ValkTriple

Installation manual

Use in combination with the project report of the ValkKITSplanner

Van der Valk Solar Systems
Developer and producer of
solar mounting systems

Version 01 | EN

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Table of contents

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 project report.
- Check ‘Datasheet Cable management’ for cable suggestions.
- The system is placed in the middle zone of the roof.

ValkQuattro

Installation manual

Use in combination with the project report of the ValkKITSplanner

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Disclaimer

This installation manual must be seen in addition to the project report which shows you specific information about your project like a project drawing and ballast plan for flat roofs.

The project report is a result of the calculation tool, the ValkPVplanner. This online calculation tool and/or the project reports derived from this tool were composed with the greatest possible care. Nonetheless, it is possible that some information might not be entirely correct as the results for each project report can be based on default values, which values always need to be checked by you. The instructions provided in this project report must be observed at all times. All applicable standards and appendixes have been integrated in this online calculation tool.

All current structural, safety and building regulations must be observed. Solar mounting systems installed on roofs will be exposed to wind and snow.
The building in question will be subject to a load as a result of the PV system. A design calculation must be used to establish whether or not the building will be able to withstand the extra load. Where necessary, modifications need to be made.

Flat roof systems should either be attached to the roof or need to be supported by ballast, to make sure that the system is unable to be lifted or tipped over.
The ballast specified in the ValkPVplanner project report will be vital to ensure that the mounting system can be used. Flat roofs with an angle above 5 degrees must be attached to the roof.

The calculations in the online calculation tool do not take into account obstacles in the near surrounding like high buildings, cliffs and mountains. Restrictions also apply for the position of the system on a roof. The solar panels must be installed at a certain distance from edge of the roof as shown in this project report and the installation manual.

The standard warranty for pitched roof, flat roof and ground mount systems is 10 years, which can be extended under certain conditions. The guarantee provided is subject to the guarantee conditions stated in the general terms and conditions stipulated by Van der Valk Solar Systems B.V. Our terms and conditions shall apply to all our products and can be found on our website: www.valksolarsystems.com.

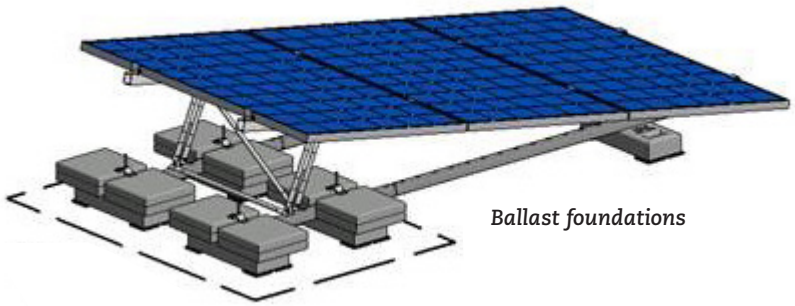
Van der Valk Solar Systems B.V. does not accept any liability for any direct and/or indirect consequences of any act (or omission) ensuing from the information in or the failure to observe the instruction provided in the project report and the installation manual and for possible incorrect results resulting from the use of this online calculation tool which was made available to you.

The ValkTriple® mounting system is a product produced by:
Van der Valk Solar Systems BV
Chamber of Commerce number: 27355116
www.valksolarsystems.com

Release date: March 2021

Required ballast | The Netherlands

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

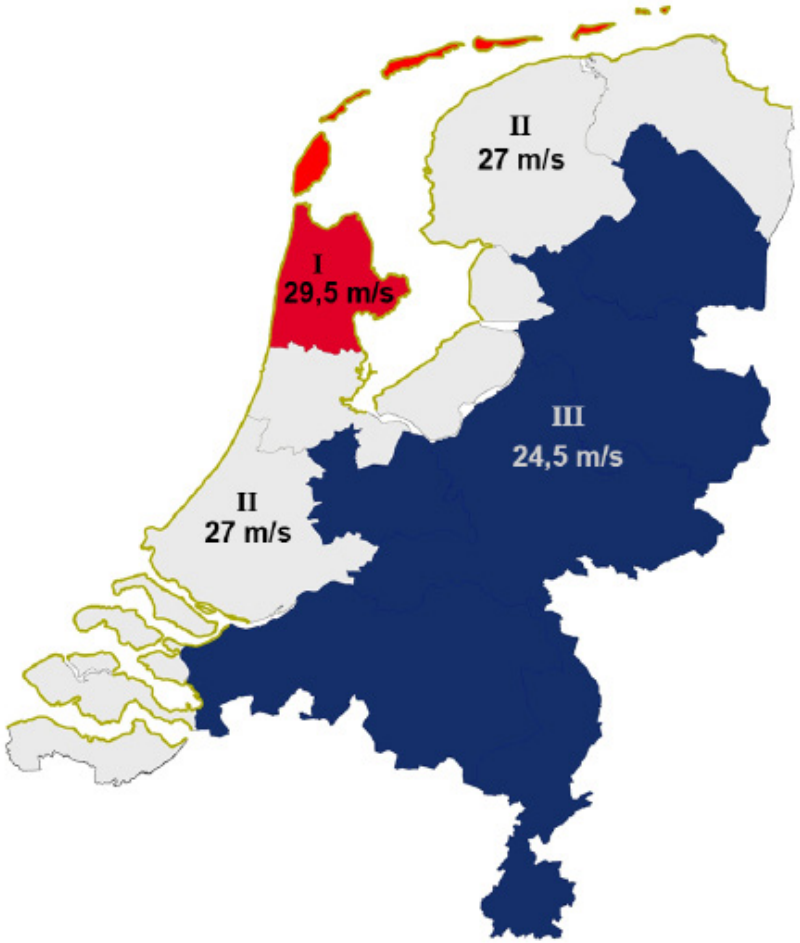
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Builded environment
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
I (29,5 m/s)	152	152	194	246	287	kg
	17	17	22	27,5	32	tiles
II (27 m/s)	92	92	128	170	205	kg
	10,5	10,5	14,5	19	23	tiles
III (24,5 m/s)	38	38	67	102	130	kg
	4,5	4,5	7,5	11,5	14,5	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

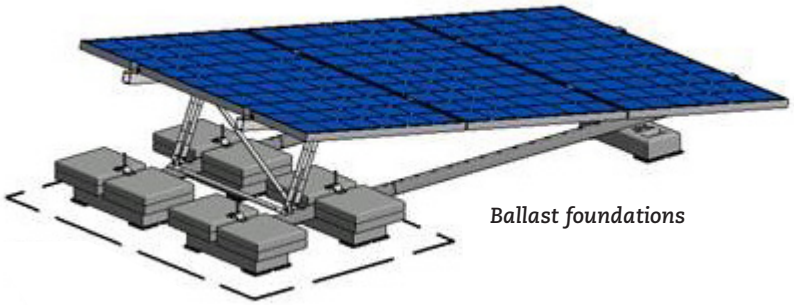
Windmap The Netherlands



* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*

Required ballast | Belgium

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

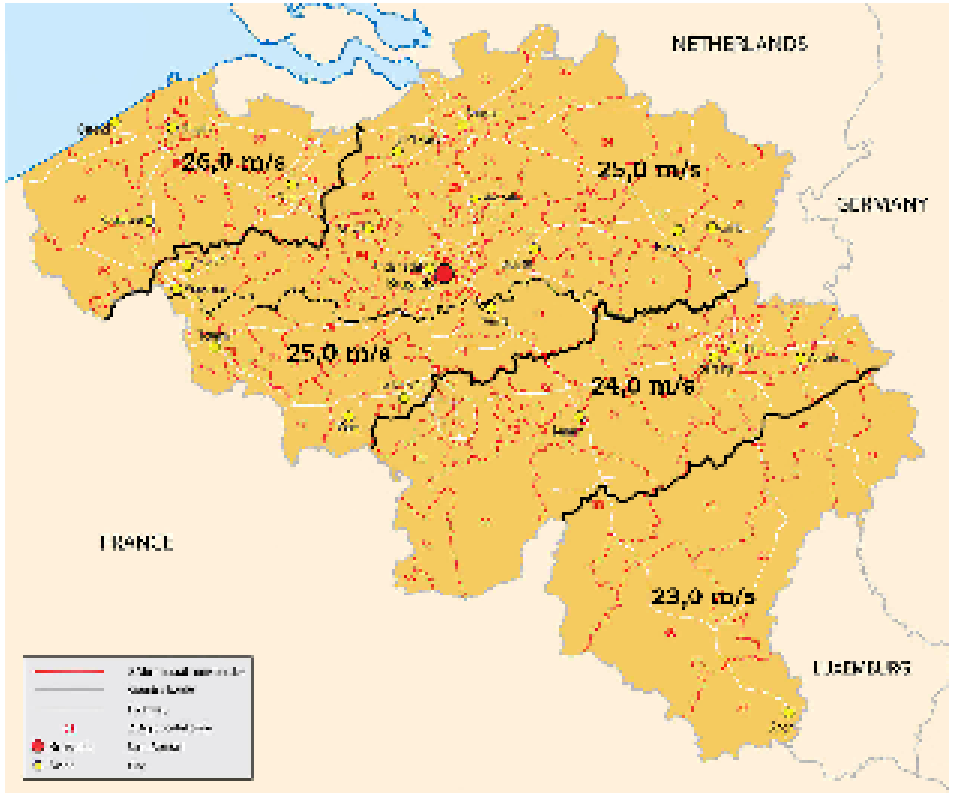
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Town
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
23 m/s	0	11	33	60	81	kg
	0	1,5	4	7	9	tiles
24 m/s	0	29	54	82	106	kg
	0	3,5	6	9,5	12	tiles
25 m/s	15	49	75	106	131	kg
	2	5,5	8,5	12	15	tiles
26 m/s	32	68	97	131	158	kg
	4	8	11	15	18	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

