

# ValkPro+

## Installation manual

*Use in combination with the installation manual of the ValkPVplanner*



**Van der Valk Solar Systems**  
Solar Mounting Systems

**VAN DER VALK**



## Please Note

- This manual is not project specific.
- This manual is not legally binding.
- No rights may be derived from this manual.
- Use this manual in combination with the ValkPVplanner.
- Check Datasheet Cable management for cable suggestions.
- The system is placed in the middle zone of the roof.
- Side panels are optional.
- Mass carriers only if applicable.

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## ValkPro+

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## General user instructions solar mounting systems

Congratulations on buying a Van der Valk Solar Systems mounting system and on helping the environment by deciding to install solar panels.

This document must be seen in addition to the installation manual and installation instructions.

\* The general user instructions describe general installation and safety instructions.

\* The installation manual shows you how to install the solar mounting system.

\* The installation instruction gives you specific measures of the engineered mounting system as a result of the ValkPVplanner.

The instructions provided in these user instructions must be observed at all times. Read these instructions carefully and keep them in a safe place for future reference.

Also follow the instructions stated in the manuals and instructions for the other system components that are a part of the overall PV system.

All current structural, safety and building regulations must be observed.

Van der Valk Solar Systems B.V. will never be liable for any direct and/or indirect intangible or consequential loss ensuing from or connected to the failure to observe the instructions provided in these user instructions.

### Safety instructions for roofs

Solar mounting systems installed on roofs will be exposed to wind and snow. The building in question will be subject to a greater load as a result of the PV system.

A design calculation must be used to establish whether or not the building in question will be able to withstand the extra load.

Where necessary, modifications need to be made.

### The standards applied (if applicable for specific solar mounting system)

EN 1990	Basis of structural design
EN 1991-1-3	Actions on structures / Snow loads
EN 1991-1-4	Actions on structures / Wind actions
EN 1993-1-1	Design of steel structures / General rules for buildings
EN 1993-1-3	Design of steel structures / Supplementary rules for cold formed members
EN 1997	Geotechnical design
EN 1998-1	Design of structures / General rules, seismic actions and rules for buildings
EN 1999-1-1	Design of aluminium structures
NEN 7250	Solar systems - Integration in roofs and facades - Building aspects (pending)
BS EN 1991-1-4	British Standard

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## Application

To calculate the needed strength, ballast and foundation of the solar mounting system, according to the Eurocodes, the specific location details have to be determined, e.g. wind zone, snow zone and height of the building. These need to be entered in the ValkPVplanner.

Foundations and strength of field systems are calculated with SolarTop.

## Type of solar panel

The Van der Valk Solar Systems mounting systems are universal mounting systems for solar panels.

Almost any solar panel with or without an aluminium frame, possibly with mounting holes, can be mounted.

## Types of roof

Type of roof covering: bitumen, EPDM, PVC, concrete and other roof coverings. For ballast calculations the exact roof covering must be known.

Before installing the solar mounting system, make sure that you carefully sweep the roof area.

The ballast calculation for flat roofs only applies for roofs with a slight pitch of up to 5°. Above this roof pitch, the system needs to be attached to the roof securely.

## Ballast

Flat roof systems can be attached to the roof or need to be supported by ballast, to make sure that the system is unable to move, lift or tip over.

The components supplied do not fully include the ballast required, which will be a number of tiles with a certain measurement and weight.

The number of tiles required per position, per type of solar panel, per roof area and per building height is calculated via the ValkPVplanner and can be seen in the installation instructions and foundation advice. The number of tiles specified per position will be vital to ensure that the mounting system can be used safely.

## Position

Restrictions also apply for the position of the system on a roof.

The solar panels must be installed at a certain distance from the edge of the roof.

Follow the scheme in the installation manual calculated by the ValkPVplanner.

## Guarantee

The guarantee provided is subject to the guarantee conditions stated in the general terms and conditions stipulated by

Van der Valk Solar Systems BV. Our terms and conditions can be found on our website: [www.valksolarsystems.nl](http://www.valksolarsystems.nl).

The mounting system is a product that has been produced by:

Van der Valk Solar Systems B.V.,

Registered with the chamber of commerce for

Haaglanden under number 27355116.

Internet: [www.valksolarsystems.nl](http://www.valksolarsystems.nl)

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# Van der Valk Solar Systems

## Solar Mounting Systems

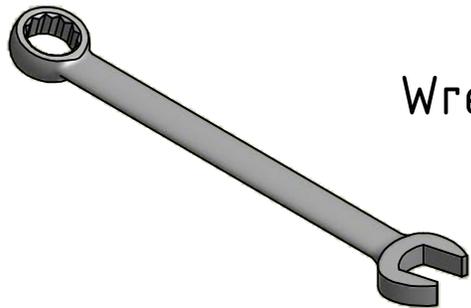
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**SOLAR SYSTEMS**



