

# Duraklick

Mounting Systems  
South

# Information



**SOLTOP**  
SONNE WÄRME STROM

## Mounting Systems South

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# SR

## Mounting Systems South

**SOLTOP** offers a flat roof mounting systems for photovoltaic arrays on industrial and commercial buildings. The flat roof mounting systems of the SR-series were developed specifically to meet the requirements of largescale on-roof systems.

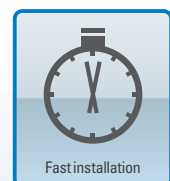
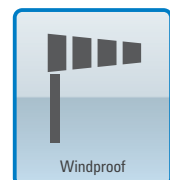
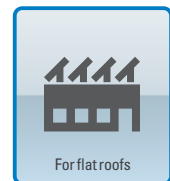
These are self-supporting, lightweight aerodynamic mounting systems in aluminium construction. They are installed without roof penetration and require only a slight additional load. The use of building protection mats as an installation foundation offer additional protection for the roof membrane.

The mounting system SR is also available with an 10° inclination - especially developed for the South-European market. It features a higher power-output due to more modules per square-foot roof space.

From now on even difficult flat roofs can be suitable for efficient harvesting of solar power. The mounting systems are quick and easy to install and the efficient use of materials and installation capacity saves you time and money. You can rely on the quality and safety of your system because we individually certify each and every one.

### **Convincing Features:**

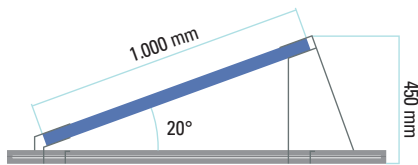
- ▶ easy and safe
- ▶ adds only a slight additional load
- ▶ corrosion-resistant and statically examined
- ▶ Made in Germany



## Mounting Systems South

### SR 100/20

...suitable for photovoltaic-modules with a width of 950 - 1.065 mm



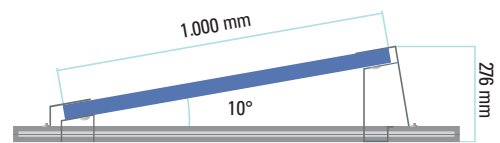
#### Technical Specifications

Inclination	20°
Rail length	0,7 - 6,0 m
Module width	950 - 1.065 mm
Distributed load	ca. 9.8 kg/m <sup>2</sup> *
Liniar load	ca. 16.8 kg/m *
Material	aluminium / stainless steel

\* assuming a module weight of 19 kg

### SR 100/10

...suitable for photovoltaic-modules with a width of 950 - 1.065 mm. Inclination 10°



#### Technical Specifications

Inclination	10°
Rail length	0,7 - 6,0 m
Module width	950 - 1.065 mm
Distributed load	ca. 10.7 kg/m <sup>2</sup> *
Liniar load	ca. 18.1 kg/m *
Material	aluminium / stainless steel

\* assuming a module weight of 19 kg





## Quick-Start-Guide

Transverse installation of our mounting systems is carried out with the Duraklick click-in modules.

### Installing ground rails

- ▶ PV system is measured out on the roof
- ▶ Building protection mats are laid down
- ▶ Ground sections are measured and lined up
- ▶ Sections are joined together with profile-connectors

### Duraklick® click-in modules

- ▶ Row divisions are measured
- ▶ Front and rear module supports are simply clicked into place
- ▶ Put ballast on if necessary

### Module mounting

- ▶ Modules are placed onto the module supports
- ▶ PV modules are attached with the module clamps
- ▶ Module cabling is installed

### Closing the system

- ▶ Wind baffles and side spoilers are attached to the PV modules



## 3 Steps to your mounting system

### Send inquiry to SOLTOP with the following...

- ▶ Completely filled out checklist
- ▶ Assignment plan with module arrangement
- ▶ Drawing of the roof with section
- ▶ Information on directly bordering building areas including height specifications
- ▶ Photos of roof, location and surrounding area from all directions and a Google Earth image
- ▶ Data sheets on roof cladding and insula

### Feasibility check

Upon this information SOLTOP checks the feasibility and gives you notice. You will receive a non-binding prior information on the amount of ballast required.