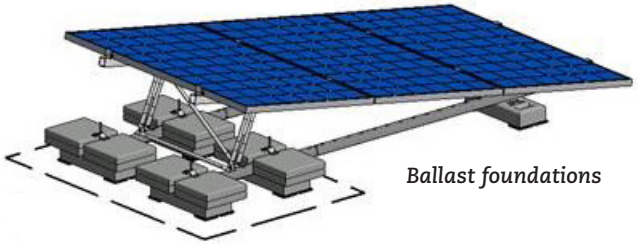
Windmap Belgium



* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*

Required ballast | Germany

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

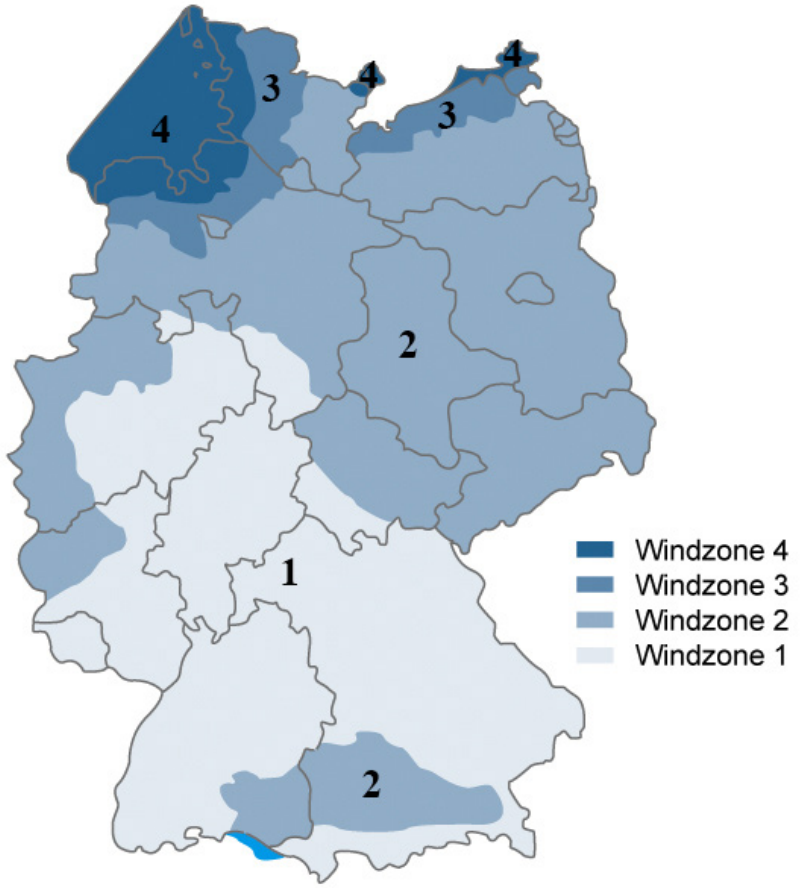
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Builded environment
Height above sea level	350 m
(Excluding North German Lowland)	
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
1 (22,5 m/s)	0	0	0	0	0	kg
	0	0	0	0	0	tiles
2 (25 m/s)	28	28	28	28	28	kg
	3,5	3,5	3,5	3,5	3,5	tiles
3 (27,5 m/s)	75	75	75	75	75	kg
	8,5	8,5	8,5	8,5	8,5	tiles
4 (30 m/s)	127	127	127	127	127	kg
	14,5	14,5	14,5	14,5	14,5	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

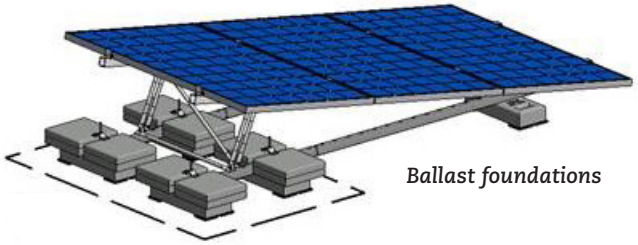
Windmap Germany



* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*

Required ballast | United Kingdom

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

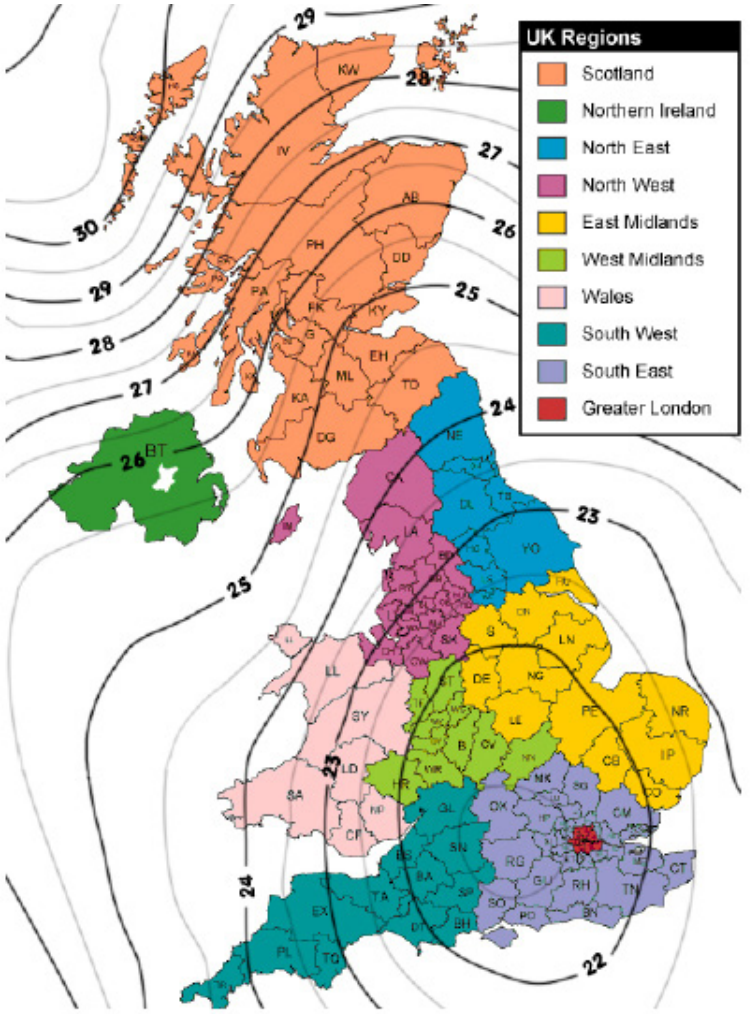
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Builded environment
Height above sea level	50 m
Distance to coast line	5 km
Distance to city border	5 km
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
22 m/s	41	89	108	167	167	kg
	5	10	12	19	19	tiles
23 m/s	63	115	137	201	201	kg
	7	13	15,5	22,5	22,5	tiles
24 m/s	86	143	166	236	236	kg
	10	16	18,5	26,5	26,5	tiles
25 m/s	110	172	197	272	272	kg
	12,5	19,5	22	30,5	30,5	tiles
26 m/s	135	202	229	311	311	kg
	15	22,5	25,5	na**	na**	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

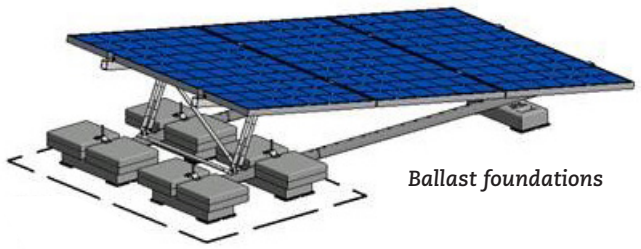
Windmap United Kingdom



* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*
** *Not available due to exceedance maximum number of tiles.*

Required ballast | Ireland

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

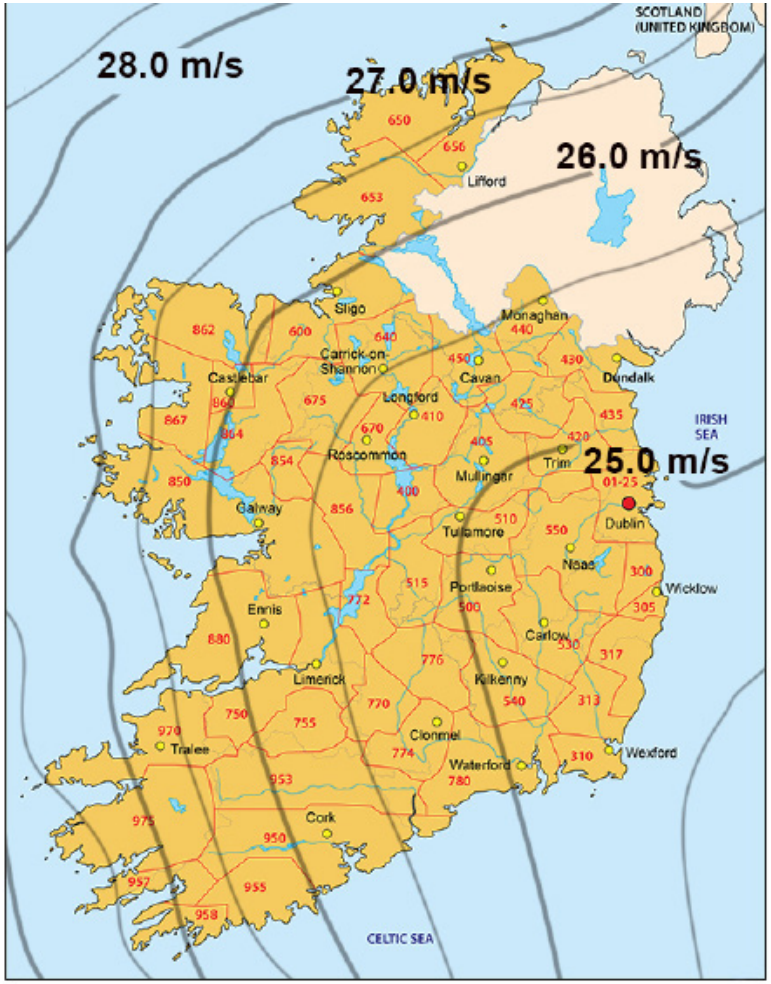
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Builded environment
Height above sea level	50 m
Distance to coast line	5 km
Distance to city border	5 km
(Northern Ireland: see United Kingdom)	
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
25 m/s	110	172	197	272	272	kg
	12,5	19,5	22	30,5	30,5	tiles
26 m/s	135	202	229	311	311	kg
	15	22,5	25,5	na**	na**	tiles
27 m/s	161	233	262	350	350	kg
	18	26	29,5	na**	na**	tiles
28 m/s	188	265	297	392	392	kg
	21	29,5	na**	na**	na**	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

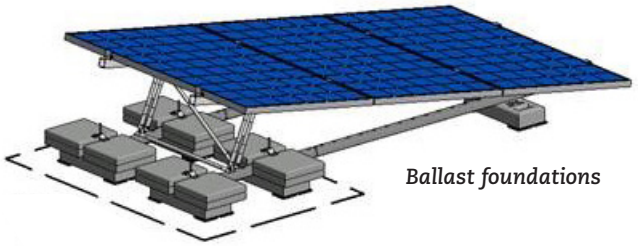
Windmap Ireland



* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*
** *Not available due to exceedance maximum number of tiles.*

Required ballast | Norway

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Town
Height above sea level	175 m
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area**	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
22 m/s	8	8	8	8	8	kg
	1	1	1	1	1	tiles
25 m/s	68	68	68	68	68	kg
	8	8	8	8	8	tiles
27 m/s	112	112	112	112	112	kg
	12,5	12,5	12,5	12,5	12,5	tiles
29 m/s	159	159	159	159	159	kg
	18	18	18	18	18	tiles
31 m/s	209	209	209	209	209	kg
	23,5	23,5	23,5	23,5	23,5	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

Norway

To determine the wind area see next page.

* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*
** *To determine the wind area see next page.*

Wind area Norway

	m/s
Province Østfold	**22**
Except Municipalitys:	
Halden	24
Moss	24
Rygge	24
Råde	24
Sarpsborg	24
Våler	24
Fredrikstad	26
Hvaler	27
Province Akershus	**22**
Except Municipality:	
Vestby	24
Province Oslo	**22**
Province Hedmark	**22**
Except Municipalitys:	
Alvdal	24
Folldal	24
Folldal near Trøndelag	24
Os	24
Os near Trøndelag	24
Tolga	24
Tynset	24
Tynset Kvikne	24
Tynset near Trøndelag	24
Province Oppland	**22**
Except Municipalitys:	
Vågå	23
Dovre	24
Dovre near Trøndelag	24
Lom	24
Lom near Sogn og Fj.	24
Vang	24
Vang near Sogn og Fj.	24
Lesja	25
Lesja near Trøndelag/ Møre og Romsdal	25
Skjåk	25
Skjåk near Sogn og Fj./ Møre og Romsdal	25
Province Buskerud	**22**
Except Municipalitys:	
Hemsedal	24
Hemsedal near Sogn og Fj.	24
Hol	24
Hol near Hordeland / Sogn og Fjordane	24
Hurum	24
Nore og Uvdal	24
Nore og Uvdal near Hordeland	24
Ål	24
Ål near Sogn og Fj.	24

	m/s
Province Vestford	**23**
Except Municipalitys:	
Hof	22
Lardal	22
Nøtterøy	24
Sandefjord	24
Stokke	24
Tønsberg	24
Larvik	25
Tjøme	26
Province Telemark	**22**
Except Municipalitys:	
Bamble	23
Porsgrunn	23
Fyresdal	24
Kragerø	24
Tinn	24
Tokke	24
Vinje	24
Vinje near Rogaland/Hordaland	24
Province Aust-Agder	**24**
Except Municipalitys:	
Arendal	26
Grimstad	26
Lillesand	26
Risør	26
Tvedestrand	26
Province Vest-Agder	**24**
Except Municipalitys:	
Flekkefjord	26
Flekkefjord near Rogaland	26
Kristiansand	26
Lyngdal	26
Søngne	26
Farsund	28
Lindesnes	28
Mandal	28
Province Rogaland	**26**
Except Municipalitys:	
Hjelmeland	24
Sauda	24
Suldal	24
Vindafjord	24
Eigersund	27
Sokndal	27
Bokn	28
Haugesund	28
Klepp	28
Randaberg	28
Rennesøy	28
Sola	28
Time	28
Hå	29

	m/s
Kvitsøy	29
Karmøy	30
Utsira	30
Ølen	*Municipality isn't in the Wind standard*
Province Hordaland	**26**
Except Municipalitys:	
Etne	24
Etne near the Folgefonna	24
Granvin	24
Kvam	24
Modalen	24
Samnanger	24
Ulvik	24
Vaksdal	24
Voss	24
Osterøy	25
Radøy	27
Austevoll	28
Austrheim	28
Bømlo	28
Fjell	28
Sund	28
Øygarden	29
Fedje	30
Province Sogn og Fjordane	**24**
Except Municipalitys:	
Aurland	25
Eid	26
Fjaler	26
Førde	26
Førde near the Jostedalsbreen	26
Gaular	26
Gloppen	26
Gloppen near the Ålfotbreen and Jostedalsbreen	26
Hornindal	26
Hyllestad	26
Høyanger	26
Lærdal	26
Naustdal	26
Askvoll	28
Flora	28
Gulen	28
Bremanger	29
Bremanger near the Ålfotbreen	29
Solund	29
Selje	31
Vågsøy	31

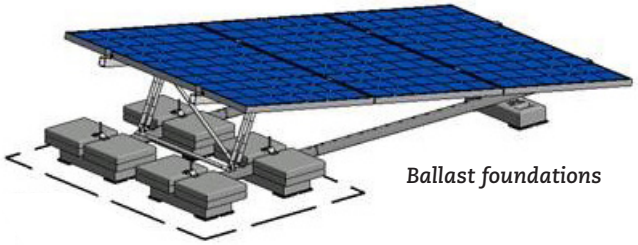
	m/s
Province Møre og Romsdal	**30**
Except Municipalitys:	
Rindal	25
Surnadal	25
Nesset	26
Norddal	26
Stordal	26
Stranda	26
Sunndal	27
Gjemnes	28
Rauma	28
Sykkylven	28
Tingvoll	28
Volda	28
Ørskog	28
Ørsta	28
Eide	29
Halsa	29
Hareid	29
Molde	29
Skodje	29
Sula	29
Ålesund	29
Sandøy	31
Frei	*Municipality isn't in the Wind standard*
Tustna	*Municipality isn't in the Wind standard*
Province Sør-Trøndelag	**25**
Except Municipalitys:	
Malvik	26
Oppdal	26
Rennebu	26
Trondheim	26
Agdenes	27
Rissa	27
Snillfjord	27
Hemne	28
Bjugn	29
Osen	29
Roan	29
Åfjord	29
Frøya	30
Hitra	30
Ørland	30

	m/s
Province Nord-Trøndelag	**26**
Except Municipalitys:	
Lierne	24
Meråker	25
Røyrvik	25
Snåsa	25
Flatanger	29
Fosnes	29
Leka	29
Leka on the mainland	29
Nærøy	29
Vikna	30
Province Nordland	**29**
Except Municipalitys:	
Beiarn	26
Evenes	26
Fauske	26
Grane	26
Hattfjelldal	26
Hemnes	26
Rana	26
Saltdal	26
Sørfold	26
Ballangen	27
Tjeldsund	27
Tysfjord	27
Hamarøy	28
Narvik	28
Sortland	28
Vefsn	28
Vefsn along the fjord	28
Vefsn Mosjøen	28
Vevelstad	28
Alstahaug	30
Bindal	30
Bodø	30
Dønna	30
Flakstad	30
Herøy	30
Leirfjord	30
Lurøy	30
Lurøy on the mainland	30
Nesna	30
Sømna	30
Vega	30
Vestvågøy	30
Andøy	31
Moskenes	31
Røst	31
Træna	31
Værøy	31
Skjerstad	*Municipality isn't in the Wind standard*

	m/s
Province Troms	**26**
Except Municipalitys:	
Bardu	24
Målselv	24
Strofjord	24
Gáivuona/Kåfjord	25
Balsfjord	26
Gratangen	26
Ibestad	26
Lavangen	26
Lyngen	26
Salangen	26
Skånland	26
Sørreisa	26
Dyrøy	27
Harstad	27
Lenvik	27
Nordreisa	27
Tranøy	27
Tromsø	27
Bjarkøy	28
Kvænangen	28
Skjervøy	28
Karlsøy	29
Berg	30
Torsken	30
Province Finnmark	**29**
Except Municipalitys:	
Kárájoga / Karasjok	24
Guovdageaidnu / Kautokeino	24
Deanu/Tana	27
Porsanger	27
Unjárgga / Nesseby	27
Alta	28
Berlevåg	30
Gamvik	30
Hasvik	30
Måsøy	30
Nordkapp	30
Vardø	30
Province Svalbard	**30**

Required ballast | Sweden

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Town
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
22 m/s	0	0	0	0	0	kg
	0	0	0	0	0	tiles
23 m/s	0	0	0	0	0	kg
	0	0	0	0	0	tiles
24 m/s	0	0	0	0	0	kg
	0	0	0	0	0	tiles
25 m/s	0	0	0	0	16	kg
	0	0	0	0	2	tiles
26 m/s	0	0	0	9	33	kg
	0	0	0	1	4	tiles

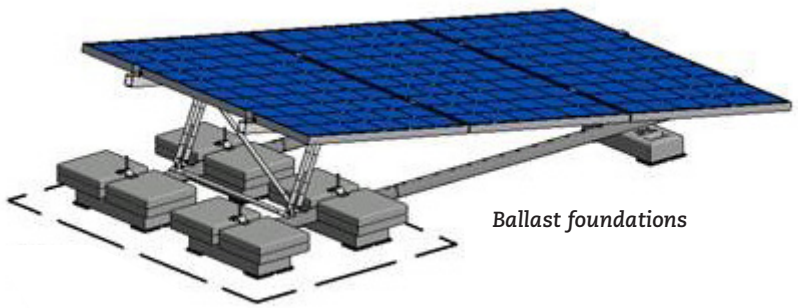
Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

Windmap Sweden

* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*

Required ballast | Finland

General
The ValkTriple® mounting system must be reinforced by means of tiles, which must be placed on the indicated ballast foundations. In **three steps** you can easily calculate the required ballast;
- determine the wind area on the windmap
- choose the wind area and building height in the table
- you can now read the number of tiles / kg



