

UTILITY-SCALE & ROOFTOP SOLAR INSTALLATION

Solar Panel Laying Machine

Turn conventional solar installation into a fast, precise and scalable industrial process — with automated lifting and placement of PV modules that cuts manual handling and shortens project timelines.

OVERVIEW

Faster, safer, more precise solar installation

MERLIN's Solar Panel Laying Machine is a renewable energy automation system built to install solar modules quickly and precisely. A crawler-mounted platform lifts, aligns and places PV modules onto mounting structures under PLC control — reducing workforce dependency, protecting modules from damage, and pushing up the MW installed per day.

BUILT FOR

EPC contractors

Energy developers

Utility-scale & tracker farms

Large rooftop projects



Crawler-mounted platform with robotic module gripper

KEY CAPABILITIES

Engineered for high-volume module installation



Automated Lifting & Placement

Automated lifting and placement of solar PV modules, minimising manual handling.



Precision Alignment

Guided positioning for accurate, uniform alignment on mounting structures.



Multiple Panel Compatibility

Handles a range of panel sizes and weights; customisable for specific modules.



Safe Panel Handling

Controlled handling reduces micro-cracks and module damage during installation.



High-Throughput Operation

Continuous operation for fast, high-volume installation across large sites.



Tracker Solar Farm Ready

Suitable for tracker-based solar farm installations.

KPI-DRIVEN BENEFITS

Measurable gains on every project

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Installation Speed

Faster panel placement than manual methods

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Labor Dependency

Reduced installation workforce

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Placement Accuracy

Uniform alignment and tilt positioning

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Module Damage

Controlled handling lowers breakage & micro-cracks

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MW Installed / Day

Higher daily installed capacity

TECHNICAL SPECIFICATION

System at a glance

System Type	Solar Panel Laying / Installation Machine
Automation Level	Semi / Fully Automated
Panel Compatibility	Standard PV modules (customisable)
Payload	Configurable based on module weight
Placement Accuracy	High-precision guided positioning
Mobility	Crawler
Installation Speed	Application dependent — high throughput
Control System	PLC / Industrial Controller with HMI
Power Source	Electric
Safety Features	Anti-drop, Emergency Stop, Load Sensors
Operating Environment	Outdoor solar farm conditions



WHY AUTOMATE

Manual installation vs. MERLIN

CRITERIA	MANUAL INSTALLATION	MERLIN SOLAR PANEL LAYING MACHINE
Installation Speed	Labor dependent	✓ High-speed automated placement
Labor Requirement	High manpower	✓ Significantly reduced
Placement Accuracy	Variable	✓ Precision alignment
Worker Safety	High manual handling risk	✓ Improved safety conditions
Module Damage Risk	Higher	✓ Controlled robotic handling
Project Timelines	Longer	✓ Accelerated completion
Scalability	Limited by workforce	✓ Easily scalable deployment
Cost Efficiency	Higher labor cost	✓ Lower lifecycle cost & better ROI

Ready to install
more MW per day?

Talk to our team about configuring the Solar Panel Laying Machine for your modules, mounting structures and site conditions.



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