

Well Packed

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HASTAMAT
PIEPENBROCK GROUP 

The packaging industry is always looking to new methods to protect, preserve and present top quality groceries and consumer goods. Therefore this industry is always at the forefront of the most modern machinery and facility concepts.

The company Hastamat Verpackungstechnik GmbH is a packaging specialist with headquarters in Lahnau, Germany. As a subsidiary of the Piepenbrock group of companies, Hastamat achieved a turnover of more than 10 million Euros. The company emphasizes customer contacts and is represented in more than 40 countries. The customer's requirements are always the center of attention. "Only somebody who knows the customer's product specific requirements can produce reliable and fast packaging machines," states Peter Lökös, responsible for Sales and Marketing.

Each new machine is equipped with PLCs and drives from B&R. The existing machines are also rebuilt in accordance

to the new technology.

Machine portfolio

The product portfolio from Hastamat includes the following areas: weighing, batching, filling and closing as well as special systems. Special systems encompass individual solutions for organizing, counting and weighing stick-shaped products such as pretzel sticks or chocolate sticks, as well as concepts for the transfer of staple crisps like Pringles and multi-lane distribution systems for packaging.

"We have developed special machines for these products that ensure gentle product packaging. It is vital to maintain the product quality. Our machines need to create the precondition,

so that the products aren't damaged. That is the challenge!"

Customer orientation was also the main focus for the newly developed bag forming, filling and sealing machine series RX. These continuous, vertical high performance machines are intended for a very high output. A very low fall height is possible thanks to a new kind of drive for the diagonal sealing tools, therefore treating the product very gently and allowing an output of up to 200 bags per minute. The machine can handle all loose and fluid products and is suitable for the food as well as for non-food industries. Any heat seal-capable foils or monofoils are suited for use.

All electrical automation components are made by B&R. Mr. Lökös explains why B&R was chosen as supplier.

"An essential advantage is that the automation components represent a complete, integrated system. It was not a one-dimensional decision, but the sum of all parts that were decisive in choosing B&R. Especially the support from B&R during the introduction of their products is worth mentioning."

The central component of Hastamat's automation solution is a 10.4" Power Panel with Touch Screen. It handles both control and visualization functions. These PC-based control systems are programmed using Automation Studio. This is the main advantage of B&R's complete solution, because the machine's communication and motion is programmed in Auto-






The RX series from Hastamat is very challenging in regards to motion control. Not only do the axes have to be synchronized, but they have to be overlaid with mathematical functions.

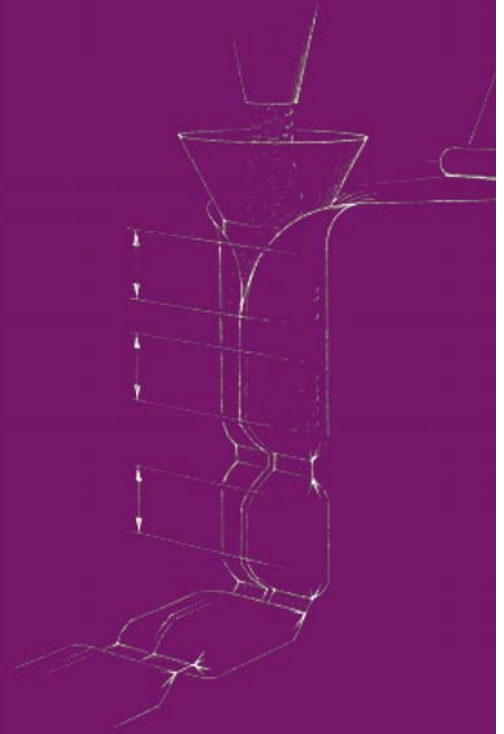
mation Studio too. This was especially important for the new RX series, since the motion is overlaid due to the special demands and requires high performance. Furthermore, collision control had to be implemented. This is not an easy task for an automation system, however it required in order to reduce the product's fall height (see "About Fall Heights") and simultaneously increase the flexibility of the machine in terms of bag size, sealing duration etc.

High Speed communicating for Precise Processes

Hasamat uses Ethernet Powerlink for communication, after all up to five servo axes (six with dosing functions) have to be synchronised. The problem is not getting the axes to run in synch. Rather, the movements of sealing tools (horizontal and circular) must be overlaid with mathematical functions. Also, functions like cooling, welding and sealing are time critical parameters, which have to be monitored and controlled continuously. Hence it was decided to employ ETHERNET Powerlink due to its high performance. The Power Panel also controls temperature regulation and cam functions of the machine. Not only does it take over PLC functions, but all operating and monitoring functions can be configured. Operators

have access to all production-relevant functions and can intuitively operate the machine using easily comprehensible pictograms. If any writing should be necessary, setting the appropriate language is possible thanks to the use of Unicode characters. Hastamat uses the most advanced concepts and technologies currently available: PC-based controllers, servo drives, remote I/Os and Real-Time Ethernet. However the technology is only an aid in concentrating on the essentials: the product-specific demands of customers form the packaging industry. 

www.hastamat.com



About "Fall Heights"

Potato chips and other very light products tend to "glide", not fall, when they are packaged. These extended falling times cause limits in the maximum packaging output. However, when filling bags, very compact product flow is required, in order to leave space between product fillings for the actual bag sealing. Therefore it is necessary to reduce the fall height as much as possible. This also has the positive side effect of being very easy on the product