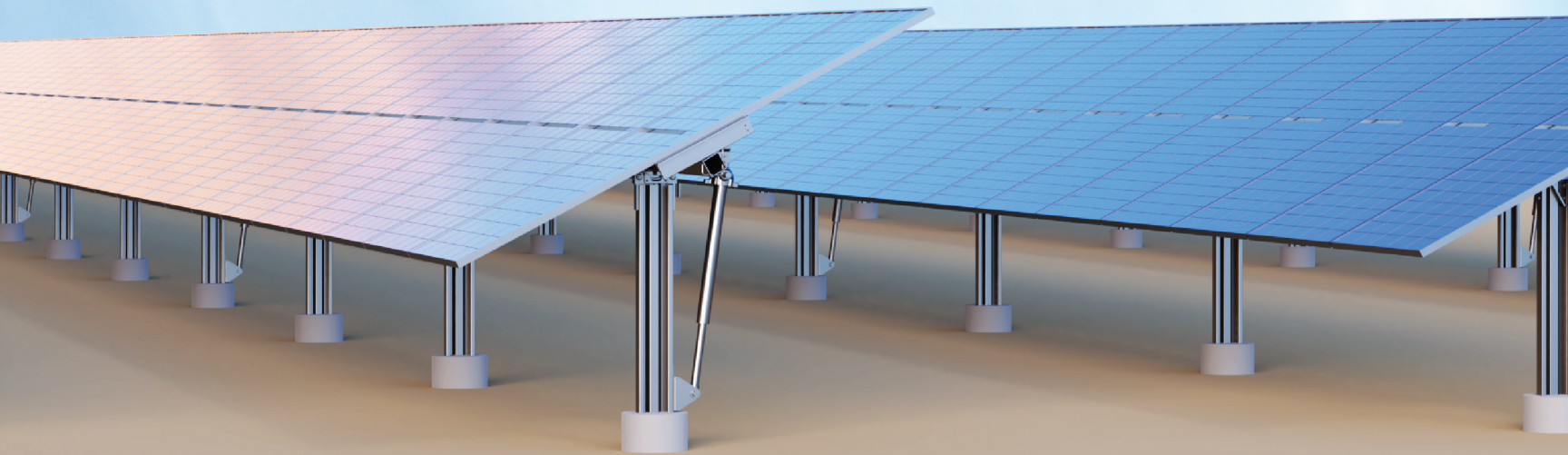




www.sunchaser.in



Supplying Structures Deploying Trust

Single Axis Trackers | Seasonal Tilt Structures | Fix Tilt Structures

Seasonal Chase







SC2P30 | SC1P17 | SC2P14 | SC2P28

Structure with Seasonal Tilt possibility

With integrated manufacturing & expert design team we are a well competitive, Qualitative & reliable single source structure supplier for ground mount small to big size PV projects. Though capability to handle your custom requirements, our quick delivery time makes us unique global structure supplier.

Technical Data Sheet

GENERAL SPECIFICATION & CUSTOMIZATIONS

| | |
|----------------------------------|--|
| Type of Structure | Fix structures with Manual tilt options |
| Type PV Modules | 330W 335W 450W 530W 545W Bi-facial – all sizes |
| Tilt angles |  5° 15° 20° 25° 35° |
| Module orientation | <input checked="" type="checkbox"/>  Portrait <input type="checkbox"/>  Landscape |
| Table Length | Flexible Modular design based on string size |
| Max. Wind speed |  39m/s (140 km/hr)   50m/s (180/km/hr) |
| Module edge distance from ground | > 300 cm / 500 cm |
| Corrosively Specification | C2 / C3 / C4 / C5 – as per ISO 12944 |



STRUCTURAL ANALYSIS

| | |
|-------------------------|---|
| Software used | Ansys Mechanical (FEA) & Staad pro |
| Regulations | As per ASCE 7-10, IS 875, IS 800/801 & Euro Code |
| Practical tests carried | Post pull-out tests Purlin & Rafter deflection tests |
| Maintenance | Bolt torque check every 10 years |

Structural Warranty

15 Years

Corrosion Warranty

15 Years



STRUCTURAL SPECIFICATION

| | |
|--------------------------------|---|
| Structure type | Bolted Structure with Serrated lock nuts |
| Structural Material | HDG & Galvalume coated steels Grade S235 / S355 |
| Faster Material | High tensile grade 8.8 Fasteners with Zinc-Flake coatings |
| Post Profiles | > 150mm size Sigma Plus - Profiles |
| Rafter & Purlin | > 120 mm size Cee Plus with stiffeners - Profiles |
| Post Foundation type | Concrete piled / concrete pad / Ramming |
| Approx Weight for 330W Modules | 26-28 Tone/MW |
| Approx Weight for 540W Modules | 18-22 Tone/MW |

DayChase - Single Axis Tracker

RC1P & RC2P


Independent row 1P & 2P multi drive tracker

East to West self-rotating PV structure, programmed to avoid inter row shadow effects, programmed to capture diffused light & to self-position at extreme weather condition are called Single-axis controlled Tracker.

After years of global OEM supply experience of key tracker parts & Design involvements, We are offering a well competitive, Maintenance free, Qualitative & sturdy trackers for small to large projects. Our trackers are FEA & CFD analysed + rigorously tested for life expectancy & sturdiness. Our indigenously manufactured each Tracker parts & control unit are made to compete the large international players in terms of reliability & after sales need. We achieve economy of supply through scale of integrated single location production facility.

