

# CIMCORP

Automation for mail  
processing and distribution



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“The big advantage in Cimcorp’s solution for tray handling and sorting is its ability to alleviate peak situations in a rational way.”



# PROFIT FROM AUTOMATED TRAY HANDLING AND SORTING

As the growth in digital communication puts increasing pressure on postal services, automation is revolutionizing sorting centers and helping mail companies to provide fast and reliable deliveries at a competitive cost. The Cimcorp solution for tray handling and sorting secures a number of important benefits that provide competitive advantage for mail companies:

The solution works flexibly to meet demand, ensuring that any peaks are handled with ease. To relieve pressure on the conveyor system, the robots store unsorted trays until they are needed, sorting them once peaks have been cleared. This means that the robotic system will never form a bottleneck in the tray-handling system, a factor which is especially beneficial in the time-critical final sweeping of the sorting machines.

**Rapid final sweeping**

The robots are able to organize trays into larger batches for the sorting machines, allowing them to run for longer periods with the same set-up. This enhances the availability of the sorting machines, increasing overall processing capacity and allowing production plans to be executed more efficiently.

**More efficient processing**

The whole system is managed by Cimcorp's high-level control software. This ensures optimal process flow; error-free tracking and tracing; automatic labeling of trays for dispatch, including removal of any old labels; a seamless interface to existing production planning and upper-level control systems; and ergonomic and user-friendly human-machine interfaces.

**Enhanced process control and ease of operation**

Through a combination of the robots supplying larger batches for sorting, improved overall system control and intelligent production planning by the customer, the robotic buffer area can receive larger batches for storage back from the sorting areas. The sorting center's own input can easily increase the system capacity, allowing throughput times to be shorter than in a conventional tray-handling solution.

**Potential for higher system capacity**

With tray storage, sorting and loading operations taking place in the same area and with trays stored in stacks, Cimcorp's solution offers optimum space utilization.

**Integrated storage, sorting and loading saves space**

The robotic area is surrounded by safety fencing that prevents unauthorized access and ensures security. Floor-based storage facilitates cleaning and maintenance when required, as well as providing manual access to all trays if necessary. In addition, no fixed fire protection barriers or dedicated extinguishing systems are required.

**Enhanced security and unhindered access**

Sorting of trays into destination-specific stacks in the robotic area means that mail required for dispatch can be retrieved from storage and loaded into delivery vehicles very rapidly, enabling postal operators to meet their tight delivery windows.

**Fast vehicle loading**



## LEADING-EDGE TECHNOLOGY OFFERS SPEED, FLEXIBILITY AND CONTROL

Cimcorp's solution for tray handling and sorting features robots operating on an overhead gantry to store and sort trays of mail in stacks placed directly on the floor. The gantry is modular in design, allowing the system to operate over large floor areas, and the robotic handling is both very fast and totally accurate. With vast experience in logistics automation, Cimcorp can design, install and support the total solution including the robotics, conveyors, material flow control and systems integration.



