

Automatic Loading
Automatic Stacking
Automatic Scoring

New concepts with
WP ROBOT

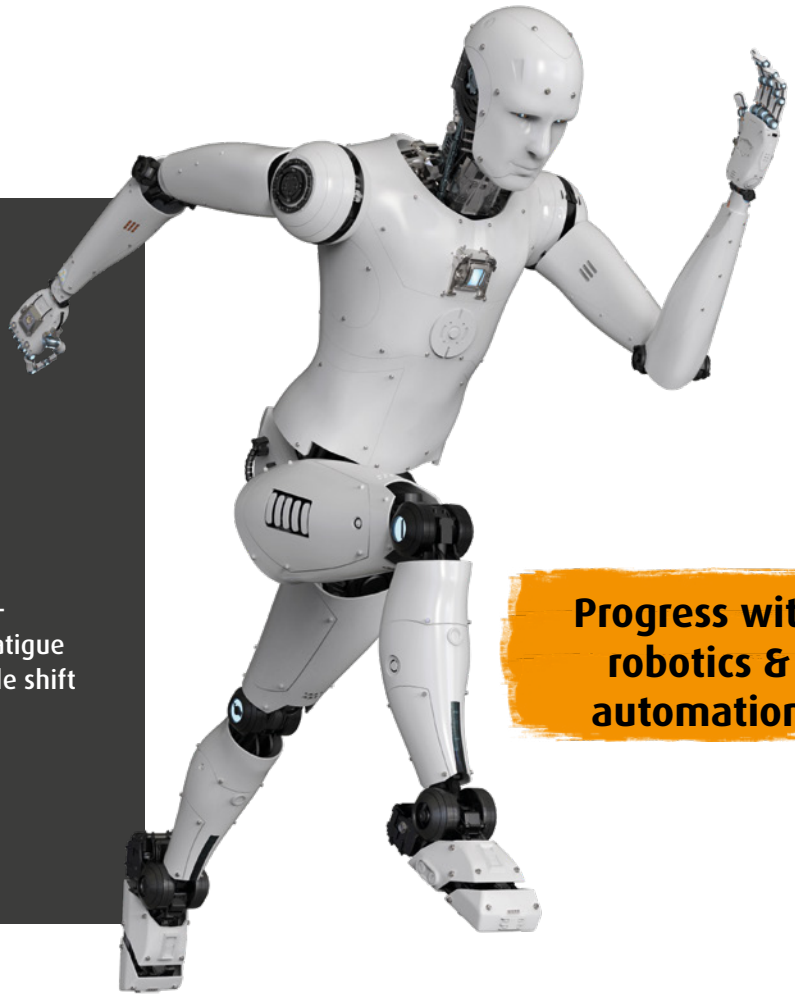
Effective automation of baking processes

think process!

WP BAKERYGROUP

BENEFITS

- More reliability
- Increased process and planning reliability
- Compensation for staff shortages
- Flexible application options
- Constant availability. Predictable performance. Continuous operation without fatigue ensures consistent cycle times and stable shift output



**Progress with
robotics &
automation**

NEW CONCEPTS WITH NEW TECHNOLOGY

New technologies create new opportunities

Robotics and automation open up new possibilities, improve process quality and offer the food industry a wide range of prospects. Thanks to their flexibility, the potential applications are virtually limitless.

From small bakeries to highly automated industrial processing lines

Our robotics opens up new possibilities. Automatic loading, unloading and stacking of sacks, pallets, crates or peelboards, or the precise scoring of dough pieces – we offer the right, intelligent solution for every task.

Flexible, powerful and precisely tailored to your requirements: this is how you automate processes that currently tie up time and staff, and take your production to a new level.

A POSSIBILITY FOR EVERY REQUIREMENT

Robotics that breaks down barriers: Our system can be used with any product and is therefore suitable for a wide range of applications. The possibilities extend far beyond the examples shown here and open up entirely new prospects for your production.

