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Base de données "Photovoltaïque et bâtiment"

SOLON SOLfixx Black /

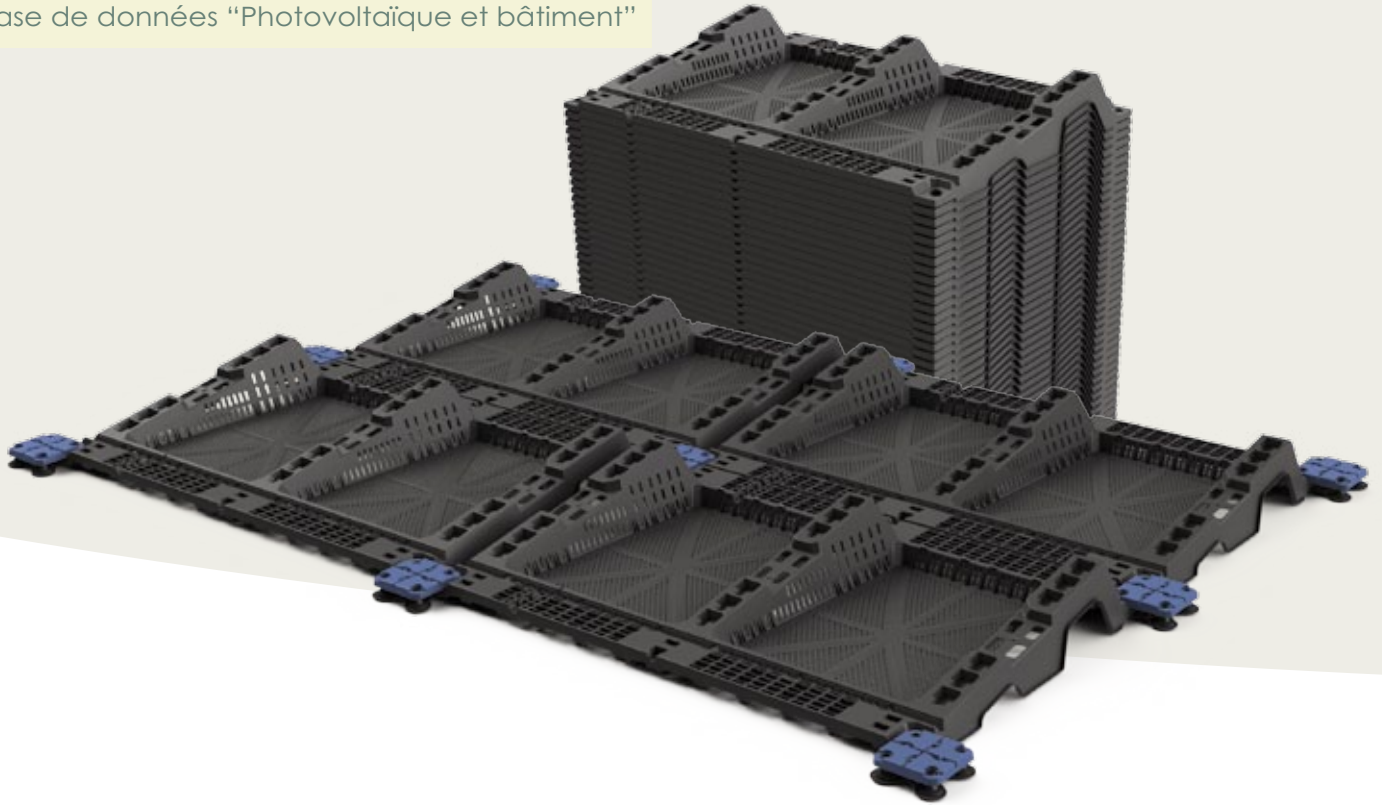
# SOLON SOLfixx.

