

Flying with Datalogic at the Venice Marco Polo Airport

The Venice Airport has been completely modernised with a new air terminal, consisting of Siemens Dematic equipment and Datalogic baggage sorting systems.

The Venice Marco Polo Airport is Italy's third largest airport system, an intercontinental airport connected by direct flights to the main Italian and European cities, with a volume of international traffic making up 65% of the overall traffic and with 4,408,000 passengers per year.

The Venice Airport has recently inaugurated a new passenger air terminal, extended on five levels, with a total area of about 60,000 m², with 60 check-in points, a baggage sorting conveyor of 3,000 m length and a receptive capacity of over 6.5 million passengers.

The building of the new structures of the Marco Polo Airport was assigned to the Siemens Dematic Material Handling Automation division, which equipped the new area of the airport. The receptive capacity will now increase from 4,408,000 to 6,000,000 passengers.

For the automatic identification and baggage sorting system (4,000 pieces of luggage per hour) to read bar codes on the labels applied to the baggage, Datalogic industrial fixed position bar code readers have been chosen. In particular, the omni-directional reading stations are made up of DS8100 and DX8200 laser scanners within the 5,500 m² of the baggage sorting area.

Each omni-directional reading station is made up of six DS8100 readers in cross positioning for omni-directional reading and four DX8200 readers combined with two SC8000 system controllers. Due to the modular design of the stations, using individual scanning heads, the scanners are able to read codes presented in any orientation, on six faces of the parcel. Even poorly printed or damaged codes can be read thanks to the code reconstruction technology ACR™ (Advanced Code Reconstruction) that makes it possible to obtain the complete code through partial scans.

Datalogic's omni-stations also implement the PackTrack™ function, so that correct code assignment is guaranteed to its respective suitcase, even when the objects are very close to one another.

According to the Zero-Downtime policy of Datalogic multi-side reading stations, this solution uses the most modern redundancy techniques, designed to make the automatic identification system tolerant to eventual breakdowns, and thus guarantee its uninterrupted functioning during the operating time of the baggage sorting system.

With this particular solution, the logistics efficiency and safety of the baggage sorting system are assured, contributing also in a relevant way to reduce the baggage transit time and thus the time between check-in and landing.

Technically, the tolerance to damages is based on the "hot back-up", that is, duplication of the system controller. This foresees the use of two SC8000 controllers in order to have an active unit and one in stand by, that is able to take control of the reading station if necessary.

Furthermore, the position of the readers in the automatic identification station is designed to enable the majority of codes to be read by at least two readers, in this way guaranteeing system performance also in case a reader is out of order.

The Datalogic system makes it possible to combine logistics and security in an extremely efficient way. In fact, a reduction in the manual operations during the baggage sorting process, obtained by using Datalogic's automatic identification technology, implies also increased security in the sorting 'restricted area', because the necessary personnel for this operation has been considerably reduced.

Datalogic Dragon™ bar code hand held readers complete the installation. They are used in the loading

bays, that is in the extremity of the conveyors where baggage is gathered to be uploaded on the plane. Here a further check on the baggage is carried out to verify that the passenger owner of a definite bag is aboard the plane leaving. An added security element is thus introduced, not only concerning the location of the luggage, but also the presence of the passenger.