

Case Study

Pallet Box in fully automated plants of the food industry



Major Achievement

Installation of a fully automated solution for the handling and storage of potatoes

The Company

Family-owned Deprez was founded in 1984 by Johan Deprez, who has since been leading the company together with his wife Germana. The first machines developed by Deprez were for the careful handling of potatoes. Carrots, onions, bulk goods, and recyclable goods were only added later. Over the years, Deprez successfully developed an automatic box handling system in combination with an automated warehouse. This concept was introduced in 2008, and Deprez was able to double its capacity since then.

Requirements

Over the years, Deprez observed that potato packers increasingly needed intermediate storage for their products before packing them. In the past, there was hardly any classification, especially for potatoes. The new system was the result of the ever increasing demands of the customers in regards to retail food.

Cabka's Product Solution



Pallet Box

Company	Deprez Handling Solutions
Location	Kortemark, Belgium
Industry	Internal transport and storage solutions
Goods	Potatoes, carrots, onions
Previously	Wooden pallet boxes
Solution	Pallet Box (3 runners ventilated)



Today, the harvest is sorted and sold based on quality or size, which requires that some of the product is temporarily stored during the packaging process. This storage must be hygienic and adhere to the classifications. This is why a storage solution with maximum filling volume and a material other than wood was required.

The Cabka Solution

Together with his customers, Johan Deprez developed a fully automatic solution, in which the pallet box from Cabka plays a central role.

- **Volume:** The Pallet Box has the enormous capacity of 1400 litres
- **Material:** The boxes are made of impact-resistant, chemical-resistant and food-safe HDPE
- **High payload:** With a net weight of 70 kilograms in ventilated and 73,5 kg in closed wall design, it is characterized by high payloads of up to 7000 kilograms in the stack, 2000 kg dynamic and up to 1000 kilograms when used in high-racks
- **Closed wall design,** Non-slip rubber profiles on the upper edges of the pallet box ensure that up to seven boxes can be safely stacked on top of each other
- **High temperature range:** The containers are designed for applications in the temperature range from minus 30 to plus 50 degrees Celsius.

The loaded boxes are then either fully-automatically stored in the high-bay or forwarded directly to the packaging line, depending on their use. With subsequent use, a system-integrated Orbiter Box Tipper can fully automatically empty the boxes onto the corresponding packaging lines. All handling from the arrival of the products to the dispatch of the finished goods takes place without a single manual work step.

“ Our solution would not exist in this form without the pallet box ”

Johan Deprez – Founder and CEO



“ We have already implemented about 30 installations with the pallet box, so we are in constant contact with Cabka to ensure optimum functionality”

Mattias Mergaert – Sales Manager

Cooperation

When Deprez plans a process automation solution with a new customer, they recommend Cabka's Pallet Box. Deprez-Systems are so strongly interlocked with the use of pallet boxes, that when installing a new installation in cooperation with Cabka a smooth handling of the goods is guaranteed.

Result

The companies that use the Pallet Box in Deprez's integrated handling solutions are gaining a huge advantage over their competitors, as fully automated handling is rarely found so far.





- Benefits**
- Stackable up to 7 high
 - Impact-resistant corners and reinforced cavities
 - Ideal for use in automatic conveyor systems, also when tipped, twisted, or turned

- Options**
- Replaceable runners
 - Specific colors on request
 - Individual marking and labeling

Technical Data	Bottom support	Wall Design	External Dimensions (mm)	Internal Dimensions (mm)	Maximum Load Capacities (kg)			Filling Volume(l)	Weight (kg)
					Static	Dynamic	Racking		PE
Pallet Box (3R-ventilated)	3 runners	ventilated	1300 x 1150 x 1250	1060 x 1240 x 1085	7000	2000	1000	1400	70,0
Pallet Box (3R-closed)		closed							73,5
Pallet Box (6R-ventilated)	6 runners	ventilated							72,5
Pallet Box (6R-closed)		closed							72,6

Entry: 4 ways | Nesting height: - | Safety rim: -

Logistics Data	Standard Truck Europe		Standard Truck USA		Mega Truck		Jumbo Truck		40' HC Container	
	per Stack	Total	per Stack	per Truck	per Stack	per Truck	per Stack	per Truck	per Stack	per Truck
Pallet Box	2	42	-	-	2	42	2	44	2	36

Technical data are guideline values based on experience and tests according to ISO 8611 with evenly distributed loads at 20°C. The data may vary based on intended use, product features, raw materials used and environmental influences. Upon request our sales team will confirm the data required for your individual application.