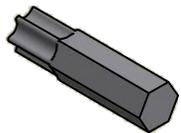
# Necessary tools for ValkPro+



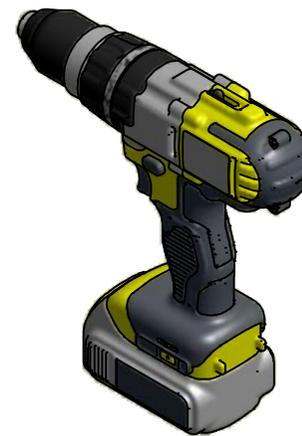
Wrench 13



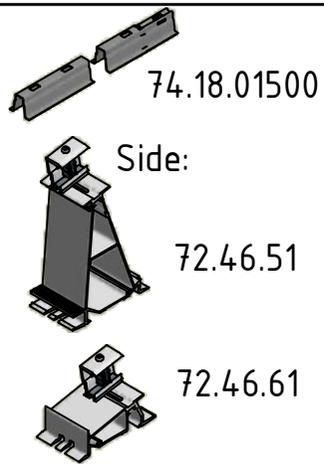
Socket 13



Torx bit T-30

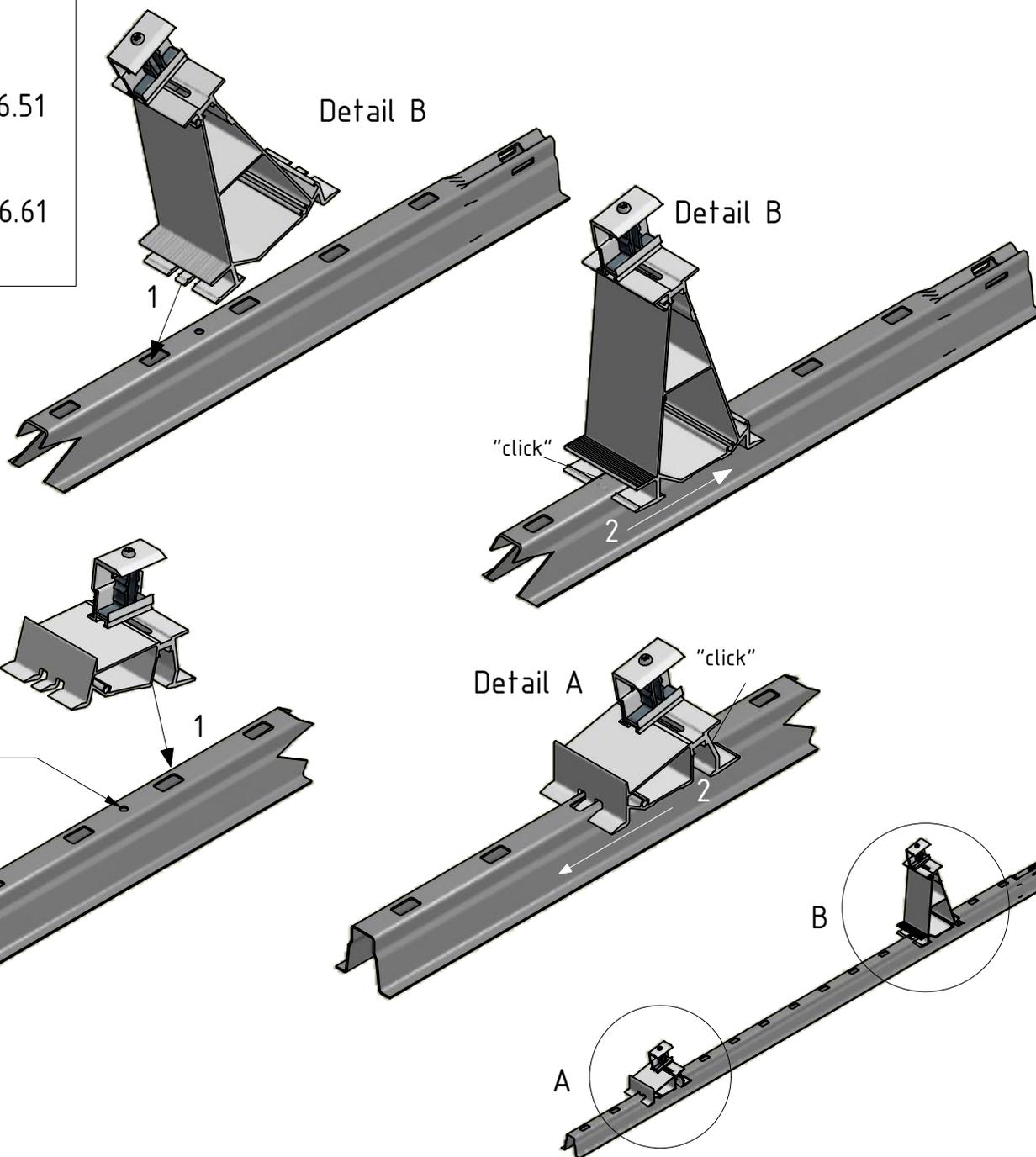


Cordless drill  
(for socket 13 and bit T-30)



### Mounting the Front and Rear Foot

Feet with Side-Clamp:

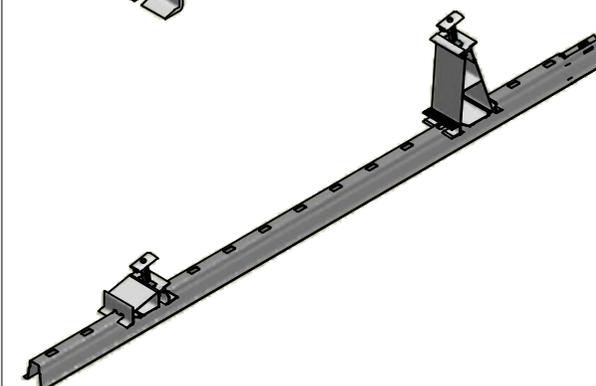
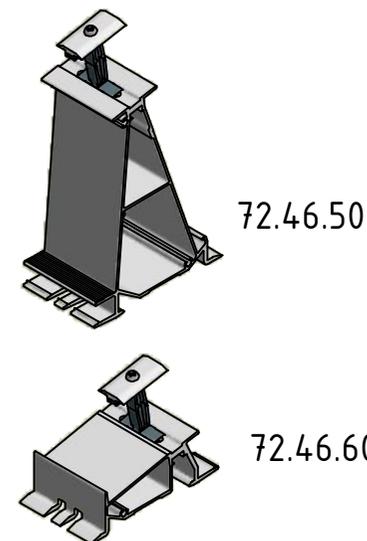


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Same procedure for feet with mid-clamp.



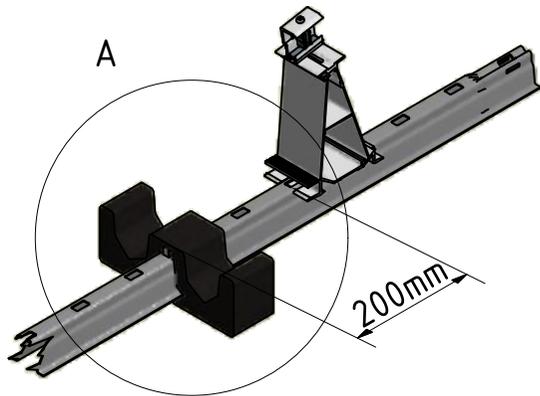
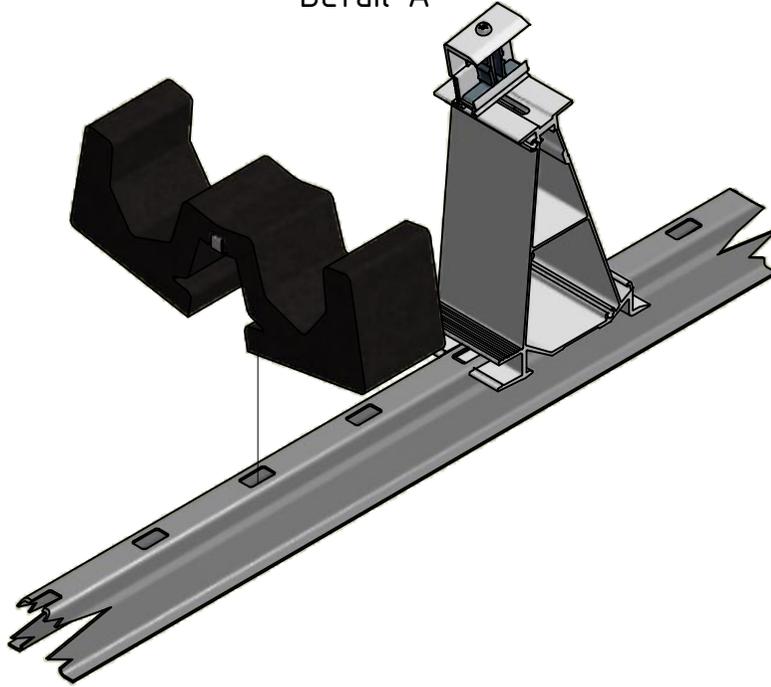


72.96.25

## Placing the Rubber Tilecarriers

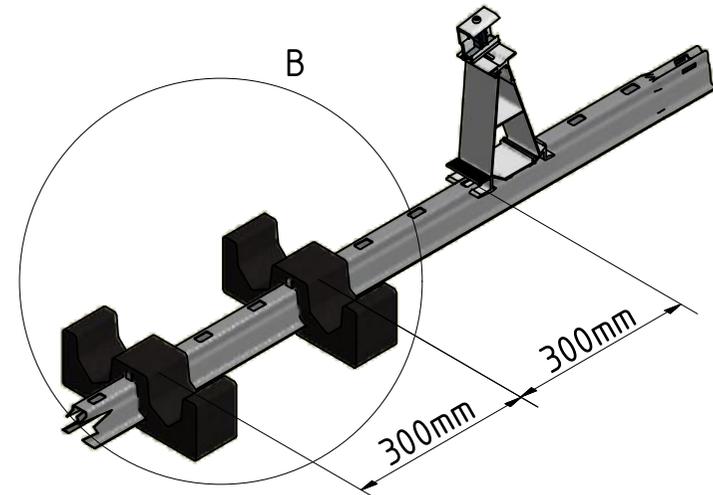
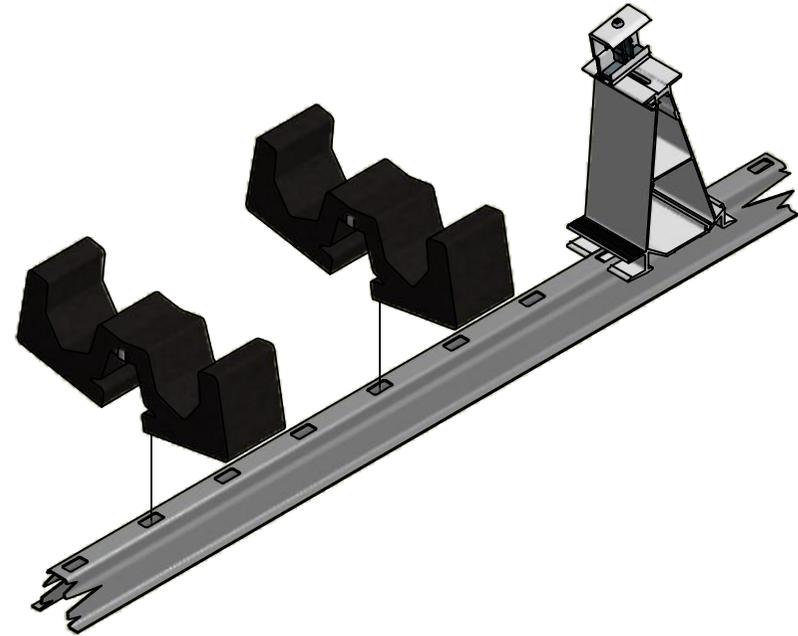
When 1 Rubber Tilecarriers is needed.  
(Check ValkPVplanner)

Detail A



When 2 Rubber Tilecarriers are needed.  
(Check ValkPVplanner)

Detail B



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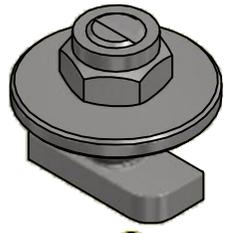
**Coupling Roof carriers**

Alignment key outlines Roof carriers.

