SL AGRI WALL

DATA SHEET

SL Rack
Schletter Ludwig

Your advantages with our SL Agri Wall

- Vertical agrivoltaic racking system.
- Only 1 % land coverage.
- 90 % utilization of the farm land.
- Design according to DIN SPEC 91434 or DIN SPEC 91492.
- Optimal and variable module clamping.
- Only two components for a complete and stable terrain adjustment.

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

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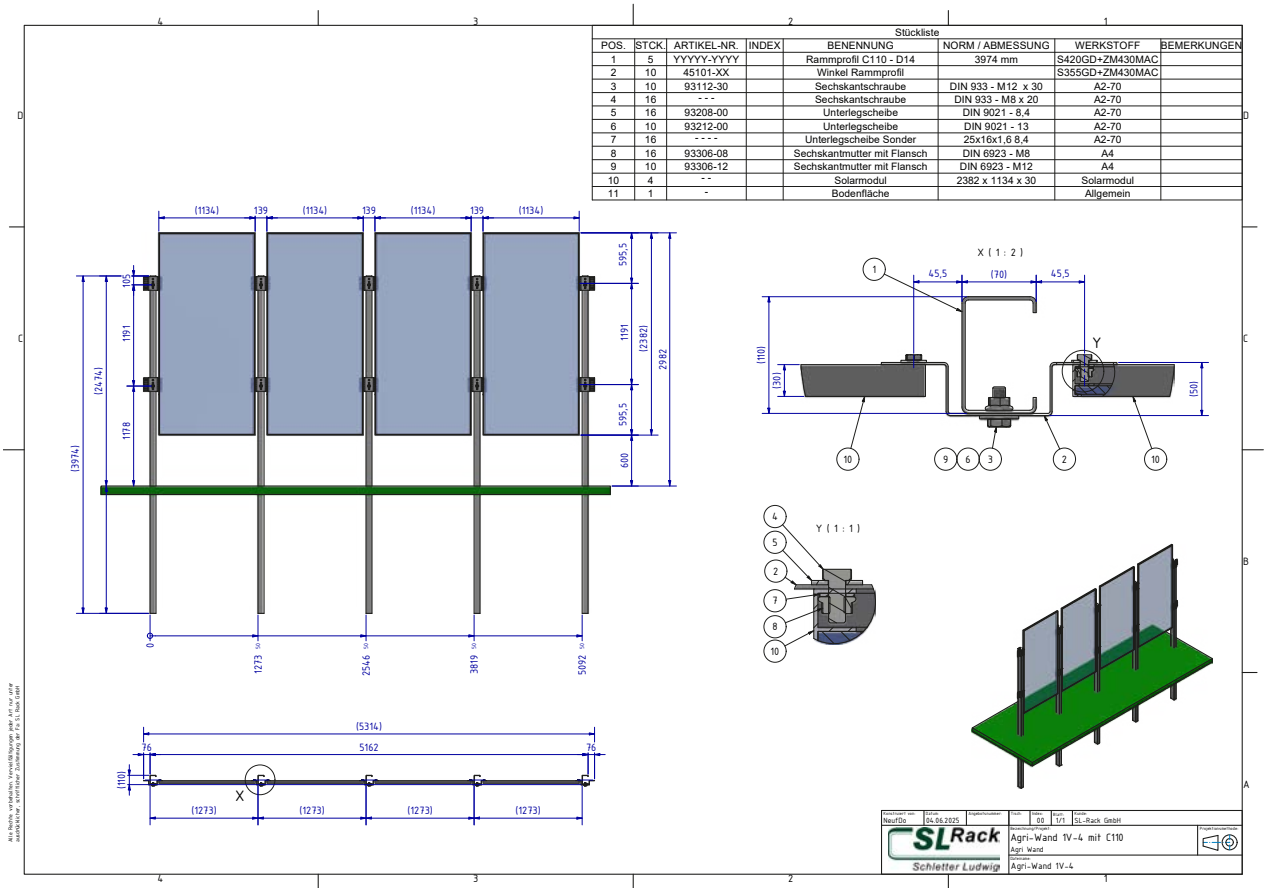
Sample design – SL Agri Wall



Please note:
Solar modules are not included and must be purchased separately.

Scope of delivery SL Agri Wall:

Pile bracket
(Item no. 45101-00)

Pile C
C110 / C130

Hardware

1. Hex bolts M16 x 30 ISO 4017
   (Item no. 71216-30)
2. Flat head socket cap screw M8 x 20
   (Item no. 93108-20)
3. Hex nut M8 & M16 with flange ISO 4161
   (Item no. 93306-16)
4. Washer Elypse
   (Item no. 93208-01)

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

<table>
<tr><th colspan="2" rowspan="2">Parts</th><th colspan="4">Corrosivity categories</th></tr>
<tr><th>C2</th><th>C3</th><th>C4</th><th>C5</th></tr>
<tr><td rowspan="2">Piles</td><td rowspan="2">  </td><td colspan="3">≥ ZM 430</td><td rowspan="2">ZM 620</td></tr>
<tr><td colspan="3">Piece-galvanized according to DIN EN ISO 1461</td></tr>
<tr><td>Hardware</td><td></td><td colspan="4">Stainless steel</td></tr>
<tr><td>Aluminum parts</td><td></td><td colspan="4">EN AW 6063 T66</td></tr>
</table>

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.

