REAL-LIFE BENEFITS

INTELLIGENT SOLUTIONS. IMMEDIATE RESULTS.

CHALLENGE	AIR SOLUTION	BENEFIT
Damaged bags on pallets can cause financial losses and damage your reputation.	**QUAT²RO® Seal Check detects damaged bags and removes them before palletizing.**	Fewer warranty claims, fewer returns and higher customer satisfaction.
Improperly opened valve bags entering the filling spout can reduce performance and cause machine downtime.	**QUAT²RO® Valve Check automatically detects and rejects improperly opened valve bags.**	System performance can increase by up to 10%, helping improve packing profitability.
Manual palletization can create bottlenecks and reduce production potential.	**AMICUS® PAL Edition delivers robotic palletization at packing-machine speed.**	Consistent throughput helps maximize packing efficiency.
Manual bag handling can limit work capacity and create inefficiencies in the packing process.	**AMICUS® Smart Cell provides a centralized bag handling.**	Higher work capacity and a more efficient packing process.

GET MORE FROM YOUR MOST VALUABLE ASSET

The plant of the future is driven by technology but guided by people. AIR shouldn't — and doesn't — replace operators. Instead, it redefines their role by automating repetitive, high-strain tasks and allowing operators to focus on:

- Process optimization
- Preventative actions
- Improvement initiatives



FASCINATING ENGINEERING. AS ONE.

PM 470 E 4375 0724 1 Fe
The machines and equipment shown in this brochure as well as the technical parameters represent only examples of customer-specific technical solutions. We reserve the right to make changes at any time without notice! The ® symbol indicates a registered trademark of HAVER & BOECKER oHG in Germany. Some of the trademarks are also registered in other countries.

HAVER & BOECKER OHG
Carl-Haver-Platz 3 59302 Oelde Germany
Phone: +49 (0) 2522 30-0
E-mail: haver@haverboecker.com
www.haverboecker.com

HAVER & BOECKER



ARTIFICIAL INTELLIGENCE & ROBOTICS (AIR)

DISCOVER THE FUTURE OF YOUR PACKING LINE

FASCINATING ENGINEERING. **AS ONE.**

"THE FUTURE OF YOUR PACKING RELIES ON MOTIVATED AND SUPPORTED OPERATORS.

AIR AND YOUR FUTURE-READY PLANT

The Association for Packaging and Processing Technology reports that 95% of packing plants struggle to find skilled operators, and nearly 60% expect these workforce challenges to intensify in the years ahead. At the same time, packing operations face pressure to achieve demanding throughput targets and maximize equipment capabilities.

Traditional automation alone is no longer enough to address today's operational realities. The future-ready plant requires intelligent systems that deliver real-time operational awareness and adaptability. These systems reduce reliance on constant manual oversight while empowering operators with a greater sense of purpose, ownership and confidence in their roles.

HAVER & BOECKER's AIR (Artificial Intelligence & Robotics) delivers exactly that. By transforming the operator's role from hands-on monitoring to value stream leadership, AIR turns your packing line into an intelligent, autonomous system. The result is reduced operational strain and the ability for your operators to focus on big-picture optimization that drives long-term performance.

TRADITIONAL AUTOMATION ALONE IS NO LONGER ENOUGH TO ADDRESS TODAY'S OPERATIONAL REALITIES.

QUAT²RO® CONNECT

YOUR ALL-IN-ONE DATA ANALYSIS TOOL

AIR connects and automates your production. But in daily operations, it's often unclear why performance changes, where downtime starts, or how processes can be improved.

QUAT²RO® Connect provides the transparency to understand this.
It brings all your production data together and shows you what's happening across your machines in real time.
You can see when performance drops, notice deviations in your processes and identify disruptions early.
When issues occur, you have the information to trace their causes and address them in a focused way.
This helps create more stable processes, reduce downtime and maintain better control over your production.





DESIGNED AROUND YOU

QUAT²RO® Connect fits into the way you work. You can start with a quick overview and go deeper whenever needed, using intuitive dashboards and flexible analysis tools. Your data remains under your control while staying accessible wherever you need it, allowing you to monitor and improve your packing processes both on-site and remotely.

QUAT²RO® AI PRODUCTS

ARTIFICIAL INTELLIGENCE FOR YOUR PACKING LINE

AI-powered QUAT²RO® products bring intelligent automation to your packing line, providing continuous monitoring and immediate alerts at critical quality checkpoints. These products use individual cameras with built-in image recognition to monitor your packing line and keep your operation running smoothly, with seamless integration into any packing machine. They are trained specifically for your operation and developed to reach the highest possible accuracy for your application.

