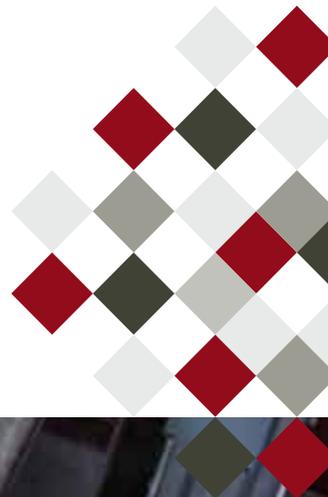




FOOD INDUSTRY

WAREHOUSE LOGISTICS
FOR NORMAL-TEMPERATURE,
CHILLED AND FROZEN PRODUCTS





CONSERVE THE TASTE OF NATURE
WITH SUPPLY CHAIN AUTOMATION®





FROM NATURE TO THE TABLE

REAL-WORLD SOLUTIONS
SUSTAINABILITY
EXPERTISE SINCE 1971

People's attitudes to food have changed considerably over the last few decades. Today, consumers themselves, as well as food industry stakeholders in retailing and catering, place far greater emphasis on the quality and freshness of food, as well as on timely delivery and the transparency of sources. For these and other reasons, food producers and distributors are looking for ways to optimize the potential of their logistics processes.

We have been a reliable partner for the food industry since 1971. With our IT and control skills, the entire supply chain can be automated throughout. Our machines and equipment can handle a wide range of different temperature requirements. Intralogistics and shipment logistics can be connected by means of our automatic truck loading and unloading systems.

In each project, we act as the main contractor, performing project planning and management. Our know-how provides the foundation for the smooth-running and punctual implementation of your construction project. Please read on to find details of just some of the warehouse logistics solutions we have already implemented.

FOOD – NORMAL TEMPERATURE

CUSTOMIZED HIGH-BAY WAREHOUSES
MULTI-STAGE PLANNING PHASES
OPTIMUM UTILISATION OF AVAILABLE SPACE

Warehouse systems operated under normal temperature conditions can be set up as high-bay warehouses in their own, integral buildings or alternatively in a silo construction. Pallets and their products each form a single loading unit for use as a loading aid. Your company's specific requirements regarding product diversity, volume to be handled and storage capacity are vital basic planning data for determining what buildings are needed and for choosing the type of warehouse.

In the planning phases, and most particularly in the detailed planning, we will join with you in defining the operational and logistical requirements, and our experts will then help transform these into technical specifications. The specifications are vital for the design of the warehouse layout and for project implementation.

If you require space-saving storage for your goods, high-density storage will provide optimum space utilisation. This is reflected in the optimum storage capacity of a warehouse system. By deciding to use multi-deep storage, you will free up space for production lines or other purposes.



KAMPFFMEYER MÜHLEN GMBH

Industry: Mill | Location: Ergolding | Built: 2012



TASK

- > Construction of a new automated high-bay warehouse with integrated order picking for optimizing transport and access times.
- > Construction project to be carried out on the existing company site.



SOLUTION

- > 2-aisle Satellite® storage system: Warehouse dimensions 51 x 24 x 21 m.
- > 2 storage and retrieval machines, each equipped with 2 Satellites®.
- > 4,260 rack spaces for Euro pallets, including for use as carrier pallets.
- > Warehouse management and order picking software: Savanna.NET®.



BENEFITS

- > An external warehouse with shuttle transport and an internal block warehouses are no longer necessary.
- > Linked into production line via a conveyor bridge to avoid obstruction of existing transport routes.
- > Significant reduction of warehouse logistics and transport costs.
- > Further cost reduction due to more efficient order-picking processes.



SPECIAL FEATURES

- > The first level of the warehouse system has three order-picking tunnels. The order pickers here operate industrial trucks equipped with touch screens.
- > C items are delivered via dynamic storage locations.
- > Düsseldorf pallets, also known as half pallets, are unstacked from the carrier pallet in fully automated manner before being made ready for shipment.





MIDSONA DEUTSCHLAND GMBH

Industry: Organic food | Location: Ascheberg | Built: 2017



TASK

- > Construction of a turnkey high-bay warehouse in a silo design.
- > Fire regulations stipulate that the warehouse must be inerted with a reduced oxygen level that prevents fire breaking out.
- > The entire project was carried out in two construction stages.



SOLUTION

- > 2-aisle double-deep storage system: Warehouse dimensions 102 x 15 x 27 m.
- > 2 storage and retrieval machines with telescopic fork for load handling.
- > 7,344 rack spaces for Euro and industrial pallets.
- > Warehouse management and material flow software: Savanna.NET®.



BENEFITS

- > Products are fetched from production in fully automated manner via conveyor systems and automated guided vehicles for integration into the warehouse system.
- > Computer-aided route planning and staging.