CUSTOMIZED ROBOTIC SOLUTIONS

Your vision and our expertise combine to create a robotics solution that will drive your business forward in the long term.

THINKING FURTHER THINK PROCESS!

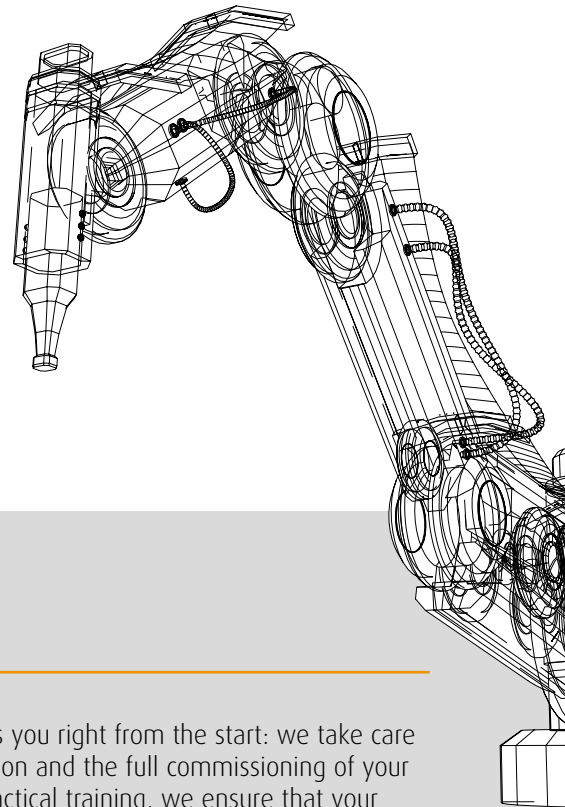
Expand your processing line with highly specialised components from other companies within the WP BAKERYGROUP and benefit from fully integrated solutions, comprehensive expertise and genuine systems expertise, all from a single source.

SERVICE

Our service supports you right from the start: we take care of delivery, installation and the full commissioning of your system. Through practical training, we ensure that your team is fully prepared and able to use the system efficiently. And should you ever need unexpected support, our 24/7 service line is always there to assist you.

SCOPE OF SERVICES

Our range of services in the field of robotics includes state-of-the-art automation solutions that take precision, efficiency and process reliability in production to a whole new level.



 **+49 7363 95390-0**

 **info@riehle.de**

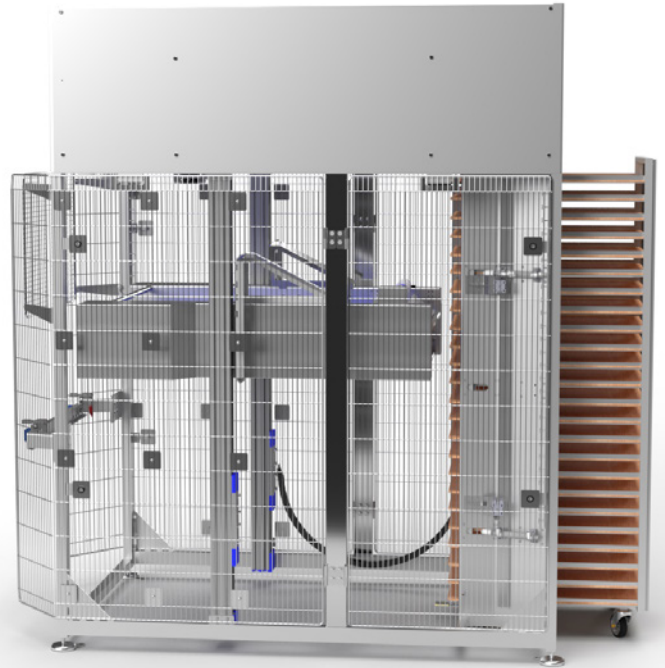
QUALITY BY RIEHLE

At RIEHLE, quality means more than just perfect technology – it means genuine support for your day-to-day work. The demands of the trades are changing rapidly, with processes becoming increasingly digital and faster. Our aim is to empower you to navigate this very transformation. That is why we develop solutions that make your work noticeably easier, optimise workflows and offer you reliable added value every day.

