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.

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Tracking Units ETATRACK active 2500-A-30 SP, 2000-A SP and 1500-A SP

Characteristics

- **total module surface up to c. 26.5 m²**
- **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**

		ETATRACK active 2500-A-30 SP	ETATRACK active 2000-A SP	ETATRACK active 1500-A SP
module surface, max.	[m²]	26.5	20.5	16.5
angle of second axis		30°, fixed other angles on request	adjustable 0° – 45° in steps of 5°	adjustable 0° – 45° in steps of 5°
dimensions of mounted frames, max. (supportive area, installation area PV modules)				
width	[m]	4.4	3.6	3.6
height	[m]	5.95	5.95	4.45
power consumption	[kWh/year]	2.0	1.5	1.5
concrete foundation size, min.	[m³]	5.3	4.0	3.0

Design

Tracking Unit

- single-axis tracking system suitable for PV modules according to IEC 61215, UL 1703
- 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 processsing 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

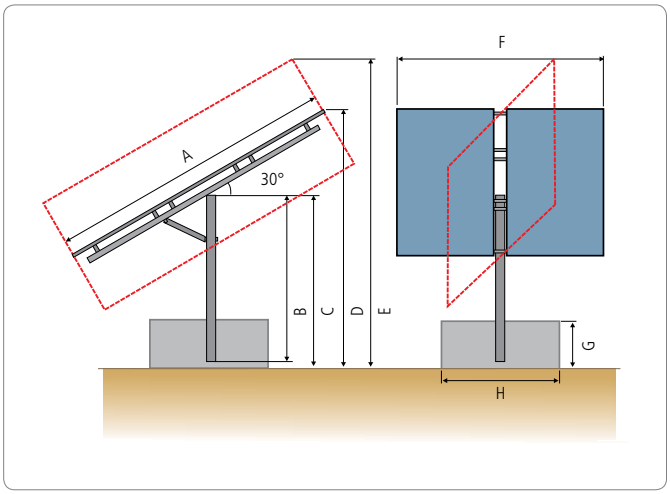
Scope of Delivery

		ETATRACK active 2500-A-30 SP	ETATRACK active 2000-A SP	ETATRACK active 1500-A SP
kit tracking unit		■	■	■
module fixation				
module clamps – included in delivery	sets	80	64	48
mounting clamps (J-clips) – optional	sets	48	48	36
control		■	■	■
drive		■	■	■
installation manual		■	■	■

Dimensions [m]

Outer dimensions depend on PV module size. Dimensions given here are exemplary for standard PV module size 1.6 m × 0.8 m

	ETATRACK active 2500-A-30 SP	ETATRACK active 2000-A SP	ETATRACK active 1500-A SP
A	6.4	6.4	4.8
B	3.0	3.0	2.8
C	3.4	3.4	3.0
D	5.3	5.3	4.6
E	6.4	6.1	5.6
F	4.1	3.5	3.5
G	min. 1.4	min. 1.1	min. 0.8
H	Ø min. 2.2 or min. 1.95 × 1.95	Ø min. 2.2 or min. 1.95 × 1.95	Ø min. 2.2 or min. 1.95 × 1.95



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 [m]

for different system locations, indicated in distance between the poles in N/S and in E/W direction, approxmiation

Location	Latitude	Tilt	ETATRACK active 2500-A-30		ETATRACK active 2000-A SP		ETATRACK active 1500-A SP	
			distance pole to pole N/S	distance pole to pole E/W	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°	16	10	16	8	12	8
Greece Southern Italy Southern Spain	38 °N	c. 25°	13.5	10	13.5	8	10	8
South Korea	36 °N	c. 25°	13.5	10	13.5	8	10	8

Spain

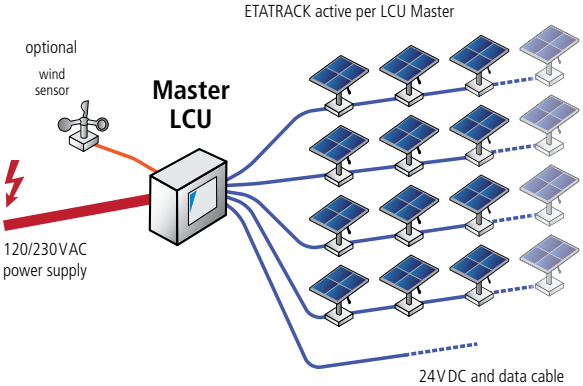
South Korea

Portugal

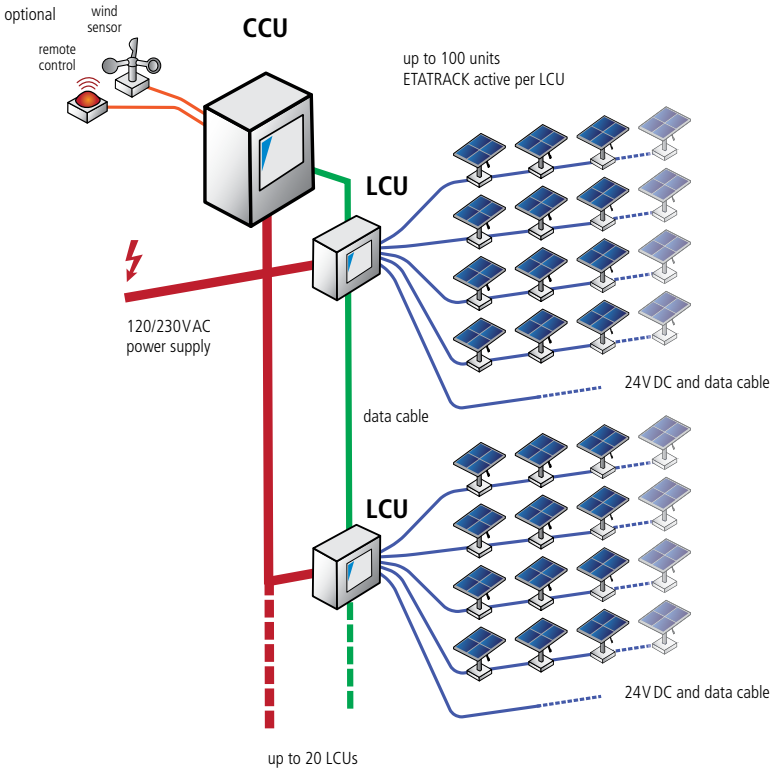
Central Control Concepts

	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



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