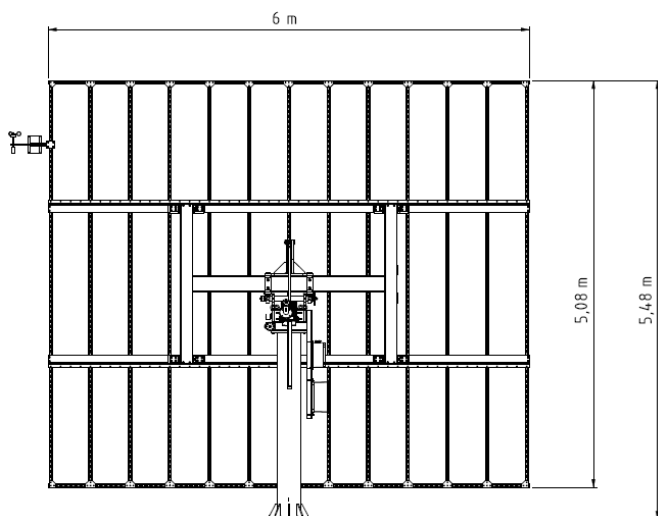


Dimensions



Description

The BSQ-HASTLA/32 Sun Tracker tracking system has been engineered to achieve optical quality stiffness, sub degree pointing accuracy, and extended tracking range, to deliver the highest energy production. Using auto-calibrated open loop tracking control, the tracker achieves 0.1 degree pointing accuracy. It efficiently manages wind and night stow positions for safety and reliability. Specially designed as laboratory equipment for the testing of different PV and HCPV modules, its aperture frame consists in a module universal mounting rack. 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
- Wide range of motion for maximum energy harvest
- Top aperture rack allows mounting of different PV or HCPV modules for field testing purposes

Reliability

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

Specifications

Mechanical

Aperture - Height (m)	6.00
Aperture - Width (m)	5.08
Aperture - Area (m ²)	30
Coverage radius (m)	3.93
Maximum height (m)	5.48
Unloaded weight (kg)	1168
Maximum payload (PV & HCPV modules) (kg)	700

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.
Azimuth range (deg)	±160 (adjustable)
Elevation range (deg)	0 to 90
Azimuth gearing	Worm gear
Elevation gearing	Linear actuator
Max. azimuth speed (°/min)	15
Max. elevation speed (°/min)	18
Max. azimuth power consumption (W)	136
Max. elevation power consumption (W) ...	130
Power consumption in idle mode (W)	47
Avg. daily energy consumption (Wh)	1250
Max. time to stowage (min)	8
Max. backlash (deg)	0.04
Axes turning angle measurement	Optical encoder
Limit switches	Soft and hard

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

Universal module mounting rack

Spacing between vertical rails (m)	0.5
--	-----