Detail A

Detail A

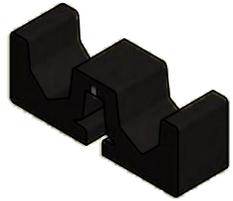
Detail A



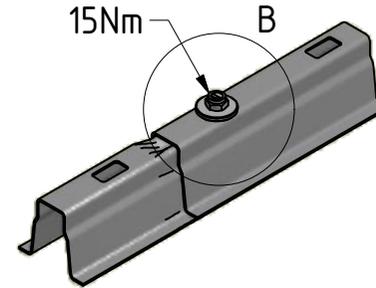
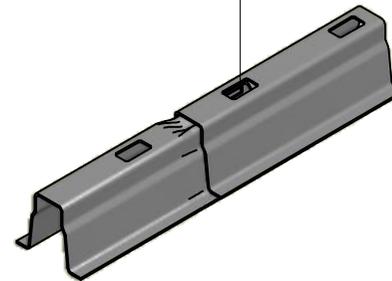
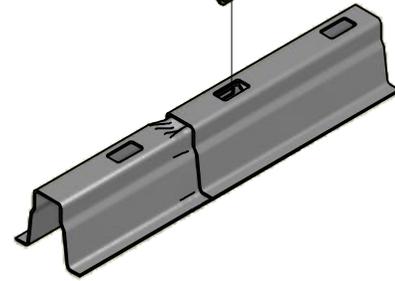
77.42.21



73.90.10

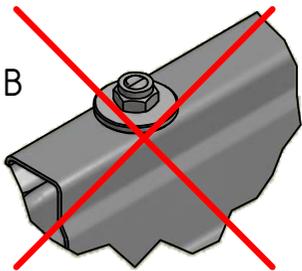


72.96.25

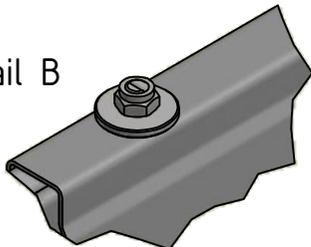


The groove of the bolt corresponds with the orientation of the bolt head.

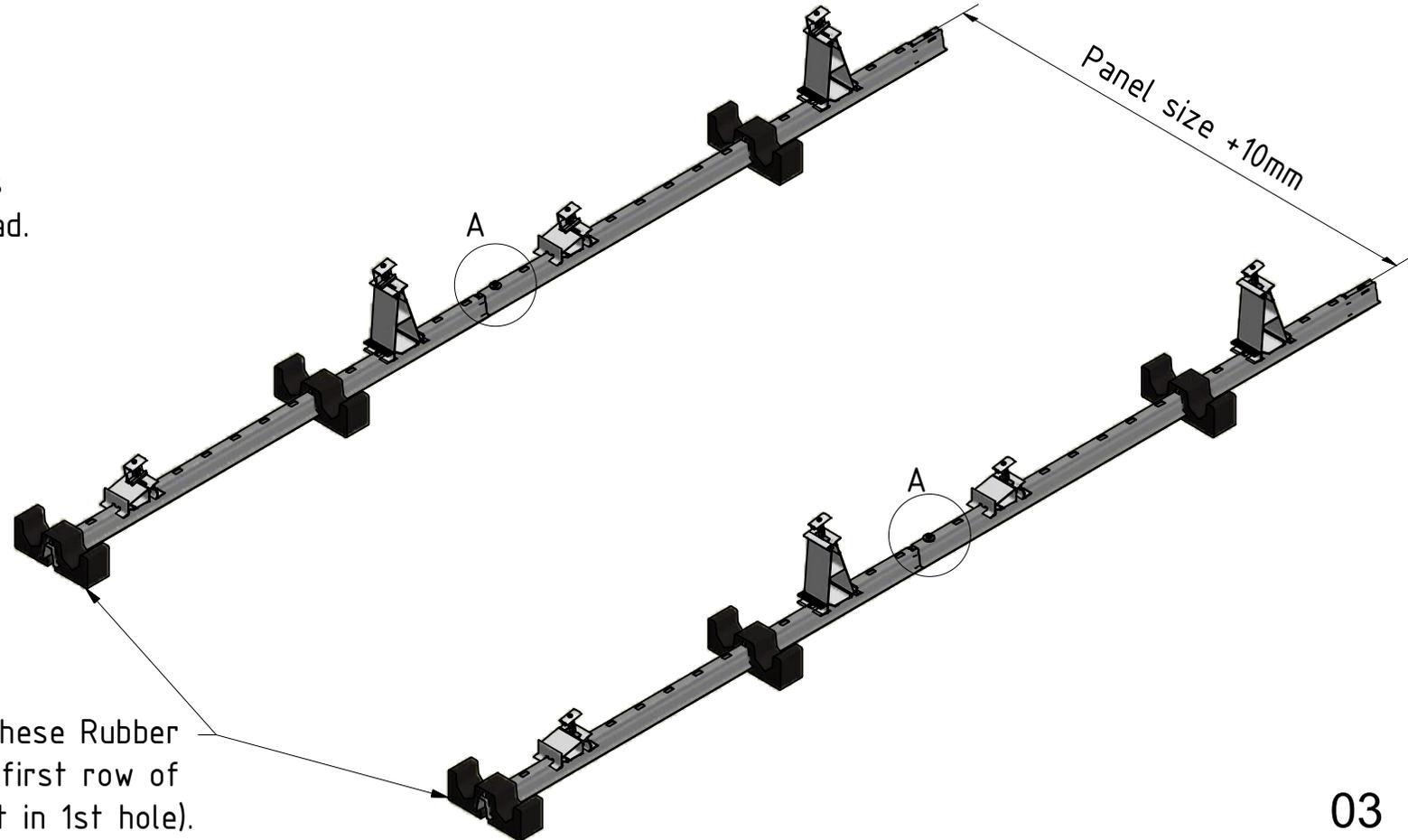
Detail B

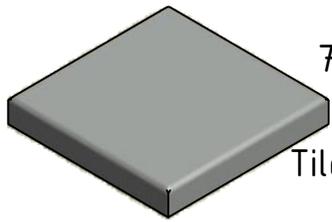


Detail B



Only use these Rubber Tilecarriers on the first row of the system (mount in 1st hole).

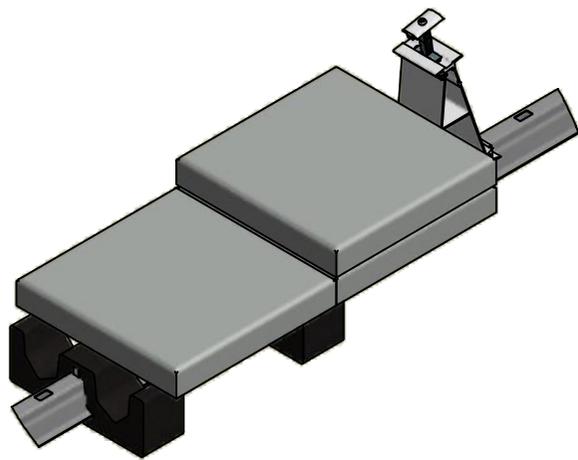
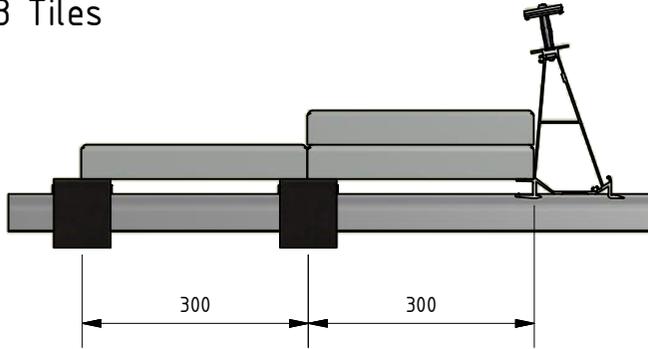




