AUTOMATION MATERIAL FLOW INTRALOGISTICS

MAXIMUM THAT'S WHAT WE STAND FOR OPTIMISATION

SMART-FLEXDEPOT
made by **AMI**

ORDER PICKING AND STORAGE AUTOMATION

THIS IS US

made by **AMI**

AMI develops the latest technologies in intralogistics. The combination of a high level of industry expertise and technological knowledge paves the way for successful automation concepts and solutions.

THIS IS WHERE WE **DEVELOP** AND **MANUFACTURE** FOR YOU

AMI Förder- und Lagertechnik GmbH was founded in Alpenrod in 1987 and has been headquartered in Luckenbach in the Westerwald since 2012. Currently, we employ more than 200 people, and we have significantly expanded our capacities for development and production in recent years. We produce components and modules for automated intralogistics systems and equipment on 16,000 square metres in our factory halls, furnished with state-of-the-art machinery and a vertical range of manufacture of over 87%. Our portfolio also includes robot-assisted units for manufacturing and assembly, as well as fully automated production lines for a wide range of industrial applications.

OPTIMISED USE
INDIVIDUAL CUSTOMISATION

ORDER PICKING
AND STORAGE AUTOMATION

SMART-FLEX**DEPOT**
made by **AMI**

Illustration shows customised version

SMART-FLEX**DEPOT**
made by **AMI**

Retail

Wholesale and central storage

Spare parts

Pharmacies

Industry

Hospitals

Electronics

Chemical industry

Pharmaceuticals & cosmetics

and many more...

CUSTOM-MADE
SPECIALISED SOLUTIONS

Our specialist team
will be happy to inform you.

CAN BE ADAPTED TO SPECIFIC INDUSTRIES

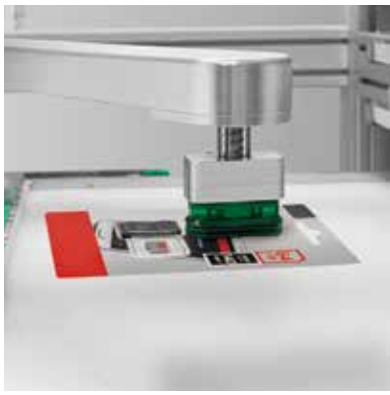
Our SMART-FLEX**DEPOT** is used in industry, mail order business and retail as well as logistics services to store and pick products such as packaged spare parts, electronic components, cosmetics, pharmaceutical products and filled bag packaging quickly, safely and easily.

EVERYTHING **IN HAND**

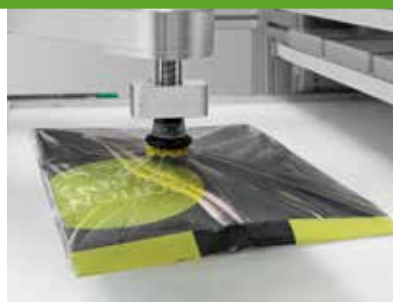
The SMART-FLEX**DEPOT** features a double rotating gripper system, which can handle many types of objects, such as round bottles, oval tubes, cans, etc..

Your packs/products are moved gently thanks to an appropriately designed vacuum system. The handling system is customised to the customer's product and its requirements.

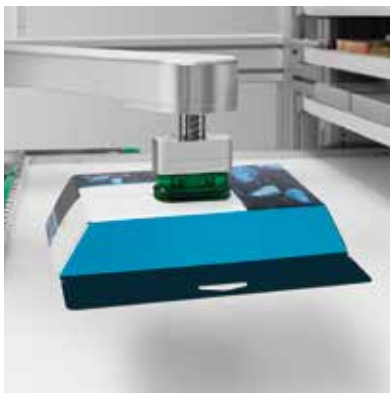
Precise 3D measurement in storage mode is used to detect the shape of the products and determine the best possible picking and storing positions.