WP AUTOMATIC LOADER

BENEFITS

- **Reduced workload:** Simple, repetitive and ergonomically unsuitable tasks are automated. This significantly reduces the workload on staff.
- **Consistent product feed:** Products are fed into the system at precisely defined intervals, ensuring a smooth and stable process flow.
- **Stability despite staff shortages:** Automation compensates for staff shortages and ensures a reliable supply to the processing line.



AUTOMATED PRODUCT TRANSPORT

The WP Automatic Loader ensures reliable feeding of the processing line. Once docked, the system processes the dough pieces one by one and automatically transfers them to the downstream equipment, such as a lye application unit. The rack trolley is systematically emptied from top to bottom; the line is supplied at predefined intervals to ensure a consistent flow of material.



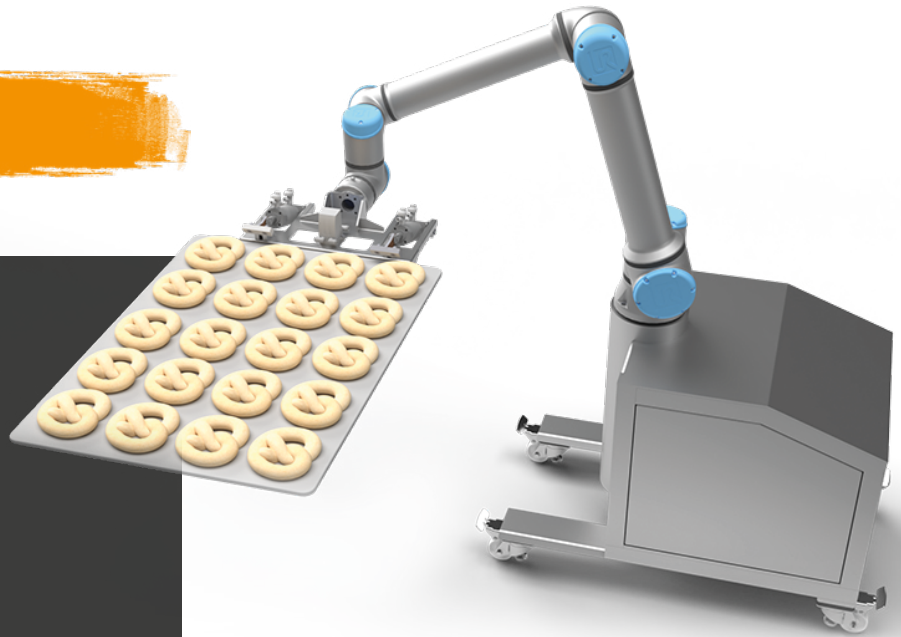
**Systematic unloading
of rack trolleys**