75.06.30.30.45

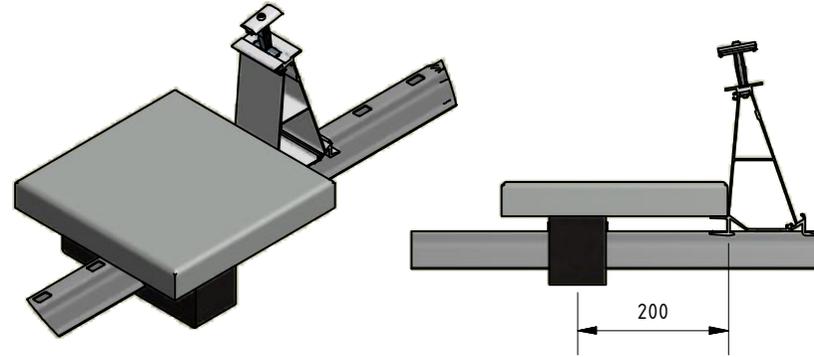
Tile 300x300x45  
(Optional)

Detail B  
3 Tiles



## Placing tiles on the Rubber Tilecarrier

Detail A  
1 Tile (max 2  
tiles.)

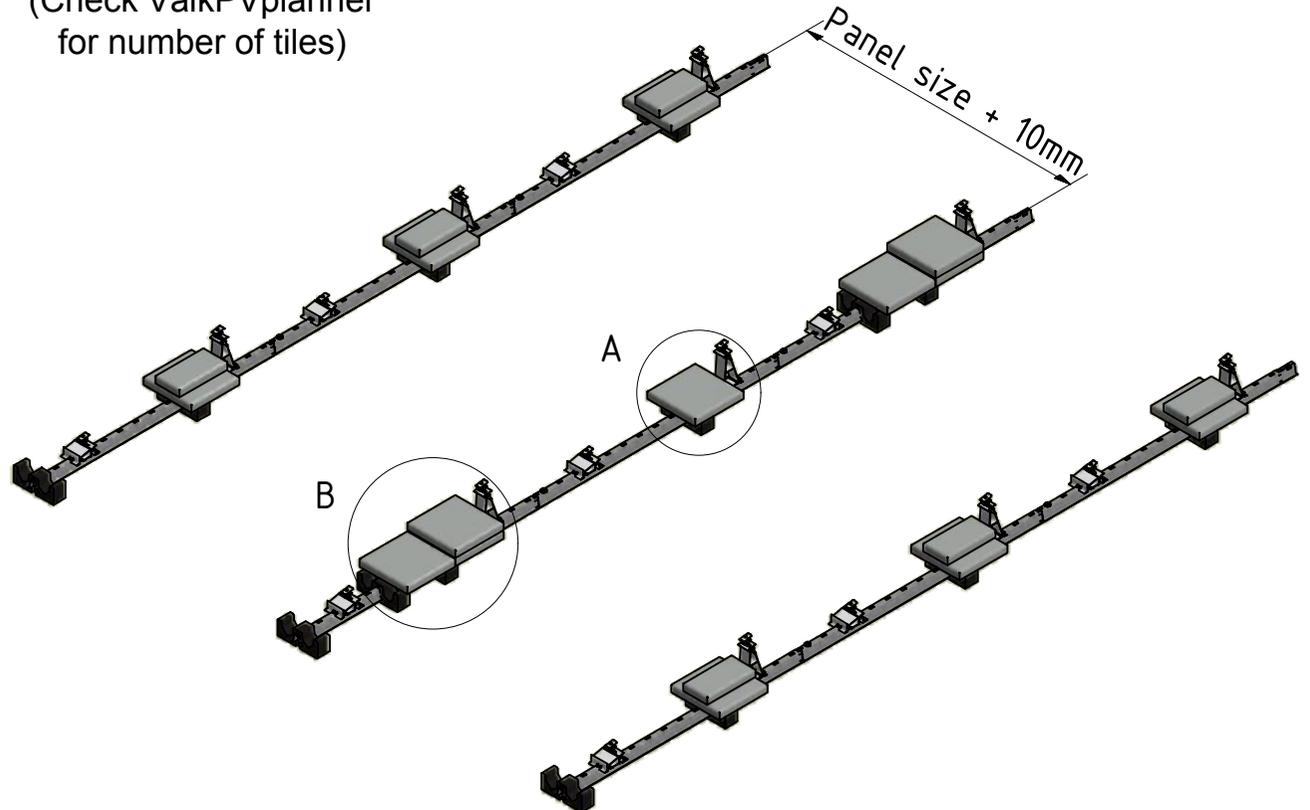


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(Check ValkPVplanner  
for number of tiles)





