



-ARCO



ARCO's 'small pack'  
packing line

Customer case | 2021

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## ARCO's 'small pack' **packing line**

For DHL, ARCO developed a 'small pack' packaging line in the European Distribution Centre in Beringe. The main objective of this packaging line was to reduce costs and achieve other savings in several areas:

- Reduction in maintenance costs for the current packaging line
- Reduction in material costs for the current packaging process
- Savings in floor space in square metres
- Savings in transport costs by increasing the fill rate of each box



The new packing line features the latest automation technologies such as an automatic box-folding machine, two spiral conveyors to transport boxes to and from the mezzanine, camera scanning, an automatic in-line weighing machine, an automatic box sealer, and a labeller that affixes shipping labels to boxes.

## Low-cost and high-yield packaging

The challenge in this project was that regular activities and work on the construction of the new process line took place at the same time. Since the completion of the new facility coincided with DHL's busiest period of the year, it required a lot of adjustments and a great deal of flexibility from all parties involved. For everything to work properly, a lot of new hardware had to be installed, for example:

- Infrastructure such as electricity, data and compressed air connections
- Horizontal and vertical conveyors for transporting boxes to and from the mezzanine
- Automatic in-line weighing scale for checking the weight
- Automatic print & apply unit for automatically affixing shipping labels
- Flowracks for buffering boxes (one-stop-shop)

The software also had to be revamped:

- Changes to the WM/D routing and packing menu
- Design of a new picking label that can also be used as a packing label
- A web application for displaying packaging instructions digitally
- A solution for printing all documents in a single operation
- A troubleshooting module for the entire packaging process



# **From engineering to launch**

## From engineering to launch

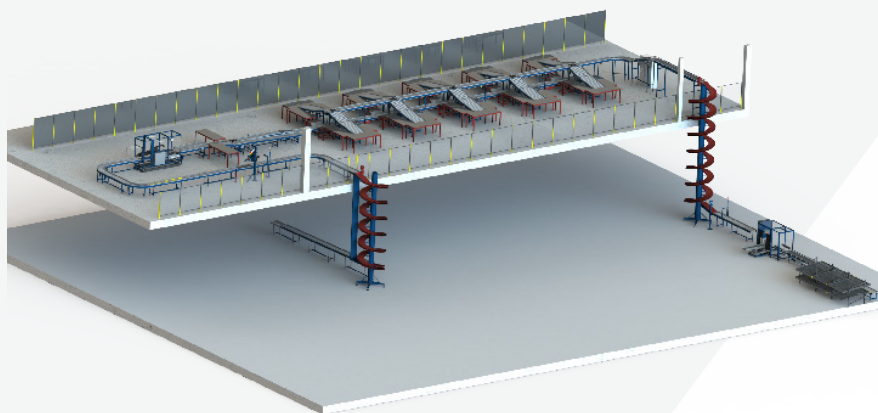
The collaboration with DHL kicked off with the development of a packaging line that was completely tailored to DHL's needs. After several feasibility studies as well as analyses of packaging processes and designs, a consensus was reached on a design. One of the things that made this project unique was the dialogue board; this facilitated a discussion between DHL employees and ARCO about the new packaging line. Detailed information about the project was made available to all employees via a bulletin board, where they were also able to share their ideas and ask their questions by attaching yellow post-it notes. Every week, the yellow post-its were answered with an orange post-it, on which issues were explained in detail.

This approach enabled DHL and ARCO to review the solution from different perspectives and to make adjustments as needed.

Once all the hardware and software had been assembled, the testing phase began: the new packaging line was intensively tested and employees received training on how to use it. The performance of all hardware and software components was tested by means of regression, capacity, and functional testing, employees received training on the new features, and preparations were made for the launch.

## From engineering to launch

After months of preparations, the construction of the installation, the development of the software, and the extensive testing of the packaging line, the system was finally put into operation. For the first few days after the official launch, a project team was on hand 24/7 to provide assistance. In the first week, several minor deficiencies were eliminated from the line. Only one week after implementation, 100% of the flow ran through the new packaging line and the project team's support was no longer needed.



**An innovative, high-tech  
packaging line**

## An innovative, high-tech packaging line

For DHL, ARCO developed an installation that has fully automated all inbound, warehousing, and outbound logistics. Based on DHL's needs, our engineers developed automated systems for unloading the truck, scanning the barcodes, labelling products, and unpacking and packing orders. Using various conveyor systems, transport of the goods was fully automated. DHL:

*“The whole system was designed to increase productivity, reduce the human workload, and reduce costs.”*

Through a Service Level Agreement (SLA), ARCO has assumed full responsibility for maintenance of the machinery.

The installation is inspected twice a year by a specialized technician, which ensures that deficiencies and wear are detected at an early stage. ARCO guarantees an up-time of 96% of the operational hours and is available for troubleshooting and repair 24 hours a day, 7 days a week. If a problem cannot be corrected remotely, a technician will be sent to resolve the problem on-site.



# Need help with a technical issue?



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