

Item no. 45201-00
Ground Mount Kit 3V x 9 - 20°

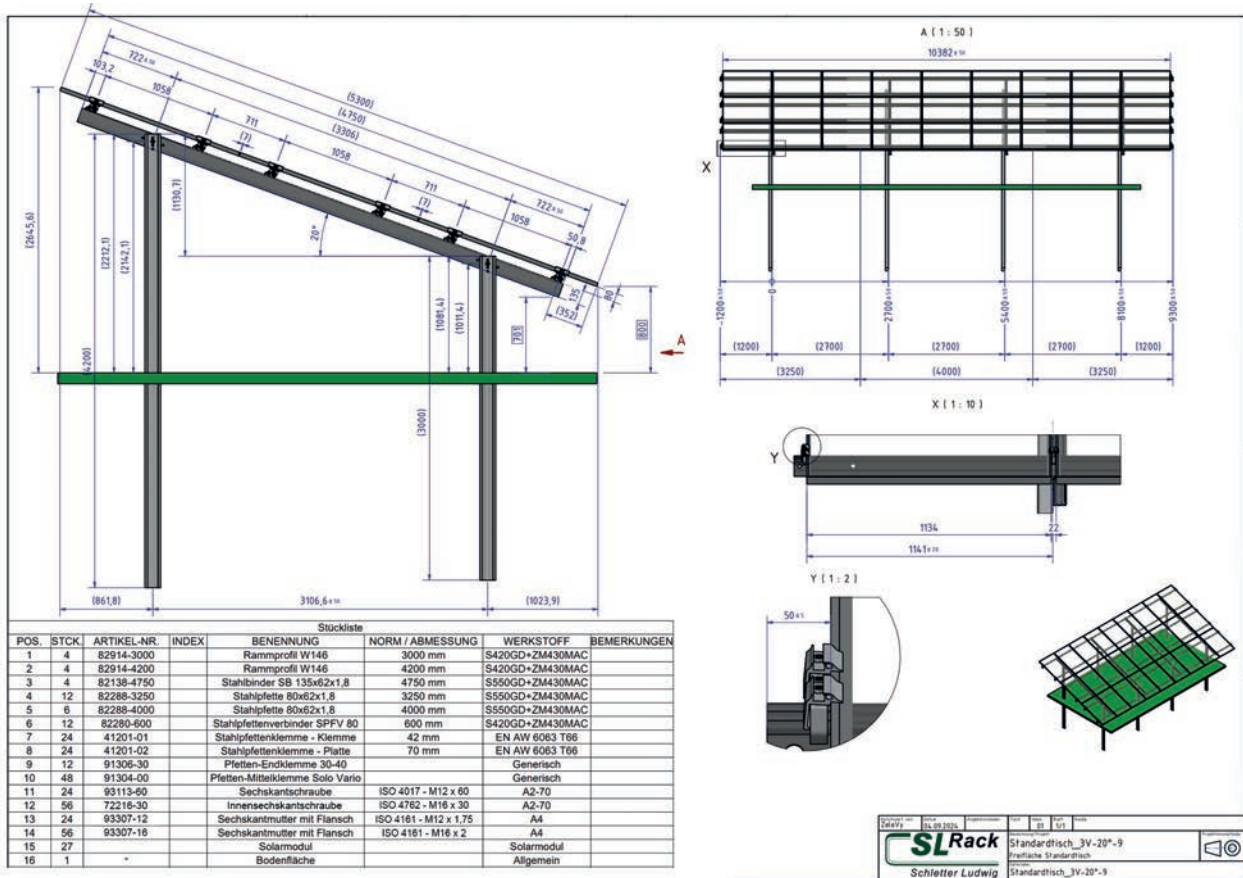


Your advantages with our ground mount kit

- » Easiest and fastest system to assemble
- » Few piles due to large spans
- » Only one tool required for module clamping -Torx 40
- » Sturdy construction
- » Expandable as needed
- » Cost-effective dual-post system

*Our warranty conditions apply.
They can be viewed online at www.sl-rack.de

Ground Mount Kit 3V x 9 - 20°



Please note: PV-modules are not included in the ground mount kit and need to be purchased separately (compatible module size: 1762 x 1134 x 35 mm).

Scope of delivery:



*Pile W146
(Item no. 82914)*



*Steel Purlin Connector SPFV 80
(Item no. 82280-600)*



*Steel Girder SB 135 x 62 x 1,8
(Item no. 82138)*



*Steel Purlin 80 x 62 x 1,8
(Item no. 8288)*



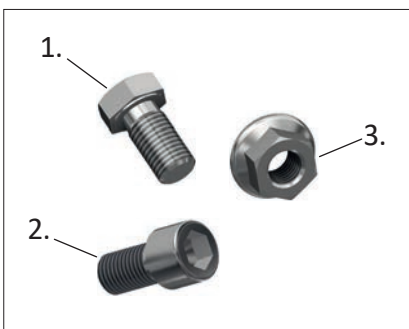
*Steel Purlin Clamp
(Item no.41201)*



*Solo-Purlin Mid Clamp
(Item no. 91304)*



*Duo-Purlin End Clamp 30 - 40 mm
(Item no.91306-30)*



1. Hexagon head screws M16x30 ISO 4017 (item no. 93117-30)
2. Hexagon socket screws M16x30 ISO 4762 (item no. 72216-30)
3. Hexagon nut M16 with flange ISO 4161 (item no. 93306-16)

