ECONO-PAK
Checking, packaging, labeling

Innovative machine manufacturer

ECONO-PAK GmbH (EP) was founded back in 1985. As a result of its well-proven, sector-specific solutions along with a wealth of know-how, ECONO-PAK is one of the leading manufacturers in the area of packaging machines and subsequently expanded its business area. With its many years of experience, ECONO-PAK offers packaging machines and complete packaging systems – from the design, engineering up to installation in the food and non-food sectors. Siemens AG awarded the machine manufacturers ECONO-PAK and Ideal an order to design a new vertical packaging solution. This represents a new generation of machines, where several machine types and steps in the packaging process are combined in one automatic machine system. The requirements placed on the packaging machine include high cycle rates, shorter, more efficient re-equipment, precision, modularity, diagnostics and traceability as well as simple programming. Based on the SIMATIC® S7-317T teamed up with the SINAMICS® S120, this was realized in the shortest time.

Satisfied customer

“For the new Siemens series of SIRIUS®-Innovation products, automated production systems were developed where, at the end of the assembly line, a standard automatic packaging unit was to be used. This had to have a high degree of availability, be flexible and fast. Computer-controlled packaging operations – including fast, fully-automatic change of the different versions – were also specified. Not only this, equipping operations had to be possible with a low level of operator support and without having to stop the machines. Naturally innovative Siemens components and software packages were to be used. In close collaboration with the Siemens sector sales force for packaging, which provides the standard software blocks, ECONO-PAK was finally chosen. In the meantime, it has become quite clear that this decision was absolutely the right one. Both in the conceptual as well as in the implementation phases, high requirements were placed on the quality of the hardware as well as the integrated processes, monitoring and interlocks.
All of these demands were fulfilled in an exemplary fashion. The joint tasks were executed effectively and competently in a spirit of partnership in a team environment together with the project team of the manufacturer of the packaging machine. In spite of the demanding deadline, the first standard automatic packaging machine was able to be supplied and commissioned on time. In the meantime, it has been integrated into the first production line and completely fulfills all of the specified functions and technical requirements. ECONO-PAK has certainly proven itself to be a competent and dependent partner, whom we can definately rely on and trust when comes to new projects”.

Norbert Bachfischer,
Group Manager
Packaging/Labeling

Peak performance using Siemens technology

Independent and data exchange

An extremely high degree of flexibility and long operating time is possible as a result of the eight independent magazines; these can be equipped with the same or different versions of the folding boxes and called-up on an order-for-order basis. Even for small order batches, the fully-automatic order-related format change permits production to continue without any downtimes. Further, the individual folding box magazines can be replenished while production continues. As a result of the data exchange system between the line and the packaging machine, before being packed in the folding box, the product is verified and can be traced at any time. This traceability functionality allows Siemens to preserve its high quality standards at all times and also allows a maximum degree of transparency to be achieved across the complete value-added process.

Energy-efficient drive technology

A 10 kW Smart Line Module is used to supply the eight SINAMICS S120 axes. Among others, position data is sent to the control via DriveClic and the clock-cycle synchronous PROFIBUS. The SIMATIC S7-317T handles the motion control functionality for the servo axes and coordinates six additional conveyor belts. The packaging machine – that operates intermittently with integrated labeling – is integrated into a complete line for producing and packaging contactors. It fills the pre-glued folding boxes from the top.

Hardware and software – good programming is key to success

A maximum degree of standardization and a high flexibility is achieved by using standard hardware and software products from Siemens. The system architecture used by ECONO-PAK is based on existing and tested program blocks and simplifies programming and configuring; not only this, it helps to avoid mistakes and significantly shortens commissioning times. When all of the points are considered together, then at the end, a machine has been crafted with the highest possible degree of productivity, efficiency and flexibility with high quality and the lowest possible service costs. Through the collaboration with Siemens on a partnership basis, ECONO-PAK was again able to craft an innovative solution.

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