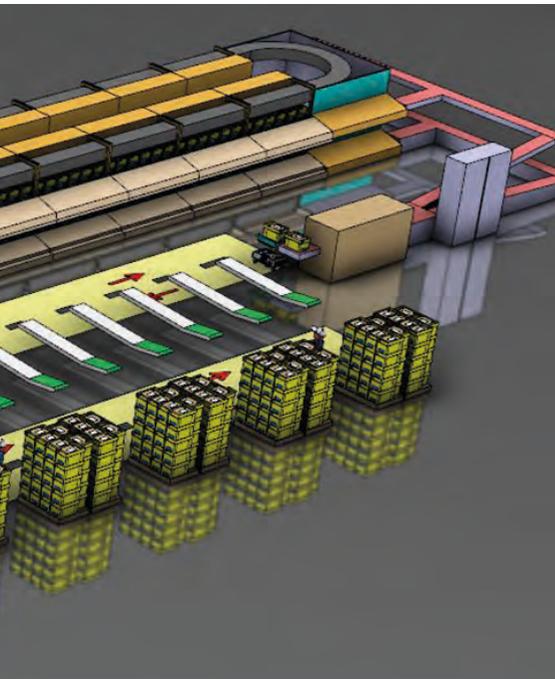


PERFECT SOLUTION

MODERN POSTAL OPERATIONS OFTEN REQUIRE A COMBINATION OF INNOVATIVE SORTING SOLUTIONS TO MAINTAIN EFFICIENCY

Working in partnership with Poste Italiane, Italy's national postal provider, Solystic designed a new configuration of its XMS mixed mail sorting solution, with new automated features to prevent operators from bearing heavy loads, especially when handling mail trays in and out of the machine. Capable of processing both letters and flat objects in the sequence of the delivery driver's route, more than 50 XMS systems have been deployed in six countries to date.

The latest version, XMS 2, assists the operator in loading objects, including letter trays, flat objects and mixed mail, onto the machine's feeder magazine. The solution then



KEY FACTS

- More than 50 XMS systems have been deployed in six countries
- The first two XMS 2 systems have been deployed in Bologna and Milan
- TOP2000 has been deployed more than 180 times in nine countries
- XMS 2 and TOP2000 use autonomous Soly robots to transfer trays between machine outputs, destackers and dispatch areas
- All systems modeled and tested in advance using Solystic's SOSi emulation/simulation software

automatically transfers the mail-filled bins to a conveyor using shuttle robots based on Solystic's Soly technology. These robots have been equipped with lidar detectors to be able to cohabit safely with the operators. The full bins are then automatically transported to the machine's tri-sequencing input or to the post's sorting center for final sorting. The total integration of these systems into the XMS 2 machine has minimized its footprint and provides more space for operator comfort. The first two XMS 2 systems were deployed in Bologna and Milan over the summer.

TOP2000 At the same time as the XMS evolution, Poste Italiane wanted to equip

LEFT: The TOP2000 at Poste Italiane will be mainly used to sort registered mail



ABOVE: XMS 2 helps to reduce the operator's workload

RIGHT: Posts and couriers are having to process an ever-widening range of parcel types



itself with machines for sorting flat and registered mail. Solystic responded by installing a new version of its TOP2000 machine – a model that has been deployed more than 180 times in nine countries. For this new configuration, Solystic doubled the throughput of the system's destackers from three to six objects per second. The machine now has two destackers instead of four, reducing its footprint by 50% and allowing enough space to double the number of delivery points.

Furthermore Solystic has changed the handling of full and empty trays by eliminating the use of conventional conveyors between machine outputs and feeders. Like

XMS 2, TOP2000 uses autonomous Soly robots equipped with integrated and controllable conveyors to transfer the trays between machine outputs, destackers (for sequencing) and dispatch areas.

Both the XMS 2 and the TOP2000 have been fully integrated with Poste Italiane's automatic recognition and video coding systems via standard interfaces.

Parcel logistics In 2017, La Poste issued a call for tenders for suppliers for its future package platforms (PFC). The Leonardo/Solystic team was selected from the La Poste supplier panel as part of its program for new parcel platforms. In 2018, the



Leonardo and Solystic team won a call for tenders for a PFC, demonstrating its ability to design high-performance solutions that fit into the customer's building constraints, integrating and testing equipment from several partners and pilot programs.

Irregular and oversized items Solystic's Soly robots were originally deployed with three applications in mind: Soly – Sequencer, for the preparation of the delivery driver routes; Soly – Sort, for the sorting of parcels in bags, cartons and/or containers; and Soly - Move, for the automatic handling of parcel bins.

In addition to these existing applications, Solystic has introduced a new use case for Soly with the handling of non-standard objects, referred to as Soly - Handling. These non-standard objects are



ABOVE: Soly can be deployed to sort small parcels and packets

BELOW: Rendering of Solystic's Computer Aided Route Sort (CARS) program

difficult to handle because of their shape and size and cannot be processed using conventional tilt-tray or cross-belt sorters.

The Soly robots have been fitted with a customized trolley that enables them to handle irregular and oversized items. The robots transport the items from the usual loading points on the conveyor all the way through to the truck loading points. Thanks to their low height, the Soly robots can circulate using the space under the sorting system and its outputs, as is the case at a DPD sorting platform in France.

CARS Soly is an ideal solution for distribution centers thanks to its flexibility. There are, however, cases where the logistics operator already has suitable conveyor-based sorting solutions, an

investment it wants to preserve. That is why Solystic offers its CARS (Computer Aided Route Sort) solution, which assists postal employees operating along the conveyor. Cameras placed above the conveyor follow the moving parcels and when a package arrives in the area of the intended employee, a colored LED light strip lights up and follows the parcel. Thus, the operator knows which parcel to take and which route to allocate it to, as the designated route chute is lit up in the same color by another LED strip.

Industry 4.0 All the projects listed above were modeled in advance using Solystic's SOSi emulation/simulation software. The solution makes it easier to share virtual models with clients, enabling Solystic to test subsystems in real time with an exact digital twin of the real system.

This was the case with the XMS 2 installation for Poste Italiane, which was first tested virtually and then physically (easy-feed unstacking assistance, shuttle, management trays). This included the virtual testing and eventual integration of the existing subsystems. Thanks to Solystic's SOSi solution, this ambitious and complex project was able to be delivered on schedule and to Poste Italiane's expectations. ■