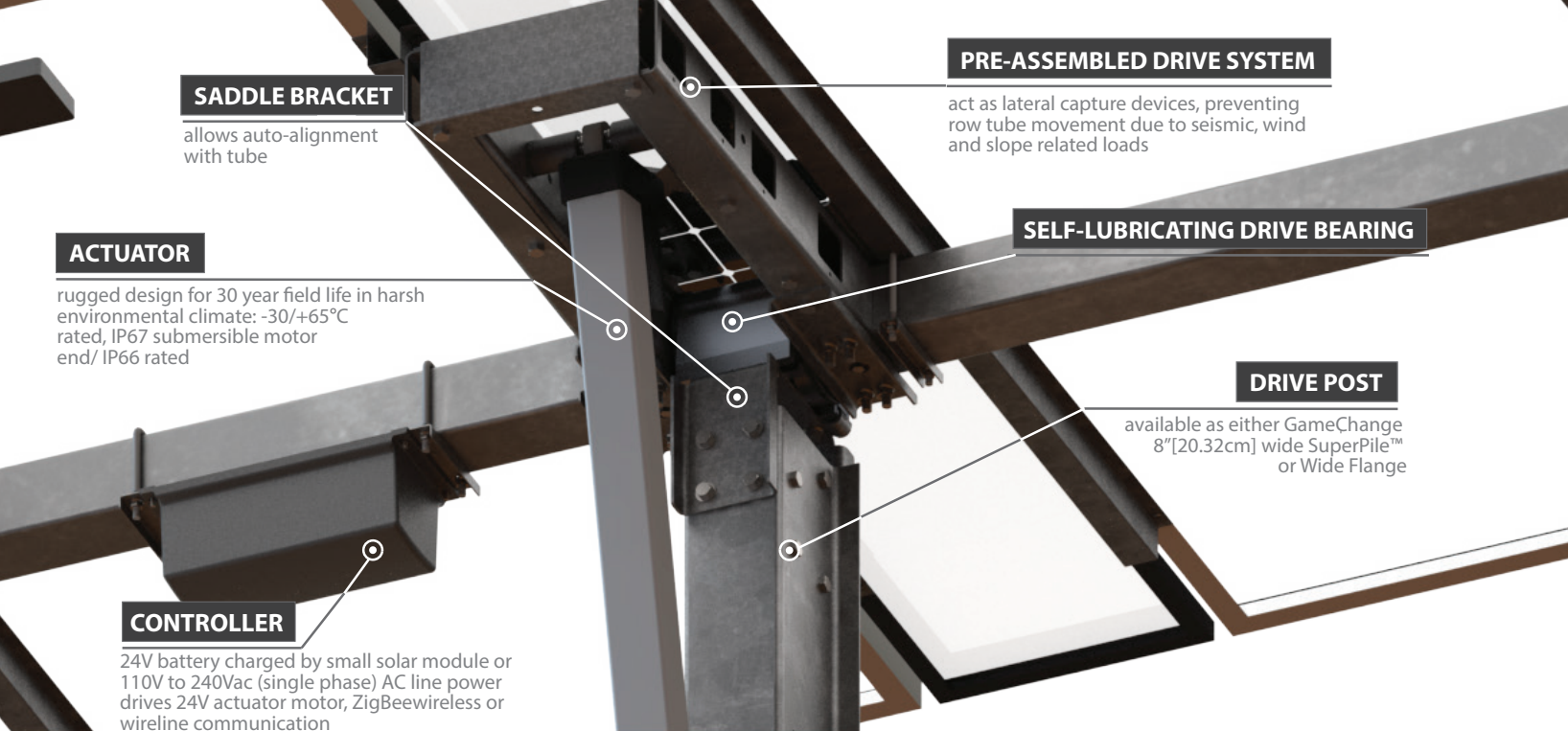
Every drive actuator has its own battery backup and wirelessly linked controllers, eliminating all trenching and Tru3D-Gimbal™ bearings account for pile installation being out of plumb, out of azimuth and out of vertical & east-west alignment

LEAST MAINTENANCE

Self-powered rows eliminates central drive, allows for uninterrupted grass cutting and module washing

BREAKTHROUGH TECHNOLOGY

Breakthrough technology enables lowest cost and highest reliability tracker with fastest install and lowest O&M cost