### After having placed the order

We will carry out an exact structural calculation and determine the final extra load according to the statics of the system.



## Requirements

### Technical and planning requirements for the mounting-systems Duraklick SR

- ▶ The Duraklick-mounting systems are in stock and are offered according to the requirements of the project.
- ▶ Inclination: 20° oder 10°
- ▶ Minimum output: 10 kWp

### Module Requirements:

- ▶ Modules with following dimensions can be used:

	Duraklick SR 100/20 Duraklick SR 100/10
Module width:	950 - 1.065 mm
Module length:	1.630 - 1.691 mm 1.470 - 1.530 mm 1.290 - 1.350 mm

- ▶ Standard-gaps:
    - 2,00 m\* for Duraklick SR 100/20
    - 1,50 m\* for Duraklick SR 100/10
    - Otherwise variable; max. 2,50 m\*
- \* Measured from front edge to front edge of module.  
(See attached drawing at page 10 and 11.)
- ▶ Minimum array:  
4 x 8 modules or 8 x 4 modules, with at least three rows in the array.
  - ▶ A separation of the ground rail or the module field must be planned after 15 horizontal modules and 15 vertical rows.
  - ▶ After the separation of the module field there has to be kept 40 cm space for the spoiler.

### Roof Requirements:

- ▶ Industrial roofs with film or bitumen covering
- ▶ Maximum roof pitch 5° (special solutions available on request)
- ▶ The minimum distance to parapet or roof edge is calculated with the following formula:

$$\text{Minimum distance} = \frac{\text{Building-height} \times 2}{10}$$

Example for calculation:

$$\text{Height 12 m} \frac{12 \times 2}{10} = 2,4 \text{ m minimum distance.}$$

(or after consultation)

- ▶ The edge distances specified in the structural analysis have to be observed.
- ▶ Flat, even roof surface (no creases in the covering, no sagging and no steps on the roof)
- ▶ For separating layer between the floor profile and the roof cladding there have to be used convenient building protection mats (You can find a list of the supplier on the following page).
- ▶ Critical roof areas are the NW and NE corners due to uplift forces. Higher ballasting must be planned for there.
- ▶ Skylights, chimneys, etc. have to be build round.
- ▶ Modules cannot be arranged individually.

### Structural Calculations:

- ▶ The costs for the structural calculation is included in the price of the order. If a structural analysis will be ordered in advance, the costs are calculated as follows:

- System size up to 500 kWp: EUR 295,00  
(plus 19% VAT)\*

- System size from 500 kWp: EUR 395,00  
(plus 19% VAT)\*

\* fully reimbursed if an order is placed



## Building protection mats

We guarantee the stability of the construction if suggested building protection mats are used. Please use for bitume and foil-roofs mats of 8 mm thickness; for gravel mats of at least 4 mm thickness. We tested the following mats respective the friction coefficient in wet and dry conditions and those we recommend: mats from BSW (Type Regupol 9510 RHS) or HMS (Type 7153P).

### Examples of suppliers:

- ▶ directly from SOLTOP
- ▶ BSW Berleburger Schaumstoffwerk GmbH  
Am Hilgenacker 24  
57319 Bad Berleburg  
Germany  
Tel.: +49 (0) 2751 803-0  
Fax: +49 (0) 2751 803-109  
info@berleburger.de  
www.berleburger.de
- ▶ HMS-Dichtungen GmbH & Co. KG  
Bachstraße 2  
49090 Osnabrück  
Germany  
Tel.: +49 (0)541-60 02 79 -0  
Fax: +49 (0)541-60 02 79 -79  
info@hms-dichtungen.de  
www.hms-dichtungen.de

### Important:

The compatibility of mats with the roof cladding must be determined for each project individually by the installer. Roofs with PVC-foil may have a incompatibility due to plasticiser in the mats. In general we recommend the use of a additional fleece (polyester-fleece 200 g/m<sup>2</sup>) between roof cladding and protection mat, but do not give any warranties for this.

