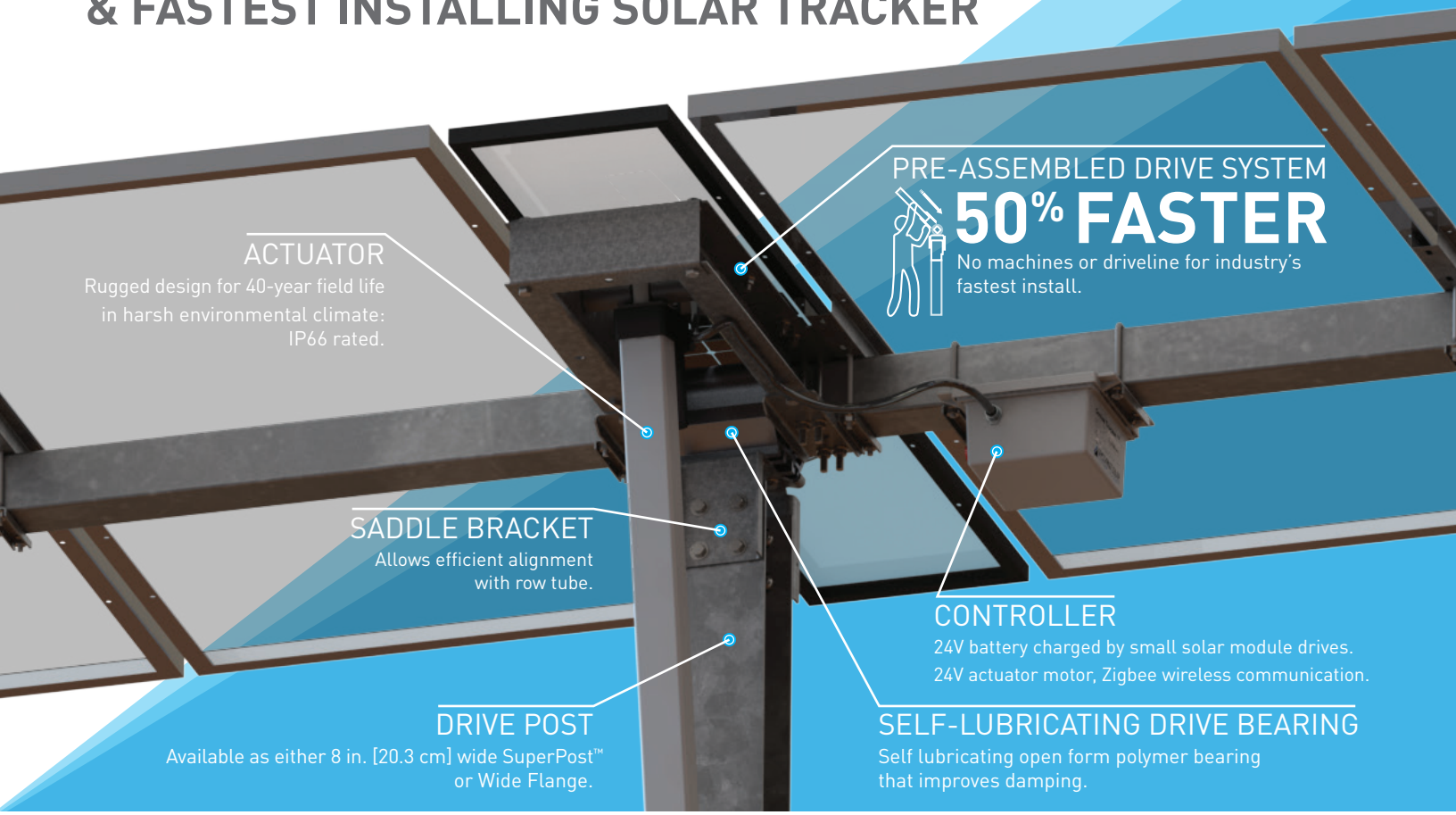
GAMECHANGE SOLAR
REPOWERING THE PLANET

OVER 16 GW SOLD
Global Innovation Leader for Trackers, Fixed Tilt & BOS

TECHNICAL DATASHEET

GENIUS TRACKER™ 1P

WORLD'S HIGHEST POWER PRODUCING & FASTEST INSTALLING SOLAR TRACKER



PRE-ASSEMBLED DRIVE SYSTEM
50% FASTER
No machines or driveline for industry's fastest install.

ACTUATOR
Rugged design for 40-year field life in harsh environmental climate: IP66 rated.

SADDLE BRACKET
Allows efficient alignment with row tube.

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

DRIVE POST
Available as either 8 in. [20.3 cm] wide SuperPost™ or Wide Flange.

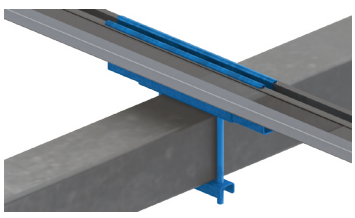
SELF-LUBRICATING DRIVE BEARING
Self lubricating open form polymer bearing that improves damping.

