JURCHEN TECHNOLOGY

Substructures for PV power plants

Welcome
to the world of clever solutions

Substructure PV power plants

Depending on the terrain conditions, Jurchen Technology offers substructures for your photovoltaic power plants: the patented PEG system, the smartFLAP system for extra large modules, or our single or double-post Uni-/TwinBase system, – Jurchen Technology has a product for every application.

Our Engineering department carries out the structural engineering calculation based on general conditions such as the wind and snow load and pull-out tests. The customer can thus be certain that the chosen substructure will withstand the on-site strains and stresses.

The laser-precise alignment of the substructure allows for uniform light on the photovoltaic modules. Our standardized components are manufactured with high-quality material. Our substructure is available in different variations - depending on the module type. Whether you use thin-film modules or crystalline modules, thanks to the Jurchen Technology DC cabling system, your power plant will be most effective.

MINIMAL SOIL SEALING

Due to the unique posts of our mounting system, a 1000 KWp photovoltaic power plant seals approximately one square meter. Sunlight and rainfall still reach the ground. Flora and fauna of this region won’t be impaired.

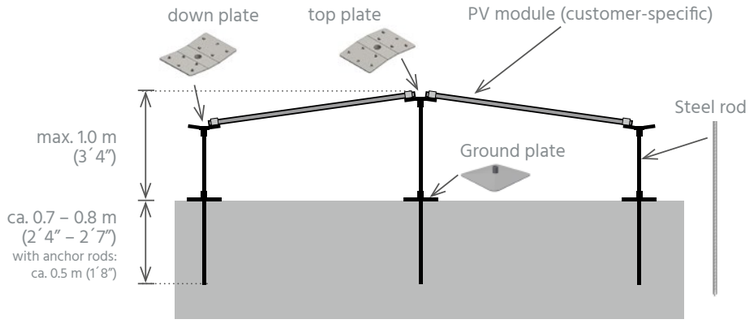
PEG® PV substructure

The revolution in utility scale pv power

PEG

YOUR ADVANTAGES

- Simple and fast installation reduces labor and machinery costs by more than 50%
- Highly efficient area utilization of 1.85 MWp per hectare due to patented ground-guided power plant system
- Flat module angles avoid shading effects and allow maximum space efficiency
- Comparatively constant energy production throughout the day due to flat 8° east-west orientation
- Preserving resources: up to 50% lower raw material usage (steel, power cables), resulting in a better CO2 balance
- Higher installation safety through much simpler assembly, e.g. no working-on-heights; ergonomic working mostly in the range of 0.8 m



TECHNICAL DATA	
Orientation PV array	Patented 8° East-West, fixed-tilt, aerodynamic proven
BOM (Bill of material)	1.10 rods and 2.15 clips per module
Large volume scalability	Any power plant capacity from 10 kWp to 100s MWp
Durability	Galvanized steel rods and plates All DC cabling components are weatherproof and UV resistant
Wind loads	Designed for 160+ mph wind; compliance TBD by local engineering per wind region
Snow loads	Up to 50°C (up to 55°C with Hot Climate Option)
Seismic loads	Clamping approval from module manufacturers
Certifications	Clamping approval from module manufacturers Wind load certificate by local engineering firm in accordance with local wind codes The PEG® substructure is UL certified.

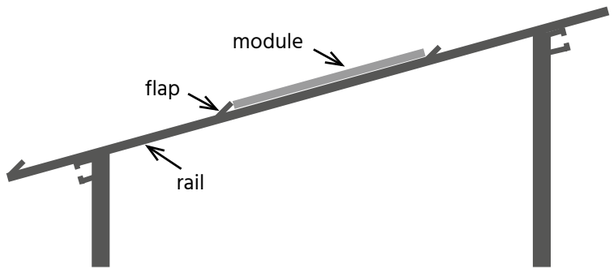
* Output yield and working hours refer to 550 W modules. The actual figures depend on the region and soil conditions.