Ballast foundations

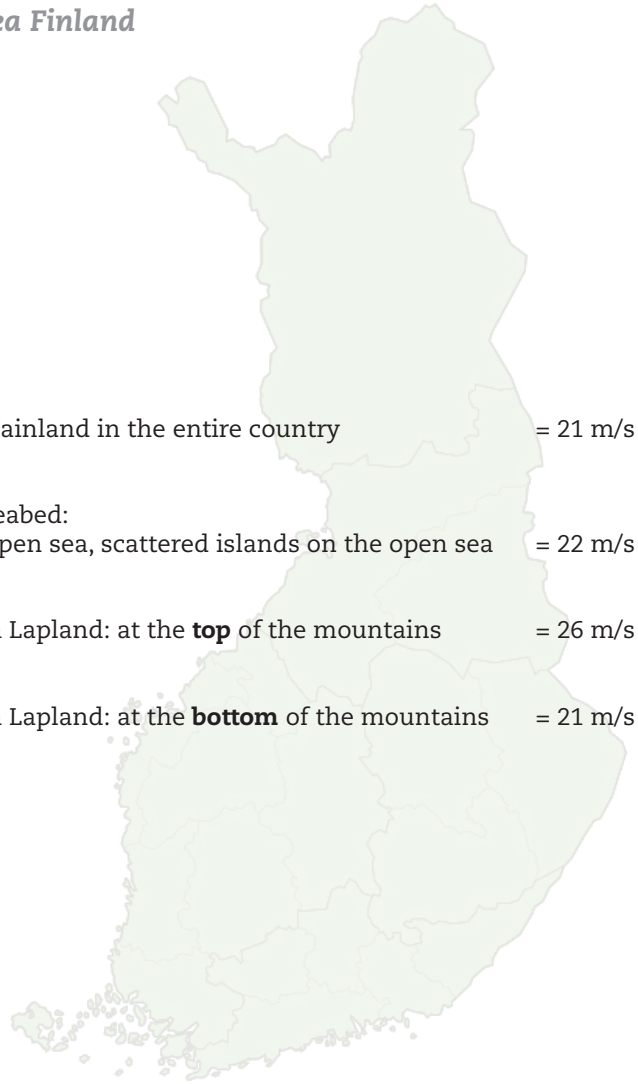
Surrounding parameters

Panelsize	Length approx. 1650 mm - Width max 1005 mm Height 28-50 mm - Weight approx. 19 kg
Position	Middle zone roof
Terrain category	Town
Roofing materials	Bitumen
Tile size*	30 x 30 x 4,5 cm á 9 kg
Flat roof	Max. 5% inclination

Height / Wind area	0 - 5 meter	5 - 7 meter	7 - 9 meter	9 - 12 meter	12 - 15 meter	
21 m/s	0	0	0	0	5	kg
	0	0	0	2	24	tiles
22 m/s	0	0	0	2	24	kg
	0	0	0	0,5	3	tiles
26 m/s	55	55	55	80	111	kg
	6,5	6,5	6,5	9	12,5	tiles

Note 1: *The extra ballast must be equally divided over the ballast foundations.*
Note 2: *The max. of 32 tiles can be placed for extra ballast (288 kg).*

Wind area Finland



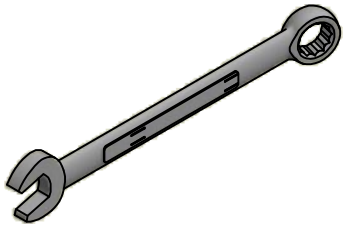
- Mainland in the entire country = 21 m/s
- Seabed:
  Open sea, scattered islands on the open sea = 22 m/s
- In Lapland: at the **top** of the mountains = 26 m/s
- In Lapland: at the **bottom** of the mountains = 21 m/s

* *If you use tiles of different sizes and thus another weight, you need to adjust the number of tiles to get the right weight.*

Recommended installation tools

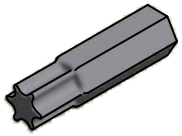
ValkTriple

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



Wrench 13

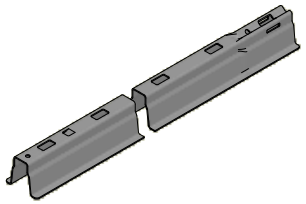
Socket 13



Torx bit T-30

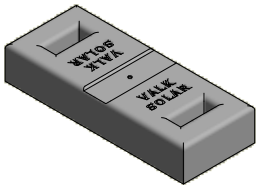
Measuring tape

Required materials
ValkTriple

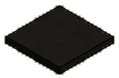


Roof carrier profile 1000mm (741801000)
Roof carrier profile 1500mm (741801500)
Installation: Page 01

Coupling set (774221)
Installation: Page 01



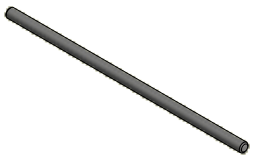
Concrete mass block (750520)
Installation: Page 01



Rubber tile carrier (729610)
Installation: Page 01

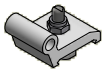
SS bolt M8x65 (774065)
Installation: Page 01

SS washer M8 125A (774008)
Installation: Page 01

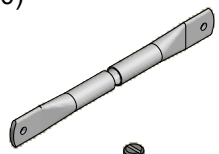


Threaded rod M8x220 (7479740)
Installation: Page 01

SS flange nut M8 (774006)
Installation: Page 01/03/04/05/06

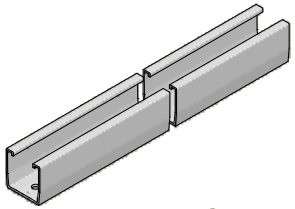


A-frame connector (724420)
Installation: Page 02

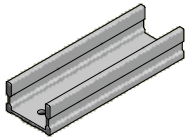


Alu. support (G13032208250000)
Installation: Page 03

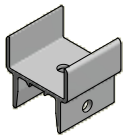
Hammerheadbolt M8x20 (774220)
Installation: Page 03



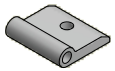
Alu. profile 2100mm (7272100)
Alu. profile 1010mm (7271010)
Alu. Extension profile (757050)
Installation: Page 04



Alu. profile coupling (004850)
Installation: Page 04



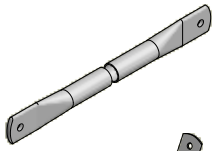
Alu. hinge 50mm (724450)
Installation: Page 04



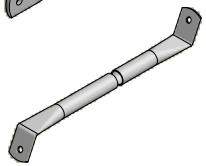
A-frame connector (724414)
Installation: Page 04

SS bolt M8x20 (774020)
Installation: Page 04

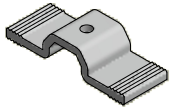
SS bolt M8x80 (774081)
Installation: Page 04



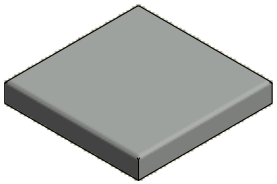
Alu. support (G13057703800000)
Installation: Page 05



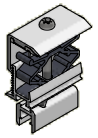
Alu. support (G13032208656565)
Installation: Page 05



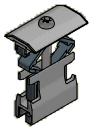
Alu. tile clamp (725140)
Installation: Page 06



Ballast tile (7506303045)
Installation: Page 06
Not included in kit



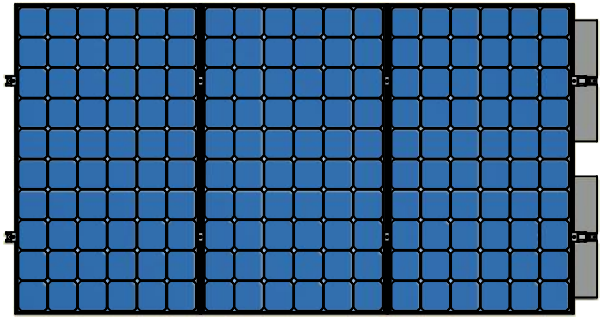
End clamp (721552)
Installation: Page 07

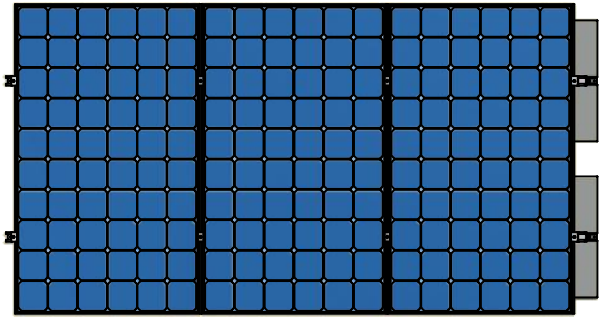


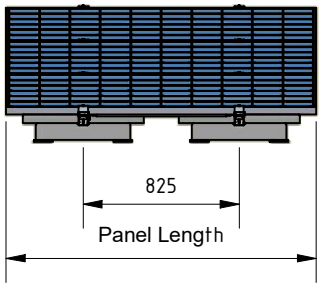
Panel clamp (721550)
Installation: Page 08

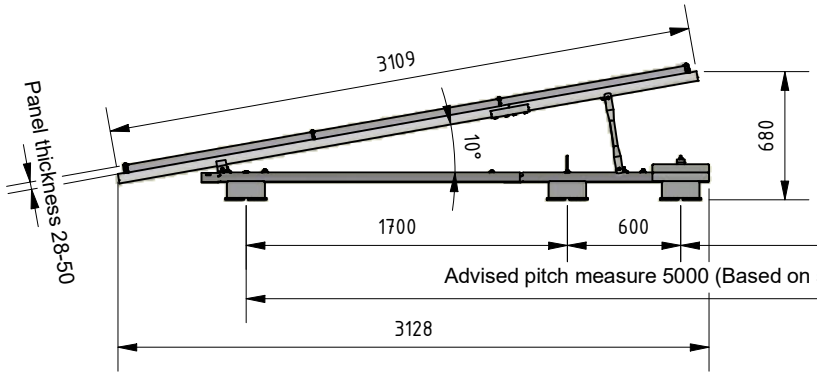
Cable clamp (732001)
Installation: Page 09

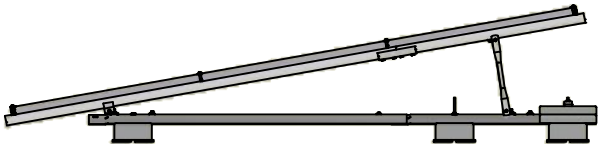
VAN DER VALK
SOLAR SYSTEMS









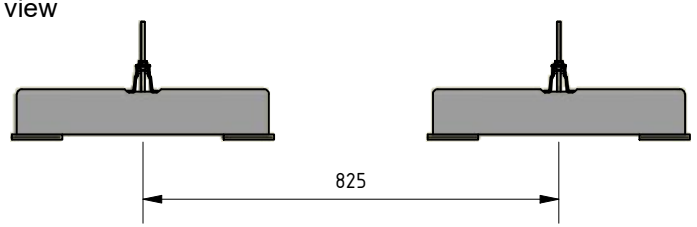


Valk Hint!

