

# Calodar Ham, Belgium

Smart & Compact – tailor-made solution with  
OSR Shuttle™



For over 60 years, the name Calodar stands for high-quality sanitary facilities. The customers of the Belgian wholesaler are predominantly DIY chain stores, architects and project developers. Calodar's wide product range comprises thousands of articles for sanitary applications – from small screws and sealing rings to washbasins and bathtubs – among them are brands like Lafiness and Saninstal. The comprehensive assortment also reflects the company philosophy of providing everything for the sanitary sector under one roof. The company, headquartered in the Belgian town of Ham, is owned by the Van der Voort family and employs around 60 members of staff. In 2013, Calodar decided to automate its existing warehouse and chose a smart solution based on the OSR Shuttle™ from KNAPP.

2124 Barrett Park Drive, Ste 100  
Kennesaw, GA 30144  
678-388-2880  
casestudies@knappusa.com  
Knapp.com/us

*“The solution won us over because KNAPP could offer us a complete solution from a single source. All the technology as well as the expertise come from KNAPP. Both our companies also share the same philosophies and values, such as the fact that KNAPP is also a family-run business.”*

**Michaël Van der Voort, Calodar**

## Growth & Impact



**11,006**  
storage  
locations



**27**  
shuttles



**600**  
order lines  
are processed  
by the system  
per hour

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## Ergonomics, efficiency and quality combined

### The challenge

To increase efficiency and at the same time be prepared for future growth, Calodar decided as far back as 2010 to pool all its activities in a central distribution center in Ham. Eventually, the economic environment in addition to increasing customer demands with regard to speed and quality made taking the step towards automation necessary. With the OSR Shuttle™ combined with an ergonomic goods-to-person workstation from the Pick-it-Easy series, KNAPP had the ideal solution for Calodar on hand; a solution that fulfils all requirements in terms of efficiency, quality and performance. The unique challenge: to adapt the OSR Shuttle™ to the limited space available as skillfully as possible to create the maximum number of storage locations. Moreover, the solution had to be installed and put into operation during ongoing warehouse operation without compromising Calodar's daily business or delaying outbound deliveries to customers; a challenge which KNAPP overcame in close collaboration with the customer.

### The solution

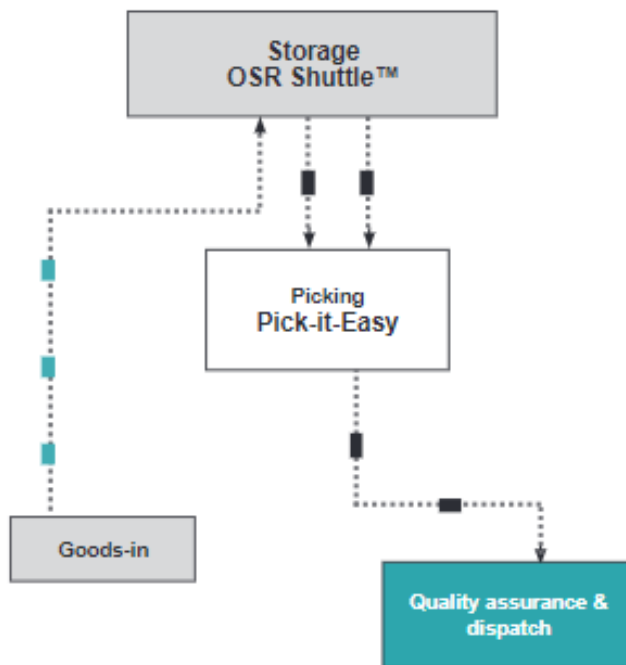
At the heart of the solution is the OSR Shuttle™ for containers with a cargo of up to 35 kg. Thanks to the OSR Shuttle™, the zone picking warehouse area could be drastically reduced: the OSR Shuttle™ replaces zone picking and enables goods to be stored more efficiently. The OSR Shuttle™ is 20 m high and 100 meters long; shuttles on each of the 27 levels store and retrieve containers and two high-performance lifts convey the containers vertically. The KNAPP solution encompasses the following technologies:

- OSR Shuttle™ with one rack line system for containers with a cargo of up to 35 kg. The system offers 11,006 storage locations – one side of the rack is double deep and the other single-deep, in order to make best possible use of the space available. 2 lifts operate in the rack and take up containers from the shuttles; a shuttle runs on each of the 27 levels. The tailor-made software KiSoft SRC controls the shuttle system.
- 1 ergonomic goods-to-person workstation Pick-it-Easy Health.
- Conveyor system with manual lid induction and automatic carton closers all controlled by a central PLC control system.
- KiSoft WCS controls, monitors and optimizes all processes in the warehouse.
- Quality-enhancing measures: integrated scales in the Pick-it-Easy workstations.
- Handling systems: automatic handling systems such as carton erectors, carton closers or strapping machines make work easier and boost efficiency.



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## The solution in detail



### 1 Goods-in

In the Ham warehouse, the storage containers are manually filled with goods using scanners and transferred to the conveyor system in the same area as the goods-in station. A goods-in order that contains all required information (order number, container number, type and quantity of articles, etc.) is transmitted to the HOST-system. The containers are stored in the OSR Shuttle™ automatically.

### 2 Order Picking

The shuttles retrieve the storage containers with the required articles ready for picking and convey them to the Pick-it-Easy Health workstation. The Pick-it-Easy workstation series combines efficiency with ergonomics and quality in order processing. Touchscreens with intuitive user guidance and Pick-to-Light displays that indicate the source and target containers as well as the quantity of articles to be removed, create a modern working environment that facilitates achieving high performance with maximum quality. Each work step is visualized on the easy user interfaces, reducing the training time for new personnel considerably.

### 3 Quality assurance & dispatch

A check scale is mounted in the Pick-it-Easy workstation area to detect any possible errors immediately. First, the tare-weight of the container is measured, then the container is weighed after each processed order line to ascertain whether the actual weight corresponds to the expected weight. Possible errors can therefore be detected and rectified quickly. An additional camera system above each target position registers the exact content of the shipping cartons. This can be reviewed on customer request. The cartons are closed automatically using a carton closer. Orders that need adjustments are conveyed to a simple yet efficient semiautomatic carton closer.

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## Advantages of the Solution

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As the existing building was too small for an extension, the efficiency of the order processing in the distribution center had to be increased. A 20-meter high OSR Shuttle™ with around 11,006 storage locations was installed. The OSR Shuttle™ stores around 70 percent of the fast moving small-goods assortment and each article is available at any time. The usage of the OSR Shuttle™ combined with the Pick-it-Easy workstation, conveyor system and automatic handling systems for cartons increased the transit time and the quality considerably, while making savings on manpower at the same time.

