DEGERtracker 3000HD / 3000NT / 5000NT
Long-term power supplier

For open land

For building integration

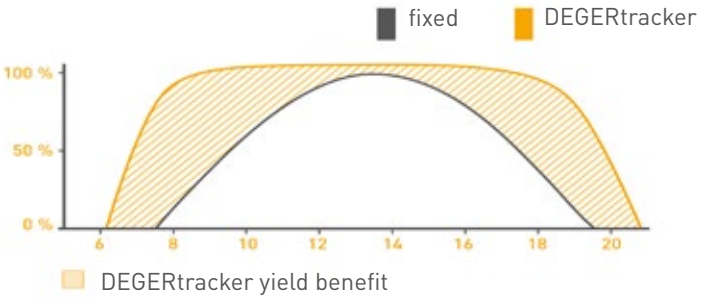
Non-binding product illustrations

DEGERtracker - Dual-axis tracking system

MLD

Dual-axis, active tracking systems from DEGER enable the optimal utilization of all the irradiation energy and achieve yield increases of approx. 45 per cent for all photovoltaic applications. An easy plug-and-play installation is realised by means of the prefabricated wiring. The decentralized control enables maximum independence. DEGERtracker are "Designed in Germany" and stand for quality and durability.

ADVANTAGES THAT PAY FOR THEMSELVES



TECHNOLOGY

- Efficiency with intelligent tracking.
- Maximum Light Detection control concept
- Premium product from the global market leader
- Low power consumption

TECHNICAL DATA

3000HD [1]

3000NT [1]

5000NT [1]

Nominal output (depending on module type)	2,000 ... 4,000 Wp	2,000 ... 4,000 Wp	4,000 ... 7,000 Wp
Module surface up to	25 m^2	25 m^2	40 m^2
Max. module surface (W x H)	5.05 m x 5.05 m	5.05 m x 5.05 m	8.3 m x 5.3 m
East - West rotation angle	300°		
Elevation pivot angle	20° ... 90°		
Control	MLD		
Operating voltage	100 ... 240 VAC / 50 ... 60 Hz		
East - West actuator	Gears in drive head		
Materials	stainless steel, aluminium, steel		
Power consumption:			
Control Mode	1 Watt		
with running actuator approx.	15 Watt		
Elevation actuator	815 mm travel	1,000 mm travel	1,000 mm travel
Internal consumption per year approx.	7 kWh	14 kWh	16 kWh
Length of mast tube	2.7 m ... 4.9 m	3.3 m ... 5.5 m	3.3 m ... 5.5 m
Max. permissible wind velocity	170 ... 300 [2] km/h	102 ... 300 [2] km/h	102 ... 300 [2] km/h
Weight (without mast/aluminium)	650 kg	600 kg	650 kg
Article No.	1310001	1300001	1500001

[1] System is not available in some countries
[2] Laid out with planning tool

SCOPE OF DELIVERY

Complete dual-axis tracking system optionally with different mast lengths, solar module carrier system made of aluminium, matching the module type used, patented control MLD (Maximum Light Detection) with MLD sensor, wind guard and optional snow sensor, foundation plan, assembly instructions.

OPTIONAL SERVICES

Insurance packages, financing concepts and extended warranty, on-site service.

DEGERenergie GmbH
Industriestraße 70
72160 Horb am Neckar
Germany

Phone +49 7451 53914-0
Fax +49 7451 53914-10
info@DEGERenergie.com

www.DEGERenergie.com

Your specialist dealer:

DEGERtracker D60H / D80 / D100
Long-term power supplier

For open land

For building integration

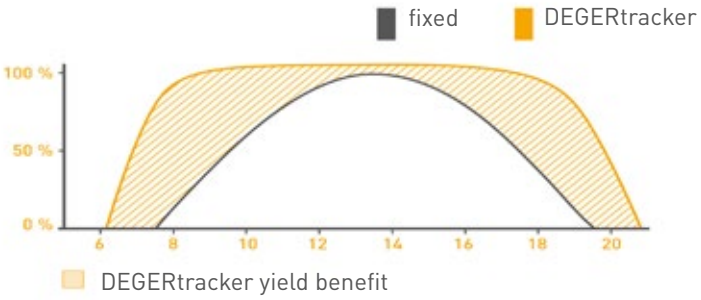
Non-binding product illustrations

DEGERtracker - Dual-axis tracking system

MLD

Dual-axis, active tracking systems from DEGER enable the optimal utilization of all the irradiation energy and achieve yield increases of approx. 45 per cent for all photovoltaic applications. An easy plug-and-play installation is realised by means of the prefabricated wiring. The decentralized control enables maximum independence. DEGERtracker are "Designed in Germany" and stand for quality and durability.

