



HEMA

HEMA e-commerce DC  
Utrecht - The Netherlands

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> Case study



# HEMA breaks records

In four years, HEMA has increased the capacity of the e-commerce DC (from where HEMA delivers to online customers from the Netherlands, Belgium, France, Germany and the United Kingdom) from 80,000 to 130,000 picks per day. To realize this, Inther Group has largely automated the DC.

The fact that the distribution center can process so many orders is the result of a four-year automation process. Since 2016, both storage and order picking capacity has been expanded in phases.

"Until then, the operation had been set up purely manually. The only mechanization consisted of a roller conveyor, which transported the full totes from the order picking area to the packing stations", says Jeroen Dietz, Manager E-commerce DC at HEMA.

## Miniload and shuttles

Inther was the first to install a miniload system with space for 13,000 plastic totes. This is where a large part of the bulk stock now lies for replenishment of the pick locations. The two miniload cranes place the necessary totes on a roller conveyor, which transports the new picking stock to the shelf locations. "As a result, reach truck traffic has decreased significantly. Because those reach trucks drove in the same aisles as all those order pickers with their picks, we wanted to get rid of that as quickly as possible", Dietz explains.

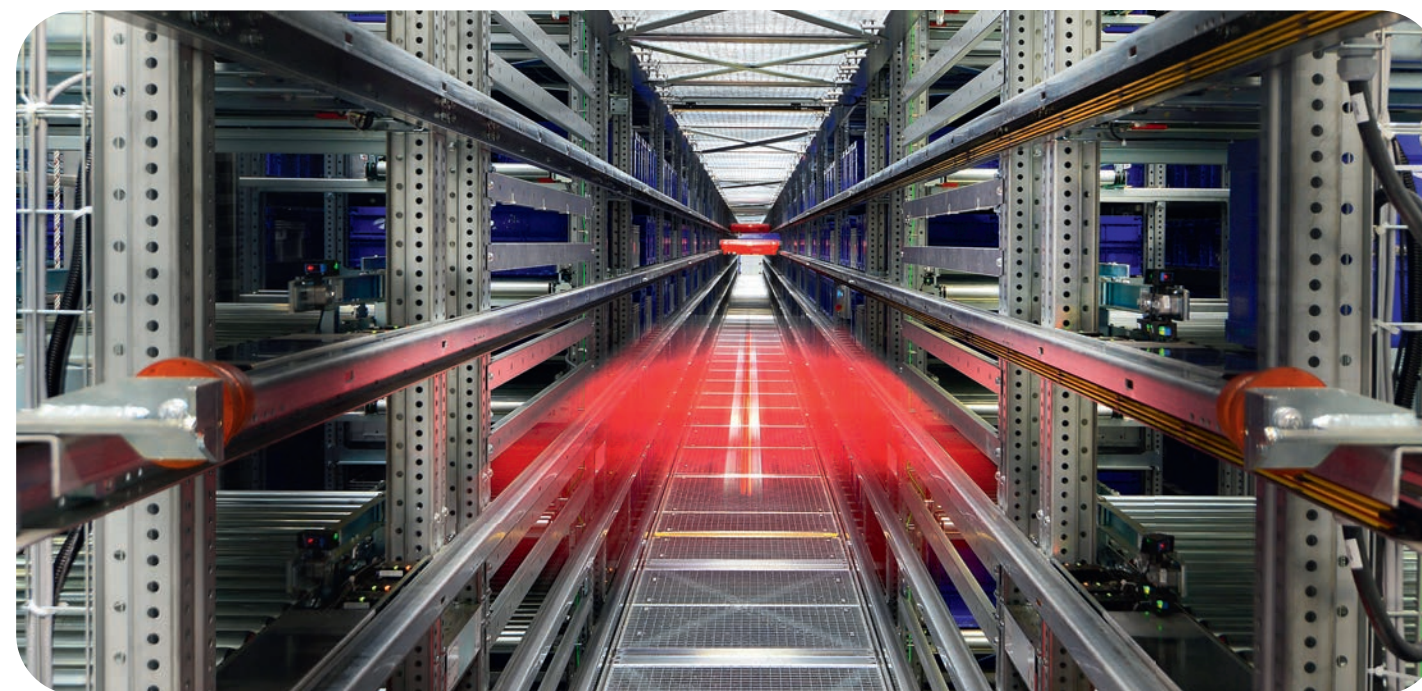
The following year Inther started to expand the order picking capacity. A shuttle system with space for 33,000 plastic totes has been installed for this purpose, of which 5,000 totes are divided into four compartments. The 75 shuttles, divided over three aisles, together are able to transport 2,400 totes per hour to

the 8 order picking stations. There is an order picker at each station, who takes the correct number of items from the tote and distributes it to the six ready totes. "These totes contain the slow movers, which we can pick with a higher frequency than before thanks to this Goods to Person system", Dietz says.

