

“Better living” with Datalogic at IKEA Warehouse

The world's largest IKEA warehouse has been successfully automated thanks to Datalogic's Dragon™ bar code readers.



The largest warehouse of IKEA, the famous furniture retailer, is part of the distribution centre in Älmhult, Sweden. It has a total storage volume of 180,000 m³ and covers more than 280,000 m², supplying about 70 stores with its products in Sweden, Norway, Denmark, East Europe and Asia.

In the Älmhult centre, 180 forklift trucks are used and 300 forklift drivers have been trained to use the Astro™ solution for warehouse management. This solution has been developed by MA-SYSTEM, one of the largest system integrators in Sweden, which has also supplied 340 Datalogic's Dragon™ and 22 fixed position laser scanners to be used with the Astro™ solution.

Due to its ruggedness and reliability even at low temperatures, the Dragon™, a tough yet ergonomic industrial laser gun with optimum manageability, represents the ideal solution for applications in the harshest operating environments and has been chosen by MA-SYSTEM for these reasons, likewise a high performance fixed position laser scanner was chosen for its capability to read poorly printed or damaged codes.

The Astro™ management system enables a connection in real time between the factory, the warehouse and the distribution centre, creating a single and well-organised flow.

Customer orders are automatically transmitted from the order system to the Astro™ software. Here all the picking is planned and checked on the basis of the truck departure times. The orders are divided into full pallets and single picking items, then Astro™ places them in different assignment queues.

Thanks to bar codes, each pallet or good has its own identity. Information on its origin and the information that is collected with

Customer
IKEA

Industry
Distribution & Retail

Application
Warehousing

Country
Sweden

Datalogic Business Solution
Warehouse Management

Datalogic Product
Dragon™

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each retrieval makes it possible to trace all consignments shipped. Via monitors, the management can follow the work in real time, i.e. while the operation is carried out. Any deviation from the plan can be rapidly corrected.

Storage of incoming goods

Incoming goods arrive at the warehouse both from other manufacturers and from IKEA factories either as single items or on pallets. Bulky items which cannot be stored on pallets are downloaded onto conveyors, where they are identified by Datalogic's fixed position scanners and then transferred to the warehouse.

Truck drivers read the bar code of the goods on the pallets using Datalogic's Dragon™ readers, which can scan up to a distance of 2 meters, thus avoiding the need to climb out of the trucks. The captured data is then transmitted to the Astro™ system, which finds the best possible storage location for the goods, with regard to the flow and the storage method. The truck driver directly receives a message on the truck-mounted terminals showing where the goods are to be located. Since the inventory is updated in real time, the goods become immediately available for delivery or sale.

Picking

The truck-mounted terminals show the picking list in order of priority on the display as well as the location of the goods, thus the truck drivers do not need any printed picking list. Once the picking has been carried out, replacement assignments are automatically generated to replace the picked goods, in real time if necessary.

Astro™ uses different forklift trucks for picking and this makes the system more efficient and dramatically reduces the time for the operation. Moreover, the preparation of goods to be delivered is quicker, allowing optimised management of the delivery area.

Both storage and picking of goods can be verified by the headquarters in real time, as truck-mounted terminals are directly connected to the central server. The real time update of data enables a constant and total control on stock balance.

Delivery

Astro™ controls where the picked and packed goods are to be placed while waiting to be uploaded and delivered. The Dragon™ is used to identify goods belonging to the same order before being packed to avoid any errors of shipping.

Considering the positive results obtained in Älmhult, IKEA has already decided to install the Astro™ system and to use Datalogic Dragon™ and fixed position scanners in its distribution centres in Poland, Austria, Great Britain and USA.