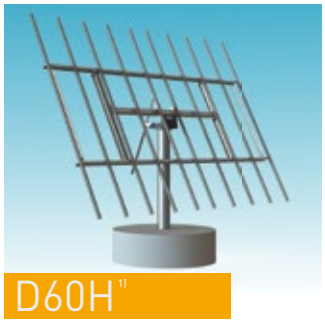
ADVANTAGES THAT PAY FOR THEMSELVES



TECHNOLOGY

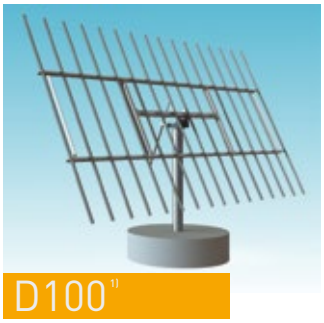
- Demountable base frame
- Short installation time
- Prefabricated wiring
- Maintenance-free bearings
- Hole in mast as cable outlet
- Steeper elevation angle

TECHNICAL DATA



D60H[1]

D80[1]



D100[1]

Nominal output (depending on module type)	4,000 ... 7,000 Wp	6,000 ... 10,000 Wp	8,000 ... 12,000 Wp
Module surface up to	40 m^2	53 m^2	70.6 m^2
Max. module surface (W x H)	8.3 m x 5.3 m	10.05 m x 5.6 m	11.95 m x 6 m
East - West rotation angle	300°		
Elevation pivot angle	10° 90°		
Control	MLD		
Operating voltage	100 ... 240 VAC / 50 ... 60 Hz		
East - West actuator	Gears in drive head		
Elevation actuator	800 mm travel		
Materials	stainless steel, aluminium, steel		
Power consumption:			
Control Mode	1 Watt		
with running actuator approx.	10 Watt	15 Watt	18 Watt
Internal consumption per year approx.	12 kWh	14 kWh	16 kWh
Length of mast tube	3.40 m ... 8.0 m	3.40 m ... 8.0 m	4.0 m ... 8.0 m
Max. permissible wind velocity	170 ... 300 km/h	130 ... 300 km/h	102 ... 300 km/h
Weight (without mast/aluminium)	1,000 kg	1,100 kg	1,150 kg
Article No.	1510001	1600001	1910001

[1] System is not available in some countries
[2] Laid out with planning tool

SCOPE OF DELIVERY

Complete dual-axis tracking system optionally with different mast lengths, solar module carrier system made of aluminium, matching the module type used, patented control MLD (Maximum Light Detection) with MLD sensor, wind guard and optional snow sensor, foundation plan, assembly instructions.

OPTIONAL SERVICES

Insurance packages, financing concepts and extended warranty, on-site service.

DEGERenergie GmbH
Industriestraße 70
72160 Horb am Neckar
Germany

Phone +49 7451 53914-0
Fax +49 7451 53914-10
info@DEGERenergie.com

www.DEGERenergie.com

Your specialist dealer:

DEGER TOPtracker® 40NT
DEGER TOPtracker® 8.5

For open land

For open land

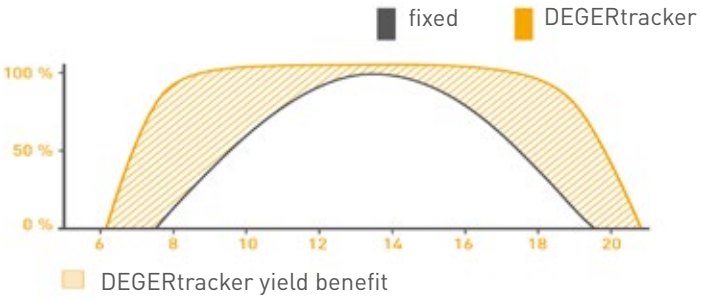
Non-binding product illustrations

DEGER TOPtracker® - Single-axis tracking system

MLD

Single-axis, active tracking systems from DEGER enable the optimal utilization of all the irradiation energy, suitable for all widely-sold solar modules. You can achieve yield increases of approx. 30 per cent for all photovoltaic applications. An easy plug-and-play installation is realised by means of the prefabricated wiring. The decentralized control enables maximum independence. DEGER TOPtracker® are "Designed in Germany" and stand for quality and durability.

