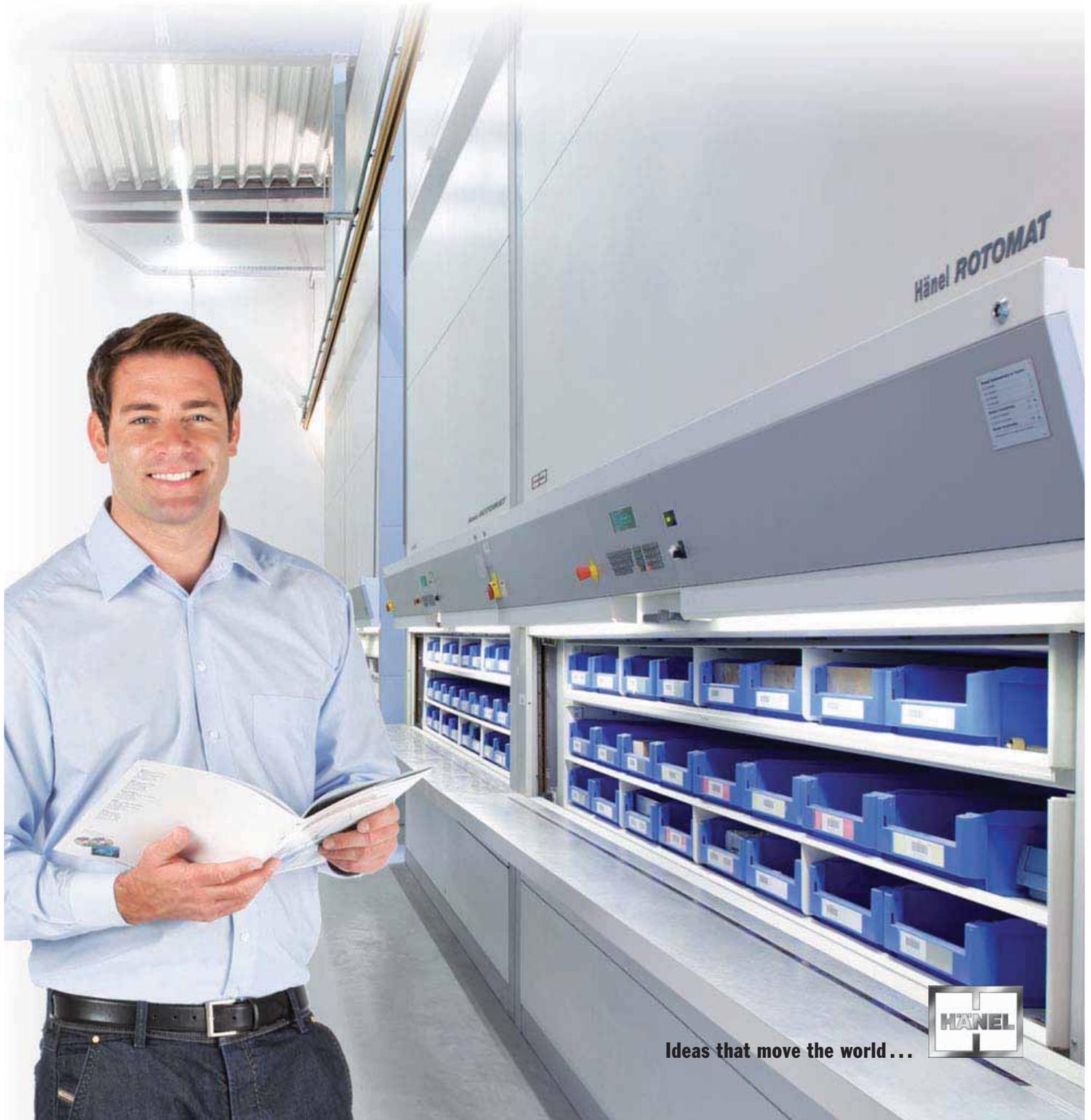


**Hänel Rotomat® industrial carousels:
Efficient storage, optimized access times,
ergonomic materials handling**



Ideas that move the world ...



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HERTEL ROTOMAT

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Hänel Rotomat® industrial carousels: Optimizing procedures, increasing flexibility, lowering costs

**Rationalization – cost-cutting – efficiency:
these are all demands that modern-day storage
organizations must meet!**

Quality and leading- edge technology ‘Made by Hänel’

In 1953 Gerhard Hänel founded the office equipment company ‘Hänel Bürosysteme’. By 1957 Hänel was series-producing filing carousels based on the Ferris wheel principle – the first manufacturer in Europe to do so.

Today Rotomat® carousels and Hänel Lean-Lifts® are produced in three manufacturing plants – and exported worldwide. Hänel has distributors in over 60 countries across the globe.

Innovation and performance, dynamics and ideas, new technologies and team spirit have made Hänel one of the leading providers of storage and organization systems.

With the Hänel Rotomat® industrial carousel, we offer a flexible storage and provisioning system that adapts optimally to your needs.

Up to 60 % more storage capacity

The Hänel Rotomat® industrial carousel makes use of the available room height and creates up to 60 % more storage capacity thanks to its compact design. This means costly warehousing space can be used more efficiently.

This saves costs!

Work time slashed

The Hänel Rotomat® industrial storage carousel brings the required parts to the retrieval area in just a few seconds.

Ergonomics

No more bending, ladder-climbing or walking long distances to search for and store parts or articles. The required items are brought automatically to the optimum ergonomic retrieval height.

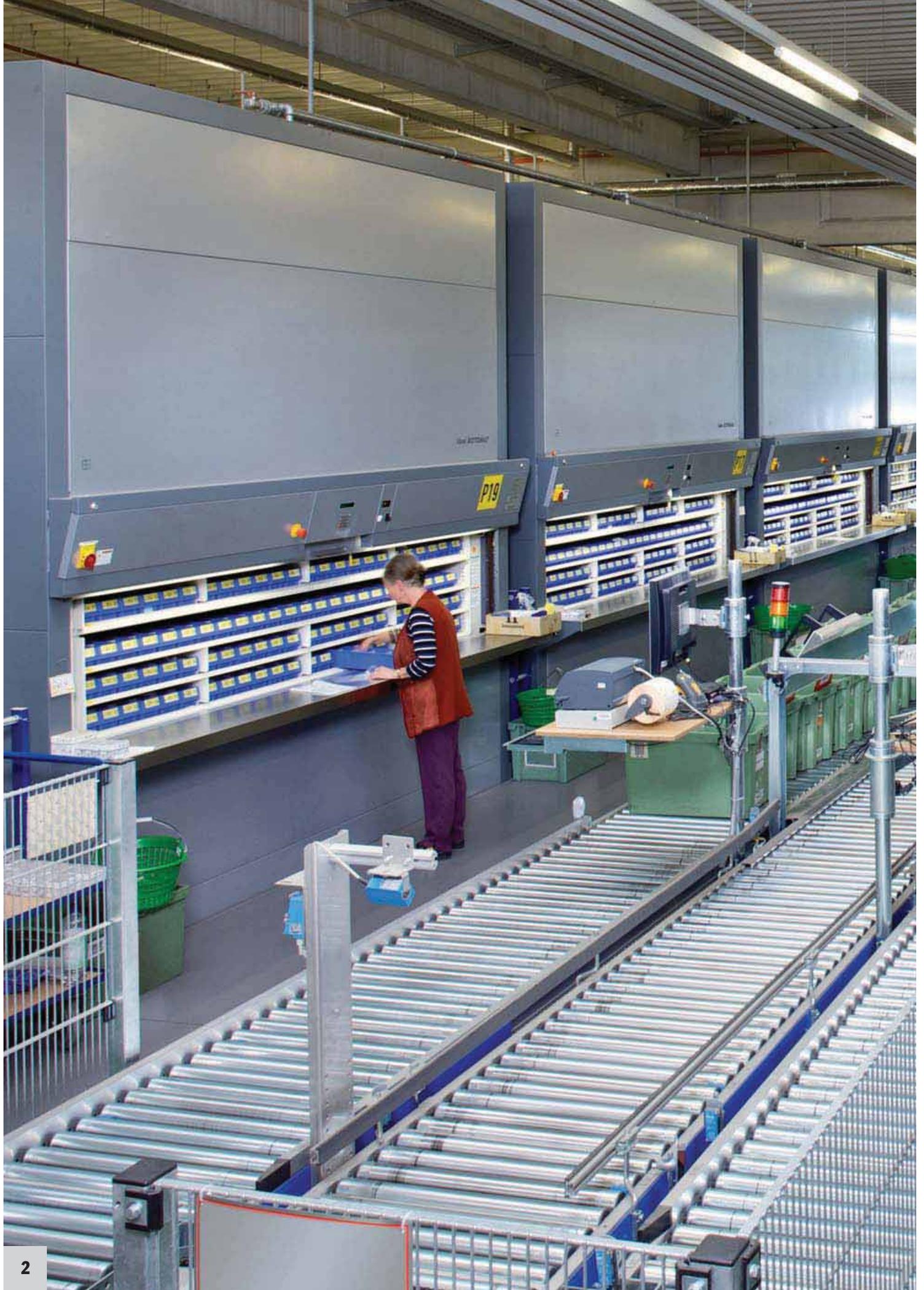
We are committed to environmental protection

It goes without saying that production at our three plants meets the latest environmental guidelines and even exceeds them. Only environmentally friendly, recyclable materials are used.

The right decision

If you want to improve your storage organization and reduce costs, you should talk to the specialists at Hänel first. They will work with you to develop your own ‘tailor-made intralogistics concept’.







High order-picking performance due to short travel paths

Around 1,700 items completed per workstation per day – maximum efficiency in the dispatch warehouse.

The Hänel Rotomat® principle

‘Vertical carousel technology’ – simply brilliant

**The principle is simple.
The applications are brilliant!**

The compact design of the Hänel Rotomat® enables up to 60 % more storage area to be created on a minimal footprint by making use of the available room height.

