palletising

# Case Story

## Full scope solution for end-of-line

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*A West-European manufacturer of bakery products was looking to improve the production efficiency and increase the output of its plant in The Netherlands. Replacing manual palletising by an automated solution could be an important step in this process. Based on the excellent experiences of a sister company with CSi palletisers, the Dutch plant decided to contact CSi.*

In the analysis and sales process WKPACK, CSi's partner in the Dutch market, was involved. Thorough analysis, because of the many SKU's/stacking patterns and the available space, was needed. But in just three months the decision was taken and the order for 3 i-Pal was placed.



The key piece of equipment is the newest version of the CSi i-Pal robot palletiser with a FANUC robot. This new release is even more modular than the previous version and has several advantages. The high level of modularity makes it much easier (and cheaper) to adjust the machine when the production demands change in the future. This specific machine has several options integrated. The pick point has two drives which makes it easier to position and space cases, allowing faster picking of multiple cases.

### KEY DATA

- ✓ Industry: Dry bakery products
- ✓ Country: The Netherlands
- ✓ Equipment: 3 i-Pal robot palletisers, of which one with integrated stretch wrapper
- ✓ End-of-line palletising of in total 40 SKU's
- ✓ Capacity: up to 17 midsize and large cases per minute
- ✓ Euro and Chep pallets

### BENEFITS

- ✓ Short pay-back time on manual labor
- ✓ Increased output
- ✓ Stacking accuracy improved
- ✓ Picking full pallets from the side

## TECHNICAL HIGHLIGHTS

- ✓ Functioning of the safety scanner
- ✓ More modular design of palletiser
- ✓ Pickpoint with double drives

The pallet conveyor is built up with 24V-rollers, allowing more gentle and controlled moving of pallets. The gripper is designed such that it can pick up an empty pallet and put it on top of the already produced stack. In this way double stacking is executed in a simple and effective way. The higher demands from retailers regarding batch sizes can be handled with this simple extension.

The customer has access to CSi patternmaker to define and implement new patterns/SKU's. This can be done completely autonomous by the operating/maintenance crew themselves. The 6-axis robot and the CSi designed shuffle gripper also make it possible to pick the cases from two sides. The choice is dependent on the position of the label. The CSi i-Pal stacks the cases such that there is always a label on the outside of the stack (label orientation). One of the machines is equipped with an integrated, revolving-arm, wrapper.

CSi integrates a wrapper based on Matco technology for this purpose. Within a relatively small footprint pallets can be stacked and wrapped, thus further improving efficiency at the end of the production line. The total dimensions of the i-Pal ISW are: 13 m length and 4,25 m width, including the extended pallet conveyor. The extension to the robot palletiser, that is needed to add the wrapping function is only 4,2 m by 3,4 m. This specific wrapper has a top pressure plate to enable handling of light products.

But not only the machine is equipped with extra features. On the case conveyor towards the machine, cases are tilted forward for better positioning.



Before another palletiser, two pivotable conveyors have been installed, allowing the customer to, manually but efficiently, switch from stacking one line to another. As a standard CSi uses the i-Liner case conveying concept as it is very flexible and adjustable.

The available space in the factory necessitated that the pallet outfeed conveyor were lengthened to enable picking the full pallets from the side (and not from the top of the conveyor as is the standard way).

Based on the experiences of working with CSi, the benefits and options of the machine, the customer has standardised the palletising function on CSi's i-Pal.

## INNOVATIONS

- ✓ Functioning of the safety scanner
- ✓ More modular design of palletiser
- ✓ Pickpoint with double drives