SPECIAL FEATURES

- > Lengthier transportation distances are not mapped via continuous conveyors, but via automated guided vehicles.
- > Those automated guided vehicles are operated contact-free, each delivering two load units to a lift table, after which the units are separated for further transport and storage.

LÄDERACH (SCHWEIZ) AG

Industry: Confectionery | Location: Ennenda, Switzerland | Built: 1999/2016



TASK

- > Construction of a new high-bay warehouse to expand storage capacity for packaging materials, raw materials and semi-finished goods.
- > Modernisation of the existing Satellite® warehouse to ensure handling capacity and plant availability.



SOLUTION

- > 1-aisle Satellite® storage system in a self-supporting building.
- > 1 storage and retrieval machine with Satellite® lengthwise deposition.
- > 1,102 rack spaces for Euro pallets.
- > Warehouse management and material flow software: Savanna.NET®.



BENEFITS

- > Seamless connection between the new high-bay warehouse and the existing one right through to the shipment area, without interrupting the flow of material.
- > Both warehouse systems use Savanna.NET® software which is connected to the client's ERP system.

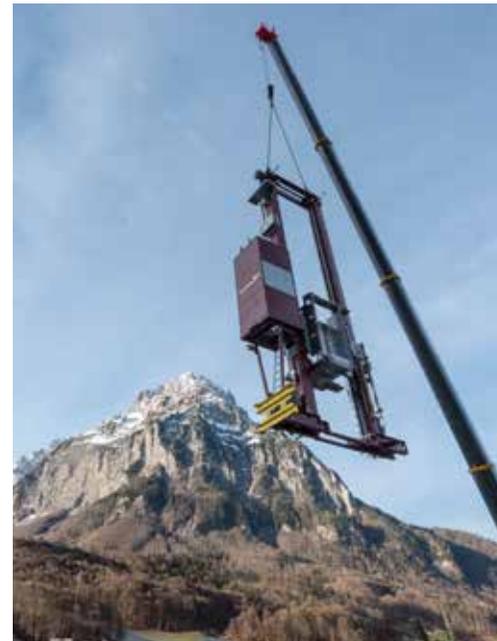


SPECIAL FEATURES

- > Storage of up to 10,000 articles in the new warehouse by means of mixed pallets.
- > Conveyor sections connecting the two warehouses are routed through newly created portals in the steel rack system of the old warehouse.
- > Highlight: Delivery of the 1,000th storage and retrieval machine by Westfalia.



Photo credit: Läderach (Schweiz) AG



FOOD – CHILLED AND FROZEN

SEAMLESS COLD CHAIN
CONVINCING TECHNOLOGIES
LOWER ENERGY CONSUMPTION

Different foodstuffs have different temperature requirements to ensure long shelf-life at a high quality. This means that both fresh and frozen products need an uninterrupted cold chain from producer to consumer. However challenging your temperature specifications may be, Westfalia has the technological solution you require.

Our automatic warehouse systems, as well as our loading and unloading systems, have been specially designed for use in the lower temperature ranges. Whether for refrigeration or for deep freeze right down to -30°C , our equipment is guaranteed to give you high performance, availability, and energy efficiency – and ultimately cost-efficiency.

When deciding on investments, you need to know not only the initial cost of acquisition, but also the ongoing operating costs. Energy consumption is a factor that drives up costs in any warehouse system, and the fewer cubic meters of space that need to be refrigerated, the lower it is. High-density warehouses have the most advantageous energy balance in relation to the number of storage units. So why not benefit from our expert knowledge?



MOLKEREI AMMERLAND EG

Industry: Dairy | Location: Wiefelstede-Dringenburg | Built: 2014/2019



TASK

- > Planning and constructing an automated high-bay warehouse as a maturing warehouse for cheese and other dairy products.
- > The company's expansion strategy includes doubling warehouse capacities. Arrangements required to allow for the second extension stage.



SOLUTION

- > 4-aisle double-deep storage system storage system as a high-bay warehouse reaching almost 30 m in height.
- > 4 storage and retrieval machines with double-deep telescopic fork.
- > 21,696 rack spaces for H1, Euro and industrial pallets and boxes.
- > 4 single-column vertical conveyors to handle different levels.
Use of the Savanna.NET® warehouse management software for both warehouses.