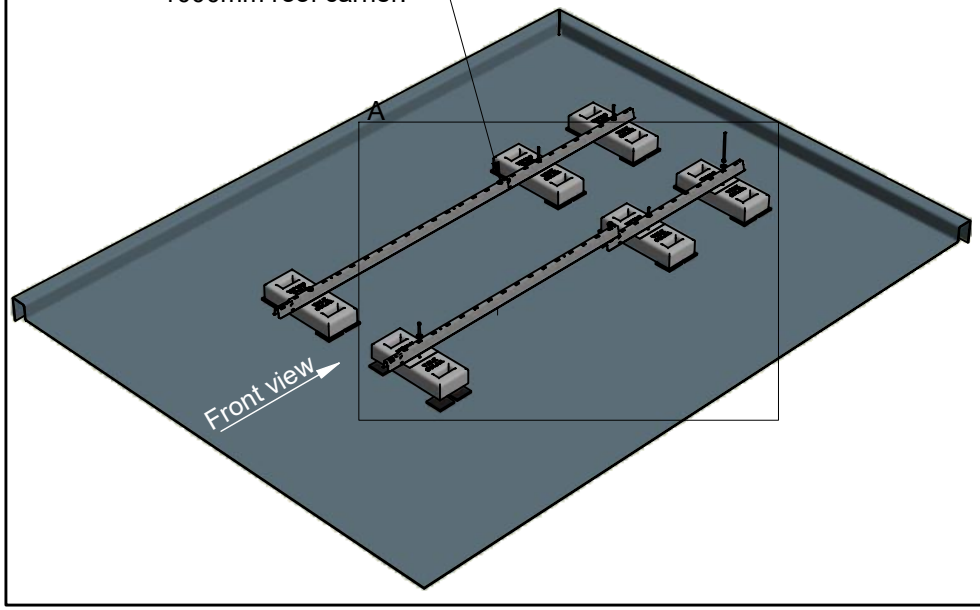
1) Place the mass block on the correct locations before mounting the roof carriers.

VAN DER VALK SOLAR SYSTEMS

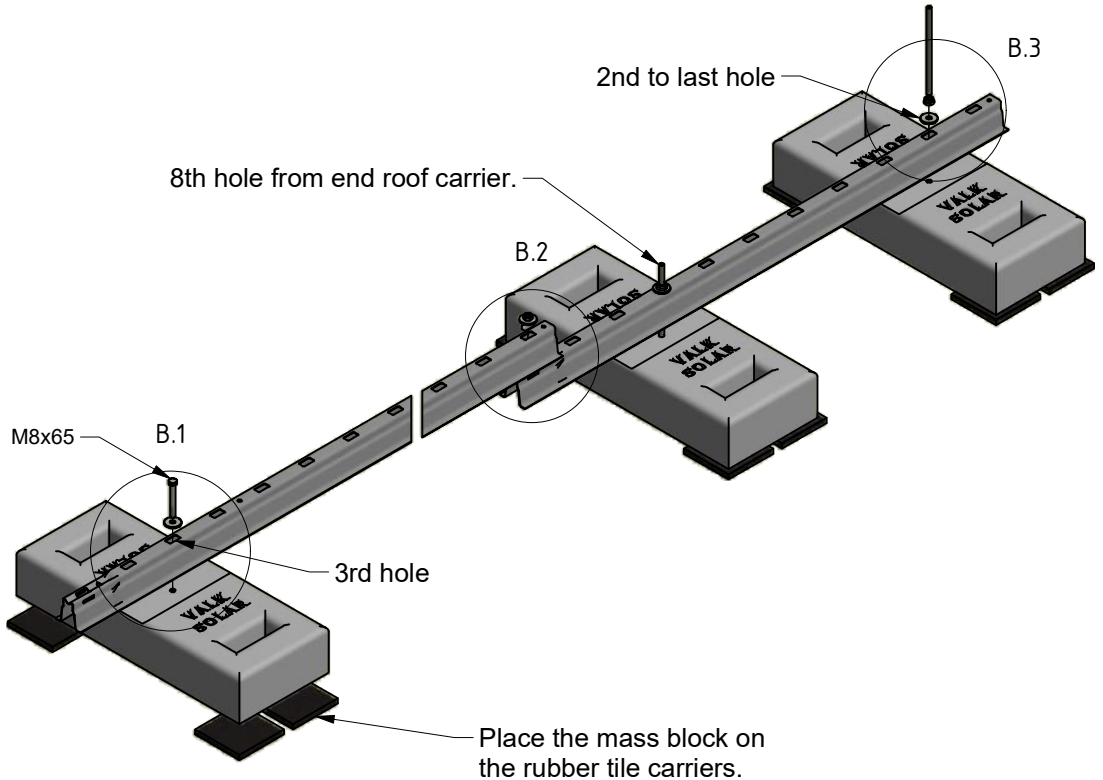
Front view



Attention! the 1600mm roof carrier is placed in front of the 1000mm roof carrier.

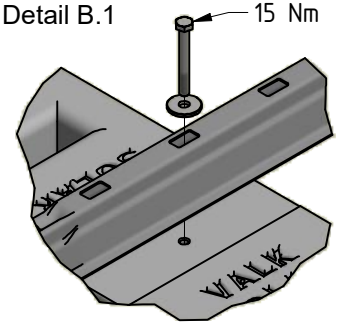


Detail A

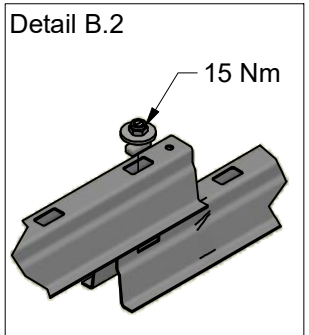


Mount the mass block to the roof carriers in the correct positions.

