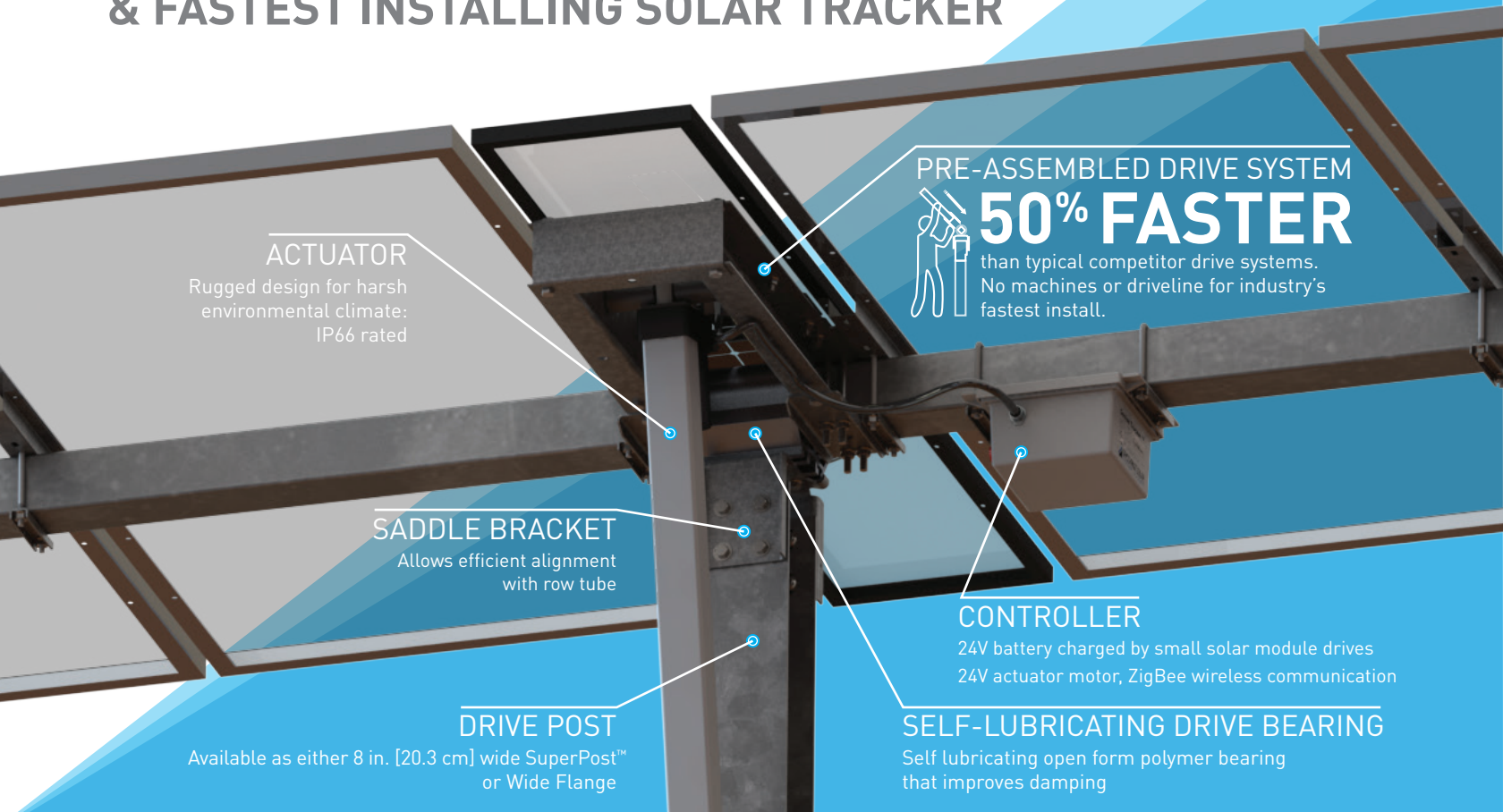


TECHNICAL DATASHEET

**GENIUS TRACKER™ 1P**

WORLD'S HIGHEST POWER PRODUCING  
& FASTEST INSTALLING SOLAR TRACKER



**ACTUATOR**

Rugged design for harsh environmental climate: IP66 rated

PRE-ASSEMBLED DRIVE SYSTEM



**50% FASTER**

than typical competitor drive systems. No machines or driveline for industry's fastest install.

**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**

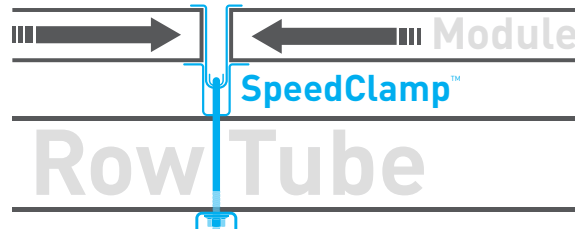
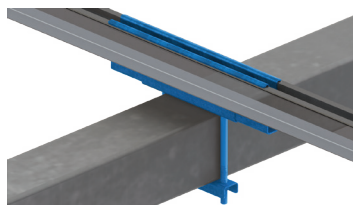
Self lubricating open form polymer bearing that improves damping

