

Storage
Order Picking
Handling & Automation

Case Study 023

Machinery



BUFFER STORE FOR FIRE PROTECTION PRODUCTS

The Customer

The Hilti GmbH Industriegesellschaft für Befestigungstechnik with its headquarters in Kaufering near Landsberg am Lech, Germany, employs around 500 people and manufactures motors and drives, premium drilling tools, compound dowels and mining and fire protection products for the international market. All production units operate according to lean manufacturing strategies for which the company has already been given the "Factory of the Year" award.

Further Information:
www.kardex-remstar.com



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Task definition

Hilti needed a warehouse for the intermediate storage of as many as 9,000 fire protection parts. These polyurethane-based fire stop bricks and plugs which are manufactured in Kaufering leave the production site at high temperatures and need to be stored and cooled down prior to packaging and dispatching. The customer was looking for a compact and easy-to-operate solution with a high safeguard against machine failure and a visually appealing, tidy and clean look.



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Solution



The solution put forward by Kardex Remstar was a fully automated vertical lift module which works according to the "goods to person" principle. The Shuttle XP requires only minimal footprint as it makes maximum use of the height of the warehouse. To achieve complete process automation, the fire stop bricks and plugs are transported to and from the storage lift on a conveyor system. The various parts of the plant are controlled by custom-designed software. One of the staff places the fire stop bricks on a special tablet; a conveyor system then delivers the products to the storage lift. Here, five tables closely positioned in a row are automatically pushed into and then stored inside the vertical storage lift system. To allow the hot products to cool down faster inside the buffer store, warm air from the storage lift is extracted through the exhaust-air plant in the warehouse. During the retrieval process, the operator can request a single tray or select a complete row of trays. On roller tracks, the trays are then transported to the second work station to be packed into cardboard boxes. The parts management is operated by the customer's own SAP system. Altogether, an efficiency rate of 99 % can be achieved with this solution. A high degree of machine reliability and safeguard against failure is guaranteed by the custom-tailored service and maintenance contract.

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Advantages at a glance

- Fully automatic and safe storage
- Products are buffered with low space consumption
- Automatic transport to the packing station
- Controlled cooling down period of products inside the lift
- Automatic retrieval as soon as parts are requested by the order management system
- High degree of access reliability

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Process description

We would be delighted to explain the different processes in detail in a personal consultation.

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Scope of delivery

- 1 Shuttle FSE 7.1
(W x D x H: 3,315 x 1,071 x 10,010 mm)
- 144 trays
- 6 fully automatic lifting stations
- 2 gantry units for loading and unloading
- 1,350 special trays for single items
- Conveyor technology
- Siemens S7 control / interface with SAP
- Test configuration and preliminary acceptance test
- Extensive documentation
- Service and maintenance contract



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