

# FROM PALLET TO CONVEYOR BELT

## Sweep-off depalletizers ensure constant bottle flow

*For new glass bottles, the journey through the filling line usually begins at the depalletizer or new bottle gate. The output of the new glass bottle depalletizer must be matched to the output of the filler in order to ensure a constant supply of new bottles to the entire filling line. Christian Schmid, Regional Sales Director at Autefa Solutions Germany, explains in this interview with BBII what to look out for when selecting a new glass bottle depalletizer and which features Autefa Solutions systems offer.*

### **BREWING AND BEVERAGE INDUSTRY INTERNATIONAL:**

*Mr. Schmid, please explain briefly how the Autefa new bottle sweep-off depalletizer works.*

**Christian Schmid:** The Autefa new glass bottle depalletizer is used to sweep-off products layer by layer. At the depalletizing position, the top layer is gripped and pushed onto a height compensation plate. This lowers to the conveyor height and the products slide onto the discharge conveyor. The packaging materials, such as layer pads and lids, are then separated into piles.

**BBII:** *What are the technical features of your new glass bottle sweep-off depalletizer design?*

**Schmid:** To reduce glass breakage, Autefa developed the anti-breakage module, which is unique on the market thanks to the protection of a utility patent. For this purpose, the bottles are secured during each lifting and

pushing movement and remain fixed during the transfer process until the transfer head is above the bottle neck. The risk of bottles falling before or during the transfer process is thus drastically reduced.

Another special feature is the transfer from carton trays. For this task, where most manufacturers switch to a lifter with a tube gripper, Autefa relies on tearing open the cartons in the direction of transfer. On the opposite side, the carton is fixed with grippers to prevent the layer from twisting during transfer. This function can also be added on a modular basis according to customer requirements.

**BBII:** *Which bottle types can be processed? Are there any restrictions on the material and size of the bottles? Can cans and beverage cartons also be handled in this manner?*

**Schmid:** To ensure safe transfer,

it is necessary that the product is able to stand stable. If this requirement is met, it almost doesn't matter whether the products themselves are round, oval, angular or asymmetrical. In the design phase, the effects on the behavior of the products during transfer are checked by our engineers and, if necessary, the system is modified with familiar features such as clamps or the like.

**BBII:** *In which performance range is the sweep-off depalletizer available?*

**Schmid:** Our systems are designed for a capacity range between 6,000 and 40,000 bottles per hour. For special lines that include trays with films, for example, an investment in this line is also attractive for even lower output ranges.

**BBII:** *What should be the nominal output of a depalletizer system to ensure efficient operation of the filling line?*

**Schmid:** The output of the new depalletizer should exceed filler output by 20 percent. Pallet switching must also be taken into account here. If intermediate layers or empty pallets are not discharged by means of conveyor technology, rather manually, these lag times must also be taken into account and adjusted to the buffer distance between gate and filler. For higher outputs, a sufficient buffer distance must also be provided for the new glass bottle pallets to prevent the line from coming to a standstill if the operator is briefly unavailable. All these components must be taken into account for efficient operation



*Christian Schmid, Regional Sales Director, Autefa Solutions Germany*

of the depalletizer and thus also of the entire filling line.

**BBII:** Are there differences in plant design for breweries compared to other beverage producers such as NOLO operations, wineries, etc.?

**Schmid:** The basic machine remains the same, but the different needs of customers are taken into account. For example, wineries usually have more product and format changes, which must be considered in the design.

**BBII:** To what extent are the spatial conditions of the plant operator taken into account in the design of the depalletizer?

**Schmid:** The design of the plant is modular and the layout is always adapted to the customer's needs. Thus, there is no such thing as a "standard machine" at Autefa, since the spatial conditions are different for each customer. The lines run for many years, therefore material flow and specific systems requirements must be adapted to ensure long-term, successful operation of the line.

**BBII:** Which pallet types can be processed? Is it possible to switch the pallet type during operation?

**Schmid:** All standard pallet types such as Euro or industrial pallets can be processed. Adaptation to specific dimensions is also possible. Adjustment between pallet types is fully automatic, so that ongoing operation is not disturbed.

**BBII:** Can the depalletizer be expanded at a later date or adapted to new tasks as needed?

**Schmid:** To be able to process new bottle formats, all that is



The design of the sweep-off depalletizer from Autefa Solutions is modular and the system layout is adapted to customer requirements.

required is to create a new recipe. For larger changes, such as the additional depalletizing and unpacking of crates, mechanical conversions or extensions with an exchangeable head are necessary. If the customer wants to increase the output of the system and the current configuration is already at its limit, the installation of a second trolley is also feasible at a later date. Basically, the technical possibilities for extensions are only limited by the available existing plant space.

**BBII:** Please describe a current project from the beverage industry.

**Schmid:** At the Reh Kendermann company, two existing lines

that were more than 20 years old were replaced by new depalletizers from Autefa. As with most of our customers, the anti-breakage module was also integrated into the machine. According to Johannes Grobeis, operations manager at Reh Kendermann, the profitability analysis gives an ROI of four years for their two new glass bottle gates. Significant service contract savings, reduced in-house maintenance and repair and reduced downtimes are among the factors leading to this satisfactory result.

**BBII:** Mr. Schmid, thank you for your time. (bm) □



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