



TRAPO >>>

Automated Intralogistics

HIGH-SPEED DEPALLETIZING IN 3-SHIFT OPERATION

Frequently changing tray formats, varying sizes of goods to be depalletized and the demand for higher cycle times - combined in one compact machine?

No problem!

... TRAPO demonstrates this with a customized high-speed depalletizing system for aerosol cans.

This task is performed by a multifunction gripper.



HRS Series >
High-Speed Robot System

The customer from the hygiene industry was already using conveyor technology from TRAPO. During a visit to the Technical Center, the high level of competence in gripper technology was convincing.

THE ORDER

Previously, depalletizing had been done by hand, but this task was to be automated.

TASK

Absolute degree of automation, fewer work steps and higher output.

Five compact and thus space-saving depalletizing lines with multifunctional grippers were ordered.

Another plus was the recycling concept for the layer trays.

FROM THE MANUAL ACTIVITY TO THE FULLY AUTOMATED DEPALLEITIZING SYSTEM

SAFE SOLUTION FOR UNSTABLE PRODUCTS

Shaving foam, hair spray or deodorant: aerosol cans can be found in every household. TRAPO developed a high-speed depalletizing station with an articulated arm robot for a well-known manufacturer in the cosmetics industry.

Aerosol cans of different dimensions are depalletized flexibly. The output of up to 330 aerosol cans with a diameter of 53 millimeters per minute is impressive; much higher outputs can be achieved with smaller diameters.

PREREQUISITE FOR AWARDING THE CONTRACT

A special solution was sought for depalletizing aerosol cans

- › High degree of automation
- › Space-saving system
- › Consideration of the high risk of tipping
- › For aerosol cans from 35 to 250 ml
- › Consideration of different intermediate formats

