

Streamlining banding machines for sustainable packaging: How OMRON's sensing solution helped Bandall

One stand-alone solution covers various banding needs and helps improve efficiency and sustainability

Bandall, a family-owned sustainable bundling and banding solutions company based in Heemskerk, The Netherlands, faced the challenge of using different sensors for detecting various product formats for its customers. Implementing OMRON's optical sensor and a digital fiber amplifier in their standalone banding machines has enabled creating a single solution for meeting various needs.

Bandall B.V. founded in 1990, is a family-owned company that has experienced significant growth and operates on an international scale. The company's primary focus is on designing and manufacturing bundling and banding machines that provide limitless packaging solutions across various markets. The machines offer numerous benefits, including reduced plastic and waste, enhanced marketing, and a positive impact on the environment. With a network of over 50 distributors, Bandall supplies these machines to more than 120 countries worldwide. The company prides itself on its innovative and eco-friendly approach, with corporate social responsibility playing a significant role in its DNA.

Band together for sustainability

The company's sustainability efforts focus on cutting down on packaging and plastics. By utilising paper or film strips to bundle products, they can help manufacturers reduce packaging material by 80%. Banding, wrapping products with a thin band of paper or film, is a primary process that can be printed and is performed by a banding machine. It is useful for bundling, labeling, and sealing products.

Bandall manufactures various banding

machines, including stand-alone models for food and beverage products, in different versions. The machines are durable, reliable, and modular in structure, offering multiple options like stainless steel, multi-width, printer, positioning system, or press. However, as various products require different types of bands, the company has until now had to design specific machines for each material or product.

Wouter Vaneker, Bandall's Office Team Leader, explains: "We were having to use a specific sensor for each type of product or material. For simplicity and cost-effectiveness, we wanted to create a single machine with a sensor that could cope with all the different types of items. We considered various sensors and brands but OMRON turned out to have the best solution. OMRON also has a similar philosophy of sustainability to ours."

One sensor for every need

Bandall selected the E3X series fiber amplifier from OMRON, paired with the E32 series optical sensor, for its banding machines. The E3X amplifiers offer a maintenance-free operation, with a smart power control function that automatically adjusts to ensure the best detection conditions in response to any decrease in light intensity. Additionally, the amplifier features a single-button smart tuning set-up with an easy teach function, making it user-friendly. Its dynamic power control (DPC) technology guarantees optimal operational stability, even when faced with changing environmental conditions or challenging objects.

The optical sensor and fiber optic amplifier unit are linked to a programmable logic controller, allowing for seamless integration into

Bandall's banding machines. OMRON supported Bandall during the testing phase of the new machine, providing sample units and technical expertise. Thanks to the versatility of OMRON's sensor, Bandall was able to develop a machine that could be adapted to suit the unique requirements of any customer, regardless of the product type or size. This is achieved through the sensor's ability to detect and identify packages on the production line, ensuring accurate and efficient banding for a variety of products.

The sensor and amplifier are now being installed in all of Bandall's standalone floor machines. Wouter Vaneker concludes: "We now have a solution that has enabled us to produce one model of machine that can handle all types of products and banding materials. This has simplified the production process. The OMRON units have vastly improved the quality of the machine and provide a much simpler and more effective approach than having different machines or sensors for different products."

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