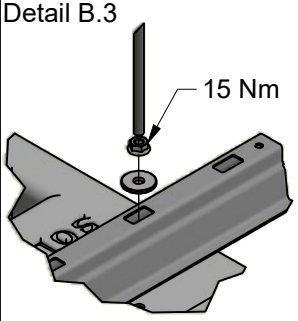
Detail B.1



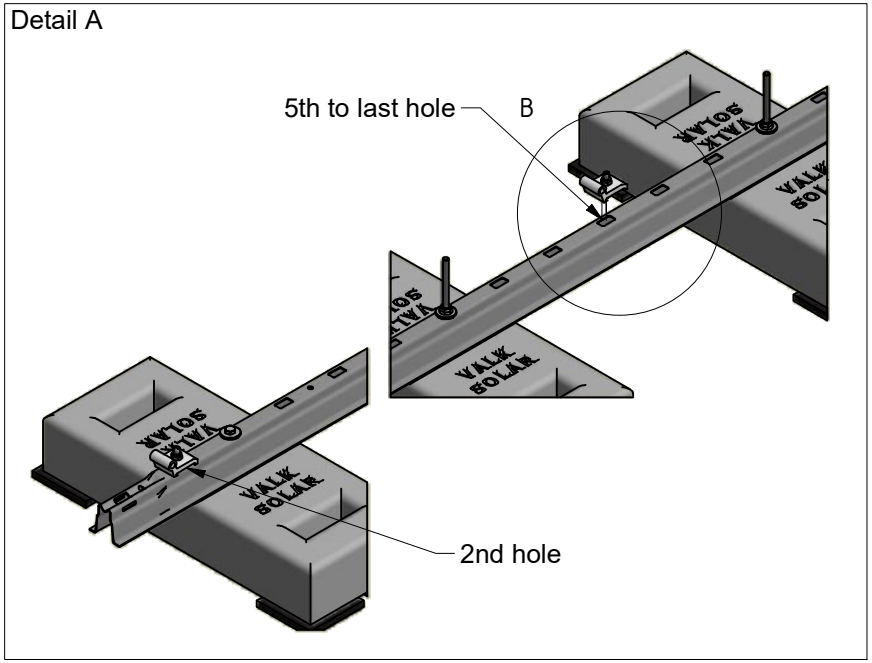
Detail B.2



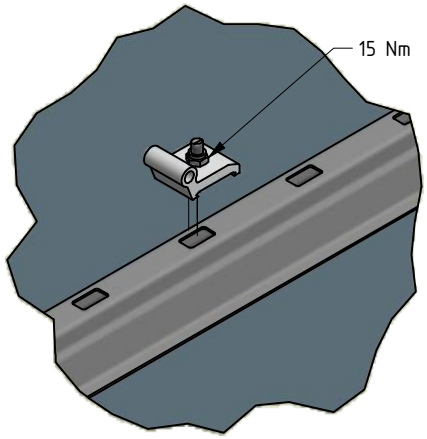
Detail B.3



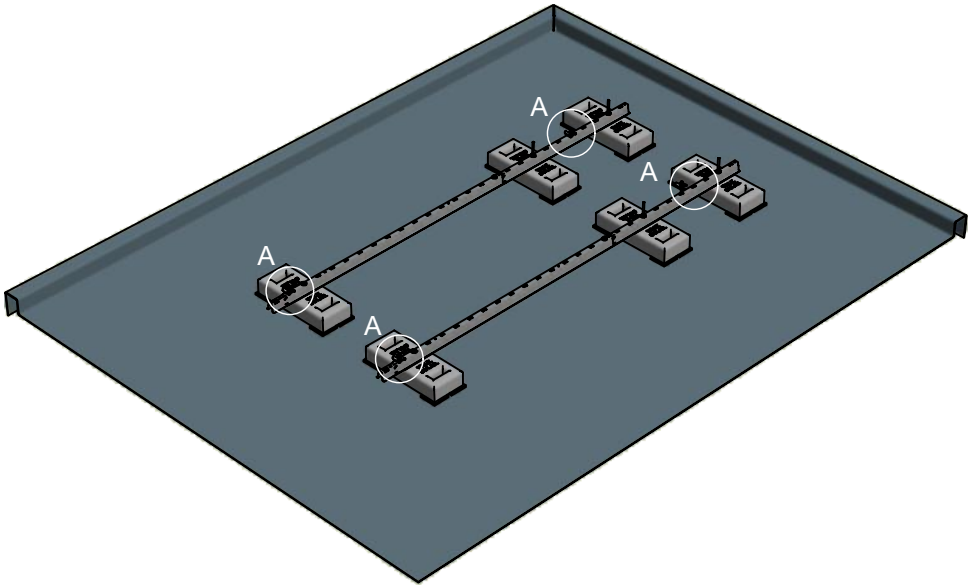
Detail A

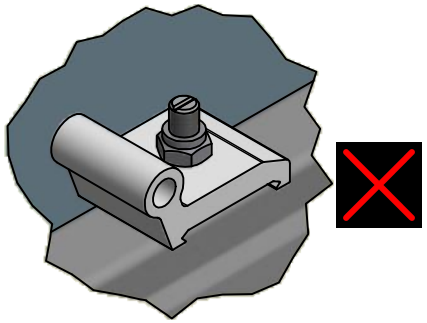


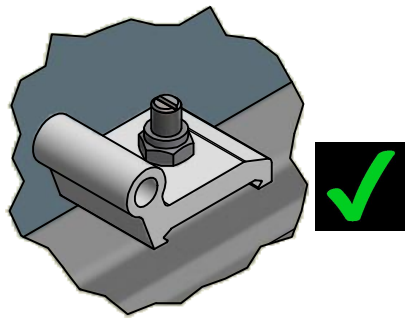
Detail B



Mount the connector pieces on the roof carriers. Make sure they are placed as shown in the drawing.



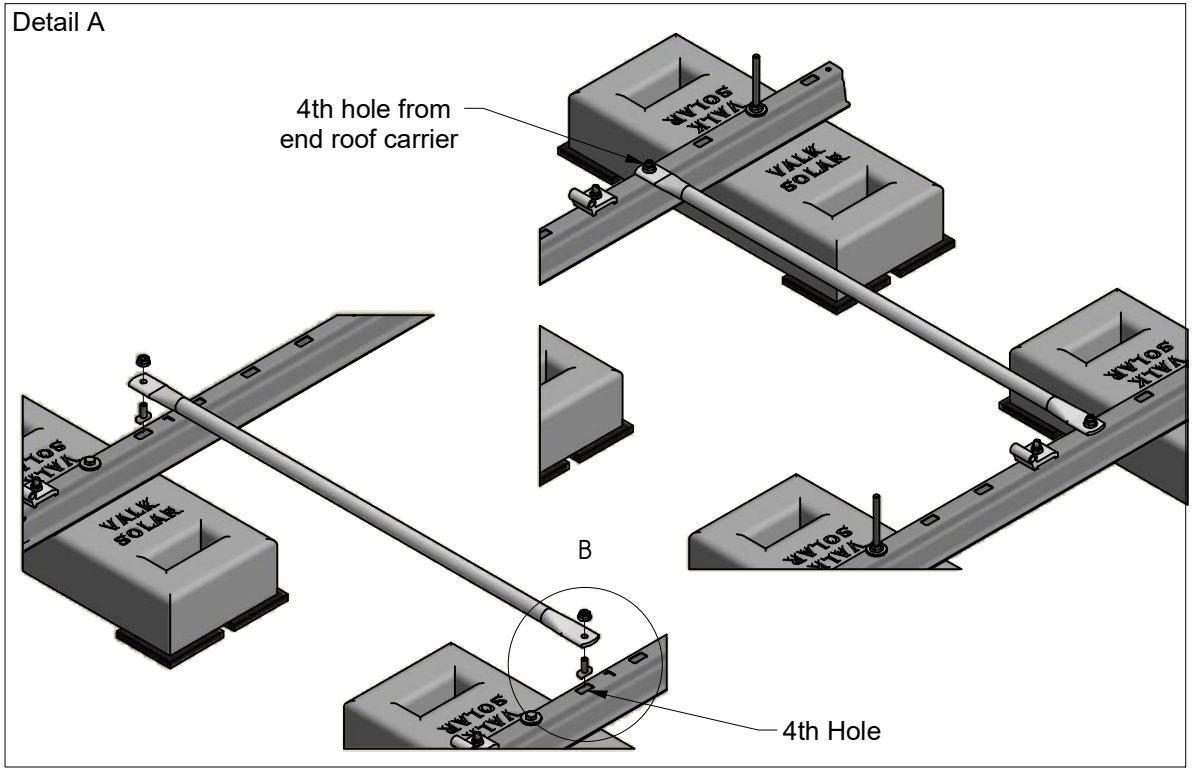




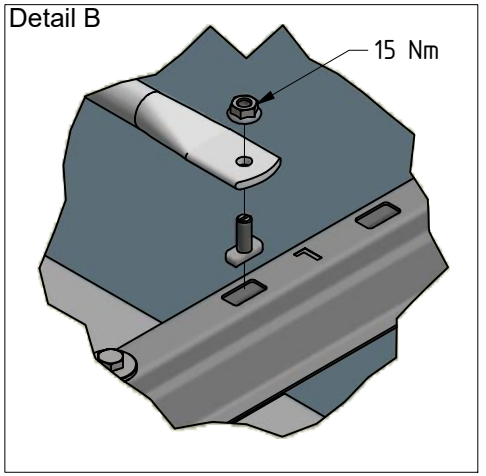
The groove on the bolt corresponds with the orientation of the bolt head!

VAN DER VALK SOLAR SYSTEMS

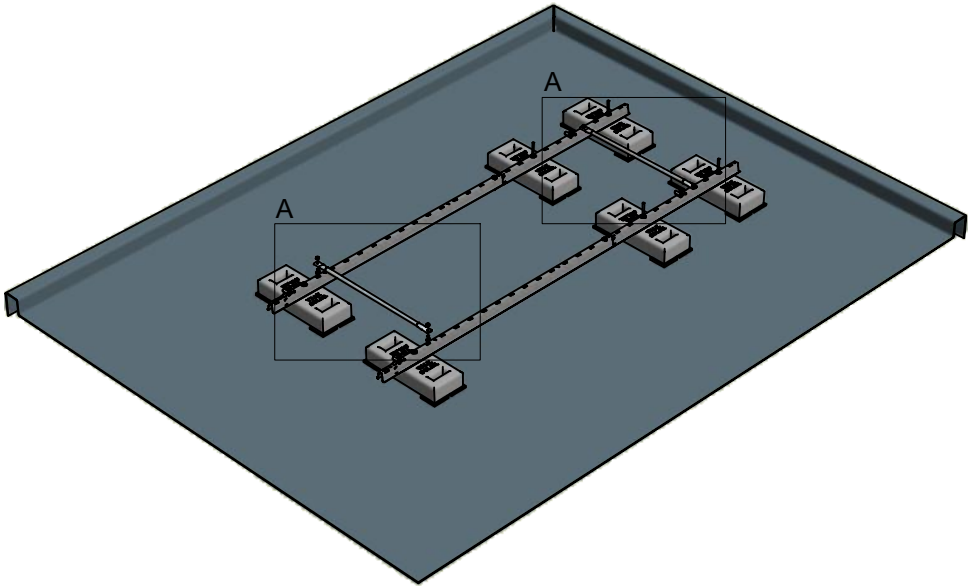
Detail A

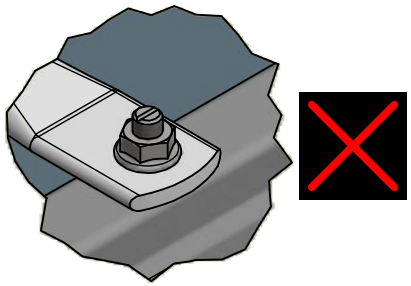


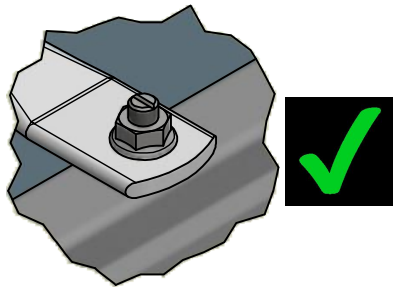
Detail B



Mount the push rods on the roof carriers to connect the two rows.

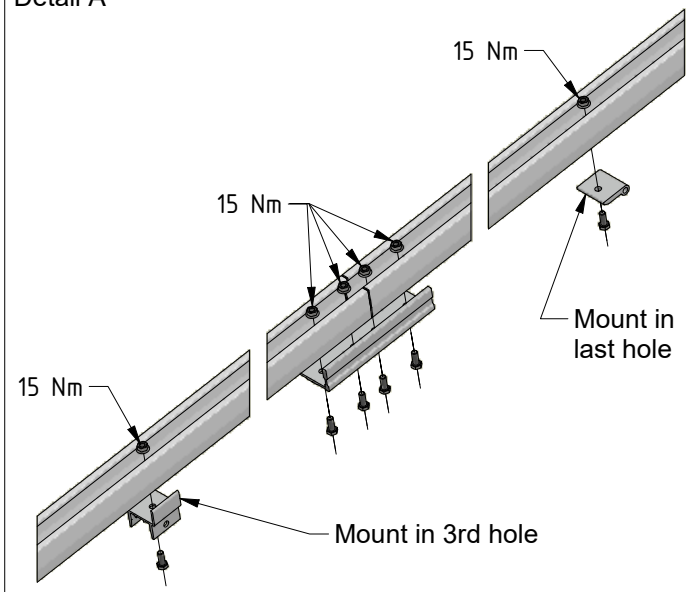






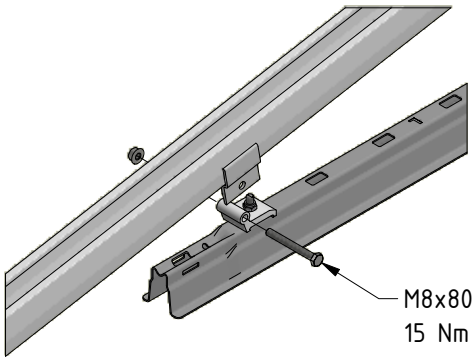
The groove on the bolt corresponds with the orientation of the bolt head!