ADVANTAGES THAT PAY FOR THEMSELVES

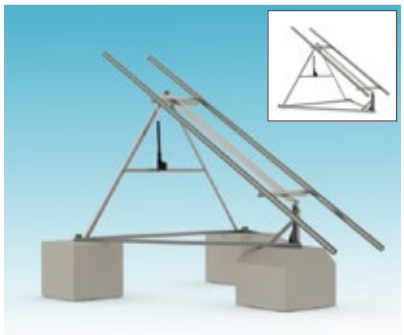


TECHNOLOGY

- Efficiency with intelligent tracking
- Maximum Light Detection control concept
- Premium product from the global market leader
- Low consumption

TECHNICAL DATA

DEGER TOPtracker® 40NT



DEGER TOPtracker® 8.5

Nominal output (depending on module type)	4,000 ... 7,000 Wp	500 ... 1,300 Wp
Module surface up to	40 m^2	8.5 m^2
Max. module surface (W x H)	8.3 m x 5.3 m	5.1 m x 1.7 m
Elevation angle	Standard 30° / optional 0° and 15°	30° / optional 20°
Rotating angle East-West	+/- 45° max.	
Control	MLD	
Operating voltage	24 VDC	
Materials	stainless steel, aluminium, steel	
Power consumption:		
Control Mode	0.1 Watt	
with running actuator approx.	12 Watt	9 Watt
Drive East-West	850 mm travel	380 mm travel
Internal consumption per year approx.	2.5 kWh	1 kWh
Length of mast tube	4.0 m / optional 5.0 m	--
Max. permissible wind velocity	102 ... 300[1] km/h	130 ... 300[1] km/h
Weight (without mast/aluminium)	650 kg	125 kg
Article No.	1130001	1110001

[1] Laid out with planning tool

SCOPE OF DELIVERY

Complete single-axis tracking system (40NT optionally with different mast lengths), solar module carrier system made of aluminium, matching the module type used, patented control MLD (Maximum Light Detection) with MLD sensor, wind guard, foundation plan, assembly instructions.

OPTIONAL SERVICES

Insurance packages, financing concepts and extended warranty, on-site service.

DEGERenergie GmbH
Industriestraße 70
72160 Horb am Neckar
Germany

Phone +49 7451 53914-0
Fax +49 7451 53914-10
info@DEGERenergie.com

www.DEGERenergie.com

Your specialist dealer:

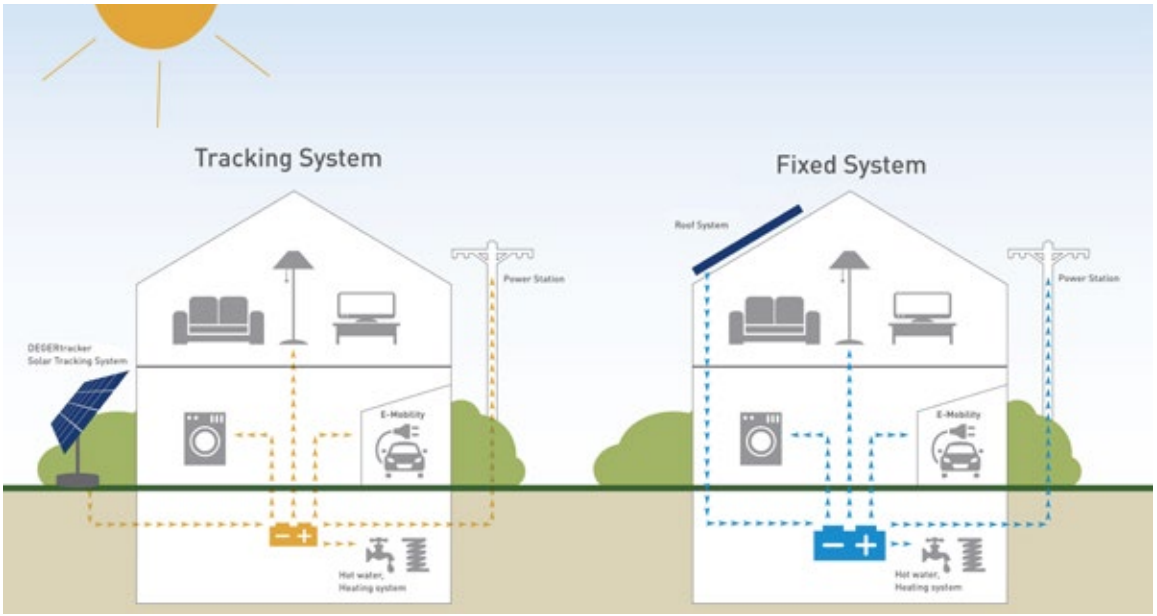
DEGER

Battery Management System
Generating, storing and using your own electricity

Battery Management System

MSS

With the MSS Battery Management System you use your solar energy installation to the full, your self-generated solar energy is optimally utilised. Due to its unique technology, the MSS Battery Management System is able to decide whether the self-generated energy should be used immediately, stored in batteries or be fed into the grid.Serviceability and long cycle life.

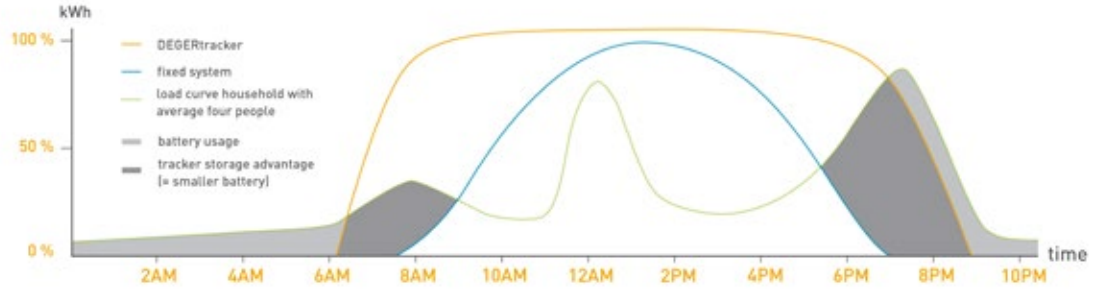


No additional components required: simply connect the solar modules, batteries, consumers and the grid to the MSS Battery Management System.

- Available as 5.0 kW, 3.7 kW or 3.0 kW versions
- Integrated 24 VDC battery manager
- Compact, easy to install “All-In-One” system
- Compatible with all modern PV-technologies
- System monitoring via integrated internet connection

Optimised Owner occupation

The MSS battery Management System is the ideal solution for the own power consumption. In private households a large proportion of the self-generated energy is used in the morning and in the evening, while solar energy is generated throughout the day.
The MSS Battery Management System optimises the use of the self generated solar energy by storing excess energy in batteries for later use.
The higher the consumption of self-generated energy, the more independent you will become from the energy provider and increasing energy prices.



DEGERtracker Tracking System

With the DEGERtracker the batteries are cautiously and evenly charged over the entire day. A large proportion of the self-generated energy will be used immediately without using the battery. This is why the storage battery can be smaller.
The lifetime of the battery increases with identical dimensioning.
Apart from this one can achieve 100% autonomy over longer periods of time. If the use of a DEGERtracker is not possible, the solar modules can also be mounted rigidly on the roof. In this case a considerably higher number of solar modules is required and the battery must also be bigger.

Three phase Home networks

The MSS Battery Management System feeds your home network in single-phase mode. In order to optimise your own consumption, the two other phases in three-phase house networks can optionally be compensated. This way the total consumption in the house is detected and covered by own energy.

DEGER Excess Manager

When the battery is fully charged and your consumers in the house are not able to consume more, the excess current is fed into the public grid. However, the target is to use as much energy as possible yourself.
The optionally available Excess Manager recognizes this situation and feeds the excess energy gradually to the buffer store of your heating system. This significantly increases the proportion of private consumption.

