

HAYER & BOECKER



DIE MASCHINENFABRIK

THE NEW AMICUS® DEPAL EDITION AUTOMATE COMPLETELY FROM EMPTY TO FULL BAG



*"My best friend is the one
who brings out the best in me."*

Henry Ford

AMICUS - the Latin word for "friend" - is HAVER & BOECKER's new advanced family of robots to further complement its line expertise for complete, fully automatic and thus labor-saving packing systems. The first member of this new family is the AMICUS® DEPAL Edition for depalletizing empty bags for fully automatic placement with an automatic bag applicator. The tool of this AMICUS® DEPAL Edition is an in-house development and thus demonstrates the ongoing expertise of HAVER & BOECKER engineers.

AMICUS® – THERE IS NO BETTER FRIEND

The AMICUS® DEPAL Edition is unique: rapid detection and secure gripping of loose empty bag bundles without strapping! With the help of the associated camera system, the innovative gripper very quickly finds the unstrapped empty bag bundles on the pallet, grips them securely and reliably brings them into the system. This is the starting point for your efficient and complete automation!

How it works

The AMICUS® DEPAL Edition is a high-performance depalletizer from our AMICUS® robot family powered by FANUC. It consists of the robot arm with innovative gripping tool, a camera system and the associated control system and accesses at least one pallet location. From there, it can even load several packing machines with the same empty bags.

The depalletizing process

First, an empty bag is read into the system. The robot detects contrasts, thereby identifying the empty bags and making it possible to recognize the bag bundles on the pallet. The camera positions itself above the pallet and captures the layer image. This three-dimensional data is passed on to the robot arm. It steers the gripping tool directly to the next bag bundle. The gripping tool moves under the bag bundle to pick it up. A pressure roller prevents the bundle from shifting. The roller gripping tool now picks up the bag bundle with the help of a counter-rotating roller. It then gently places the bags on the deposit table of the RADIMAT® automatic bag applicator. Alternatively, they can be fed onto a conveyor. This cycle is continuously repeated - for a continuous and efficient process.

Your result

With the help of the associated camera system, the innovative gripper very quickly finds the empty bag bundles on the pallet, grips them securely and reliably feeds them into the system. The empty bag pallet is unpacked at a constant rate and the RADIMAT® is continuously and reliably loaded with empty bags, 24/7 if required. Your entire bagging and packing process becomes much more reliable thanks to efficient automation. This ensures the performance of your entire line, which achieves peak outputs of up to 6,000 bags/hr. The AMICUS® DEPAL Edition is your starting point for stable, consistent and safe cycle times!

Your advantages with this newly developed gripping tool:

- low weight
- quick change device for easy maintenance
- no tool change for different bag sizes necessary
- bag sizes from 220 x 300 mm to 500 x 660 mm
- bundle thickness of up to 50 mm possible
- also, possible to pick up single bags



FOUR FRIENDS INSTALLED

In this possible installation, four AMICUS® DEPAL Edition systems supply a total of five packing lines with empty bags. In addition the entire pallet transport is also connected fully automatically.



AMICUS® DEPAL EDITION PRECISE - RELIABLE - INTELLIGENT

Your advantages:

- Complete your automation from empty to full bag: fast, safe and easy.
- The AMICUS® DEPAL Edition is quick to install and precise in operation, easy to handle and easy to maintain.
- You increase health and safety and give your team more freedom for important tasks.
- Your automatic bag applicator is continuously and reliably supplied with empty bags 24/7.
- The teach-in function and accurate image recognition enable perfect bag detection without search trips.

Technical information:

- up to 6,000 bags/hr
- compact design
- all valve bags can be used

Installation possibilities:

- feeding of empty bags at the RADIMAT®
- feeding on another floor
- feeding on a belt
- fully automatic pallet feeding
- supply of several packing machines with the same bags by one robot

Safety devices:

For protected interaction between operator and robot, the AMICUS® is equipped with FANUC Dual Check Safety (DCS). The software is used to safely design and continuously monitor workspaces and axis areas. DCS includes:

- speed and distance monitoring
- power and force limitation
- axis limitation

If the defined specifications are violated, the servomotors are stopped by the controller and thus ensure comprehensive safety of operators, robots and tools.



AUTOMATED FRIENDSHIP

Reliable cycle times through better automation

Efficient automation is crucial today: over three million industrial robots now work in factories worldwide. Industrial robotics in all its facets is thus an important component of modern factory automation, now also in medium-sized and small companies. Robots that feed machines optimally improve the efficiency of processes, provide and ensure more available work capacity and a stable, reliable and safe cycle. In particular, via technical equipment and work facilitation, they increase safety and health protection. More and more at a reasonable cost.

THE BASIC AMICUS® HARDWARE

The robot - precise and fast handling

The AMICUS® (powered by FANUC) offers high performance in a small space and is ideal for loading and unloading machines and for handling and positioning parts in confined factory environments. To ensure maximum flexibility, it features a compact arm and wrist. And thanks to its new, improved design and drive train, it offers significantly higher axis speeds and motion performance. With an increased active stroke of 1831 mm, it also offers a generous working range, with increased rigidity that results in improved repeatability of ± 0.02 mm. To avoid snagging and improve reliability, cable routing is internal. By combining performance with reliability, AMICUS® maximizes throughput to increase profitability and offers easy installation and low cost of ownership.



The control - a new generation of advanced technology

The AMICUS® controller sets a new standard for smarter productivity. It is designed to help facilitate the use of robotics and automation in the manufacturing industry. Equipped with a new generation of advanced integrated hardware and more than 250 software functions, it is your key to robot performance in terms of cycle time, speed, accuracy and safety. The AMICUS® also offers full connectivity via an Ethernet network that allows easy connection to robots, remote computers and other hardware. Designed for increased ease of use and minimal power consumption, the controller is available in four different enclosures to maximize your floor space and production cell layout. The flexibly designed iHMI user interface impresses with high screen resolution and strong processing power.

WE ARE AT YOUR SIDE THROUGHOUT THE ENTIRE LIFE CYCLE



With our PROcheck life cycle approach, we accompany you on the way to your goal. It is our philosophy that for a functioning and successful partnership we must always have your process in view and to look after it throughout its entire life cycle with our products, our services, and our tools. We've developed PROcheck for precisely this because "we are always there for you".

PROcheck categorizes all instruments and actions with which you can keep an eye on the efficiency and potential of your processes at all times in order to optimize your success. As a result, you'll always be in perfect flow in the future!

Our commitment to and our understanding of this approach have a lot in common with all of our personal lives.

PROCESSING STORAGE MIXING FILLING PACKING PALLETIZING LOADING DIGITALIZATION



PROCHECK CONSUMABLES

Consume intelligently by ensuring your process receives what it requires to operate perfectly.

Did you know that with some processes, more money is spent on the annual requirement of consumables than what is spent on the original one-time investment for the equipment? Consumables are the fuel for your process.

You need the right material for peak performance and success. We consult, design and even provide your consumables for every step and phase of your project. Regardless of whether you are commissioning, ramping up or if you simply want to optimize your process on an ongoing basis.

Our full service for your optimum bag packaging

- Architecture
- Design
- Testing
- Starter-kit
- Full bag supply

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