

Tracking Systems for Solar Parks



up to 40% additional yield

reliable

maintenance-free

excellent price-performance ratio

high Return On Investment

Solar tracking systems allow increased returns on investment. Thanks to their robust mechanics and their reliable control concepts for installations of all sizes, LORENTZ tracking systems for solar parks guarantee highest energy yields - all around the year.

The statics are certified according to German and European norms.

Characteristics

- based on the tracking system ETATRACK active, successfully operating worldwide since more than 10 years
- premium workmanship, high life expectancy
- maintenance-free
- optimised control concepts for solar parks of different sizes
- economical

LORENTZ 

Tracking Units

ETATRACK active 1500-A SP and ETATRACK active 2000-A SP

Characteristics

- total module surface up to c. 20.5 m², alternative sizes up to 26 m² on request
- optimised control concepts for different sizes of solar parks
- no failure-prone light sensor
- no unnecessary tracking movements
- low power consumption
- statics according to German and European standards
- high reliability and life-expectancy
- maintenance-free
- cost-efficient tracking system

Design

Tracking Unit

- single-axis tracking system suitable for PV modules according to IEC 61215, UL 1703
- angle of second axis (tilt) adjustable 0–45° in steps of 5°
- elevation East-West: 90°
- module surface: see table
- frame and pole: steel, hot-dip Zn-coated
- screw set: steel, Zn-coated
- module clamps made of stainless steel for mounting the PV modules
 - standard: using the holes in the module frame, incl. M6 stainless steel screw kits
 - optional: mounting clamps (J-clips) for mounting the PV modules with middle and end clamps
- suitable for high wind speeds: statics according to German and European standards
- maintenance-free

Control

- local controller processing commands from Central Control Unit (CCU/LCU) or LCU-Master Central Control
- electronics in plastic housing
- stepwise tracking
- control concepts for solar parks of various sizes

Drive

- DC linear drive, maintenance-free

Foundation

- concrete foundation with steel reinforcement
- screw foundation
- ram foundation



photos may differ

		ETATRACK active 1500-A SP	ETATRACK active 2000-A SP
module surface, max.	[m]	16.5	20.5
dimensions of mounted frames, max. (supportive area, installation area PV modules)			
width	[m]	3.5	3.5
height	[m]	4.4	5.9
power consumption	[kWh/year]	1.5	1.5
concrete foundation size, min.	[m ²]	3.0	4.0

Scope of Delivery

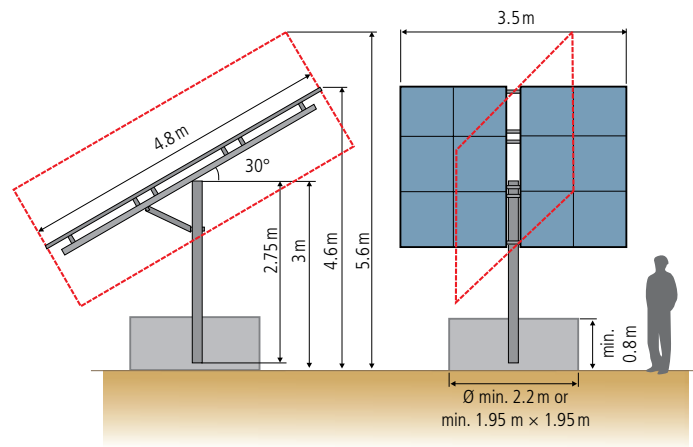
		ETATRACK active 1500-A SP	ETATRACK active 2000-A SP
kit tracking unit		■	■
module fixation			
module clamps – included in delivery	sets	48	64
mounting clamps (J-clips) – optional	sets	36	48
control		■	■
drive		■	■
installation manual		■	■

Storage and Operating Conditions

- ambient temperature range: –25 °C to +50 °C
- daily average ambient humidity: max. 80 %
- air salinity: max. 2 µg/m³, or distance from coast: min. 1 km
- altitude: –400 m to +3,000 m MSL
- for detailed description of ambient conditions for safe operation, cf. installation manual
- designs for other conditions on request