74.25.50 For panel L=1559-1675mm  
74.25.55 For panel L=1950-2000mm

### Placing tiles on the Mass carriers OPTIONAL!

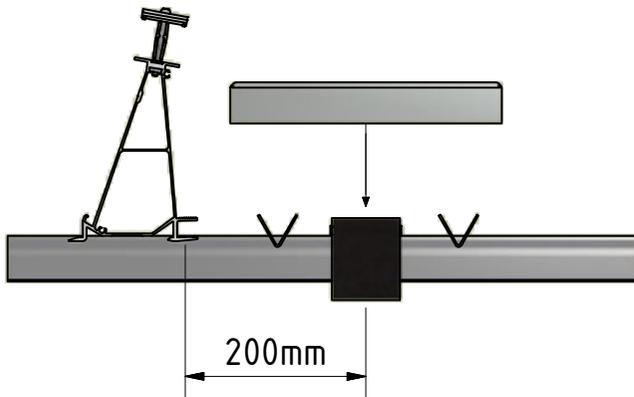
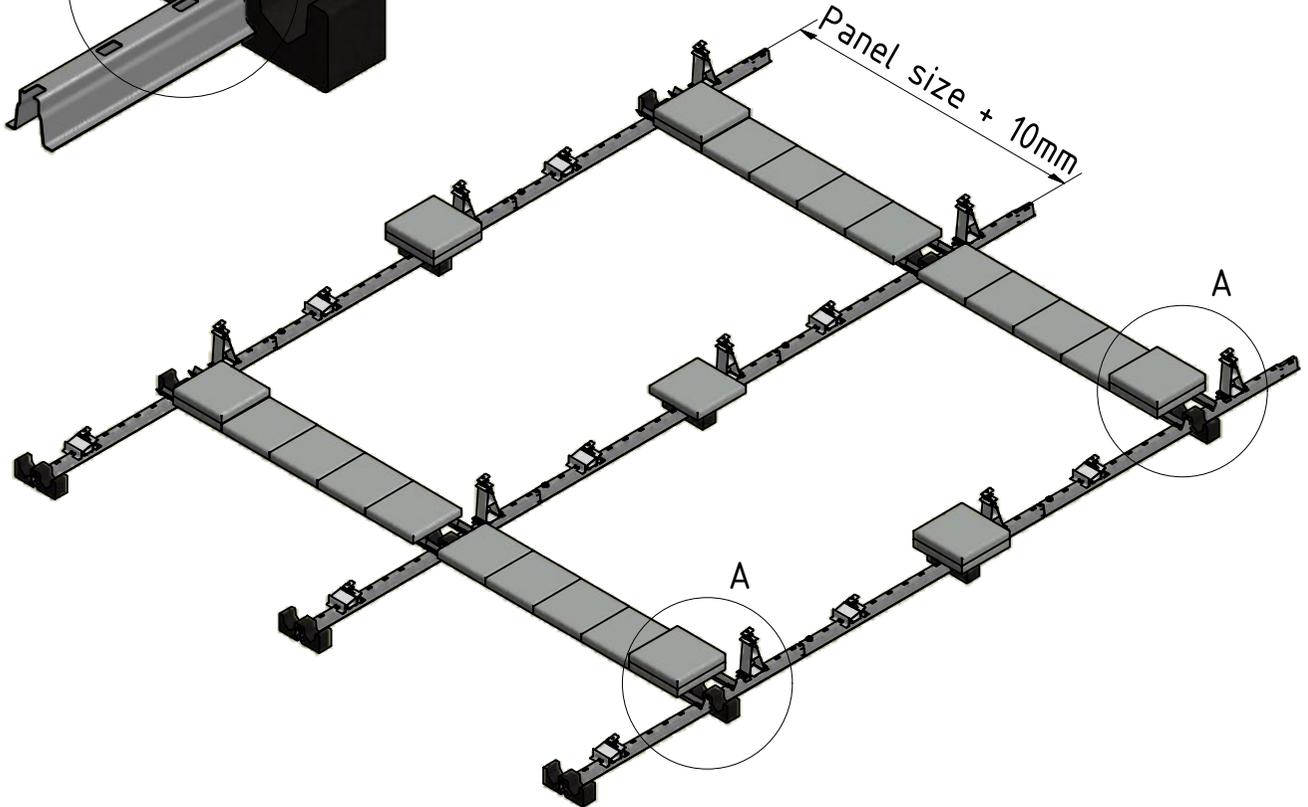
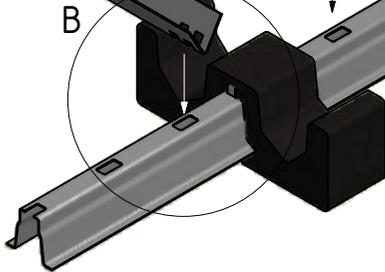
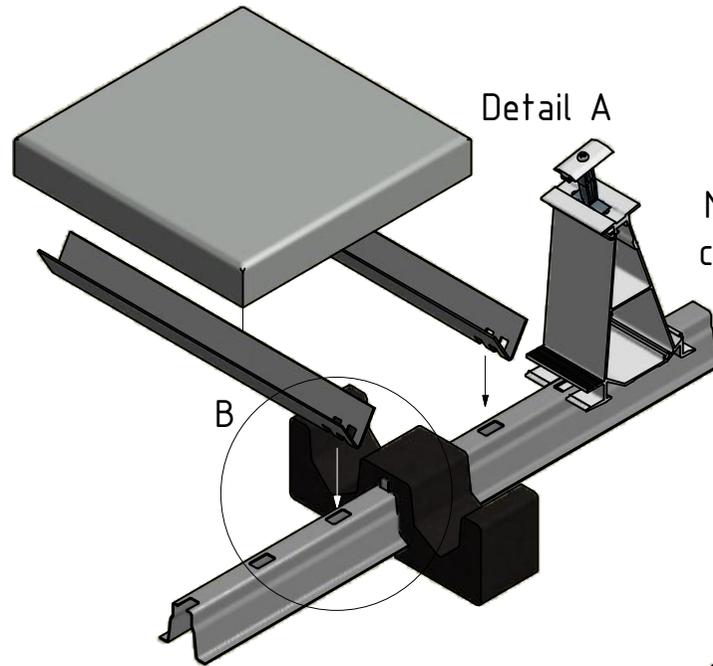
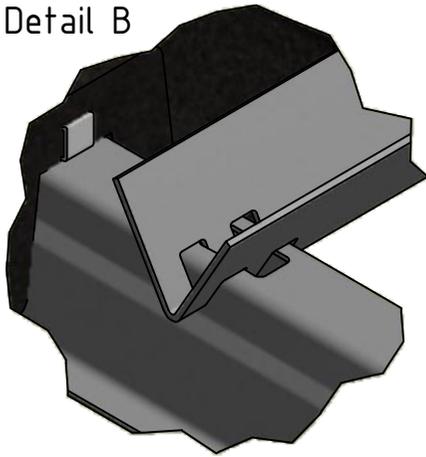
**VAN DER VALK**



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Mass carriers are only required if the ballast cannot be placed on the Rubber Tilecarriers.  
(See ValkPVplanner.)

Detail B



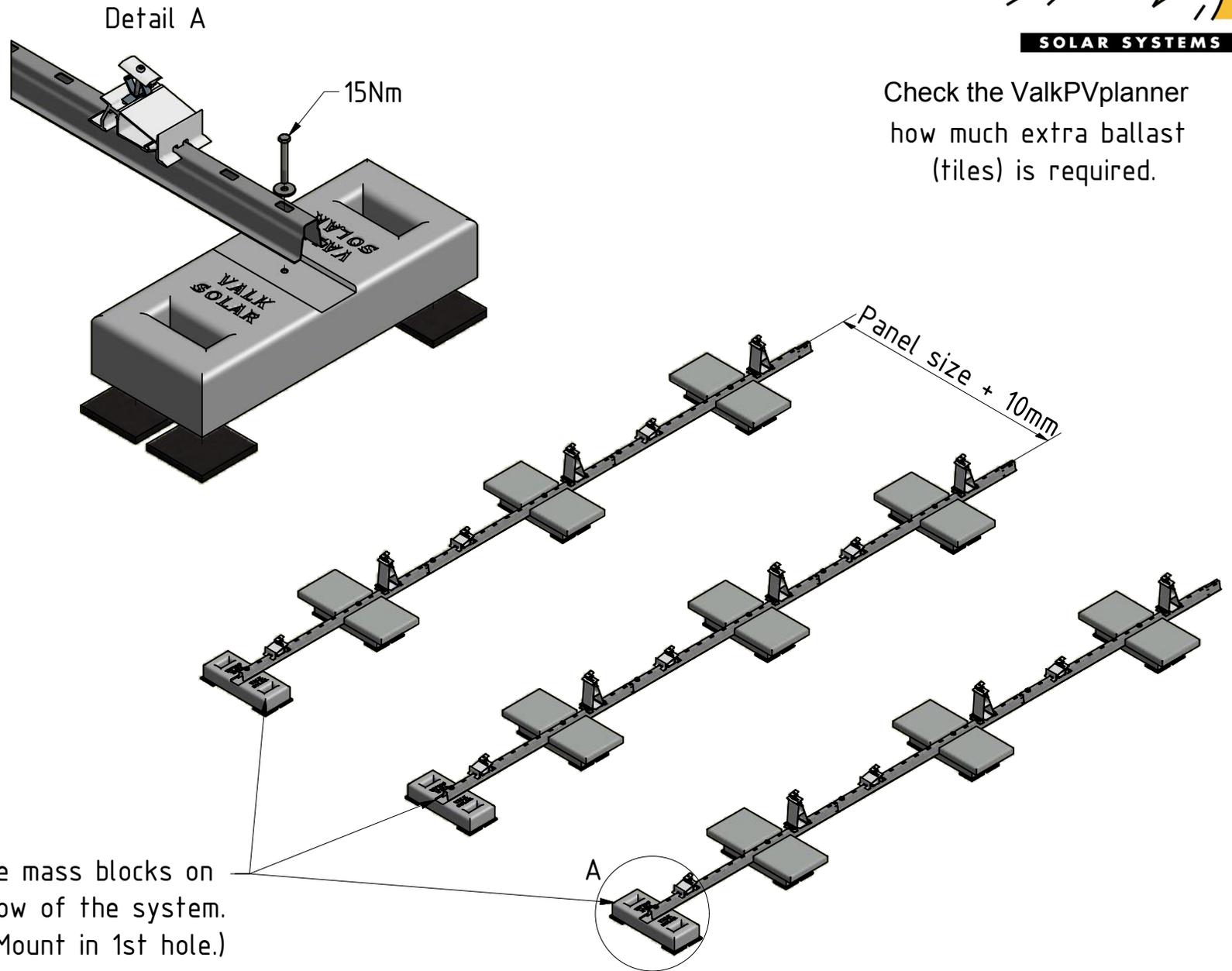
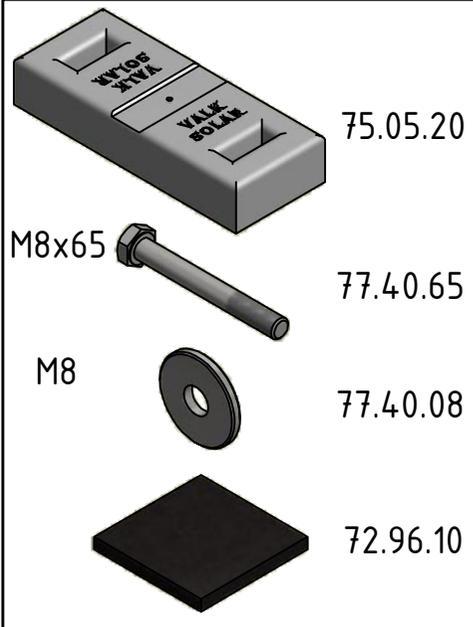
# Mass Blocks OPTIONAL!

