

# Cleaning of Photovoltaics and Solar Panels





#### SAS VOLTNET

offers a fully autonomous cleaning unit on site which includes:

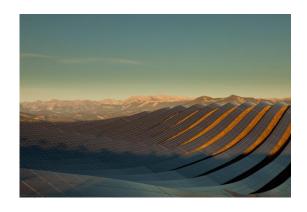
- > **IVECO Truck t**o transport the material on site and water supply site during cleanup
- Roboklin 25T 4000 An autonomous cleaning unit specially fitted to be able to move within narrow spans and to stay stable regardless of the declivity
- IV Curve measures before and after cleaning to measure yield increase

SAS VOLTNET

Capital variable 1000€ - RCS AVIGNON 8 Rue du Pastre Hameau de Fontjoyeuse 84240 PEYPIN D'AIGUES

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## Specifically designed for optimum cleaning in difficult terrain ...

The material adapts to any terrain, flat, sloping, on slopes, whatever your setup, we are able to pass between your tables for perfect cleaning: washing and brushing under osmosis water pressure.

The articulated arm minimizes the risk of cracks or fractures on the panels thanks to the electronic management of the enhanced hydraulic system.









Guided by a sensor cleaning system prevents any impact on the panels and optimizes washing freeing itself from the constraints of terrain.

The pulsed washing water combined with a rotating brush ensures unrivaled cleaning.

### The autonomous cleaning unit supports:

- ➤ An articulated arm with hydraulic command Extension up to 4 m length and 360° pivoting
- ➤ A 4.20m rotary brush with ultrasonic sensor for the control of the safety distance between the brush and the panels
- ➤ A tank of 2400 liters to ensure the autonomy of the system
- An osmosis water system guarantees clean water and allows drying without trace.
- > The rubber tracks reduce the impact on soil













Regular cleaning results in significant efficiency gains

Example of measurements carried out before and after washing with a performance analyzer

RECAPITULATIF	R22			R59			R64		
	Power loss		Gain	Power loss		Gain	Power loss		Gain
Before Cleaning	-8,02%			-7,74%			-8,37		
After cleaning		-5,19%	2,83%		-5,31%	2,42%		-3,01%	5,36%
AVERAGE			3,535%						

#### Performance Measurement FTV200

RECAPITULATIF	R58				R4 - 2 lavage	es	R4		
	Power loss		Gain	Power loss		Gain	Power loss		Gain
Before Cleaning	-6.39%			-8.97%			-6.92%		
After cleaning		-1.42%	4.97%		-1.18%	7.62%		-1.35%	5,58%
AVERAGE			6,05%					•	