

CASE STUDY

A super space-saving solution for 400 sq. metres

Dematic automates IVF HARTMANN's logistics centre



IVF HARTMANN AG
Neuhausen, Switzerland

▷ **The procurement of medical supplies for society-at-large has become increasingly critical including items such as surgical instruments, gauze bandages and plasters as well as other products for emergency situations. And with the outbreak of the Covid-19 pandemic in 2020, individuals around the world now understand the importance of having disinfectants readily available. IVF HARTMANN is based in the northern Swiss town of Neuhausen and is a subsidiary of Germany's Paul Hartmann, a leading manufacturer and retailer of medical and healthcare products.**

The Swiss leader in the manufacture of medical supplies had been experiencing for some time demand and throughput volumes which far exceeded what its warehouse and intralogistics processes could handle. To increase efficiency at its facilities, management at the traditionally run company selected a Dematic solution to automate its warehouse and order picking process.

“With the storage and order-picking areas directly above each other, we can save time with shorter internal transport routes and we have optimized our logistics processes. We are also now able to make the best possible use of the space available, which is a real benefit!”

Thomas Mayer, Head of Logistics at IVF HARTMANN

In a space covering just 400 sq. metres (roughly 4,300 sq. feet), the global automation technology supplier implemented a highly efficient space-saving solution which involved a 3-aisle high-speed Multishuttle system and an order-picking area with a put-to-light system underneath. Dematic also installed a manual high-bay and order-picking warehouse in the new building. For facility management, IVF HARTMANN relies on

SAP Extended Warehouse Management (SAP EWM) software package with Dematic SAP Material Flow System.

A MEDICAL COMPANY WITH 150 YEARS OF EXPERIENCE

Since it was established in 1871, IVF HARTMANN has been producing and selling surgical instruments, plasters, diagnostic equipment, hygiene and disinfection products as well as healthcare materials. Its customer base is primarily hospitals and pharmacies. For a long time, the storage of the numerous articles and product groups as well as their commissioning was accomplished solely using manual processes. Due to the rapidly growing increase in demand in the past few years and the resulting need for faster order processing, the employees who worked in the warehouse and in the preparation for delivery were gradually overwhelmed.

TECHNICAL DATA

- **An integrated space-saving concept for 400 sq. metres (4,300 sq. feet);**
- **Dematic Multishuttle tray warehouse with three aisles, 20 levels, 10,000 storage locations and 60 static shuttles;**
- **Three ergonomic put-to-light order-picking stations directly below the multishuttle warehouse where up to eight orders can be simultaneously processed;**
- **Just 290 metres (950 feet) of conveyor technology;**
- **SAP EWM system with a Dematic SAP Material Flow System.**



To expand capacities and to respond to customers more quickly, the management team resolved to automate its intralogistics processes at its Neuhausen am Rheinfall site.

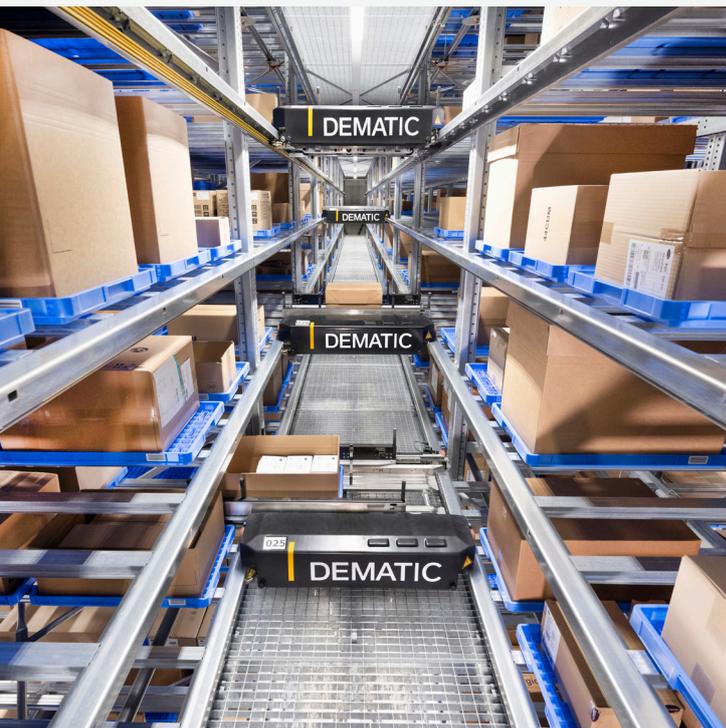
“The greatest obstacle we faced in our dilemma was coming up with a high-performance solution for a very limited space,” notes Thomas Mayer, the head of Logistics at IVF HARTMANN. Due to its direct proximity to Europe’s most powerful waterfall, the Rhine Falls, expanding the site was not an option for the healthcare specialist.

A 2-STORY LOGISTICS CENTRE

IVF HARTMANN found what it was looking for with Atlanta-headquartered Dematic. From its German offices in Heusenstamm, just outside Frankfurt am Main, the supplier of intelligent automation solutions won them over with an innovative and efficient system: a 2-story Multishuttle system with trays. Instead of setting up the order picking in a single-story hall next to the tray warehouse, Dematic provided a system with two floors covering just 400 sq. metres (4,300 sq. feet). While the new order-picking area was installed on the ground floor, the Multishuttle warehouse was placed on the upper one. With the floors directly connected via the lifts, only 290 metres (roughly 950 feet) of tote conveyor technology was necessary.