PERFECTLY **CUSTOMISED**
ADAPTED TO SPECIFIC INDUSTRIES

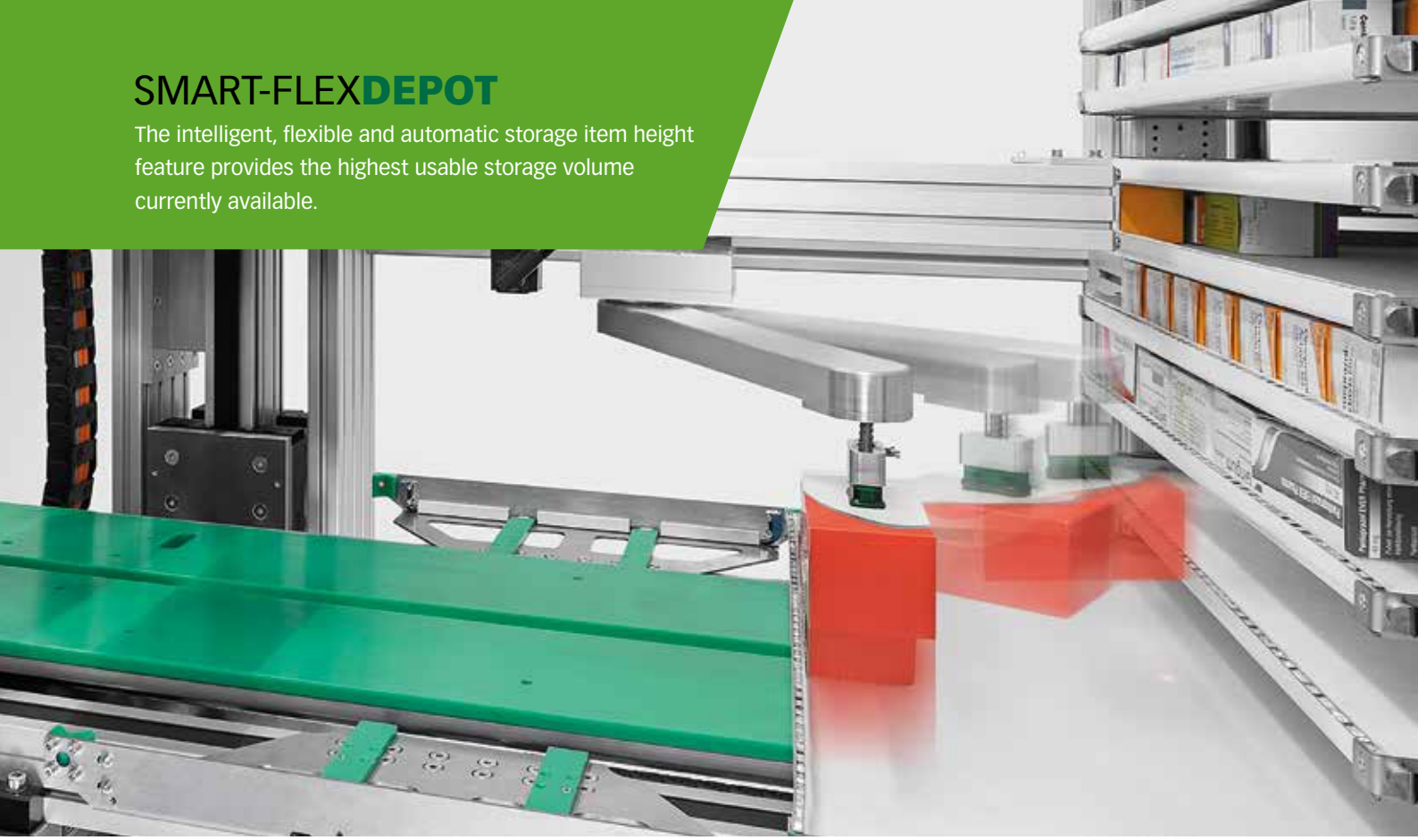


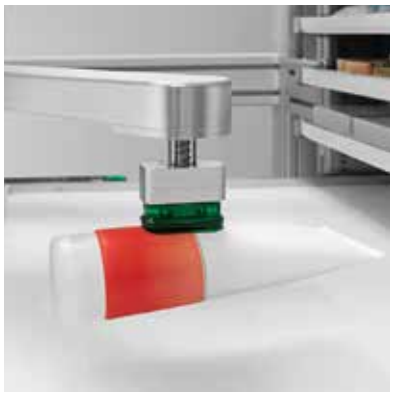
Can be used in almost **all industry segments** as well as **wholesale and retail**