The operating principle

The Hänel Rotomat® creates an enormous amount of storage volume on a small footprint. It works on the Ferris wheel principle, i.e. the goods come to the operator, not the operator to the goods.

The structural design

Self-supporting steel plate casing, comparable to the cellular structure used in the aircraft industry. Lockable, smooth-running sliding doors. Environmentally friendly powder coating, as well as impact-resistant and shock-proof stove enamel finishes. There are five attractive colors to choose from. Customized finishes are possible.

Whether it's materials handling in the production hall or computerized spare parts storage – the Rotomat® can do it all!

The drive system

Most Hänel Rotomat® industrial carousels are powered by two 400-V three-phase motors. Pole-switching three-phase motors are used as standard, enabling gentle but powerful acceleration and braking even under different load conditions.

The intelligent Hänel control systems

Powerful Hänel microprocessor control units offer the possibility of interfacing with computers and other peripheral devices, giving you an optimal overview at all times.

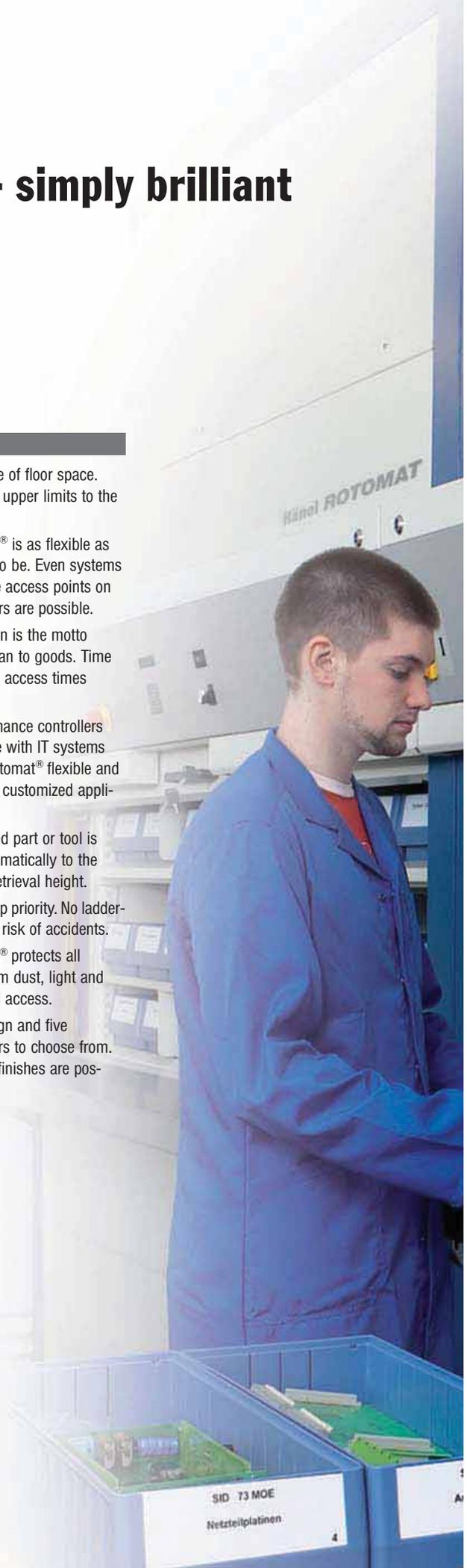
The safety

Hänel ensures maximum safety by using the Hänel safety threshold switches and light-barrier curtains compliant with DIN EN 15095. The Hänel Rotomat® carousels have the German GS mark and the Swiss SUVA inspection certificate attesting to their safety.



The pluses

- ▶ Optimum use of floor space. There are no upper limits to the Rotomat®.
- ▶ The Rotomat® is as flexible as you need it to be. Even systems with multiple access points on different floors are possible.
- ▶ Goods to man is the motto instead of man to goods. Time is saved and access times reduced.
- ▶ High-performance controllers and interface with IT systems make the Rotomat® flexible and adaptable to customized applications.
- ▶ The requested part or tool is brought automatically to the ergonomic retrieval height.
- ▶ Safety has top priority. No ladder-climbing, no risk of accidents.
- ▶ The Rotomat® protects all the parts from dust, light and unauthorized access.
- ▶ Elegant design and five modern colors to choose from. Customized finishes are possible.



Hänel ROTOM



HD T3 MOE
Schußplatte
4

Hänel Rotomat® industrial carousels at a glance



Rotomat® model	900/100	900/115	900/125	936
Maximum payload per shelf in kg	150	150	150	250
Maximum payload per carousel in kg	3,000	3,000	3,000	6,000
Shelf depth in mm	370	416	470	630
Shelf width in mm	2,243 2.838	2,243 2.838	2,243 2.847	2,915
Standard carousel width in mm (customized carousel widths possible)	2,600 3.270	2,600 3.270	2,600 3.280	3,420
Carousel depth in mm	1,000	1,155	1,255	1,615
Equipment features (standard)				
Twin motor design / Soft start with pole-switching motors	depending on version	depending on version	depending on version	✓
Load imbalance warning device for payloads over 3 tons	✓	✓	✓	✓
Light-barrier curtains compliant with DIN EN 15095	✓	✓	✓	✓
Stable carrier suspension with 4-point sliding carriage principle	✓	✓	✓	✓
Individual features				
Networking with IT systems via the controller	●	●	●	●
Connection of barcode scanners	●	●	●	●
Integrated storage management (no PC required)	●	●	●	●
Customized finish	●	●	●	●
Multiple access points on different floors	●	●	●	●
2nd safety circuit / Safety Bypass package	●	●	●	●
Frequency converter for gentler, smoother start	●	●	●	●

This is only a sample from our versatile product portfolio of Hänel Rotomat® industrial carousels. For special features and customized compartment divisions, speak directly to our specialists (see also page 26).



946	950	956	970	980	985 S	985	990
330	400	340 / 400	250	600	750	500	250
6,000	10,000	10,000	6,000	14,000	14,000	14,000	10,000
630	416	640	445	505	505	630	640
2,915	2,870	2,870	2,915	2,750	2,750	2,750	2,870
3,420	3,420	3,420	3,420	3,420	3,420	3,420	3,420
1,615	1,250	1,670	1,250	1,475	1,600	1,720	1,670

								Page
✓	✓	✓	✓	✓	✓	✓	✓	15
✓	✓	✓	✓	✓	✓	✓	✓	14
✓	✓	✓	✓	✓	✓	✓	✓	12
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●	●	●	●	●	●	●	●	34
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✓ = Standard

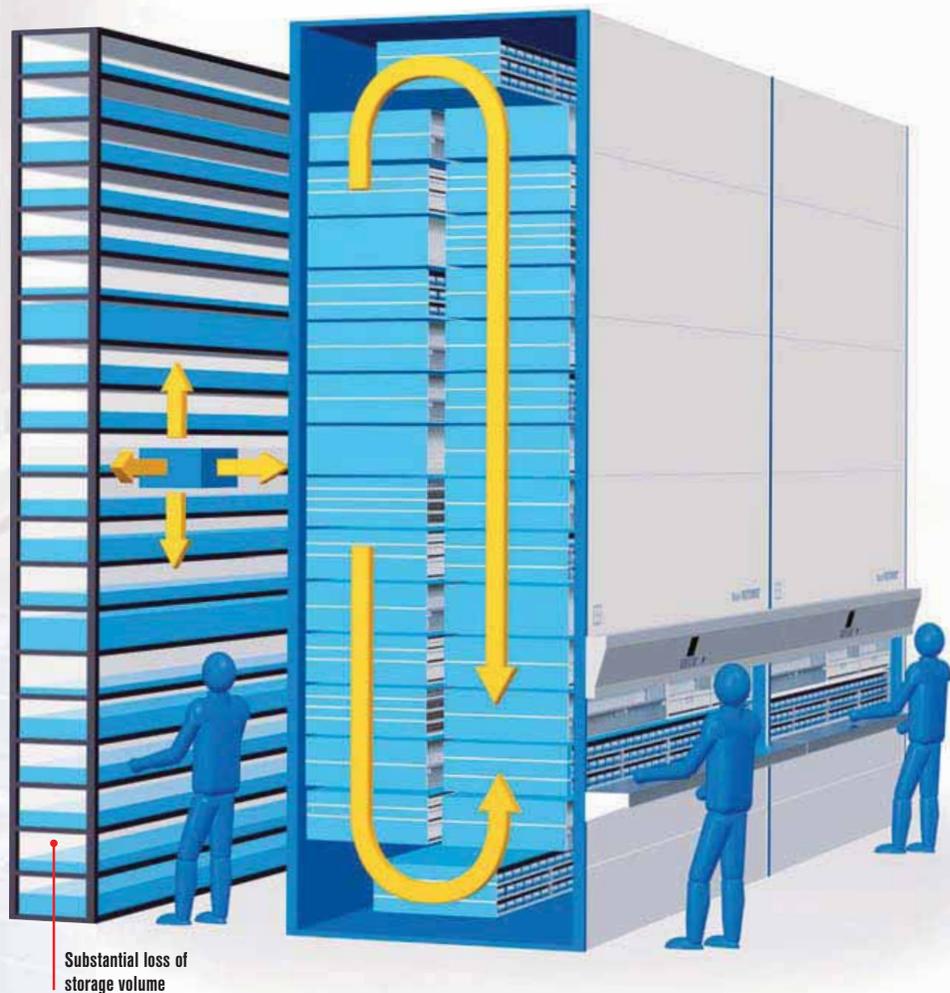
● = Optional



Less warehouse is more

Distinct advantages over conventional rack storage and MLS

The Hänel Rotomat® offers up to 60% more storage capacity than a miniload system or conventional rack store on the same footprint



Miniload system/
conventional rack storage

Hänel Rotomat®



One glance in the Hänel Rotomat® shows the advantages clearly: Adapting the multifunction carriers to suit the inventory items means that highly varied parts can be stored optimally without any loss of space!

