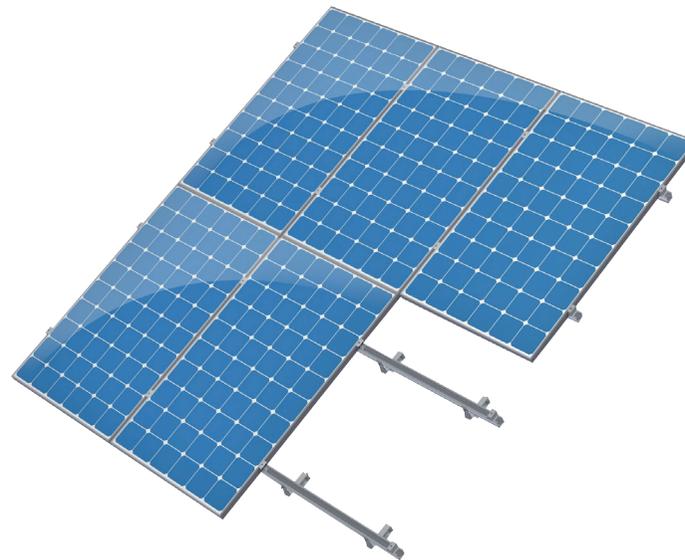


ValkPitched - Clamp

Installation manual



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 right may be derived from this installation manual.
- Use this manual in combination with the ValkPVplanner.
- Check Datasheet Cable management for cable suggestions.

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Mounting the Strongline roof hooks	Page 03
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ValkPitched - Clamp

Van der Valk Solar Systems
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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

Van der Valk Solar Systems
Solar Mounting Systems

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SOLAR SYSTEMS

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.

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

Issue date: november 2016:

Version: General user instructions v2 EN

Van der Valk Solar Systems

Solar Mounting Systems

VAN DER VALK

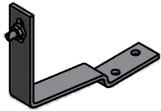


SOLAR SYSTEMS



Mounting the Smartline roof hooks

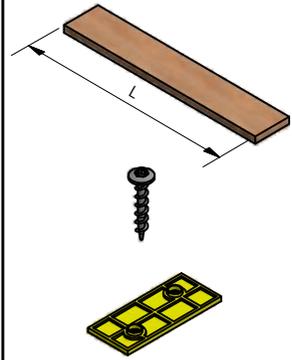
74.78.31 (horizontal profile)
74.78.32 (vertical profile)



75.40. (L [mm])

77.38.40

73.90.03



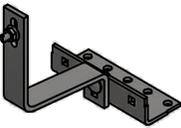
Optional:

See page 2



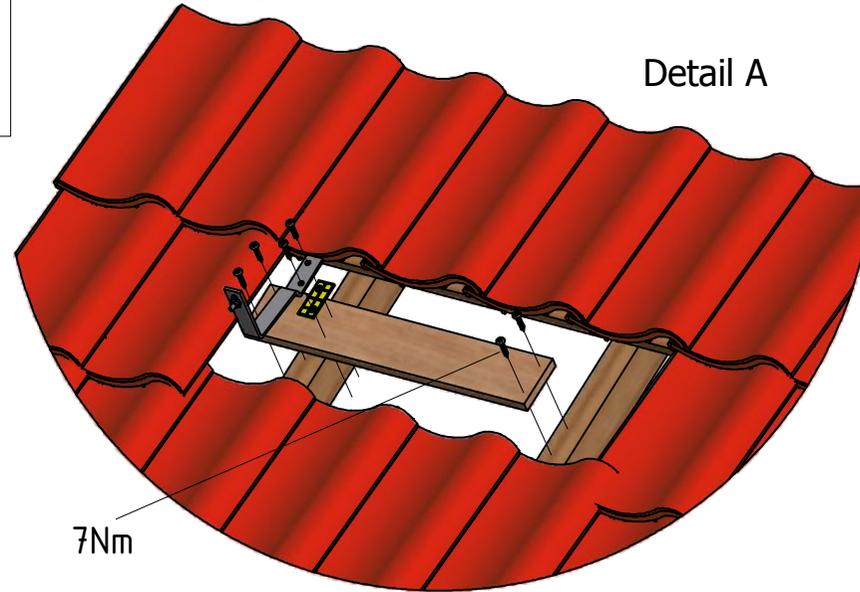
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See page 3



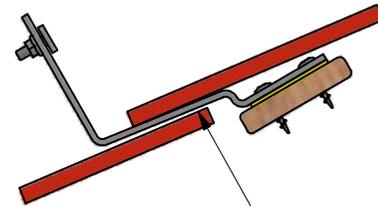
Optional:

See page 4

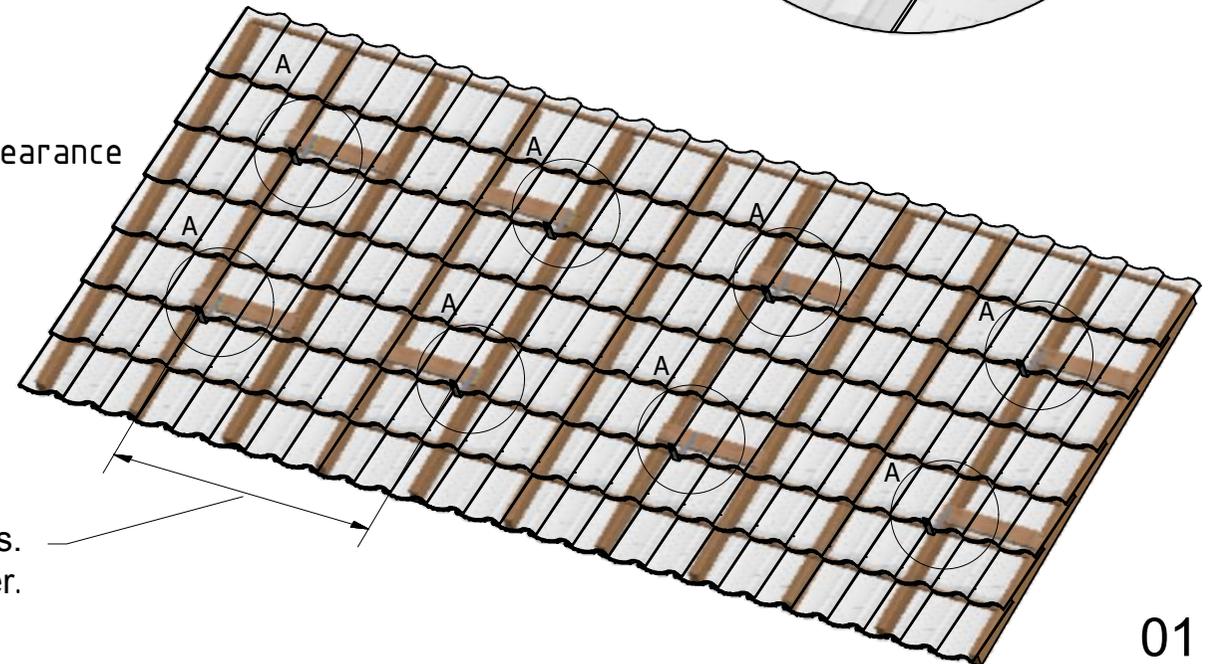


Detail A

Detail A



Keep at least 3 mm clearance



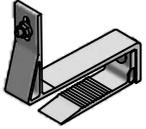
Distance between Roofhooks.
See Installation instructions of the ValkPVplanner.