*Photovoltaic System for Flat Rooftops.*

**SOLON**  
*Innovation*

- More yield per square meter: area-optimized system
- Suitable for lightweight roofs from 13.9 kg/m<sup>2</sup> load-carrying capacity
- Meets the static requirements of DIN 1055/EN 1991-T1-T6
- Time-saving plug-and-play concept: No tools required
- Ideal for roof renovations: special mounting solutions for bitumen and plastic roofing strips
- Up to 25 years guarantee for substructure

**SOLON**  *Don't leave the planet  
to the stupid*



# *Innovative. Convenient. Powerful.*

SOLON SOLfixx is the first PV system for flat roofs that has its module and substructure integrated into one unit. The modules are installed on the substructure at an inclination of 10 degrees. This ensures maximum yield per square meter of roof area. An additional benefit: simple and fast plug-and-play installation.

The innovative flat-roof system is suitable for all roof structures and lightweight roofs with a carrying load capacity greater than 13.9 kg / m<sup>2</sup>. The tray-like plastic substructure provides a large support surface. This means that 70% of the loads are distributed to area on the roof. The rounded edges ensure additional roof protection. The system is not only easy to install, but also strong under extreme weather conditions. SOLON SOLfixx is stable enough for wind load zones 1 + 2, snow load zone 2a and meets the static requirements of DIN 1055 / EN 1991-T1-T6. In addition, SOLON offers up to 25 years guarantee for the substructure.

When planning a roof renovation based on bitumen or plastic strips, you will find that SOLON SOLfixx is the optimal solution. Special attachment methods render installation particularly easy.



### Higher Efficiency.

- › Module with an efficiency of up to 14.7%
- › Optimal energy output due to 10° inclination
- › Maximum output per square meter of roof area used

### Simple and Fast Installation.

- › Module and substructure form a single unit
- › Flexible installation solutions for various roof surfaces
- › Separation of mechanical and electrical installation possible

### Reliable Statics.

- › System weight of only 13.9 kg/m<sup>2</sup> perfect for lightweight roofs
- › Meets the requirements of DIN 1055 / EN 1991-T1-T6
- › Also tested in a wind tunnel

### Roof Protection.

- › Non-penetrating installation design<sup>1)</sup>
- › Roof-protecting design made of plastic

### Stability in all Aspects.

- › Stable polymer materials for long-term durability
- › Integrated cable channel and maintenance walkway
- › Withstands strong wind and high snow loads

<sup>1)</sup> Depends on snow and wind load, terrain category and height of building.

### For Sustainable Satisfaction: Up to 25 Years Guarantee.

In addition to our comprehensive warranties and services, we provide up to 25 years guarantee on the substructure. SOLON SOLfixx is not only distinguished by its reliability, however. It is also easy on your roof: 70% of the load is distributed over the surface and the line loads, exerted by rails for example, encountered in conventional systems, are avoided. Just as recommended by the leading manufacturers of roof seals.

#### SOLON Advantages:

- › 10-year product guarantee<sup>1)</sup>
- › 25-year performance guarantee<sup>1)</sup>
- › 10-year guarantee on substructure; extension up to 25 years available<sup>2)</sup>
- › SOLON solar insurance included<sup>3)</sup>
- › Positive binning of power classes (0 to + 4.99 Wp)
- › Free module recycling

<sup>1)</sup> According to SOLON Product and Performance Guarantee.

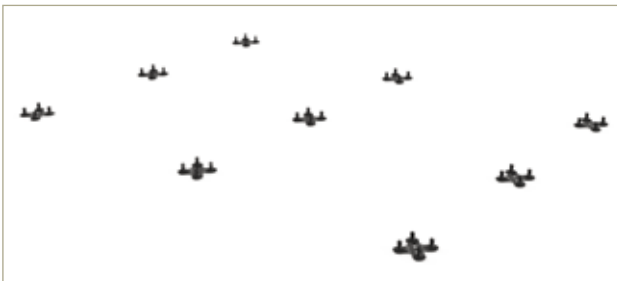
<sup>2)</sup> According to SOLON SOLfixx SE Product and Performance Guarantee. Guarantee extension up to 15, 20, 25 years possible.

<sup>3)</sup> Valid for the countries of the European Union and Switzerland.



# PRELIMINARY PRODUCT INFORMATION

## Tool-Free Installation.



### 1. Attach Mounting Plates.

- > Mark the first SOLON SOLfixx row
- > Position the attachment plates



### 2. Snap in Substructure.

- > Click the first SOLON SOLfixx row into place
- > Connect the cover plate to the lids of the base plates
- > Cable channels already integrated (UV protection)



### 3. Fastening onto a Rooftop Surface.

- > Ballasting, anchoring or welding – depending on the roof structure

### 4. Placing the Modules.

- > Position, click into place, ready
- > Wire up the modules



Powerful system components.

