

AgriPV

Solar Energy Meets Agriculture

TrinaTracker

AgriPV Solution

Wind
Tunnel
Tested



AGRI-PV Overview

The global demand for renewable energy and food production has intensified competition for land use, particularly in regions with limited arable land.

The TrinaTracker Vanguard Family is a versatile, high-efficiency solar tracker designed to address this challenge by combining energy generation with agricultural activities.

With robust performance, advanced control systems, and adaptability for co-located solar and agricultural operations, it serves as a cornerstone of sustainable Agri-PV solutions.

As a leading tracker solution, the Vanguard Family has earned global trust for its reliability and high performance in utility-scale solar projects. Now applied in Agri-PV, this proven product ensures efficient dual land use for energy and agriculture, delivering a dependable foundation for sustainable development.



AGRI-PV Specific Benefits



Increased Land-Use Efficiency

Vanguard Family maximizes land-use efficiency by integrating energy production and farming, making it ideal for regions where agricultural land is valuable.



Improved Crop Yields and Microclimates

Solar panels provide shading for crops, helping to reduce soil evaporation by up to 20%, leading to improved water retention and more favorable conditions for crops and cattle.



Bifacial Module Compatibility

Vanguard Family is fully compatible with bifacial solar modules, capturing additional energy from sunlight reflected off the ground or crops. Studies show bifacial modules can increase overall energy generation by up to 15% in Agri-PV applications.

Warranty period of 10 years for the structural set of elements which comprises the tracker and have been supplied by Trinasolar.

Warranty period of 5 years for commercial components. (Including but not limited to drive system electrical system, bearing set, fasteners, etc.)



Product Service



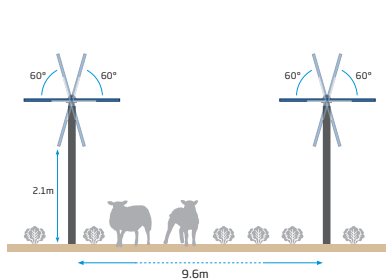
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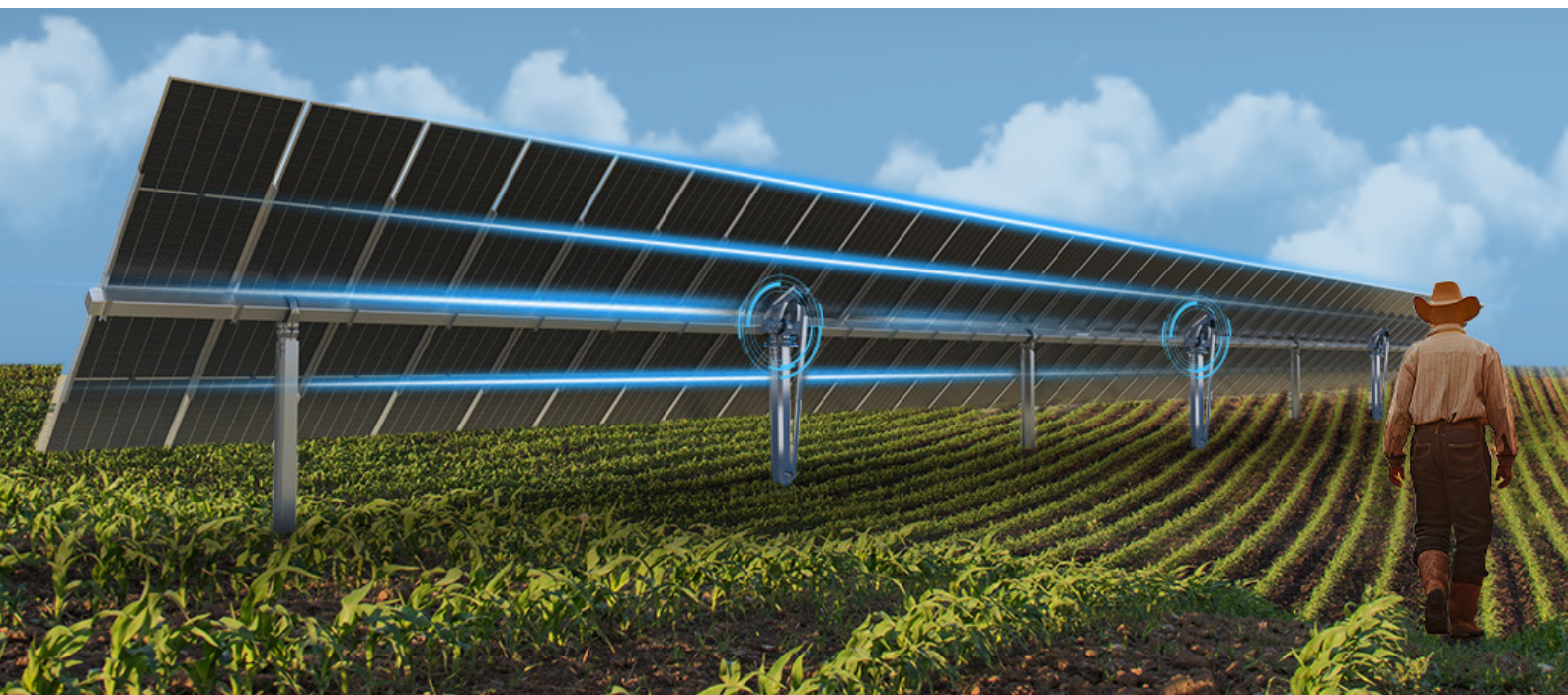
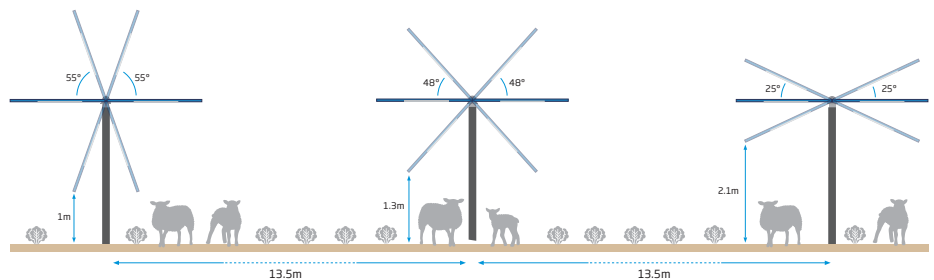
GENERAL FEATURES

	VANGUARD 1P	VANGUARD 2P
Solar tracker type	Single row, Single-Axis	Single row, Single-Axis
Module Configuration	Singular module in portrait (1P)	Two modules in portrait (2P)
Maximum Tracking Range	$\pm 60^\circ$ (120°)	$\pm 55^\circ$
Ground Clearance (Tracking Angle)	2.1m ($\pm 60^\circ$)	1m ($\pm 55^\circ$) / 1.3m ($\pm 48^\circ$) / 2.1m ($\pm 25^\circ$)
Driver	Slewing drive	Multi-motor linear actuator
Terrain Adaptability	15% W-E, 15% N-S	15% W-E, 15% N-S
Wind and Snow Loads Tolerance	Tailored to site requirements	Tailored to site requirements
GCR	$\geq 25\%$	$\geq 25\%$
Maximum pitch	9.6 meters	13.5 meters

Vanguard 1P



Vanguard 2P





STRUCTURE

Material	High Yield Strength Steel
Coating	HDG, Pre-galvanized & ZM
Foundation Options	Flexible designs for minimal soil disruption in farmland

CONTROLLER

Controller	Electronic board with microprocessor
Tracking Method	Astronomical algorithms + SuperTrack technology
Advanced Wind Control	Customizable
Power Supplier	String-powered/Self-powered/AC-powered

Contact Information

For more information on the Vanguard Family solution and how it can support your Agri-PV project, please contact us at +400 689 0000 or visit our website at www.trinasolar.com



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