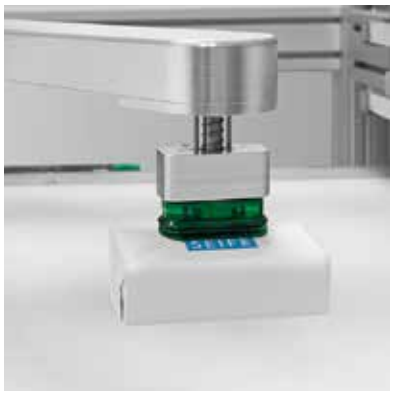


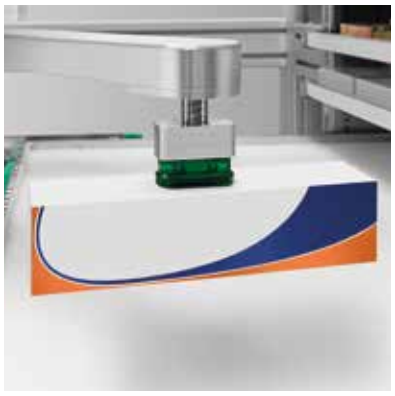
SMART-FLEX**DEPOT**

The intelligent, flexible and automatic storage item height feature provides the highest usable storage volume currently available.



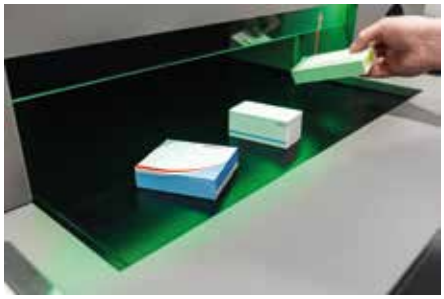






PHARMACY **MANAGEMENT**

RETHOUGHT – FROM OPTIMUM TO MAXIMUM



With the SMART-FLEX**DEPOT** we solve a challenge in the healthcare industry by customising automation solutions to your requirements. Our automatic order picker optimises and simplifies your daily workflows, saving valuable working time. This in turn has a positive effect on your internal processes. Maximum working efficiency and top customer care are ensured.

SEMI-AUTOMATIC STORAGE

The **semi-automatic** SMART-FLEX**DEPOT** currently offers the highest value on the market in terms of usable storage volume for accommodating a wide range of goods. Constant stock reconciliation between the automatic order picker and the enterprise resource planning system prevents stock shortages.

During **storage**, the barcode on an item is scanned before the item is placed on a specially defined and marked area on the storage conveyor; after this, no more manual steps are involved. The items are placed in rows but do not have to be sorted by type, as the scan has already transmitted all the key parameters for the internal process in the machine.

With a package size of, for example, 124 × 65 × 50 mm (L × W × H), the storage capacity is between 3,300 and 100,100 packaging units.

SMART-FLEX**DEPOT**
made by **AMI**

INTELLIGENT, FLEXIBLE STORAGE AND
ORDER PICKING WITH MAXIMUM **USABLE VOLUME** AND
MAXIMUM **STORAGE DENSITY.**

FULLY AUTOMATIC STORAGE

Storage of cuboid products is **fully automated** and currently offers the highest **value** on the market in terms of usable space for storing **a wide range of goods** in **industry, mail order business** and **retail,** as well as in **logistics services**.

The SMART-FLEX**DEPOT** I SFD400 is the innovative, fully automatic extension of the standard version. Items are stored by placing them on the storage conveyor or through the feed hopper (which saves space). A mixed batch of products of different sizes, shapes and weights can simply be tipped into it.

The SMART-FLEXDEPOT I SFD400 boasts an average cycle time of around 400 products per hour, making it currently the fastest fully automatic order picker on the market.

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Currently the fastest fully automatic order picker on the market!