### Smart pick carts

The slow movers cover 60 to 70 percent of the product range, which consists of 14,500 items. The fast movers are still in shelf locations and are still picked using pick carts. "But those are smart pick carts with Pick to Light technology", Dietz assures. "The display on the cart sends the order picker to the right location. If the order picker scans the correct item, the Pick to Light displays indicate how many pieces he or she has to put in each tote. That way, each order picker can handle sixteen orders at the same time."

When it comes to small orders, HEMA can bundle them into a batch. Each batch is collected in one tote, after which the items are sorted by order again using a putwall. "In this way we can reduce walking distances even further and increase efficiency", says Dietz. "We had 22 order picking carts, but recently we expanded that number to 28. Partly thanks to the 8 order picking stations and the extra order picking trolleys, we succeeded in increasing the capacity from 80,000 to 130,000 picks per day in four years."





# Full integration

Inther not only supplied the miniload and shuttle system, but also carried out the entire automation process. That also includes a box erector, label applicators, Automated Document Inserters and the conveyors that connect all machines and systems. The Warehouse Control System for integration and control of the entire system is also taken care of by Inther. "In 2016 we had to switch quickly. Inther had already supplied the pick carts and the Warehouse Management System, knew our operation from oat to barley and was able to get to work quickly".

Dietz explains the choice for Inther.

In the years that followed, HEMA continued to return to Inther. "It has great advantages to bring everything under one party, so that one large integrated solution is created", says Dietz, who is supported by Caspar de Jong, Director Global Logistics at HEMA. "With the completion of this distribution center ten years ago, we laid a foundation to which new elements were constantly added. Each addition has contributed to further optimization of the operation."

## Workload distribution

An important part of the optimization is a result of Inther's software. By adding more and more smart logic, we have succeeded in further increasing the capacity of the various used systems. "Take as an example the option of distributing the orders evenly across the system. In the past, when we transferred the online orders from our SAP-system to the WMS, we had no idea how much work was involved. As a result, it was busy in some zones and quite in others", Dietz explained.

Inther has developed a solution that distinguishes between the type or order. Does it contain order lines for the shelf/tote area, for the shuttle system or for both? Is it a small order that can be combined with other orders into a batch? "We can now see in

advance what the impact of orders will be on the workload in the various zones. By carefully planning the release of orders, we can optimally distribute the workload and make even better use of the available capacity".

## Minimum number of mispicks

Mechanization and automation have not only significantly increased storage and order picking capacity, but also significantly reduced the number of picking errors. The items on the shelf locations are scanned piece by piece during both order picking and packing. At the eight order picking stations that are linked to the shuttle system, LED strips with green and red lights indicate from which compartment to pick and for which tote those items are intended. The screen above each picking station shows the corresponding picking





instructions. Preventing mispicks starts at inbound, Dietz emphasizes. For receiving and inbound, HEMA has nine fixed and four mobile workstations, where the goods are unpacked and checked. "Everything we receive is fully counted and repackaged in empty totes. Everything for maximum stock reliability."

Dietz is pleased with the reliability and user-friendliness of the chosen solution. Inther also supplies Resident Engineers who take care of the daily care and maintenance of the system. At HEMA this is done in a 24-hour operation.

### Facts & Figures

- › Surface area: 11,000 m<sup>2</sup>
- › Receiving: 9 fixed, 4 mobile workstations
- › SKU's: 14,500
- › Storage locations: 50,000
- › Picks per day: 130,000
- › Capacity increase: 162,5%
- › Miniload: 2 cranes/aisles, 13,000 totes
- › Shuttle system: 3 aisles, 75 shuttles, 33,000 totes
- › Shuttle capacity: 2,400 totes per hour
- › Goods to Person: 8 workstations
- › Pick to Light carts: 28
- › Box Erector: 1
- › Box Sealer: 3
- › Label applicator: 3
- › Automated Document Inserter (ADI): 2
- › Warehouse Control System: Inther LC
- › WMS: SAP





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