**VAN DER VALK**



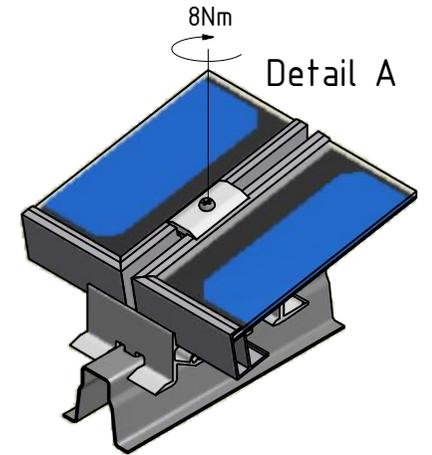
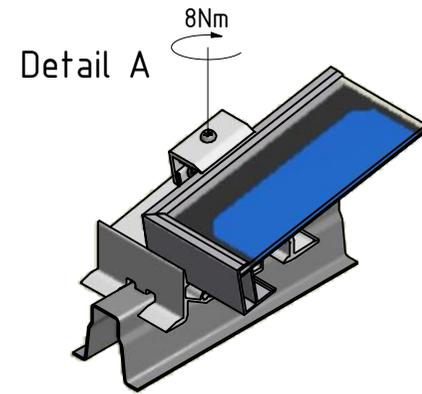
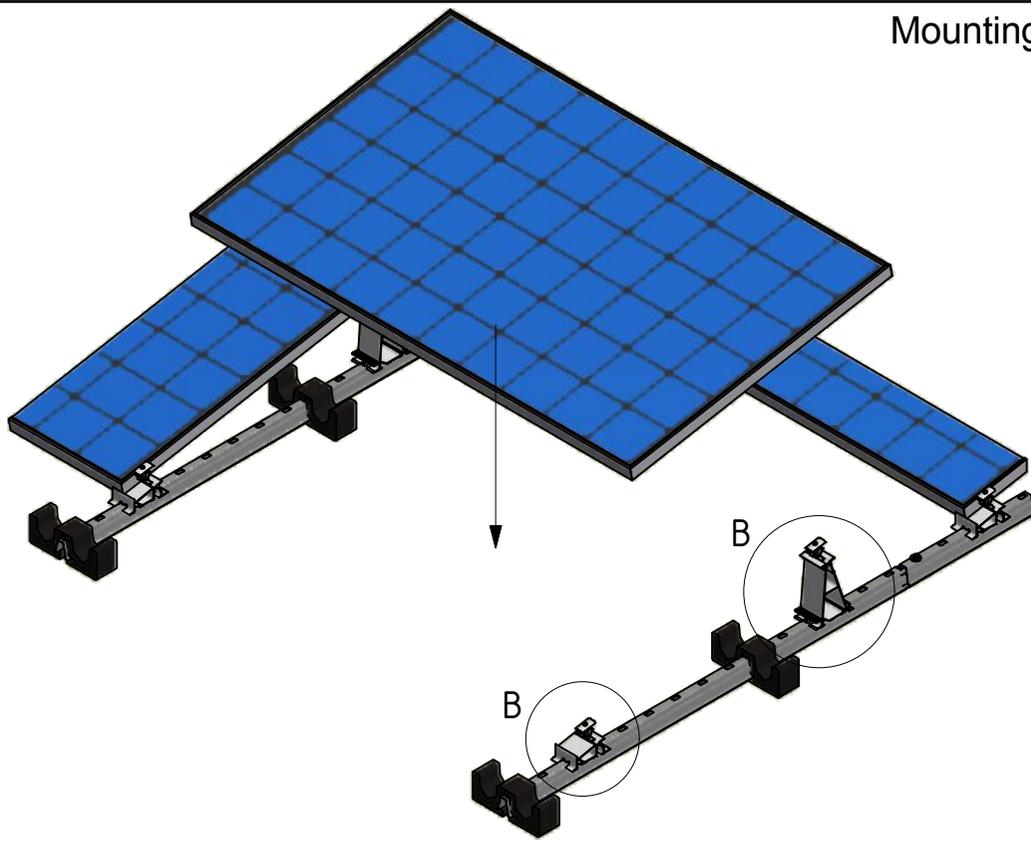
**SOLAR SYSTEMS**

Check the ValkPVplanner how much extra ballast (tiles) is required.



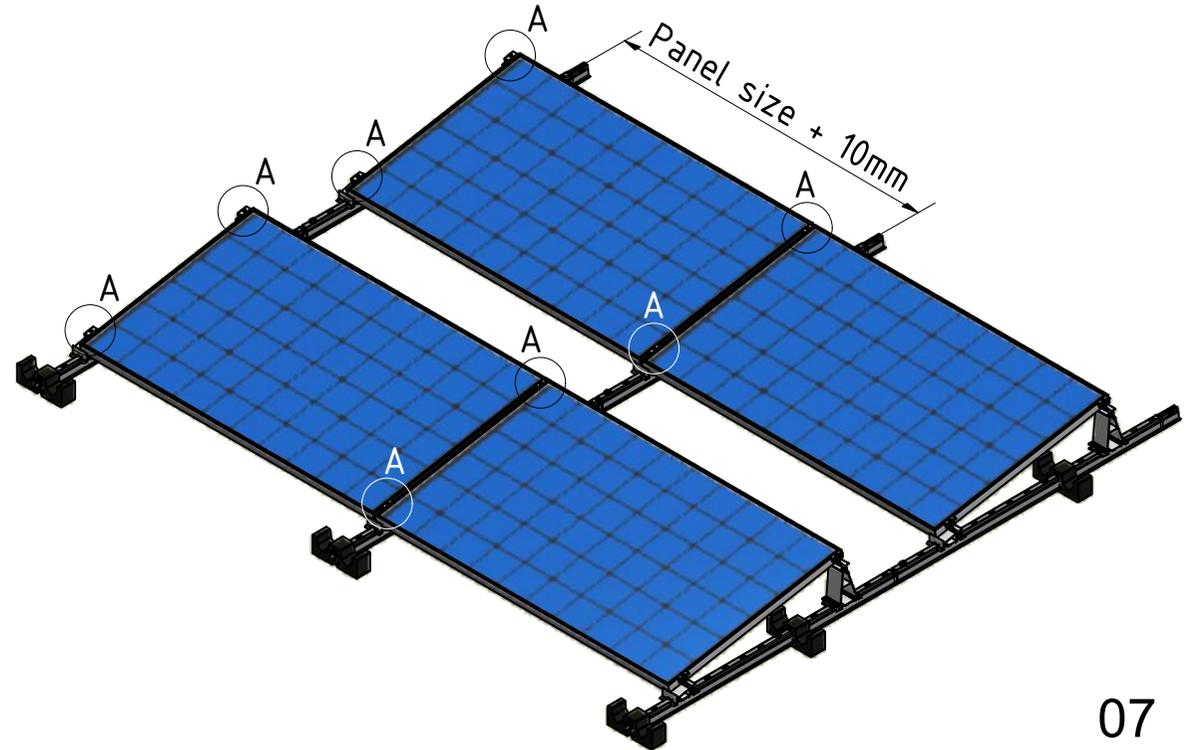
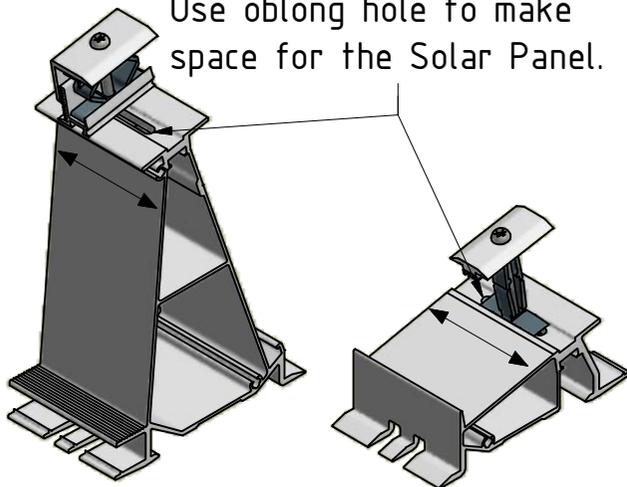
Only mount these mass blocks on the first row of the system. (Mount in 1st hole.)

