



Storage technology that connects

Whether from powerful individual product to complex process-linking, or from series production to batch size 1; HOMAG Automation offers the best possible material flow for each class, thus creating prerequisites for a cost-effective production.

➤ The more conscious companies deal with their resources, the higher is the added value achieved by their products. The focus lays more and more in panel division at the beginning of the process chain. Here, "automation" is the magic word, since the saw is only able to work with maximum efficiency, if it is supported through a suitable logistics concept. Automation with profit means to combine a saw with a horizontal storage system in order to vastly optimize the material flow.

Logistics around the saw In a horizontal storage panels are stored and removed quickly, fully automatic, and precisely as well as collated or transferred to the linked saw. Panel saws can easily be integrated via standard interfaces. Furthermore, using horizontal storage systems, different transport systems can be combined through which additional operating machines will be integrated, or offcuts could be returned into the storage. In brief: The storage decides and organizes the logistics so that operating machines can run optimally. Idle times are avoided due to a continuous material flow. The logistics solutions start with the TLF210 that offers a great

scope for the furniture and component industry with a gage of maximal 12 m, a travel distance up to 50m, and a transportable panel weight up to 250 kg. The TLF411 goes a step further. The strengthened design result in more stability, thus offering a greater scope of extension in length and width. This storage system works with a gage of up to 16 m and transports panels up to 350 kg single weight. The storage's operating speed provides for fast panel transport to any storage position or to deposit it onto the connected saw for processing. The TLF 810, with a gage beyond 16 m, is available for very large demands to fulfill special logistics requirements.

Practice demonstrates improvement No operator stands at the machine, apart from storing material. Process planning manages master and optimization data from the office and knows at any time, which material is available in which quantity. The cutter concentrates only in panel pre-cut and machine maintenance, since functions such as restacking, material provision, or pre-collating of panel packages are automatically done by the storage. This advantage is especially obvious, if production is designed for batch size 1

production, i.e. many different panels have to be stored, transported, and cut.

However, not only the organization is improved, but also the material consumption is clearly optimized. Offcut management completely includes all panel rests in the order planning, those laying in the horizontal storage as well as those stored in the manual offcut storage, and processes them with priority. Before a new panel is transported to the saw, the storage will check, whether there are some offcuts that can be processed in accordance to the requirements. Thus, existing material is recognizably better used. As a result less material has to be reordered.

Another interesting point is the automatic check of goods receipt. The whole stack is looked through by means of transporting each panel separately. The operator detects immediately whether damaged panels have been delivered. It is also checked whether the right material is stored. The crane measures each panel, even if the dimension is written on the delivery note. Another topic is the quantity delivered. The operator has better control over the number of delivered panels due to the storage system. Also the panel quality improves, since they are less moved



mechanically, the risk of damage is reduced, what again result in reduction of disturbances through damaged material.

Control is the brain of the storage system With woodStore 6, the storage systems are equipped with a control system developed by HOMAG Automation. This control is the brain of each storage system and optimizes all processes in the storage. WoodStore links the purchase system to the order processing, manages offcuts, analyses, controls, and optimizes all material movements. Even panels in external storage places can be managed. So, each material is registered in the control with unambiguous data, such as storing position, number, quality, etc., beginning with new delivered material up to panels that are called manual offcuts. By this means,

search and handling times are significantly reduced, even for offcuts, since they are stored with unambiguous assignment and are recommended with highest priority for adequate orders. The current offcut stock is displayed on each terminal connected to the horizontal storage system and can easily be operated through simple filter functions. Noteworthy is also the product analysis integrated into woodStore. Adjusted to customer's specific production conditions, this tool evaluates the whole storage movements and present on this base how efficiently the storage works. The so called "expert system" generates different strategies on the base of this evaluation and give tips on how to optimize the efficiency of the storage. The competitive advantage by using such kind of storage system is given by the factors time, transparency, and cost

(from left to right) Horizontal storage system TLF210 with gage of max. 17 m and travel distance up to 50 m offers a great scope for furniture and component production

The strengthened design of the horizontal storage system TLF411 result in more stability, thus offering a greater scope of extension in length and width

Horizontal storage system TLF411 in 2 bridge design The storage's operating speed provides for fast panel transport

Pictogram of storage technology for clarification

control. Outstanding characteristics are process safety, material overview, offcut management, and the structured process. The result: Horizontal storage systems offer a great scope in combination with operating machines and in panel variety, and they are the basis for an efficient production. www.homag-automation.com