



SICHER ARBEITEN AUF PHOTOVOLTAIK-ANLAGEN

Instructions for the Use of the

SMB SOLAR MULTIBOARD®

(also referred to as **SMB** or **board** below)

on Photovoltaic Arrays with Framed Modules

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1. Important information (to be read before use)

Solar panel manufacturers stipulate that you must not walk or place concentrated loads on photovoltaic modules.

Incorrectly distributed weight on PV modules will result in the formation of micro cracks in the solar cells. Damage ranges from a small loss of performance to the complete failure of individual modules.

An increasing number of servicing, repair or cleaning jobs on photovoltaic arrays make it necessary to walk or place weight on the modules.

The SMB SOLAR MULTIBOARD[®] was developed to prevent damage to solar panels. The board is a lightweight, mobile, non-slip working platform that enables you to work on PV modules without damaging them.

When using the SMB you must comply with the general safety regulations (see section 6) for working on PV arrays and for working on scaffolding. The use of the SMB does not exempt you from observing mandatory safety regulations.

The SMBs must be kept clean at all times.

The boards must be inspected to ensure that they are in proper working order before being used on PV modules. This includes an inspection of the flaps, the protective layer and a general check for distortion of the board.

The boards may be installed on the PV modules only for the duration of the works and must be removed after the work has been completed.

The boards must not be installed with the non-slip surface (metal side) on the solar cells.

The SMBs shall not be subjected to sudden impacts (no jumping or skipping). The boards are designed for use by one person only with a max. weight of 150 kilogram.

Tools, cleaning equipment, etc. on the glass surface of the PV modules or on the boards shall not cause an obstruction to the service technician and must be secured against falling.

You are advised to wear knee pads to prevent injury to your knees.

When cleaning PV arrays do not direct the jet of the high-pressure washer at the protective layer as this may damage it.

When storing the boards please ensure that the protective layers or the non-slip surfaces of two boards are always stacked on top of each other to prevent damage.

2. The SMB MULTIBOARD[®]

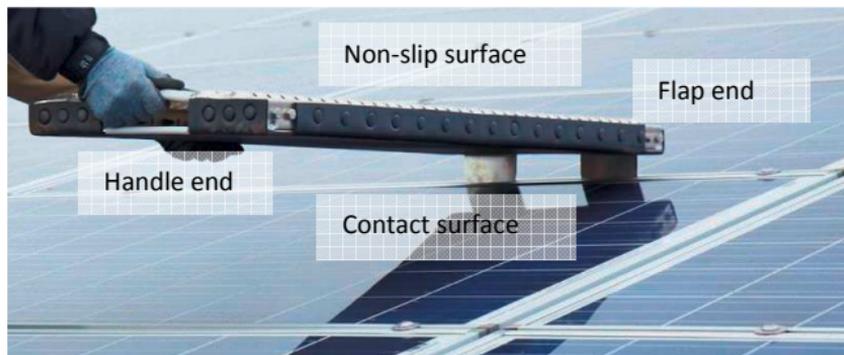


Figure 1: General view of the SMB SOLAR MULTIBOARD[®]

The **non-slip surface** must be kept clean at all times to maintain its non-slip properties. The **contact surface** must also be kept clean at all times to prevent dirt particles from damaging the glass surface of the PV modules when a service technician steps onto the board.

The entire **contact surface** must rest flat on the **glass surface and the frame** of the PV module.

The **handle end** must always be positioned facing downwards in the direction of slope, i.e. towards the lower edge of the solar panel. The board has an integrated handle for ease of use.

The **flap end** must always face upwards against the direction of slope, i.e. towards the upper edge of the solar panel, and be pushed into position (figure 1 & 2). Make sure that the two flaps on the **flap end** are carefully inserted in the existing gap between the PV modules (figure 2)



Figure 2: Detailed view of flaps

The board may only be placed on the **glass surface and the frame** of the PV modules as described above.
Damaged or dirty SMBs shall not be used.

The board shall NEVER be placed with the metal side on top of the PV module.

