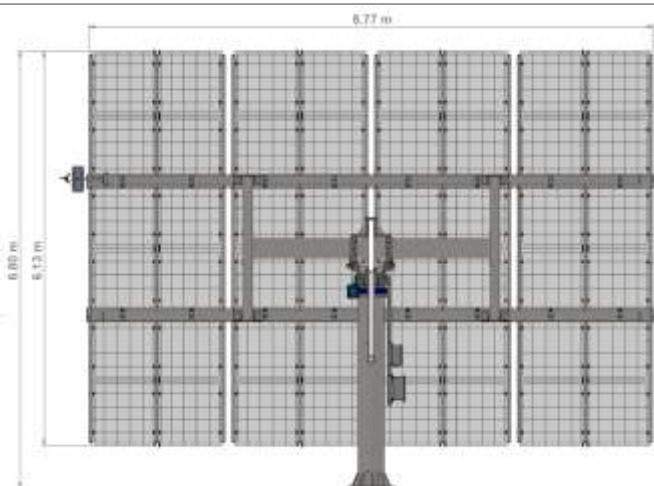


Dimensions



Description

The BSQ-D280/53 CPV System is specially designed as the optimum building block for solar CPV power plants.

Its BSQ-D280/53 CPV Sun Tracker is engineered for the BSQ's D280 HCPV module to achieve optical quality stiffness, sub-degree pointing accuracy, and extended tracking range to deliver the highest and cost effective energy production.

Using proprietary auto-calibrated open loop tracking control, the tracker achieves 0.1-degree minimum average pointing accuracy. It efficiently manages wind and night stow positions for safety and reliability. Supplied software monitors and controls system performance.

Features

Performance

- > Numerically optimized aperture surface for least structural weight and cost
- > Auto-calibration for maximum tracking accuracy
- > Landscape collecting surface profile for least shadowing loss
- > Wide range of motion for maximum energy harvest
- > Suitable for intertropical zones

Reliability

- > IEC62817 certified
- > Hot dip galvanized structure
- > Controller design according to electrical safety and EMC standards and tested in harsh climatic conditions.

Specifications

Mechanical

Aperture - Height	6.13 m
Aperture - Width	8.77 m
Aperture - Area	53.76 m ²
Coverage Radius	5.34 m
Maximum Height	6.79 m
Unloaded Weight	2465 kg
Weight with modules	3598 kg

Structural Properties

Max. Service Wind Speed	10 m/s
Max. Flexure @ Max. Service Loads	0.3 °
Max. Wind Load (resistance limit)	28 m/s
Lowest Resonance Frequency	3 Hz

Tracking Drive

Tracking Geometry	Az.-El.
Azimuth Range	±180 ° (adjustable)
Elevation Range	0 ° to 90 °
Azimuth Gearing	Worm gear
Elevation Gearing	Screw jack
Tracking Mode Max. Speed	15 °/min
Manual Mode Speed	18 °/min
Max. Azimuth power consumption	136 W
Max. Elevation power consumption	130 W
Power consumption in idle mode	47 W
Max. daily energy consumption	1250 Wh
Max. time to stowage	8 min
Max. backlash	0.04 °
Axes turning angle measurement	Optical encoder
Limit switches	Soft and hard

Tracking Controller

Pointing Accuracy (Average)	0.05 °
Pointing Accuracy (Std. Dev.)	0.04 °
Min. Positioning Resolution	0.05 °
Position Resolution	0.018 °
Sun Ephemeris Mean Accuracy	0.01 with built-in GPS
Wind Stow Condition	12 m/s
Basic Connectivity	RS232-485, Modbus
Tightness Condition	IP65
Temperature Range	-10 °C to 60 °C

Array Configuration

No. Panels	48 (13.44 kW@STC)
No. Panels per String	6
No. Parallel Strings	8