Key points speak in favor of the Hänel Rotomat® industrial carousel:

The pluses

- ▶ Up to 60% more storage capacity.
- ▶ Storage capacity can be adapted step by step.
- ▶ Several people can operate multiple carousels and process jobs simultaneously.
- ▶ Retrieval times are considerably shorter.
- ▶ Units can be added, expanded or separated at a later time.
- ▶ Better usage of storage volume thanks to customized divisions in the multifunction carriers.
- ▶ Decentralized storage right in the production hall.

Hänel ROTOMAT

Hänel ROTOMAT



Hänel multifunction carriers

Adaptable and versatile

No two Hänel Rotomats® are the same, because each task demands a precisely defined solution

The task defines the fittings

We provide customized interior fittings, tailored to the individual demands of production systems and storage logistics. The mechanical parts and carrier sets are configured according to the size and weight of the storage goods. It's this flexibility that makes the Hänel Rotomat® so cost-effective.

The Hänel multifunction carriers offer you customized, variable interior fittings that can be adapted effortlessly to your personal needs and the different article heights. This achieves maximum compaction of the storage volume.

And a wide range of accessories are available, such as plastic boxes, tool inserts, molded trays for small parts, holders for milling cutters, etc., which compliment the Hänel Rotomat®, turning it into a complete logistics system that saves costs, makes optimum use of space, makes work easier and minimizes distribution times.

Hänel also offers customized special-purpose holders for SMD reels, cable drums, printing rollers, rods and tubes.

Our specialists would be happy to develop a tailored solution for your storage requirements.

The pluses

- ▶ Hänel multifunction carriers are absolutely stable and distortion-free.
- ▶ Variable fittings can be altered at a later date.
- ▶ Compartment dividers, bins, drawers or loose goods – the possibilities are endless.
- ▶ Long lifecycle and high load-bearing capacity up to 750 kg per carrier, depending on the model.



Multifunction carrier with different front edge variants



Multifunction carrier with intermediate shelves slotted into punched holes and with movable dividers



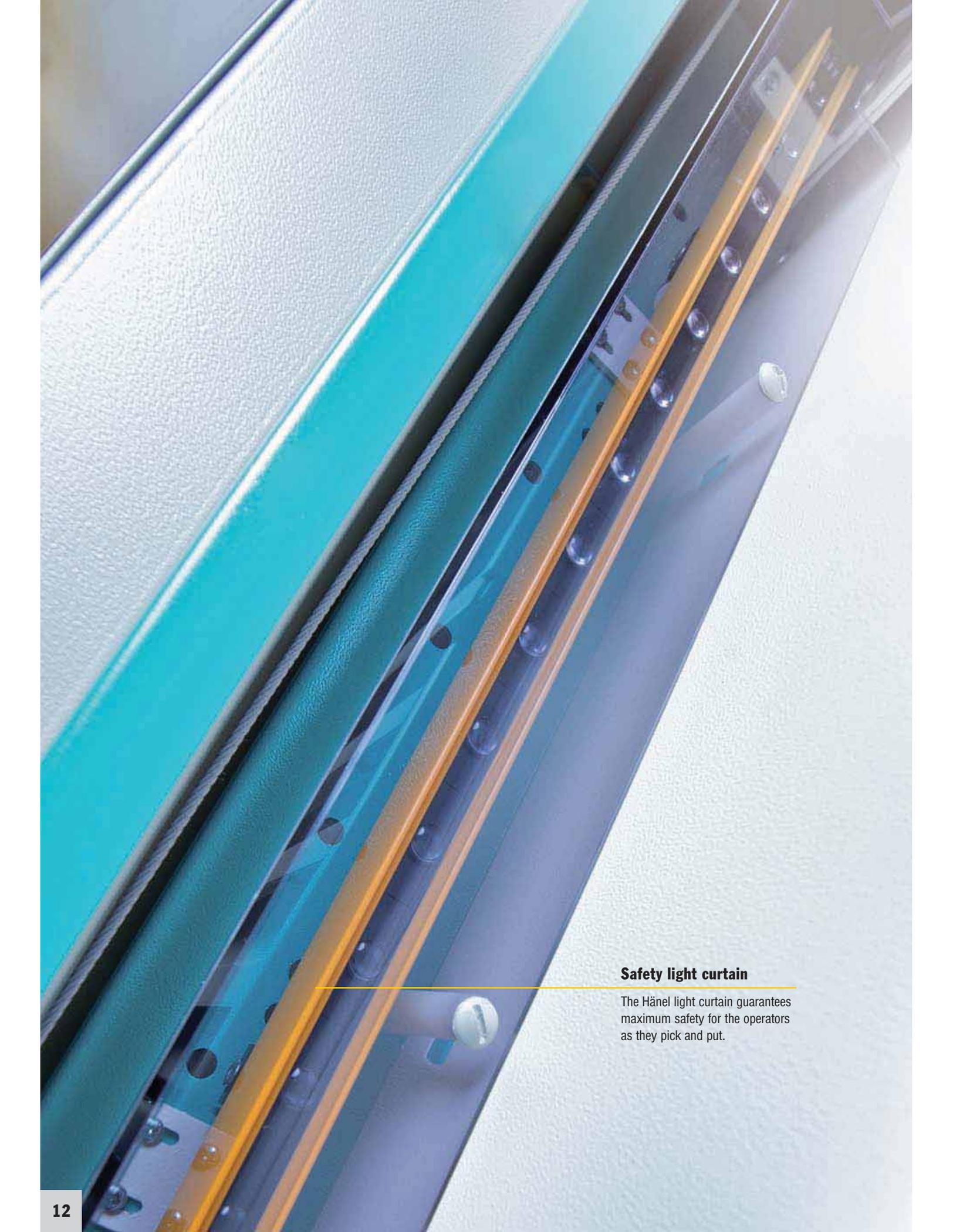
Multifunction carrier with front wall – trough version with movable dividers



Multifunction carrier with drawers of different heights slotted into punched holes



Multifunction carrier with lowerable front walls



Safety light curtain

The Hänel light curtain guarantees maximum safety for the operators as they pick and put.

Always well stocked with great ideas

The Hänel Rotomat[®] access point

Non-wearing V2A work counter

The V2A stainless steel work counter used on the Hänel Rotomat[®] is virtually wear-proof and not only looks good but enables users to pick, put and slide the storage bins with minimal effort. Behind it is the **Hänel safety threshold** which allows level-sweep access to the inventory while ensuring optimal personal protection at the same time.



Work counter of high-grade V2A stainless steel

The compartment indicator ensures error-free access and quick storage and retrieval

The LED display is integrated elegantly into the work counter. The sub-level indicator in front of each storage compartment ensures error-free retrieval. The compartment and sub-level are displayed on the LED strip as either one or two digits.



Error-free access with integrated compartment and sub-level indicators

Lockable sliding doors

The Hänel Rotomat[®] is fitted with a smooth-action, lockable sliding door. This protects the goods from dust and dirt as well as from unauthorized access. The sliding door is split, with the upper and lower halves providing a counterbalance to each other. This makes the door easy to open without the need for additional counter-weights.



The lockable sliding door protects the storage items from unauthorized access

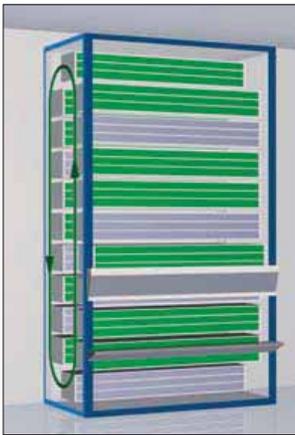
Everything in balance

High-tech for the storeroom

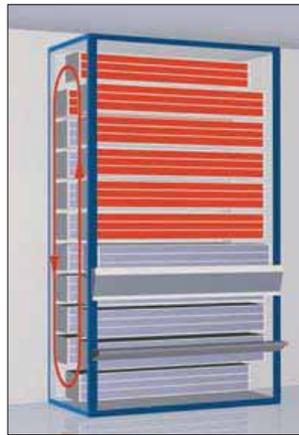
Safe loading thanks to the intelligent load imbalance warning devices UL 2 and UL 3 from Hänel

The load imbalance device not only warns of an uneven load distribution in the carousel, but also gives storage recommendations, indicating which carrier should be loaded next. This prevents uneven loads from arising in the first place.

The load imbalance device UL 3 is integrated in the Hänel microprocessor control unit.

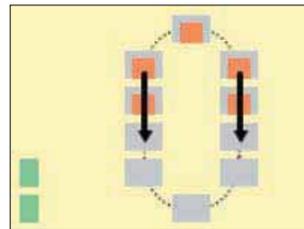


Uneven loads prevented by the load imbalance device UL 3

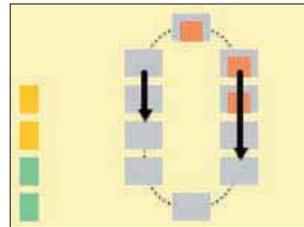


Unacceptably uneven load distribution without the load imbalance device

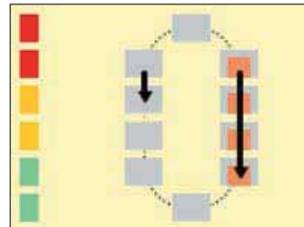
Load imbalance shown on the control display (UL 3)



Optimal load distribution



Minor load imbalance: Load imbalance warning device gives storage recommendation

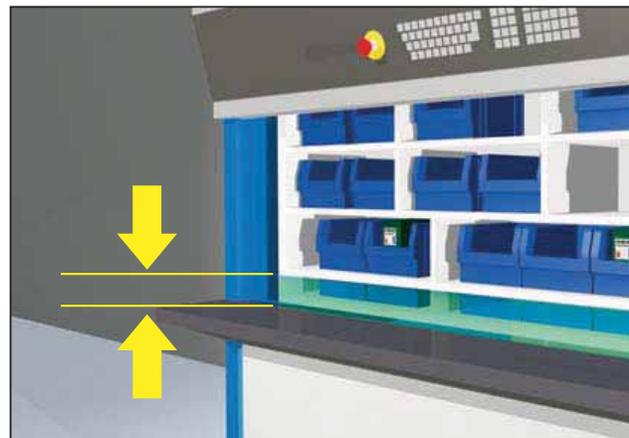


Load imbalance status: If storage recommendations are continually ignored, a load imbalance status can arise. Stock relocations are then recommended

Accurate positioning of the shelf levels

The Hänel Rotomat® multifunction positioning system MFPS 1 is able to position each level of a carrier with exceptional accuracy when the load is evenly distributed. The intelligent Hänel microprocessor control systems, such as the MP 12 N, also have a brake path monitoring and correction system installed which records any push-on effect caused by a high load imbalance and carries out a cor-

rection when the carousel starts up again. New stop positions can be programmed easily with the teach-in process.