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Contact corrosion

The risk of contact corrosion between two metals is low and considered unproblematic for the SL Rack Agrivoltaic 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
Aluminium – zinc	0	0 – 1	0 – 1	1	1 – 2
Aluminium – hot-dip galvanized steel	0	0 – 1	0 – 1	1	1 – 2

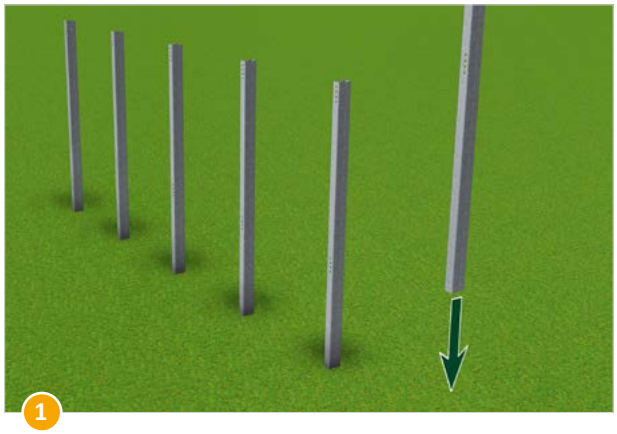
Legend:

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)

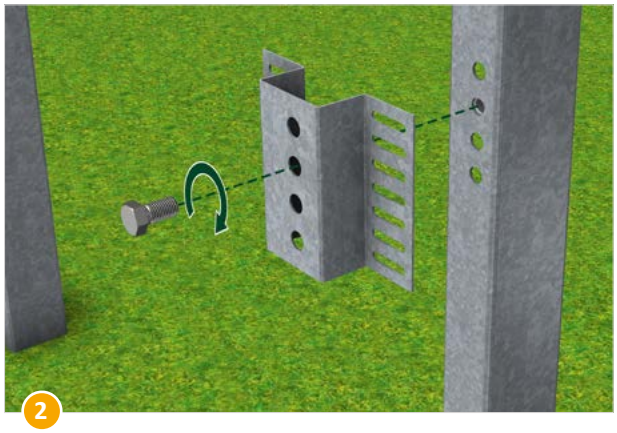
Corrosiveness categories Corrosion stresses	Corrosivity	Examples of typical surroundings	Thickness reduction after 1st year of installation	
			Carbon steel	Zinc
C1 Insignificant	Very low Slightly aggressive Interior	Only heated indoor spaces, insulated buildings (≤ 60 % r. h.)	≤ 1,3 µm	≤ 0,1 µm
C2 Low	Low Moderately aggressive Exterior/interior	Unheated buildings, low-polluted atmosphere, dry climate. Mainly rural areas.	> 1,3 – 25 µm	> 0,1 – 0,7 µm
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 µm	> 0,7 – 2,1 µm
C4 Strong	High Moderately aggressive Exterior/interior	Swimming pools. Industrial atmosphere and coastal atmosphere with moderate salt load.	> 50 – 80 µm	> 2,1 – 4,2 µm
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 µm	> 4,2 – 8,4 µm

Installation

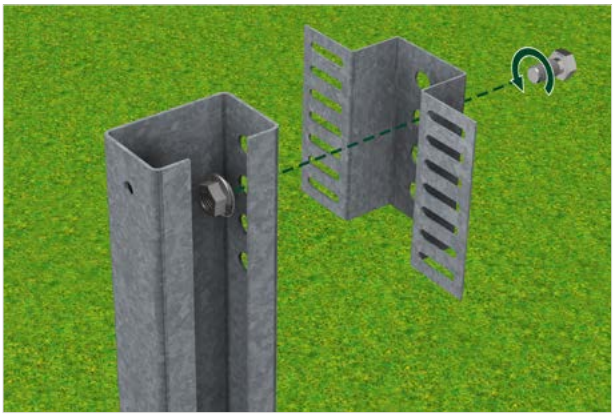


1. Install the piles according to the ramming plan. Installation of C-piles is identical with the installation of W-piles.

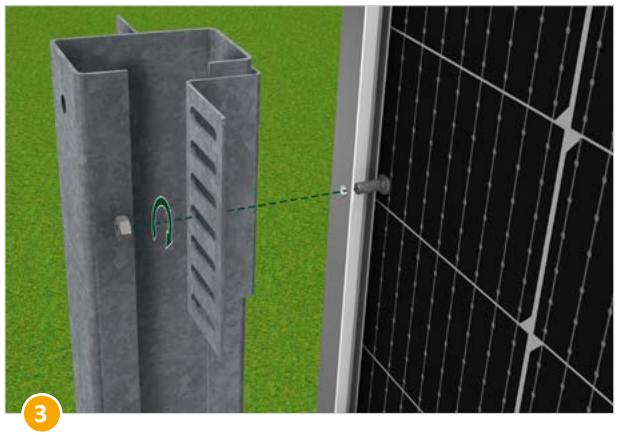
Attention:
After ramming, coat the top of the piles with thick film zinc dust paint, item no. 06201-01.



