High Tech Solar Trackers

1 HORIZONTAL AXIS

Up to 30% more power

compared to similar investments in fixed structure installations.

The 211.7 kWp HORIZONTAL TRACKER is EASIER and FASTER to install than FIXED structures.

Up to sixteen 13.2 kWp axes, 42 modules each.

Up to 1,344 m^2 moved by a single motor.

MS-1EH HORIZONTAL TRACKER

The horizontal tracker designed by **mecasolar** is a **horizontal single-axis tracker so easy and fast to install that it is a better choice than fixed structures.**

The tracker's cost-effectiveness, the fact that it is easy and fast to install and its 30% higher output compared to fixed installations turn the MS-1EH into the **MOST COMPETITIVE TRACKER ON THE MARKET**.

Apart from all this, **mecasolar**'s production capacity at the international level and its broad experience in the development of tracking system technologies, with over 400 MW around the world, make this firm the most profitable - and the wisest choice.

The MS-1EH tracker has up to **16 axes** moved by a single motor. Each axis can carry **up to 672 modules, 13.2kW per axis**. In sum, **211.7 kWp**.

COMPETITIVE ADVANTAGES

This type of tracking system can increase power output by 30% compared to ground-mounted fixed structure systems, depending on the latitude of the location.

SIMPLE MODULAR ASSEMBLY

The design of a modular, low height structure results in simple assembly that **does not require cranes or lifting equipment**, which saves time in the installation of the solar PV system.

NO WELDING REQUIRED AT THE LOCATION

The system requires no welding at the location: all the parts can be assembled using fastening devices, thus **reducing costs and assembly times.**

EASY, OPTIMAL LOGISTICS

The parts are assembled on location, which means they are **easily delivered in standard containers**.

ROBUST, DURABLE STRUCTURE

The **hot-dip galvanised steel and the Dacromet fasteners** ensure excellent performance in aggressive environments.

DIFFERENT FOUNDATION SYSTEMS

It can be directly thrust into the ground or mounted with a concrete anchoring system.

UNIVERSAL AND ADAPTABLE

The simple modular design of the axes allows for perfect **adaptability to different types of ground and dimensions** (including uneven ground) **and to the different PV modules** available on the market.

LOW MAINTENANCE AND REDUCED CONSUMPTION

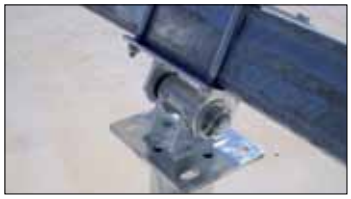
Since the system requires **almost no maintenance**, both maintenance costs and production interruptions are reduced. Cleaning the PV modules **is an easy task because the tracker is not tall.**

LOW ENVIRONMENTAL IMPACT and LITTLE CONSTRUCTION WORK

Its **low height** means lower environmental impact. **Given the reduced dimension of the pillar or column section**, it requires **little construction work**. Land levelling, which is not permitted by environmental authorities in certain locations, is not required, which reduces work costs and avoids affecting the land.

HIGH PRECISION

With a **low number of mobile parts and the solar tracker software**, the system tracks the sun with high precision.

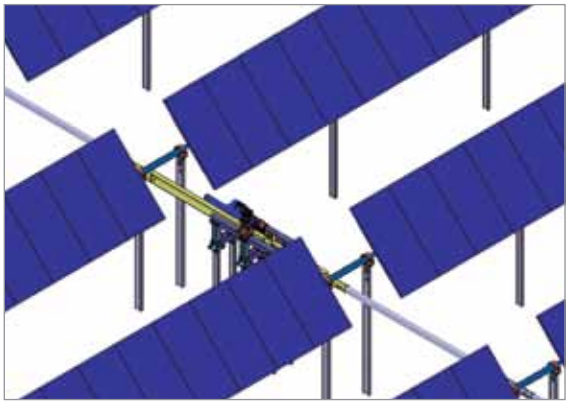


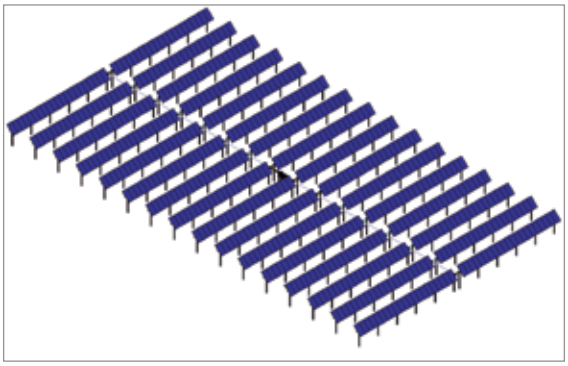
NO WELDING: Fasteners used to assemble mounts, beams and rail

LOW CONSUMPTION (1 motor = 1,344 m^2)
1 linear transmission mechanism = 165kWh/year

Thrust into the ground with or without concrete. It can be used with MECASCREW foundation screws as well.

GRAPHIC





TECHNICAL SPECIFICATIONS

Type of tracking system	HORIZONTAL single-axis tracker with or without backtracking
Peak power	Up to 211.7 kWp
Max. No. axes	16
kWp per axis	Up to 13.2 kWp (depending on power and number of modules)
No. modules per axis	Up to 42 72-cell modules per axis
Control type	PLC programming with optional backtracking and wind protection system
Movement sensor	Inclinometer
Fixed zenith angle tilt of modules	Standard: 0º
Rotation angles	+45º to -45º
Rotating system	Electromechanical
Transmission mechanism	Linear, driving up to 12 axes
Motor power	2.2 kW (estimated power consumption 165 kWh/year)
Input voltage at control board	Single phase 230V
Part assembly and work on location	No welding required on location. Parts are assembled with fastening devices.
Module area	1,344 m^2 (14,467 ft^2)
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
Dimensions: length x width x height	to 77m x 43.5m x 2m (253 ft x 143 ft x 6 ft) height at 45º
Max. distance between axes	6m (19.7ft)
Max. load	Up to 17,000 kg (37,487 lb), with 28 kg (61.73 lb) modules
Weight without modules	Up to 20,980kg (46,253lb) including foundation system that gets 2m deep into the ground.
Height above the ground (lowest part of modules at 45º)	0.5 m (1.64 ft) It varies with depth of screw and relief features of the area.
Fixing	Several options: Directly thrust into the ground or mounted with a concrete anchoring system. Ground footings or MECASCREW foundation screws can be used as well.
Warranty	2 years (extended warranty available)
Compliance with standards	Electricity: Machinery Directive 2006/42/EC, Low Voltage Directive 2006/95/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

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

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