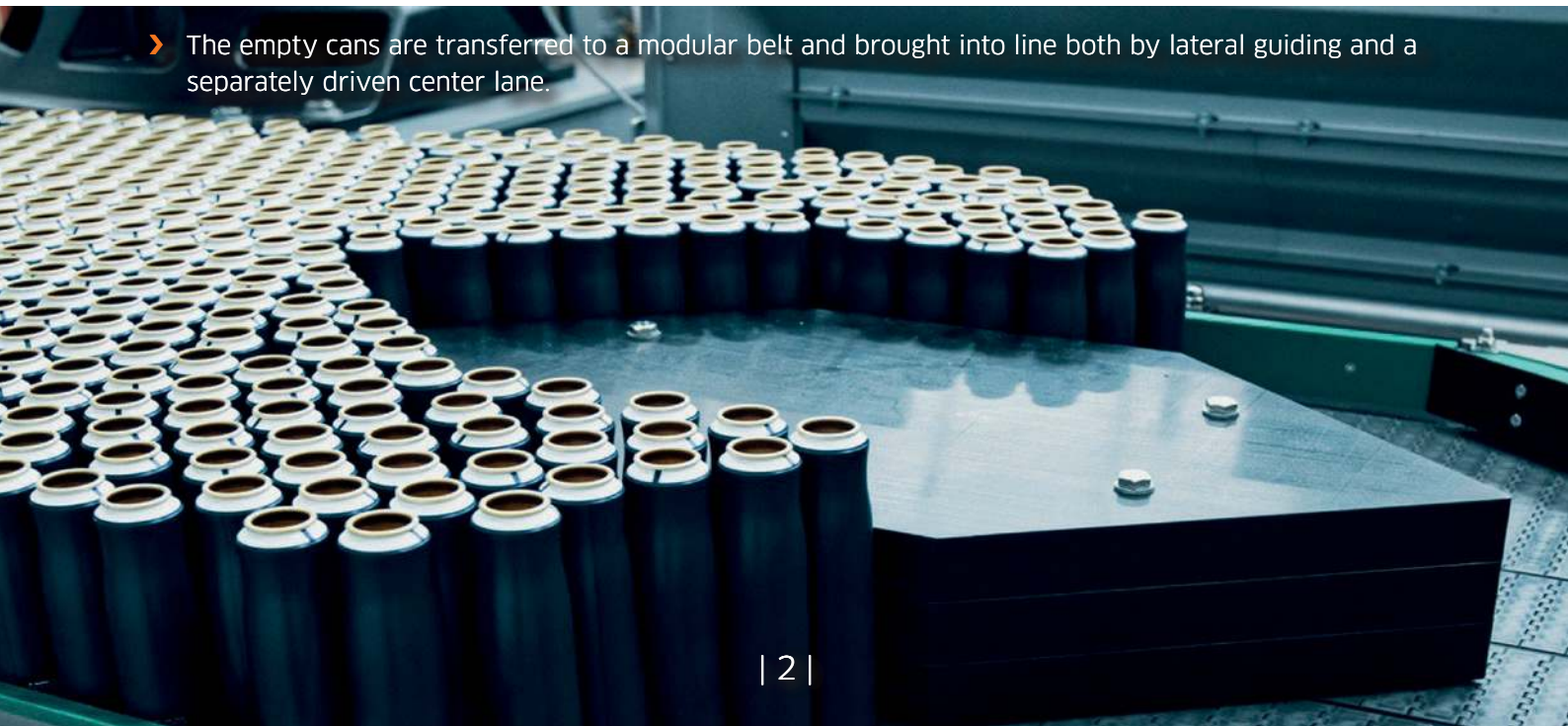
THE SOLUTION

A space-saving depalletizing station

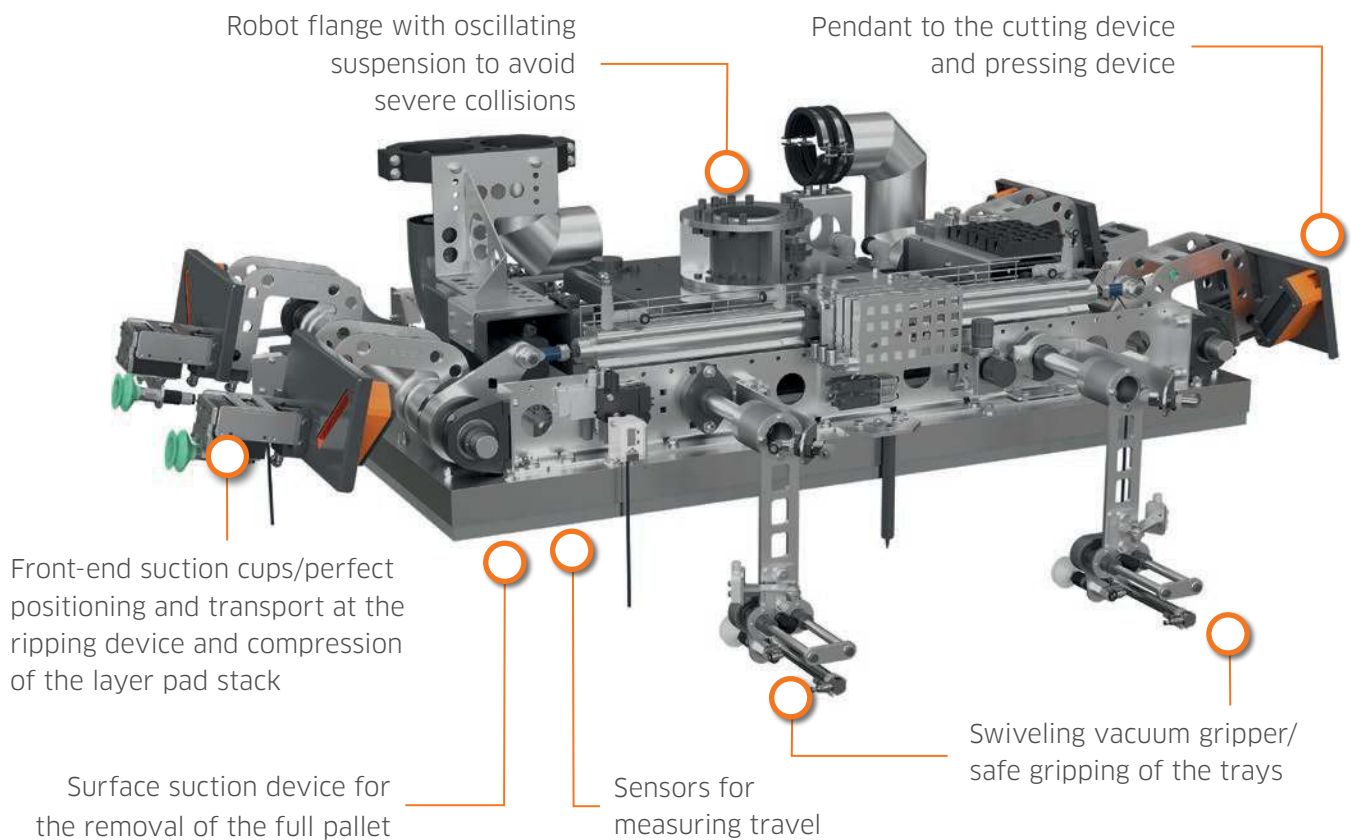
TRAPO developed a high-performance depalletizing station with a customized multifunctional gripper and special solutions that depalletizes five days a week in 3-shift operation around the clock.