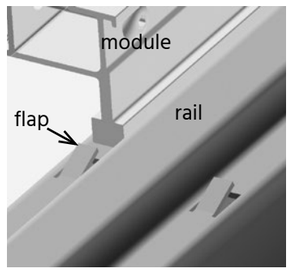
smartFLAP

YOUR ADVANTAGES

- smartFLAP is a PV fixed tilt substructure for large photovoltaic modules. The system is optimized for FirstSolar Series 6 modules.
- smartFLAP PV substructure has rails with flaps. The flaps allow exact positioning of the modules and prevent them from slipping backward while the rails act as a guidance/ track up to the final position.
- Three times faster module mounting (vs. typical structures)
- Safe, easy and fast positioning
- Less risk of injury and damaging modules
- Only 2 screws per module for fixing

TECHNICAL DATA	
System	specially adapted for First Solar Series 6 modules
Module arrangement	3 modules portrait on top of each other
System inclination	8°, 15°, 20°
Height above ground level	on request, ~700 mm (bottom edge of module table)
System height	~2380 mm
Distance between piling supports	according to static calculation
corrosion class	C3, C4
Module type	framed



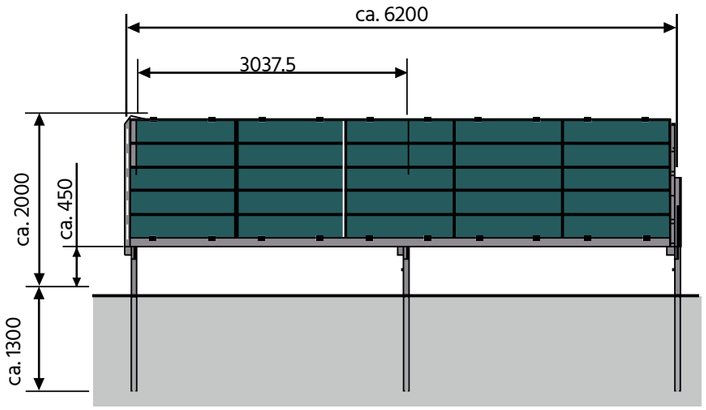


The flaps prevent slip back and keep the modules in correct position.

UniBase

YOUR ADVANTAGES

- Easy assembly without sealing of the surface area (no concreting necessary)
- Inclination: Standard 25°, individual design upon inquiry
- Optimal adaptation to the prevailing terrain conditions, even in uneven terrains
- Universally for all frameless and framed and modules
- Designed for snow-load zone II and wind zone I (other dimensioning upon inquiry)
- Small amount of components which allow for a faster installation



Uni-Base HAL D

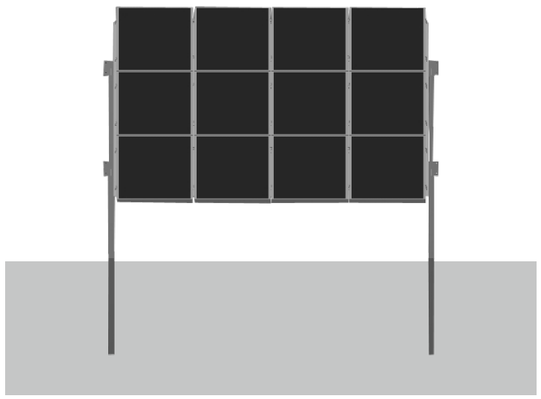
TECHNICAL DATA	
Sturd distance	3.04 m
Width/Module table	6.20 m
Module inclination	10°, 15°, 20° or 25°
Height above ground	Approx. 0.45 - 0.80 m (bottom edge of the module table)
Suitable module types	Thin-film and crystalline modules
Max. count of module tables[1]	5
Material	Hot-deep galvanized steel. PV modules and clips based on corrosion-free aluminum and glass.
Module type	framed & frameless

[1]) due to temperature strains

TwinBase

YOUR ADVANTAGES

- Inclination: Standard 25°, individual design upon inquiry
- Universal application for all frameless and framed modules
- System designed for a wind speed of 150 km/h
- Small amount of components which allow a faster installation
- Scalable use at customer’s request



TECHNICAL DATA	
Orientation PV array	South or East/West
Sturd distance	depending on the module
Width/Module table	depending on the module
Height	Approx. 3.20 m
Module inclination	25°, or other
Height above ground	Approx. 0.7 m (bottom edge of the module table)
Suitable module type	universally adaptable
Material	Steel (S 235, hot-dip galvanized) Aluminium (EN AW 6060)
Module type	framed & frameless

German PV specialist for customized solutions

Since 2008, Jurchen Technology has specialized in the development and production of high-quality components for photovoltaic systems. We are the only provider on the market to offer a dual and innovative component solution for solar plants. This means that we manufacture both the substructure and the appropriate high-quality DC cabling for solar systems from the rooftop to the solar park. In its production of all components Jurchen Technology attaches special importance to the quality of the materials and workmanship and the long-lasting reliability of the products.

The company's development center guarantees thought-out and safe technical innovations and performs the preliminary work for the comprehensive range of products. Jurchen Technology offers its customers a transfer of know-how from the start of the project to accepting construction work. Engineers and technicians with many years of experience in solar energy work out structural engineering planning and cost-efficient cabling solutions.

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