

Single-Axis Solar Tracker

Tracker structure · control system · control retrofit · yield engineering

BTR Enerji supplies single-axis solar trackers with their own control system, and replaces ageing control electronics on existing tracker plants. Every quote comes with a site-specific yield simulation.

Technical overview

Type	Horizontal single-axis tracker, north-south axis
Rotation range	±55°
Drive	Brushless DC motor
Structure	Galvanised steel, S355 / S235
Tables	1P configurations sized to the string length (e.g. 1P14, 1P28, 1P56)
Bearings	Self-lubricating, UV-resistant polymer: no periodic greasing
Tracking	Astronomical sun-position algorithm with backtracking (terrain-aware option)
Control	TCU per table · NCU per site · wind/snow sensors (RSU) · software · SCADA interface
Wind stow	Default threshold 18 m/s, 3-second gust (site-adjustable)
Modules	Mono- and bifacial modules



8 MW single-axis tracker plant, Central Italy (group company project)

What we offer

- New plants: tracker structure + control system supply, layout and string sizing.
- Control retrofit: replacement of TCU/NCU, sensors and software on existing (third-party) tracker steel, with warranty maintenance.
- Yield engineering: hourly simulation, bifacial and terrain modelling, P50/P90, bill of materials and PDF report.

Recent tracker projects of our group companies

Location	Size	Scope	Year
Northern Italy	12 MW	Tracker control electronics retrofit + 2-year warranty maintenance	2026
South-East Italy	8 MW	Tracker supply + NCU / TCU / sensors / software	2026
Central Italy	8 MW	Tracker supply + NCU / TCU / sensors / software	2026
Central-East Italy	3.6 MW	Tracker system supply	2026

Tracker vs fixed-tilt: simulated annual yield

Location	Tracker kWh/kWp	Fixed kWh/kWp	Gain
Seville (Spain)	2,274	1,862	+22.2%
Apulia (Italy)	1,943	1,600	+21.5%
Atacama (Chile)	2,823	2,313	+22.1%
Benban (Egypt)	2,677	2,180	+22.8%
Riyadh (Saudi Arabia)	2,402	2,042	+17.6%
Konya	2,238	1,838	+21.7%

BTR simulator, PVGIS typical year, same installed capacity, bifacial modules; simulation, not measurement. Your site is simulated in your quote.

Quote in 48 hours

Send the site location (KMZ/DWG/coordinates), capacity and module type. Within 48 hours you receive a yield simulation report, layout and budget quote: tracker.btrenerji.com/en/solar-tracker-quote.html

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