# CDS SOLAR
## SELF-CLEANING TRACKER

## THE MOST INNOVATIVE AND VALUABLE TRACKER ON THE EARTH

CDS SOLAR has engineered the most innovative and valuable tracking technology available the HZ-SC™ self-cleaning tracker. Our mission is bring more solar energy to the world.

HZ-SC™ tracker bring self-cleaning and dust-proof function to reduce the O&M cost up to 50%. With a minimalist design and highly configurable, independent rows, HZ-SC™ tracker improves reliability and design flexibility while lowering O&M costs. We believe value is more than the cost of a tracking system. It's about building with forgiving tolerances and fewer parts so construction crews can work efficiently. It means protecting your investment with a failure-free wind management system. But most of all, value is measured in annual income, saving money means increased income. Only we can save the cost of cleaning PV modules.

## SELF-CLEANING FUNCTION KEEP PV MODULE CLEAN:

The HZ-SC™ self-cleaning tracker can let the PV module face down when the sun goes down. In this position, under the action of wind and gravity, the dust fall off from the surface of PV module. The HZ-SC™ can keep PV module clean for a long time.

## DUSTPROOF FUNCTION REDUCES O&M COST UP TO 50%:

The Dustproof function can reduce cleaning times by half at least. In the night, the dustproof function can let PV module face down, in this position, the dusts doesn't affect PV module anymore. It can reduce O&M costs by up to 50%.

## CUSTOM MADE SOLUTION FOR BOTH 1kV AND 1.5kV SYSTEMS:

Electrical and mechanical co-optimization is possible in any project. The HZ-SC™ self-cleaning tracker design can be adapted to client's needs and local regulation as per project's requirements. Installation training and comissioning services can be provided.

## LOWEST LONG-TERM O&M COSTS:

The HZ-SC™ self-cleaning tracker was a minimalist design, independent rows, self-cleaning function and dustproof function that contribute to the lowest long-term O&M costs for our clients.

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# DUST SERIOUSLY AFFECTS THE EARNING OF PV POWER PLANTS

## DUST WILL REDUCE SOLAR RADIATION ON THE SURFACE OF PV MODULES

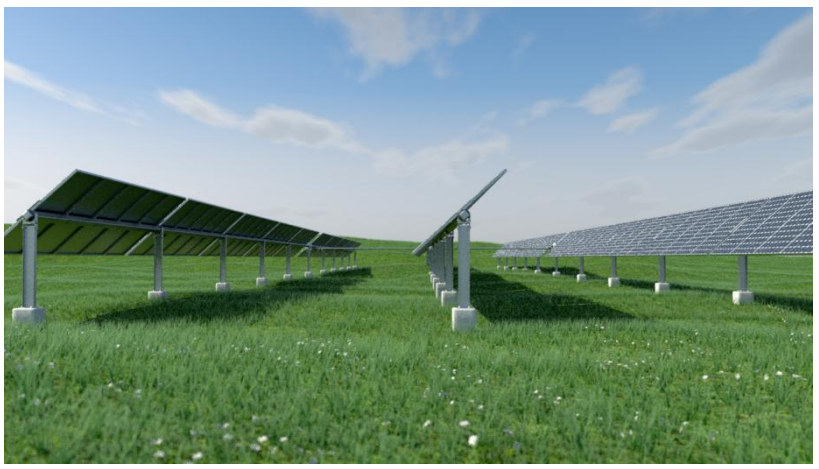
Dust accumulation on the surface of PV module can reduce the transmittance of glass and therefore reduce solar radiation on the PV module. The less solar radiation, the less energy output of PV power plants.