Detail A

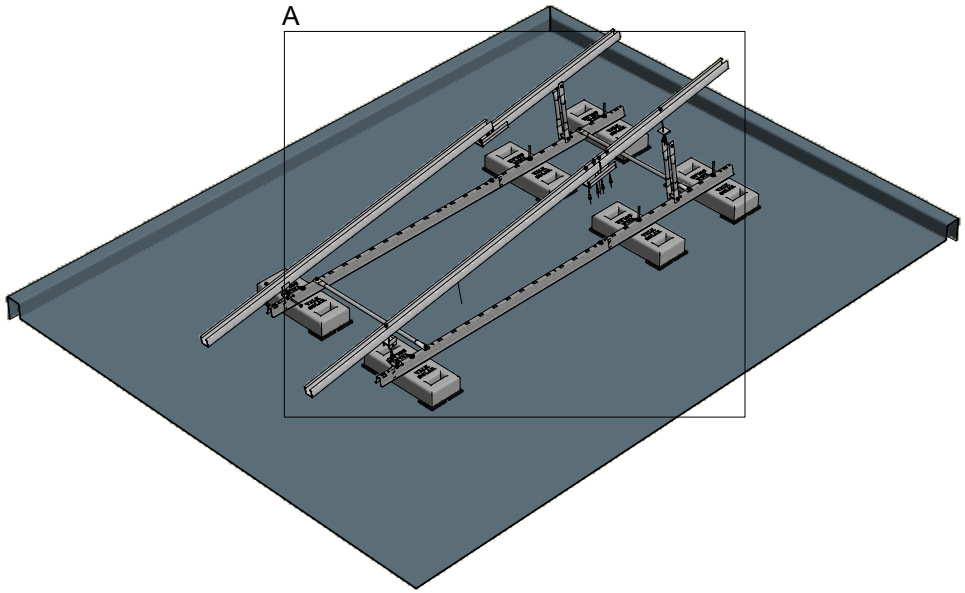


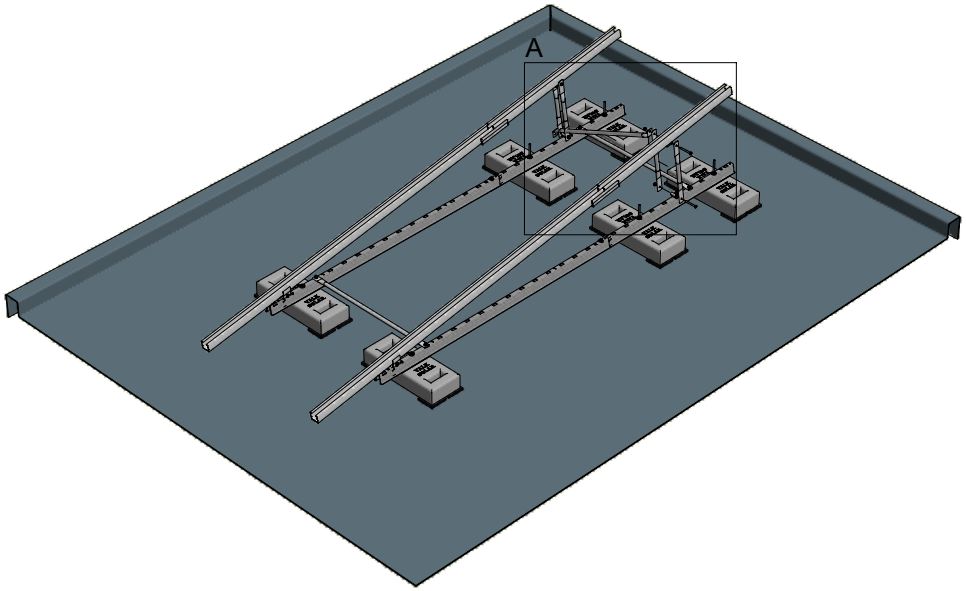
ValkHint!
Mount the aluminium profile with the connector pieces/coupling first. Then mount the profile to the roof carrier.