**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



## OWNER BENEFITS

### UP TO 40% HIGHER ROE

Combine to increase owner cash flow

### 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 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

## GameChange Solar

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### DISCLAIMER: GameChange Solar

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<b>Modules</b>	<b>Modules Supported</b>	Most commercially available modules, including frameless crystalline and thin film	
<b>Civil</b>	<b>Slope Tolerance (N-S)</b>	7% standard, can go to 15% special order	
	<b>Slope Tolerance (E-W)</b>	15%	
	<b>Tracker follows slope (Y/N)</b>	Yes	
<b>Structural</b>	<b>Drive Type</b>	Robust linear actuator stainless steel & aluminum	
	<b>Posts per MW</b>	350-400/MW for 1 up portrait / 2 up landscape or 250-300/MW for 2 up portrait	
	<b>Design Wind Load</b>	105 mph [46.9 m/s](Std) / 130 mph [58.1 m/s](Premium 1) / 150 mph [67 m/s](Premium 2)	
	<b>Snow Load</b>	5 psf [0.24 kPa](Std) / 20 psf [0.96 kPa](Premium 1) / 40 psf [1.92 kPa](Premium 2) / 60 psf [2.87 kPa](Premium 3)	
	<b>Tracking Range (Std)</b>	45°, 52°	
	<b>Tracking Range (Premium)</b>	60°	
	<b>Post Sections</b>	G235 [55 µm] galvanized steel (or HDG option) roll formed standard posts, HDG wide flange option also available	
	<b>Post Size (Interior) &amp; (Exterior)</b>	6 x 6 in. [15.24 x 15.24 cm] roll form shape or W6x7, W6x9, W6x12 or W6x15 wide flange	
	<b>Motor Foundation</b>	6.5 x 8 in. [16.51 x 20.32 cm] roll form hat or W6x15 or larger wide flange	
	<b>Standard Embedment</b>	5 - 7 ft. [1.52 - 2.13 m]	
<b>Design</b>	<b>Flood Plain Allowance</b>	Up to 6 ft. [1.83 m]	
	<b>Module Configuration</b>	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™	
<b>Electrical</b>	<b>Length per Table</b>	Up to 320 ft. [97.53 m] (for example 78 First Solar Series 6™ modules)	
	<b>Module Attachment</b>	SpeedClamp™ or bolts available for bottom mount frame modules or clamps for glass on glass modules	
	<b>Ground Coverage Ratio</b>	0.25 to 0.65	
	<b>Rows per Drive</b>	1 drive per tracker(table), distributed drive system	
	<b>Powering System</b>	Onboard solar module with battery	
	<b>Ground Clearance To Module</b>	18 - 48 in. [45.7 - 121.9 cm] typical	
	<b>Min / Max Ground to Top of Post</b>	56 in. [1.42 m] typical + 9 in. [22.86 cm] min. adjustment range	
	<b>Backtracking / Anti-shading</b>	Yes, although can be turned off as requested (i.e. for FSLR modules)	
	<b>Temperature Range</b>	-20° C [-40° C also available] + 48° C	
	<b>Electromagnetic Interference</b>	Compliant with FCC guidelines/ Applicable sections EN 61000	
	<b>Install</b>	<b>Specialty Tools Required</b>	No
		<b>Max Offload for Deliveries</b>	As per customer requirement
	<b>Electrical</b>	<b>Tracking Method</b>	Time and location based algorithm
		<b>String Design</b>	Compatible with any string size
		<b>Cable Supports</b>	Hole punching as per customer requirement for nominal cost
<b>Linear Actuator Motor</b>		24V DC UL Listed	
<b>Parasitic Loss</b>		0 amps	
<b>Controller Box</b>		ZigBee® wireless communications, 24V solar module and battery	
<b>Control System</b>		Master to Node: ZigBee® wireless communications	
		Master to SCADA/DAS: Modbus TCP communications	
<b># of Motors</b>		20 to 52 / MW depending on module wattage and loading conditions (35 for typical conditions)	
<b>1000V System or 1500V System</b>		Both	
<b>Grounding Method</b>		Tracker structure is part of grounding path per UL 2703	
<b>UL Compliance</b>		UL 2703 / UL 3703	
<b>Ingress Protection</b>		IP66 stroke end / IP67 motor end (NEMA 4/4x equivalent)	
<b># Weather Station Monitoring System</b>	1 per 6 MW - 10 MW typical Web portal interface available Compatible with all standard third party monitoring vendors		
<b>Snow &amp; Flood Sensors</b>	Move modules to optimum location for weather events		
<b>Backup Power</b>	Solar module and battery providing integrated backup - 3 days		
<b>O&amp;M</b>	<b>Warranty</b>	5 year drive & control, 10 year structural standard, 10 / 20 also available	
<b>Shipping</b>	<b>Max load</b>	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	
	<b>Shipping Containers or Flatbeds</b>	Flat beds for structure, dry vans for hardware	
	<b># Trucks or Containers per MWdc</b>	4 typical for trucks, 5 typical for containers	
<b>Commissioning</b>	<b>Backfeed required?</b>	No, Generator for power as alternative	