

New, Highly Flexible Sorting Machine

Manufacturers must act quickly in order to satisfy business needs. It is important to pay attention to the various presentations of display boxes, and increasingly, to the demand for product boxes. This is **where various products**, for example, packaged in deep-draw trays, are to be combined into one box. Because production of goods does not typically occur in parallel, sustainable pre-packaging is necessary. An **effective automation** of this packaging process does not seem possible here, because both, the display box as well as the products, are customer-specific and very different. This is why manual labour is employed.



However, de Man GmbH, in cooperation with a meat products factory, has succeeded in automating these production processes with the **necessary degree of flexibility** vis-à-vis business requirements.

The newly developed sorting machine consists of three parts. The first segment is responsible **for putting together the display box**. The main component is comprised of a 6-axle robot and a flexible folding table, which together can execute a high number of folding procedures. In order to be able to process not only folding boxes but blanks for boxes as well, a hot glue element has been incorporated into the segment. The robots also add stacking edges and bases. This renders the robot flexible enough to establish **a broad portfolio of display boxes** for various customers. The segment is designed so that it can be adapted later on if there is a need to change the box.

A **sorting magazine** is integrated into the second segment. The deep-draw trays are placed into stacks according to type and individually removed as the need arises. The system mixes them together according to the customer's specifications and makes them available. The combined assortment of goods is then grabbed by another 6-axle robot and placed in the display box. The system's capacity is over 4,500 trays per hour. The mixture of the products can be **freely selected and easily adapted**.

The product boxes are **sealed with lids** in the third segment. Similarly to the first segment, both pull-off lids as well as blanks can be used. They are prepared by the third robot, glued if necessary and placed on top of the box. Once the box is ready, a different station can label the box and palletise it.

de Man GmbH has thus succeeded not only in satisfying current needs for state-of-the-art packaging machines but also in giving the user an **unusually large amount of latitude for future tasks**. The modular design of the three segments enables systematic assembly and disassembly of the sorting line.

To have a closer impression of our sorting machine, please ask for our video.

