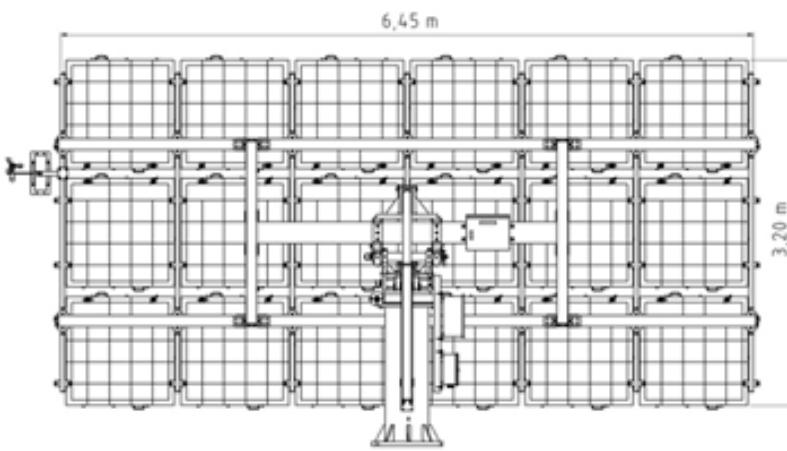


Dimensions



Description

The BSQ-D280/20 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. Designed with reduced height and enhanced landscape aspect ratio, it is optimal for installations requiring reduced visual impact.

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

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

Specifications

Mechanical

Aperture - Height	3.20 m
Aperture - Width	6.45 m
Aperture - Area	20.64 m ²
Coverage Radius	3.60 m
Maximum Height	3.70 m
Unloaded Weight	1234 kg
Weight with modules	1594 kg

Structural Properties

Max. Service Wind Speed	20 m/s
Max. Flexure @ Max. Service Loads	0.3 °
Max. Wind Load (resistance limit)	45 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	30 °/min
Manual Mode Speed	8 °/min
Max. Azimuth power consumption	40 W
Max. Elevation power consumption	130 W
Power consumption in idle mode	47 W
Max. daily energy consumption	1190 Wh
Max. time to stowage	11 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	22 m/s
Basic Connectivity	RS232-485, Modbus
Tightness Condition	IP65
Temperature Range	-10 °C to 60 °C

Array Configuration

No. Panels	18 (5.04 kW@STC)
No. Panels per String	6
No. Parallel Strings	3

