

# 3D DYNAMIC BUFFER

## INTELLIGENT CASE PICKING SYSTEM

### CONCEPT RETAIL CASE PICKING

This concept is especially made for mixed palletizing applications.

The material flow from product pallets to mix pallets is based on a system of i-Collectors. In fact, the product pallets will be depalletized and the cases of the pallet will be placed on trays, which will be stored in i-Collectors type organised buffer [OBS].

The trays of each pallet will be stored in a few storage channels. These channels consist only trays of the same product. In this way there is a storage available of all products out of which one can produce the orders of a day.

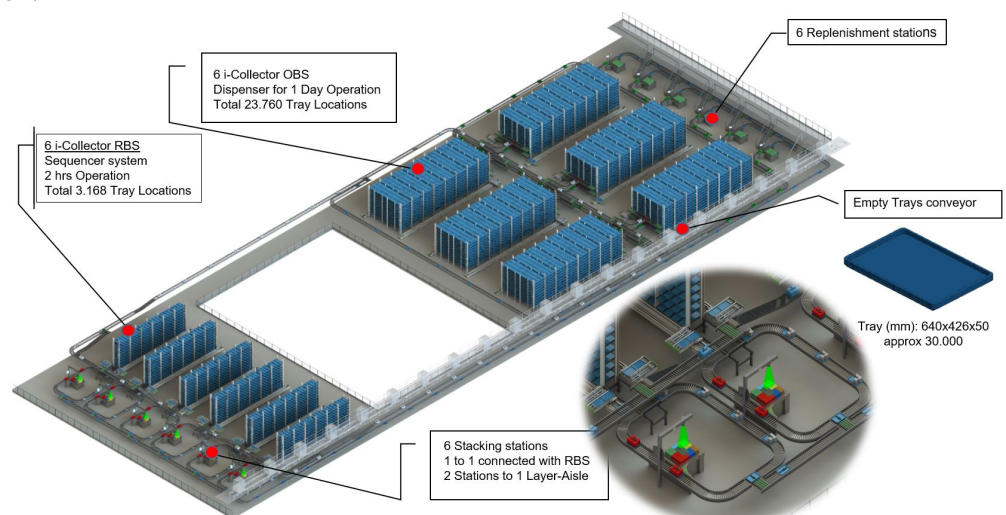
The orders to pick and palletize will be pre-calculated by special software called IPS (intelligent Palletizing Software). Each calculated mix pallet needs a specific sequence of product cases to build the pallet.

This sequencing step in the material flow will be done by a special i-Collector called Universal Fast Sequencer, this i-Collector will be fed by trays coming out the "product" i-Collectors.

The material flow software will assign orders to the sequencers and the product amounts required from product i-Collectors to the corresponding sequencers.

The internal transport of trays between the product i-Collectors and the sequencers can be done both by conveyors and/or by AGV (Automatic Guided Vehicles). The sequencers bring per order the required trays to the pick and palletize station to build the calculated mix pallets. At the conveyor loop near the station the rest amount on the tray after picking will automatically be checked by weighing or scanning by vision.

The operator at the station stays on an ergonomic position and gets the palletize instructions for efficient picking and palletizing visualized on a screen.



**i-collector**

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*i-Collector is a PATENTED system*

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## FACTS

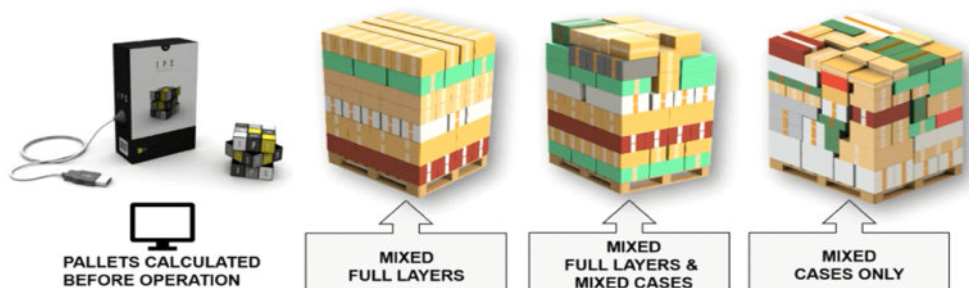
800 SKU case pick  
300-450 store deliveries a day  
40.000 lines a day  
Average 2.5 cases per line

## SYSTEM

6 i-Collectors total 35.000 tray locations, about 90.000 cases storage, type [OBS].  
Tray 640x425 mm, product cases on top of tray.  
35 AGV to move trays from and to product i-Collectors- and sequencers.  
5 Sequencers total 5.000 tray locations, about 12.000 cases storage.  
10 Pick stations with stack by instruction and automatic checking rest trays.  
Floorspace about 3.000 m2  
Height 10 meter

## BENEFITS

Optimal usage of floorspace  
Plug and play add on system  
Easy flow control from mono to mix pallet  
All-in one software including mixed palletizing software  
Modular design  
Scalable and flexible automation  
Proven technology  
Usage of industrial 4.0 components  
Sustainable  
Applicable in existing buildings  
Applicable in cold store



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