



### LANDGUTH: INCREASE IN DEPALLETIZING PERFORMANCE BY 100%

This High-Speed Layer Depalletizer (HLDP Series) uses a magnetic gripper to pick up complete can layers, including the intermediate layer, and place them on the conveyor belt.

Up to 90,000 empty cans are depalletized every hour. For added personal safety, the HLDP is the only one in its performance class to operate at ground level.



**HLDP Series >**  
High-Speed Layer Depalletizer

#### THE CUSTOMER

Since the 1990s, Landguth Heimtiernahrung GmbH, based in East Frisia, has been the leading private label manufacturer of premium dog and cat food. In state-of-the-art production facilities, Landguth produces pet food specialties for trade partners – also as canned menus.

#### THE ORDER

Higher performance, more safety and less breakage when depalletizing tin plate and aluminium cans.

#### TASK

Design and installation of a fully automated depalletizing line. It is supposed to pick up a complete layer of empty cans of different sizes – optionally 100/200/400/600 or 800 g – and safely depalletize them in one step as a complete layer and place them on the conveyor belt.

# TAILOR-MADE SOLUTIONS FOR THE FOOD INDUSTRY

## THE NUMBER OF PETS IS RISING:

According to Statista\*, around 10.56 million dogs and around 25.7 million cats lived in German households in 2020. Demand for high-quality pet food is growing analogously. Consumers are opting for recyclable outer packaging – tin plate cans, for example.

Three tasks that TRAPO answers with a High-Speed Layer Depalletizing Line. The application can be adapted 1:1 to the tasks of the food industry.

\* The online portal Statista is the leading provider of market and consumer data.

## PREREQUISITE FOR THE AWARD OF A CONTRACT

### A precisely fitting depalletizing solution was sought for the exact destacking of empty cans


- › Safe destacking
- › High-Speed Layer Depalletizer with y-axis
- › Multifunctional gripper for overhead frame depalletizing, layer removal and layer pad processing
- › Choice of magnetic or vacuum grippers
- › Layer pad handling
- › Common pallet formats (Euro, Industrial, Chep etc.)
- › For empty cans (tin plate, aluminium) and empty jars
- › For empty glass: vacuum prevents broken glass

## THE SOLUTION

### Space-efficient depalletizing of empty cans

TRAPO designed and installed a fully automated depalletizing line for Landguth Tiernahrung GmbH. It enables the safe depalletizing and loading of complete layers of empty cans from pallets up to 3 meters high.

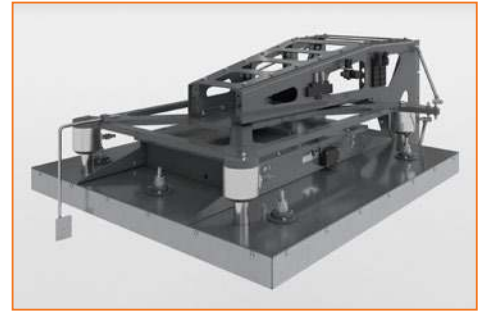
**HLDP Series** ›  
High-Speed Layer Depalletizer

- 
- › Not achievable by human hands: safe layer depalletizing at heights of up to three meters.

## THE IMPLEMENTATION

### Fastest ground level can depalletizer: 6 layers per minute

- Introduction of the pallet and pallet magazine to the line.
- Metal pallet top frames form the optimal transport protection for loose products such as empty cans. Applied as the end of each layer, they create fully-fledged transport units that are ideal for stacking. In a first depalletizing step, these reusable pallet top frames are removed by a magnetic gripper and deposited in a space-saving manner.
- This is followed by the core task of depalletizing empty cans: A magnetic gripper with an integrated pneumatic magnetic plate for maximum holding force picks up the entire layer of cans, including a stabilizing cardboard intermediate layer.
- The magnetic gripper enables energy-efficient and reliable handling of ferromagnetic workpieces. The permanent magnet is moved by pneumatics. This enables it to securely grip the magnetic workpieces – in this case empty cans – and place them back down again in an optimal manner.



- Magnetic gripper with an integrated pneumatic magnetic plate – for maximum holding force when picking up the entire layer.

## SAFE DEPALLEITIZING OF TALL PACKS WITH A HEIGHT OF UP TO THREE METERS

- The magnetic gripper was installed on a lifting column with y-axis from the High-Speed Layer Palletizer product family (HLP series). This enables high outputs to be achieved with process reliability, even with tall packs of up to three meters in height.
- In a third step, a downstream vacuum gripper removes the stable cardboard layer pad, which protects the can layers on the pallet against external influences. These are also stacked in a magazine and made available.
- The empty cans are securely placed on the conveyor belt by the magnetic gripper and transported onward for filling.

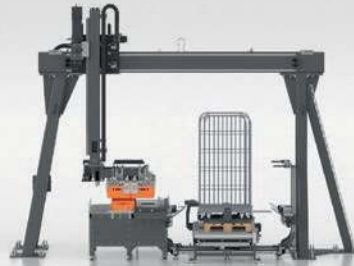
- This High-Speed Layer Depalletizer for empty cans and jars is operated from ground level – for added personal safety.



## THE RIGHT SOLUTION FOR YOUR PRODUCT



**HLP Series** >  
High-Speed Layer Palletizer



**HPS Series** >  
High-Speed Portal System



**HRS Series** >  
High-Speed Robot System

# LET'S TALK ABOUT (DE-)PALLETIZING!

### Headquarters

## TRAPO >>>

Automated Intralogistics

TRAPO GmbH  
Industriestraße 1  
48712 Gescher-Hochmoor | Germany

Fon +49 2863 2005-0

info@trapo.de

www.trapo.de

### Subsidiaries

## TRAPO >>>

Automated Intralogistics

TRAPO America, Inc.  
805 Satellite Blv  
30024 Suwanee, GA | USA

Fon +1 678 288 3491

info.america@trapogroup.com

www.trapogroup.com



## TRAPO >>>

Automated Intralogistics

TRAPO Italiana S.r.l.  
Via del Lavoro, 50  
31016 Cordignano TV | Italy

Fon +39 0438 911 391

info.italy@trapogroup.com

www.trapogroup.com

