valmont UTILITY | First Solar

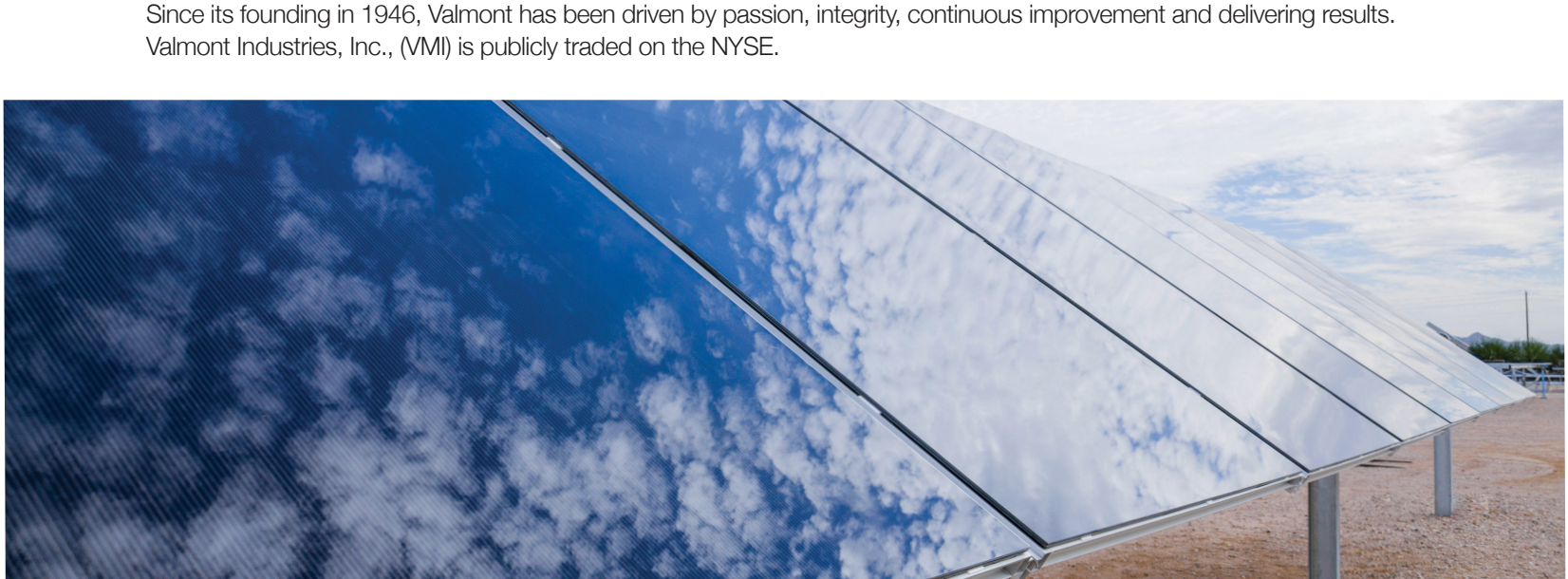
Convert TRJ Single-Axis Tracker

A SINGLE SOURCE FOR UTILITY-GRADE POWER STRUCTURES

With the 2018 acquisition of Convert Italia, a leading global tracker manufacturer, Valmont® Industries, Inc., is bringing this efficient, flexible and innovative technology to the North American market.

Every Convert TRJ Tracker is backed by the bankability of the Valmont brand, a global manufacturing network of 87 locations across 23 countries, and a legacy of engineering and manufacturing excellence built over 70 years. We're partnering with utilities to take advantage of opportunities like connecting existing power grids to help manage growing demand, bringing renewable energy (wind and solar) into the grid, delivering low or zero environmental impact installations and pioneering drone technology as a critical tool for structure and line inspections. We continue to define innovation and service in the utility industry and are proud to offer a portfolio of products for power transmission, distribution, substation and generation.

Since its founding in 1946, Valmont has been driven by passion, integrity, continuous improvement and delivering results. Valmont Industries, Inc., (VMI) is publicly traded on the NYSE.



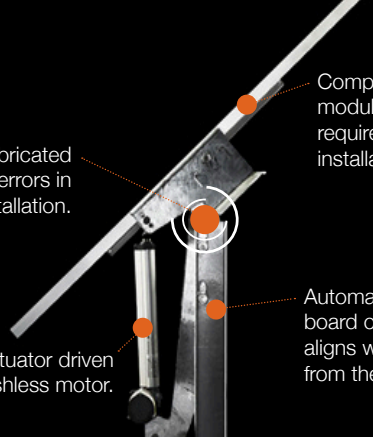
SIMPLE TO INSTALL. EASY TO OWN.

The modular design and superior engineering of the utility-grade Convert TRJ Single-Axis tracker make it simple to install, easy to maintain and built for long-term performance.

- **Simple, Robust Table Structure Design** Short, single-string rows provide best-in-class terrain following and layout density while enabling a stiff structure that minimizes failures and decreases long-term costs.
- **Innovative, Hybrid Controller Architecture** The wireless controller utilizes existing DC infrastructure to enable backup capabilities without failure-prone batteries or auxiliary modules.
- **Highest-Quality, Global Supply Chain** With 87 manufacturing facilities spread across 6 continents, Valmont has the footprint and capability to ship the highest-quality product while offering unmatched price stability and availability.
- **International, Bankable Product Portfolio** The Convert TRJ Single-Axis tracker has been deployed in 11 countries on 4 continents, generating 1.5 GW for leading customers, financiers and partners.

Simplicity. Reliability. Productivity. It's what you've come to expect from Valmont. Contact us at **solarinfo@valmont.com**.

CONVERT TRJ TRACKER



STRUCTURAL/MECHANIC FEATURES

Tracking Technology	Horizontal, balanced single-axis tracker with independently driven rows and backtracking
Tracking Range Technology	Up to 120° (± 60°)
Module Compatibility	FirstSolar Series 6, typical 6 module strings
Drive System	One AC linear actuator per row; 240V single phase 60 Hz brushless motor
Ground Cover Ratio	Fully configurable; typical range from 35% to 50%
Terrain Flexibility	N-S: Up 7% standard, extended options available; E-W: Unlimited
Operating Temperature Range	14° F – 122° F (-10° C – 50° C); extended range available

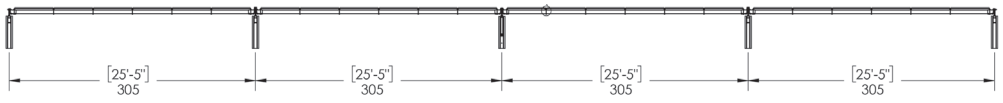
ELECTRONIC SPECIFICATIONS

Solar Tracking Method	Control system governed by astronomical clock with GPS input; self-configuring; no irradiation or tilt sensor required
Communication	Wireless Point-to-Point Network – LoRa Protocol
Monitoring	Real-time local or remote communication data provided via ModBus from control board to SCADA
Controller	String powered with backup or power AC input; one controller per 10 rows
Ground Cover Ratio	Fully configurable; typical range from 35% to 50%

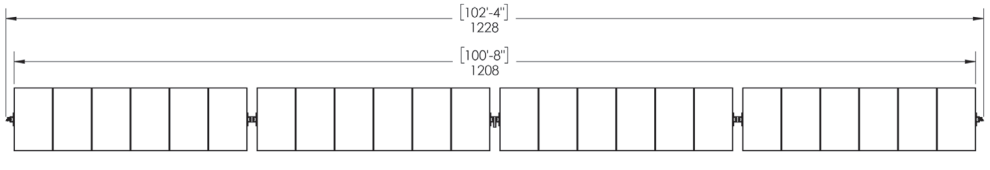
INSTALLATION

Foundation	Compatible with all major foundation types (driven pile, ground screw, concrete)
Installation Tolerance	Twist 5°; Inclination 1°; Height ± 3/4 inch (± 20mm)
Installation Method	Requires no specialized personnel or equipment; no in-field welding
Module Installation Method	Speedslot, top clamp, other approved First Solar clamps
Grounding Method	Grounding path is through tracker structure per UL2703
Warranty	10 years on structural components; 5 years on drive and control system; extended warranty available
Operating Temperature Range	14° F – 122° F (-10° C – 50° C); extended range available

Front view @ 0°



Top view @ 0°



Side View @ 60°