



Case Study

Courier Parcel Sorting Solution

ACS Courier S.A.
Athens (GR)





ACS Courier

ACS Courier S.A. is the leading company in the domestic courier marketplace, by providing first-class courier services in competitive prices, within Greece and for all international shipments and worldwide destinations.

The Parcel Sorting System

ACS worked together with Kinematik to materialize a sorter solution to fit exactly the needs of its Athens sortation hub. Due to the fact that the sorter was to be fitted to an existing facility, there were substantial limitations of both space and installation duration.

Designed from the beginning, a pop-up roller sorter was selected. Build into modules, transportation and installation was completed in a weekend.

Moreover, to keep costs down a synchronized feed conveyor was realized by retrofitting existing supply conveyors. Both the retrofitted sorter feed conveyor and the DWS (dimensioning, weighing, scanning) system were integrated into the sorter system. Finally, sortation data are exchanged with the customers IT system by Kinematik Sorter Control Station (KSCS).

Sorter System Operation Description

Packages are unloaded on the loading conveyors, which transport them to the gap creator conveyors, making sure that the packages have the necessary distances with each other to be identified correctly from the DWS system. After identification the packages enter the sorter. Depending on the chute that each package will exit, the sorter aligns the packages to left or the right of the sorter conveyor. Finally when the package reaches the exiting chute, the sorter using a pop-up roller mechanism diverts the package to the destined chute.

Heavier, larger and generally unsortable packages are conveyed on the bidirectional belt conveyor line located under the sorter. The bidirectional conveyor line is used also as a sorter loop.

The Solution

- Pop-up roller sorter build from 5 modules, having 20 exiting chutes + 1 for overflow.
- Bidirectional belt conveyor line for unsortable items, acting also as a loop
- Retrofitting supply and gap creating conveyors in order to be synchronized with sorter feed conveyors
- Integration with the DWS system
- Engineering, Automation, Integration, Data Exchange





Handling Ability

Capable of handling a wide range of products, such as cartons, boxes, totes, packages etc. Sorting capacity reaches 2500 units per hour.

Reliable and Accurate

Having sensors along the sorter and at the chutes, and due to the advanced sorting algorithm, the system can accurately track each package during sortation process and eliminates missorting.

Compact

The system has a very small footprint, for the best utilization of space. The secondary bidirectional line is placed under the sorter.

Flexible

The sorter can run various sortation scenarios, which can instantly change. Chute exit reassigning can be also easily performed.

Simple Use

The sortation system is controlled through an operator panel that signals alarms and warnings, allowing instant troubleshooting. Communication with customers

IT is controlled from the Kinematik Sorter Control Station. Signalling lamps with beepers located near the chutes are used to notify when a chute is full, increasing productivity.

Safety

Personel and equipment safety is guarded with pull-rope switches along the conveyors and emergency buttons.

Modular Design

Consists of easily assembled submodule parts, which provide extra flexibility. Due to its modular and failsafe design, each part can be easily accessed and replaced, offering minimum downtime.

Minimum Maintenance

The system was designed especially to require the minimum maintenance consisting of top quality materials and equipment.

Based on the easy to assemble and troubleshoot philosophy, all the electrical connections are pluggable and each conveyor or exiting mechanisms can be disassembled in a few minutes ensuring reduced downtimes.





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Kinematik

KINEMATIK SA

Theodora 3, Metamorfosi
144 52 Athens, Greece

Phone: +30 210 2846 893
Fax: +30 210 2846 894

www.kinematik.eu
[info\[at\]kinematik.eu](mailto:info[at]kinematik.eu)