Dematic designed a 3-aisle Multishuttle tray warehouse on the upper floor with roughly 10,000 bin locations on 20 levels. The old manual storage and retrieval of goods with trays is now handled by 60 shuttles. Totes are now automatically transported via three pairs of lifters between the warehouse and order picking, which move the goods on two parallel buffer tracks at a speed of up to four metres per second.

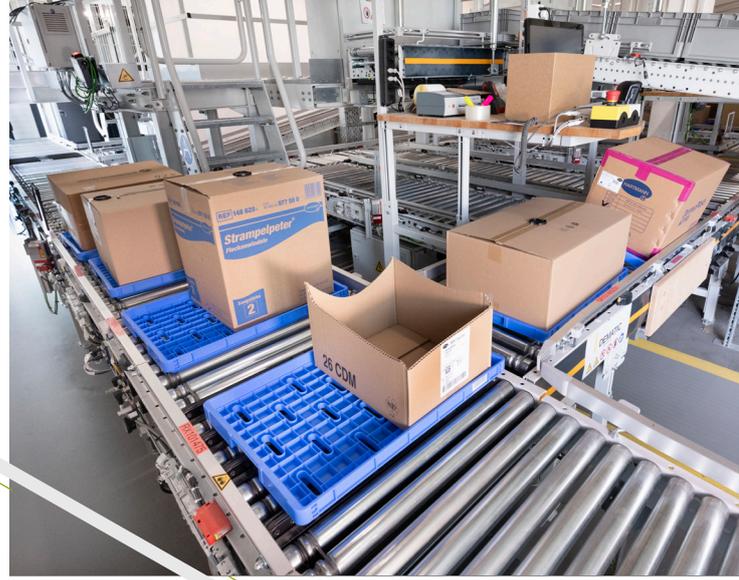
“With the storage and order-picking areas directly above each other, we can save time with shorter internal transport routes and by optimizing our logistics processes. We are also now able to make the best possible use of the space available, which is a real benefit,” notes Mayer.



EFFECTIVE AND ERGONOMIC ORDER PICKING

Once they reach the ground floor, the items are distributed to one of three picking stations. Using a put-to-light system, employees can see the container where the respective item needs to be placed. "It reduces the likelihood of errors during picking to a minimum," beams Mayer. Up to eight orders can be simultaneously processed at each workstation. The high-performance Multishuttle system makes it possible to serve sequenced source trays at the picking stations. Additionally, employee ergonomics are also addressed during order compilation. Empty totes are placed on the side of the picking station on dust tracks at a height adapted to that of the employee so that they can ergonomically place the medical items to be picked without having to bend down.

The consolidated provision of the buffered mixed cartons with the original ones for dispatch allows a significantly more effective order picking process to happen. When an order tote is full or the order has been completed, it is relayed to the packing stations by an automatic feed. Once the goods have been packed and made available, the empty order-picking totes are sent back to a return conveyor and conveyed back. The process involves picking, packing, packaging and goods provision where it can be optimized by innovative technology such as put-to-light or Proglow® gloves with integrated scanners.



"The cooperation with Dematic was one built on trust from the very start. The solutions they came up with and their process support completely met our expectations. Thanks to our new logistics center, we are now in a much better position to meet our customers' requirements."

Thomas Mayer, Head of Logistics bei IVF HARTMANN

SIMPLIFYING THE SOFTWARE LANDSCAPE

While it was automating and modernizing the Swiss facility, Dematic also digitalized the running of IVF HARTMANN's warehouse processes. The global automation specialists replaced the previous SAP warehouse management solution with the latest SAP EWM system along with its own Dematic SAP Material Flow System to ensure the best possible use of the resources available and to create a map of every process – from goods receipt to goods issue. It was essential to HARTMANN that Dematic designed processes that could be implemented and used as a template for future rollouts at other locations. Relevant data is now collected in real time and fed to the EWM for a smooth flow of goods within the new logistics centre.

Thanks to the implementation of proven standards, the control level (PLC) is directly connected with the SAP EWM. Project-specific implementations were eliminated, which lead to shorter implementation times and low-fault operation. Mayer sums up: "The cooperation with Dematic was one built on trust from the very start. The solutions they came up with and their process support completely met our expectations. Thanks to our new logistics centre, we are now in a much better position to meet our customers' requirements."



CUSTOMER BENEFITS

- Robust solution in a limited space;
- Faster order processing speed and quicker delivery to customers;
- Greater accuracy and enhanced ergonomics in order picking;
- Latest software package of SAP Extended Warehouse Management (SAP EWM) with the Dematic SAP Material Flow System serves as a template for the rollout to future locations.



ABOUT THE CUSTOMER

IVF HARTMANN AG has been a leading Swiss manufacturer of medical supplies for over 150 years. The healthcare specialist, based in Neuhausen am Rheinfall, has been a member of the international HARTMANN GROUP since 1993. Its business segments include wound care items, incontinence, risk prevention in hospitals and assorted first aid supplies. In addition, other product segments such as cotton wool or heat plasters are sold. IVF HARTMANN employs nearly 330 individuals in Switzerland.



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