## DUST WILL REDUCE POWER OF THE PV MODULE

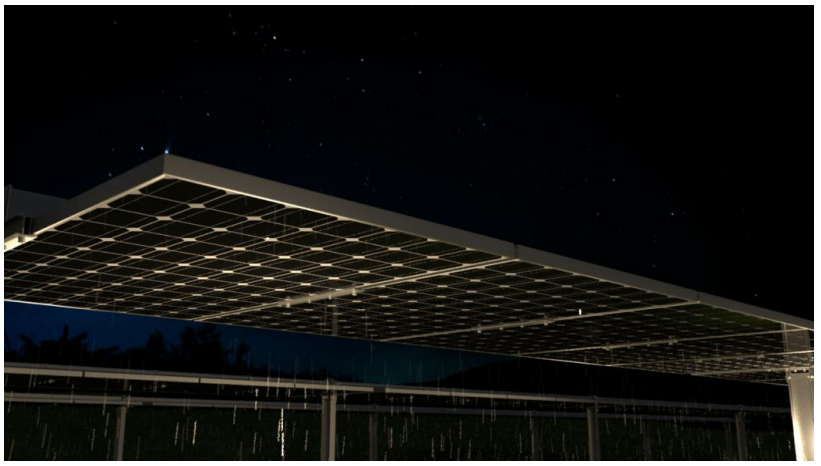
Dust can reduce the effective area of PV module and cause solar radiation uneven on the surface of the PV modules reducing the power of PV module. The less power of the PV module, the less power of PV power plants.

## DUST WILL GREATLY INCREASE O&M COST OF OV POWER PLANTS

Clean the dust on the surface of PV module is a time-consuming process. Dust will greatly reduces the power of PV plants , if you want higher revenue, you should clean PV module frequently. This will greatly increase O&M cost of PV power plants.



**Tracking Position**



**Dust-proof Position**

## HZ-SC™ TRACKER CAN INCREASE ENERGY OUTPUT BY 5%

HZ-SC™ tracker has a high precision angle sensor. The tracking precision is up to 0.2 degrees, it can increase by 5% energy output per year compared to conventional trackers with 1 degree tracking precision.

## HZ-SC™ TRACKER CAN REDUCE O&M COST UP TO 50%

HZ-SC™ tracker has self-cleaning and dust-proof functions. It can keep the surface of PV modules clean for a long time and reduce cleaning times PV modules. When the sun goes down, the tracker will go to dust-proof position which means the PV module will face down. The PV module is not affected by dust at least half the time of the year. The PV power plant will reduce by a half the time for cleaning PV modules.

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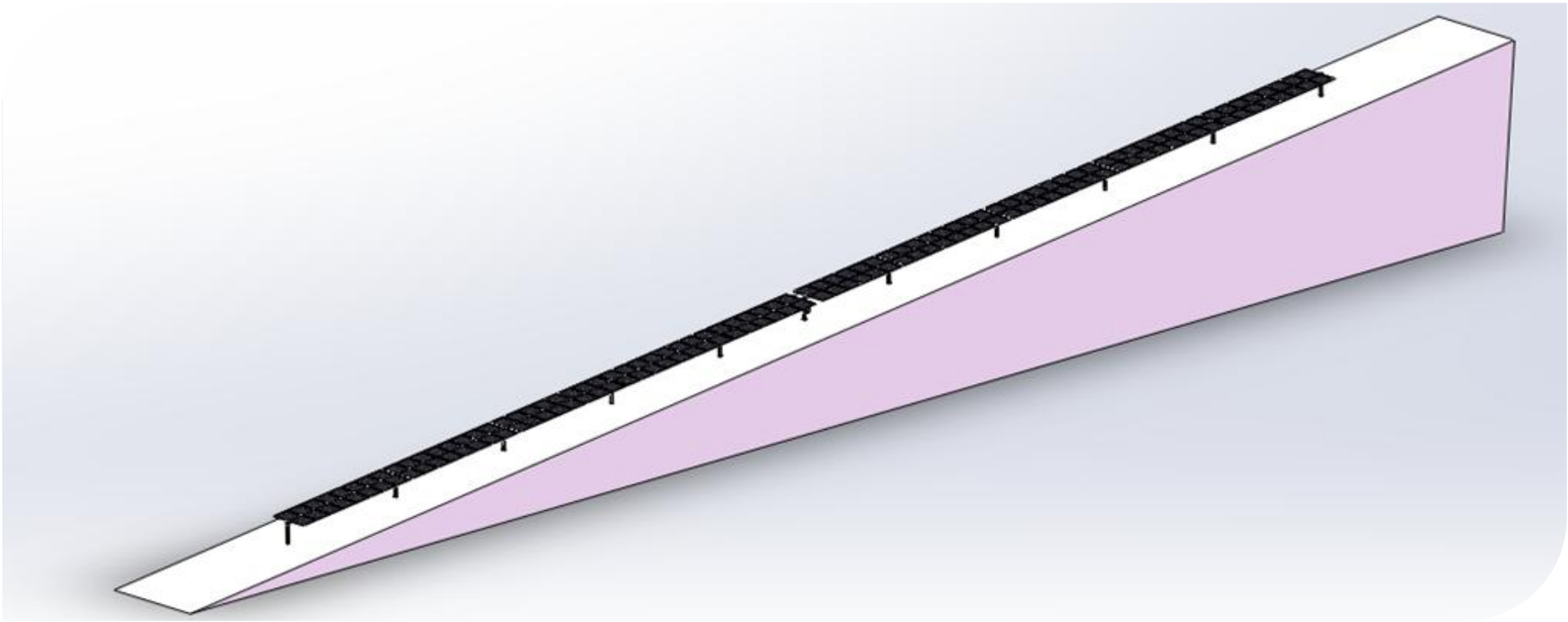
## SITE CONDITIONS