Mounting the Slimline roof hooks

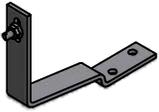


Fixed
72.95.30 (horizontal profile)
72.95.31 (vertical profile)



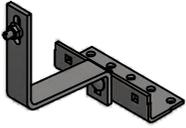
Adjustable
72.95.40 (horizontal profile)
72.95.41 (vertical profile)

Optional:



See page 1

Optional:



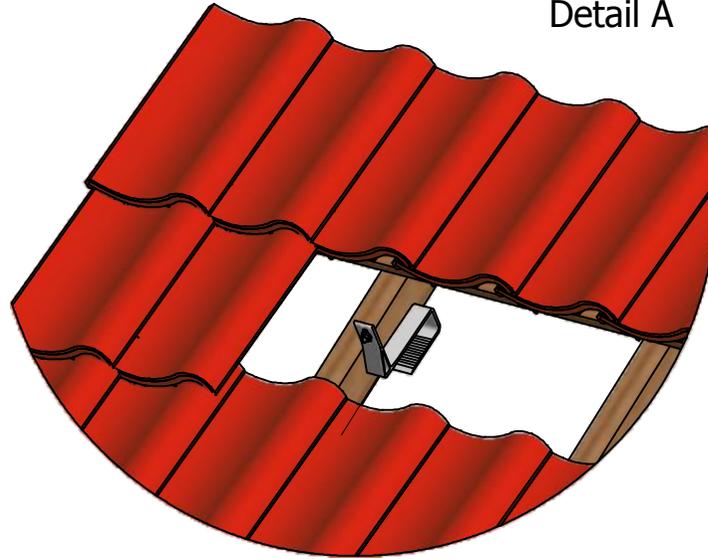
See page 3

Optional:

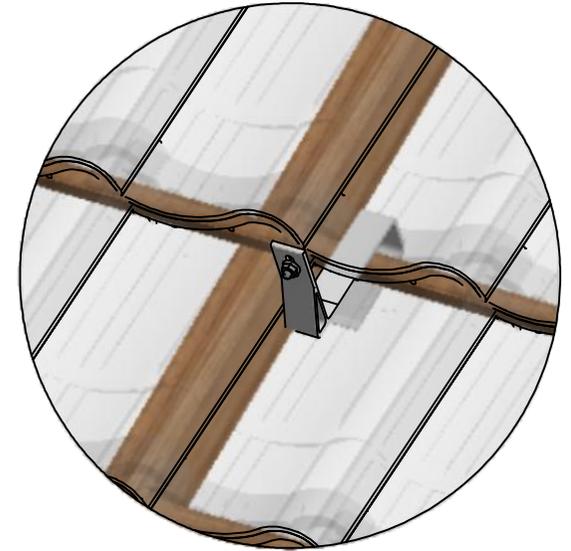


See page 4

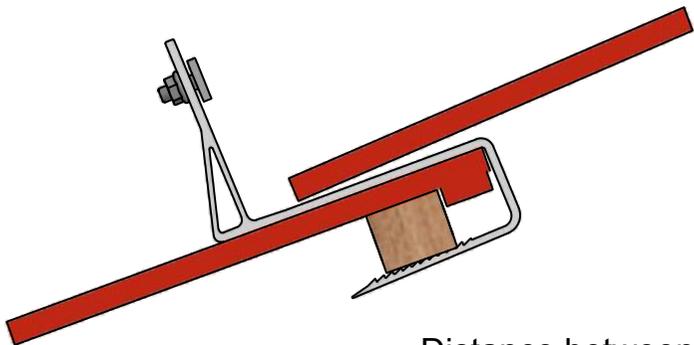
Detail A



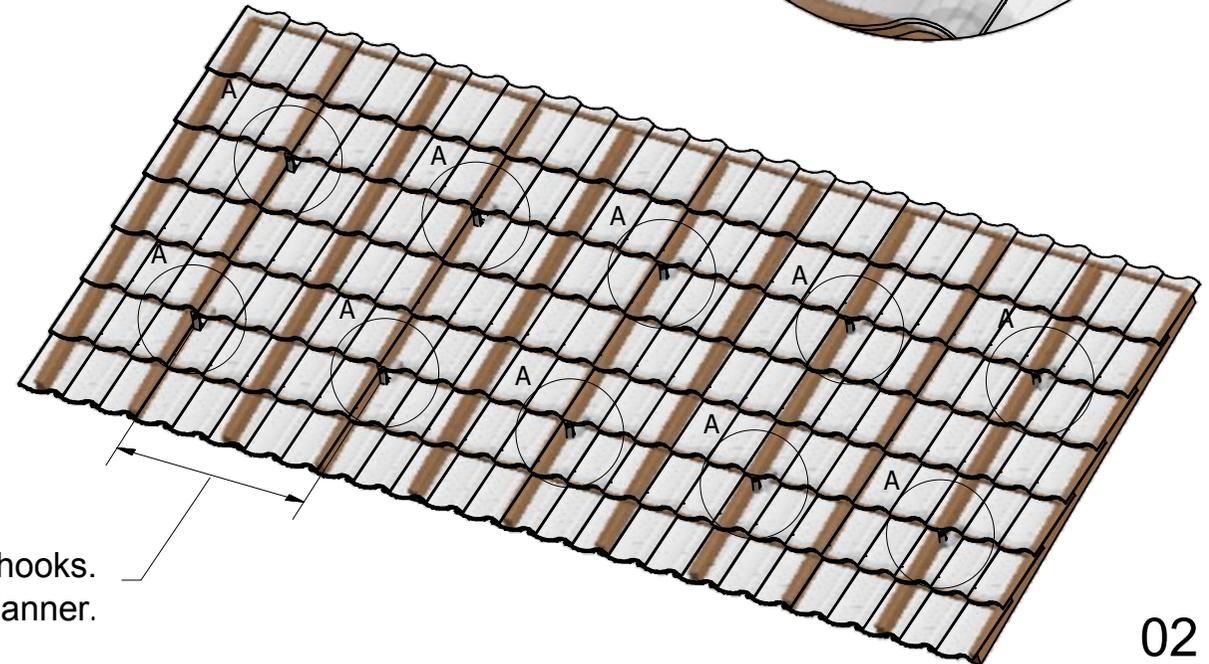
Detail A



Check strenght of battens.

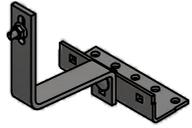


Distance between Hanghooks.
See Installation instructions of the ValkPVplanner.





Mounting of the Strongline roof hooks

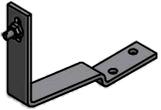


74.78.44 (horizontal profile)
74.78.45 (vertical profile)



77.33.60

Optional:



See page 1

Optional:

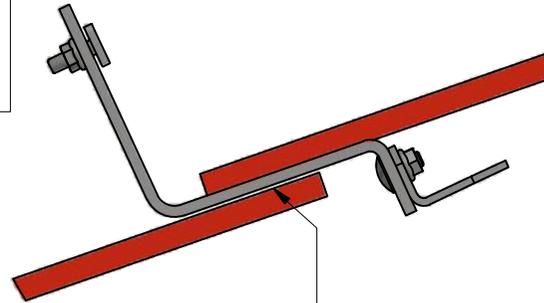


See page 2

Optional:

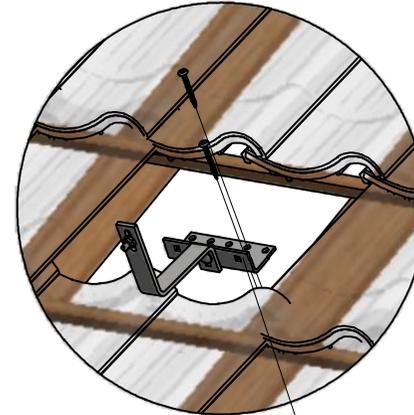


See page 4

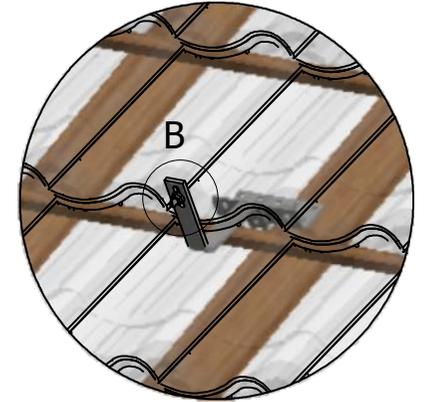


Clearance: > 0mm

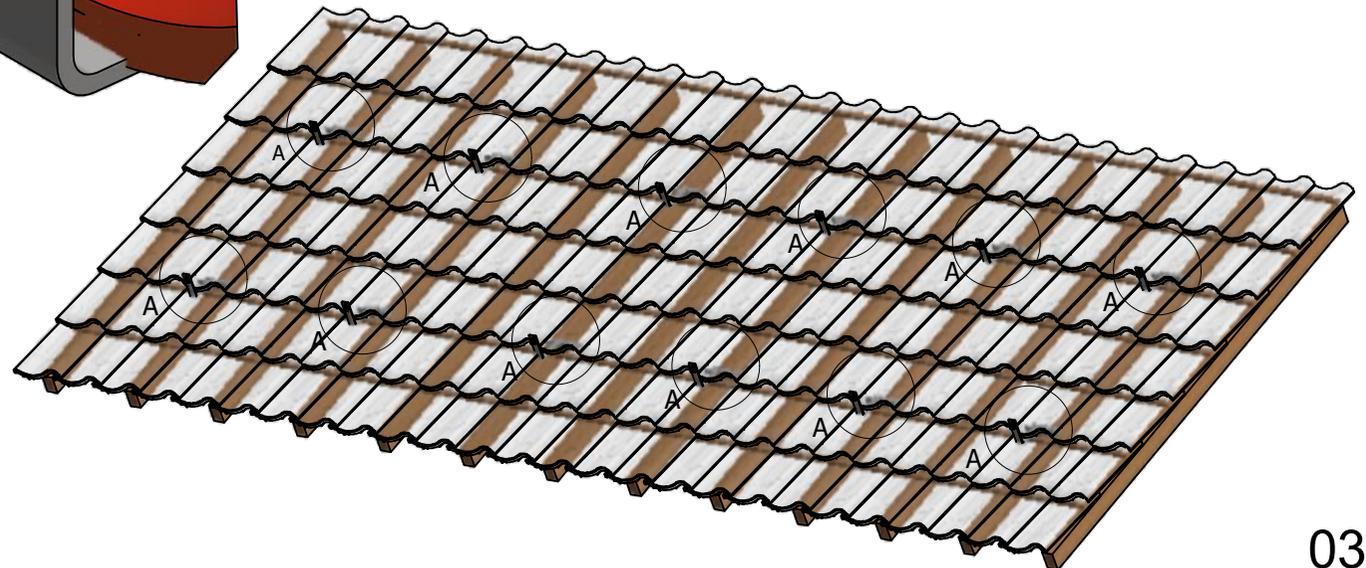
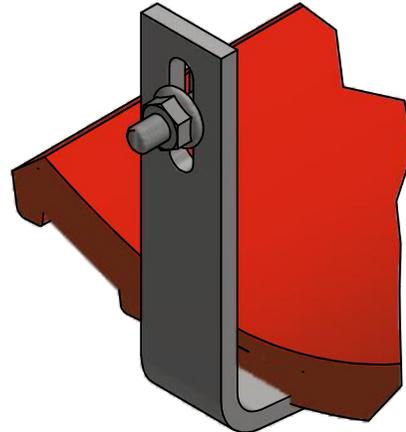
Detail: A



7Nm



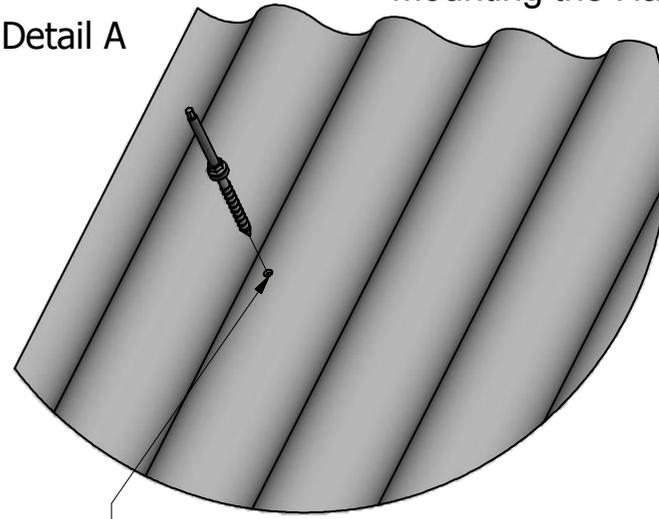
Detail: B



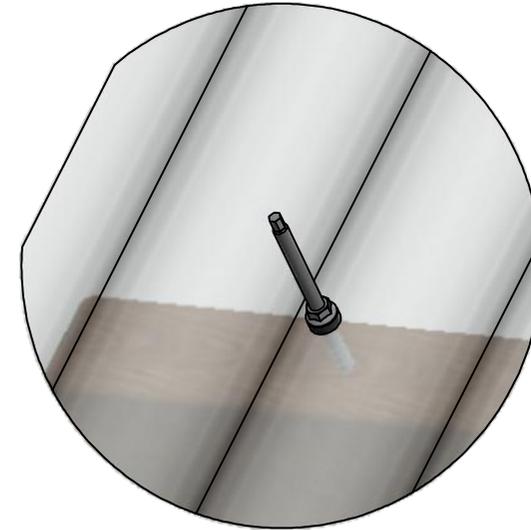


Mounting the Hanger bolts

Detail A



Detail A

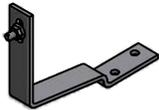


74.79.15 (M10x200)
74.79.17 (M10x250)



74.79.20 (M12x250)
74.79.22 (M12x350)

Optional:



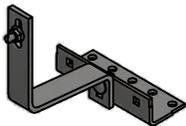
See page 1

Optional:



See page 2

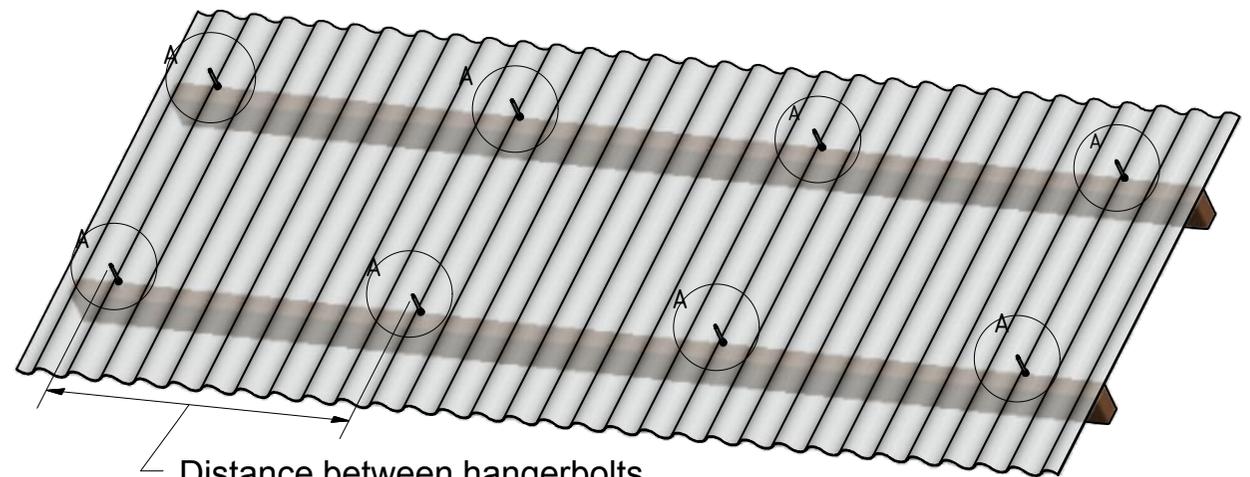
Optional:



See page 3

Drill hole for Hangerbolts.
M10 : Hole size 10 mm in corrugated sheet
M12 : Hole size 12 mm in corrugated sheet

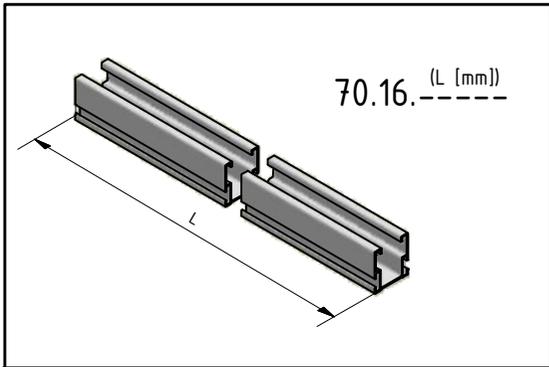
Pre drill in wood.
M10 : Hole size 7.0 mm
M12 : Hole size 8.4 mm



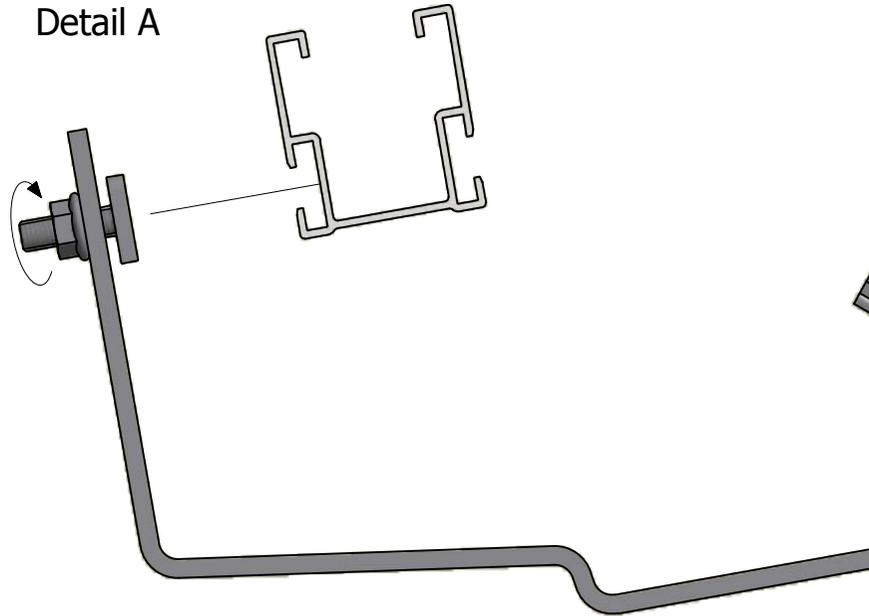
Distance between hangerbolts.
See Installation instructions of the ValkPVplanner.



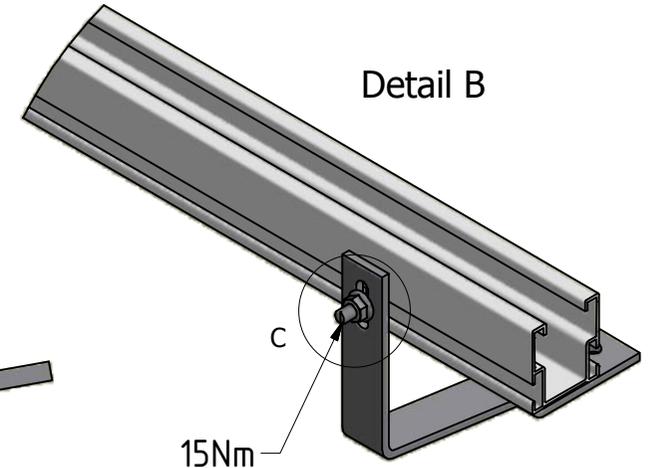
Mounting the Side+ profile



Detail A

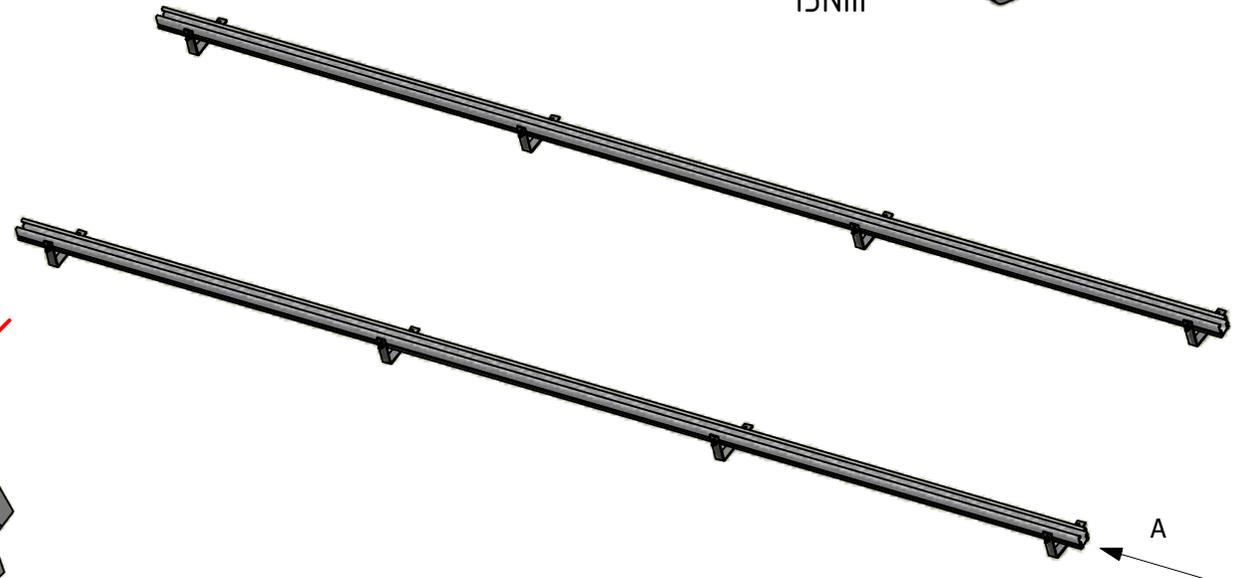
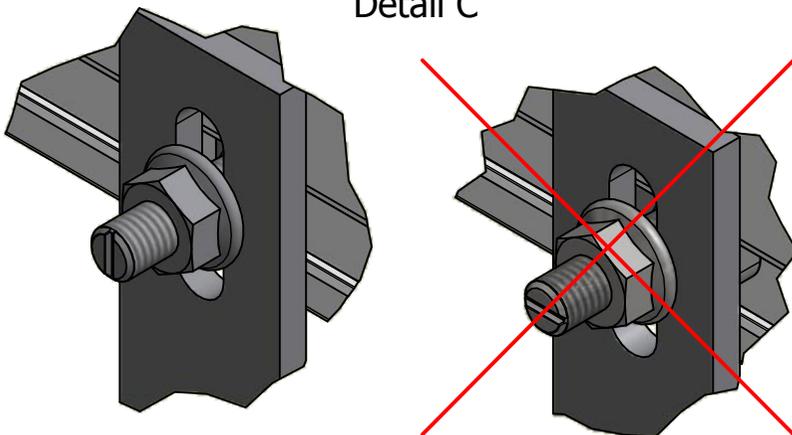