Each retrieval level is precisely positioned and can be individually adjusted via the control unit

Keeping the wheels of industry turning

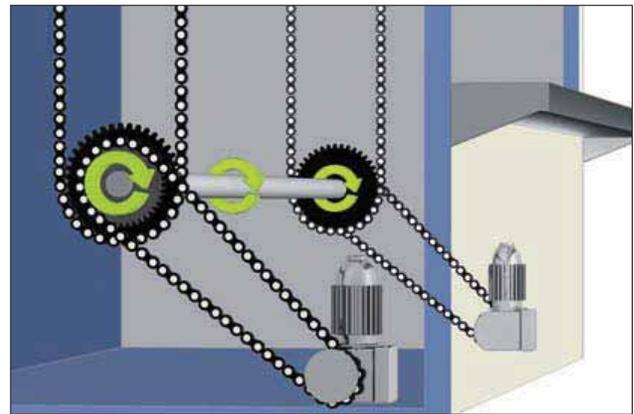
The Hänel Rotomat® drive components

Twin-motor design

The drive systems of all Hänel Rotomat® carousels are housed inside the carousel casing. This ensures optimal freedom of movement in front of the carousel.

Almost all Hänel Rotomat® industrial storage carousels are equipped with twin motors. This guarantees less wear and quieter running. The right and left drive motors are con-

trolled synchronously. The simultaneous acceleration and braking of the two drives means that the multifunction carriers are moved without distortion. The twin motor design also ensures optimal balance if the load on the carrier is distributed unevenly.



Stable carrier suspension on 4-point sliding carriage principle

The Hänel Rotomat® carrier suspension is designed according to the sliding carriage principle so that the carriers are suspended from 4 levers on 4 rollers on left and right.

Suspension from 4 levers means that transverse forces are safely absorbed, reducing wear substantially and making running quieter.

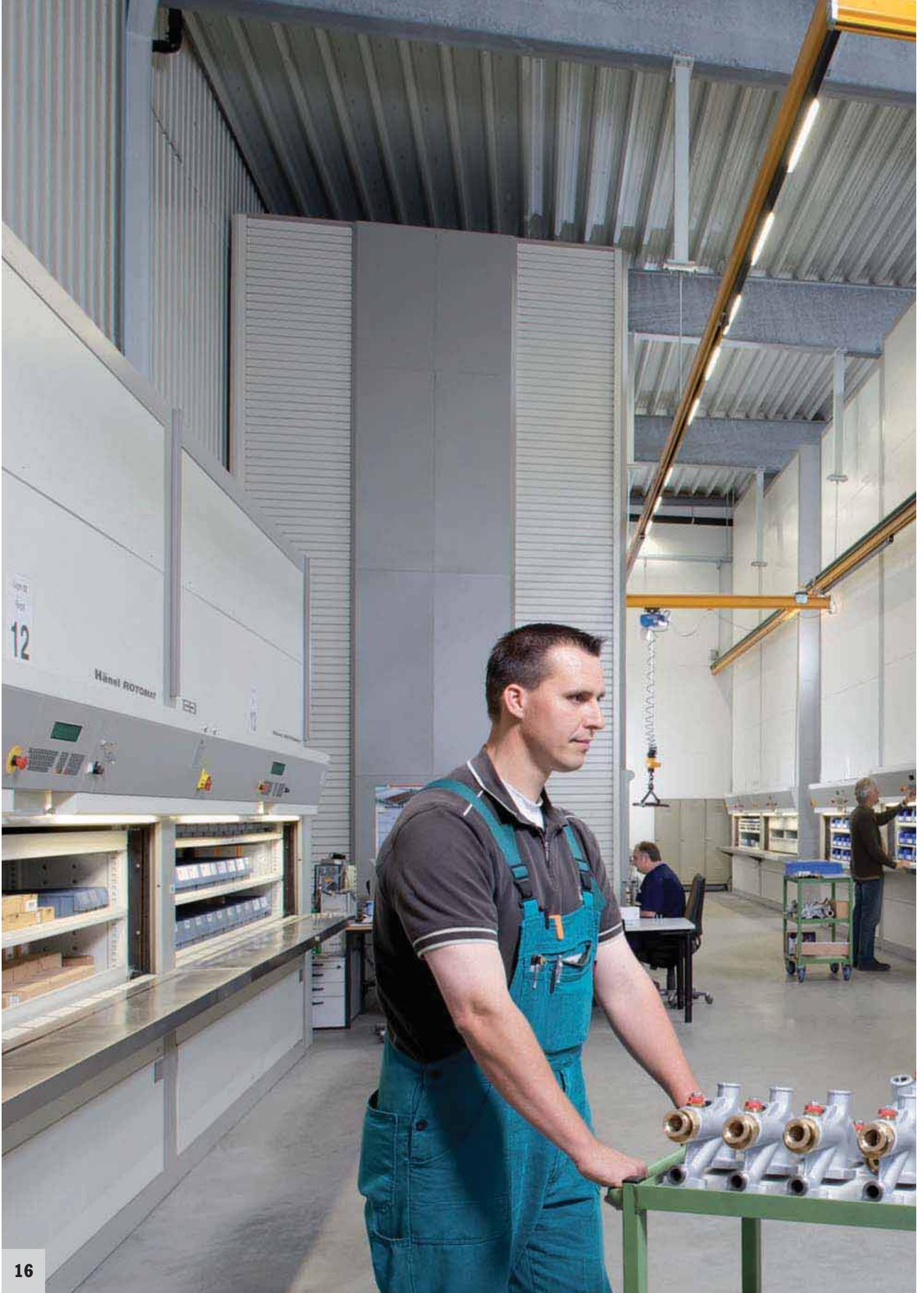


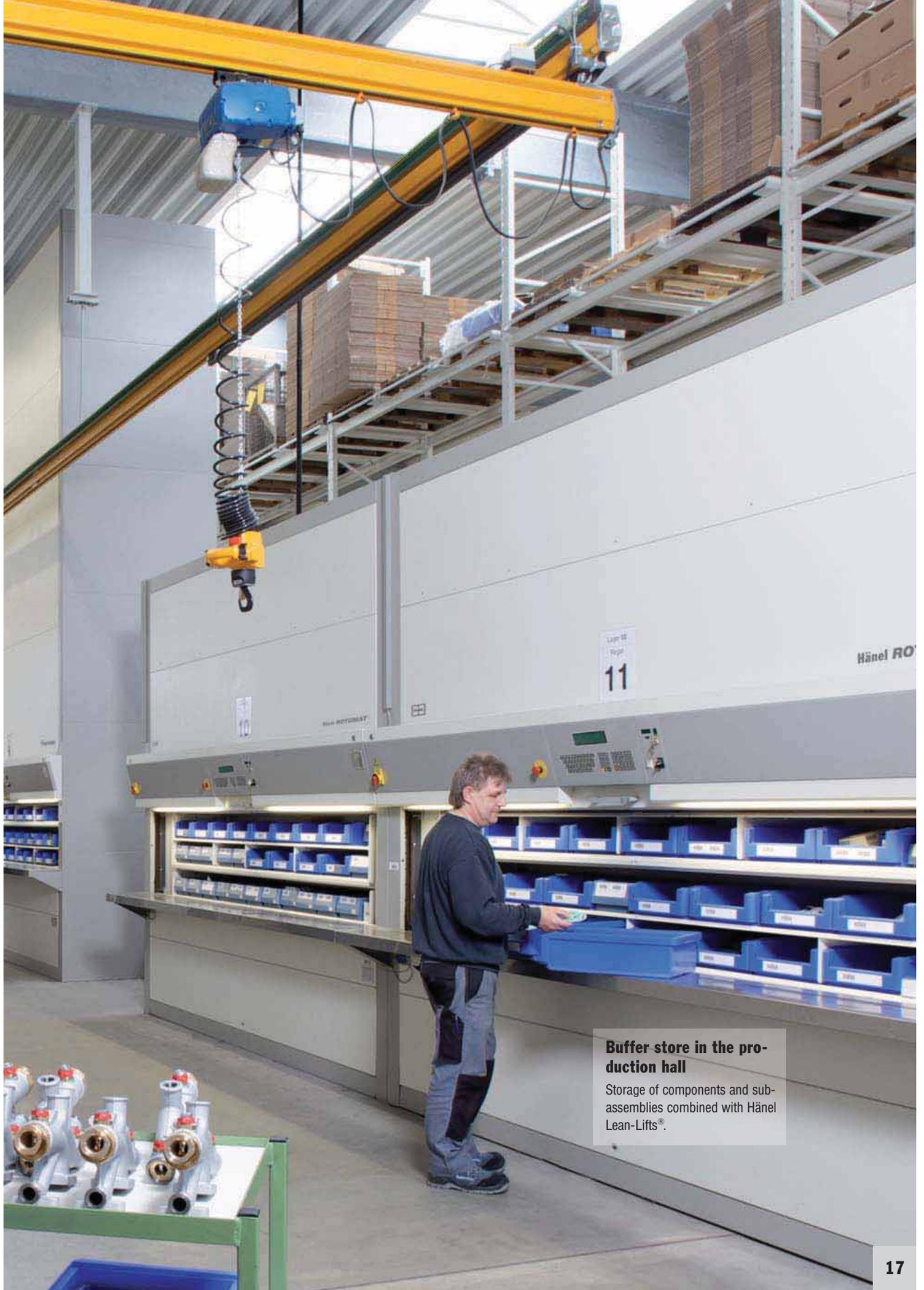
Safety Bypass System

Hänel Rotomat® industrial carousels work reliably and failure-free. If a malfunction should arise, however, Hänel's optional Safety Bypass System comes into effect in certain cases.