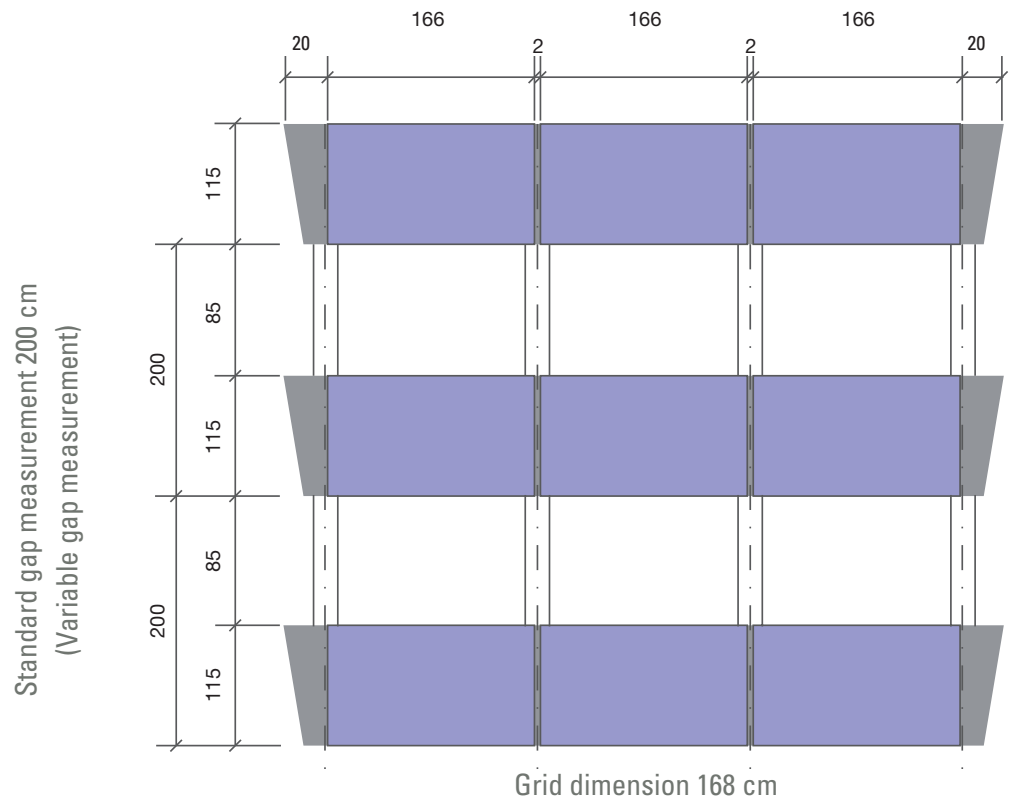


## Sample with dimensions

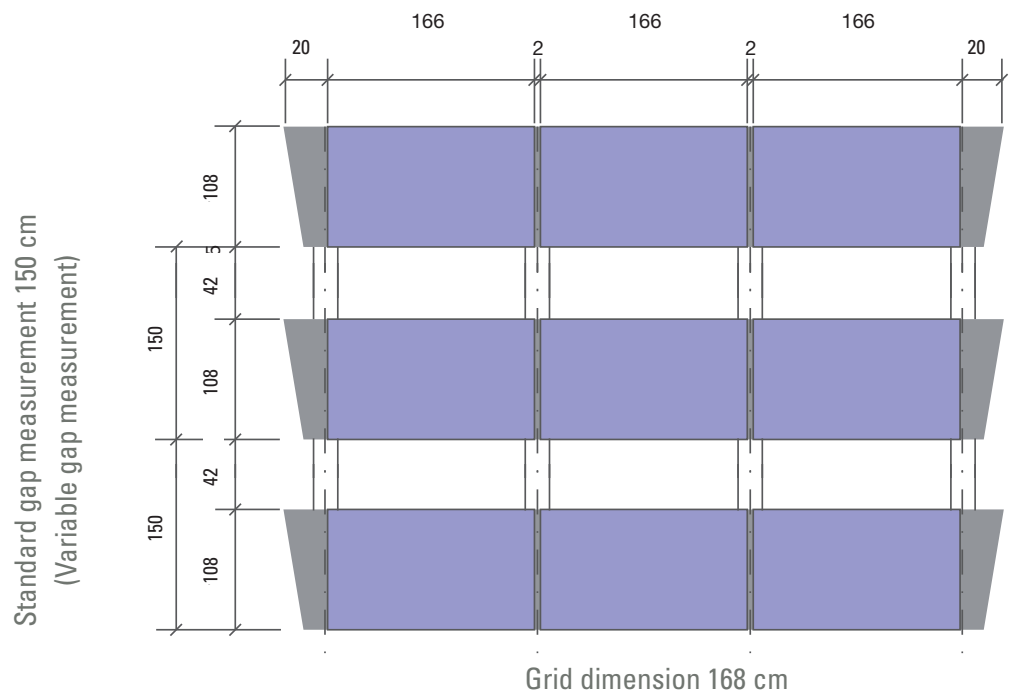
### Duraklick SR 100/20 and Duraklick SR 100/10

For a module array consisting of 3 x 3 modules of 166 cm width:

#### SR 100/20



#### SR 100/10



# Checklist (1)

## Installer

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Company: \_\_\_\_\_ Mobile: \_\_\_\_\_  
Street / No.: \_\_\_\_\_ Fax: \_\_\_\_\_  
Postal Code / City: \_\_\_\_\_ E-Mail: \_\_\_\_\_

## Construction project / Project

Name of Customer: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Name of Project: \_\_\_\_\_ Mobile: \_\_\_\_\_  
Street / No.: \_\_\_\_\_ Fax: \_\_\_\_\_  
Postal Code / City: \_\_\_\_\_ E-Mail: \_\_\_\_\_

## Mountingsystem

- |  |   |
|--|---|
| <input type="checkbox"/> Duraklick <b>SR 100/20</b> (South)      | <input type="checkbox"/> Duraklick <b>ECO 20°</b> (South) |
| <input type="checkbox"/> Duraklick <b>SR 100/10</b> (South)      | <input type="checkbox"/> Duraklick <b>ECO 10°</b> (South) |