WP CO-WORKER

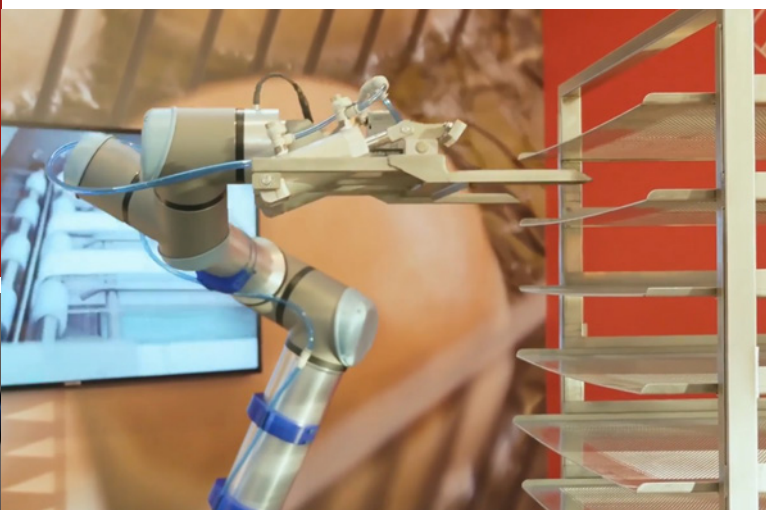
BENEFITS

- **Flexible application options:**
 - Tray handling
 - Product handling
 - and much more
- **Consistent availability.** Predictable performance. Continuous operation without fatigue ensures consistent cycle times and stable shift output – even with fluctuating staffing levels.
- **Different versions:** Different sizes / capacities are available depending on requirements
- **Various application possibilities:**
 - Depending on the application, grippers / suction attachments can be changed without tools
 - Various programmes can be stored



WP ROBOTS AS HELPERS FOR THE BAKERY

Monotonous and physically demanding tasks – such as manually loading dough pieces into machines – are a thing of the past. Our WP Co-Workers carry out these tasks with precision and reliability, freeing up time for what really matters: high-quality products, motivated staff and an efficient production process.



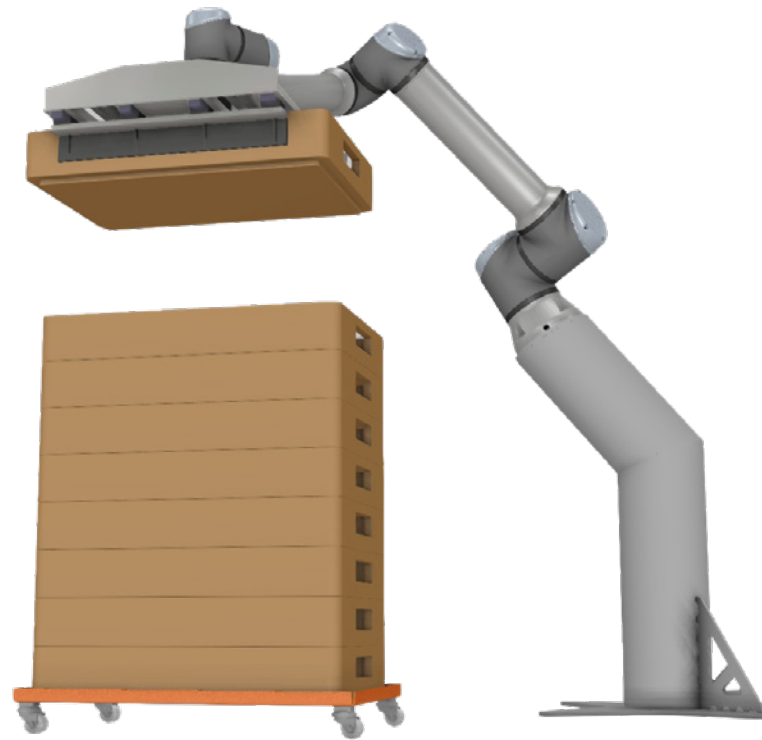
Robots for gripping or suction and conveying in baking processes