# Mounting Solar Panels



Detail B

Use oblong hole to make space for the Solar Panel.



# Mounting Side Panels OPTIONAL!

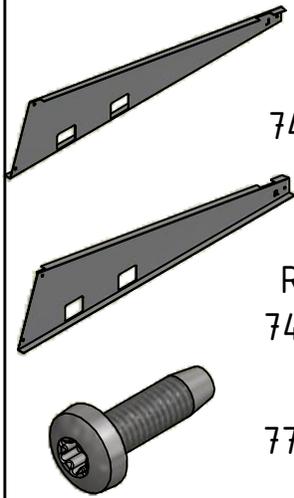


Side panels are optional and only needed for esthetical purposes.

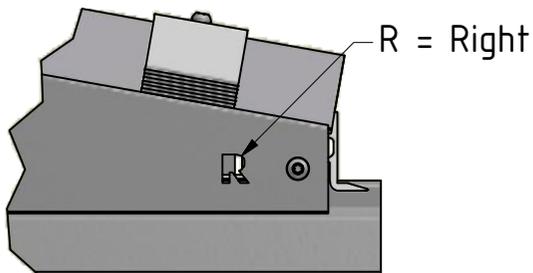
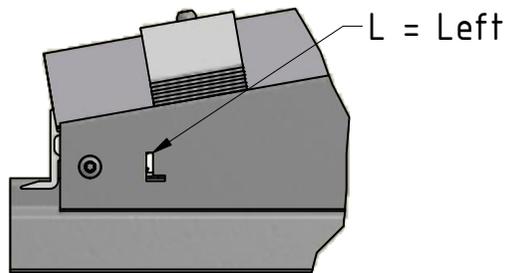
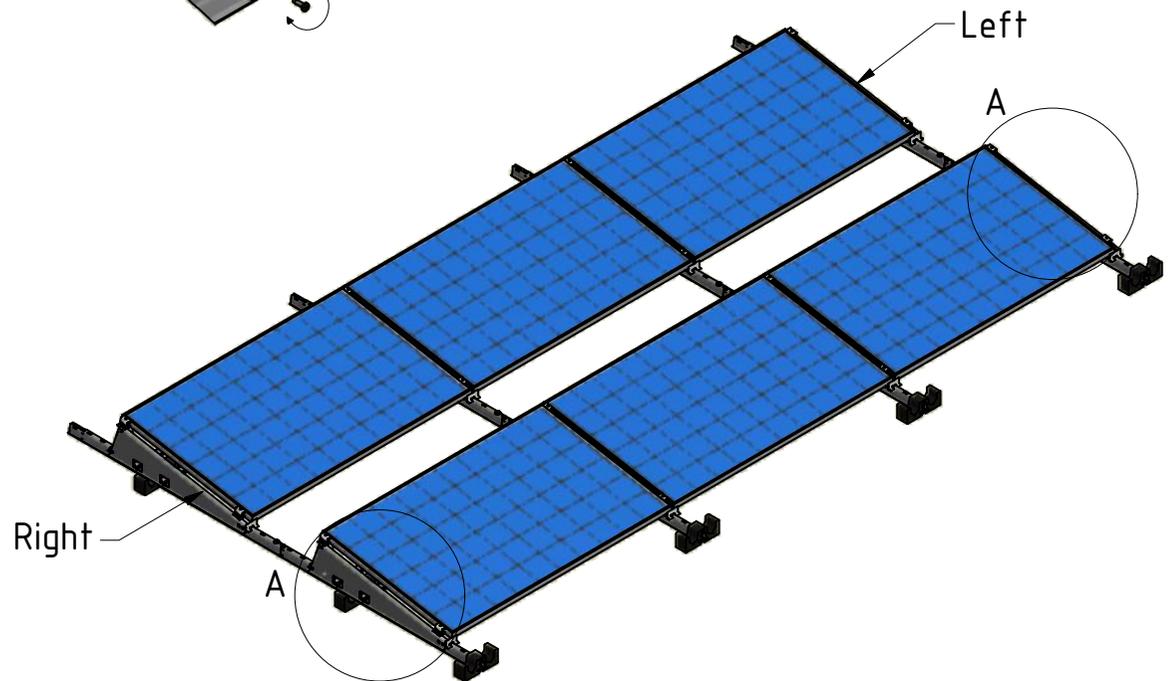
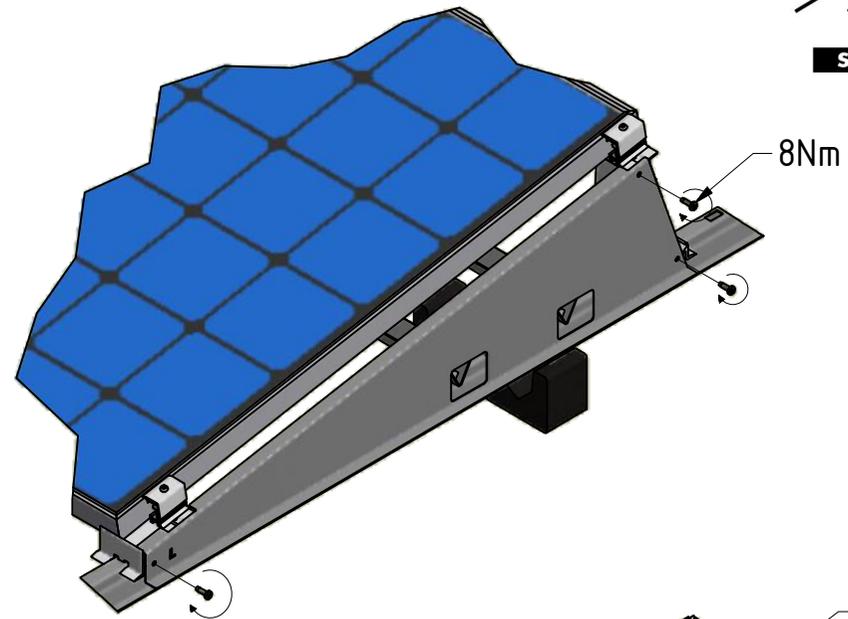
Left:  
74.25.30

Right:  
74.25.31

77.33.20



Detail: A



Please note!!

When using side panels the ballast must be placed on:

- Mass carriers with whole tiles (300x300 mm)
- or
- Rubber Tilecarrier with max. 3 half tiles (150x300 mm)



Mounting Back Panels (mandatory)