If a light barrier curtain or door switch is defective, for example, the user can continue to operate the Hänel Rotomat® until the Hänel service technician arrives by activating the Safety Bypass System and closing the sliding door.







Buffer store in the production hall

Storage of components and sub-assemblies combined with Hänel Lean-Lifts®.

Hänel Rotomat® industrial carousel: High-speed for the dispatch warehouse

Top order-picking performance due to short travel paths

To meet the demands of a modern dispatch warehouse, a complex intralogistics concept needs to be implemented. The Hänel Rotomat® industrial carousel is the ideal automated materials handling system for this purpose.

The vertical carousel with its short travel paths and therefore swift retrieval of requested articles enables top order-picking performance.

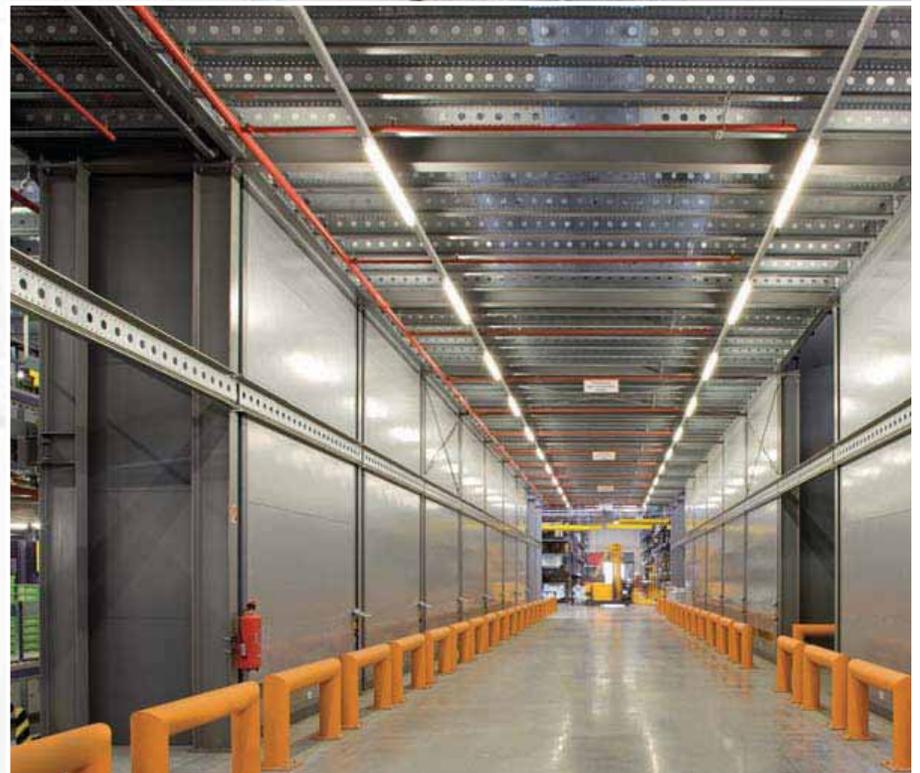
An operator can pick, put and fill orders at multiple Hänel Rotomats® continuously. As the Hänel micro-processor control systems are linked up to the enterprise resource planning system, the orders are displayed directly at the micro-processor controllers and the Hänel Rotomats® are pre-positioned in working groups.

Numerous customers worldwide use Hänel Rotomat® industrial carousels, for example in spare parts provisioning, for logistics services and in the mail order business.

Make use of our experience and talk to our specialists.

Order picking on the upper floor...

This dispatch warehouse consists of 13 Hänel Rotomat® industrial carousels each with an overall height of 9 m.



... Main storage area at basement level

Optimal use of the available storage area on multiple floors.





**The Hänel Rotomat®
industrial carousel as
a buffer store**

Protected interim storage of sensitive aircraft turbine shafts in the Hänel Rotomat® industrial carousel. This buffer store also includes eight Hänel Lean-Lifts®.

Handling heavy parts with ease

The Hänel Rotomat® heavy-duty carousels

Hänel has the right solution for heavy-duty requirements

Hänel Rotomat® industrial carousels can also cope with heavy and bulky storage items. Offering standard widths up to 3,420 mm (greater widths also possible), standard carrier payloads of up to 750 kg maximum and total payloads of up to 14,000 kg per unit, the Hänel Rotomat® is the ideal heavy-duty automated storage system.

Whether it's handling complete sub-assemblies, bulky components or tools – the Hänel Rotomat® industrial storage carousel brings all the items to the ergonomic retrieval height on request. This means a large number of parts can be stored in a safe and protected environment on a minimal footprint.

The powerful 2-motor drive system and robust design of the multifunction carriers along with the 4-point sliding carriage suspension makes the Hänel Rotomat® the optimal system for the metal-working industry.

The Hänel Rotomat® tackles the really tough jobs!



Secure storage of bulky parts in the Rotomat® industrial carousel



Heavy components and assemblies neatly stored



Tool storage in the Rotomat® industrial carousel



All parts safely in hand

Orderly storage of small parts

The Hänel Rotomat® with storage boxes and drawers on telescopic runners

Mail order businesses, production halls and spare parts centers all have one thing in common – they often need to store, retrieve and pick large numbers of highly varied small parts on demand.

Hänel offers different inserts and dividers for its carriers to make the job easier. Plastic boxes of various dimensions, for example, can be stored in the Hänel Rotomat®.

These boxes can be subdivided again, while the compartment sub-level indicator helps the user find and pick the required article quickly and without error.

Small parts can also be kept in drawers with telescopic runners to save space. These drawers are available in different heights, so that the compartment sizes can be adapted precisely to your stock.



Small parts stored in drawers on telescopic runners



Buffer store and dispatch center for parts used in mechanical engineering



Spare parts storage in the dispatch warehouse



Hänel Rotomat® ESD storage: Protected storage in the electronics industry

With its antistatic coating, the Rotomat® offers optimal protection for electronic components and devices

To avoid damage caused by electrostatic discharge, electronic devices and components must be handled, packaged and stored in an ESD-protected environment. With this in mind, Hänel offers its Rotomat® industrial carousels with a conductive work counter, multi-function carriers with an antistatic coating and mechanical systems of special ESD design.

Numerous companies in the electronics industry worldwide use the Hänel Rotomat® industrial carousel to store sensitive electronic devices both in the production hall and in the dispatch warehouse.

Pick and put operations can be booked using a barcode scanner. This guarantees continuous inventory control.

If electronic components need to be stored in an antistatic, air-controlled environment, the ESD version of the Hänel Rotomat® industrial carousel can be combined with systems like the Hänel ClimateStore®, the Hänel DryStore® or the Hänel CleanStore® (for further information, turn to pages 28-29).



Storage of electronic components in the production hall



ESD buffer store for PC board assembly



Pick and put movements recorded by barcode scanner

Hänel Lockomat®

Safe and secure retrieval

Compartment doors that are closed manually or automatically guarantee error-free retrieval and protect the stored articles from unauthorized access

User authorization

The user proves his authorization by means of an ID card, password or transponder, and the user interface set up for him personally appears on the display. All booking operations can then be traced to a specific user. Multiple users can be set up with different authorizations.

Article management

Articles are requested or put into storage by entering an article number or using a barcode scanner. The digital LED display on the work surface indicates the compartment door behind which the article is stored. All pick and put operations are logged, which makes later verification and tracking easy. Similar-looking articles can't be confused.

Inventory control

Continuous inventory control means that shortages in the supply of materials can be avoided. The intelligent microprocessor control system can be easily integrated into the customer's own IT system. This ensures you have an overview of the stock situation at all times.

Protection of inventory

The closed storage system protects your stock from unauthorized access.

Space and time savings

Optimum use of floor space. There are no upper limits to the Lockomat®. Systems can even span multiple floors.

The Lockomat® is designed according to the tried-and-tested vertical carousel principle. That means:

Goods to man is the motto instead of man to goods. Access times are slashed.

The Hänel Lockomat® is the ideal storage system for safe and secure provisioning of small parts, tools, electronic components, medicines, and much more...



User authentication via ID card, PIN code or RFID transponder



Storage and retrieval via barcode



The Hänel RFID transponder: one of the many options for user authentication



Hänel DryStore®

Hänel CleanStore

Hänel ClimateStore®

Automated storage in a controlled atmosphere



Storage of contamination-sensitive products up to clean-room class 5 according to DIN EN ISO 14644-1

The quality requirements that consumer and industrial goods have to meet are becoming increasingly stringent and far-reaching. Many products today, ranging from highly sensitive components in the electronics industry (such as the surfaces of semiconductor products) to fragile substances in the chemical and pharmaceutical industries or medical supplies in hospitals and pharmacies, need to be stored under very specific, defined conditions.

With its automated **DryStore®**, **CleanStore** and **ClimateStore®** systems, Hänel offers future-oriented solutions suitable for air-controlled environments. The systems are flexible, can be free-standing and operate as stand-alone solutions, or be integrated into existing rooms with air-controlled environments.