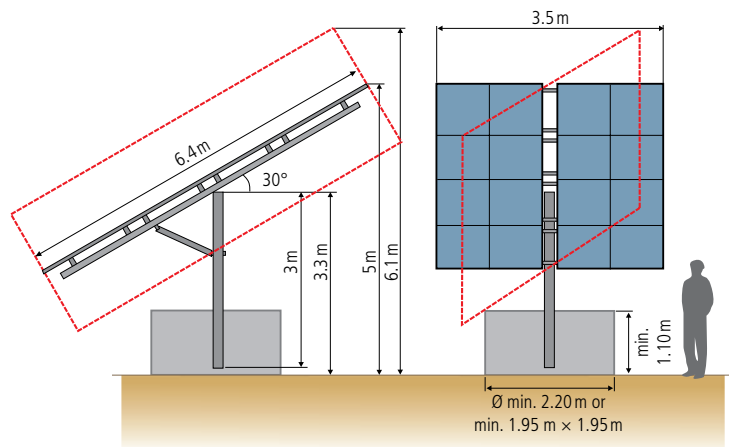
Dimensions

ETATRACK active 1500-ASP



Example: system dimensions with 12 PV modules, c. 1.6 m × 0.8 m

ETATRACK active 2000-ASP



Example: system dimensions with 16 PV modules, c. 1.6 m × 0.8 m

Spatial Requirements

LORENTZ solar parks are spatial-optimised to achieve highest yields on a given space. For smaller distances between the units, mutual shadowing is avoided by optimised tracking movements.

Examples of spatial requirements for different system locations, indicated in distance between the poles in N/S and in E/W direction

Location	Latitude	Tilt	ETATRACK active 1500-ASP Spatial requirements for module surface of 3.5 m × 4.8 m (W × H)		ETATRACK active 2000-ASP Spatial requirements for module surface of 3.5 m × 6.4 m (W × H)	
			distance pole to pole N/S	distance pole to pole E/W	distance pole to pole N/S	distance pole to pole E/W
Southern Germany	49°N	c. 30°	c. 12 m	c. 8 m	c. 16 m	c. 8 m
Greece Southern Italy Southern Spain	38°N	c. 27°	c. 10 m	c. 8 m	c. 13.5 m	c. 8 m
South Korea	36°N	c. 27°	c. 10 m	c. 8 m	c. 13.5 m	c. 8 m



Germany



South Korea

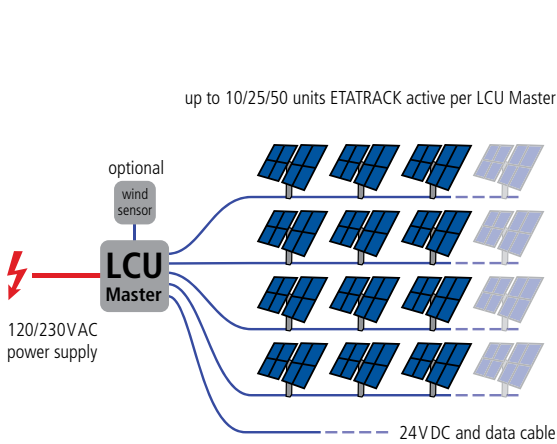


Portugal

Central Control Concepts

	LCU Master Central Control 10 / 25 / 50			Central Control Unit (CCU) 2000
size of installation	up to 10 tracking units	up to 25 tracking units	up to 50 tracking units	up to 2000 tracking units
sensorless control	■	■	■	■
low energy consumption	■	■	■	■
energy supply from the grid	■	■	■	■
avoidance of mutual shadowing	■	■	■	■
wind sensor	optional	optional	optional	optional
remote maintenance and diagnosis				optional

LCU Master Central Control Concept



CCU 2000 Concept

