

SUCCESS STORIES

One of the largest distribution centres in South America trusts Datalogic to automate its sorting lines

OVERVIEW

One of the largest business groups in South America, which owns shopping centres, supermarkets chains, toy stores, cinemas, restaurants, department stores and the largest and most important hardware stores in the country, is trusting Datalogic to automate its sorting lines. Among all its businesses, the Group manages more than 250 locations such as stores, local shops, shopping centres, etc. The Group has one of the largest and most modern distribution centres in the country, incorporating the best technology, from where it imports, exports and distributes products. The company is an example of innovation and development in its country.

THE CHALLENGE

The distribution centre is more than 32.500m² and moves a large number of products, from its own brand to local and international brands, which, among other things, they supply to their different businesses. Initially the company carried out the classification processes manually, moving up to 6,000 items per hour. However, the manual management of all this volume made it impossible to guarantee a reliable order preparation process, the processes were long and expensive and there were many errors, returns and losses.

The company was looking for an automatic system that would allow it to manage the processes of preparation, transport and classification of orders automatically. The objective was to increase their productivity, reduce errors and time invested in different phases and save costs. To do this they sought a supplier that could provide experience in the sector and ensure the highest quality solution. The project was flexible, and they needed an after-sales service that guaranteed maximum security.

The system integrator chosen was Modumaq, a Spanish company capable of offering advanced solutions for process automation, with experience gained throughout its professional career and integrating the latest technologies applied to transport and maintenance systems. They are experts in automated systems for order preparation and distribution in logistics centres, as well as special end-of-line solutions.

THE SOLUTION

The company chose to develop a logistics solution for the preparation, sorting and transportation of orders based on a high-speed merchandise classification system. This consists of an extensive system of conveyor belts that move the packages coming from the different cross-docking areas, where there are 16 positions for the deconsolidation of the pallets and picking of completed units and boxes. Once the boxes are made, they are placed on the different conveyor belts that converge onto a main sorting ramp capable of housing all kinds of products, from bulky goods to fragile items such as boxes of bottles. The configuration of the conveyor belt system allows the boxes to reach the sorting ramp perfectly separated and sequenced to be classified for the subsequent order preparation.

The main classification belt is equipped with two 5-sided omnidirectional reading arcs, each arc consisting of 5 Datalogic AV7000 linear cameras that are capable of reading on any type of surface and at 360°. These cameras identify and classify each of the packages that pass through the sorting belt and send the information to the main PLC. With this information the system delivers each package to one of the 60 ramps dedicated to the preparation of orders. At the end of each ramp an operator receives the sorted material and finishes making the customer's order.

The integrator Modumaq, in charge of carrying out this project, analyzed the needs of this company and studied in depth the different phases of the ambitious project. For the sorting zone, they studied several options, many of which did not offer satisfactory results. The integrator clearly saw that the Datalogic AV7000 linear camera was the best option, since the experience in tests was very positive and the product met the needs of the customer.

The AV7000 is a smart linear camera with 360-degree reading capacity, ideal for high-speed applications for any material handling system with conveyor belts, tilt trays and cross-belt sorters. With superior optical performance, the AV7000 is the ideal solution to manage the identification of packages in distribution centres, parcel delivery facilities and high-speed warehouses. Its high sensitivity CMOS sensor and patented lighting technology provides high definition, clear and sharp images from one to six sides at high speed. Images can be exported in full definition or compressed formats.

In order to manage the data, Modumaq developed a software solution capable of analyzing the information provided by the company's ERP, with functionalities that track the traceability of the packages at all times, as well as other information such as the productivity of the machine, the status of the components of the system and the management of incidents with the ability to export all this information for quick and efficient analysis and anticipation of problems.

THE RESULT

With this automatic high-speed sorting system, the Distribution Group has managed to increase productivity at its distribution centre from managing 6,000 packages per hour to 12,000 packages per hour and 60,000 boxes per day. The automatic classification of packages for order preparation has allowed them to reduce handling time, reduce errors, returns and subsequent losses, and have real-time information on the order preparation process.

Datalogic is a global leader in the automatic data capture and process automation markets, specialized in the designing and production of bar code readers, mobile computers, sensors for detection, measurement and safety, RFID vision and laser marking systems. Datalogic solutions help to increase the efficiency and quality of processes in the Retail, Manufacturing, Transportation & Logistics and Healthcare industries, along the entire value chain.

The world's leading players in the four reference industries use Datalogic products, certain of the attention to the customer and of the quality of the products that the Group has been offering for 45 years.

Today Datalogic Group, headquartered in Bologna (Italy), employs approximately 2,900 staff worldwide, distributed in 30 countries, with manufacturing and repair facilities in the USA, Brazil, Italy, Slovakia, Hungary and Vietnam. In 2017 Datalogic had a turnover of 606 million Euro and invested over 55 million Euros in Research & Development, with an asset of more than 1,200 patents in multiple jurisdictions.

Datalogic S.p.A. is listed in the STAR segment of the Italian Stock Exchange since 2001 as DAL.MI. More information about Datalogic at www.datalogic.com.

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