DryStore® humidity-controlled:

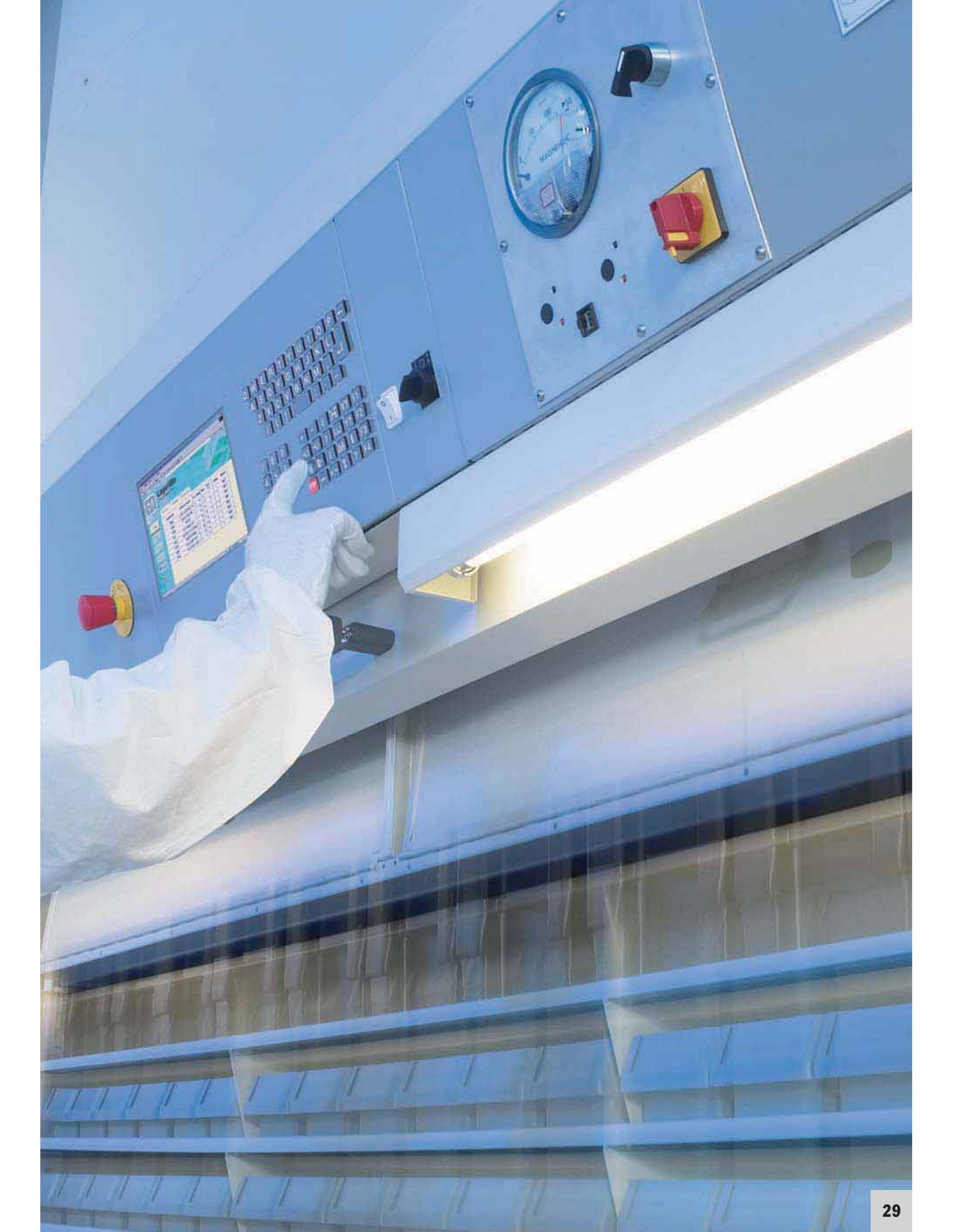
For articles that need to be stored in humidity- and corrosion-protected conditions.

CleanStore particle-controlled:

Low-particle storage of components in clean-rooms.

ClimateStore® temperature-controlled:

Whether it's in the plus or minus range, goods are stored at a constant temperature.



Storage and retrieval of high-grade components in the medical engineering sector



In medical engineering centers, in hospitals or pharmacies – the Hänel Rotomat® always has the right solution

Medical technology

A large number of companies in the medical and pharmaceutical industries take advantage of the many benefits of the Hänel Rotomat® industrial carousel to store their products.

Protection of inventory is imperative in the medical engineering sector. This is where the Hänel systems for controlled atmosphere, such as the Hänel CleanStore Rotomat®, come into their own.

The Hänel intralogistics concepts offer practical solutions to meet the growing demands of customers and their just-in-time objectives.

The pharmacy as a distribution center

Pharmacy customers include not only patients who are supplied with drugs directly in the sales room. In addition to catering to numerous customers on-site, pharmacies also offer home deliveries to patients needing continuous medical supplies. They also deliver to care homes for the elderly, residential nursing homes, hospital outpatient and casualty wards and university clinics.

Clinic organization

The Hänel Rotomat® can be integrated smoothly into existing hospital logistics. For example, it can supply the central sterilization unit with surgical instruments and equipment. The Hänel CleanStore is particularly suitable for sterile environments. In the pathology department, specimens can also be stored in a protected and orderly fashion until they are needed for examination.

Many clinics archive their X-ray records safely in the space-saving Hänel Rotomat® right in the radiology department.

There are countless possible applications for the Hänel Rotomat®, which can help to save space in the central pharmacy, administrative offices, the maintenance department and in the laundry.

The Rotomat® is the perfect handling system for protected storage and quick retrieval of a wide range of objects.

Hänel Rotomat® industrial carousels help ensure that the large number of medicines and health-care products are instantly available at all times.

In view of the inner-city location of many pharmacies, this space-saving solution is ideal. Storage area can be reduced by up to 60 %.



Retrieval of surgical instruments and equipment in the central sterilization room of a clinic



Protected storage of pathology specimens in the Hänel Rotomat®



The pharmacy as a distribution center – an ingenious concept

Everything under control

The control concept with brains

Our strength lies in our know-how – the practice-oriented microprocessor control units from Hänel can offer you a complete storage management system



The Hänel MP 12N-S top controller with touchscreen technology

MP 0A – the compact standard control system for the Hänel Rotomat®

The MP 0A has a two-line VF display. Once the shelf number has been entered, the shelf levels are selected directly. The shelf number is displayed digitally in the retrieval point. An interface card with RS 232 connection for a computer can be supplied as an option for the MP 0A.

MP 12N-S

A complete storage management package is already integrated. The TFT touchscreen technology makes it easy to use. Quick and easy hook-up to the customer's corporate network is ensured by the integrated Ethernet interface.

With the web server, users can access the web page of the MP 12N-S directly with Internet browser.

MP 100 D – high-powered storage management intelligently designed!

Up to 99 Rotomats® can be controlled simultaneously with the MP 100 D.

The pluses

- ▶ Hardware and software are integrated in the carousel, no additional PC or monitor required.
- ▶ No complex software installation on PC.
- ▶ Direct integration into the corporate network via Ethernet link.
- ▶ Data can be retrieved from the MP 100 D and MP 12N-S simply by using the browser – continuous transparency in the storeroom guaranteed.
- ▶ No additional communication software needed.
- ▶ Customized expansion possible with versatile supplementary modules.

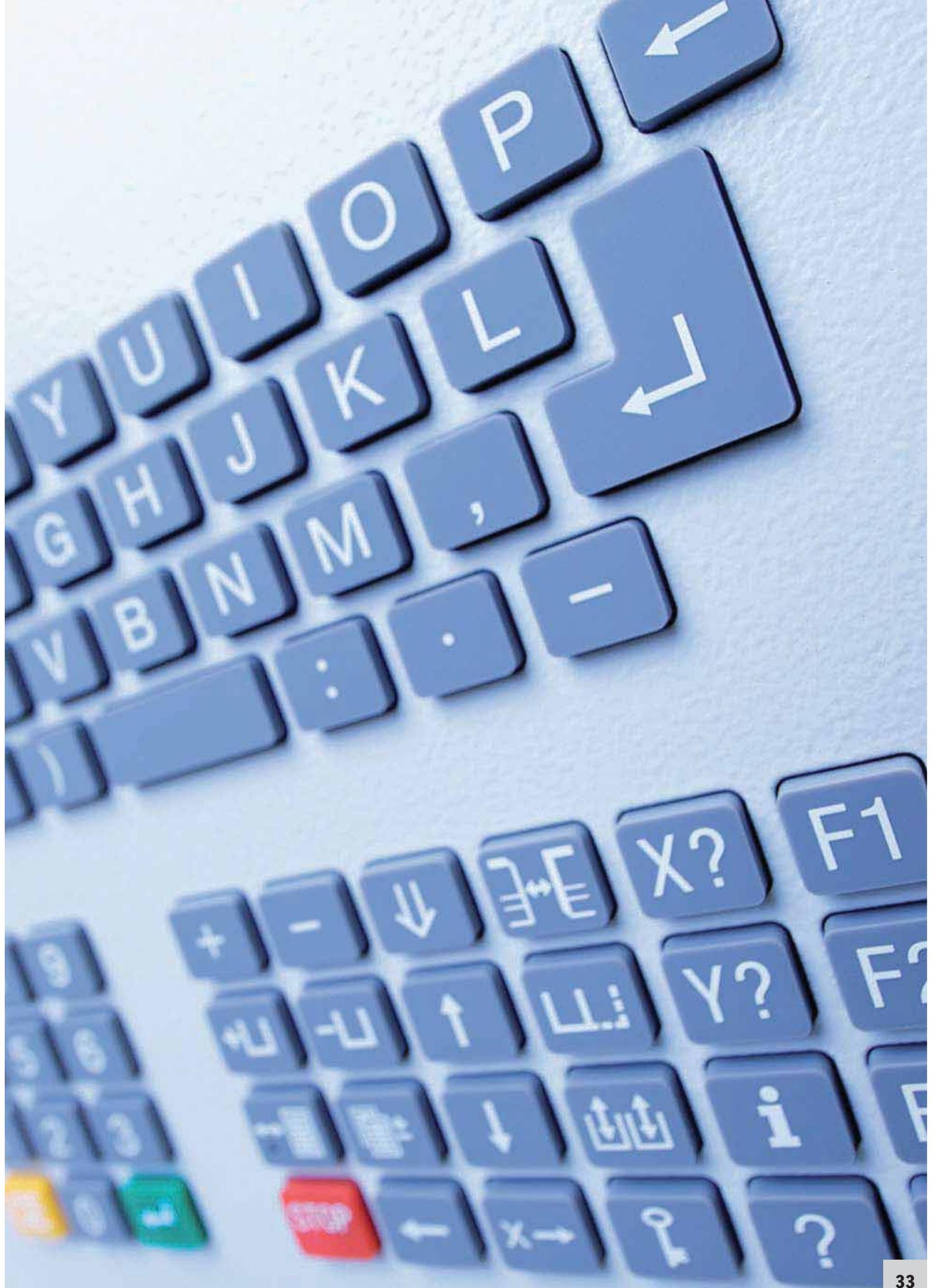
Networking with IT systems

Of course it is possible to hook up the Rotomat® to the customer's IT environment. The control systems are easily connected via the integrated Ethernet interface. Article data, pick lists and booking information are exchanged through the integrated storage management functions.