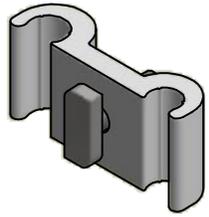
Detail B



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

Detail C

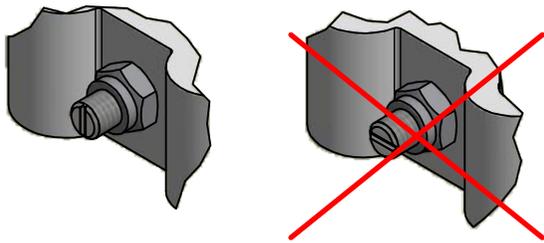




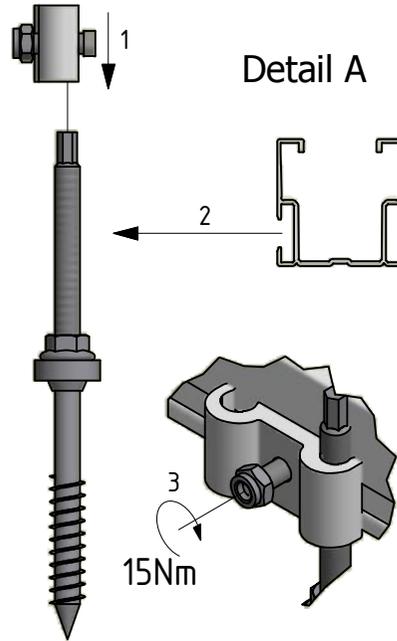
72.11.00

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

Detail C

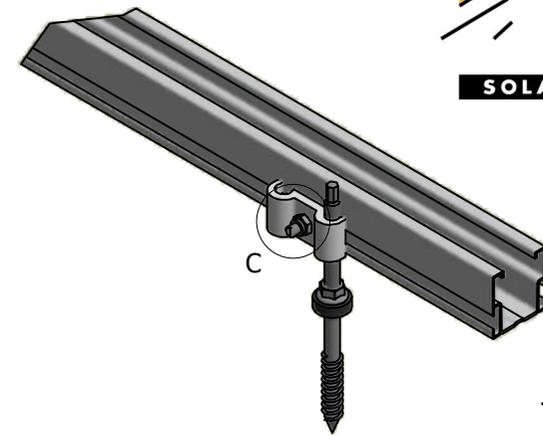


Mounting Side+ profile

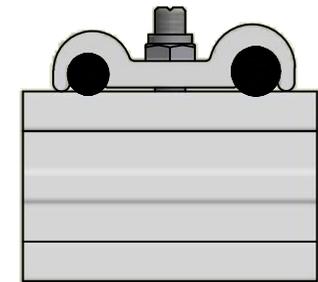


Detail A

Detail B

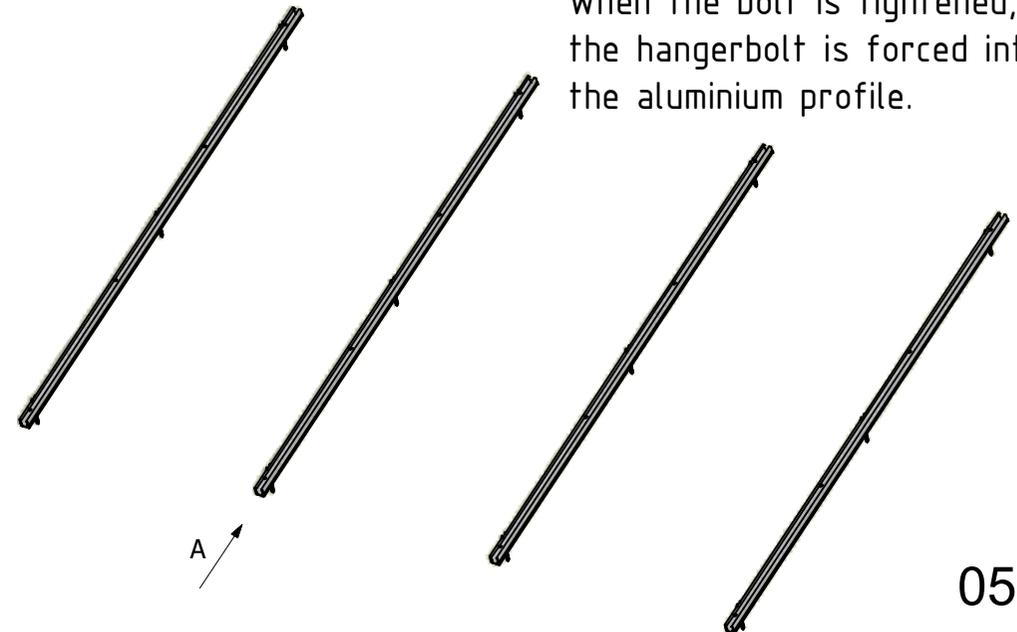
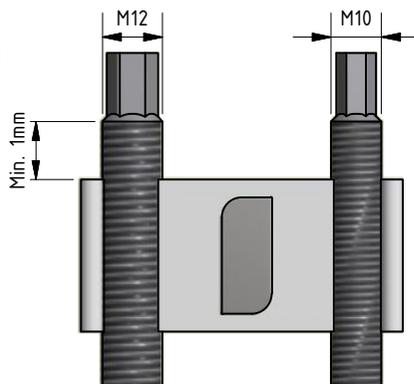


Top view

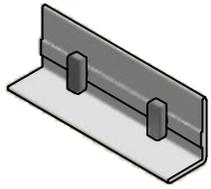


When the bolt is tightened, the hangerbolt is forced into the aluminium profile.

At least 1 mm thread above the clamp.