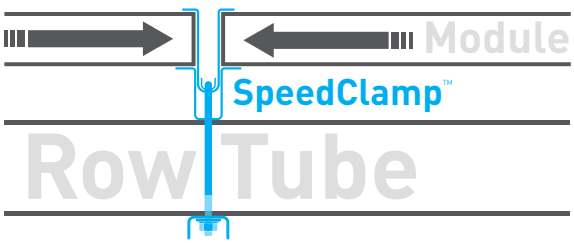
OWNER BENEFITS

UP TO 6.75% MORE POWER PRODUCTION
RESULTS IN **HIGHER** KWH OUTPUT AND UP TO **40% HIGHER ROE**
based on project specifics

INSTALLER BENEFITS

200% FASTER INSTALL SPEED WITH **SPEEDCLAMP™** THAN ANY OTHER TRACKER





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OWNER BENEFITS

UP TO 40% HIGHER ROE
Owners can experience increased cash flow compared to other systems.

HIGHER MODULE DENSITY
Increased row spacing means more time facing the sun and less time running from the shade. Adds up to 5% more power production than competitors.

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.

SPEEDCLAMP™
Mounts modules with no mounting hardware, speeds module installation up to 200%.

PRE-ASSEMBLED DRIVE ARM
Can be lifted by one worker. No machine required. 50% faster than most competing systems.

PE STAMPED DRAWINGS
Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, IS 875.

PROPRIETARY INTEGRATED-HARDWARE™
Proprietary hardware allows 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.

GameChange Solar

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Mesa, AZ, USA
Santiago, Chile
Madrid, Spain

RESEARCH & DEVELOPMENT CENTER
Brimfield, MA, USA

Modules	**Modules Supported**	Most commercially available modules, including frameless crystalline and thin film
Civil	**Slope Tolerance (N-S)**	7% standard, can go to 15% special order
	Slope Tolerance (E-W)	15%
	Tracker follows slope (Y/N)	Yes
Structural	**Drive Type**	Robust linear actuator stainless steel & aluminum
	Posts per MW	350-400/MW for 1 up portrait / 2 up landscape or 250-300/MW for 2 up portrait
	Design Wind Load	105 mph [46.9 m/s](Std) / 130 mph [58.1 m/s](Premium 1) / 150 mph [67 m/s](Premium 2)
	Snow Load	5 psf [.24 kPa](Std) / 20 psf [.96 kPa](Premium 1) / 40 psf [1.92 kPa](Premium 2) / 60 psf [2.87 kPa](Premium 3)
	Tracking Range (Std)	45°, 52°
	Tracking Range (Premium)	60°
	Post Sections	G235 [55 µm] galvanized steel (or HDG option) roll formed standard posts, HDG wide flange option also available
	Post Size (Interior) & (Exterior)	6 x 6 in. [15.24 x 15.24 cm] roll form shape or W6x7, W6x9, W6x12 or W6x15 wide flange
	Motor Foundation	6.5 x 8 in. [16.51 x 20.32 cm] roll form hat or W6x15 or larger wide flange
	Standard Embedment	5 - 7 ft. [1.52 - 2.13 m]
	Flood Plain Allowance	Up to 6 ft. [1.83 m]
Design	**Module Configuration**	1 or 2 up in portrait for crystalline & First Solar Series 6™, 2 up landscape or 1 or 2 up in portrait for Bifacial, 3 to 4 up landscape for First Solar Series 4™
	Length per Table	Up to 500 ft. [150 m]
	Module Attachment	SpeedClamp™ or bolts available for bottom mount frame modules or clamps for glass on glass modules
	Ground Coverage Ratio	0.25 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
	Min / Max Ground to Top of Post	3'-8" [1.12 m] typical + 9 in. [22.86 cm] min. adjustment range
	Backtracking / Anti-shading	Yes, although can be turned off as requested (i.e. for FSLR modules)
	Temperature Range	-20° C (-40° C also available) + 48° C
	Electromagnetic Interference	Compliant with FCC guidelines/ Applicable sections EN 61000
Install	**Specialty Tools Required**	No
	Max Offload for Deliveries	As per customer requirement
Electrical	**Tracking Method**	Time and location based algorithm
	String Design	Compatible with any string size
	Cable Supports	Hole punching 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	20 to 52 / MW depending on module wattage and loading conditions (35 for typical conditions)
	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 Actuator [NEMA 4 equivalent]
	# Anemometers	1 per 6 MW - 10 MW typical
	Monitoring System	Web portal interface available Compatible with all standard third party monitoring vendors
	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
	# Trucks or Containers per MWdc	4 typical for trucks, 5 typical for containers
Commissioning	**Backfeed required?**	No, generator for power as alternative

Rev. 5-31-2022