

Storage and automated solution



With the high-density capacity of a new automated warehouse, RNM optimized its space and increased its production capabilities.

Project description

RNM Group is among the top ten chemicals operators in the Iberian Peninsula, providing competitive solutions for this sector. Körber developed an automated integrated solution in terms of production, distribution, logistics and transportation of chemical products for various sectors of activity.

The ever-growing infrastructure of logistics solutions for storage and road, rail and maritime transport highlighted the need for efficient storage, management and distribution of their products. Körber project automated the customer complete product life cycle. From production to the expedition

Features and benefits

- **Throughputs optimization based on the number of SKUs and the racking system configuration**
- **Redundancy to the expedition isles**
- **Collector lines increased**
- **Higher storage capacity**





there are complete reversible lines, what allows them to perform inbound and outbound operations. Consoveyo was awarded the contract for providing a complete solution while keeping the current needs of the site and preparing to the inevitable growing.

System features / functionalities

The project main goal was the implementation of an automated warehouse prepared to be expandable. Furthermore, it's also possible to have a unique interface between the expedition and filling lines areas, and optimize the throughputs based on the number of SKUs and the racking system configuration.

A shuttle car serves the distribution of the empty Intermediate Bulk Containers (IBCs) through the different filling lines and the collector loop.

There are three expedition / reception isles, each one served by two conveyor lines. Preferably, the isles should be working in two opposite directions. However, since the customer has very high input and output peaks, both lines could work in the same direction. This brings flexibility and redundancy to the expedition / reception isles.

All interfaces with the automated system will be done by forklifts. Due to the quality and variety of pallets to be handled in the automated system, all products will be transported on top of a slaved pallet.

Customer benefits

The automatic warehouse is implemented at a greenfield site near the existing factory. This automated system allows the customer facilities improvement in a market one continuous expansion.

Due to the high redundancy of the expedition / reception isles - where the reception and order demands could have peaks - the system is able to work with inputs and outputs. It is a huge advantage for our customer, who requires the inbound and outbound flows to be held at same time.

Future expansion

In the future it is possible to increase the storage capacity or the system's throughputs. When the customer needs, we can easily expand the racking system and increase the collector line.

About RNM group

As a national market leader, ranks among the ten largest operators of chemicals in the Iberian Peninsula, RNM group is a company established in Vila Nova de Famalicão that ensures integrated solutions in terms of production, distribution, logistics and transportation of chemicals.

Focused on the future and its huge growing, RNM group will be prepared from now on, with this investment, to the expansion of the automated warehouse.



Project special characteristics

The high-density capacity of the warehouse enables compliance with the needs of the customer in the smallest possible space. We are currently discussing a clad rack type warehouse that reaches 35 meters in height, where four stacker cranes work with telescopic forks on-board in a double depth.

As a chemical Industry, RNM project has the particularity to implement the filling lines of chemical products in the automated system.

At the production area, the interfaces with the filling lines will assure the automatization of the IBCs circuit - from the filling lines until the storage and also the expedition.

The system is designed to be able to handle all load under a slaved pallet. Slaved pallets will have a special design to carry the high weight, 1570 kg.

Facts and figures

1. Industry

Chemical

2. Products handled/store

- a. Products: chemicals in state of liquid or solid
- b. Handling units: wooden pallet (at least 1200 x 1300 x 170mm)

3. Operation temperature

Room temperature

4. General contractor / main scope of works

- Automated storage and retrieval stacker cranes
- Conveyor system
- Warehouse management and visualization software
- Project and engineering

5. Warehouse characteristics

- a. Storage type: double depth
- b. Length x with x height: 122.5 x 31 x 35m (racking storage area)
- c. Storage capacity: 17,920 pallets

Product	Main elements	Product quantity	Handling device	Handling performance
Conveyor system	Roller conveyors	36	-	0.2m/s
	Chain conveyors	94	-	0.15m/s
	Transfer tables	34	-	-
	Rotating tables	6	-	-
	Pallet stacker	6	-	-
	Shuttle car	1	Chain conveyor	2.5m/s and 0.5m/s ²

	Aisles	SRM quantity	Loading device	Loading performance
Stacker crane system	4	4	Telescopic forks	72 pallets / hour in 72 pallets/ hour out

Körber Supply Chain Automation:

Our impartial consultants will advise on, and help you select, the right automation solution for your organization. We have our own range of competitive products, but we are equally willing to procure and implement other products if they are better suited to your needs.

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