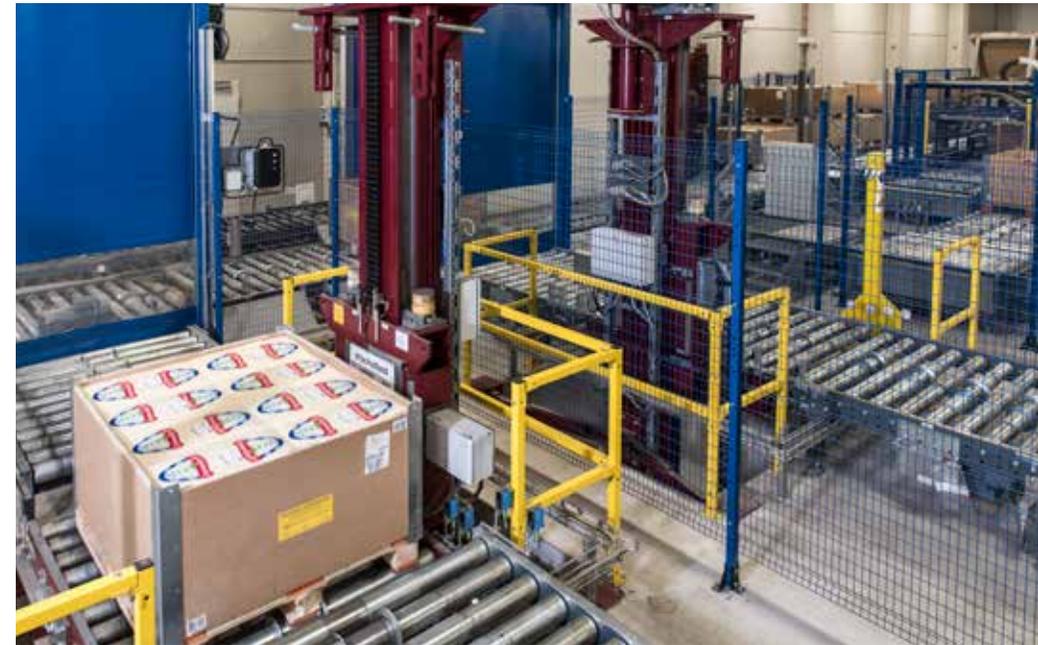
BENEFITS

- > The continuously growing volume of production is matched by the new warehouse capacities that are created and by the equipment performance designed for them.
- > The very complex intra-logistic processes are now mapped by Savanna.NET®, which also serves as material flow software.



SPECIAL FEATURES

- > The items produced come from existing buildings and are transported to the warehouse system across a conveyor bridge with continuous conveyors.
- > Expansion of the warehouse logistics to include a 5-aisle warehouse served by telescopic fork, with 24,300 rack spaces, in 2019.





JAN ZANDBERGEN B.V.

Industry: Frozen meat | Location: Veenendaal, Netherlands | Built: 2015



TASK

- > Construction of a fully automated deep-freeze finished product warehouse for high-quality meat products.
- > Energy costs are a vital criterion in choosing a suitable type of warehouse.
- > Implemented as an inhouse warehouse with high storage density for optimum space utilisation.



SOLUTION

- > 4-aisle Satellite® storage system: Warehouse dimensions 98 x 59 x 15 m.
- > 4 storage and retrieval machines with Satellite® as load handling devices.
- > 14,215 rack spaces for various types of wood or plastic pallets: Euro, window and single-use pallets, Craemer H1 and H3.
- > Warehouse management and material flow software: Savanna.NET®.



BENEFITS

- > Storage with triple support prevents the pallets from sagging under the weight of the heavy goods.
- > Efficient space utilization thanks to the flexibility of Satellite® technology.
- > Software: Savanna.NET® ensures the load units are distributed logically within the warehouse according to specified algorithms.



SPECIAL FEATURES

- > A divided lift Satellite® is used implement the triple support.
- > Outside the deep-freeze warehouse, stainless steel conveyor equipment is used to ensure food hygiene and easy cleaning.

D'ARTA

Industry: Frozen vegetables | Location: Ardoorie, Belgium | Built: 2017



TASK

- > Investment in a new, fully automatic deep-freeze warehouse for vegetables. Four warehouse systems were planned and built at the location in the construction years leading up to 2017.
- > Direct connection to the production process and to existing warehouses.
- > Used to store raw goods or finished goods according to season.



SOLUTION

- > 2-aisle Satellite® storage system: Warehouse dimensions 84 x 51 x 22 m.
- > 2 storage and retrieval machines with Satellite® for load handling.
- > 22,300 rack spaces for Euro and industrial pallets, and crates used as containers for bulk goods.
- > Warehouse management and material flow software: Savanna.NET®.



BENEFITS

- > As well as extra storage capacity, the economic benefit comes from integrating the new, fully automated high-bay warehouse into the existing intralogistics.
- > Synergy effects come from fully utilising the different warehouse systems, and the interaction between them.



SPECIAL FEATURES

- > Peak periods can be handled by means of suitably designed storage and retrieval buffer zones.
- > At the heart of the intralogistics is the multi-layer warehouse for the automatic order-picking of layers to form shipment pallettes.





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