

TDP™ TURNKEY TRACKERS

™ TDP is a trademark of Solar FlexRack

The Turnkey Tracker Solution Puts a Team of Experts at Your Service



Meet the most powerful solution for mounting panels: *TDP* Turnkey Trackers and Solar FlexRack's full suite of solar project services and support for commercial and utility-scale solar installations.

From your preliminary layout and design, through geotechnical engineering, construction and commissioning, and for the life of the system, *TDP* Turnkey solar Trackers provide a reliable solution that reduces installation time and cuts operations and maintenance costs.

Solar FlexRack's unmatched team of experts and their decades of solar experience are at your service.

TDP Turnkey Trackers are the only solar tracker solution with full geotechnical, design, installation and commissioning services.

The Only Tracker Solution with:

- Full Design
- Installation
- Commissioning Services

Small Drive Block Maximizes Land Use

TDP Trackers' small drive blocks enable up to 40% reduction in land use, and even bigger reductions on irregular lots and non-adjacent lots.

Distributed Drive Reduces Operations And Maintenance Costs

TDP Trackers have no mechanical components between rows, allowing easy access for mowers, cleaning services and other project maintenance.

Smart Backtracking Maximizes Energy Production

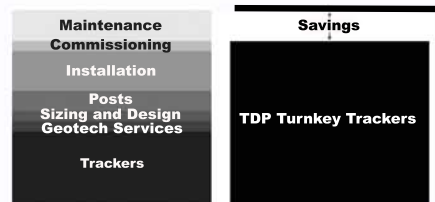
TDP trackers can be programmed based on the terrain, to optimize MWh production. Trackers on east-facing slopes get more early-morning sun, and trackers on west-facing slopes get more in the late afternoon, increasing overall yield.

10% Slope Tolerance Eliminates Land Prep

TDP trackers can conform to the terrain, eliminating the need to level land, and reducing project cost and time.

Complete Service Offering Reduces Project Costs And Risks

A tracker solution that comes with all the critical associated services – and an unmatched team of experts – will dramatically reduce your total cost. Project management is simplified, redundancies are eliminated, and you have one supplier instead of many.



TDP™ Turnkey Trackers Solution by Solar FlexRack

TESTING

Rain, wind, sleet, snow, heat – every day and everywhere, our products are battling the elements.

We perform ongoing extensive testing in these key areas: wind tunnel, structural load, electrical bonding, and life cycle.

Solar FlexRack trackers also undergo wind tunnel testing performed by RWDI, per American Society Of Civil Engineers Standard ASCE 7.

UL COMPLIANCE

All Solar FlexRack systems have gone through UL testing.

Each component-connection point within the system conforms to NEC codes for electrically bonded and conductive systems.

Testing is performed by TUV Rheinland in accordance with UL 2703 issue 2.

Certification covers both United States and Canada.

Find out more about Solar FlexRack product reliability and testing at www.solarflexrack.com/products/testing



Bankability report from Black & Veatch available upon request.



Learn more about our Preferred Installer Program: <http://solarflexrack.com/resources/preferred-installer-program/>

Tracking	
Tracking method	Single-axis horizontal, distributed drive
Backtracking	Smart backtracking - customized to terrain for maximum production
East-west range of motion	± 45° Greater range available upon request
Ground coverage ratio (GCR)	Up to 60% - site dependent
Tracking accuracy	2°
Night stow	Configurable

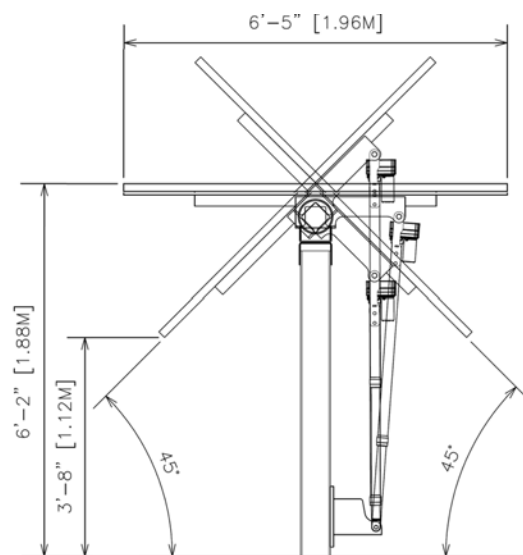
Tracker Dimensions (60 panels)	
Length	200' (61 meters)
Width	77" (1.96 meters)
Height	74" (1.88 meters) May vary due to site conditions

Configuration	
Panels per tracker	Up to 60
Trackers per controller	Up to 4
String voltage	Up to 1,500 volts dc
Posts per tracker	9
Panel configurations	1 in portrait (crystalline) 2 in landscape (crystalline) 4 in landscape (thin film)
Drive type	Linear actuator 24 volts dc, 1Ø
Drives per MW	Approximately 56

Operations and Maintenance	
Scheduled maintenance	None
Warranty	Structural - 10 years Controls and drive - 5 years
Codes and standards	UL 2703 ASCE 7

Installation Tolerances	
North-south slope tolerance	Up to 10%
North-south post spacing	± 1.5 inches (.038 meter)
East-west post alignment	± 0.625 inches (0.016 meter)
Post height	± 1 inch (0.025 meter)
Post plumb	± 1°
Post twist	± 2°
Tube twist	± 2°

Services	
Geotechnical services	Panel installation
Structural analysis	Configuration of tracker controls
Layout and design services	Configuration of network controls
Foundation design services	Project management
Post driving	PE stamp
Pull testing	On-site training
Tracking system installation	Commissioning
Visual inspection of trackers	Remote data monitoring and reporting



TDP TURNKEY TRACKER

Construction	
Structural materials	Hot dip galvanized steel Stainless steel Composite
Bearings	UV-rated PTFE - no lubrication needed
Mechanical connections	Bolted - no welding, drilling or cutting required

Control System	
Data feed	Ethernet, SCADA
Power consumption	31 kWh per tracker per year

Environmental	
Operating temperature	-30 °C to +60 °C
Wind (IBC-2012/ASCE 7-10)	130 miles per hour (209 kilometers per hour)
Snow load	30 pounds per square foot (1.44 kPa) Higher snow load available upon request

40 Years & Over 2 Gigawatts

Solar FlexRack, a division of Northern States Metals, is an integrated solar company that offers custom-designed, fixed tilt ground mount and single-axis solar tracking systems in the commercial, community solar and utility-scale solar mounting industries. Solar FlexRack offers full turnkey packages including engineering, geotechnical, pullout testing, field, layout, and installation services to address the actual site conditions of an installation and provide a full scope of services from design to delivery and installation. Solar FlexRack has completed over 2 GW of solar racking installations in 40 states across America and five countries globally.

For more information on Solar FlexRack visit: www.solarflexrack.com