SZGZ-X

Solar Tracking Racking

Dual-axis sun tracking keeps the whole array facing the sun

WZPV-SZGZ-X



Before Start-Up, Match Documents to Physical Items

Item	Content
Device identity	Record model, serial number, configuration list and mechanical / control versions.
Engineering documents	Prepare general assembly, foundation, anchor, lifting-point, temporary support and tightening requirements.
Electrical documents	Prepare supply, grounding, terminal, cable, string and companion equipment wiring diagrams.
Site conditions	Verify ground bearing, drainage, obstacles, full motion space and maintenance corridors.
Personnel and tools	Qualified installation, electrical and commissioning personnel; prepare voltage-testing, measurement and lifting tools.
Safety release	Stop work unsuited to the weather; cordon lifting and motion zones, and implement power-off and temporary stability measures.

Foundation dimensions, lifting capacity, tightening torques and working wind-speed limits follow this project's approved documents - generic examples are never a substitute.

01 | Install the Column After Foundation Acceptance

Confirm the foundation, mounting faces and anchors meet this configuration's requirements before upper assembly work.



Foundation acceptance

Land the column after foundation strength, elevation, anchors and mounting faces pass acceptance; check position and drainage.

Column placement

Land per the approved lifting plan; verify orientation, plumb and connections; maintain reliable temporary stability.

Next step

Release after connection and stability checks pass. Foundation dimensions, anchoring and tightening requirements follow the project drawings.

Eight-position reference structure step drawings; construction, tightening and temporary supports follow approved documents. Pre-assembled, inspected assemblies are installed as delivered and are not disassembled to match the figure order.

02 | Install the Central Dual-Axis Drive

The complete drive assembly connects the column and upper structure, carrying azimuth and tilt motion respectively.



Identify the installation orientation

Verify assembly model, interfaces and both axes' directions; keep harness, limit and maintenance space.

Assembly placement

Install the complete drive assembly per the general assembly drawing. Lifting points, connection sequence and supports follow the approved plan.

Installation release

Check mounting faces, connections and tightening. Never force the self-locking drive or run motion tests while unstable.

Eight-position reference structure step drawings; construction, tightening and temporary supports follow approved documents. Pre-assembled, inspected assemblies are installed as delivered and are not disassembled to match the figure order.

03 | Install Load-Bearing Beams and Supports

Install load-bearing beams, corner beams and supports in the original assembly relationships to form the upper load path.



Verify connections

Identify load-bearing beams, supports and installation direction against the general assembly drawing; avoid misassembly and forced hole alignment.

Group assembly

Install connectors in the approved sequence, keeping temporary stability; never apply module loads to an incomplete frame.