HRS Series >
High-Speed Robot System

- › The empty cans are transferred to a modular belt and brought into line both by lateral guiding and a separately driven center lane.



MULTIFUNCTIONAL GRIPPER HANDLES COMPLETE LAYERS: PRODUCTS WITH TRAY



Features:

Suction area in Euro format: 1200 x 800 cm | Gripper weight: 105 kg | Loudness: 70 dB

THE FUNCTIONS

TRAPO is a specialist in gripper technology

- Full pallets are delivered by AGV and transported to the depalletizing station via the conveyor belt. The area suction cup of the multifunctional gripper takes over the complete layer of aerosol cans including the tray and transfers them to the tray table.
- This gripper is equipped with suction arms that can be swiveled to the side so that the cardboard tray can also be gripped securely.
- Suction cups installed on the bottom of the tray table fix the tray in place. It remains there while the aerosol cans are removed as a complete layer and safely deposited on the moving modular conveyor where they are fed into production.
- The tray table tilts each individual tray to remove any remaining cans. They are collected in a collection bin and sent for recycling.
- Vacuum suction cups hold the tray in position and enable the gripper and the cutting device integrated in the tray table to work together in a precise fit. Prerequisite for space-saving reprocessing.

TRAY TABLE INCLUDING RECYCLING CONCEPT

The trays have a side structure of different heights.

After the can layer has been transferred to the conveyor belt for separation, the gripper and tilting table work together with the cutting device to cut open the tray corners. In this way, the cartons can be deposited by the gripper on a separate pallet to save space and later be sent for recycling.

The cut corners are discharged, collected and also sent for recycling.