Technical Data Sheet

GENERAL SPECIFICATION & CUSTOMIZATIONS

| | |
|----------------------------------|--|
| Type of Structure | Independent Row - Horizontal Single axis Tracker |
| Module Architecture | 1P & 2P |
| Module Type | Bifacial & all framed modules |
| Tilt angles |  + 60° to - 60 ° (Optional +50° to - 50°) |
| Tilt Angle Variation (N-S) | +/- 2 ° - along the length of the table |
| Ground coverage ratio | 30% - 60% - Flexible configurable design |
| Table Length | 30 - 134 modules in Row |
| Module edge distance from ground | > 500 mm |
| Operating temperature | -10°C to 65°C |
| Corrosion class supply | C2 / C3 / C4 - as per ISO 12944 |



STRUCTURAL SPECIFICATION

| | |
|--------------------------------|--|
| Structure type | Bolted Structure with Serrated lock nuts |
| Wind resistance | In operation – at any angle: up to 20m/s (70 km/h) In Stow position – at 0° : up to 50m/s (180/km/hr) |
| Tracker Stowing time | < 6 min (accelerated drive algorithm) |
| Structural Material | HDG & Galvalume coated steels Grade S235 / S355 |
| Faster Material | High tensile grade 8.8 Fasteners with Zinc-Flake coatings |
| Column Profiles | > 160mm / 260mm size Sigma Plus – Profiles |
| Column Foundation type | Concrete piled / concrete pad / Ramming |
| Column Foundation depth | Designed based on soil test reports & on-site pull-out tests |
| Flood-safe height | > 800mm from ground level |
| Earthquake resistant | Yes - With Seismic Dampers (optional) |







STRUCTURAL ANALYSIS

| | |
|-------------------------------------|--|
| Software used | Ansys Mechanical (FEA) & Wind CFD analysis |
| Regulations | As per ASCE 7-10, IS 875, IS 800/801 & EURO Code |
| Practical tests carried | <ul style="list-style-type: none">- Head Bearing life test – 50 Years- Drive actuator life test – 40 Years- Drive actuator tensile test – 5000 MPA- Drive tube torsion test – 100 N- Complete table accelerated life test – 40 Years- Turbulent Wind load stress on drive actuators – 25000 N |
| Wind Tunnel Aeroelastic Test | Not required – Locking at short table length |

DRIVE PARAMETERS

| | |
|-----------------------------|---|
| Drive type | Self-locking Synchronized screw driven actuator system |
| Drive Actuators per Module | 12 – 24 configuration based on site architecture & location |
| Drive Actuators per column | On every column / on multiple column per table |
| Power requirement | 24V DC with battery back-up for 2 days / 5 Days |
| Drive Mechanical Parts | IP55W - Dust & weather proof |
| Drive Actuators lubrication | Re-lubrication every 5 Years |
| Drive Actuators tested | for >40 years of life at 2x higher load |

CONTROLLER SYSTEM SPECIFICATION

| | |
|--|---|
| Drive Algorithm | Astronomical formulas with angle feedback |
| Backtracking | Individual Row or Terrain based – To avoid shadow effects |
| Diffuse Light Capture | Light cloud & Heavy cloud mode |
| Control options for individual tables / entire plant | Cleaning mode : +/- 60° Maintenance mode / Safe mode : 0° Emergency stop mode : at actual position |
| Control Box & Electrical Parts | IP55W / IP65W – Dust & Weather proof |
| Sensors |  Wind speed  Wind pressure  Sun irradiation  Over drive limit switch |
| Communication | Wireless low power network - LoRa |

>2% HIGHER OUTPUT DUE TO INTELLIGENT CONTROL

ACTIVE BACKTRACKING

LIGHT CLOUD MODE

HEAVY CLOUD / RAIN MODE

FLEXIBLE LAYOUT

DESIGN CHARACTERISTICS

POST / PILE / COLUMN
INSTALLATION TOLERANCES

North - South +/- 40 mm

East - West +/- 30 mm

Height Tolerance +/- 40 mm

Pile Tilt +/- 3°

Pile Twist +/- 5°

Ground Slope +/- 150 mm

MAINTENANCE & WARRANTY

Drive Parts Maintenance
Lubrication of
actuators & gearboxes

Every 5 Years

Drive Parts Warranty

15 Years

Controller Warranty

5 Years

Structural Warranty

15 Years

Corrosion Warranty

15 Years

Spare Supply
Guarranty

25 Years

SUPPLY & INSTALLATION AIDS

| | |
|-----------------------------|--|
| Head bearing Unit | Pre-assembled & Tested |
| Drive actuator Unit | Pre-assembled & Tested |
| Drive tube support bearings | Pre-assembled |
| On site Work | No cutting, No Welding, easy on-site installation |
| Control Unit | Pre-Programmed for each row & site; On site calibration |
| Installation Guide line | Free Training at Rajkot or Supervised at additional cost |



Advantage of Single axis Trackers:

- + PV panels mounted on Single axis-Trackers would produce significantly higher power during early morning & late evening hours by rotating the panel in direction of sun.
- + The diagonal rays of sun in Morning & Evening hours have unbelievably high capacity to produce power (> 60% intensity than midday at sun position only 15° above horizon). The milder temperature in morning & evening hours helps drastic increase in efficiency of Photovoltaic solar cell.
- + Our 1P trackers are especially advantageous for bi-facial modules to capture reflecting sun light & to avoid shading effect on rear side of modules.
- + Our 2P Tracker offers additional benefits of better use of ground, shorter row lengths, and higher module height for better cooling & higher reflection on rear side. The 2P Bi-facial tracker is estimated to supply at least 2% higher output compared to 1P Bi-facial tracker.



Factories & Offices

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