SADDLE BRACKET

allows auto-alignment with tube

PRE-ASSEMBLED DRIVE SYSTEM

act as lateral capture devices, preventing row tube movement due to seismic, wind and slope related loads

ACTUATOR

rugged design for 30 year field life in harsh environmental climate: -30/+65°C rated, IP67 submersible motor end/ IP66 rated

SELF-LUBRICATING DRIVE BEARING

DRIVE POST

available as either GameChange 8"[20.32cm] wide SuperPile™ or Wide Flange

CONTROLLER

24V battery charged by small solar module or 110V to 240Vac (single phase) AC line power drives 24V actuator motor, ZigBee wireless or wireline communication



Tru3D-Gimbal™ allow for 4.5% plumbness & azimuth tolerance, 2.5" [6.35cm] vertical & 1.75" [4.45cm] east-west adjustment

Table Length: Up to 96 72 cell modules driven per actuator, (or equivalent number of thin film modules incl. First Solar Series 4 & 6™) 100 to 320 ft.[30.5m - 97.5m], varies as required to pack more modules into oddly shaped sites

Drive Type: Robust linear actuator stainless steel & aluminum, 30 year life, IP rated for operation in harsh environmental conditions

Pre-assembled Drive System: Drive System delivered to site fully pre-assembled. This cuts 1 man hr per drive, 37 man hours per MW. The entire installation takes under 5 min. with 2 men and is by far the fastest installing drive system of any tracker

Tracking Method: Time and location based algorithm

Remote Communication: Secure monitoring and control tracker array in real-time via an encrypted cloud portal; SCADA solution available

Remote Access and Control through Cloud VPN or Proprietary Network: Real time tilt and battery level information, remote control for each tracker's tilt

O&M Cost: 65% lower vegetation O&M cost than center drive trackers by eliminating weedwacking along drivelines. Overall 10% lower O&M cost

Power Source for Motor: 24V DC battery charged by small solar module or 110v-240v (single phase) AC, wireline power, or parasitic options all available

Actuator: Rugged design for 30 year field life in harsh environmental climate: -30/+65°C rated IP67 submersible motor end/ IP66 rated

Anti-Shading (Backtracking): Prevents module shading for entire operational range

Module Configuration: Poly modules - portrait 1 up, thin film First Solar Series 4 & 6™ - landscape 3 up

Module Attachment: Bolts available for bottom mount option module clamps for double glass modules

Slope Tolerance: Handles maximum slopes north-south 7% and east-west 15%

Monitoring: Web portal with real-time tilt and data for every tracker

Parasitic Load: Zero draw on solar array - small solar module charges battery

Grading Requirements: Least site grading required of any tracker system

Stow Windspeed: Varies with time of day, averages 70 mph [31m/s] +. Typical stow time less than 2 min

Warranty: 10 yr structural components, 5 yr warranty on control & drive system (20 yr / 10 yr also available)

Grease Free Maintenance: No messy annual greasing slew drive, screw jack and hydraulic systems required

Snow and Flood Sensors: Move panels to optimum location for weather events

Maximum Tolerable Water Depth: 2 ft [60.96cm] standard, up to 6 ft [182.88cm] available

Power Source for Controller: No parasitic load draw if use module charger/battery or wireline powered options

Rotational Range (East/West): 90° standard, and 104° available

Encryption Protection: ZigBee® wireless network

Ground Coverage Ratio: 0.25 to 0.65 (as required)

Linear Actuator Motor: 24 volt DC

Stow position: 45 Degrees West standard

Ground Clearance To Module: 2 ft [60.96cm]

Controllers: 1.6 GW installed Worldwide

Backup Power: Every linear actuator has solar module and battery providing integrated backup - typically 5 days

No special tools needed for installation

Material

Piles: G235 galvanized steel (or HDG option) roll formed standard posts, HDG wide flange option also available

Tubes, Purlins & Other Components: G90 galvanized steel

Hardware: magnacoat 3/8", 1/2" & 3/4" bolts, serrated flange nuts & washers, 3/8" U bolts

Module Hardware: 1/4" serrated flange nuts 1/4"-20 x 3/4" long bolts, star washers

Bearings: 6005A-T6 AL & 95° C, UL rated UV resistant PP