| <input type="checkbox"/> Duraklick <b>GR 100/20</b> (Green roof) | <input type="checkbox"/> Duraklick <b>ECO 15°</b> (South) |
| <input type="checkbox"/> Duraklick <b>EW100/10</b> (East-West)   |   |

## Delivery address and site information

Street / No.: \_\_\_\_\_ Postal Code / City: \_\_\_\_\_  
Ground-Elevation above MSL: \_\_\_\_\_ m  
Windzone according to DIN 1055: \_\_\_\_\_  
Snow load zone according to DIN 1055: \_\_\_\_\_  
Important: Possible extra load according to the building-statics (load-reserve) of \_\_\_\_\_ kg/m<sup>2</sup> lbs/ft<sup>2</sup>

## Terrain category

- 0 Coastal areas
- I Open terrain without obstacles
- II Open terrain with scattered obstacles
- III Suburbs, industrial or commercial areas
- IV Town

# Checklist (2)

## Roof specifications

Type of construction:  existing roof  renovated roof  new building

Height of roof: \_\_\_\_\_ m Roof-pitch (max. 5°): \_\_\_\_\_ degrees

Useable roof area (length): \_\_\_\_\_ m Useable roof area (width): \_\_\_\_\_ m

Building dimensions (length): \_\_\_\_\_ m Building dimensions (width): \_\_\_\_\_ m