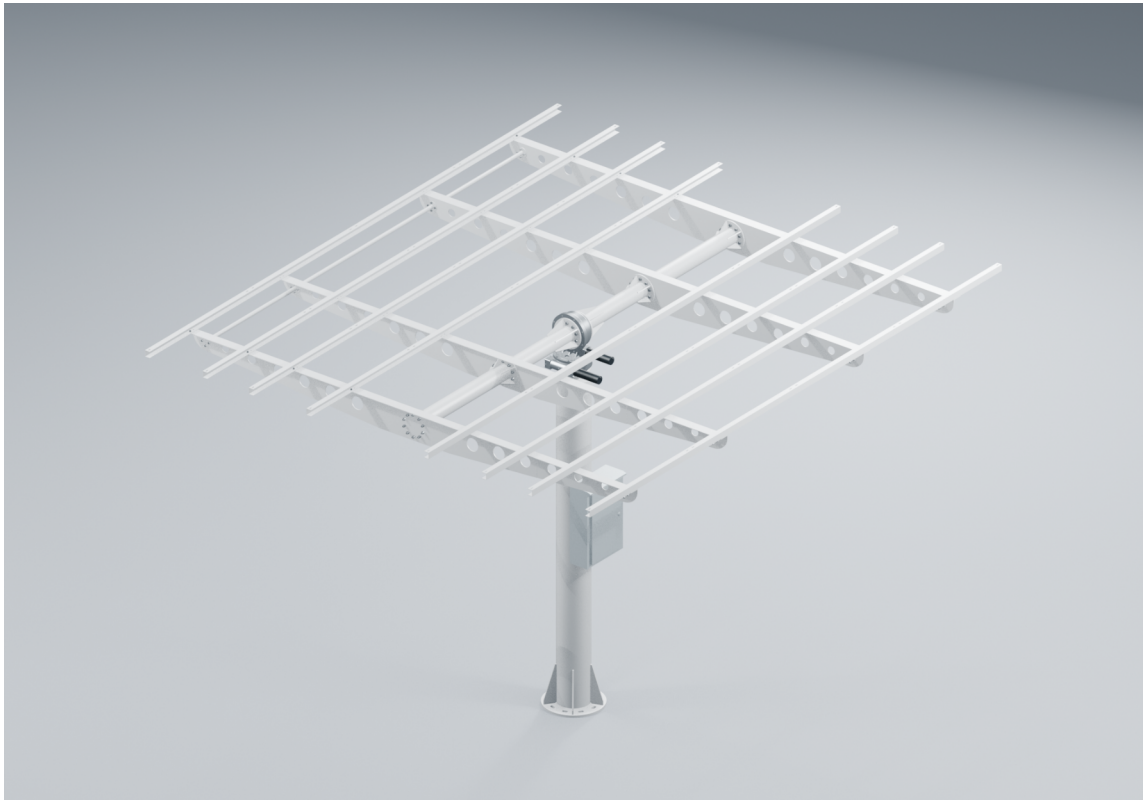
Structural check

Re-verify connections, support points and tightening; confirm no deformation or interference; install subsequent cross beams after checks pass.

Eight-position reference structure step drawings; construction, tightening and temporary supports follow approved documents. Pre-assembled, inspected assemblies are installed as delivered and are not disassembled to match the figure order.

04 | Complete the Rectangular Load-Bearing Frame

Cross beams and purlins connect per the module layout; the bare racking's mounting interfaces are checked at this stage.



Frame connections

Complete cross beams, purlins and connectors per the configuration drawing; re-verify mounting faces and arrangement direction.

Module interfaces

Check clamp positions, permitted clamping zones and module dimensions; confirm interfaces with the selected modules' installation documents.

