

Tracking Systems for Solar Parks



- up to 40% additional yield**
- reliable, high life expectancy**
- fast and failure-free installation**
- excellent serviceability**
- short Return of Investment (ROI) cycle**
- lower Total Cost of Ownership (TCO)**
- first-rate price-performance ratio**

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.

LORENTZ solar park tracking systems are based on the tracking system ETATRACK active, successfully operating worldwide since more than 10 years.

LORENTZ provides optimised control concepts for solar parks of different sizes

Statics according to German and European standards.

Tracking Units ETATRACK active 1500-ASP and ETATRACK active 2000-ASP

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
- excellent serviceability
- 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
- suitable for ground level installation
- excellent serviceability

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

- designed for concrete foundation with steel reinforcement
- screw and ram foundation optional

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



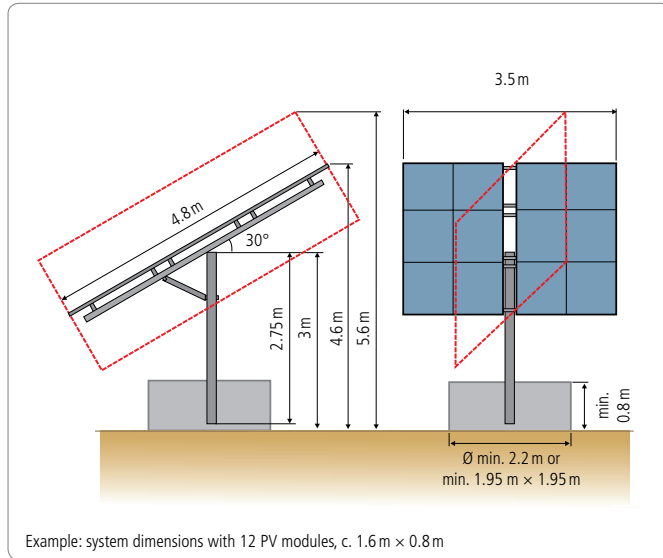
		ETATRACK active 1500-ASP	ETATRACK active 2000-ASP
module surface, max.	[m ²]	16.5	20.5
dimensions of mounted frames, max. (supportive area, installation area PV modules)			
width	[m]	3.5	3.5
height	[m]	4.4	5.9
power consumption	[kWh/year]	1.5	1.5
concrete foundation size, min.	[m ³]	3.0	4.0

Scope of Delivery

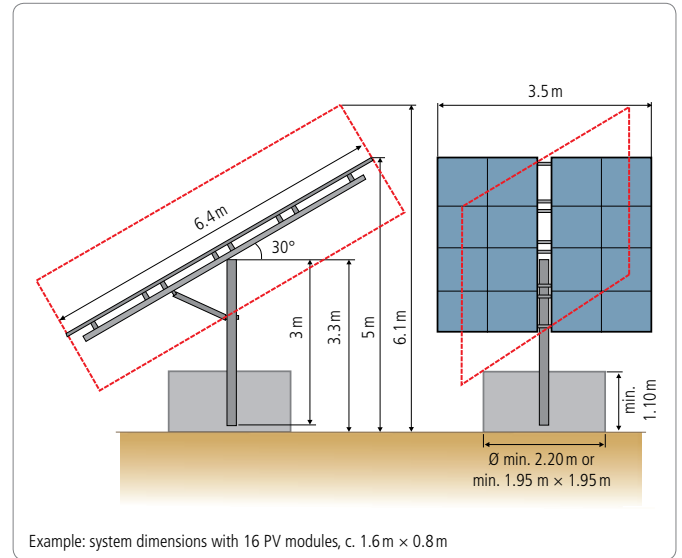
		ETATRACK active 1500-ASP	ETATRACK active 2000-ASP
kit tracking unit		■	■
module fixation			
module clamps – included in delivery	sets	48	64
mounting clamps (J-clips) – optional	sets	36	48
control		■	■
drive		■	■
installation manual		■	■

Dimensions

ETATRACK active 1500-ASP



ETATRACK active 2000-ASP



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. 25°	c. 10 m	c. 8 m	c. 13.5 m	c. 8 m
South Korea	36 °N	c. 25°	c. 10 m	c. 8 m	c. 13.5 m	c. 8 m



Spain

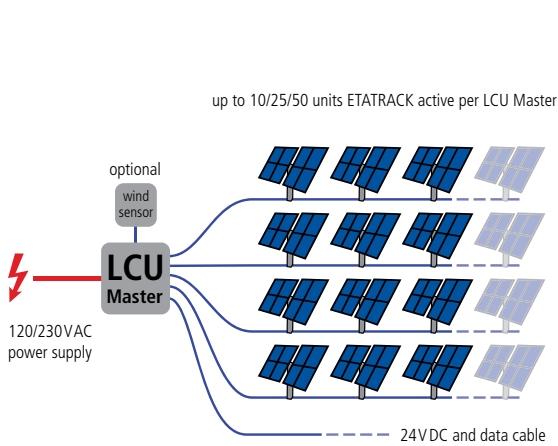
South Korea

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 2,000 tracking units
sensorless control	■	■	■	■
low energy consumption	■	■	■	■
energy supply from the grid	■	■	■	■
avoidance of mutual shadowing	optional	optional	optional	optional
wind sensor	optional	optional	optional	optional
remote maintenance and diagnosis	-	-	-	optional

LCU Master Central Control Concept



CCU 2000 Concept

