SCHLETTER
The Solar Mounting Group

FS DUO

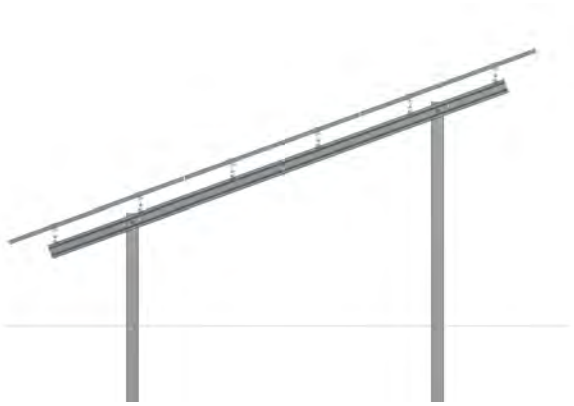
PRODUCT SHEET

FS DUO

The double-post steel system

With the right substructure from Schletter, secure standing, high efficiency and a long service life of open-area installations are guaranteed. For many years, FS has proven itself in countless projects almost everywhere in the world. Double-post systems are the first choice for large multi-row module arrangements. FS Duo is the ideal solution if large module tables are to be installed on flat slopes on level terrain.

- **No soil sealing**
- **Perfectly matched system components**
- **Extremely short installation times**
- **Maximum degree of prefabrication**
- **High efficiency**



We have successfully turned the screw on savings

The call for even greater economic efficiency is also becoming louder for open-area installations. Cost pressure is growing. In many cases, we have succeeded in noticeably reducing the total costs for large-scale PV systems by using steel ram foundations. This type of foundation makes the use of concrete foundations mostly superfluous. This reduces labour and material costs.

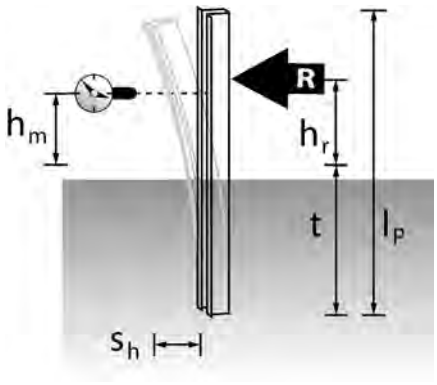
Stability is the top priority

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

Secure standing is guaranteed

The detailed and individual project planning based on the currently applicable standards enables the long-term stability of the installation. Of course, this is not enough for us. In addition, a geological survey of the foundation soil is carried out on site. The load-bearing capacity of the soil is determined on the ram foundation by means of load tests.

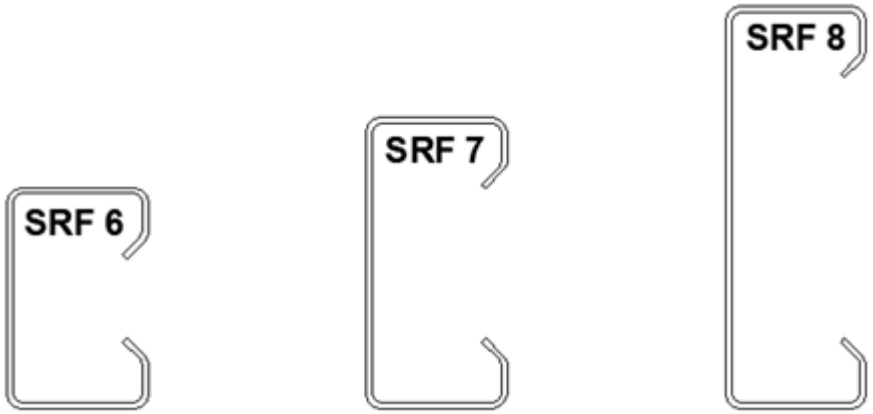
- **Oblique tension tests**
- **Horizontal compression tests**
- **Preparation of soil profiles**
- **Chemical analysis in the laboratory**



Oblique tension mechanical background:
The fundamental principle of oblique tension tests is based on the fact that the wind blows almost perpendicular to the module surface. This creates a contact pressure from the initiation of the bending torque in the form of a force couple. The frictional resistance between the post and the ground is usually significantly higher than the skin friction at inclinations greater than "15°", resulting in a higher tightening resistance.

