

CUSTOMER REFERENCE

Korteks achieves digital transformation in textured yarn packaging with OMRON automation solutions

Korteks

Bursa, Turkey



25% production increase



30% labour savings



15% cost reduction in packaging materials



ROI in 3 years



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Key Benefits

1

Daily packaging capacity of **110,000 bobbins**

2

30% labour savings and **25% production increase**

3

15% cost reduction in packaging materials through optimized robotic applications

4

Error rates minimized through enhanced traceability

5

Return on investment achieved within 3 years

At a glance

Korteks, one of Europe's largest polyester yarn producers, fully digitalized its Textured Yarn Bobbin Packaging line with OMRON. The project integrated PLCs, motion control, sensors, and safety systems, engineered with Sysmac Studio software. Real-time communication was enabled through the OMRON FINS protocol, while Korteks' own OPALS software connected automated handling, quality control, packaging, and palletizing with WMS and ERP systems. The results: 25% higher capacity, 30% less manual labor, and 110,000 packaged bobbins per day, with ROI in just three years. Korteks also reduced downtime and secured greater efficiency, flexibility, and quality across operations.



Korteks, one of Turkey's leading polyester yarn manufacturers, has fully digitalized its textured yarn packaging line with OMRON's advanced automation and software solutions. The project increased production capacity by 25%, reduced labour needs by 30%, and reached a daily packaging capacity of 110,000 bobbins.

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Korteks, a company of Zorlu Holding, was founded in 1989 in Bursa, Turkey, by Zeki Zorlu and Ahmet Zorlu. Today, it is one of the largest integrated polyester yarn producers in Europe. With expertise in technical textiles, Korteks supplies high-performance products to a wide range of industries — from defence to healthcare, from automotive to home textiles.

Operating from a 350,000 m² production site in Bursa with approximately 2,000 employees, Korteks has an annual production capacity of 200,000 tons, single-handedly meeting 17% of Turkey's polyester yarn demand. Exporting to more than 50 countries, the company is a strong ambassador for Turkish textiles in global markets.

"At Korteks, technology lies at the heart of our production," says Barış Mert, General Manager at Korteks. "Our digital transformation project, carried out in collaboration with OMRON, takes efficiency and quality to the highest level through full automation. Thanks to integrated software, high-speed data flow, and robotic solutions, we have become one of the best examples of Industry 4.0 in practice."



The challenge: Automating packaging and unifying diverse systems

Korteks wanted to transform its Textured Yarn Bobbin Packaging operations into a fully digitalized, fully automated process, minimizing manual handling, ensuring consistent quality, and meeting growing market demand without increasing labour requirements.

One of the most significant hurdles was the integration of different systems and equipment from multiple sources into a seamless, centrally controlled operation.

"The biggest challenge in the project was integrating different systems," recalls Cem Yurdakul, Distribution Account Manager at OMRON Industrial Automation. "However, with OMRON's flexible protocols and technical support, we managed this process successfully. By testing the process in advance through simulations, we were able to eliminate all potential problems before commissioning."





The solution: Integrated control, motion, safety, and real-time data

Korteks implemented an industrial automation solution from OMRON's to fully digitalize and automate every stage of the bobbin packaging process.

"We automated all processes such as the contact-free transfer of bobbins, quality control, bagging, boxing, storage, and palletizing," explains İlker Aytaç, Electronics Manager at Korteks. "With OMRON's advanced machine automation controllers, PLCs, motion control systems, sensors, safety systems, and the Sysmac Studio software platform, we can now manage all processes in an integrated structure."

Built-in EtherCAT and EtherNet/IP communication systems accelerated data flow between equipment, significantly increasing production efficiency. Korteks also developed its own OPALS software to manage Automation Handling Systems, using the OMRON FINS protocol to monitor barcode scanning, sorting, quality control, boxing, and palletizing in real time.

"With OMRON's advanced automation technologies, we have made the Textured Yarn Bobbin Packaging Line fully automatic," says Tuba Yavuz, Product Marketing Manager at OMRON Industrial Automation. "Automatic transport, labelling, and palletizing systems have maximized efficiency, making this project a key milestone in Korteks' digital transformation."

Full integration with WMS and ERP systems ensures end-to-end process transparency.



The Benefits: Higher output, lower labour needs, faster ROI

The results of the automation project were immediate. Korteks reached a daily packaging capacity of 110,000 bobbins, achieving a 25% increase in output while reducing labour requirements by 30%. Unplanned downtime dropped to a minimum, creating a more stable and predictable production process. "We achieved remarkable gains in both productivity and quality, ensuring a robust, future-ready production structure," notes İlker Aytaç.

Thanks to these improvements, the investment paid back in just three years. Beyond efficiency, Korteks established a flexible and safe automation framework. The project also strengthened the company's competitiveness in global markets and received national recognition. Korteks was honoured with the "Efficiency Award" at the Robot Investments Summit, where its robotics projects were showcased as exemplary cases. "With the fully integrated operation of the entire system, we have created a sustainable automation structure while maintaining quality standards," concludes Barış Mert.



KORTEKS

About Korteks

For more information, please visit: <https://www.korteks.com.tr/en>

OMRON

About OMRON Corporation

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