Hardware

Appropriate corrosion protection





Steel is a versatile building material, but it corrodes in the atmosphere, in water and in soil. Corrosion processes (also due to insufficient or poor surface preparation) cause considerable economic damage. Costs incurred as a result can be prevented with suitable corrosion protection. Suitable surface finishes delay the formation of rust enormously. Aggressive air pollutants, high humidity (> 80 % RH) or condensation, precipitation and salt water are thus kept away in the most efficient way. Therefore, steel surfaces should be covered with suitable protective coatings of zinc, zinc-magnesium or organic coatings, if necessary in several layers and in sufficient thickness, depending on the respective ambient conditions and the corrosion loads they are exposed to.

EN ISO 1461 Hot-Dip Galvanization

The standard for piece galvanizing is DIN EN ISO 1461: „Zinc coatings applied to steel by hot-dip galvanizing (piece galvanizing)- requirements and testing.

- » This standard has also worldwide significance
- » Defines the tests required for hot-dip galvanizing of manufactured components in a discontinuous process
- » Standard specifies requirements for zinc coatings and establishes procedures to demonstrate compliance of hot-dip galvanizing with this standard
- » Defines services to be performed by the hot-dip galvanizing provider, but does not automatically apply to subsequent partial services
- » Defines the repair of defects (ungalvanized areas)

Corrosion Protection Design of SL Rack Steel Racking

Parts		Corrosivity Categories			
		C2	C3	C4	C5
Purlins		≥ Z 600 ≥ ZM 310	≥ Z 600 ≥ ZM 310	≥ ZM 430	ZM 620
Girders		≥ Z 600 ≥ ZM 310	≥ Z 600 ≥ ZM 310	≥ ZM 430	
Piles		≥ ZM 430 Piece-galvanized according to DIN EN ISO 1461			
W-Piles		ZM 430			
Bolts		Stainless Steel			
Aluminium Parts		EN AW 6063 T66			

The values in the table above for the galvanizing thicknesses/methods, depending on the corrosivity category, are based on DIN 55928-8 („Corrosion protection of steel structures by coatings and overlays; Part 8: Corrosion protection of load-bearing thin-walled components“) and are at least at the level of the standard. **The information is a non-binding recommendation of SL Rack GmbH and is subject to a case-by-case examination within the scope of project design.**

Contact Corrosion

The risk of contact corrosion between two metals is low and considered unproblematic for the SL Rack ground mount system. Should a system be installed near the coast or salt water, protective measures can be checked and initiated. To illustrate: Depending on the metal pairing (aluminium - zinc- hot-dip galvanized steel, for example Z purlins- rafters and/or module frames), there is a difference in electrical potential of varying degrees . The greater the difference in this potential, the higher the corrosivity.

Metal Pairing	Atmosphere			Water	
	City	Industry	Ocean	Fresh Water	Salt Water
Aluminum - Zinc	0	0 - 1	0 - 1	1	1 - 2
Aluminum - Hot-Dip Galvanized Steel	0	0 - 1	0 - 1	1	1 - 2

Legend:

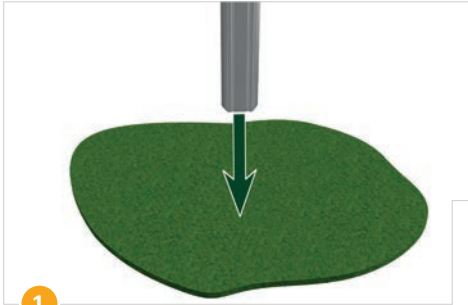
0 = no significant corrosion of the metal pairing
 1 = slightly increased corrosion, but no protective measures recommended

2 = increased corrosion, insulating protective measures recommended
 3 = severe contact corrosion, avoid metal pairing

Corrosion Categories according to DIN EN ISO 12944-2 (with Exposure)

Corrosiveness categories Corrosion stresses	Corrosivity	Examples of typical surroundings	Thickness reduction after 1st year of installation	
			Carbon steel	Zinc
C1 Insignificant	Very low Slightly aggressive Interior	Only heated indoor spaces, insulated buildings ($\leq 60\%$ r. h.)	$\leq 1,3 \mu\text{m}$	$\leq 0,1 \mu\text{m}$
C2 Low	Low Moderately aggressive Exterior/interior	Unheated buildings, low-polluted atmosphere, dry climate. Mainly rural areas.	$>1,3 - 25 \mu\text{m}$	$>0,1 - 0,7 \mu\text{m}$
C3 Moderate	Moderate Little aggressive Exterior/interior	Rooms with high humidity and low air pollution. Urban and industrial atmosphere with moderate SO_2 pollution or temperate climate.	$>25 - 50 \mu\text{m}$	$>0,7 - 2,1 \mu\text{m}$
C4 Strong	High Moderately aggressive Exterior/interior	Swimming pools. Industrial atmosphere and coastal atmosphere with moderate salt load.	$>50 - 80 \mu\text{m}$	$>2,1 - 4,2 \mu\text{m}$
C5 Very strong	Very high Aggressive Exterior/interior	Environments with almost constant condensation and heavy air contamination. Industrial atmosphere with high relative humidity and aggressive atmosphere.	$>80 - 200 \mu\text{m}$	$>4,2 - 8,4 \mu\text{m}$