EFFICIENT **STORAGE**

Due to random storage, maximum storage capacity is achieved even in extremely small spaces.
Storage is optimised automatically.
The intelligent, flexible and automatically adjustable storage item height allows efficient storage. If required, orders can be entirely picked and provided on load carriers.
Easy manual removal of stored goods is possible at any time, even in the event of a malfunction.

3D ANIMATION

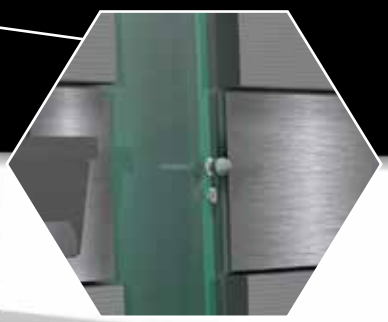
Illustration shows customised version

SHUTTLE PRINCIPLE

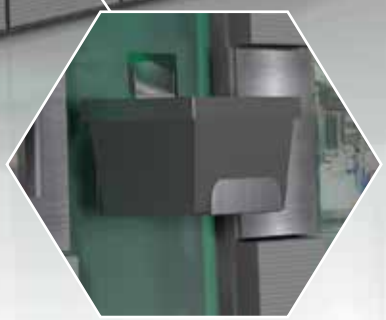
Very light and rigid load carriers, which are made from materials used in aviation technology, can be moved freely in the system. This makes it possible for them to be fully loaded in the storage area and then placed in the corresponding storage slots. The resulting short travel distances allow faster storage and removal. In addition, the height categories for the load carriers can be automatically adapted to changes in the product range without user intervention.

TOUCH SCREEN
The storage station features a large touchscreen that provides information on all important functions. The operating software enables simple, fast and safe operation of storage and removal functions with clearly organised menus.

STORAGE
Complete deliveries are stored easily without interruption.
Stored goods are precisely measured and logged using 3D measuring.



SERVICE
Intelligent drive and axis technologies ensure precise, low-noise technology with maximum storage density in the smallest possible space.



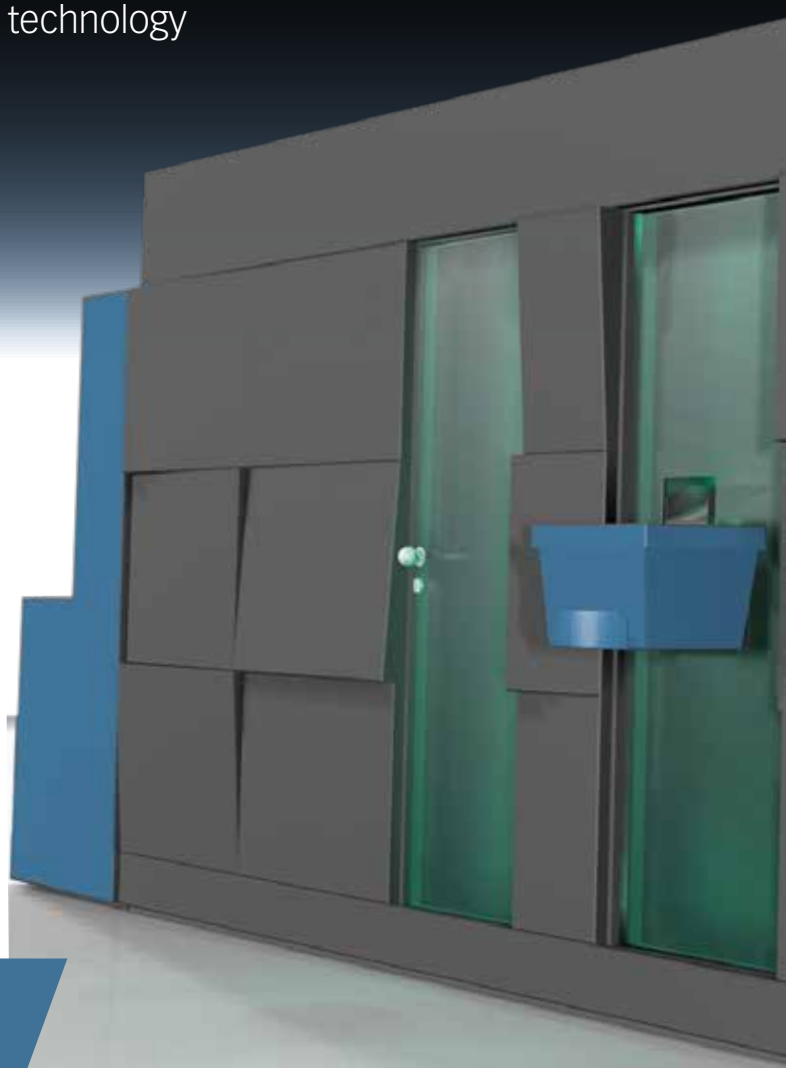
REMOVAL
The number and positions of the removal points can be freely selected. Shelves for wholesale containers are provided as standard. Conveyor belts, chutes, spiral conveyors, etc. can be connected to additional removal points at any time.