Detail A.2

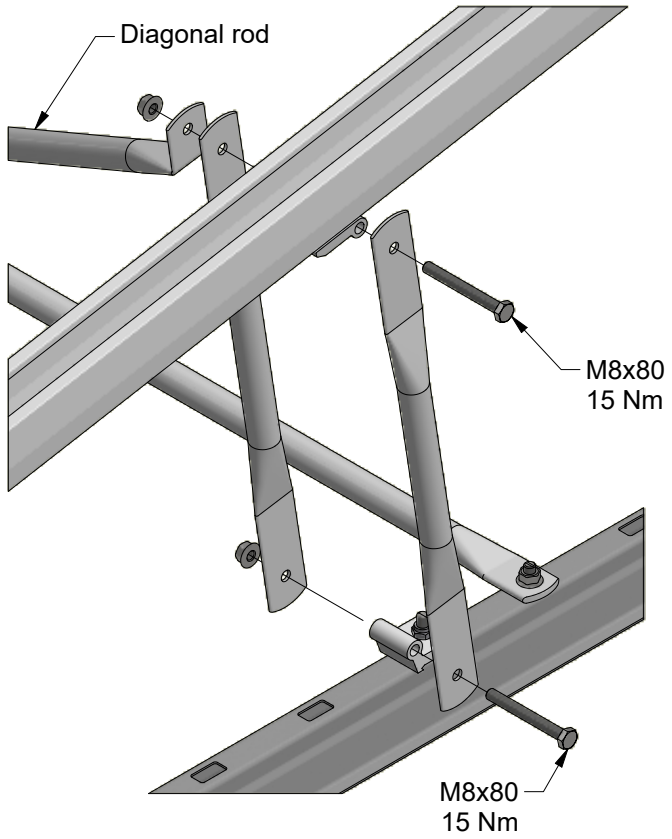


A

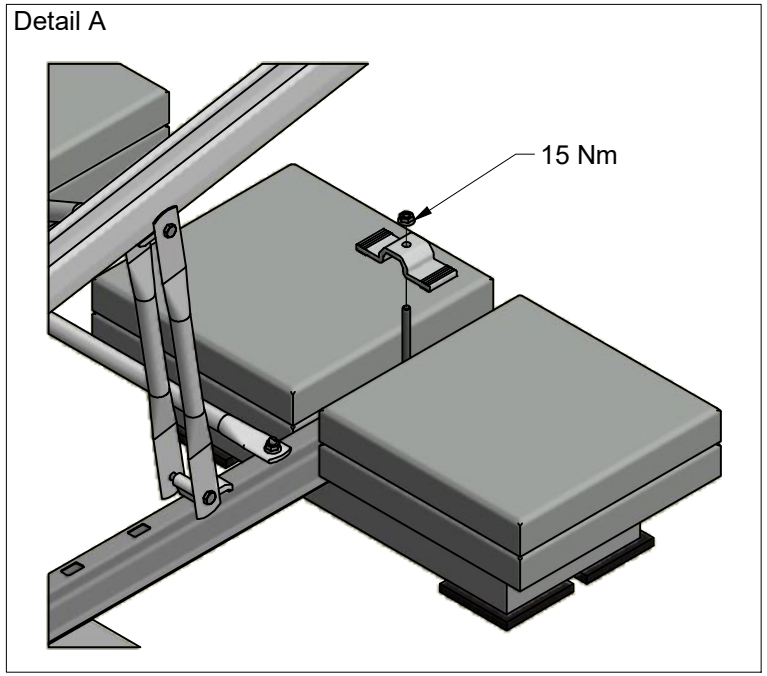


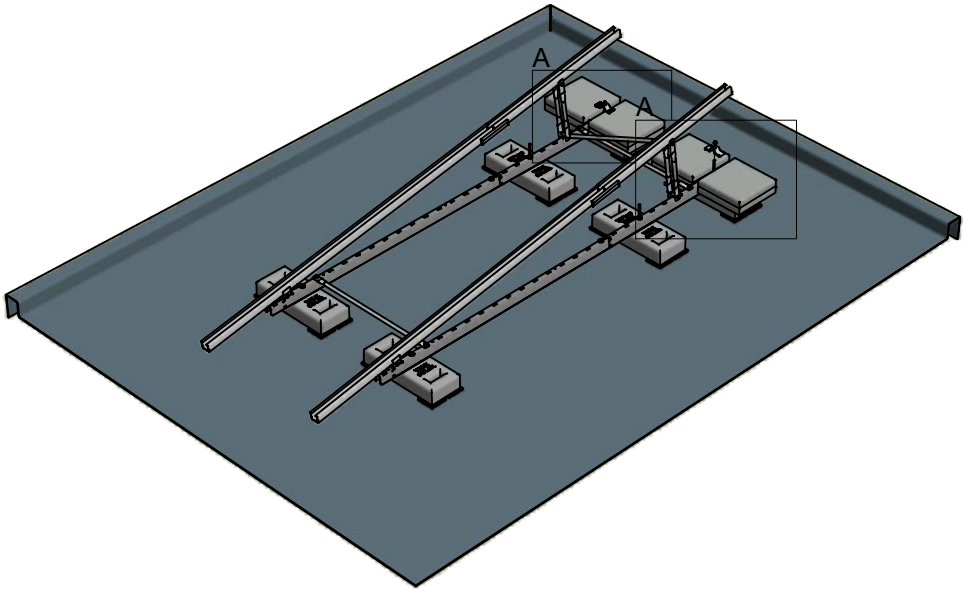


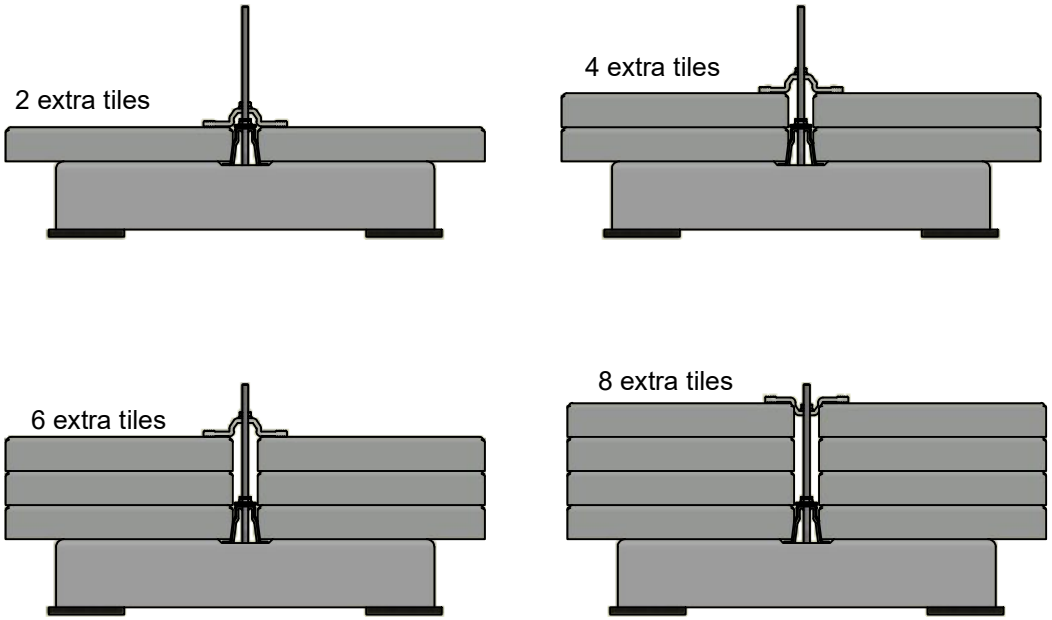
Detail A



Mount the push rods between the aluminium profile and the roof carrier.



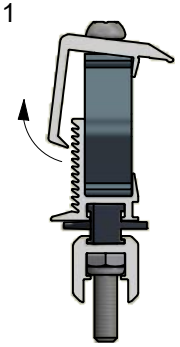




For the required number of tiles check
the ballast tables in front of this manual.

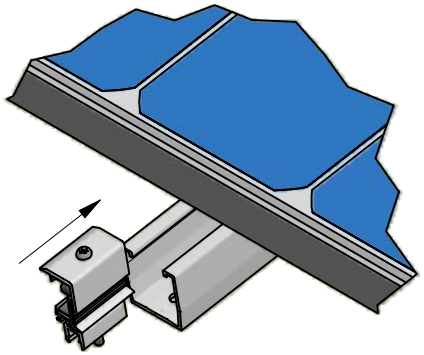
VAN DER VALK SOLAR SYSTEMS

Step 1

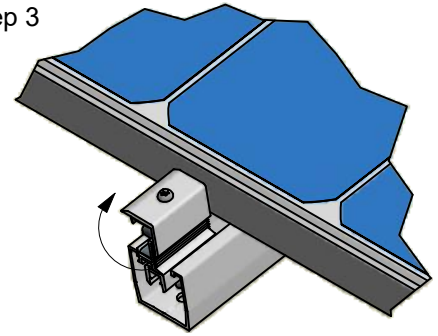


Take the end clamp out if it's slot for an easier assembly.

Step 2

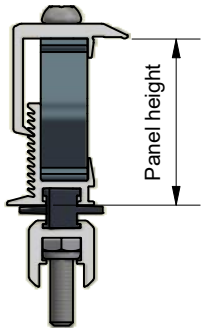


Step 3

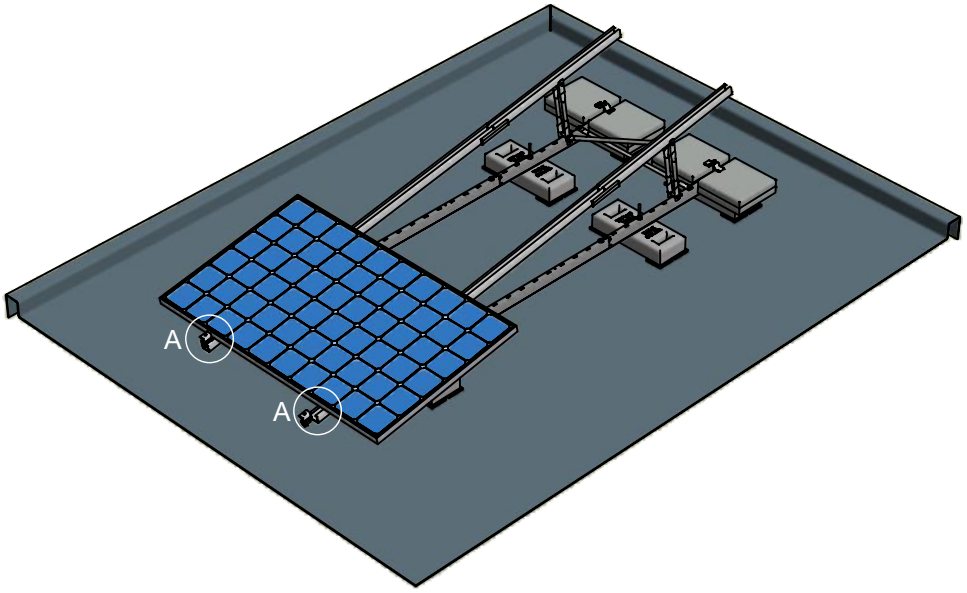


The end clamp can only be turned clockwise, so make sure the clamp is placed in the right way.

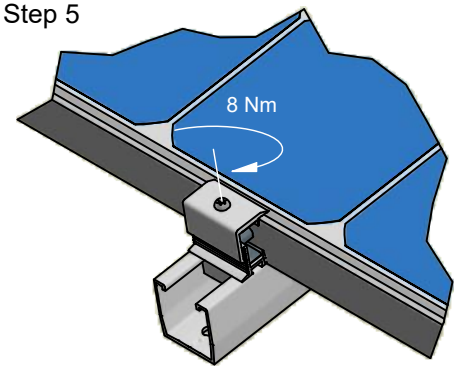
Step 4

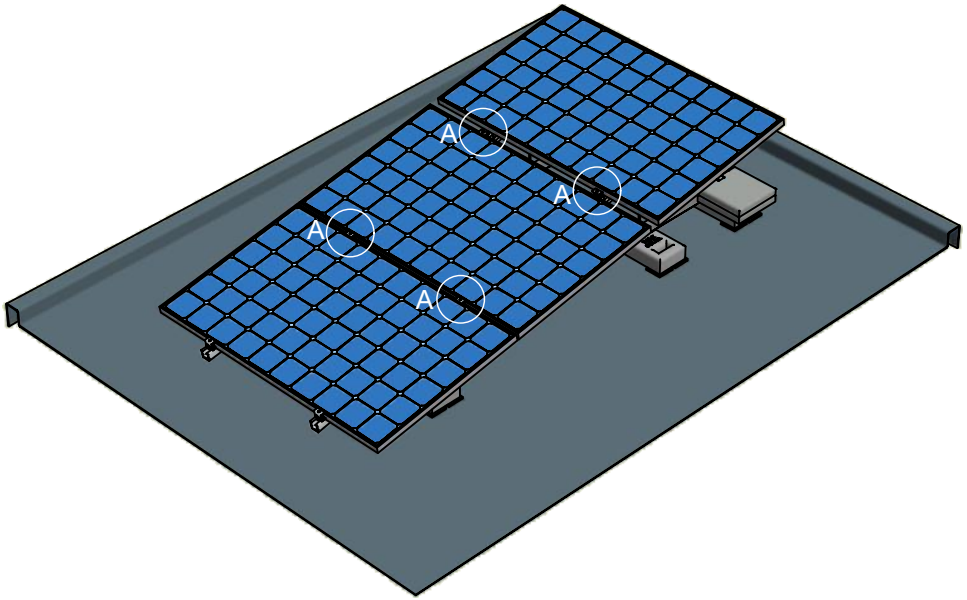


Put the end clamp in the right slot to contine the assembly.

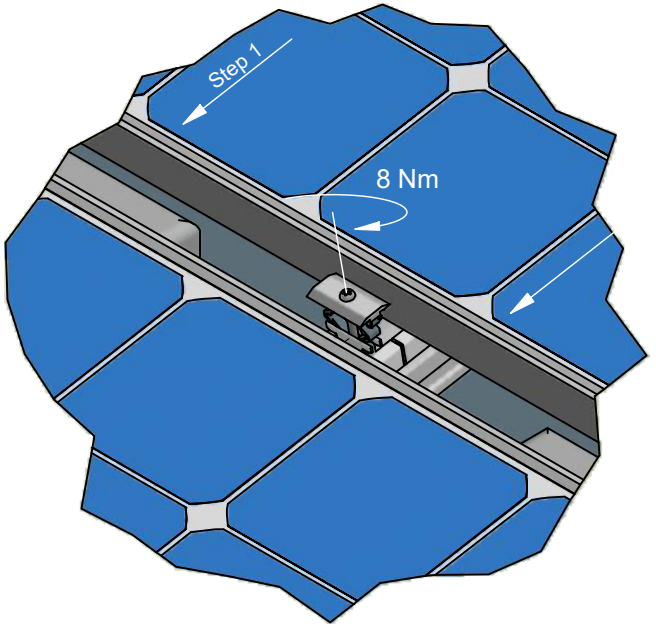


Step 5

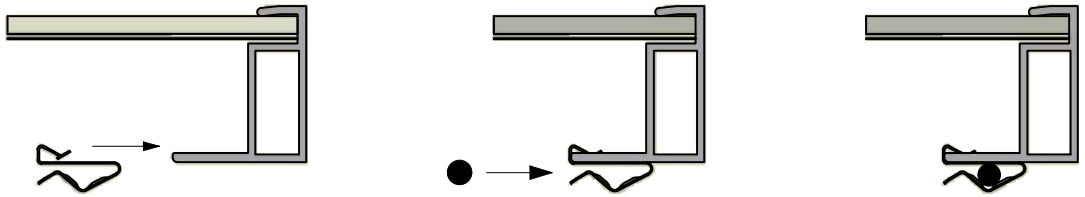




Detail A



Attention!! Do not forget to install the end clamp above the third panel! (Same installation as other end clamps, page 07.)



Mount cable clamp on the panel.