# HOW CIMCORP'S SOLUTION WORKS

## High-speed conveyor loop

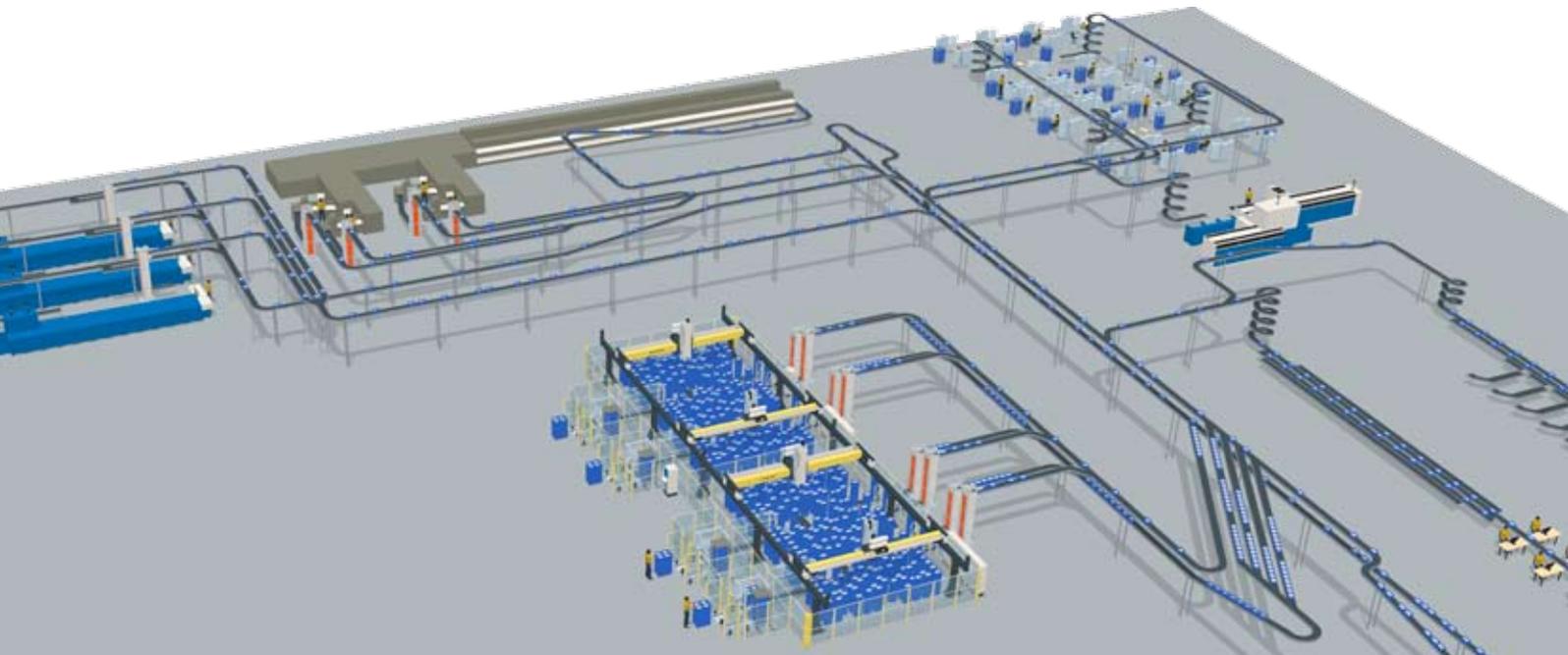
Mail arrives at the facility via mail acceptance consisting of automatic unloading stations, corporate bulk mail arrivals, CFC (culler-facer-canceler) machines and price-marking and other pre-processing areas. From here, trays are identified by barcode and conveyed to the mail sorting areas – LSM (letter sorting machine), FSM (flat sorting machine) and manual sorting – via a high-speed conveyor loop. This loop connects the robotic tray storage, sorting and dispatch area with the mail acceptance and mail sorting areas.

## Buffer storage

Proven, robotic technology operates as a buffer store at the core of the system. Trays arriving from mail acceptance can either be conveyed directly to the sorting areas or – if not immediately required for sorting – transferred to the buffer store. As soon as trays are required, they are retrieved on demand by the robots and transported to the correct sorting areas, each of which receives exactly the right type of mail and the right number of trays – supplied in batches of similar mail items that are as large as possible – as per the production plan.

## Robotic sorting

The robots sort the trays into stacks according to characteristics such as type (sorted or unsorted), class (priority, economy or later deliveries), product (such as registered mail, express mail or Christmas card) and destination (other sorting centers, depots or delivery offices). Trays return to the robotic area after the first sorting stage (outward or national sorting, for other sorting centers) and the second sorting stage (inward or regional sorting, for the local area), with outward trays stacked according to sorting center and inward trays stacked according to local delivery office. When a transport unit load of mail is ready for dispatch, a robot transfers the destination-specific stacks rapidly to roll containers or dollies, which are then wheeled to a marshaling area or directly into delivery vehicles.



## CIMCORP IN A NUTSHELL

Automation technology company Cimcorp supplies robotic solutions for managing material flows in production and distribution environments. Cimcorp's purpose-built systems, software and services improve the profitability and competitiveness of its customers' businesses.



The Cimcorp group – which consists of Cimcorp Oy in Finland and RMT Robotics Ltd in Canada – has become a leading supplier worldwide to the tire industry, and is also strong as a supplier to the food & beverage and postal services sectors. The group has 230 employees and has delivered almost 2,000 robotic systems across five continents.

## CIMCORP OY

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