PERFORMANCE
High storage and removal performance due to shorter travel distances.

Equipped with the latest air-conditioning technology to maintain a constant temperature in an energy-efficient manner.

Thanks to a special enclosure and an integrated cooling unit, the SMART-FLEX**DEPOT** can also be used as a warehouse for products that need to be stored at low temperatures.

To ensure that the cold air remains in the depot, the storage and removal points are equipped with special airlocks. Continuous temperature monitoring ensures the safety of the stored products. This version of the SMART-FLEX**DEPOT** is ideal as storage for a variety of refrigerated articles or as an automated shop for a wide range of food products.



Also suitable as **cold store**

CUSTOM-MADE
COOLING MODULES
DOWN TO 0°C
Available for use in the **low temperature range.**
Our specialist team will be happy to advise you.

OPERATING**SOFTWARE**

Operation of storage and removal functions

SIMPLY**APP**

Everything under control at all times

SIMPLY**SMART**

Operating software

The SMART-FLEX**DEPOT** operating software and app enable simple, quick and safe operation of storage and removal functions thanks to clearly structured menus. The system can be easily adapted to existing systems and expanded via interfaces.

SYSTEM**FEATURES**

- Error overview
- Overview of all pending orders
- Optimised emergency mode
- Notification of products that have passed their expiry dates
- Batch and removal recording
- Storage key figures (storage depth, storage time, occupancy, etc.)
- Complete package tracking
- Easy operation
- Measurement (notebook)
- Statistics
- Stock-taking
- Interfaces to other systems

SMART-FLEX**DEPOT**
made by **AMI**

For optimum usability, the depot offers a **large touchscreen** that provides an overview of all the important functions. The integrated 2D scanner ensures fast recording and storage of the goods.

STORAGE

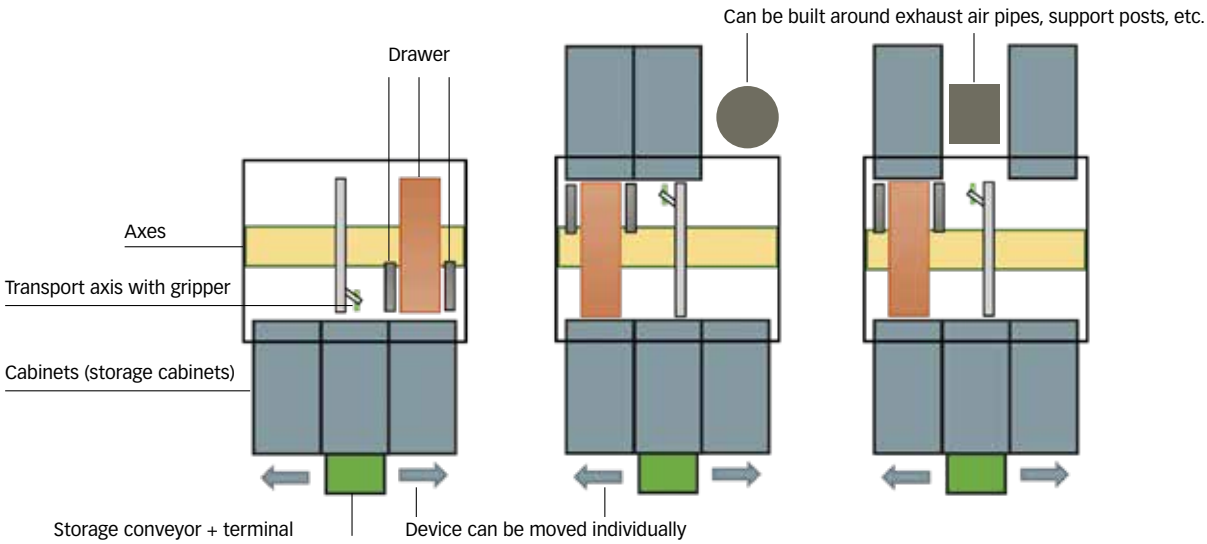
With SMART-FLEX**DEPOT** the entire drawer can be used as storage space. All stored goods have specific storage locations and can be stored and removed as quickly as possible thanks to direct access**, eliminating the need for time-consuming relocation.**