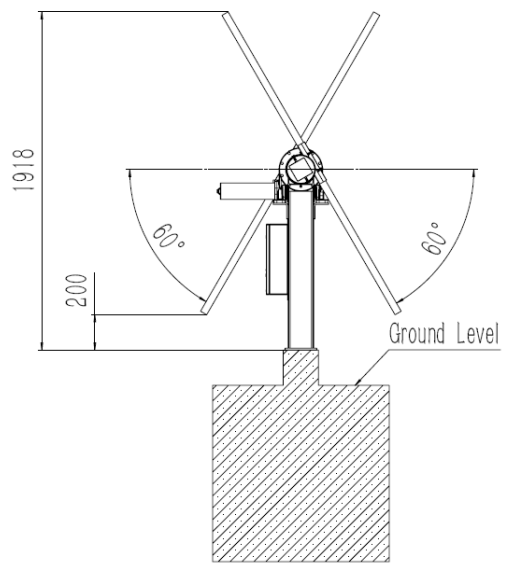
The innovative HZ-SC™ tracker is so flexible that it can be built almost anywhere. While linked row systems need to pay more attention to both north-south and east-west slopes, HZ-SC™ tracker offers complete freedom in east-west slopes tolerance. In the north-south direction, HZ-SC™ tracker unique design accommodates a generous 18% (10°) grade.

