

# PEG<sup>®</sup>

Revolutionizing PV Mounting



Reaching the lowest cost of electricity with  
simplified, rapid deployment, high-density mounting

# IT'S NOT EPC,

The PEG® system is a revolution in the field of substructures for solar power plants with framed modules.

It is a simple and unique solution designed for East/West orientations. The PEG® system delivers the lowest possible levelized cost of electricity (LCOE) with a maximum efficiency of space, constant energy generation over the day and a large volume scalability.

The PEG® system significantly reduces both substructure supply and delivery as well as installation costs. Due to the lightweight construction no foundation is needed. The required material is reduced by over 78% compared to conventional systems.

Less material and a simple design lead to reduced labor costs and construction times. The PEG® substructure is the lightest, most efficient and most innovative system on the market. The steel rods of the PEG® substructure can also be installed with only a hammer drill. Substructures of our competitors are heavier and more expensive. Most of them need concrete foundations and heavy machines.

The substructure is at waist height and allows for ergonomic, convenient and fast installation.



PV substructure conforms to UL Std. 2703



Rod



Head plate



Down plate



Base plate

## COST REDUCTION


- Compact substructure requires less materials reducing supply, logistics and installation costs by up to 40% compared to conventional alternatives. Case studies from Meralli sites show a bit more clear how much you'd save with PEG
- No DC trenching, no foundations, no concrete & minimal heavy machinery
- 225% improved land yield than traditional structures
- Demonstrated ability to deliver regional projects on time and on budget
- Ultra low profile blends in with surrounding environment = less pushback from neighbours
- 72% less CO2 compared to conventional substructures
- Contribute to regional sustainability by utilising local suppliers and labourers




# IT'S EPI

Engineering  
Procurement  
Installation


## EFFICIENCY IMPROVEMENT



**2.20 MWp\***  
per one 40 ft. container  
for the substructure



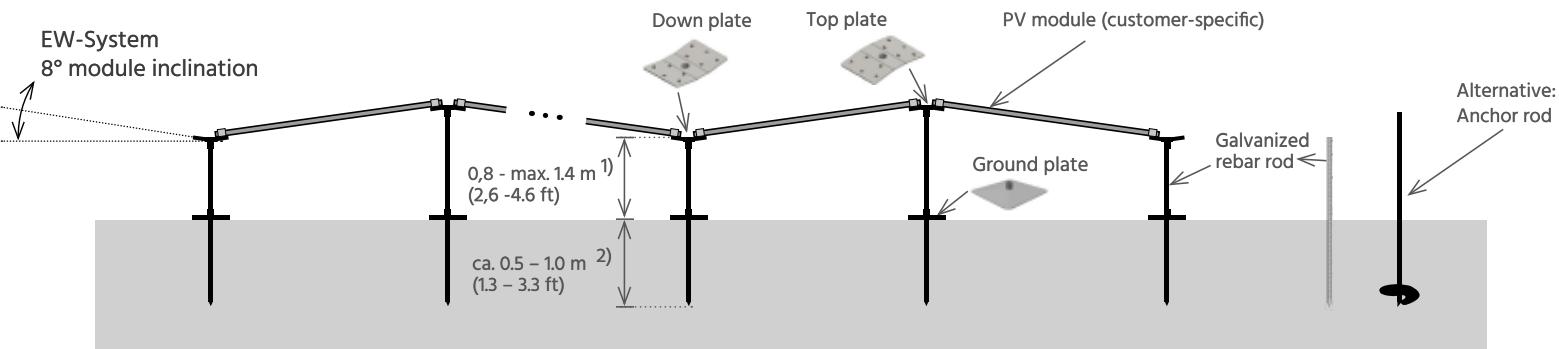
**460 working hours\***  
per MWp -  
applies to PEG EW Standard  
(2.2 kWp per working hour)



**2.1 MWp\***  
per hectare  
(852 kWp per acre)


## SIMPLICITY

- Robust & certified for tropical weather, high winds (298+ kmh, 185+ mph) and high snow loads (up to 50psf)
- Self stabilizing
- Low visual impact



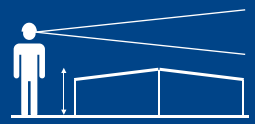
<sup>1)</sup> subject to the site conditions and system design  
<sup>2)</sup> Depends on the POT-values. For exceptional permafrost conditions, the ramming depth could be up to 2m, done by the use of two rods crimped together onsite through a sleeve, subject to project-specific approval.

## ENVIRONMENTAL PROTECTION



**-72%**  
less carbon

ClimatePartner GmbH calculated the carbon emissions generated by the PEG® versus conventional system based on the Greenhouse Gas Protocol indicating the carbon footprint is 72 percent (61 tons CO<sub>2</sub>/MWp) less versus a conventional fixed-tilt system.



**Low visual impact**  
only 1m (3' 4") high

The maximum construction height of the PEG® system is very low at 1 m (3.3 ft) compared to conventional racking systems. Ground penetration is only 0.4 to 1 m (1.3 - 3.3 ft) meters.

Low visual impact, minimal foundation depth and no concrete can greatly simplify the permit application process.





## ENGINEERING

- High land utilization (97% GCR)
- Low visual impact
- Fully scalable from 1 MWp to GW+ scale

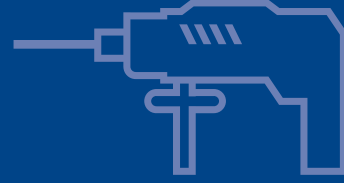


Scan QR-code & learn more about the efficient PEG design!



