

Intelligent carton warehouse with optimizer load handling device

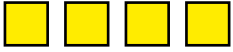


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Concept Information





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In the distribution of commodities, »cross docking« and »fast track« are of increasing importance. Goods have to be buffered in the distribution center, for an on-time and efficient supply to the point of sale. Ideally, they are buffered in the original delivery unit, so that repacking is not necessary. More often, the original delivery unit is a carton, requiring single access and individual handling.

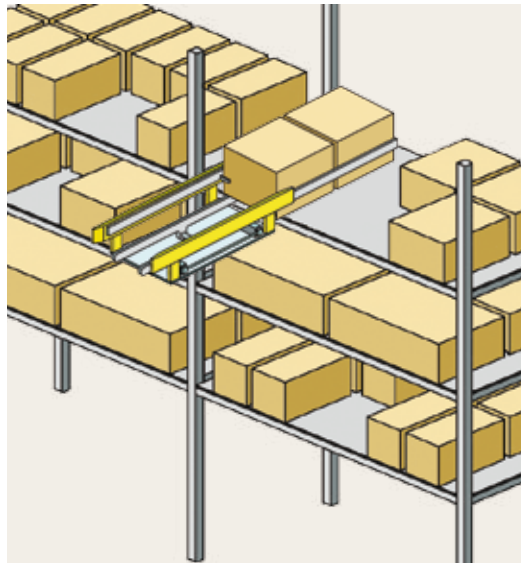
Usually, the cartons differ in size and quality, thus the applied storage and distribution technology should be able to handle such differences. The special challenges are storage and buffering tasks, which only work economically if the instoring and outstoring processes are automated, having in mind the best possible utilization of the storage capacity. Due to the complexity of such warehouses, the maximum possible functionality and reliability are needed.

The *optimizer* load handling device for single or multi-deep storage, developed by psb, fulfils these requirements in every respect.

Function

The *optimizer* load handling device is mounted on a miniload crane; it automatically stores and retrieves cartons of different sizes inside the high bay warehouse. The gripping devices auto-

matically adjust to the size of the carton to be handled, so that the cartons can be stored according to the available clearances. This means, that a shelf can be occupied with many small cartons, or with few large ones. The related, carton-specific data are stored in the psb control and software module *selektron*. Through form-fit gripping and pushing/pulling of the cartons, during storing and retrieval, with the units sitting on the shelf directly, the quality of the cartons is not as critical as it would be with the storage on »elbow« joints (angled). The risk of deformation of the cartons, if they are stored for a longer time, is considerably



reduced too. In addition, by using the delivery cartons as load carrying device, there are no expenditures for trays, expensive single racking storage, etc. or a conveyor system handling empty load carrying devices.

The constructional features of the *optimizer* make it to be an especially flexible, efficient and economical storage and buffer system for single, multi-sized cartons.

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