## HZ-SC™ TRACKER IS MORE SUITABLE FOR N-S SLOPE INSTALLATIONS

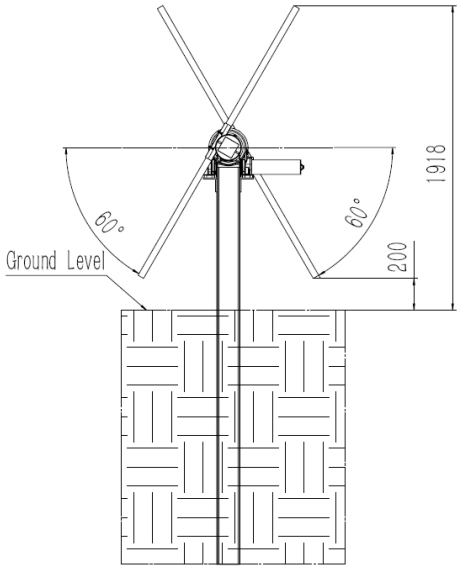


## INSTALLATION AND O&M

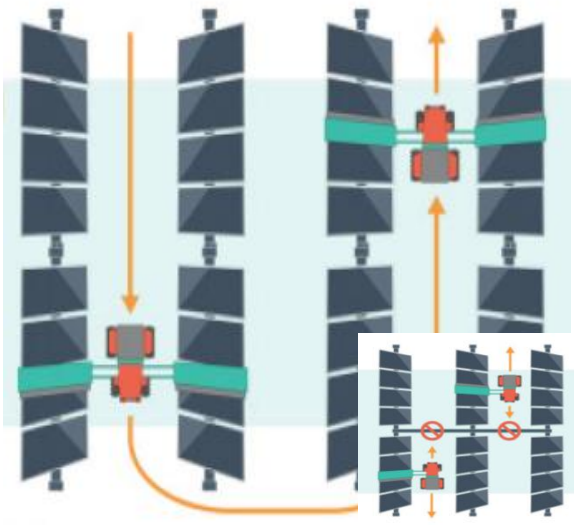
HZ-SC™ tracker efficient structural design uses less steel than conventional trackers, with fewer parts and quicker installation. You won't need drive shafts or extra cabling to power the tracker, speeding the process up even further. HZ-SC™ tracker B type is self-grounded, so you won't have to pay costs and labor for installing grounding washers, braided straps, bare copper wire, and grounding rods. Furthermore, zero welding is required. Once installed, the tracker is easy to service. Because the row are not linked with a drive shaft, maintenance vehicles can drive through the arrays freely. Plus, module cleaning and vegetation management becomes quick and effortless.