## PROCUREMENT

- Significant CAPEX reduction (Supply and Logistics)

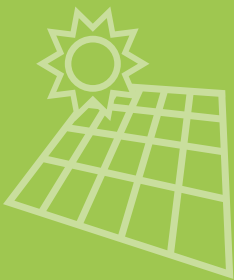


## INSTALLATION

- No heavy machines
- No DC cable trenching
- No concrete foundations
- Simpler H&S procedures
- Low-skilled labor



Scan QR-code & learn more about the simple PEG installation!



## OPERATION

- Consistent energy generation across the day
- Low ecological footprint
- Robust design
- Stormproof



## MAINTENANCE

- Cost-effective solutions for cleaning & landscaping

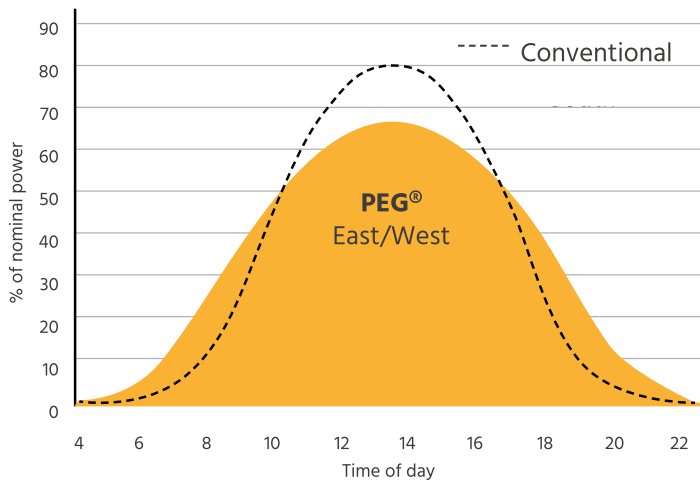


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# CONSISTENT GENERATION ACROSS THE DAY

Comparison of photovoltaic systems  
of different orientation on a sunny day (8 July)



Production is closer to base line allowing for more consistent production throughout the day.

## APPROVED MODULES

Most module suppliers are compatible with PEG®. All approved modules including UL certification are available at [www.jurchen-technology.com](http://www.jurchen-technology.com).



Scan QR-code!



Australia

10.8MWp PEG® system at Queensland, Australia



## Key data

- Extremely light substructure
- Innovative and simple system
- All components will be installed above ground
- Specialized aerodynamic proven design
- No concrete foundations required
- Safe installation

## Technical data

<b>Orientation PV array</b>	Patented 8° East-West, fixed-tilt, aerodynamic proven
<b>BOM (Bill of material)</b>	1.1 rods and 2.1 clips per module
<b>Large volume scalability</b>	Any power plant capacity from 10 kWp up to GWp+ scale
<b>Durability</b>	Galvanized steel rods and plates All DC cabling components are weatherproof and UV resistant
<b>Wind loads</b>	Designed for 298+ kmh, 185+ mph wind; compliance TBD by local engineering per wind region
<b>Snow loads</b>	Designed for 50 psf snow load
<b>Seismic loads</b>	Significantly lower impact vs other racking systems
<b>Certifications</b>	Clamping approval from module manufacturers Wind load certificate by local engineering firm in accordance with local wind codes The PEG® substructure is UL certified.

## Requirements

<b>Land soil condition</b>	Cohesive (e.g. sandy-clay, clayey silt) and non-cohesive soil (e.g. sand or sand-gravel). Rock (e.g. lime stone, basalt), pre drilling required.
<b>Upper soil layer</b>	Pre drilling needed if hard bedrock or underground infrastructure up to 1m below ground; rammed depth up to 0.8m. In case of soil contamination (e.g. ammunition, explosives or on landfills), use the ballasted PEG system!
<b>Site slopes</b>	Up to 20° (~36%) subject to site conditions and PEG system design.

\* Explanation of the key figures on page 3:

- MWp/ha:** In relation to the entire DC area, including the gaps between the DC blocks/tables
- kWp/Labour hour:** Time for the complete installation of a PEG solar power plant incl. inverter stations inverter stations
- MWp/container:** Only the substructure
- Machine costs:** In relation to all machines for the installation of the DC system, compared to a conventional substructure

- Labour costs:** Labour costs for the complete installation of the PEG solar power plant, including inverter stations, compared to a conventional substructure
  - Logistics costs:** All logistics costs, including machinery and labour, to the site and on site, compared to a conventional substructure
- All figures assume ideal ground conditions and a min. 5MWp PEG system with 550W modules and may vary from region to region.**



**Jurchen Technology GmbH**  
Prinz-Ludwig-Straße 5  
97264 Helmstadt  
Deutschland  
  
info@jurchen-technology.com  
www.jurchen-technology.com



**Jurchen Technology India Private Limited**  
Andheri – Kurla Rd, Chakala, Opposite to  
Cinemax, Andheri East, Mumbai,  
Maharashtra 400093. Indien.  
  
sales@jurchen-technology.com  
www.jurchen-technology.in/



**Jurchen Technology US Corporation**  
101 Jefferson Drive  
Menlo Park, CA 94025  
USA  
  
matthew.lusk@jurchen-technology.com  
www.jurchen-technology.com