Siddhapura®
solo energy pvt. ltd.

Together we can power a cleaner future.

Tracking System

Fixed / Seasonal Structure

Carport

Balcony

Solar Farm

Solar Racking & Tracking Systems

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Factory: Plot No. 12, Survey No. 56/1P/1P,
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Siddhapura®
solo energy pvt. ltd.

Engineering the backbone of solar infrastructure.

40+ years of engineering excellence, delivering precision manufacturing, structural innovation, and reliable solutions with more than 2 GW annual production capacity from our manufacturing facility.

Engineering that builds solar infrastructure for decades.

Every structure is engineered for strength, precision, and long-term reliability in demanding solar environments.

- Strength without unnecessary weight
- Faster installation through modular construction
- Optimised designs for alignment and stability
- Layouts tailored to every site condition
- Foundations engineered for project requirements
- Durability that withstands time and climate

The future we are building.

Our Vision

To enable the global shift to clean energy through engineering excellence.

Our Mission

Engineering reliable, scalable structures that enable clean energy at scale.

WHY US

Built for speed. Engineered for reliability.

SPEED, PRICE, RELIABILITY

Siddhapura Solo Energy Pvt. Ltd. combines advanced manufacturing technology with precision engineering to deliver dependable solar mounting structures for modern utility-scale projects.

Fully automatic CNC roll-forming lines at our manufacturing facility maintain high accuracy, faster execution, and consistent manufacturing quality - project after project.

01
High-Speed Delivery

02
Competitive Project Pricing

03
Consistent, Reliable Output

04
Advance Production Setup

05
Utility-Scale Project Expertise

06
Customer-Focused Execution

BY THE NUMBERS

Built to Last.

SNAPSHOT

30 yr
STRUCTURAL DESIGN SERVICE LIFE, EVERY SYSTEM

60 m/s
PEAK WIND SPEED OUR STRUCTURES ARE DESIGNED AGAINST

±1°
ANGULAR TRACKING ACCURACY UNDER CLOSED-LOOP CONTROL

C5
ANGULAR TRACKING ACCURACY UNDER CLOSED-LOOP CONTROL

• DESIGNED, MANUFACTURED AND SUPPLIED IN-HOUSE

STRUCTURE & MATERIALS

Steel chosen for where it will stand.

ZnAlMg
Zinc-magnesium-aluminium coating with several times the cut-edge barrier life of conventional galvanising, the default on structural members.

C4–C5 · STRUCTURAL MEMBERS

AZ150
Aluminium-zinc coated steel with enhanced corrosion resistance, designed for long-lasting performance in demanding outdoor environments and solar applications.

ISO 9364 · STRUCTURAL STEEL

HDG
Batch hot-dip galvanising to a controlled coating mass for posts, foundations and heavy fabricated sections.

ISO 1461

SS 304 / 316
Every interface that sees weather is bolted with stainless hardware. No sacrificial plated bolt sits in the critical path.

A2 / A4 FASTENERS

BUILT FOR EVERY CLIMATE

The structural backbone of every solar project.

Tracking System

Horizontal Single-Axis (1P)
Horizontal Single-Axis (2P
Tilted Single-Axis
Agricultural Single-Axis
Dual-Axis

Fixed Structure

Ground Mount Structure

Fixed Tilt
Seasonal Tilt

Roof Mount Structure

Flat Roof
Inclined Roof
Non-Invasive Roof
FRP Solar Walkway

Carport

Steel
Aluminum

Balcony

Solar Farm

Components

ENGINEERING, MANUFACTURING, AND QUALITY, INTEGRATED UNDER ONE ROOF.

Solar Tracking System

Horizontal Single-Axis Tracking System (1P)

We build high efficiency 1P horizontal single-axis tracking system that follow the sun east to west through the day. Panels adjust automatically to capture more sunlight and deliver higher output than fixed tilt mounting systems. Built with advanced control technology and a robust structural design, these systems suit utility scale projects seeking higher performance, reduced LCOE and reliable long term operation across diverse site conditions.

Technical Features

Single-axis horizontal tracking for continuous solar alignment
AI-based control with precision slewing drive for stable movement
HDG or Al-Mg-Zn coated steel for superior corrosion resistance
Concrete, steel pile and PHC pile foundation options
Uneven terrain and north-south slopes up to ~20%
Wired or wireless communication with self powered or external supply

HSAT 2P

TACKING SYSTEM

Horizontal Single-Axis Tracking System (2P)

We build advanced 2P horizontal single-axis tracking system with dual row layouts and intelligent sun tracking. Panels rotate east to west through the day for stronger output and better land use than fixed mounting structures. With an optimised structural design, fewer support columns and smart controls, our 2P trackers suit large scale projects needing efficient land use, strong performance and reliable long term operation.

