



SOLARTRACKER ILB Helios Track 250

Moving system for photovoltaics

We are selling powered carrier systems for solar modules, which, according to today's technical standards, clearly offer higher installation surfaces with up to 250m² for more than 40 KWp. These system can be very individually designed for the equipment with solar modules from all kinds of producers.

Tracking

Tracking of the module surfaces according to the sun radiation at different times of the day makes an obviously higher efficiency gain of up to 30 to 32% possible, compared to carrier systems rigidly directed to the south. The tracking system for outdoor ground-installed systems (not installed on buildings) on the 45th to 55th degree of latitude carries the modules to a level inclination of 30 degrees to the horizontal line. Another type for the 35th to 45th degree of latitude with an inclination of 20 degrees can be provided.

Chassis

The ILB Helios Track 250 moves across a chassis consisting of four gear sets and a concentric running tracking system with a diameter of 12 m around its own vertical axle with central bearing.

Control

The ILB Helios Track 250 as got a so-called SPS (storage programmable control). This control processes the signals from a radio clock and an incremental incoder (installed between gear box and driving motor) as well as from mechanical pushbuttons. Thereby it steers the driving motor every 10 minutes so that it will adapt to the new sun position within one minute.

In spite of wind and weather

The ILB Helios Track 250 is designed for a lifespan of at least 20 years. Therefore corrosion protection is of utmost importance. By the sandblast rust-removing method SA 2,5 (according to DIN) and complete submersion galvanizing with slotted hollow sections (interior coating) Track 250 will be resistant to any kind of weather – with low maintenance and absolute reliability.

Your advantages at one glance

- reliable ABB drive with SPS control
- spare parts are available worldwide at any time
- generously proportioned safety factors
- long years of experience in engineering (crane construction)
- steel construction with optimal corrosion protection





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Technical Data

- Rotary axis, Azimut (Sun radiation angle), Tracking system with one axis
- Rotational angle, max. 220 degrees (summer, June 21)
- Rotational angle, min. 100 degrees (winter, December 21)
- Module, different types of modules and module sizes can be installed
- Electrical efficiency, 25.000 to 26.500 Wp
- Inclination angle, Module surface inclination of 20 to 30 degrees to horizontal line (according to latitude)
- Module surface, width 21,6 m x height 10,4 m (equal 224 m²)
- Installation height, about 6 m (on the ground, not on a building)
- Foundation, Annular foundation with a diameter of about 12 m
- Control, Storage Programmable Control – SPS, through hour and day, incremental encoder and daily zero point calibration
- Drive, Planet Drive (braking motor 0.37 kW, i – 1:1595, Through chain wheel form-fit on anchor chain Power input about 0.4 kWh daily)
- Dead Weight, galvanized about 10.000 kg (without modules, snow- and wind loads) extremely robust steel construction
- Area of use, Ground installation, 30th to 60th latitude (northern and southern hemisphere)
- Design certification, static type test through LGA (Landesgewerbeanstalt Bayern – trade office of Bavaria)

Energy gain through tracking

When module surfaces track the sun higher energy will be gained because all sun hours are used efficiently.

On days with high sun radiation relatively high radiation gains can be achieved through sun tracking. In summer ILB Helios Track 250 can reach about 30 to 32% radiation gains on sunny days compared to a rigidly installed system directed towards the south.

Fig.:Example for a sunny summer day. The light blue area shows the efficiency graph of a rigid system; in the dark blue area the efficiency enhancement through our tracking system 6.1 is visible.

Efficiency diagram

