

Packaging machines

Position monitoring
of cardboard boxes

- **Top priority:
operation reliability**
- **Plug & Play**
- **Suitable for rough and
changing environments**
- **Satisfied customers
world wide**



Packaging Experts

Foodstuffs must be packaged securely in order to reach consumers in undamaged condition. Econo-Pak is a company with machines specialised in this task. Their solutions are used worldwide - supported by Wachendorff encoders.

Ice cream, biscuits or dishwasher tablets are usually found on supermarket shelves in colourful folding boxes. These days the automatic machines that place the finished products into these boxes are an important and accepted component of production lines.

They are particularly common in the food industry: Goods cannot be temporarily stored - at the end of the production process they are generally packaged as they are then received by traders. This isn't just sensible for logistical reasons - hygiene and product quality also make rapid packaging of the goods a requirement for their protection.

Highest demands placed on suppliers

Operational safety plays the most important role in this industry as every standstill has a significant effect on quality and can even render the goods unusable: „Our customers need machines that are safe and reliable,“ explains Markus Zerbe, National Distribution Manager of Econo-Pak.

The family business, which has been developing and manufacturing packaging machinery in Rheinland-Pfalz since 1985, is therefore focussed on absolute quality and places high demands on their suppliers. „We need real „Plug and Play“, says Ralf von Landenberg, responsible for machine electronics. „The components must be easy to install and integrate and then function - preferably without maintenance, laborious adaptations or even stoppages!“

Extreme workload for all components

For example, Ralf von Landenberg has been using Wachendorff encoders for over 10 years. The WDG 58 D with 720 pulses, which separates the production process into various substeps, is primarily used. The position of the encoder provides the machine control with precise information on which part of the process the cardboard packaging is currently in - whether they are in the correct position to be folded, or whether they are in the right position in order to apply the adhesive for sealing.

The encoder used by Econo-Pak is the most resilient in the Wachendorff range - for good reason:

„The environment is very harsh in our industry - for frozen products, for example, it's not just the extreme temperatures but also the high humidity that affects all machine parts,“ relates Ralf von Landenberg from his experience. The cleaning materials are also often very aggressive. „One of our customers in the USA lathered an entire machine overnight. The motors didn't survive but the Wachendorff encoders still worked,“ he explains with a grin.

Encoder endurance test

The encoder's electronics and coated aluminium housing with protection class IP 67 isn't just well protected against extremely low temperatures of up to -40 °C and corrosion: The radial and axial bearing load can also withstand up to 400 Newton. This robustness of Wachendorff components is no coincidence:

All encoders are subject to the toughest load tests in their internal laboratory. For example, all encoders are exposed to severe vibrations for at least 300 hours in a special shaker and the shock values on all axes are examined 1000 times. Only the toughest materials and components sur-

vive. Anything that does not pass the tests is removed and replaced by other solutions by the Wachendorff developers. The moulding of all larger components and the cable connections on the circuit board also ensures robustness - this means that everything stays in place and securely connected even in the event of strong vibrations.

Many Wachendorff products are also used in mobile work machines, in mining and in onshore/offshore areas, where they are exposed to particularly adverse conditions.

In addition the temperature range is examined in a climatic chamber, where extreme fluctuations within short time spans are simulated. The result is encoders that are virtually indestructible:

„We previously had problems with condensation that caused stoppages“, recounts Ralf von Landenberg. „Everything has been operating reliably since we started using Wachendorff products. We haven't even experienced discarded shafts since then.“

The full order books and customers from around the world attest to the reliability of Econo-Pak's machines. The family company, with the sons (Dirk Seidel and Jens Seidel) and step-son (Cornelius Arzt) of the company founder Helmut Seidel now at the helm, has a reference list full of names that every supermarket-goer will recognise: Coppenrath & Wiese, Lindt, Wiesenhof or Langnese are only some of the many global players that obtain their packaging machines from Econo-Pak.

„We've actually stopped thinking about the encoders - they are cost-effective and we know that they work. We certainly won't take the risk of changing suppliers“ Ralf von Landenberg gives Wachendorff the best compliment that a manufacturer can hope to receive.

The Wachendorff Group has been developing and manufacturing absolute and incremental encoders for use in various applications worldwide for over 20 years. Apart from a wide range of standard products with extensive options, the Company also develops individual solutions together with customers or makes adaptations on request. Internal developments such as wear-free, batteryless EnDra® technology for absolute multiturn encoders display the innovativeness of the medium-sized business. As development and manufacturing takes place under one roof at the headquarters in Geisenheim/Rheingau, this enables the company to react quickly and flexibly to customer wishes. The production department can also manufacture on short notice in urgent cases and offers an express service with 48 hours delivery time.

Above all, customers appreciate the robustness of the components, for which Wachendorff provides a worldwide 5 year warranty.



Image 1
 All Econo-Pak departments are located under one roof at its headquarters in Flonheim. The site employs just under 100 staff.



Image 2
 85% of the packaging machines are used in the foodstuffs industry. However, folding boxes - Econo-Pak's core business - are also used in other industries. Dishwashing tablets are being packaged here for example.



Image 3
 A typical Econo-Pak packaging machine - more than 500 Company lines are currently distributed worldwide.



Image 4
The path for a cardboard packaging cycle. It is initially folded, then filled and finally sealed.



Image 7
The machine's aren't just developed in Flonheim but assembled there as well. This machine is almost ready for shipping.



Image 5



Image 8



Image 6
Wachendorff encoders determine the exact position of the cardboard packaging. Their impulses provide information to the control on when the next process substep can be triggered.



Image 9
Ullrich Dettweiler fits a Wachendorff encoder. The type used here is available with between 2 and 25000 pulses. The customer can also select between the different resolutions, output circuits and connectors.