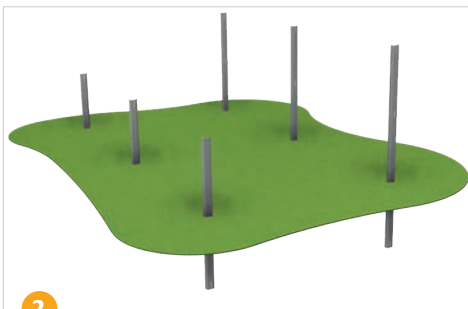
Installation



1

1. Install pile with a standard hydraulic pile driver in accordance with the respective ramming plan.

Please note: After ramming, treat the top of the piles with zinc dust paint.



2

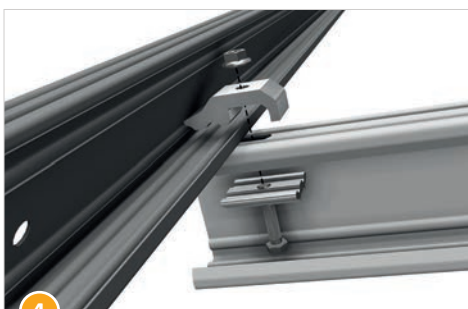
2. This is what it looks like after ramming the piles.



3

3. Attach the steel girder to the pile – choose the appropriate holes on the girder for levelling.

*Please note: Carry out equally for the front and back pile. The tightening torque for **M16x30** is **150 Nm**.*



4

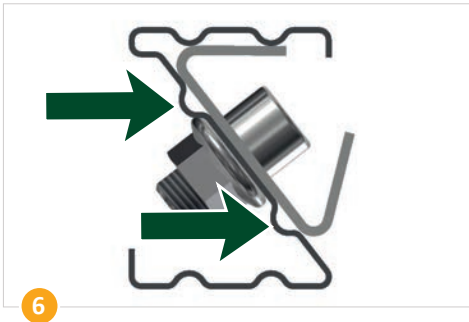
4. Hook purlin in, adjust and fixate.

*The tightening torque for **M12x60** is **90 Nm**.*

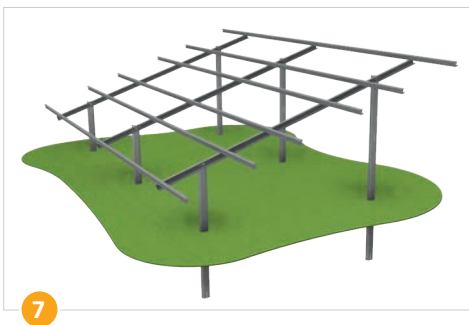


5. Place the purlin connector on the side of the purlin that is not carrying cables and fixate it using the hardware supplied (see Fig. 5).

*The tightening torque for **M16x30** is **150 Nm**.*



6. Observe corrugation alignment.



7. Correct installation results in the following rack:

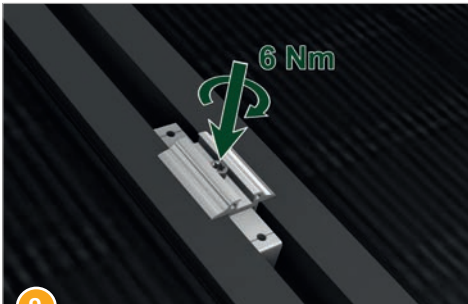


8



8. Click in the end clamp, place the first module on top and align according to the drawings:

*Push end clamp to the module frame. First tighten the center support screw, then fixate the module with the two clamping screws. (*Tightening torque for all M6 bolts: 6 Nm)*



9

9. Click in the mid clamp, place the next module on top and fixate it.

(*Tightening torque: 6 Nm)



10

10. Fixate the last module with an end clamp.

Note! *The horizontal and vertical module spacing shown in the drawing must be observed (see kit dimensions). Modules can be placed on top of each other with 7 - 20 mm spacing.*



Technical Data

Material	Steel, Aluminum
Statik	The static calculation is carried out in accordance with the current national standards (EN 1991, EC1 for Germany). Please make sure that the instructions provided by the module manufacturer are followed.

Your opinion is important to us!

It is our top priority to make the installation process for you as quick, easy and efficient as possible. Please share your experiences, ideas or criticism with us, so we can continue to improve our products and develop new ones.



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Subject to technical changes
and misprints.
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