

FLEXRACK SERIES

FlexTrack - S Series - Ballasted

**Proven
Technology**

A merger of two tried and true technologies - S-Series Tracker with Patented Cast-in-Place Ballast Forming System

Over 500 S-Series tracker projects and over 100 ballasted projects deployed throughout the USA, Canada, and all over the world

**Greater Adjustability
To Maximize Performance**

Up to a 5% N-S slope tolerance

Reduces civil work

Ample vertical adjustability for initial installation and differential settlement.

**Single-axis tracker with horizontal
distributed slew drive**

Patented Cast-in-Place roll formed steel ballast forms can be placed on localized slopes up to a 5% slope

+/- 3" CIP Insert

+/- 6" Telescoping Upright

Up to 12" for future settlement

Patented Cast-in-Place ballasted foundations are optimized for sliding and overturning based on design wind speeds and project specific stow position.

Blocks are uniquely sized for idler and drive posts and for each zone prescribed in FLEXRACK's wind tunnel study (CPP)

Trackers Solution by FLEXRACK by QCells



CONTROL SYSTEM

Data Feed	Ethernet to Network Control Unit
Power Consumption	Grid-Powered: 31kWh per tracker per year
Tracker Controller	1 Controller to DC motor per tracker
Size	230 x 100 x 150 mm
Battery (self-powered)	Rechargeable LiFePO4 (Lithium Iron Phosphate 3Ah (standard operating temperatures), 6Ah for low temperature conditions
Battery Charging (self-powered)	Optimum charging through CC/CV algorithm for LiFePO4 Chemistries which contributes to extended battery life
SoC Monitoring (self-powered)	SoC achieved through OCV and Coulomb counting algorithms
Operating Temperatures	Grid Powered: -20C to 60C Self Powered (Standard): -10C to 50C Self Powered (Low Temp): -30C to 40C
Interface	HMI (includes enclosure mounted keypad LED visual interface)
Communication	Zigbee Wireless
PV Module (self-powered)	Standard: 38W Monocrystalline Low Temp: 76W Monocrystalline

SERVICES

Geotechnical Services	Configuration of Tracker Controls
Structural Analysis	Project Management
Layout and Design Services	PE Stamp
Foundation Design Services	On-site Training
Tracking System Installation	Commissioning of Tracker System

UL COMPLIANCE

All FLEXRACK by Qcell 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 Solar PTL in accordance with UL 3703.

Certification covers both United States and Canada.

**50 YEARS & OVER
4 GIGAWATTS**

FLEXRACK by Qcells is an integrated solar company that offers custom-designed, fixed tilt ground mount and single-axis solar tracking systems in the commercial and utility-scale solar mounting industries. FLEXRACK also offers full services, including engineering, geotechnical, pullout testing, field, and layout design services to address the actual site conditions of a project site. FLEXRACK has completed over 4 GW of solar racking installations in over 40 U.S. states and across the globe.

TRACKING

Tracking Method	Single-axis horizontal, distributed drive
Backtracking	Smart backtracking - 3D backtracking technology available to reduce row shading and optimize energy production on challenging terrain. Overcast feature intelligently positions trackers to optimize energy yields for diffused light conditions and bifacial modules
Tracking Range	Up to 110° (± 55°)
Ground Coverage Ratio (GCR)	No limitation. Configurable based on site conditions.
Tracking Accuracy	2°
Stow Features	Stow Strategy is customized to meet project specifications to protect system from extreme weather events including wind, snow, hail, and flooding.

ARRAY CONFIGURATION

Panels per Tracker	Up to 90 (72 Cell Modules)
Trackers per Controller	1
String Voltage	Up to 1,500 volts
Posts per Tracker	Dependant on tracker size and site conditions, approximately 15 posts for 90 panels
Panel Configurations*	1 in portrait (crystalline) 2 in landscape (crystalline) 4 in landscape (thin film)
Drive Type	Slew 24 Volts DC

OPERATIONS AND MAINTENANCE

Scheduled Maintenance	None
Warranty	10 Years: Structural 5 Years: Drives and Electrical
Certifications	UL 3703
Dynamic Load Management	Integrated frictional dampening and limited progressive dampening technology

INSTALLATION TOLERANCES

North-south Slope Tolerance	Up to 7%
North-south Post Spacing	± 1.5 inches (.038 meter)
East-west Post Alignment	+/- 0.75 inches
Post Height	± 1 inch (0.025 meter)
Post Plumb	± 1°

CONSTRUCTION

Structural Materials	Galvanized Steel. Multiple coatings available.
Bearings	UV-rated engineering plastic, no lubrication needed
Mechanical Connections	Bolted - no welding, drilling or cutting required

ENVIRONMENTAL

Wind (IBC-2012/ASCE 7-10)	Up to 130 mph (Trackers can be customized to higher wind speeds upon request) 35 mph stow position
Snow Load	30 psf (Trackers can be customized to higher snow loads upon request)

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. FLEXRACK by Qcell trackers also undergo wind tunnel testing performed by RWDI and CPP, per American Society of Civil Engineers Standard ASCE 7.

*Adaptable to all module sizes
Patent U.S. 10,125,506