

Vacuum handling rationalises commissioning of parts



Project information

Branch Solar
Area Commissioning department
Customer General Solar Systems GmbH, Ravensburg (D)
Application Handling of solar collectors

Schmalz products Vacuum tube lifter JumboErgo 85 with pneumatic swivelling unit PSE

Customer benefits

- Ergonomical handling of collectors with ability to swivel through 90°
- Damage-free handling
- One device for many different collector models

The problem

Sales of solar systems are booming. In the German logistics centre of General Solar, about 200 solar collectors per day are lifted from stacks and placed in a vertical position on a delivery pallet. The 7 persons responsible for this could no longer handle

the task manually, due to the hard physical work involved. For this reason, the company management was looking for a suitable material-flow solution.

Requirements

- Lifting of the horizontal collectors from a stack and placing them vertically on a delivery pallet
- Collector dimensions: 1,200 x 1,900 or 2,100 mm
- Collector weight: between 38 and 45 kg

- Damage-free handling of the easily damaged solar collectors
- Ergonomical transport by a single person

The solution

Vacuum tube lifter JumboErgo 85 with pneumatic swivelling unit for loads weighing up to 70 kg. The PSE permits the operator to turn the collectors safely by 90° without the need for assistance by other persons. The vacuum tube lifter is equipped with four suction pads which can be adjusted easily for handling collectors of different sizes. The necessary vacuum is generated by a directly driven blower of the type Schmalz Blower SB-L, which is installed in a silencer box to reduce its

noise level. The vacuum tube lifter is suspended from a slewing column crane with a 4500 mm jib and a slewing range of 270°, permitting a large operating area.

Procedure: the horizontal collectors are lifted from the stack with the aid of the vacuum tube lifter, moved to the delivery pallet, turned through 90° to the vertical position and placed on the pallet.

Customer benefits

- Major increase in productivity: handling with the vacuum tube lifter permits a single person to commission more than three times as many collectors as could previously be done by seven persons! In spite of the high throughput, one

JumboErgo is sufficient for loading the delivery pallets in two-shift operation.

- Prevention of damage to the delicate surfaces of the collectors -> no more expensive complaints



Lifting a horizontal solar collector from the stack with the aid of the vacuum tube lifter JumboErgo.



Placing a solar collector vertically on the delivery pallet before movement to the packing station.