2. Fixate the bracket to the pile through the matching holes at the top and bottom.



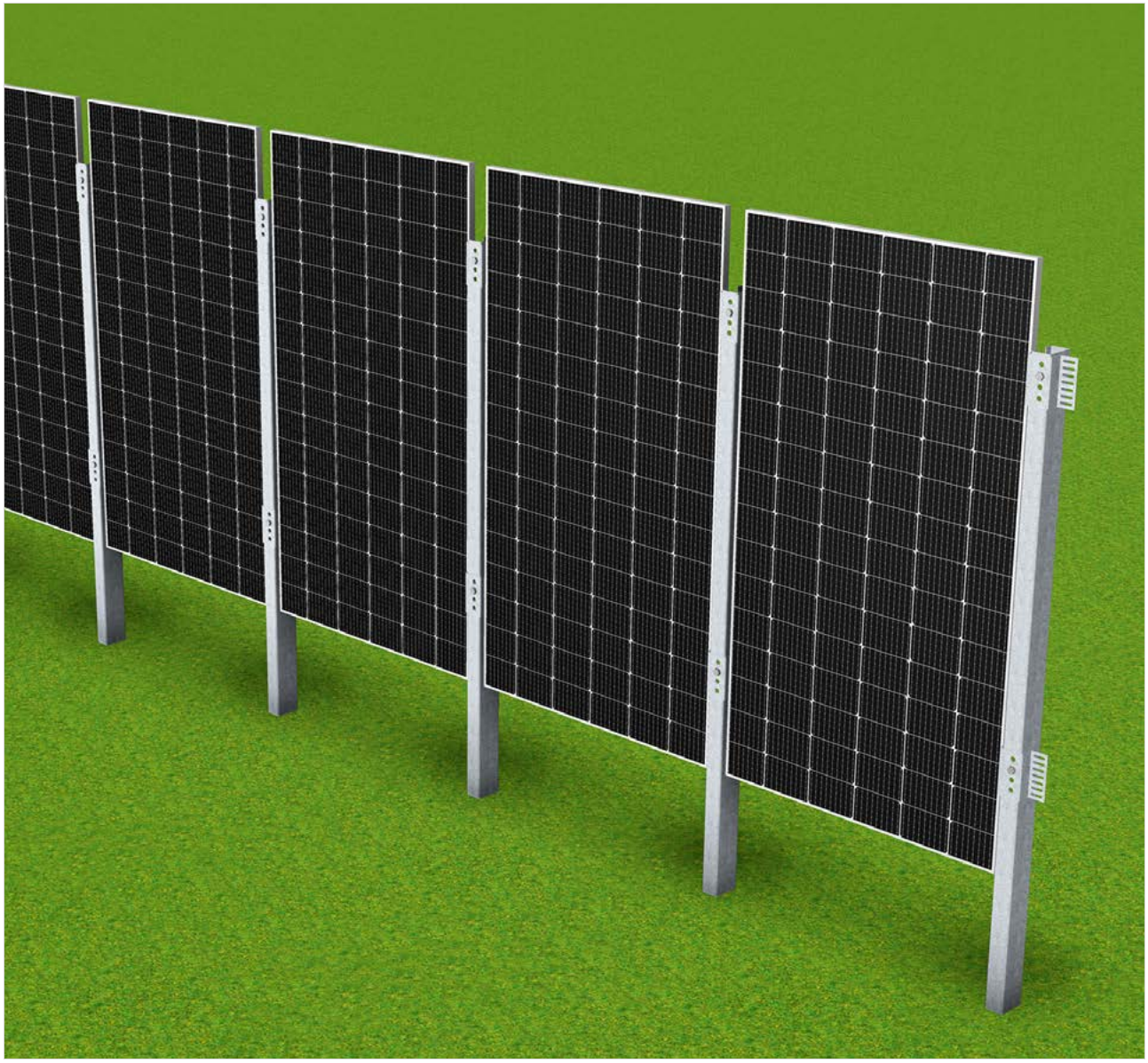
Attention: *The tightening torque for* ***M16 x 30*** *is* ***150 Nm.***



3. Attach the solar module to the matching slot of the bracket.

Attention:
The washer needs to be placed on the inside of the module frame.

Attention: *The tightening torque for* ***M8 x 20*** *is* ***25 Nm.***



Technical data

Material Galvanized steel ZM430, stainless steel

Statics The structural analysis is carried out in accordance with the current country-specific standards (EN 1991, EC1 for Germany). Make sure to observe the installation manual of the respective module manufacturer.

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Subject to technical changes and misprints.
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