Hänel software made-to-measure

If you wish, the Hänel specialists will develop with you a tailor-made storage management concept that meets your requirements exactly!

You can find detailed information about Hänel microprocessor control systems in our brochure 'The intelligent Hänel control and software technology'.



Everything you need – included in Integrated Hänel storage management

Intelligent inventory control with the storage management packages from Hänel

Contained in the compact controller MP 12N-S and the central control system MP 100 D is the Hänel inventory control package. This means all the storage management is already integrated.

No additional PC is required!

Three different storage management packages are available:

- ▶ Hänel article management
- ▶ Hänel tool management
- ▶ Hänel file management

All three packages boast easy-to-operate user interfaces and maximum storage management functionality.

066/528-923
ENTER QUANTITY
1 1 1 -1 ■

INFO

REQUISITION NUMBER	125.547
ARTICLE NUMBER	066/528-923
ARTICLE NAME	Motor block
TOTAL/MIN. INVENTORY	10 / 5
CONTAINER SIZE	1 1
ARTICLE NAME 2	--
ADDITIONAL INFORMATION	--
ARTICLE INFORMATION	--
SPECIAL DATA FIELD	--

Select article storage/retrieval
When an article is selected, a detailed list of information about the article is displayed

066/528-923
ENTER STORAGE LOCATION
SHELF NUMBER ↓
1 1 3 1 ■ +

INFO

REQUISITION NUMBER	--
ARTICLE NUMBER	066/528-923
ARTICLE NAME	--
TOTAL/MIN. INVENTORY	0 / 0
CONTAINER SIZE	1 1

Storage location search
When a unit size is entered (optionally with a height specification) the control system suggests the next free storage location

066/528-923
ENTER ARTICLE NAME
MOTOR BLOCK ■

INFO

REQUISITION NUMBER	--
ARTICLE NUMBER	066/528-923
ARTICLE NAME	Motor block
TOTAL/MIN. INVENTORY	10 / 5
CONTAINER SIZE	1 1
ARTICLE SIZE 2	--
ADDITIONAL INFORMATION	--
ARTICLE INFORMATION	--
SPECIAL DATA FIELD	--

Entry of supplementary data
An article name can be entered as well as an article number. With the option 'Item pool management' it is possible to create and edit other data fields

MATCH CODE SEARCH FOR ARTICLE NUMBER
[1/1/+X→/CE]

MENU INFO ON LIFT ASSIGNMENT INFO ON ARTICLE DATA

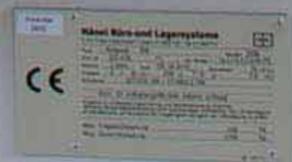
ARTICLE NUMBER	ARTICLE NAME	SPECIAL DATA FIELD
1	ARTICLE 1	-
111	ARTICLE 111	-
122	ARTICLE 122	-
222	ARTICLE 222	-
1234	ARTICLE 1234	-
5368	ARTICLE 5368	-
5369	ARTICLE 5369	-
5370	ARTICLE 5370	-
5371	ARTICLE 5371	-

Info on article data
When a search term is entered, the results are displayed in a table. Any data field can be selected as a search field, such as article number, article name, etc.



Variable controller position

The controller can be attached under the work counter or on a Varioarm as shown here.



Interfacing with IT systems and peripheral devices

Integration into IT networks and data exchange with a central host computer are hassle-free!

The modular architecture of the software and use of the latest programming tools guarantee easy adaptation of the software to growing demands. Even the basic versions of the MP 12 N-S and the MP 100 D control units are equipped with a standardized interface for data interchange. The controllers are hooked up to the customer's IT network via Ethernet.

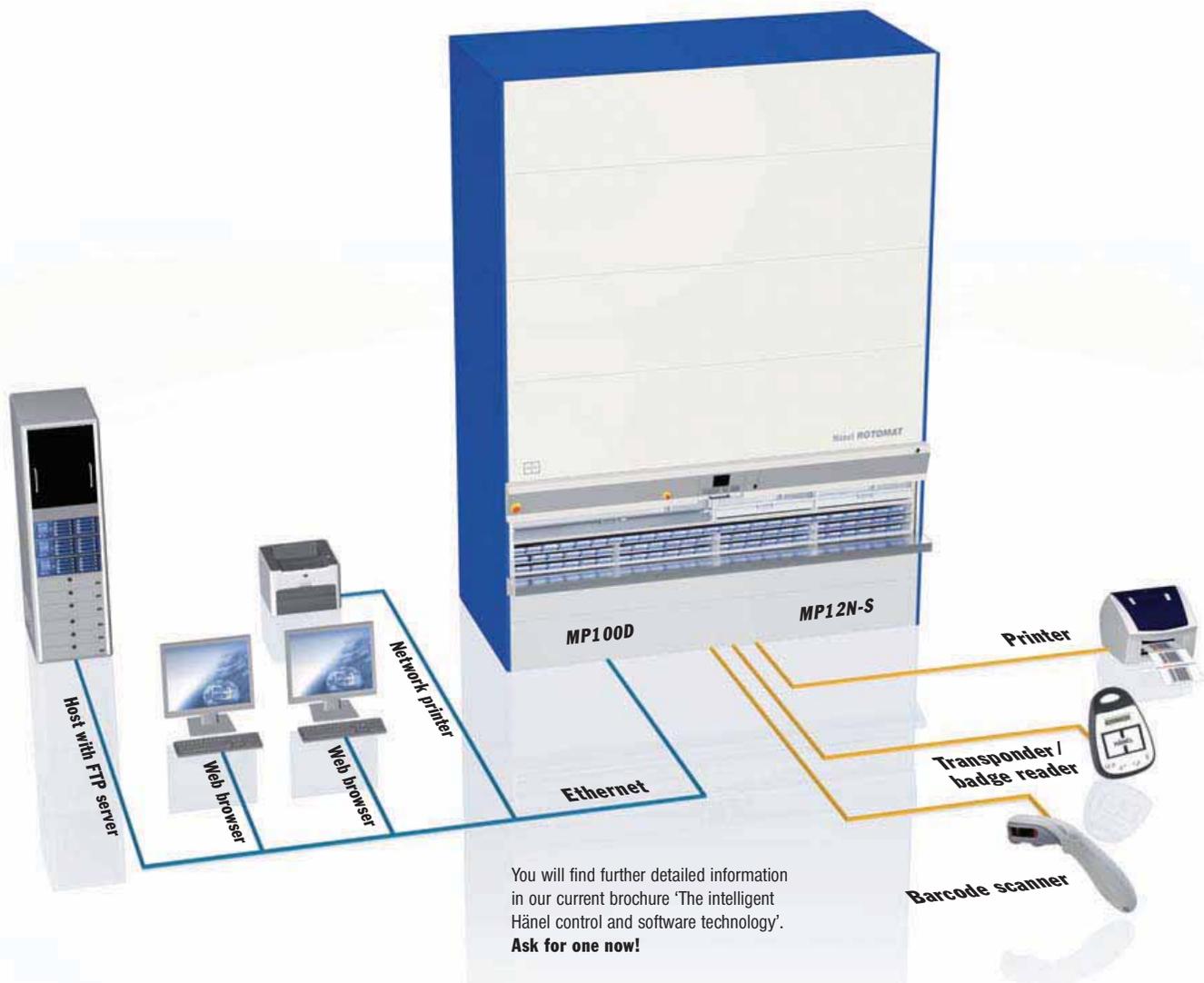
The integrated web server allows all the data for storage management to be displayed conveniently via the intranet using a web browser and also to be printed out.

The Hänel control system offers a wide range of options for connecting peripheral devices.