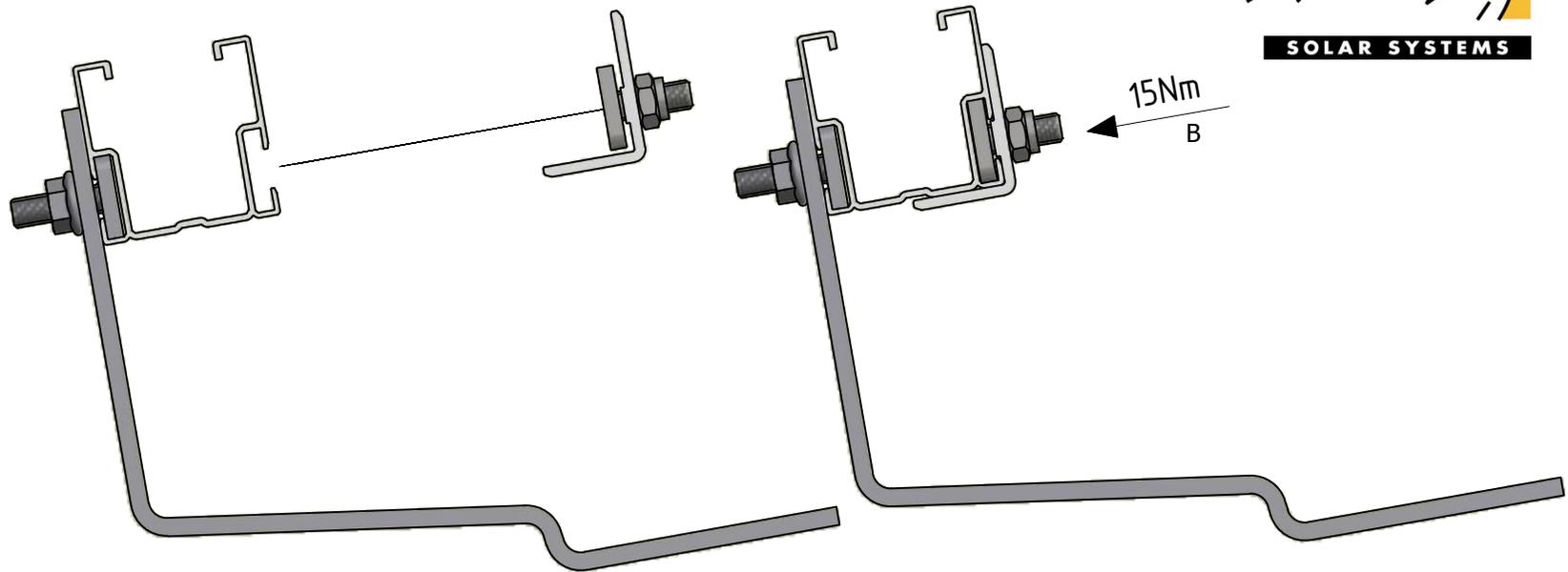


Mounting the Side+ coupling



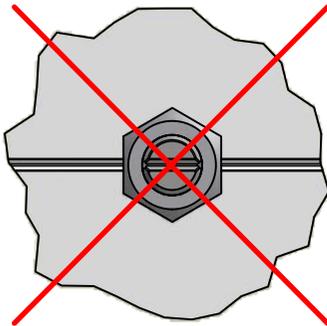
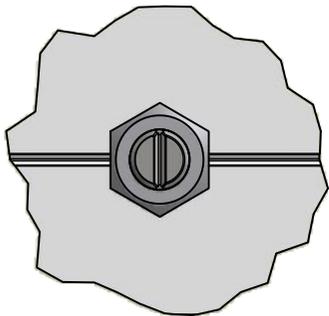
72.48.65

Detail A



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

Detail B

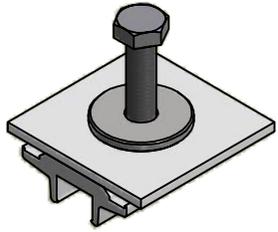


Optional:



73.90.50

Optional:



77.42.23

Optional:



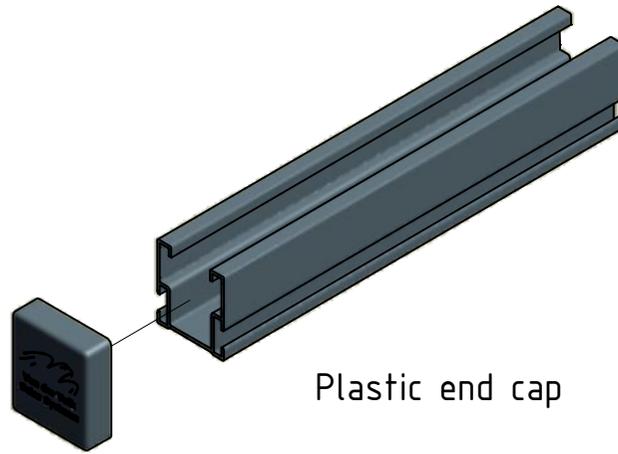
73.30.20

Mounting optional products

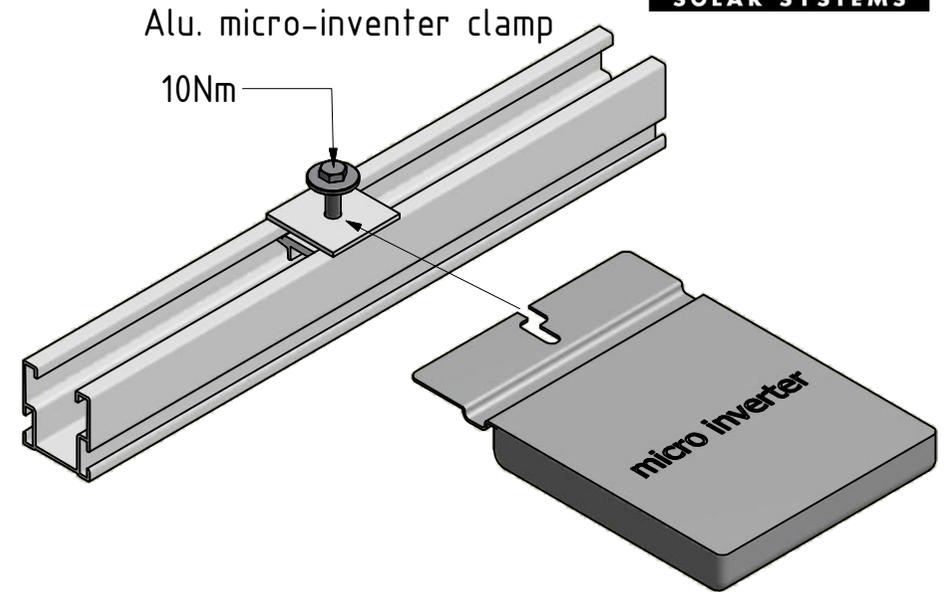
VAN DER VALK



SOLAR SYSTEMS



Plastic end cap

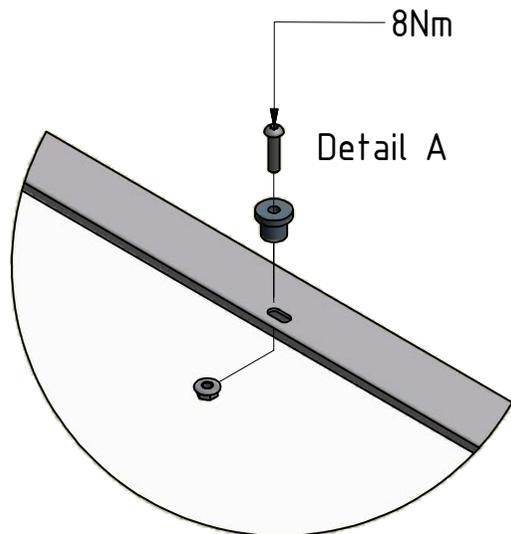


Alu. micro-inverter clamp

10Nm

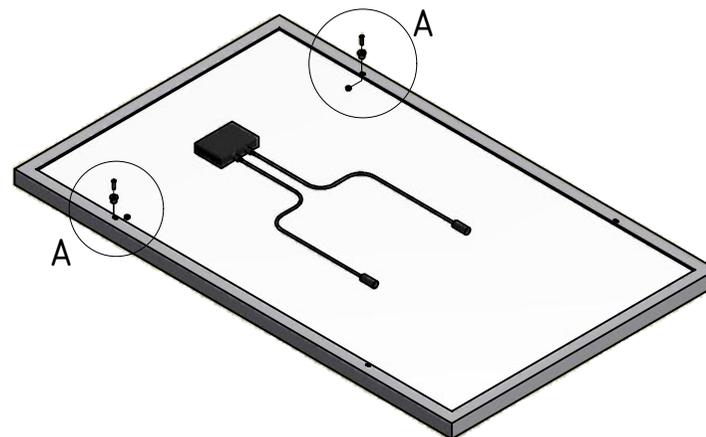
micro inverter

Plastic panel alignment pins



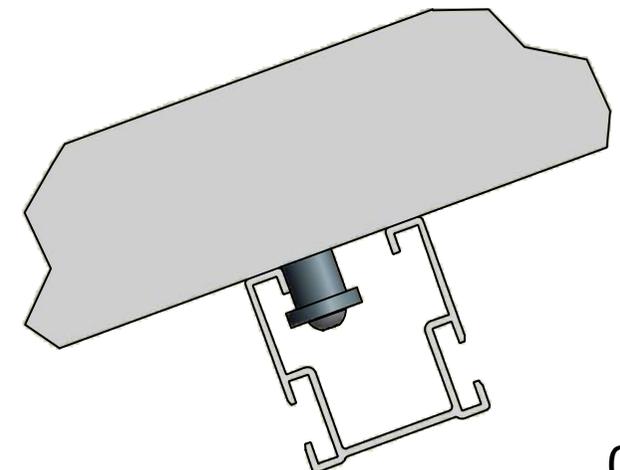
8Nm

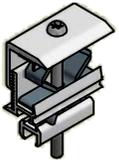
Detail A



A

A





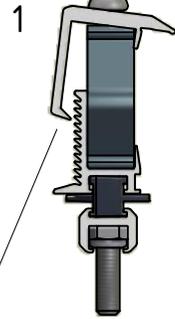
72.15.52

Mounting panels

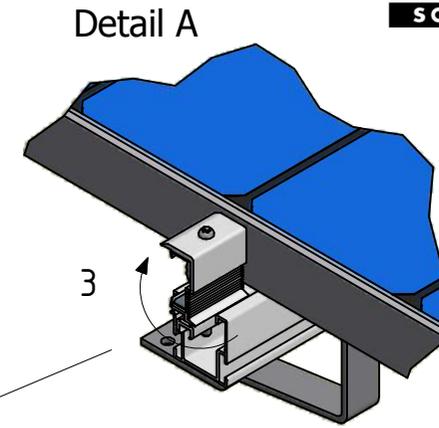
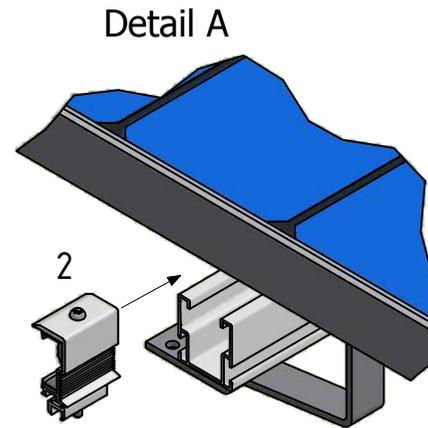
VAN DER VALK



SOLAR SYSTEMS

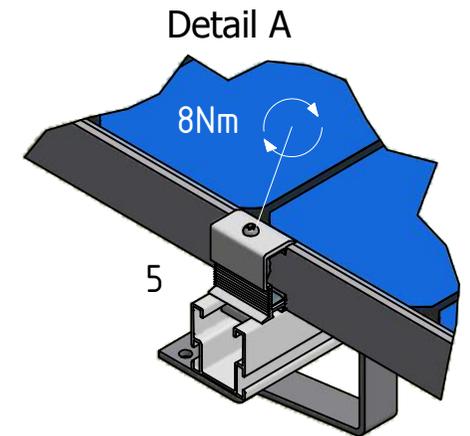
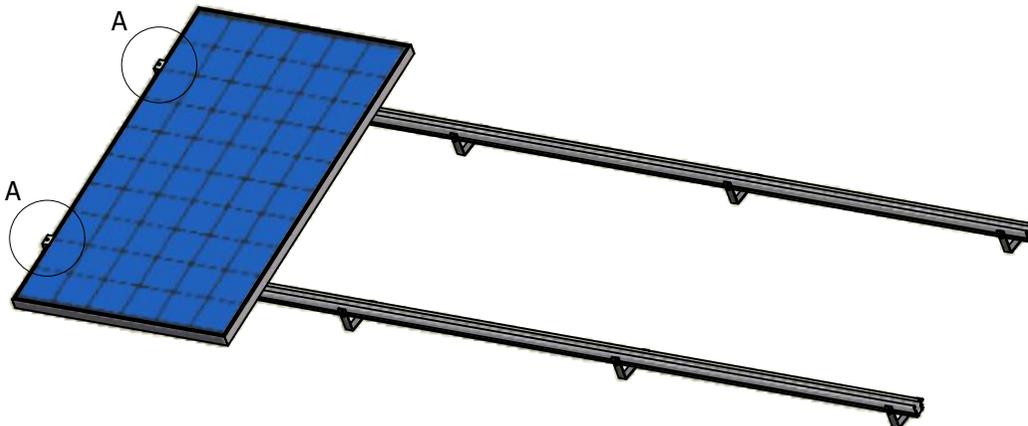


Take the End Clamp out of it's slot to make the assembly easier.



The End Clamp can only be turned clockwise, so make sure that the End Clamp is placed the right way.

Put the End Clamp in the right slot to continue the assembly.





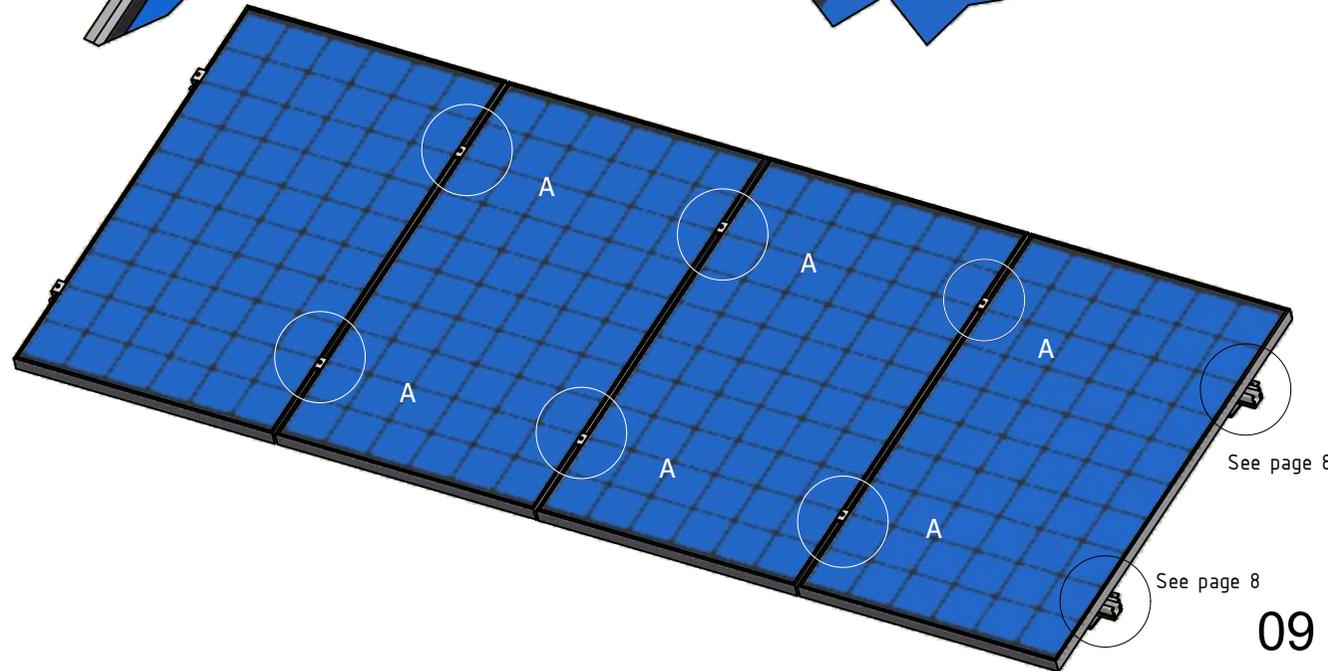
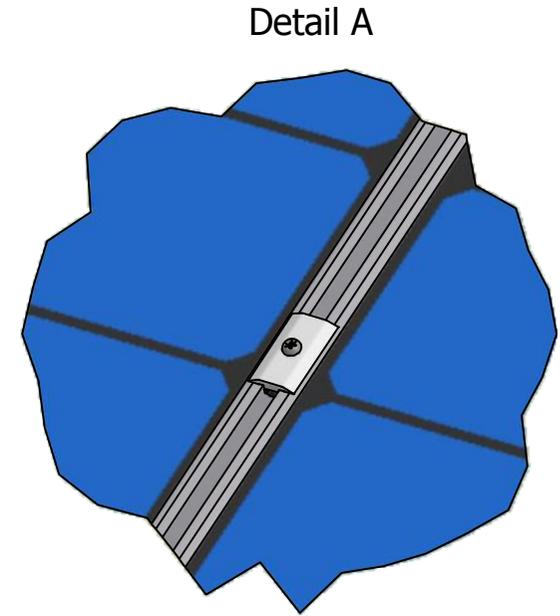
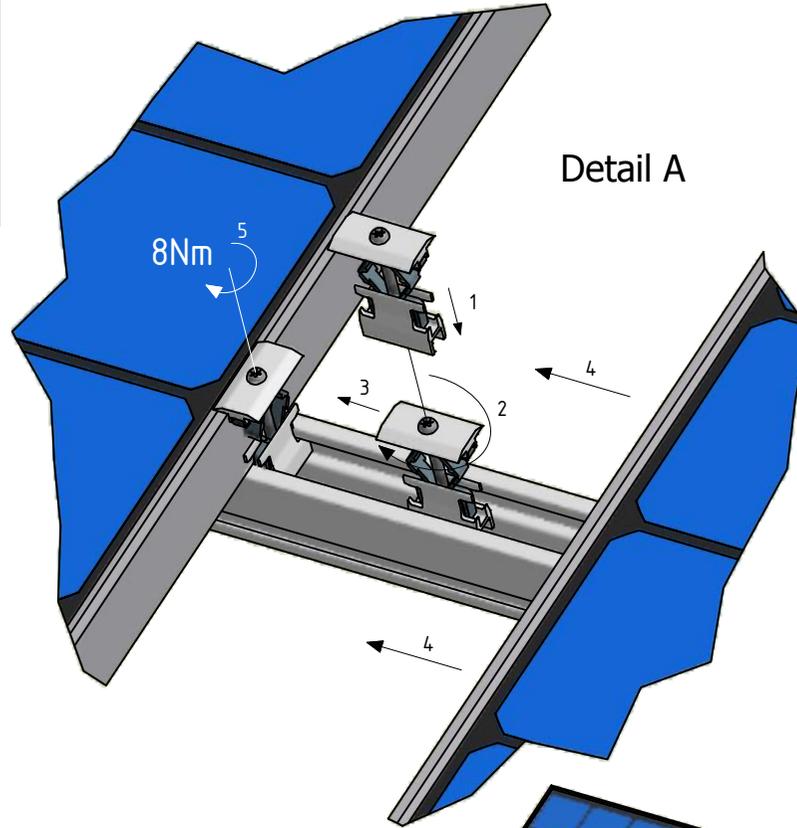
72.15.50

