

Significantly higher results with less effort

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Innovative solution for postal operators and CEP companies: semi-automatic discharging device for different package sizes ensures higher throughput and a more ergonomic operation

Up until recently, employees in logistics centres were required to complete physically demanding work when unloading packages, parcels and shipping units of various sizes from different containers or vessels. This was not only exhausting, but even lead to absence due to injury. With its BEUMER Parcel Picker, BEUMER Group has now brought an innovative solution to the market: This semi-automatic machine enables the efficient unloading of the bulk cargo with no physical effort, and it considerably increases throughput in the logistics centres of postal operators and CEP companies.

Online retailing has especially increased the pressure on postal and CEP companies. They are expected to deliver quickly and without any complications, and, at the same time, pay special attention to the employee's health and provide an ergonomic workplace. Increased throughput also means increased physical strain for the employees in the distribution centres, for example when manually moving heavy packages. Non-ergonomic work processes, such as heavy lifting and frequently bending down, can make tasks more difficult. In order to make work processes more efficient, for both operations and its employees, BEUMER Group has developed the BEUMER Parcel Picker, a semi-automatic device for unloading swap bodies and trailers, in a fast and ergonomic way. It has been developed so that this robust and compact device is very easy and safe to operate. Compared to manual unloading which is most commonly used today, operators can considerably increase their throughput: with an average parcel range and an operator that is familiar with the system, throughput rates of more than 2,500 packages per hour are possible.

A convenient workplace

The BEUMER Parcel Picker consists of a modified stationary telescopic belt conveyor and an unloading unit connected on the face side that is operated by the employee. The unit is pushed by the telescoping belt conveyor. The main component is the package manipulator. The operator uses it to pull the packages from the top onto the conveying technology. The package manipulator's design is particularly light and robust. A special attachment, mounted flexibly at the front end, supports proper package handling and prevents

damages. The package manipulator is ergonomically designed and is suspended from its centre of gravity to make it neutral in weight, so that the operator does not have to carry it. The packages do not have to be lifted, which means almost no physical strain for the operator. At the same time, the operator's productivity is increased because the work is less exhausting. The suspension also has a motor-driven height adjustment, so it can be optimally adjusted to the height of the employee.

In order to avoid any risk for the employee during operation, BEUMER Group designed the operator platform in regards to ergonomic, functional and safety aspects. The person operating the system always has ample space between them and the packages. In addition, there are side walls attached to the telescoping belt conveyor which offer more protection against bulky items. The operator is supported by numerous automatic assistance systems. The layout of all control and display elements necessary for operation is clear and easy to reach for the operator.

Keeping everything in check

Via an easy to control operating unit at the operator panel, the employee enters the direction of movement into the system. The actual movement is triggered with a foot-operated button, which ensures safe operation. A camera, mounted to the unloading unit, turns on automatically when driving backwards. The employee can always see all activity on his display, even to their rear, and avoid any obstacles.

The employee moves the unloading unit exactly in front of the swap body or trailer. The integrated laser pointers allow for proper alignment and orientation. As soon as the front part of the BEUMER Parcel Picker is located in the swap body, the control switches into automatic operation. The system is positioned using its lateral distance sensors, until the vertical pick-up conveyors are in front of the first packages. With the package manipulator, the user takes individual package stacks and, with gentle movements, pulls them onto the conveyors of the pick-up unit. Here, they are collected and transferred to the telescopic belt conveyor in a bulk stream. For the bulk stream to be efficiently processed, the packages need to be automatically separated. This is why BEUMER Group has developed the Automatic Parcel Singulator, which is matched to the discontinuous mode of operation of a loop sorter induction unit.

The BEUMER Parcel Picker is very versatile. It is used as a semiautomatic device for unloading bulk goods from swap bodies. The BEUMER Parcel Picker can also be equipped with a module for automatic unloading of roller containers. In an emergency, this innovative system can also be used manually, i.e. like a traditional telescopic belt conveyor.

Source: BEUMER Group