WP CO-WORKER

BENEFITS

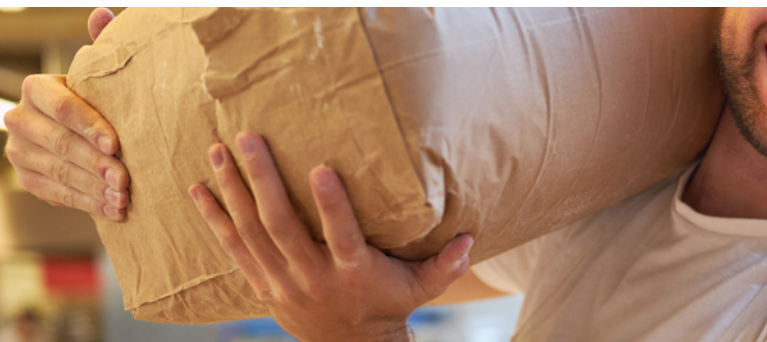
- **Performing simple but physically demanding tasks:** relieving employees by stacking boxes, sacks, floorboards, etc.
- **Constant speed:** Products are supplied or removed at regular intervals.
- **Compensation for staff shortages**
- **Consistent availability.** Predictable performance. Continuous operation without fatigue ensures consistent cycle times and stable shift output – even with fluctuating staffing levels.
- **Various versions:** different sizes/capacities are available depending on requirements
- **Mobile or permanently installed**



STACKING PRODUCTS

Heavy and repetitive stacking tasks no longer need to be carried out manually. Whether it's flour sacks, shipping crates or baking trays – these tasks are handled fully automatically and integrated precisely into your production cycle. This boosts efficiency, reduces physical strain and takes your processing line a decisive step closer to full automation.

For maximum flexibility, various gripper attachments are available, which can be changed without tools as required. And to ensure the WP Co-Worker can be deployed at different stations, it can be equipped with multiple programmes – precisely tailored to your processes.



The systematic stacking of objects.



WP INDUSTRIAL ROBOT

BENEFITS

- Specially designed for stacking heavy, bulky goods in industrial production
- Staff reduction:
 - Specialist staff are released for qualified tasks
 - Depending on the dimensions and weight of the product, tasks can be performed that previously required several people working together or the use of other aids.
- **Regular supply and removal:** The products are supplied to or removed from a plant at regular intervals.



INDUSTRIAL PROCESSING

The industrial robot integrates seamlessly into industrial processing lines, offering exceptional flexibility. Depending on the task profile, various robot models are available – tailored to payload, reach and specific requirements. Whether for precise product handling or the safe movement of oversized baking trays.



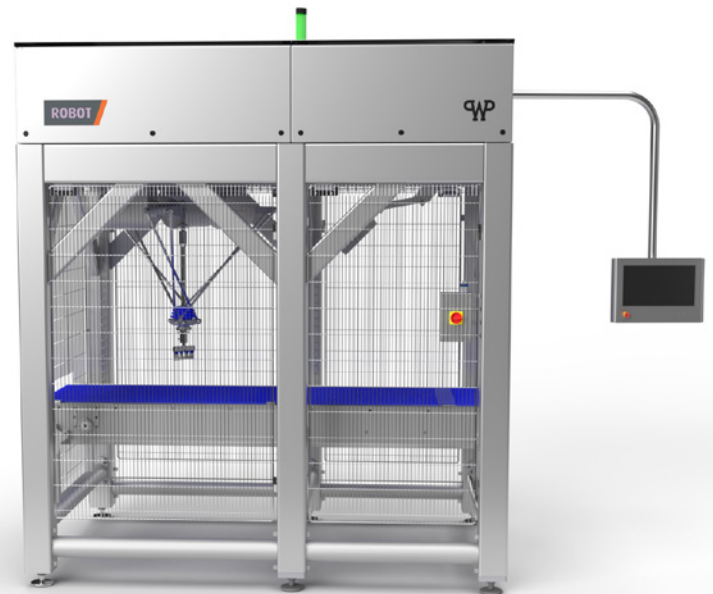
Powerful industrial robot for stacking bulky, heavy goods.



WP DELTA ROBOT

BENEFITS

- Automates simple routine tasks: cuts in products are made with precision, consistency and complete process reliability.
- Different versions of the trimming technique:
 - Ultrasonic
 - Rotating blades
 - Water jet
- Various patterns programmable:
 - Consistent pattern quality
 - Different patterns possible



SCORING ROBOT

The Delta robot integrates seamlessly into existing production lines and handles the automatic scoring of bread rolls, pretzels, pretzel sticks, loaves and many other products. The fully automated process relieves your staff of monotonous tasks whilst ensuring precise, consistent and reproducible results for every product and at every cycle.



