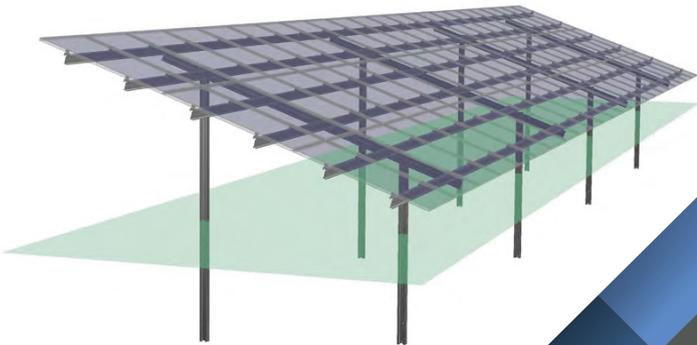




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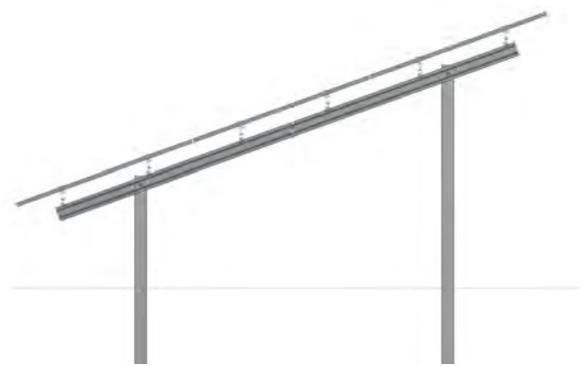
YS DUO

PRODUCT SHEET

Double-post steel system

With the correct substructure, safe standing, high efficiency and a long service life of ground-mounted systems are guaranteed. YS has proven itself for many years in countless projects almost all over the world. Double post systems are the number one choice for large multi-row module arrays. YS Duo is the ideal solution when large module tables are to be installed on flat slopes.

- No sealing of soil
- System components are perfectly matched
- Maximum prefabrication
- Installation times kept extremely short
- High efficiency
- 5-year guarantee



Cost savings as an important factor

The demand for even greater economic efficiency is also growing louder for ground-mounted systems. Cost pressure is growing. In many cases, we have succeeded in noticeably reducing the overall costs for large-scale PV plants by using steel pile-driven foundations. This type of foundation usually eliminates the need for concrete foundations. This reduces labor and material costs.



Stability represents the most important priority

Two ram foundations per support, in combination with the load-optimized Z-purlins, result in a stable and load-bearing PV substructure for module arrays with large spans.

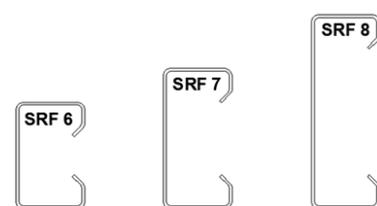
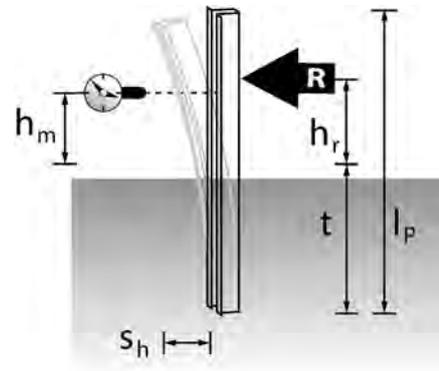
Guaranteed secure stand

The in-depth and customized project planning based on the currently valid standards ensures the long-term stability of the plant. Furthermore, a geological survey of the sub-soil is carried out on site. The bearing capacity of the soil is established on the pile-driven foundation by means of load tests.

- Oblique tensile tests
- Creation of soil profiles
- Horizontal compression testing
- Chemical laboratory analysis

Oblique tension mechanical reasoning:

The basic principle of the oblique tensile test is built on the fact that the wind blows almost perpendicular to the module surface. This creates a contact pressure from the introduction of the bending moment in the form of a pair of forces. The frictional resistance between the mullion and the ground is usually much higher compared to the skin friction at inclinations greater than "15°", which leads to a higher tightening resistance.



Significant advantage for the double-post system

The fundamental framework for any YS system is the support geometry. By using two ram foundations per support, higher support loads can be dimensioned than with only one post. This naturally allows for greater spacing distances between supports and module panel spans. The small number of components reduces assembly times to a minimum.

Suitable for any module

The modules can be mounted quickly and cost-effectively from the floor or on the frame with suitable tools, depending on the customer's requirements. The modules are arranged according to the project. Depending on requirements, these are laid out vertically, horizontally or with the combination clamp. The module clamps are fastened in pre-punched slotted holes or, on request, fastened to aluminum module clamp adapters.

TECHNICAL DATA

Material	Continuously hot-dip coated steel Girder: zinc magnesium alloy coated steel, alternatively: continuously hot-dip coated Fasteners, bolts: galvanized steel, aluminium Module clamps: aluminium
Design	- Adjustment possibility for fine adaptation to the ram result - Reduced total construction costs based on static optimization - Quick and easy installation of the components
Module clamps	- Possibility of combined module clamping - Framed and unframed modules
Accessoires	Cable ties
Logistics	- Maximum level of prefabrication - Optimal handover to the construction site
Delivery and service:	- individual frame statistics based on regional data - Delivery of all assembly material
Ground Maintenance	Sheep grazing
Structural analysis	- Individual site structural analysis based on an external soil survey - Individual system structural analysis based on the regional critical loads - Profile geometries with highly efficient material utilisation - Verification of all construction components on the basis of FEM calculations • - Optional: Vibration simulations for wind forces

For more information, see www.ysolar.co.jp.



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