QUAT²RO® Bag Check

Prevent filling errors before they occur.
QUAT²RO® Bag Check uses AI image recognition to compare the bag against the product, ensuring product is filled into the correct bag. The system alerts operators and halts the packing process when the wrong bag is placed.



QUAT²RO® MatEx Check

Stop product loss during filling.
QUAT²RO® MatEx Check monitors the filling process on stationary packing machines. Abnormal material discharge prompts an alert and stops the machine immediately, preventing costly product loss and downtime for cleanup.



QUAT²RO® Valve Check

Reduce incorrect valve bag application during filling.
Improperly opened valve bags can lead to incorrect spout placement. QUAT²RO® Valve Check identifies improperly opened bags and rejects them before issues arise. Operators can collect them and place them back on the packing line.



QUAT²RO® Seal Check

Ensure quality sealing before palletizing.
Bookending the packing line, QUAT²RO® Seal Check monitors bags leaving the packing line via conveyor. If abnormal spillage is detected, the bag is diverted off the line instead of being palletized, ensuring only fully sealed bags are palletized.



OPERATIONAL IMPACT: Continuous visual monitoring | Instant error detection | Automated intervention/alerts

CURIOUS WHAT QUAT²RO® AI CAN DO FOR YOU?

Scan our QR code and find out.

AMICUS® ROBOT FAMILY

SPECIALIZED ROBOTICS FOR YOUR MODERN PACKING PLANT

The AMICUS® robot family complements your existing packing line to improve efficiency, provide more work capacity and create a stable and reliable packing cycle. Unlike standard industrial robots, AMICUS® systems are purpose-built for specific packing line applications, offering a high degree of integration with your existing equipment. Specialized AMICUS® robots handle bags, drums and other packaging formats with precision, reducing downtime and maximizing your production efficiency.

AMICUS® DEPAL Edition

Depalletize empty bag bundles seamlessly.
The AMICUS® DEPAL Edition's unique End of Arm Tool (EOAT) transfers bags from the pallet to the automatic bag placer with specialized image recognition technology allowing it to locate and securely grip untied bags. The system is easy to operate and maintain, improving efficiency and uptime.



AMICUS® PAL Edition

Palletize filled bags, pails, canisters and drums efficiently.
The AMICUS® PAL Edition completes the packing and filling process by placing filled packages on pallets. Its EOAT features a user-friendly, smart HMI that adapts to a range of container and pallet sizes to meet production needs. The system reduces downtime and improves overall efficiency.



AMICUS® Smart Cell

Increase work capacity with an all-in-one robotic solution.
The fully automatic AMICUS® Smart Cell provides a centralized robotic solution that depalletizes empty bags, places them on the stationary packing machine, removes the filled bag, and palletizes it in one centralized area.



AMICUS® SEAL Edition

Seal traditional valve bags automatically.
Designed to reduce product loss, the AMICUS® SEAL Edition uses an EOAT to seal valve bags as they are deposited onto the conveyor, protecting product integrity during transportation and storage.



OPERATIONAL IMPACT: Increased production capacity | Improved operator safety | Consistent, reliable performance

CONNECT WITH AN AIR EXPERT

Discover how our solutions can integrate with your existing packing line to create a safer, smarter and more efficient operation now and into the future.



HAVER & BOECKER
Dennis Friemel
QUAT²RO Product Manager
d.friemel@haverboecker.com
+49 2522 30-8703

HOW TO BEGIN

CURRENT PLANT
Siloed data, manual check points, no artificial intelligence or robotic solutions.

GOAL
Improve performance by centralizing data collection across multiple pieces of equipment and facilities.

STEP 1
Enable data collection for existing systems.

STEP 2
Integrate QUAT²RO® AI products.

STEP 3
Train AI models with your system data.

STEP 4
Equip your operators with the ability to make faster, more informed decisions with QUAT²RO® AI products.

STEP 5
Upgrade to full-line automation by integrating AMICUS® robots.

STEP 6
Create a life-long learning production process with "Closed-Loop" AI.

NEXT-LEVEL PLANT STATUS
A completely AIR-integrated packing system to support operator success.

MEET BUDDI

THE FUTURE OF PACKING AUTOMATION.

Buddi is learning to perform routine tasks like placing empty bags, cleaning equipment, and identifying and relaying equipment faults for remote troubleshooting. As Buddi learns and grows, he will further empower your operators to focus on big-picture efficiency and engaging tasks that move your plant forward.

Contact HAVER & BOECKER for opportunities to pioneer packing technology and put Buddi's capabilities to the test.