Mounting panels

VAN DER VALK



SOLAR SYSTEMS



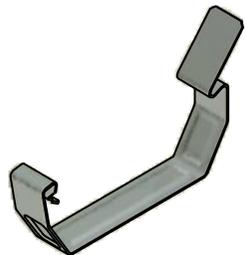
See page 8

See page 8

optional:



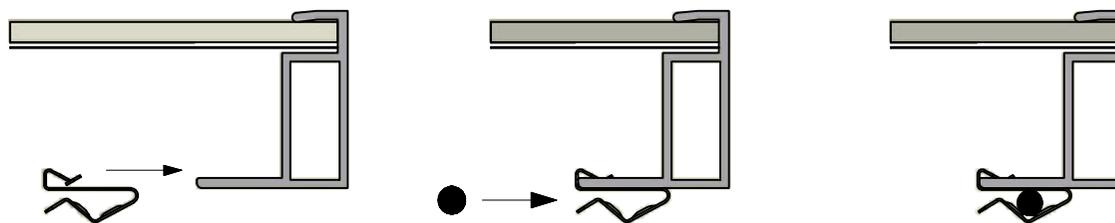
73.20.01
Max. cable
diameter $\varnothing 9$ mm



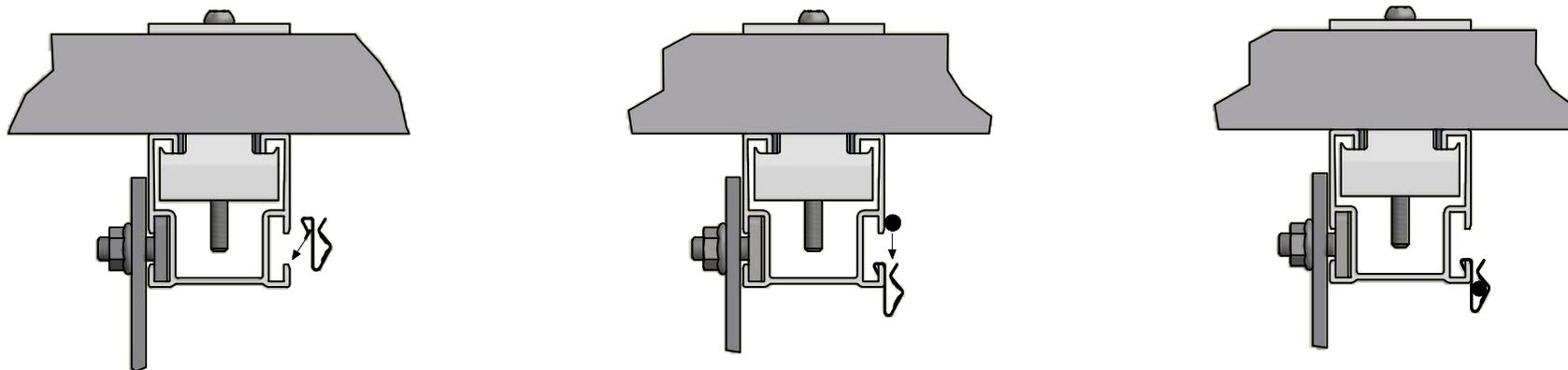
73.20.05
Max. cable
diameter $\varnothing 9$ mm

Mounting cable clamps

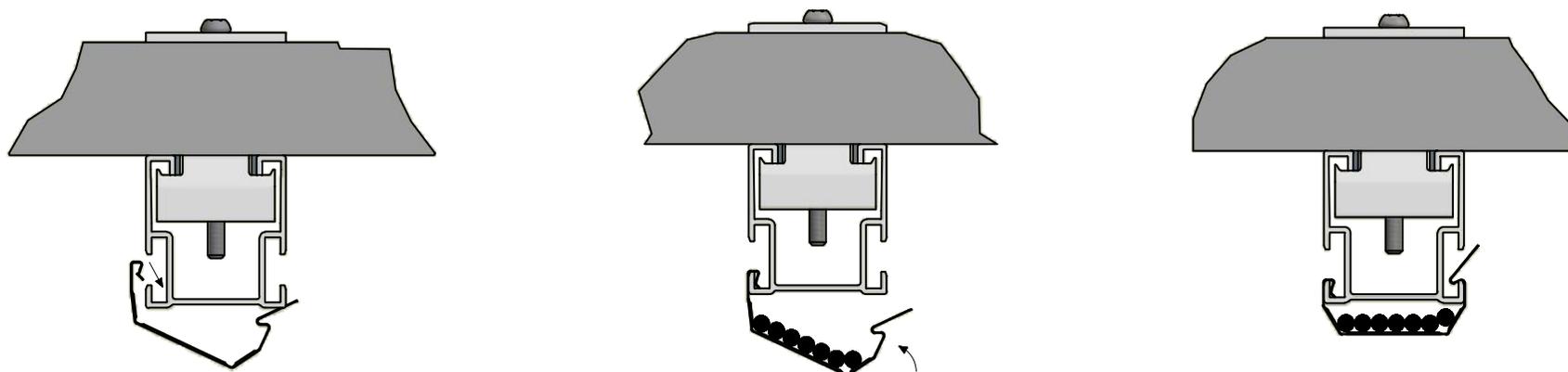
Mounting cable clamp on panel.



Mounting cable clamp on Side+ profile.



Mounting cable clamp on Side+ profile.



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 m² 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