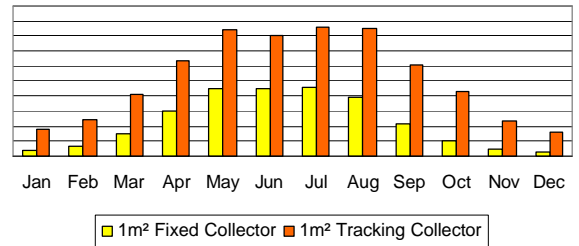


LaZer2 Solar Tracker II

Why track the sun? Solar thermal collectors gain energy through radiation. Because radiation travels in straight lines (until absorbed and re-radiated) collectors must be positioned so that they are exposed to the maximum amount of direct sunlight. The Sun moves relative to the Earth's surface at the rate of 15°/hour east to west and by approximately 46°/annum north to south. This means that fixed collectors will hardly ever be perfectly aligned with the Sun. At latitude 52° north, a south-facing collector angled at 30° will only be perfectly aligned (present its full aperture) at midday on mid-summer's day. Collectors in a 'tracking panel' system will be perfectly aligned with the sun all the time it is shining, and therefore the full aperture will be presented to the sun all day, every day. The collectors in a 'fixed panel' system will only present anything approaching their full aperture to the sun, around midday. The rest of the day only a fraction of the panel is being presented.



In a year 'tracking' collectors can produce up to 250% of the energy 'fixed' collectors can.

The LaZer2 Solar Tracker II combines high efficiency LaZer2 vacuum tube collectors with an advanced computer controlled mounting system that ensures the collectors are always gaining the maximum amount of energy available. The Tracker's proprietary 'Hunt & Track' digital control system continually scans the sky to locate the sun. It then positions the array, using reliable and whisper-quiet electronic actuators, so that the collectors are perfectly aligned to gain the most energy. If the sun is obscured by cloud then the system automatically hunts and tracks to the part of the sky where the most energy is available. An integral clutch allows the unit to 'weather cock' out of strong winds or stop if an obstruction is encountered.

The LaZer2 Solar Tracker II is a unique British product, and advancement on the original Solar Tracker, which won the 2001 Euro Solar Award. It has been developed to maximise solar energy gain in climates like those of the UK and Europe, whilst ensuring extremely low operating costs and no scheduled maintenance requirements.

The LaZer2 Solar Tracker II is used by private pool owners, industry and the public sector to meet their water heating requirements. The LaZer2 Solar Tracker II can work as the sole source of heating, or it can work alongside other heating systems. It will significantly reduce energy bills and over its 25-year life can prevent almost 500,000kg of CO₂ polluting the atmosphere (depending on size of system and fuel being replaced). A Tracker is ideally suited to heating swimming pools, many of which are under-utilised because the water is too cold or heating costs are too high. Using just solar energy, a pool can be maintained at 26°C-30°C (77°F-86°F) from May through to September. A Tracker can also be used to provide large volumes of domestic hot water all year round. A single tracking system can provide enough energy to heat up to 1,400-litres of water or to provide a 40-person apartment block with 60-75% of the annual domestic hot water requirement. Whether integrating into an existing or new pool or water heating system, installation is fast and straight forward. Four models are available (each designated by the collector area), so you can be assured a cost effective and controllable solar system, with gains of up to 250% over fixed collector systems.

LaZer2 Solar Tracker II Specifications

Model	ST2-LZ4	ST2-LZ6	ST2-LZ8	ST2-LZ10
Collector Aperture Area	4m ²	6m ²	8m ²	10m ²
Gross Collector Area	12.4m ²	18.6m ²	24.8m ²	31m ²
Width	4,200mm	4,200mm	4,200mm	4,200mm
Height (Max)	1,405mm	2,050mm	2,660mm	3,275mm
Operating Radius (Max)	2,190mm	2,380mm	2,500mm	2,710mm
Weight	231kg	309kg	387kg	465kg
Mount	Steel Tripod (Options Dependent on Location)			
System Controller Type	STII Digital with Smart Logic			
Sensors	Optical 550um Wavelength, Over Temp Shutdown, Power Failure Shutdown			
Rotator	Low voltage DC Motor with Helical Gear Train & Patented Anti-Backlash System			
Azimuth Range	180°			
Tracking Speed	0.5°/second			
Elevation	Low voltage DC Linear Actuator			
Elevation Range	68°			
Voltage (Nominal)	24V DC			
Max. Current	1.5 amps			
Static Wind Load	35m/second (80mph)			
Operating Wind Speed	25m/second (56mph)			

