# PEG® PV Substructure

A unique simplified high-density ground mount solution

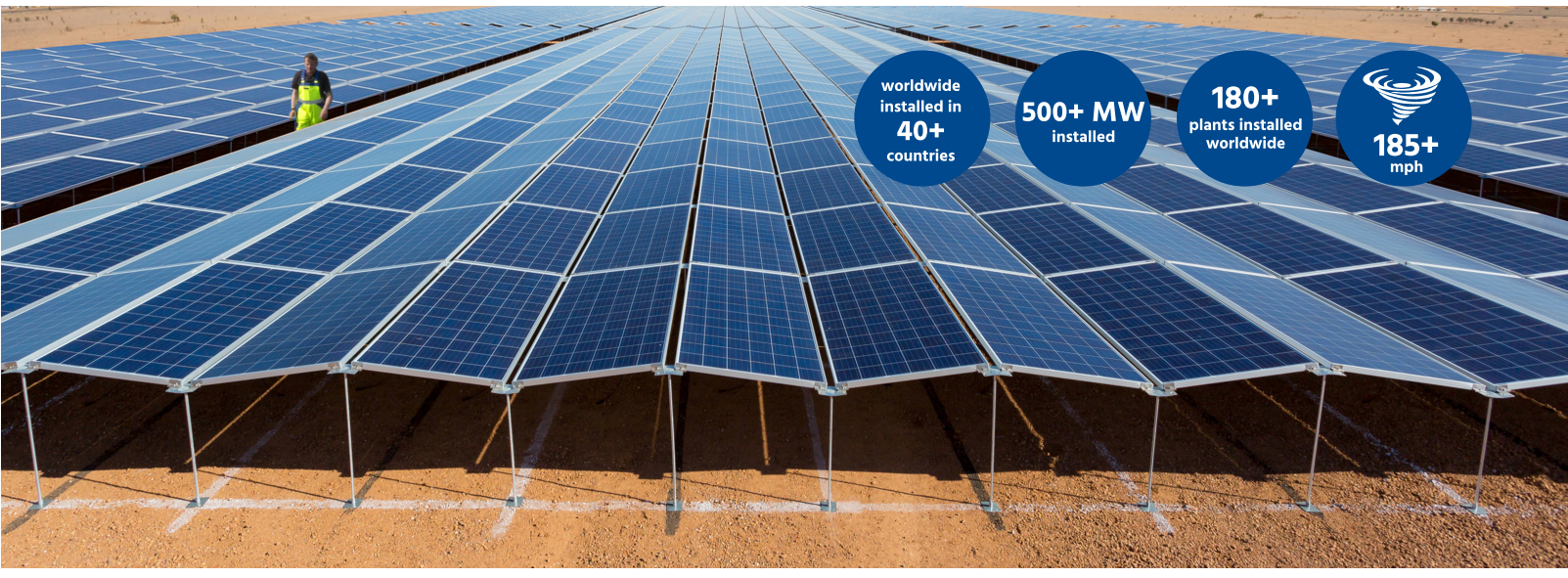
JURCHEN TECHNOLOGY

PATENTED

DNV·GL
Bankability report available

IFI Institut für Industrieaerodynamik
Aerodynamically approved

Intertek
Solar racking system conforms to UL Std. 2703




The PEG®'s **simple, high-density, and lightweight design**, streamlines the whole project's installation process leading to drastically reduced construction effort, materials, logistics, and labor sourcing.

The racking is low to the ground, about waist height, providing an aerodynamic design **suitable for extreme wind hurricanes**.

Our PEG® racking **decreases material and installation costs as well as the consumption of $CO^2$** while providing a **robust ground-mount solar solution** that brings **energy resiliency** and **scaleability to GW+**.

Learn more about, why PEG is the best ground mount solution:
https://www.jurchen-technology.com/products/solar-mounting/peg/peg-design/

**-78% less steel**

**430* working hours**
per MWp
(2.25 kWp* per working hour)

**Low visual impact**
average: only 1 m (3.3 ft) height

**2,0 MWp***
per hectare acre
(811 kWp per acre)

## Key data

### Design

- Extremely light substructure, 78% less steel versus a conventional system
- Maximize land energy density with +225% MWh/acre
- Patented, innovative, minimalist, simple design
- Robust & certified for tropical weather, high winds (185+ mph, 298+ kmh) and high snow loads (50+ psf)
- Low visual impact, typically up to 3.3 ft (1 m) high

### Procurement

- Significant CAPEX reduction of both supply and delivery
- 2.2 MW of substructure per 40 ft container

### Installation

- Safe installation, working height 3.3 ft (1 m)
- No heavy machines, rods install with e.g. hammer drill
- No DC cable trenching
- No concrete foundations
- Simpler H&S procedures
- Low-skilled labor
- 430 working hours* per MWp with 580 watt modules - applies to PEG EW standard