Age of roof: \_\_\_\_\_ years

Parapet available:  Yes  No Height: \_\_\_\_\_ m

## Specifications on the type of roof

Plastic-foil covered roof  PVC-foil covered roof

Manufacturer (if known): \_\_\_\_\_

Bitumen  Additional gravel covering  Other: \_\_\_\_\_

Height of gravel covering: \_\_\_\_\_ cm  Mounting **on top** of gravel  Mounting **in** the gravel

Green roof intensive  Green roof extensive

Kind of substrate: \_\_\_\_\_

Type of insulation / Insulation thickness / Compressive strength in kN/m<sup>2</sup>: \_\_\_\_\_

## Gap-Measurement (measured front-edge module to front-edge module)

Duraklick **SR 100/20 / ECO 20°**  Standard gap 2,00 m  Individual gap \_\_\_\_\_m

Duraklick **SR 100/10 / ECO 10°**  Standard gap 1,50 m  Individual gap \_\_\_\_\_m

Duraklick **GR 100/20**  Standard gap 2,00 m  Individual gap \_\_\_\_\_m

Duraklick **EW 100/10**  Standard gap 2,35 m  Individual gap \_\_\_\_\_m

Duraklick **ECO 15°**  Standard gap 1,75 m  Individual gap \_\_\_\_\_m

## Module data

Module manufacturer: \_\_\_\_\_

Output (Wp): \_\_\_\_\_

Module dimensions (mm x mm x mm): \_\_\_\_\_

Module weight (must be indicated): \_\_\_\_\_

Number of modules: \_\_\_\_\_



# Checklist (3)

## Delivery / Unloading Equipment

The Duraklick-material is delivered by a forwarding company. Please make sure that unloading-equipment e.g. forklift or crane is available on delivery-day. Duraklick will not cover costs occurring due to the lack of unloading options.

## The following must be submitted

- Drawing of the roof (as AutoCAD or PDF-file) with module-arrangement and roof dimensions
- Please note where South is located
- Photos of roof, location and surroundings (from all directions)
- Section of the building
- Module datasheet

\_\_\_\_\_

Place, Date

X \_\_\_\_\_

Signature

\_\_\_\_\_

Company stamp

# Mountingsystem-Order

Only fully completed orders can be processed.

We herewith bindingly order the mounting system

- Duraklick **SR 100/20**
- Duraklick **SR 100/10**
- Duraklick **EW 100/10**
- Duraklick **ECO 10°**
- Duraklick **ECO 15°**
- Duraklick **ECO 20°**
- Duraklick **GR 100/20**
- Duraklick **HSS**

Company stamp

VAT-Number (**Important!**): \_\_\_\_\_

Project-No.: \_\_\_\_\_

Special arrangements: \_\_\_\_\_

Shipping address: \_\_\_\_\_

Shipping address is business address:  Yes

Contact person for delivery: \_\_\_\_\_

Tel.-No. for notification by forwarding company: \_\_\_\_\_

Required delivery week / date: \_\_\_\_\_

Required delivery time: \_\_\_\_\_  
(from/until): \_\_\_\_\_  
We try to fulfill delivery-wishes and guarantee the delivery date but no exact time.

Delivery and Unloading: **The Duraklick-material is delivered by a forwarding company.  
Please make sure that appropriate unloading-equipment is available.**

What kind of unloading-equipment will be at the delivery-site?  Forklift  Crane (Important for choosing correct transport)  
Duraklick will not cover costs occuring due to the lack of unloading options.

Coaching by our Service-Personel required? (chargeable)  Yes  No

Checkliste up-to-date?  Yes  No

Up-to-date, approved roof allocation plan and module data sheet must be attached (with date, signature).

We herewith confirm the accuracy of the information

Place, Date

Signature