SIMPLE **ASSEMBLY**

Factory prefabricated modules enable quick and easy installation, whether in vaults, old buildings or modern industrial buildings.

All machines are fully assembled in our factory before delivery and undergo an extensive in-house dimensional and functional test (FAT = factory acceptance test).

INSTALLATION OPTIONS



STANDARD COLOURS

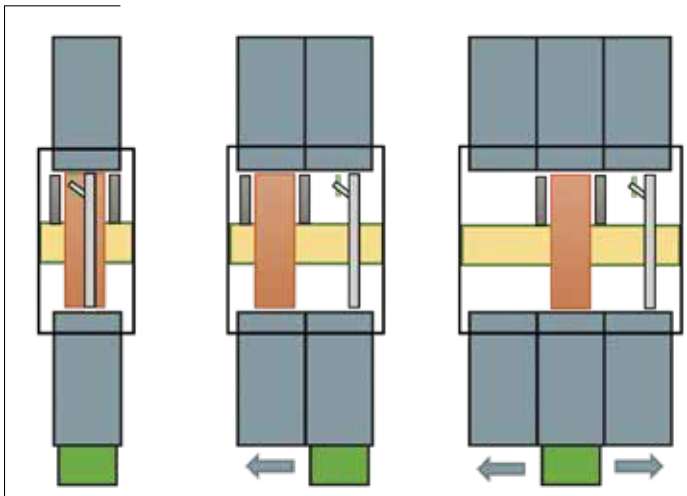
Individual colour requests or finishes in wood or aluminium look on request.

RAL 9007 Grey aluminium
RAL 9010 Pure white
RAL 3009 Oxide red
RAL 6020 Chrome green

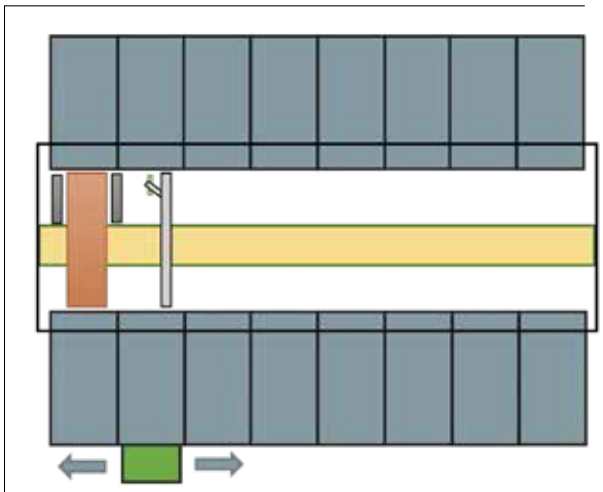
Illustrations show standard version

1 mm INCREMENTS

MODULAR DESIGN



MINIMUM dimensions:
Width = 1.3 m; length = 2.5 m; height = 2.15 m



MAXIMUM dimensions:
Width = 6.0 m; length = 6.0 m; height = 4.0 m

Thanks to its modular design, the SMART-FLEXDEPOT can be customised on site in **1 mm** increments to suit the structural requirements. Flues, landings, wall openings and exhaust air pipes, supports or beams are no obstacle.