## SOLON Black 280/17 (monocrystalline)



### Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m<sup>2</sup>, (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3

Capacity rating	P <sub>max</sub>	290 Wp	285 Wp	280 Wp	275 Wp	270 Wp	265 Wp
Module efficiency		14.65 %	14.39 %	14.14 %	13.89 %	13.64 %	13.38 %
Rated voltage	U <sub>mpp</sub>	35.60 V	35.40 V	35.20 V	35.00 V	34.80 V	34.60 V
Rated current	I <sub>mpp</sub>	8.16 A	8.06 A	7.96 A	7.86 A	7.76 A	7.66 A
Open circuit voltage	U <sub>OC</sub>	44.23 V	43.96 V	43.69 V	43.42 V	43.15 V	42.89 V
Short circuit current	I <sub>SC</sub>	8.59 A	8.51 A	8.44 A	8.36 A	8.29 A	8.21 A
Maximum reverse current	I <sub>R</sub>	20 A	20 A	20 A	20 A	20 A	20 A
Maximum system voltage		1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V

Measuring tolerance for P<sub>max</sub>: ± 3 %

Reduction of module efficiency from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: < 4 %

### Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m<sup>2</sup>, NOCT, AM 1.5

Capacity rating	P <sub>max</sub>	208 Wp	204 Wp	201 Wp	197 Wp	194 Wp	190 Wp
Rated voltage	U <sub>mpp</sub>	31.91 V	31.73 V	31.55 V	31.37 V	31.19 V	31.01 V
Rated current	I <sub>mpp</sub>	6.52 A	6.44 A	6.36 A	6.29 A	6.21 A	6.13 A
Open circuit voltage	U <sub>OC</sub>	39.98 V	39.73 V	39.49 V	39.24 V	39.00 V	38.76 V
Short circuit current	I <sub>SC</sub>	6.94 A	6.87 A	6.81 A	6.75 A	6.69 A	6.63 A

### Thermal data

Tc of open circuit voltage	-0.36 %/K
Tc of short circuit current	0.04 %/K
Tc of power	-0.47 %/K
NOCT (according to IEC 61215)	48°C ± 2°C

Measuring tolerance for all final data: ± 10 % (except P<sub>max</sub> (STC) and NOCT)

## SOLON Blue 270/17 (polycrystalline)



### Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m<sup>2</sup>, (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3

Capacity rating	P <sub>max</sub>	280 Wp	275 Wp	270 Wp	265 Wp	260 Wp	255 Wp
Module efficiency		14.14 %	13.89 %	13.64 %	13.38 %	13.13 %	12.88 %
Rated voltage	U <sub>mpp</sub>	35.95 V	35.70 V	35.45 V	35.18 V	34.91 V	34.65 V
Rated current	I <sub>mpp</sub>	7.78 A	7.70 A	7.61 A	7.53 A	7.43 A	7.35 A
Open circuit voltage	U <sub>OC</sub>	44.08 V	43.85 V	43.62 V	43.40 V	43.17 V	42.94 V
Short circuit current	I <sub>SC</sub>	8.20 A	8.14 A	8.08 A	8.02 A	7.95 A	7.89 A
Maximum reverse current	I <sub>R</sub>	20 A	20 A	20 A	20 A	20 A	20 A
Maximum system voltage		1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V

Measuring tolerance for P<sub>max</sub>: ± 3 %

Reduction of module efficiency from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: < 5 %

### Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m<sup>2</sup>, NOCT, AM 1,5

Capacity rating	P <sub>max</sub>	204 Wp	200 Wp	197 Wp	193 Wp	189 Wp	186 Wp
Rated voltage	U <sub>mpp</sub>	32.72 V	32.49 V	32.26 V	32.01 V	31.77 V	31.53 V
Rated current	I <sub>mpp</sub>	6.23 A	6.16 A	6.09 A	6.03 A	5.96 A	5.90 A
Open circuit voltage	U <sub>OC</sub>	40.25 V	40.04 V	39.83 V	39.63 V	39.42 V	39.21 V
Short circuit current	I <sub>SC</sub>	6.66 A	6.61 A	6.56 A	6.51 A	6.45 A	6.40 A

