

1-AXIS POLAR

The largest solar tracker available on the market



THE LARGEST SOLAR TRACKER ON THE MARKET: up to 114.4 kWp

With a single controller and motor. Modular and scalable, it comes in units of up to 2.6 kWp and 44 units.

MS-1EP POLAR TRACKER

This tracker designed by **mecasolar** is a **single-axis, polar aligned tracker made of modules that can be easily installed.**

The tracker consists of a series of tilted axes on a north-south line on which the PV panels rotate. All the axes are connected by means of a transmission bar moving an area of up to 730 sq m (7,855 square feet), 114.4 kWp max.) with a single motor.

Sun tracking is astronomically controlled. Backtracking can be used as well, which allows higher energy production and increased PR in the installation.

COMPETITIVE ADVANTAGES

This type of tracking generates 30% more energy than systems fixed to the ground.

EASY ASSEMBLY OF MODULES

Thanks to its long experience in the PV industry, Mecasolar has designed a modular structure that can be easily assembled saving time in the installation of PV solar farms.

EASY, OPTIMAL LOGISTICS

The parts are assembled at the location, which means they are easily delivered in standard containers.

ROBUST STRUCTURE

Robust structure made from hot-dip galvanised steel that provides corrosion protection and durability.

DIVERSE FOUNDATIONS

The design of the structure allows for the use of different ground foundation systems with or without concrete via foundation screws. The screw system (Mecascrew or similar) reduces assembly time and ground preparation time too. Land levelling, which is not permitted by environmental authorities in certain locations, is not required, which reduces work costs and avoids affecting the land.

ADJUSTABLE TO DIFFERENT PV PANEL TYPES

The simple, modular design of the axes (up to 10 modules per axis, 44 axis x 10 modules = 440 modules) makes it possible to adapt the different PV modules available on the market.

LOW MAINTENANCE AND CONSUMPTION

This system requires low maintenance and involves reduced consumption, which lowers costs and avoids production halts.

Up to 114.4 kWp can be driven by a single motor, thus leading to low energy consumption.

WIND PROTECTION

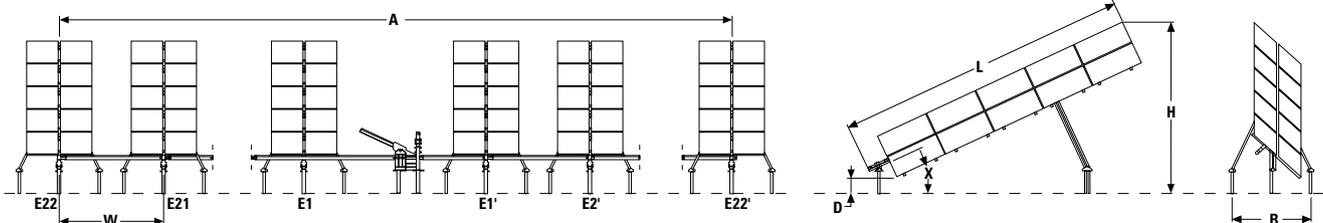
Active wind protection system including anemometer and vane to determine safest position.



TECHNICAL SPECIFICATIONS

Type of tracking system	Single-axis tracker with or without backtracking
Peak power	Up to 114.4 kWp per tracker and 2.6 kWp per axis with 290 Wp modules
Max. No. axes	44
kWp per axis	2.6 (varying with the power of the PV module to be installed)
Control type	PLC programming with optional backtracking and wind protection system
Movement sensor	Inclinometer
Tilt angle	20 - 25 - 30° (varying with the project or customer's needs)
Rotation angles	+45° to -45°
Rotating system	Electromechanical
Transmission mechanism	Linear, driving up to 44 axes
Motor power	0.75 kW
Input voltage at control board	Single phase 230 V
Work at the location and part assembly	No welding required on location. Parts are assembled with fastening devices.
Module area	730 m ² or 7,855 ft ² (varying with the surface area of the PV module to be installed)
Structure material	Hot-dip galvanised steel under ISO 1461 standard or A123/A123M standard Fastening materials made of class 8.8 steel with Dacromet 500 Grade B treatment
Size: length (L) x width (W) x height (H)	9 x 2.5 x 4.5 m (29.5 x 8.2 x 14.7 ft) (max. height varies with the angle of the axis above the horizontal)
Min. distance between axes	3.5 m (11.5 ft)
Max. load	From 11,000 kg (24,251.07 lb) to 12,320 kg (27,160.93 lb) with 28 kg (61.73 lb) modules
Weight without modules	10,500 kg (23,148 lb)
AHeight over the ground (D) (lowest part of modules)	0.3 m (0.98 ft) (it varies with the depth of the screw and relief features of the area.
Fixing	Different xing options: MECASCREW or similar foundation screws. Micropiles. Concrete footing in situ or precast
Warranty	2 years (extended warranty available)
Compliance with standards	Electricity: Machinery Directive 2006/42/EC, Electromagnetic Compatibility Directive 2004/108/EC, UL 508A. Structure: Eurocode; ASCE 7-05, LRFD Manual, 13th edition; CFE-2008 (wind, seismic hazard); AS/NZS, IS, SANS

DIMENSIONS



W Varies with each project
(Min. dimension 3.5 m or 11.5 ft)

X 20° - 25° - 30°

L 9 m (29.5 ft)

H 20° 4.0 m (13.1 ft)
25° 4.5 m (14.7 ft)
30° 4.9 m (16.1 ft)

A 150 m to 215 m (490 to 700 ft)

B 2.5 m (8.2 ft)

D 0.3 m (1 ft) (Min. distance)

Max. number of axes
2 x 22 = 44



ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007

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