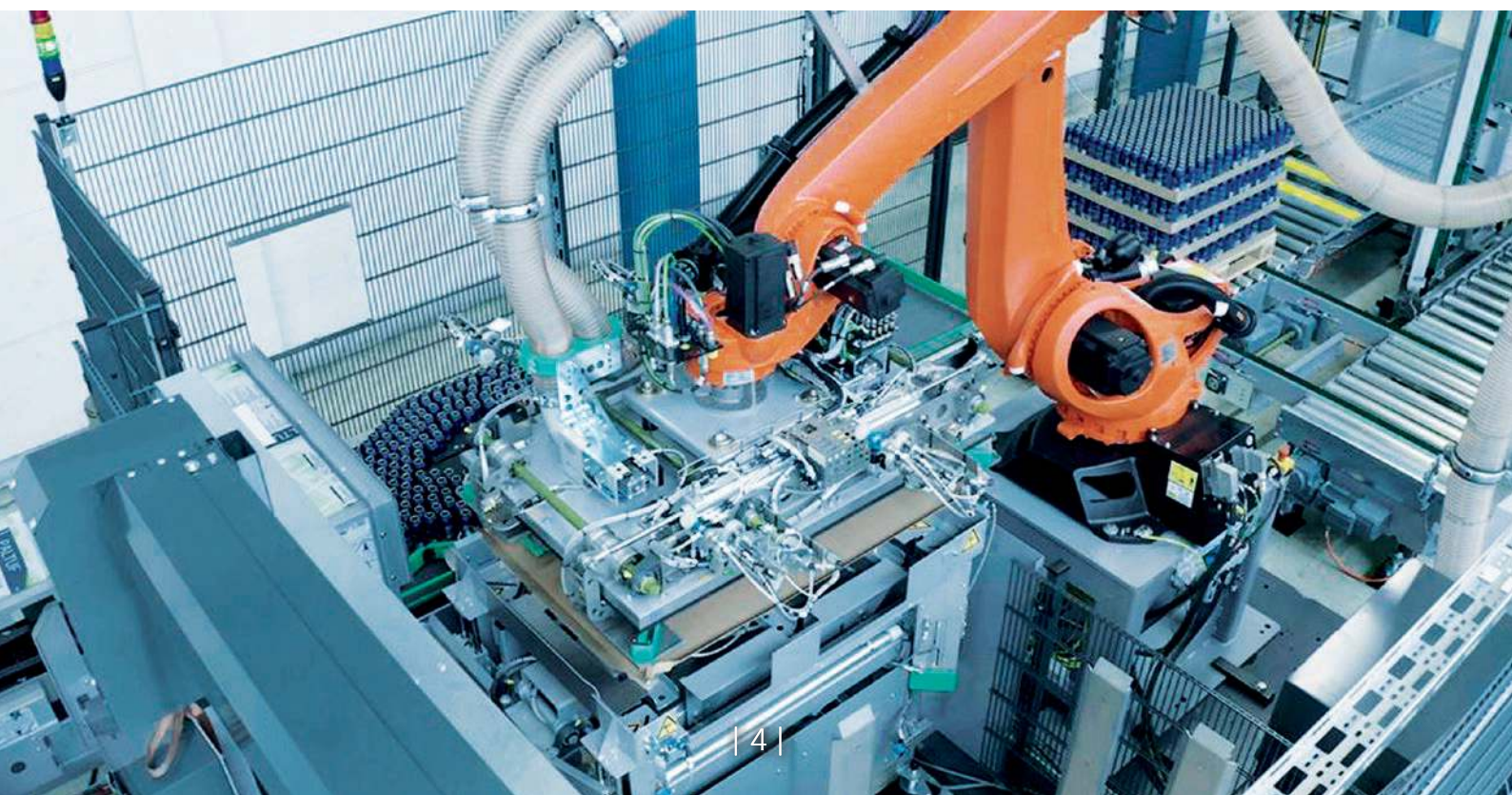
The empty Euro pallets are transported further and stacked in a magazine for reuse.



EMPTY PALLET MAGAZINE WITH A DOUBLE FUNCTION:

- 1 Stacking of empty pallets and discharge.
- 2 Buffer zone: Full, non-depalletized pallets are discharged there. In this waiting function, the empty pallets are lifted to a second level; the full pallet passes under the stack and, as soon as the jam clears, is returned to the flow.

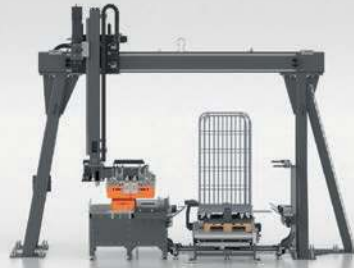
The empty pallet stack is conveyed to a pickup position and removed from there by the stacker.



THE RIGHT SOLUTION FOR YOUR PRODUCT



HLP Series >
High-Speed Layer Palletizer



HPS Series >
High-Speed Portal System



HRS Series >
High-Speed Robot System

>>> TALK TO US!

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