Technical Features

Horizontal single-axis tracking with east to west movement for continuous solar alignment

Slewing drive mechanism with dampers for smooth and stable rotation

Advanced AI-based control with real-time feedback and astronomical calculations

Compatible with bifacial and high wattage PV modules

Manufactured using HDG steel or Al-Mg-Zn coated steel for superior corrosion resistance

Multiple foundation options including concrete, steel piles and PHC piles

Designed for uneven terrain and north-south slopes up to ~20%

Fully automated system with wired or wireless communication options

TSAT

TACKING SYSTEM

Tilted Single-Axis Tracking System

We build advanced tilted single-axis tracking system that combine a fixed south facing tilt with dynamic east west tracking. Operating on a permanently inclined axis, they follow the sun for improved exposure and higher generation through the day and across seasons. Designed for flexibility and high performance, these systems suit utility scale projects seeking enhanced efficiency, better seasonal output and optimised land utilisation.

Technical Features

Tilted single-axis design integrating fixed tilt with east west tracking

Continuous east west rotation for precise solar alignment

Multi-point drive system for synchronized and stable movement

Advanced control system using astronomical algorithms with sensor feedback

High strength steel structure with C2 to C4 corrosion protection

Engineered for uneven terrain and varying site conditions

Fail-safe design with high wind resistance for reliable operation

Modular, pre-engineered components for fast installation and scalability

AGRI-PV

TACKING SYSTEM

Agricultural Single-Axis Tracking System

We build agricultural single-axis tracking system that enable dual land use, combining solar generation with active farming. Panels follow the sun east to west while elevated structures maintain clearance for crops, machinery and livestock below. Purpose built for agri-voltaic (Agri-PV) applications, these systems enhance land productivity with higher energy output and balanced sunlight distribution between crops and solar modules.

Technical Features

Single-axis tracking with east west movement for continuous solar alignment

Elevated structure design for smooth movement of farm machinery and livestock

Multi-point drive system for synchronized and stable tracking

Seasonal tilt adjustment for improved year round energy performance

Durable steel construction with advanced corrosion resistant coatings

Adaptable design for uneven and sloped agricultural terrains

Smart control system using astronomical algorithms with sensor based feedback

Pre-engineered modular components for quick and efficient installation

DAT

TACKING SYSTEM

Dual-Axis Tracking System

We build advanced dual-axis solar tracking system that move panels on both horizontal (east-west) and vertical (north-south) axis. Continuous alignment with the sun through the day and across seasons delivers significantly higher energy output. Engineered with smart control technology and a robust structural framework, our dual-axis trackers suit high performance projects where efficiency, precision and maximum yield are critical.

Technical Features

Real-time panel tilt and orientation with GPS integrated closed-loop control

Durable slewing drive system for smooth and stable multi-axis movement

Independent tracker units for easy maintenance and fault isolation

Heavy duty structure with multi point or herringbone support for enhanced stability

Hot dip galvanized or Zn Al Mg coated steel for superior corrosion resistance

Wind speeds up to ~35 m/s with auto stow, night positioning and safety features

Multiple foundation options including concrete, steel piles and PHC piles

RS485, Zigbee or LoRa communication for remote monitoring

Solar Fixed Structure: Ground Mount Structure

Fixed-Tilt Mount Structure

We manufacture high quality fixed tilt solar mounting structures for reliable, cost effective installations across projects of all sizes. Available in independent row 1P and 2P configurations, they are engineered for strength, durability and minimal maintenance on ground mounted projects.

Technical Features

Heavy-duty bolted structure with serrated lock nuts

HDG & Galvalume coated high-strength steel

Grade 8.8 zinc-flake coated fasteners

Sigma Plus & Cee Plus reinforced profiles

Flexible foundation options for varied terrains

Modular tilt structure compatible with multiple PV modules

Seasonal-Tilt Mount Structure

We manufacture high performance seasonal tilt solar mounting structures for optimised energy generation across changing sun angles throughout the year. Suitable for 1P and 2P independent row configurations, they provide a cost effective alternative to full tracking while improving annual solar output.

Technical Features

Bolted structure with serrated lock nuts

HDG & Galvalume coated steel construction

Grade 8.8 zinc-flake coated fasteners

Sigma Plus & Cee Plus reinforced profiles

Concrete pile, pad, or ramming foundation options

Seasonal tilt structure with tracker-ready design

Compatible with Poly, Mono PERC & bifacial modules

Adjustable tilt angles with manual actuator system

ROOF
MOUNT

FIXED
STRUCTURE

Solar Fixed Structure: Roof Mount Structure

Flat Roof Mount Structure

We manufacture high performance flat roof solar mounting structures designed for RCC concrete rooftops. They provide a safe, stable and efficient solution for solar panel installation while maximising rooftop space utilisation and ensuring long term structural integrity and waterproof protection.

Technical Features

Optimized load distribution for flat RCC rooftops

Ballasted and anchored mounting options

HDG, GI & Galvalume corrosion-resistant materials

Modular structure for faster installation

Supports portrait and landscape module layouts

Integrated drainage clearance design

High wind resistance and structural stability

Compatible with multiple PV module types

Inclined Roof Mount Structure

We manufacture high performance inclined roof solar mounting structures for secure and efficient installation on sloped rooftops, including metal sheets, tile roofs, trapezoidal and corrugated surfaces. They deliver superior strength, flexibility and long term durability while ensuring proper load distribution and maintaining roof integrity and waterproofing.

