



TRAMONTINA

CASE STUDY

TRAMONTINA

-Miniload-

Household Appliances

THE COMPANY

Tramontina is a Brazilian company that produces pots, cutlery and home appliances located in Carlos Barbosa/RS city. Founded in 1911 by Valentin and Elisa Tramontina, it is today one of the most important companies in Brazil, with ten factories throughout the country and a strong presence also in the international market, exporting to over than 120 countries around the world.

Tramontina produces more than 22 thousand items, among cutlery, pots and kitchen utensils, toys, wooden and plastic furniture for home and garden, gardening equipment and much more. Acting globally, the brand has the necessary support to deliver solutions capable of meeting the needs of its time, combining productivity and goal achievement with sustainable development through the environmental management program.

CUSTOMER NEEDS

The customer sought Cassioli for the construction of an automated warehouse to optimize space, meeting its operation with an intensive picking of products dedicated to kitchen, professional and sports knives, kitchen utensils, cutlery for daily use, pots, pans, molds and baking sheets, scissors, plastics, children's cutlery, and a complete line of products and accessories for barbecue. The large variety of SKUs and the limited area available led Cassioli to develop a project for a miniload, which is an automatic storage system of plastic boxes for small products, integrated with box racks. The project started with an analysis of statistical flow data to design the system and a volume analysis to study the ideal load unit, in order to efficiently accommodate the different types of products. The box considered on this study has as dimensions of 600 mm x 400 mm x 280 mm and a maximum weight of 50 kg. The project required a connection with the production area, where it was integrated with the autonomous vehicles AMR's, which perform all movement of collection and delivery of products to their destinations according to the production system request.

THE CASSIOLI SOLUTION

- ▶ Automated miniload warehouse composed of stacker crane with double depth telescopic forks.
- ▶ Flow of Boxes in the Miniload = 46 boxes/hour (Combined).
- ▶ Motorized roller conveyor.
- ▶ Motorized toothed belt conveyor.
- ▶ Motorized toothed belt conveyor with lifting.
- ▶ Entry station with dimensional and weight verification of the boxes.
- ▶ Transfer system for autonomous vehicles (AMR).
- ▶ Double depth warehouse with an area of 7,371 m³, for a total of 16,100 boxes.



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ADVANTAGES

- HIGHER PERFORMANCE IN TERMS OF SPEED AND ACCELERATION
- OPTIMIZATION OF THE AVAILABLE AREA
- POSSIBILITY OF STORAGING AND HANDLING DIFFERENT TYPES OF MATERIAL
- HANDLING OF INDIVIDUAL BOXES
- CONCEPT OF “GOODS TO MAN”
- OPTIMIZATION IN INVENTORY MANAGEMENT
- ELIMINATION OF SEVERAL ERRORS DUE TO MANUAL HANDLING