3. Use of SMB SOLAR MULTIBOARDS® on PV modules

The entire surface of the boards must rest flat on the **glass surface and the upper and lower frame** of the PV modules to ensure that weight is distributed evenly and supported by the module frame and the substructure. The boards must be laid in an offset pattern in the line of slope (see figure 3).

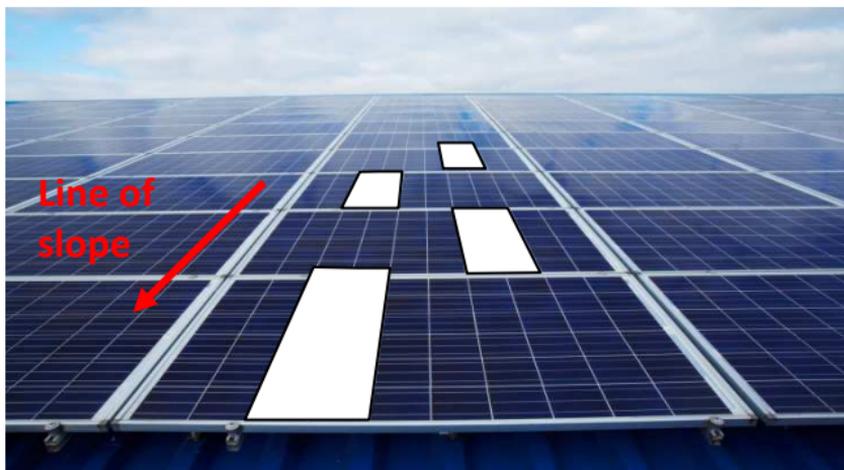


Figure 3: Correct alignment of SMB SOLAR MULTIBOARDS®

The SMBs must **not** be laid across the mounting brackets of the modules. Please also ensure that the boards are not placed near the edge of the PV modules (see figure 4).



Figure 4: Incorrect alignment of SMB SOLAR MULTIBOARDS®

The size of the SMB must match the size of the PV module. We recommend using the long board (1,720 mm) for vertically mounted PV modules and the short board (1,020 mm) for horizontally mounted PV modules (see table 1).

Size of PV module	Vertical installation	Horizontal installation	SMB-model
1660 x 990mm	1660mm		1720mm
1660 x 990mm		990mm	1020mm
1580 x 808mm	1580mm		1720mm
1580 x 808mm		808mm	1020mm
1200 x 600mm	1200mm		1720mm
1200 x 600mm		600mm	1020mm

Table 1: Recommended board sizes for vertically and horizontally mounted PV modules

When walking on the SMBs you must stay within the area between the upper and lower frame of each PV module

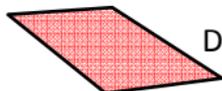
(figure 5). If a board extends onto the next module below you must not place weight on this section (figure 6).



Figure 5: Correct use of the SMB SOLAR MULTIBOARD®



Figure 6: Incorrect use of the SMB SOLAR MULTIBOARD®



Do not walk on this section!

In order to work across a wider area of the PV array we recommend the use of at least three (3), preferably five (5) boards.

The first SMB should be placed on the lowest row of modules as shown in figure 3. Step on the first board and fit the second board offset to one side (see figure 7).



Figure 7: Placing the SMB SOLAR MULTIBOARDS®

Step onto the second SMB and install the next boards as described above.



Figure 8: Inserting the SMB SOLAR MULTIBOARD®

4. Limitation of liability

We will take no responsibility for any damages to the PV modules.

Before stepping onto the SMBs users must make sure that the PV modules have been placed correctly. In particular, users must ensure that the mounting brackets that connect the PV modules to the substructure are securely fastened so that modules cannot slip out of position.

The maximum load of the PV modules must not be exceeded.

5. Service and repairs

Service and repairs may be carried out only by the manufacturer

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or by their authorised partner companies.

6. Safety regulations

- BGI 515 Personal protective equipment
- BGI 656 Safety when working on roofs
- BGI 659 Safety when cleaning buildings
- BGI 663 Handling of work and protective scaffolding
- Accident prevention regulations for winches, lifting and towing equipment
- Accident prevention regulations for first aid

The sale and delivery of SMB SOLAR MULTIBOARDS[®] are subject to our General Terms and Conditions.



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