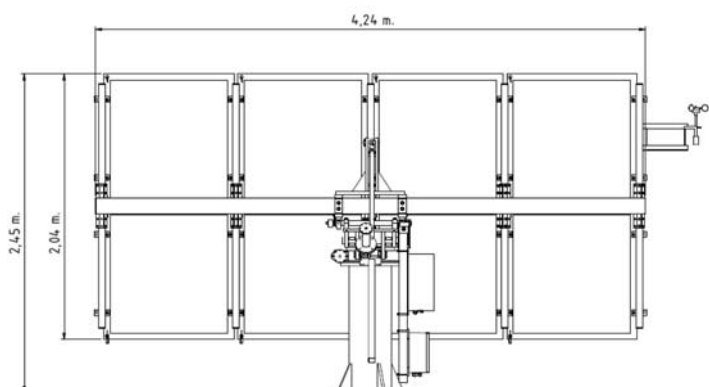


Dimensions



Description

The BSQ-D280/9 CPV Sun Tracker tracking system has been engineered, for BSQ's D280 HCPV module, to achieve optical quality stiffness, sub degree pointing accuracy, and extended tracking range, to deliver the highest energy production at cost effective cost. 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 for least structural weight and cost
- Auto-calibration for maximum tracking accuracy
- Landscape shaped collecting surface for least shadowing loss and reduced visual impact
- Wide range of motion for maximum energy harvest

Reliability

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

Specifications

Mechanical

Aperture - Height (m)	2.04
Aperture - Width (m)	4.24
Aperture - Area (m ²)	8.65
Coverage Radius (m)	2.45
Maximum Height (m)	2.45
Unloaded Weight (kg)	655.3
Weight with modules (kg)	847.3

Structural Properties

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

Tracking Drive

Tracking Geometry	Az.-El.
Tracking Geometry	±160 (adjustable)
Azimuth Range (deg)	0 to 90
Elevation Range (deg).	Worm gear
Azimuth Gearing	Screw jack
Elevation Gearing	15
Tracking Mode Max. Speed (°/min)	18
Manual Mode Speed (°/min)	136
Max. Azimuth power consumption (W)	130
Max. Elevation power consumption (W) . . .	47
Power consumption in idle mode (W)	1250
Max. daily energy consumption (Wh)	8
Max. time to stowage (min)	0.04
Max. backlash (deg)	Optical encoder
Axes turning angle measurement	Soft and hard
Limit switches	

Tracking Controller

Min. Pointing Accuracy (Average) (deg)	0.1
Min. Pointing Accuracy (Std. Dev.) (deg)	0.04
Min. Positioning Resolution (deg)	0.05
Position Resolution (deg)	0.018
Sun Ephemeris Mean Accuracy (deg)	0.01 with built-in GPS
Wind Stow Condition (m/s)	12
Basic Connectivity.	RS-232-485, Modbus
Tightness Condition.	IP65
Temperature Range (°C)	-10 to 60

Array Configuration

No. Panels	8 (2.24kW@STC)
No. Panels per String	4
No. Parallel Strings	2

