

Traceur solaire 2 axes 3 panneaux 0,75 kWp @ 15% pan. eff.

- With time-derived astronomical positioning for the automatic sun-tracking
- Dual-Axis solar tracker with embedded positioner
- Time controlled astronomical algorithm for sun tracking
- Simple installation and synchronization of sun time
- Usable for PV, CPV and lighter thermal panels and heliostats
- 7 hours of automatic tracking at perpendicular angle
- User friendly web interface for monitoring, setting and upgrading
- USB communication port, optionally CAN BUS ****
- For surface area up to 5,8m² and max 90 kg
- Made in Europe

with backstructure for 3 panels, 0.75 kWp @15% eff.



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GREEN ENERGY

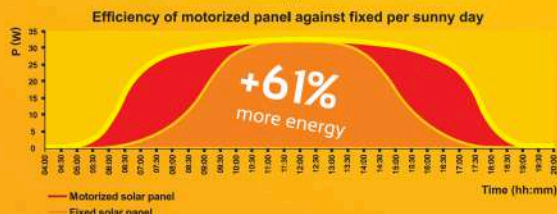
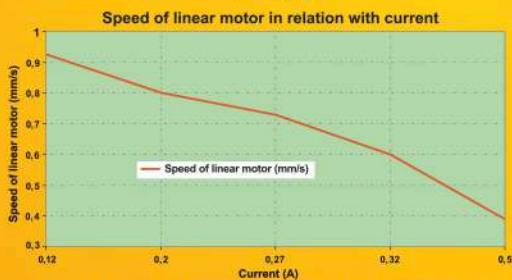
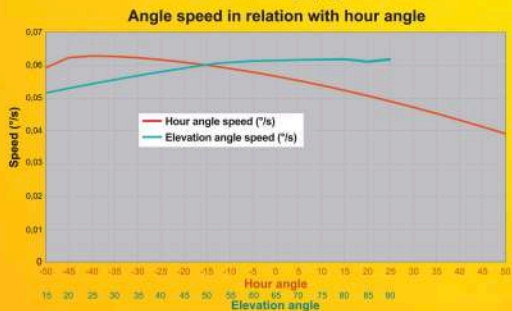
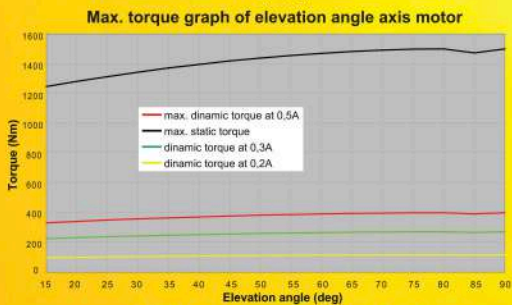
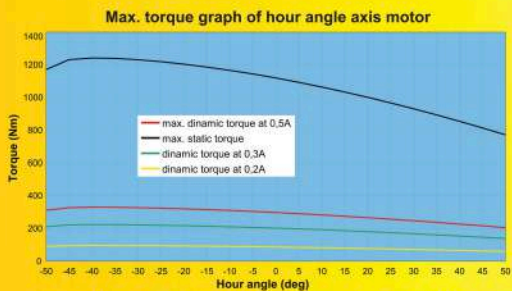


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+61%
more energy

**** means for additional payment



Real energy measurement of two equal solar panels (fixed and motorized)
 Three equal solar panels were exposed to the sun and the converted electrical power was measured.
 Test conditions: Solar panels (all): 0.75 kWp (producer spec. at AM 1.5), Date: July 2010
 Time: 4:00 to 20:00 (sun time), Geo. latitude: 46°N, Weather conditions: sunny
 Results: Average energy of fixed: 3762 Wh, Average energy of motorized: 6093 Wh,
 Note: sum of motor energy consumption through all day at full load is 17.52Wh or 0.29%
 of all collected energy, Efficiency of the motorized panel: 161.5%

Mechanical Capabilities

Number of turning axis	Dual-Axis
Hour Angle Limit	100°, software and hardware limit
Elevation angle	15 - 90°, adjustable start
Type of hour-angle engine	Linear Motor SM4S520M2 with stroke of 520mm
Type of elevation shaft and stroke	Linear motor SM4S520M2 with stroke of 520mm
Hour-angle shaft diameter and length	Ø48 mm, L=1450mm (steel)
Turning speed of hour angle shaft	0,039 - 0,063 °/s at no load, see graph
Turning speed of elevation shaft	0,052 - 0,062 °/s at no load, see graph
Max. dynamic torque of the hour-angle shaft	200 Nm - 330 Nm depend from HA, see graph
Max. dynamic torque of elevation shaft	330 Nm - 400 Nm depend from EA, see graph
Destructive torque of the hour-angle shaft	750Nm-1250Nm, depend from HA, see graph
Destructive torque of elevation shaft	1250Nm-1500Nm, depend from HA, see graph
Backstructure size	2 pcs of 1000mm (H) & 2 pcs of 3000mm (V)
Type of backstructure clamp	Toothed scissors grippers - 12 pcs
Tube diameter for mounting	Ø60 - 68 mm (not included with kit)
Max. dimensions of a solar panel	3 pieces of 0.99 m x 1.95 m in total 5.8 m ²
Max. weight of a solar panel	3 pcs per 30 kg
Estimated service life	5.000 rotations of 200° or 10 years

Positioning System Data

Tracking accuracy	<0.5° (optionally <0.1°***)
Operating Protocol	TdAPS (Time derived Astronomical Positioning System)
Type of positioner	Servo driver positioner with TdAPS arc logic function calc.
Type of timer	GMT clock with EOT and calendar
Type of application program for supervision and setting	Solar tracking system monitor via web site
Setting and changing data via PC	Yes, It can be setup 1000 parameters
Monitoring possibility via PC	Yes, It can be monitored 1000 parameters
Turned on the position sent from PC	Yes, it turn on position sent from PC, also all other setting can be commanded with string sent from PC

Communication Data

Type of communication interface	USB interface
Networking solution for control from centre	CAN BUS, RS485

Firmware - Software

Upgrading possibility via PC	Yes, firmware via PC with help of web wizard
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Electrical Data

Motor Power Supply	24 VDC ± 10% (2A current capacity)
Backup battery	Backup for timer, position and data
Turning time interval	1min. - 15min.
Max. consumption during the operation of the hour-angle shaft	500mA @ 330Nm, see graph
Max. Current of elevation shaft	500mA @ 400Nm, see graph
Standby consumption (when is not moving)	20mA ± 25% @ 24V
Power supply connection	1 piece of 2 Wire Cable with an Internal Cu Conductor of 1,0 mm ² (not included with kit)

Environmental Data

Operating temperature	-25°C to +70°C (optionally with artic grease for teperatures from -40°C up to +70°C)
Operation at humidity	0% to 100%, relative humidity
Max. safe wind speed	max. 144 km/h

Corrosion, weather and chemical resistance

Neutral Salt Spray (3000 h, EN ISO 9227 NSS)	/
Hot-dip galvanizing (HDG, EN ISO 1461)	75-100 µm (equivalent of 50 years)

Packaging

Dimensions of a packed product	1 box of 165 (L) x 22 (W) x 27 (H) cm
Product weight	47kg

Quality Certificates

International Protection Rating (IEC 60529)	IP33
Electromagnetic Compatibility (EMC Directive 89/336/EEC)	Yes
Low Voltage Equipment Directive (IEC Council Directive 73/23/EEC)	Yes

Optional Properties

Anti-Shadowing Function	Yes, included
Heliostat usage	Yes, for additional payment

*** for additional payment



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