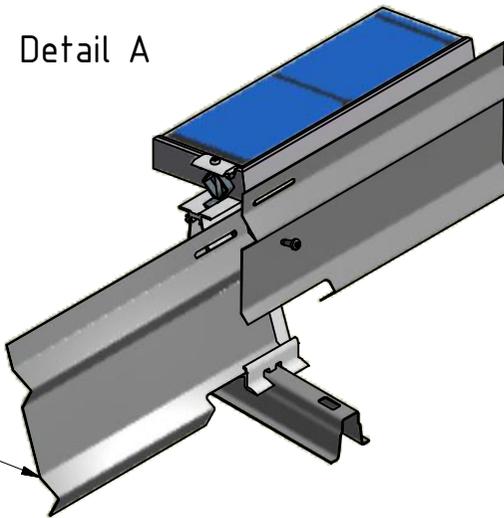


74.25.10 for panel L=1559-1675mm

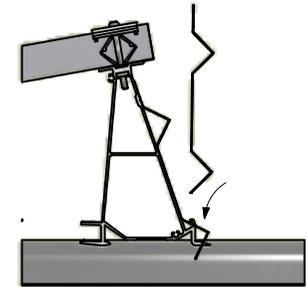
74.25.15 for panel L=1950-2000mm



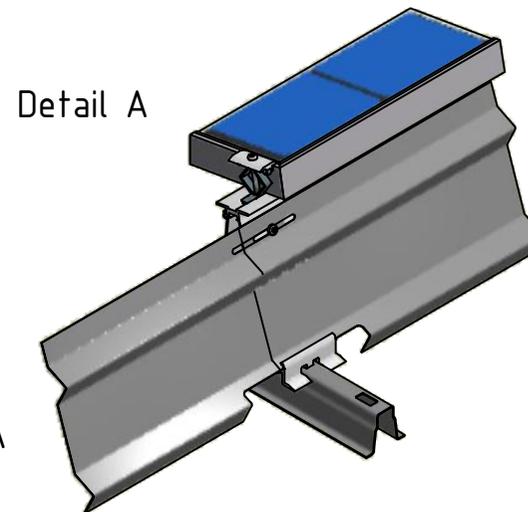
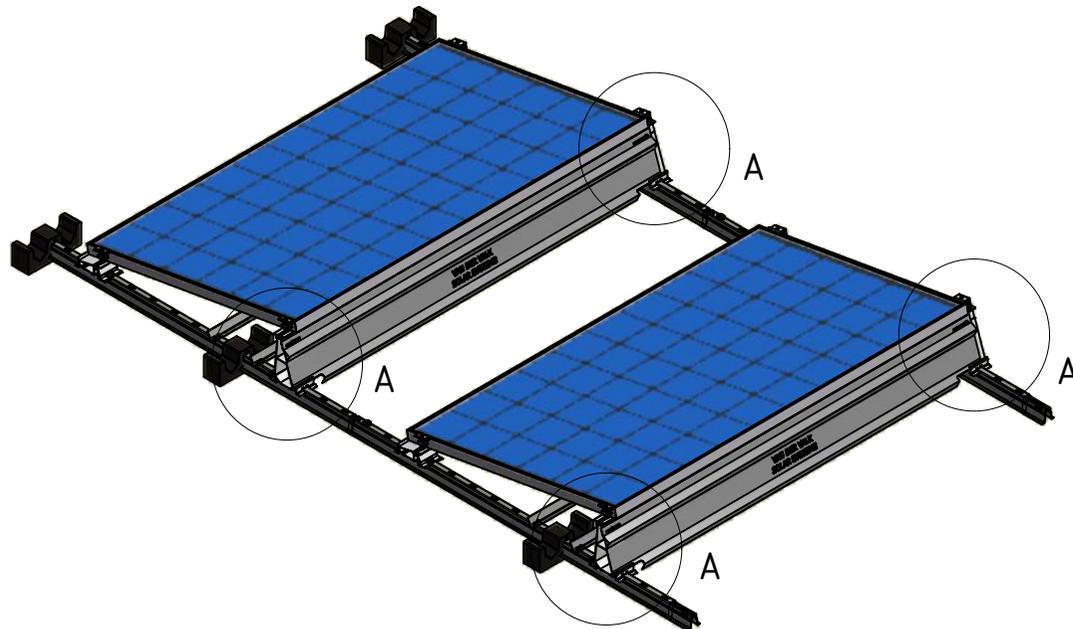
77.33.20



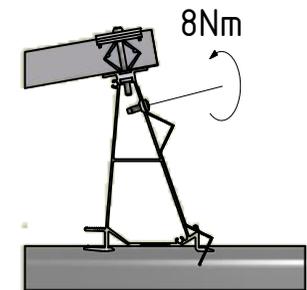
Detail A



The two Back Panels overlay each other and are fastened with 1 Torx bolt.

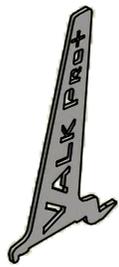


Detail A



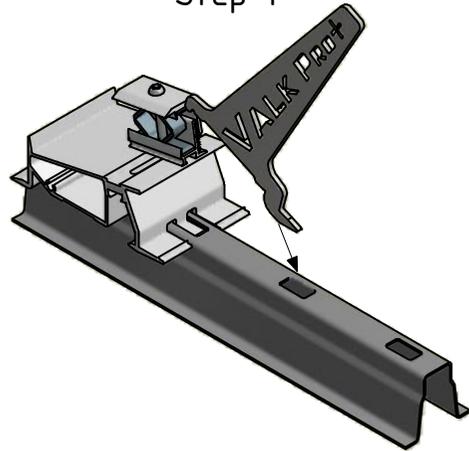
8Nm

# Disassemble Front and Rear Foot

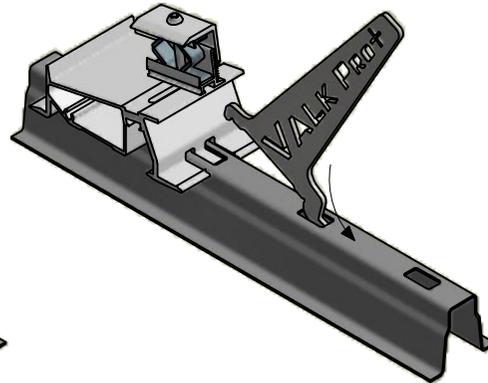


74.30.00  
(Optional)

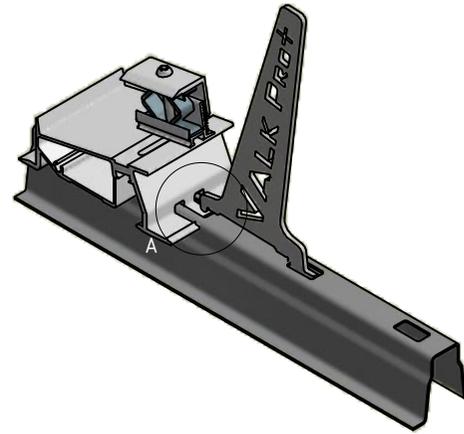
Step 1



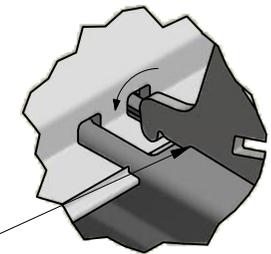
Step 2



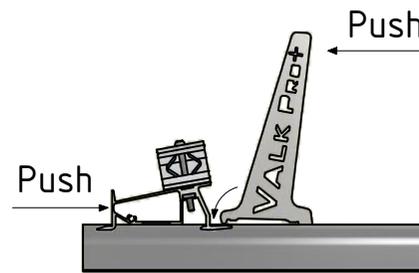
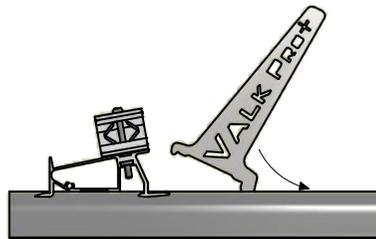
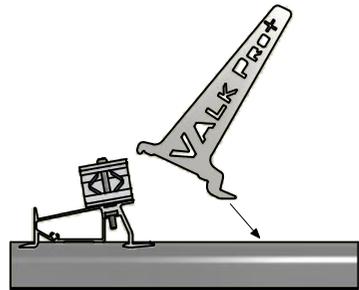
Step 3



Detail A



Use the Disassembly Key to push the middle lock tab down. Now the Front or Rear Foot can be removed.



Push the Disassembly Key simultaneous with the Front or Rear Foot towards each other to disassemble the Front or Rear Foot from the Roof Carrier.

## Van der Valk Solar Systems

Van der Valk Solar Systems is one of the fastest growing companies in the solar industry. It concentrates solely on developing and manufacturing solar panel mounting systems for pitched roofs, flat roofs and open fields. Van der Valk Solar Systems also has an office and warehouse located in the UK.

Our mounting systems are developed and manufactured in our own factory in the Netherlands and are distinguished by their versatile application, very fast mounting and top quality. They comply with the latest Eurocodes and thus meet the requirements set by banks and insurance companies for solar systems.

Van der Valk Solar Systems works closely together with Van der Valk Systemen, which since 1963 has upheld an international reputation in the field of mobile systems and fixation components.

Our joint industrial complex includes 20,000 m<sup>2</sup> of offices and industrial buildings. By using modern machinery and the latest technology, products and systems can be developed, manufactured and tested quickly and precisely.

### Developer and producer of solar mounting systems for:



Pitched Roofs



Flat Roofs



Open fields



Greenhouses



Water Features

Please contact Van der Valk Solar Systems, your installation company or project organisation for full information.

### Why choose Van der Valk Solar Systems?

- Innovative systems developed in compliance with applicable worldwide standards
- Fast and reliable deliveries thanks to modern machinery and large stocks
- System supplier since 1963
- Free software for project design and project calculation
- All systems applicable to any type of roof or surface
- Quick assembly thanks to premounting of essential components
- All systems available in portrait as well as landscape configuration
- Various systems also available as ready-to-use kits



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# Van der Valk Solar Systems

## Solar Mounting Systems

**VAN DER VALK**



**SOLAR SYSTEMS**