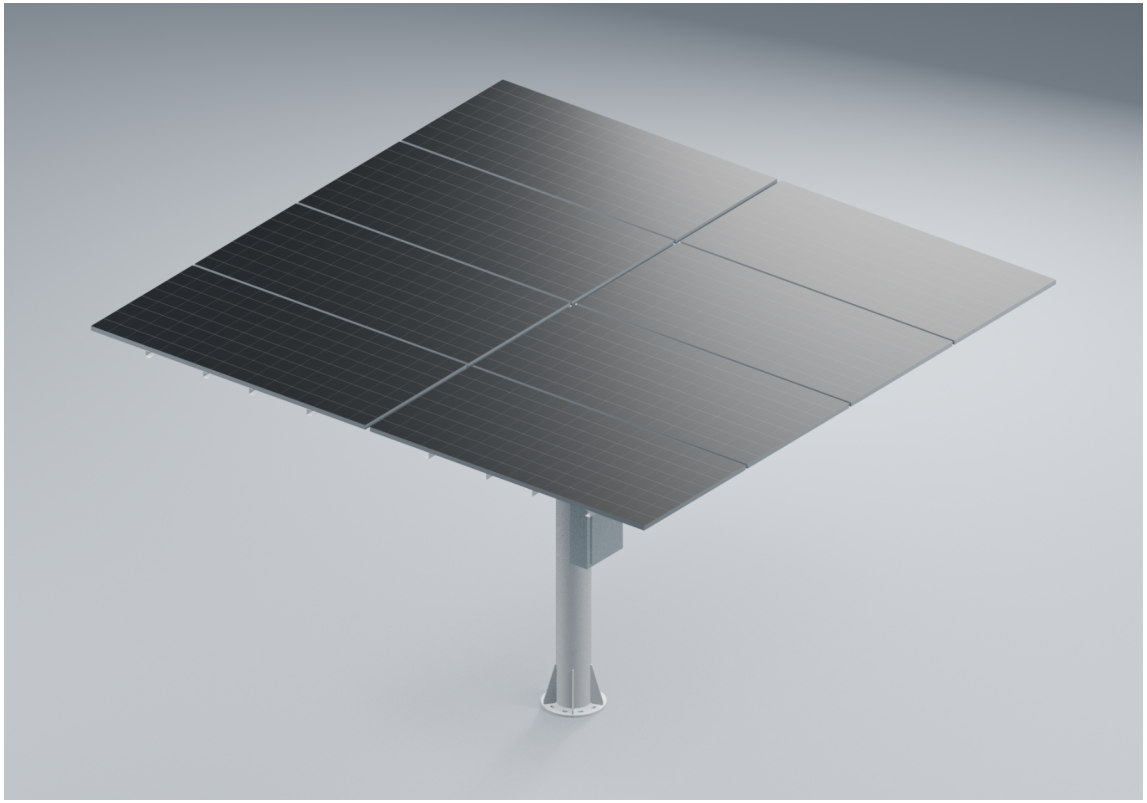
Motion clearance

Check connections, cable routing and rotation / tilting space; keep necessary temporary supports until mechanical release.

Eight-position reference structure step drawings; construction, tightening and temporary supports follow approved documents. Pre-assembled, inspected assemblies are installed as delivered and are not disassembled to match the figure order.

05 | Install Modules per the Mounting Plan

Racking supply excludes PV modules. With customer-supplied modules, install per the confirmed mechanical and electrical plan.



Bare-racking delivery

Record mounting interfaces, frame connections and motion clearance; modules not supplied are not listed as delivery shortages.

Customer module installation

Assemble at the module manufacturer's permitted clamping positions, tightening requirements and approved sequence; re-verify loads and centre of gravity.

Mechanical delivery check

Verify clamps, grounding and cable margins; clear tools and obstructions; proceed to electrical commissioning after release.

Eight-position reference structure step drawings; construction, tightening and temporary supports follow approved documents. Pre-assembled, inspected assemblies are installed as delivered and are not disassembled to match the figure order.

De-energize Before Wiring, Verify Item by Item After

Item	Content
Supply and isolation	Identify control, motor, module and inverter circuits; work only after isolation and voltage testing.
Motors and feedback	Wire motors and Hall per the terminal diagram; verify voltage, polarity, ground and channel numbers.
Limits and weather	Verify end-point inputs, wind speed and other configured sensors circuit by circuit; check signal changes.
Grounding and cables	Verify protective grounding, wire gauge, protection devices, fixing and full motion margin.
Electrical accessories	PV to the inverter or approved DC circuit, 24 V to tracking control; connect storage and loads per the electrical drawings when supplied.
Energization release	Re-verify terminal tightness, waterproof sealing, insulation and protection checks; energize per the approved electrical procedure.

Never mix motor 24 V, Hall supply or string voltages; do not use an unapproved uniform power-up sequence.

Verify Direction and Limits First, Then Enter Automatic Tracking

Item	Content
Position and time	Set actual coordinates, timezone and time; verify positioning and communication.
Channel mapping	Identify azimuth and tilt separately; use short low-risk motions to verify direction and feedback.
End-point checks	Verify each axis's limits and stop response; never bypass protection to complete a motion.
Initial calibration	Establish zero position, counts or angle datums per the delivered control process; save and read back values.
Dynamic clearance	After mechanical release, check the full motion envelope; confirm cable, connector and ground clearances.
Automatic and protection	Verify tracking, parking, protection, self-check and recovery; keep actual settings and results.

Complete mechanical release before motion tests; remove temporary supports per the approved plan. Tag out power for servicing; stop immediately on jamming, unusual noise, or limit / feedback anomalies.

Acceptance and Delivery Records

Item	Content
Identity and configuration	Model / serial number; mechanical, control board, software and electrical configuration.
Installation checks	Foundation, column, connection, tightening, grounding and harness inspection results.
Commissioning parameters	Coordinates, time, each axis's direction, zero position, limits and protection settings.
Function verification	Manual, automatic tracking, parking, protection, self-check and platform permission tests.
Anomalies and treatment	Record issues, measures, re-verification results and items still to be completed.
Personnel and documents	Installation / electrical / commissioning / acceptance sign-off; delivered drawings and maintenance documents.

Without mechanical and electrical release, never enter unattended operation. LIANSTOR Energy | sales@lianstor.com | lianstor.com

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E Efficient

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