**Automated scoring of
dough pieces**



INTEGRATED 3D CAMERA SYSTEM

With its integrated 3D camera system, it accurately detects every product, including its position and orientation, and performs every cut with high precision and impressive speed. The result: clean, consistent cut surfaces, even when processing large quantities in continuous production.

WP INDUSTRIAL ROBOT

BENEFITS

- Specially designed for scoring large quantities in industrial process lines
- Precise and hygienic scoring of dough pieces using a water jet
- Reproducible and consistent quality
- Automatic detection of dough piece positions and adjustment of the cutting path



FOR INDUSTRIAL LINES

The scoring robot comes with 3D intelligence as standard: the integrated camera system detects dough pieces, including their exact position and orientation. Using this data, the robot performs each cut with precision, repeatability and care for the product.



**Powerful industrial robot
for scoring dough pieces in
large process lines.**



EXAMPLES OF USE



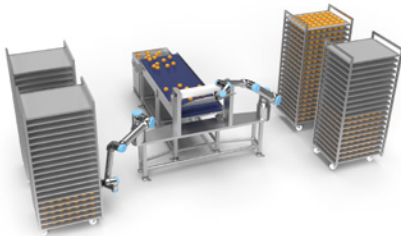
EMPTYING TRAYS

- The trays are removed from full rack trolleys and the products are unloaded onto a conveyor belt
- The emptied tray is placed back into the rack trolley
- Optionally, the trays can also be brushed after emptying



TRAY FEED AND DISCHARGE

- Tray feed from provided tray stacks or rack trolleys
- The robot places the empty trays on a conveyor belt
- When products have been deposited on the tray, it is placed in a rack trolley provided



EMPTYING AND BRUSHING OFF WITH TWO ROBOTS

- Emptying trays can be made even more efficient by using two robots
- In this example, work can be carried out alternately from two sides
- The trays are removed by a brush after emptying



LOADING AND UNLOADING

- In this example, the ALLROUND was combined with two robots
- The front robot removes the peelboards with dough pieces from the rack trolley provided, places them, triggers the suction process and removes the unloaded peelboard to place it back in the rack trolley
- The rear robot provides an empty tray from a rack trolley, triggers the depositing of the products and places the full tray in the rack trolley



INDUSTRIAL ROLL PROCESSING LINE WITH TWO WP INDUSTRIAL ROBOTS

- A robot handles the stacking and feeding of large peel-boards
- A second robot cuts the dough pieces using waterjet cutting technology

SCORING DOUGH PIECES IN A LYE APPLICATION LINE

- A delta robot performs the automated scoring of dough pieces using ultrasonic cutting technology on a lye application line / pretzel line



AUTOMATIC LOADING IN A LYE APPLICATION LINE

- An automatic loader systematically unloads the rack trolleys and transfers the dough pieces to a lye application unit.

UNLOADING PRODUCTS IN THE SHIPPING DEPARTMENT

- A WP Co-Worker is responsible for systematically unloading products from a rack trolley and tipping them from the baking tray onto shipping baskets via a chute.



**DEEP FRYING
(PASTRY)**

**DEEP FRYING
(SAVOURY)
& COOKING**

**IN-STORE /
SNACK
BAKING**

**LYE
APPLICATION**

**TRAY
CLEANING**

**ROBOTICS /
AUTOMATION**

**BAKERY
FREEZING
SYSTEMS**

**CUSTOMISED
SOLUTIONS**

ACCESSORIES

WP Lebensmitteltechnik RIEHLE GmbH
Dr.-Rudolf-Schieber-Str. 15
D-73463 Westhausen (Germany)
phone +49 7363 95390-0
info@riehle.de | www.wp-riehle.de