Technical Features

Compatible with metal, tile, trapezoidal & corrugated roofs

Supports portrait and landscape module layouts

HDGI, Galvalume, POSMAC & aluminium construction

Multiple mounting options for flexible installation

Modular design for quick installation

Designed for high wind and harsh weather conditions

Universal rail system for various roof profiles

Optimized clearance for airflow and cooling efficiency

ROOF
MOUNT

Non-Invasive
Roof Mount Structure

FIXED
STRUCTURE

We manufacture advanced non-invasive roof solar mounting structures for secure panel installation without drilling or damaging the roof surface. These systems use clamp based, ballasted and friction fit technologies to ensure firm panel support while preserving complete roof waterproofing and structural integrity.

Technical Features

Non-penetrative clamp, ballast & adhesive mounting

Suitable for flat, low-slope & metal roofs

Aluminium & stainless steel corrosion-resistant structure

Strong stability without roof damage

Modular design for faster installation

Supports portrait and landscape module layouts

Aerodynamic design for improved performance

Uniform load distribution across roof surfaces

ROOF
MOUNT

FRP Solar Walkway

FIXED
STRUCTURE

FRP solar walkways are safe, durable and non-intrusive access across solar installations. Made from premium Fiberglass Reinforced Plastic (FRP), they provide secure movement for maintenance personnel while protecting solar panels and roofing surfaces from damage.

Technical Features

Made from high-strength FRP with excellent strength-to-weight ratio

Resistant to corrosion, chemicals, and UV for long outdoor life

Lightweight modular panels for easy handling and fast installation

High load-bearing capacity with durable grating structure

Available in multiple mesh sizes, thicknesses, and custom configurations

Fire-retardant and weather-resistant for extreme conditions

Compatible with rooftop and ground-mounted solar systems

Solar Carport Structure

Steel Carport Mount Structure

We provide durable, high efficiency steel carport mount structures designed to transform parking spaces into productive solar energy zones. Manufactured using premium hot dip galvanized structural steel, they deliver excellent strength, long term durability and reliable performance while optimising available space.

Technical Features

High-strength structural steel with corrosion resistance

Single-pole cantilever and multi-row parking designs

Pre-engineered modular system, no on-site welding or cutting

Supports portrait and landscape module orientation

Adjustable tilt angle from 0° to ~15°

Concrete foundation or ground-mounted installation options

Compatible with framed/frameless modules with cable & drainage management

Aluminium Carport Mount Structure

We offer premium aluminium carport mount structures designed to convert parking areas into efficient solar power generation spaces. Combining functionality with modern aesthetics, they protect vehicles from weather conditions while generating clean energy for residential, commercial and industrial applications.

Technical Features

High-strength aluminium alloy structure with corrosion resistance

Multiple configurations: single pole, double pole, W, Y and multi-bay layouts

Available in waterproof and non-waterproof designs with drainage system

Pre-engineered modular components for fast installation

Supports portrait and landscape PV module orientation

Flexible foundations: concrete base or ground screw system

Compatible with framed/frameless modules with integrated cable management

BALCONY

Balcony Mount Structure

EFFICIENT STRUCTURE

We offer innovative balcony mount structures designed for urban and residential solar applications where rooftop space is limited or unavailable. These systems enable safe and efficient installation on balcony railings, walls, or compact open areas, making solar energy accessible for apartments and space-constrained properties. Engineered with lightweight materials and adjustable tilt options, they ensure optimal solar generation along with quick and hassle-free installation.

Technical Specifications

Applicable surface: ground, concrete structures and balcony installations

Wind load capacity up to 60 m/s

Snow load capacity up to 1.4 kN/m²

Tilt angles: 5°, 10°, 15°

Material: anodised aluminium and stainless steel

ENGINEERING PARAMETERS

The numbers, at a glance.

TYPICAL DESIGN BASIS TUNED PER PROJECT

PARAMETER	DESIGN VALUE	REFERENCE
Wind Design Speed	60 m/s peak gust	IS 875 Pt 3 · ASCE 7
Seismic Design	up to Zone V	IS 1893
Tracking Range	±60°	Horizontal Single-Axis
Tracking Accuracy	±1°	Closed-Loop Control
Maximum Table Length	160 m	Per Tracker Row
High-Wind Stow	0° flat	Lowest-Drag Posture
Guaranteed Availability	99%	Contractual
Structural Service Life	30 years	Design Basis
Coating System	ZnAlMg / HDG · C2–C5	ISO 12944
Fasteners	Stainless A2 / A4	At Weather Joints

*Images and specifications shown are for reference only and may vary as per project and site requirements.

Siddhapura Group of Companies

Siddhapura Group of Companies is built on over decades of manufacturing and engineering excellence. Driven by a progressive vision, we create lasting value through innovation, reliability, and long-term partnerships.

Siddhapura®
ENGINEERED FOR TRUST

Siddhapura brings over 40 years of expertise in precision sheet metal cutting, bending, punching and forming solutions, serving clients worldwide with reliable and performance-driven engineering.

Sheet Metal Machinery :
Press Brake | Shearing | Rolling | Bending | Power Press | Roll Forming Machine

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From our generations to yours. Built on quality.

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