### Operation

- Optimized energy generation, higher during the morning and afternoon
- Low ecological footprint – Carbon footprint is 72 % (61 tons CO2/MWp) less versus a conventional fixed-tilt system.
- Proven design with over 500+ MWp in operation in all continents
- 811 kWp DC per acre (2,0 MWp* DC per hectare)
- Produces ~225% more yield per Hectare (or acre) versus trackers and fixed tilt systems
- Hot-dip galvanised steel offers high resistance to demanding corrosion classes (e.g. also near the sea)

## Technical data

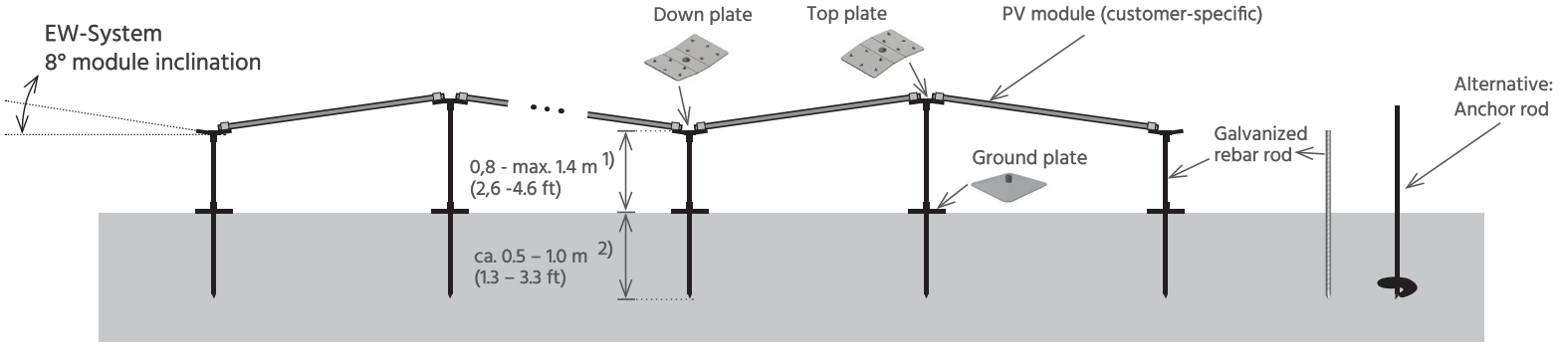
| | |
|---|---|
| **Orientation PV array** | Patented 8° East-West, fixed-tilt, aerodynamic |
| **BOM (Bill of material)** | ~1.1 rods and ~2.2 clips per module |
| **Large volume scalability** | From 10 kWp to GW+ scale |
| **Durability** | Hot dip galvanized steel rods and plates |
| **Wind loads** | Designed for 298+ kmh (185+ mph) per ASCE 7-16 Structural Code;<br>compliance TBD by local engineering. Values may vary depending on the countrys structural code. |
| **Seismic loads** | Flexible design allows high tolerances for seismic activity |
| **Certifications**<br>ETL US UL Std. 2703<br>Intertek | - PEG specific clamping approval from module manufacturers<br>- Wind load certificate by German IFI Institute with local wind codes (ASCE).<br>- The PEG® substructure is UL 2703 certified.<br>- PE Stamped Drawings - Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, IS875, and SANS10160, etc.<br>Values may vary depending on the structural code. |

PEG® EW PV system in Dareton, Australia

Installation of a PEG® EW PV system in Dareton, Australia

## Requirements

| | |
|---|---|
| **Land soil condition** | Cohesive (e.g. sandy-clay, clayey silt) and non-cohesive soil (e.g. sand or sand-gravel).<br>Rock (e.g. lime stone, basalt), pre drilling required. |
| **Upper soil layer** | Pre drilling needed if hard bedrock or underground infrastructure 1 m below ground (deeper if needed).<br>Rammed depth up to 0.8m (or deeper if needed). |
| **Site slopes** | Up to 10° (17.6%) for sites without snow.<br>6% slope with snow, subject to site conditions and site specific system design |




1) subject to the site conditions and system design

2) Depends on the POT-values. For exceptional permafrost conditions, the ramming depth could be up to 2m, done by the use of two rods crimped together onsite through a sleeve, subject to project-specific approval.

**✱ Explanation of key figures on page 1:**

**MWp/ha:** Referring to the complete DC area, including the gaps between the DC blocks/tables
**kWp/working hour:** Time for complete DC installations including inverter stations
**MWp/container:** Only the substructure
**Machine costs:** All machines required for the DC installation
**Labor costs:** Labor for complete DC installations including inverter stations
**Logistic costs:** Including machinery and labor, to the site and onsite

**All figures assume suitable ground conditions, a min. 5MWp PEG® system with 580W modules and may differ regionally.**

PEG® Datasheet US 2024_0320
Pictures: Jurchen Technology GmbH, Meralli Projects PTY Ltd
All data may subject to alterations and errors.

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