Monitoring and managing

The MSS Battery Management System has an integrated internet connection, so that detailed system information (e.g. power, energy utilisation and energy yield) can be called up via the internet portal.
With this remote maintenance facility the software of the MSS Battery Management System can be updated and also extended with new functions, so that the system can be easily adapted and always remains up-to-date.

Technical Data

OUTPUT	Powerrouter 5.0	Powerrouter 3.7	Powerrouter 3.0
Permanent power AC output at 40^0 C (P nom)	5000W (DE 4600W)	3700 W (DE 3680 W)	3000W output
AC-output current	25 A (DE 22 A)	16 A	13 A
Cos Phi	1 (DE: 0.9 ind. ... 0.9 cap. adjustable)		
Nominal output voltage	230Vac, 50Hz		
AC voltage range	180-264Vac 45-55Hz (limited by local regulations against island effects)		
AC output voltage (local out)	230Vac ± 2%, 50Hz ± 0,2%, Sine curve < 3% THD, single-phase		
Peak power (local out)	2 x Pnom, 10 sec		
Protection	Electronic, fused		
Standby power consumption	<= 4W		
User interface	Display with control buttons		
Connectibility	Ethernet RJ45, TCP/IP		
Dynamic 1-phase feed controller and energy consumption monitoring	Included: with external sensor at mains connection point		
Dynamic 3-phase feed controller and energy consumption monitoring	Optional: with external 3-phase sensor at mains connection point		
Energy management relay	2 provided , NO/NC, 250Vac, 1A, 24Vdc, 5A		
SOLAR			
Max. input power	5.5kWp, 15A/String	4kWp, 15A/String	3.3kWp, 15A
Number of inputs	2	2	1
Number of MPP-trackers	2, compl. independent	2, compl. independent	1
DC load-break switch	4-pole, 600V, 15A	4-pole, 600V, 15A	2-pole, 600V, 15A
Solar voltage range	100 - 600 Vdc/String		
MPP voltage range	180 - 480 Vdc/String		
Solar connections	MC4		
Max. efficiency	94.5% (93% EU)		
Max. MPP efficiency	99.9 %		
LEAD-ACID BATTERIES (wet/gel), AGM (24 Vdc)			
Lead-acid voltage range (Vout)	21-31Vdc		
Charge current	25-200Adc, programmable	25-155Adc, programmable	25-125Adc, programmable
Battery power	Min. 100Ah, at 25A charge current		
Charge curve	3-stage adaptive with maintenance		
Short-circuit protection	Electronic, at max. charge current, shut-down < 1 sec.		
Battery temperature compensation	Included		
Battery voltage measurement	Integrated		
Current shunt	Integrated		
GENERAL			
Operating temperature (at full load)	-10^{0}C to +50^{0}C (power drop from 40^{0}C)		
Storage temperature	-40^{0}C to +70^{0}C		
Humidity	Maximum 95%, non-condensing		
Legal approval and standards	CD, VDE-AR-N 4105:2011-08, EEG 2012, C-Tick		
Safety	EN 6095-1, EN62109-1, EN60335-2-29		
Interference emission	EN55014-1, EN61000-3-2, EN61000-3-3, EN61000-6-3		
Interference immunity	EN55014-2, EN61000-6-2		
Mains monitoring	VDE 0126.1.1		
Warranty	Five years		
MECHANICS			
Dimensions (WxHxT)	765 x 502 x 149 mm		
Degree of protection	For indoor use (IP20)		
Weight	20.5 kg		
Topology	Galvanically isolated transformer		
Cooling	Controlled air cooling		

ACCOMPLISH A CHANGE IN ENERGY POLICY IN YOUR OWN HOME!

- Independent power supply through power generation with sunlight
- Including electricity charging station at your own house
- Innovative system with unique efficiency values
- Independence from the development of electricity prices
- Complete service package for 25 years

For further information watch the video on **www.DEGERenergie.com**. Or simply scan the QR code.

DEGERenergie GmbH
Industriestraße 70
72160 Horb am Neckar
Germany

Phone +49 7451 53914-0
Fax +49 7451 53914-10
info@DEGERenergie.com

www.DEGERenergie.com

Your specialist dealer: