

EMPTICON AND ROBOT PALLETIZING

Mascot International is a family-run company that develops and manufactures working clothes and safety footwear. Having experienced heavy growth over a number of years, and with workrooms in both Vietnam and the Far East, Mascot International has seen a distinct growth in the number of freight containers with non-palletized goods received for unloading.

Four operators used to work the entire day, unloading containers and then palletizing the goods afterwards. The unloading of non-palletized goods from freight containers traditionally constitutes an ergonomic problem due to the physical strain and many heavy lifts.



In order to solve this problem and to reduce the variable costs, Mascot International chose to invest in an Empticon® as well as the associated robot palletizing equipment supplied by Qubiqa. After an installation time of 1½ days, the solution quickly showed its worth,

The number of operators handling inbound goods has fallen from 4 to 1½: One super-user operates the Empticon, and another user spends half of his workday handling the robot palletizing. Today, Mascot International uses 40-60 minutes when unloading a container with 480 boxes.

Warehouse Manager Claus Skeel Nielsen:

„Our cooperation with Qubiqa has resulted in a number of innovative solutions that fit well with our goal to keep optimizing our flow of goods. It was very exciting to participate in the pilot project and we have continued our cooperation on improving the Empticon, presently with a view to establishing automated goods receipt. Qubiqa’s aftersales service is flexible and even minor tasks are solved instantly while more extensive tasks are done outside normal working hours to avoid interrupting our daily operation.“

DEVELOPING THE EMPTICON

The Empticon container unloader was developed in a cooperation between Qubiqa and the design and innovation consultancy CPH Design A/S and a number of companies (including Mascot International), who wished to find a solution to the hard and strenuous work of unloading containers.

The result is groundbreaking, and the Empticon has won the Danish Design Prize, and some of the reasons given were that it is *“thoroughly tested in practice, innovative and a good solution to workplace problems”*.

Cartons are pulled out by means of suction discs via a wireless control desk and onto a belt that conveys the cartons out of the container. The cartons travel via six belt modules telescoping in and out of the container. The machine moves between several gates and is prepared for an associated system.

The Empticon is especially well qualified for the handling of uniform cartons of good cardboard quality.

ROBOT PALLETIZING

Using a robot solution for automated palletizing can save numerous man-hours and considerable effort. Cartons travel from the Empticon via roller conveyor to a robot that automatically and efficiently palletizes cartons until the pallet is full. Then the pallet is automatically conveyed out into a buffer zone, and a new pallet leaves the pallet magazine. The operator takes care of feeding the pallet magazine with empty pallets and takes away pallets from the buffer zone.

