



The Roboklin 25 tracked vehicle achieves a maximum cleaning rate of 1MW in five hours. Photo: Messersi

# Efficient, automated cleaning for large PV farms

It is well known that on large scale PV farms clean panels are essential in order to produce peak yields. The Italian company Messersi has been offering PV cleaning solutions for 7 years. Their product, Roboklin 25, is a fully automated machine and it delivers efficient cleaning to large PV farm operators.

The company's main business is actually building special vehicles for construction and agriculture, the Roboklin 25 was developed as a solution for cleaning solar modules. 40 units have been sold worldwide so far.

During 7 years, working in many different conditions around the world Messersi acquired a lot PV cleaning experience. The tracked vehicle is powered by a turbocharged diesel engine from Kubota and has a maximum cleaning capacity of 1MW in five hours.

The telescopic arms have maximum lengths of 4 and 6.5m. Two washing systems can be mounted on them. There is either a sprinkler system with a maximum pressure of 40bar or a rotating brush: 3 sizes of 2.2, 3.6 and 4.2m long.

Both systems are supplied from a tank with a capacity of 2400l. Cleaning is controlled through ultrasound sensors, which ensure that the distance between the modules and the cleaning system is always the same, automatically compensating for irregularities on the ground whilst the

vehicle is in motion.

The hydraulically controlled telescopic arms are also cleverly designed. They can clean from a distance of up to 9m between the vehicle and the module and an articulated arm lets the cleaning systems move freely to the left or the right.

The track undercarriage is suitable for all ground conditions and drives at a maximum speed of 11km/h. The Roboklin 25 base comes from Messersi's 60 years' experience in construction equipment and earthmoving machines. They are a worldwide leader in the compact tracked dumper market. The tracks are designed to absorb all the roughness of the ground in order to limit the vibrations, which could be dangerous for the oscillations of the brush on the panels during the cleaning operation.

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