



Agrivoltaics - an innovative way to increase crop yields



Profitable
even without government subsidies



The **efficient** integration of the solar power plant



Protection of plants and soil from the negative impact of the environment



Dual use of Arable Land

Modern farmer installs solar power plants not only to meet their own energy needs but also to improve management of water and agricultural resources. This enables them to receive additional income, compensate for market losses, and mitigate any other risks associated with increasing crop yields or raising livestock.



Agriphotovoltaic mounting systems (hereinafter APV mounting systems) – are mounting systems designed for installation of photovoltaic (hereinafter PV) modules in farmland.



The APV mounting system is a supporting structure designed for portrait / landscape orientation of PV modules, featuring a static tilt angle within the range of 5°-25°, and is installed on individual foundations. The structure of APV mounting systems is designed for the installation of PV modules of any type.

APV mounting systems with photovoltaic modules provide additional desired electricity generation in farmland, which can cover own consumption or be utilized for additional electricity generation through energy purchasing agreements with local residential and industrial estates. Additionally, APV power stations can produce electricity into the power grid.

Warranty conditions

Mounting systems warranty	Mounting systems are warranted by the manufacturer for a period of 10 years, subject to the requirements outlined in the Installation and Operation Manual, as well as the assembly drawings.
Mounting systems warranty	The coating of mounting systems is guaranteed according to ISO 9223, of atmospheric corrosion category up to C3 (in accordance with ISO 1461/ASTM A123 and ISO 3575) against perforation corrosion. The duration of the guarantee is as follows: <ul style="list-style-type: none"> • For hot dip galvanizing: 25 years; • For other types of coating: specified additionally in the contract specifications.
Mounting system lifetime	The lifetime of the mounting systems is 25 years and can be extended over time.

APV is a universal mounting system designed for installation of photovoltaic modules in agricultural purposes.

Technical data	
Field of application	On-ground
Type of soil	Suitable for most soil types
Module orientation	Portrait / landscape
PV modules	Suitable for all standard module types
Quantity of rows for PV modules	One, two and multi rows
Quantity of rows for piles	One, two and multi rows
Foundation options	Piles for ramming / piles for concreting / screw piles / anchoring to foundations.
Fixed tilt angle	5°-90°
Distance from the ground to the bottom of PV-module	0,9 m - 4,0 m
Materials used for structure	Steel coils S235JR/S355JR according to EN 10025, featuring anti-corrosion coating through hot dip galvanizing according to ISO 1461:2022 standards. Pre-galvanized steel coils S350GD/S450GD according to EN 10346 with an anti-corrosion coating of at least 275 g/m ² , including options such as Corrender, PosMAC, Magnelis, etc.
Type of profiles used for structure	Piles – steel circular/square pipes, C-profile, U-profile, C-profile; Diagonals - steel C-profile; Main beams - steel Z-profile, C-profile, C-profile, perforated rail-profile.
Clamps material	Aluminum clamps are crafted from aluminum alloy AlMg0.7Si (6060/6063) according to EN 573 specifications. An anodic coating, with a thickness of at least 21 microns, is applied to the aluminum profiles in compliance with ISO 7599:2018.
Mounting systems	Mounting systems are manufactured from A2-70 stainless steel in accordance with ISO 3506-1:2020. Additionally, the use of carbon steel fasteners compliant with ISO 898-1:2013, with various types of coatings (such as galvanization, Delta MKS, hot dip galvanizing) and a quality class of 8.8, is permitted. The metalware set M12 is intended for structural mounting. The metalware set M8 is intended for mounting of PV modules.
Static principles	The design of the supporting structure and elements of the APV mounting system is conducted in compliance with the requirements of Eurocode EN 1990, EN 1991, EN 1993, and EN 1090.
Certifications and testing	ISO 9001, CE certified.

Agrivoltaics technology generates renewable electricity without compromising arable farmland resources needed for food production.

Technical Characteristics

Mounting systems for APV structures are developed by Solar Steelconstruction LLC in accordance with the standards and requirements of Eurocode EN 1990; Eurocode EN 1090; Eurocode EN 1991; Eurocode EN 1992; Eurocode EN 1993; Eurocode EN 1999.



Cold rolled steel profiles are manufactured from steel coils S235JR/S355JR according to EN 10025, featuring anti-corrosion coating through hot dip galvanizing according to ISO 1461:2022, or galvanized steel coils S350GD according to EN 10326, with an anti-corrosion coating of at least 275 g/m², of Corrender type, PosMAC, or similar alternatives.

Metalware for fastening steel profiles is crafted from A2-70 stainless steel in accordance with ISO 3506-1:2020. Carbon steel hardware, compliant with ISO 898-1:2013, is permitted, with various coatings such as galvanic coating, Dacromet, Delta, or HDG.

Clamping elements for PV modules are manufactured from aluminum alloy AlMg0.7Si (6060/6063/6005A) according to EN 573, with an anti-corrosion coating achieved through anodizing according to ISO 7599:2018.

Metalware for fastening clamps is manufactured from A2-70 stainless steel according to ISO 3506-1:2020.