Optimally equipped against wind and snow pressure

In order to ensure that the binding forces can also be transmitted to the upper connection point and thus give the installation its optimum stability against wind and snow pressure, strip-galvanised ram profiles in various size classes (SRF6/SRF7/SRF8) are used for the foundation. The ram designs specially developed by us ensure optimal embedding in the ground with maximum bending stiffness at the same time.



Clear advantage for the double-post system

The basic structural framework for every FS system is the support geometry. By using two ram foundations per support, higher superimposed loads can be dimensioned than with a single post. This, of course, also enables larger spacing between supports and module panel spans. The small number of components reduces installation times to a minimum.

Suitable for every module

Depending on the customer's wishes, the modules can be installed quickly and inexpensively from the floor or on the frame with suitable tools. The arrangement of the modules is project-specific. These are laid out vertically, horizontally or with the Schletter combi clamp, as required. The module clamps are fixed in pre-punched slotted holes (Fig. 1) or, on request, on aluminium module clamp adapters (Fig. 2).

For bi-facial modules, a raised adapter (Fig. 3) of 60 mm in height is used to prevent shading of the support profiles on the rear side.

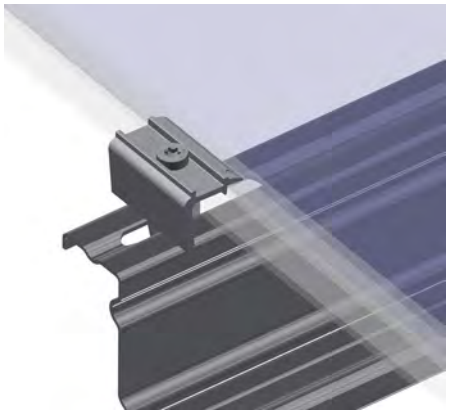


Fig. 1

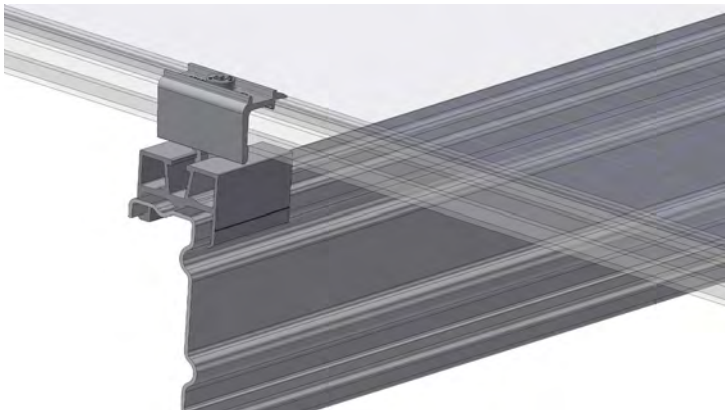


Fig. 2

Fig. 3

TECHNICAL DATA

Material	• Ram foundation: Steel, continuously hot-dip refined • Girder/purlins: Steel, coated with zinc magnesium alloy, alternatively continuously hot-dip refined • Fixing elements, screws: Zinc-flake coated steel, aluminium • Module clamps: Aluminium
Design	• Adjustment option for fine adjustment to the ram result • Reduced overall construction costs on the basis of static optimisation • Components for quick and easy installation
Module clamps	• Framed and unframed modules • Combined module clamping possible • Rapid16 and Rapid16L
Accessories	Cable ties
Logistics	• Maximum degree of prefabrication • Optimal transfer to the construction site
Delivery and service	• Individual frame structural analysis based on regional data • Delivery of all installation materials
Structural analysis	• Individual site structural analysis based on an external soil survey • Individual system structural analysis based on the regional critical loads Load assumptions according to DIN EN 1990 (Eurocode 0), DIN EN 1991 (Eurocode 1), DIN EN 1993 (Eurocode 3), DIN EN 1999 (Eurocode 9) and additional or corresponding country-specific standards • Profile geometries with highly efficient material utilisation • Verification of all construction components on the basis of FEM calculations • Optional: Vibration simulations for wind forces
Ground maintenance	Sheep grazing

Module clamps and accessories can be found in our latest component overview.

More information at: www.schletter-group.com

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