



INTELLIGENT TROLLEY FOR ORDER PROCESSING

This intelligent trolley, developed by ROBOSOFT for CERP-ROUEN, is intended to improve the productivity of an operator with regard to the manual methods of orders processing in warehouses for any type of small products. Up to 9 orders can thus be processed in only one round, without any paper medium.

A smart card provides the communication with the management system of the warehouse. Equipment like the barcode reader, the receiving shelf or the infrared network contributes to reach important productivity gains.

Based on mobile robotics technologies, this intelligent and modular trolley can be adapted to many configurations of warehouses or management systems.

Technical specifications

Size: 1 m 45 (58") length, 78 cm (31") width, 1 m 30 (52") height
Weight: about 120 Kg (266 Lbs)
Load: up to 120 Kg (266 Lbs)
Speed: from 0 m/s to 1 m/s (0 – 40 in/s)
Batteries: 4 X 12 Volts – 60 Ah
Motors: 2 X 300 Watts CC Motors with permanent magnet, 48 Volts

How it works ?

The missions to carry out are loaded in the onboard PC of the trolley from the store's management computer, using a smart card or any wireless communication system. The products to be distributed are sequentially displayed on the screen according to their geographical code (optimization of the mission).

The trolley indicates to the operator the box in which the product must be put. In the event of mistake, a sound signal and message on screen point out the box in which the product must be put. As long as the mistake was not corrected, the trolley cannot start the continuation of the mission. At the end of the mission, a report is transferred to the store's management computer.

Start of mission:

The mission's parameters are loaded into the trolley using the memory card or any wireless communication system. An onboard barcode reader captures the numbers of box. The trolley, according to the mission's parameters (volume, number of products in the boxes, ...), determines the location of the delivery box. A message on screen appears indicating, the number of the box, the trolley location on which the box must be set down (it can manage up to 9 different locations). A detector checks the presence of the box on the indicated position.

Mission:

The geographical surface then the geographical code of the product come up on screen as well as parameters like the name, the quantity, the price, etc, and the box in which the product must be set down. Once the distribution operation carried out, this one is confirmed on screen what causes the start of the following sequence. In the case of lacks or substituted products, the operator can modify the information on screen. Those will be memorized in the memory card.

End of mission:

The information memorized during the mission is restored to the store's management computer at the end of the mission.

Security:

The trolley is equipped with an active shield that in the event of shocks ensures the entire trolley's stopping. A scanner with ultrasounds controlled on the direction of moving can be installed in option.

Operator shelf:

The operator shelf is a plate enabling to put down the captured products when those are required in large quantities or are distant in crosspieces no accessible by the trolley. This shelf has a mini aide –memoire screen recapitulating a part of the information on screen about the products to go and fetch.