TECHNICAL **SPECIFICATIONS**

STANDARD SMART-FLEX**DEPOT**

- MINIMUM dimensions: Width = 1.3 m; length = 2.5 m; height = 2.15 m
- MAXIMUM dimensions: Width = 6.0 m; length = 6.0 m; height = 4.0 m
- Customised dimensions:
- Structural adaptations in dimensions and design can be flexibly realised
- Suction cup => max. 1 kg load capacity (higher transport weights on request)
- Removal and storage time depending on transport weight
- Storage time: => 6–12 seconds
- Removal time: => 8–14 seconds
- Maximum item dimensions (square): Length: approx. 250 mm; width: approx. 150 mm; height: approx. 100 mm (larger dimensions on request)
- Minimum item dimensions (square): Length: approx. 50 mm; width: approx. 25 mm; height: approx. 10 mm (smaller dimensions on request)
- Dimensions (round): Ø 10–100 mm
- Ambient temperature: > 0°C to +40°C
- Axis speed: approx. 2.5 m/s
- Safety brakes on the functional axes
- UPS (emergency operation)

STORAGE CAPACITY

Example calculation *=> given an item size of 124 × 65 × 50 mm (L × W × H)*

the SMART-FLEXDEPOT storage capacity ranges from approx. 3,300 to 100,100 items.

MAXIMUM
SYSTEM ADVANTAGES

SMART-FLEXDEPOT
made by **AMI**

- Space miracle
- 24/7 service
- Perfect fit
- Automatic software updates
- Easy to use
- Bespoke design
- Modular expansion options
- Top-quality materials used
- Maximum utilisation
- Low total weight

Our SMART-FLEXDEPOT is also suitable for storing and picking products with the highest security priority.
Our specialist team will be happy to advise you.

Watches

Jewellery

Gold bars and coins

HIGH-SPEED**DEPOT**

The HIGH-SPEED**DEPOT** can be used for storing and picking goods in folding boxes. The items are stored by type in specially designed slots. There are 2 storage zones arranged in an A-shape. A conveyor belt is located between the two storage zones to transport the picked products. There is an automatic pusher on a linear axis below each of the slots, which moves the items from the respective slot onto the conveyor belt. Empty storage locations are detected immediately by intelligent sensors. The slot width is variably adjustable, facilitated by an integrated scale.

After the user sets the width, the size change is automatically recognised through a reference test. The intelligent control system creates an imaginary picking field on the conveyor belt during the picking process. When the system picks the goods, all items in a given order are pushed into this field by the pusher. The picking area is dynamically adjusted in line with the order size.

Each individual HIGH-SPEED**DEPOT** can be extended up to a maximum module length of 2 metres. These modules can – theoretically endlessly – be connected. In this case, the conveyor belt in the centre is extended accordingly. Depending on individual customer requirements, additional conveyor technology can be installed at the end of the picking conveyor, e.g. to store the goods in transport boxes and automatically transport them.

TECHNICAL SPECIFICATIONS:

Slot height:	Max. 1,500 mm
Item width:	Min. 50 mm / max. 120 mm
Item length:	Min. 50 mm / max. 180 mm
Item height:	Min. 15 mm / max. 120 mm
Maximum module length:	2,000 mm
Minimum module length:	1,000 mm
Grid for module length:	250 mm
Maximum weight per slot:	10 kg
Number of slots per module:	Max. 2 × 28 slots

Up to 2 items per second can be picked per storage zone.

MAXIMUM SYSTEM AVAILABILITY

THERE FOR YOU AROUND THE CLOCK

OUR SERVICES

- 24/7 availability and on-site service
- Checks, inspection and maintenance
- Maximum availability of spare parts
- Training and apprenticeship
- Maintenance and repairs

BENEFIT FROM OUR SERVICES AND EXPERIENCE

+49 2662 9565-0

YOUR AMI SERVICE TEAM

MINIMISE RISK OF FAILURE
SERVICE, MAINTENANCE, SPARE PARTS

YOUR PARTNER
FOR CONVEYOR TECHNOLOGY,
MATERIAL FLOW
AND INTRALOGISTICS

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