

ERGONOMIC HELPERS FOR THE PHOTOVOLTAIC INDUSTRY

As process optimisers with high safety standards, vacuum lifting devices from AERO-LIFT have long since become indispensable in the sheet metal and timber industry. The successful example of ezee Energy shows that the vacuum lifting technology specialist from Baden-Württemberg also offers smart solutions for handling PV modules.

The company ezee Energy from Geislingen-Binsdorf in the Zollernalb district specialises in renewable energies. It offers sophisticated concepts for its partner companies in the solar, plumbing and heating trades, which it also supplies with the necessary products. The need for supporting solutions is increasing, particularly when it comes to separating photovoltaic modules for the respective customers and installation teams, as several deliveries have to be picked every day.



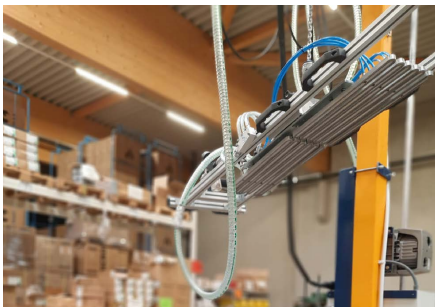
The manual handling process usually requires at least two people due to the weight of the individual modules and to protect the material. There is a risk that one of the unwieldy modules could fall and break. There is also the aspect of ergonomics. Reasons enough to think about optimising this work process.

Due to the neighbouring company locations, the obvious solution was to knock on the door of the vacuum technology professionals next door. After analysing the existing work process, the engineers at AERO-LIFT developed a special solution for the PV industry. This enables several photovoltaic modules to be sucked in from above at the same time, allowing them to be removed from or inserted into cardboard boxes with pinpoint accuracy, for example. Thanks to the soft, flexible seals of the suction plates, the modules are safely sucked in and can be transported from A to B without damaging the material. The distance between the individual suction plates can be variably adjusted. Conversion to solar modules of different widths is therefore a breeze. Special positioning aids are also available for common sizes, making the changeover even more convenient.

Each row of suction plates can be individually shut off manually via a manual slide valve. This means that 1-6 modules can be handled flexibly with the same setup. The devices are designed and manufactured in accordance with the current safety standards EN 13155 and ASME B30, and are tested and documented in accordance with the applicable accident prevention regulations BGR 500 and Machinery Directive 2006/42/EC/Appendix IIA.



The final acceptance test is carried out in accordance with VDE 0113 and EN 60204. AERO-LIFT also has a solution for swivelling modules: using a specially designed vacuum lifter, the solar panels can be rotated by 90° and transported both horizontally and vertically. This also allows individual modules to be handled efficiently. Thanks to a mobile light gantry crane, the picking stations at ezee Energy can be flexibly relocated in the halls without the need for structural measures. What used to be tedious and unpopular picking work is now comfortable, faster and more efficient and, above all, can be carried out by just one employee.



The Managing Director of ezee Energy agrees: "The vacuum lifting technology has significantly improved our processes and the risk of back pain is now fortunately a thing of the past," says Reiner Stauss. "It is now unthinkable for all of us to carry out this work without the support of vacuum lifting technology."

Sebastian Scherer, contact person at AERO-LIFT Vakuumhebetchnik, is also satisfied: "We are always pleased when we can make our customers' work easier and safer with the help of our solutions. Many companies in the PV industry have already been able to make their work much more comfortable and ergonomic thanks to our vacuum lifting devices. We are constantly working on new concepts for this purpose, which can of course be customised to meet specific customer requirements."

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