**A Type Installation**



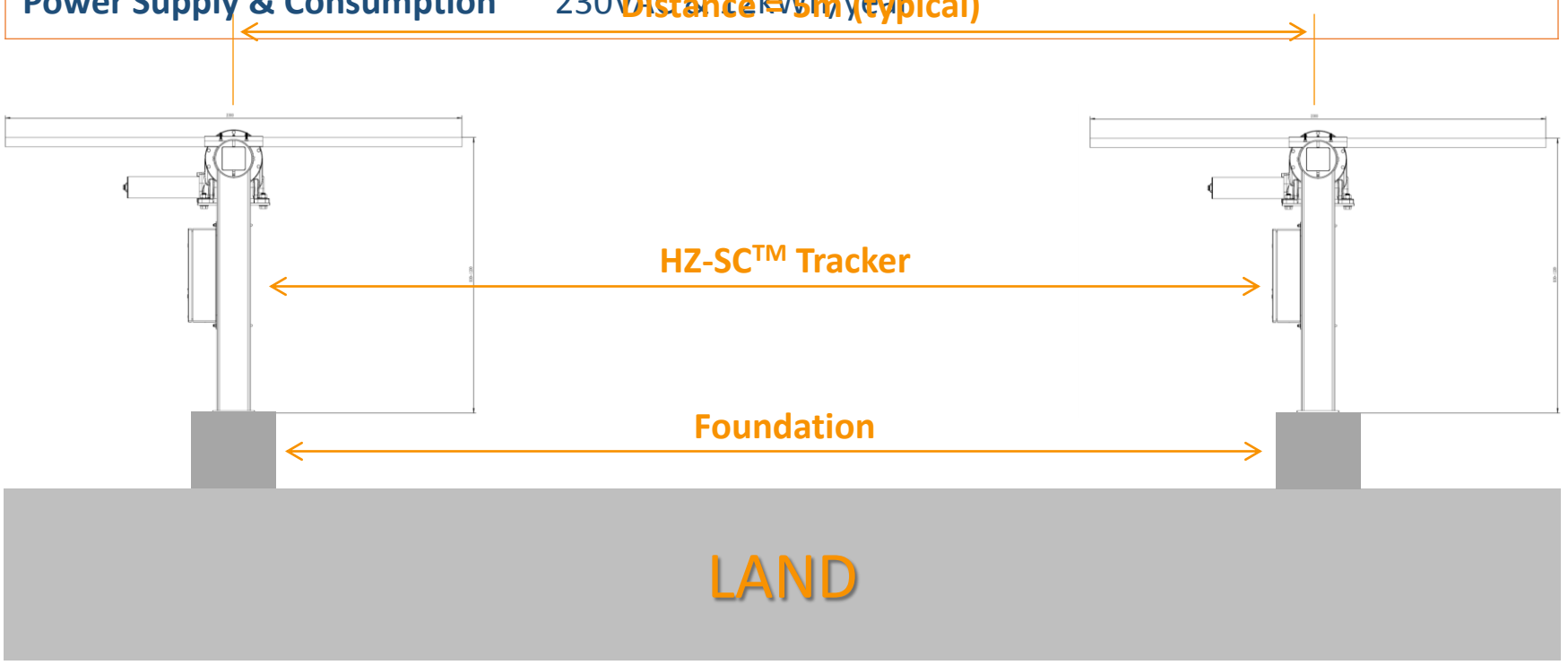

**B Type Installation**



**HZ-SC™ IS FASTER**

## Tracker Parameters

| | |
|---|---|
| **Tracking Technology** | Horizontal single-axis self-cleaning tracker with back-tracking |
| **Tracking Range** | 90°(±45° ) , 120°(±60° ) |
| **Drive System** | One slew gear, 24VDC motor |
| **DC Capacity** | 76/80 panels, DC Power depending on module power. |
| **System Voltage** | 1,000 Volt or 1,500 Volt(optional) |
| **Safety Stowing** | Automated wind and snow stowing |
| **Maximum Wind Speed** | Up to 140mph in stow position |
| **Principal Materials** | Galvanized and stainless steel |
| **Compliance Standards** | IEC 62548, UL3703 |
| **Typical Dimensions** | Height 0.8~1.2 m, Width 2 m, Length 80~90 m |
| **Module Grounding** | Integrated grounding to foundation pier. |
| **Ground Coverage Ratio** | From 33% to 50% |
| **Communications** | Modbus RTU / RS485 |
| **Power Supply & Consumption** | 230VAC & 12kWh/year |




## HZ-SC™ TRACKER PROVIDE MORE OPTIONS FOR CLIENTS

HZ-SC™ tracker has two installation way. One is installed pedestal on the concrete foundation, the other is hammering pedestal into the land. Tell us your needs, we will provide the best installation plan to you.

| System Overview | |
|---|---|
| **Installation Method** | Rapid field installation of pre-manufactured components. |
| **Motor and Slew Drive** | Fully sealed, Lubricated for life. No annual maintenance |
| **Module Attachment** | Shared mounting rails with integrated module grounding |
| **Structural Connections** | Full bolts, No welding required |
| **Scheduled Maintenance** | Limited to annual inspection |
| **Array Bearings** | Self-lubricated / maintenance free polymer bearings |
| **Tracker Control System** | 1 controller, 1 DC motor and 1 slew drive per tracker row |
| **Solar Tracking Method** | Astronomical GPS based algorithm with angle sensor |
| **SCADA Interface** | Dedicated tracker system SCADA with RS485 on dedicated industrial computer |

## SERVICE AND WARRANTY

Exemplary customer service is tightly woven into CDS SOLAR company's DNA. We have 10 years of experience with boots on the ground, and we know bow to best help you speed installation, lower project costs, insure proper maintenance, and answer every question you might have. We've got you covered with our on-site tech advisors. Customer service is value – one that we've always carried in our DNA, and always will.

| Service & Warranty | |
|---|---|
| **Comprehensive Warranty** | 10 years on structural components, 5 years on drive and control systems. Extend terms available. |
| **Design Service** | Site Plan, Layout, Topography Review |
| **On-Site Tech Advisors** | Standard |

# CDS SOLAR

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## MAXIMIZE YOUR INVESTMENT

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