### Thermal data

Tc of open circuit voltage	-0.35 %/K
Tc of short circuit current	0.07 %/K
Tc of power	-0.45 %/K
NOCT (according to IEC 61215)	46°C ± 2°C

Measuring tolerance for all final data: ± 10 % (except P<sub>max</sub> (STC) and NOCT)



## SOLON Black 280/17 and SOLON Blue 270/17.

### Mechanical specification

Dimensions (H x W x D)	1,973 x 993 x 5.3 mm
Weight	26.2 kg
Junction box	1 junction box with 3 bypass diodes
Cable	Solar cable, length 1,500 mm, 4 mm <sup>2</sup> , prefabricated with MC4-combinable plug
Application class	Application class A (according to IEC 61730)
Front glass	Transparent toughened safety glass, 4 mm
Solar cells	72 cells, mono- or polycrystalline Si 6.2" (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Composite film
Frame	Frameless
Backrails	6 backrails reinforced with glassfibre PA (290 x 50 x 38 mm)

### Permissible operating conditions

Temperature range	-40 °C to +85 °C
Maximum surface load capacity	Tested up to 5,400 Pa according to IEC 61215 (advanced test)
Resistance against hail	Maximum diameter of 25 mm with impact speed of 23 m/s

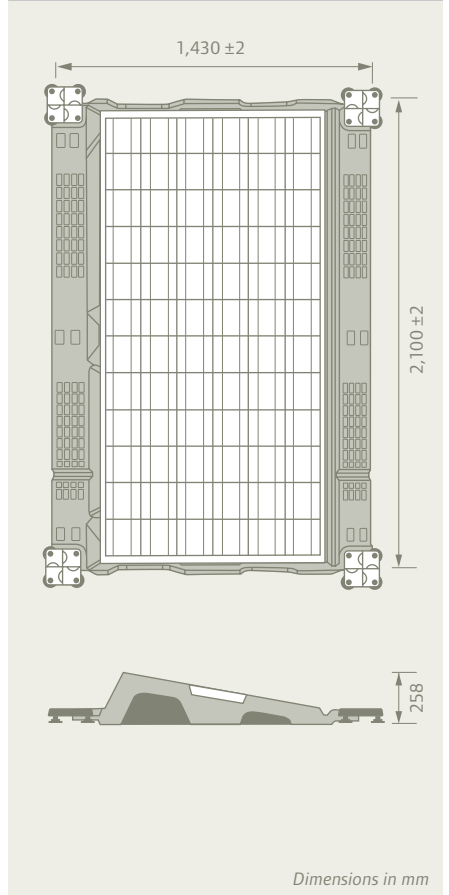
### Guarantees and certifications

Product guarantee	10 years <sup>1)</sup>
Performance guarantee	Guaranteed output of 95 % for 5 years, 90 % for 10 years, 87 % for 15 years, 83 % for 20 years and 80 % for 25 years <sup>1)</sup>
Approvals and certificates	TÜV: IEC 61215 Edition II, IEC 61730 (incl. Safety Class II)

### Substructure

Dimensions (H x W x D)	2,100 x 1,430 x 258 mm
Weight	Lightweight system – just 4.8 kg/m <sup>2</sup>
Material	Polypropylen, UV and weather resistant
Material thickness	2.5 to 4 mm
Colour	Anthracite / black
Inclination	10°
Cable channel	Integrated
Maintenance walkway	Integrated in substructure, (UV protection)
Wind load	1.3 kN/m <sup>2</sup>
Snow load	5.4 kN/m <sup>2</sup>
Guarantee	10 years guarantee on substructure, guarantee extension up to 25 years available <sup>2)</sup>

### Drawing



This datasheet complies with the requirements of EN 50380:2003. Subject to modifications.  
Electrical data without guarantee.

<sup>1)</sup> According to SOLON Product and Performance Guarantee.

<sup>2)</sup> According to SOLON SOLfixx SE Product and Performance Guarantee.

Guarantee extension up to 15, 20, 25 years possible.