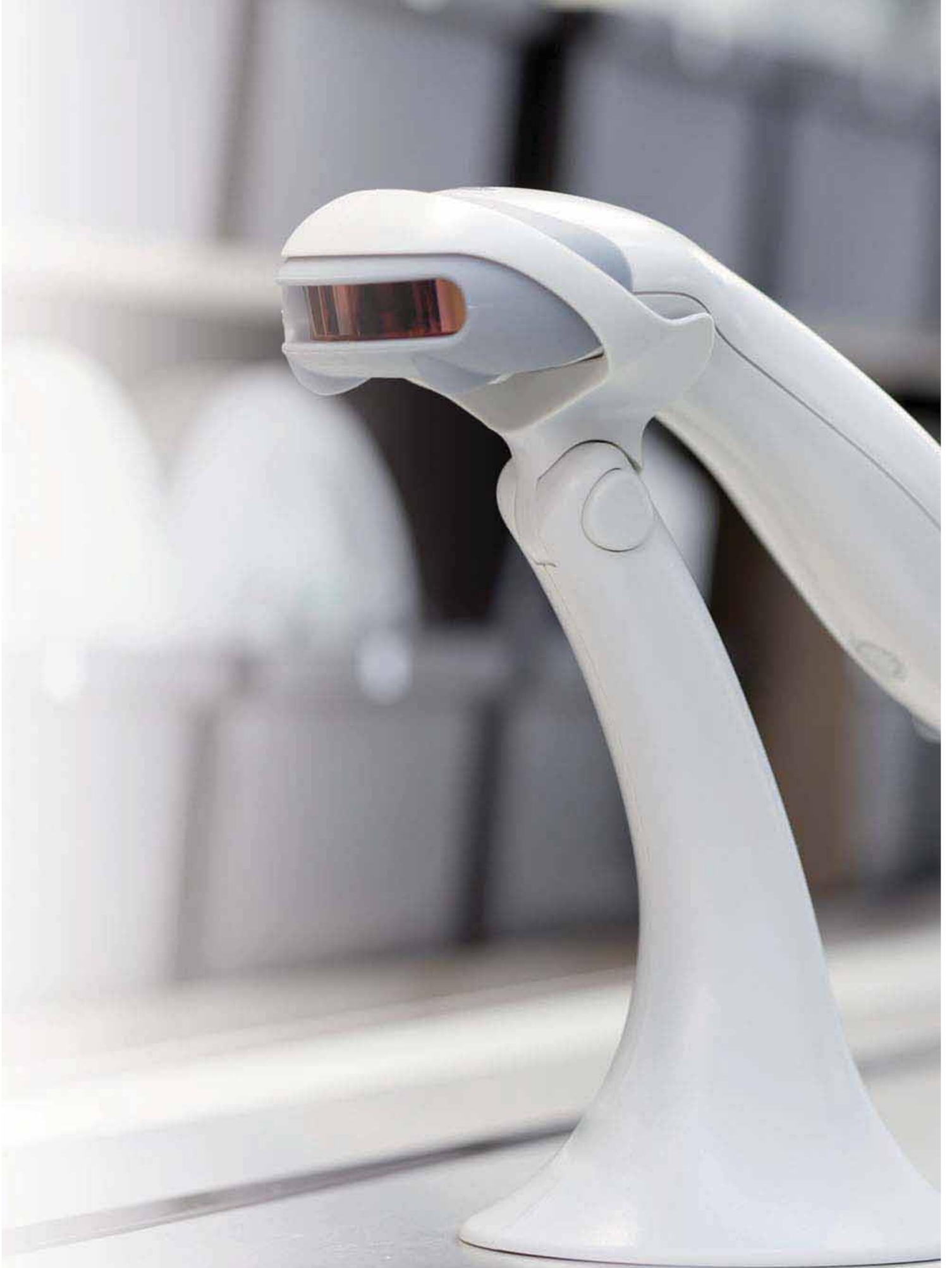
Additional interfaces enable peripheral devices such as barcode scanners, badge readers or label printers to be connected effortlessly to the intelligent Hänel micro-processor control units. The label printer, for example, can be used to print a label with barcode for each newly entered article.

The pluses

- ▶ Quick and easy connection of peripheral devices.
- ▶ Efficient work methods thanks to the ergonomic positioning of the peripheral devices.
- ▶ Smooth workflow resulting in saved time.



You will find further detailed information in our current brochure 'The intelligent Hänel control and software technology'.
Ask for one now!



Our strength lies in our know-how

Hänel software solutions made-to-measure

Hänel's inventory management software enables efficient, rationalized workflow

Hänel's inventory management programs are intelligent software systems for computerized handling of warehouse processes on Hänel storage systems.

These programs manage storage locations, articles, stocks, pick and put jobs and orders.

For every application there are powerful software packages that offer each customer individual adaptation based on useful configuration options and various standard modules:

Storage management

Control software for Hänel storage units networked with host-supported ERP (Enterprise Resource Planning) systems.

Tool management

Warehouse management with Hänel storage units – from goods receipt to dispatch.

Talk to our specialists – we will be happy to advise you!

The pluses

- ▶ Quick and reliable access during pick and put operations as the user works directly at the Hänel storage units.
- ▶ Modular functions for the best possible adaptation to customer requirements.
- ▶ Standardized interfaces for simple data exchange with materials management/ERP programs.
- ▶ Interface to the Hänel lift controllers for pick and put operations directly at the storage units.
- ▶ Optimized order picking for all connected storage units.
- ▶ Rack storage systems, pallet stores, container stores, etc., can be managed in addition to Hänel storage units.

Hänel software systems rationalize storage operations and provide optimal transparency in the storeroom!



Efficient work process with storage management systems

Maximum control over inventory with Hänel storage units

It doesn't matter whether you work with the software solutions from Hänel or other storage management software – Hänel storage units can be integrated effortlessly into the most varied of software environments through the micro-processor control units.

All pick and put operations can be booked directly at the lift control units.

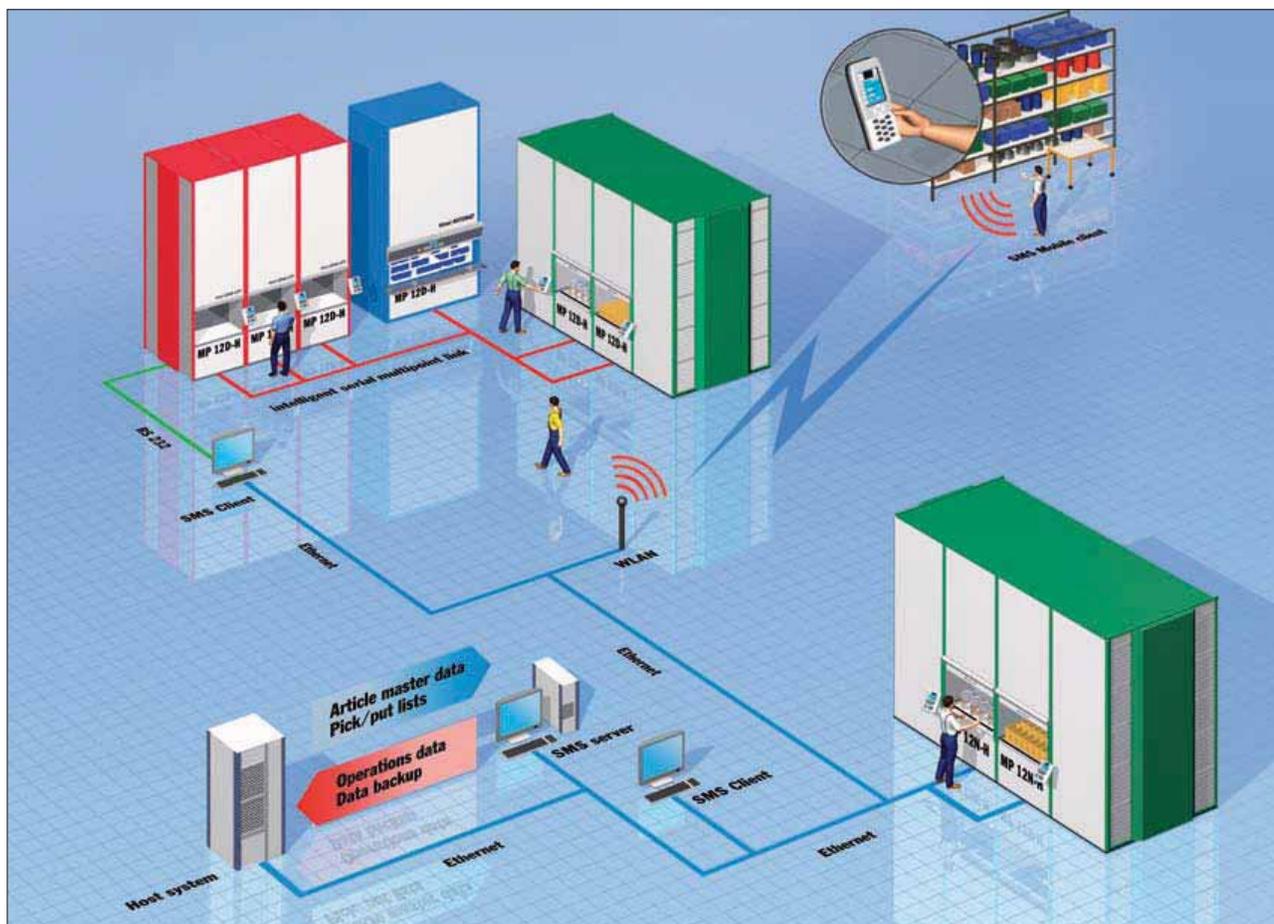
It allows not only Rotomat®, Lockomat®, Lean-Lift® and Multi-Space® units to be managed, but also other types of systems such as rack and pallet stores.

A standardized host interface enables data to be exchanged with any type of materials management system.

Please don't hesitate to request detailed information about Hänel software programs.

The pluses

- ▶ Operators work directly at the storage units – which is ergonomic, practical and time-saving
- ▶ Asynchronous processes at the storage units – each lift works independently
- ▶ Prioritized storage location search in front of the corresponding storage unit
- ▶ Exchange of data with all the well-known ERP systems
- ▶ Can be expanded at any time by adding more storage units.





Quality through competence

The Hänel service team

We see customer support and the legendary Hänel customer service as our obligation



The electrical components are stowed centrally in the wiring cabinet

The employees in our support centers are factory trained by us to a high standard and approach their jobs in a highly professional manner. This is true whether they are developing a storage management concept, training operators or carrying out maintenance and repair work.

In recognition, the quality management system of Hänel Germany and Hänel Switzerland has been awarded the DIN EN

ISO 9001:2008 certificate for production, design, development, installation, sales and service.

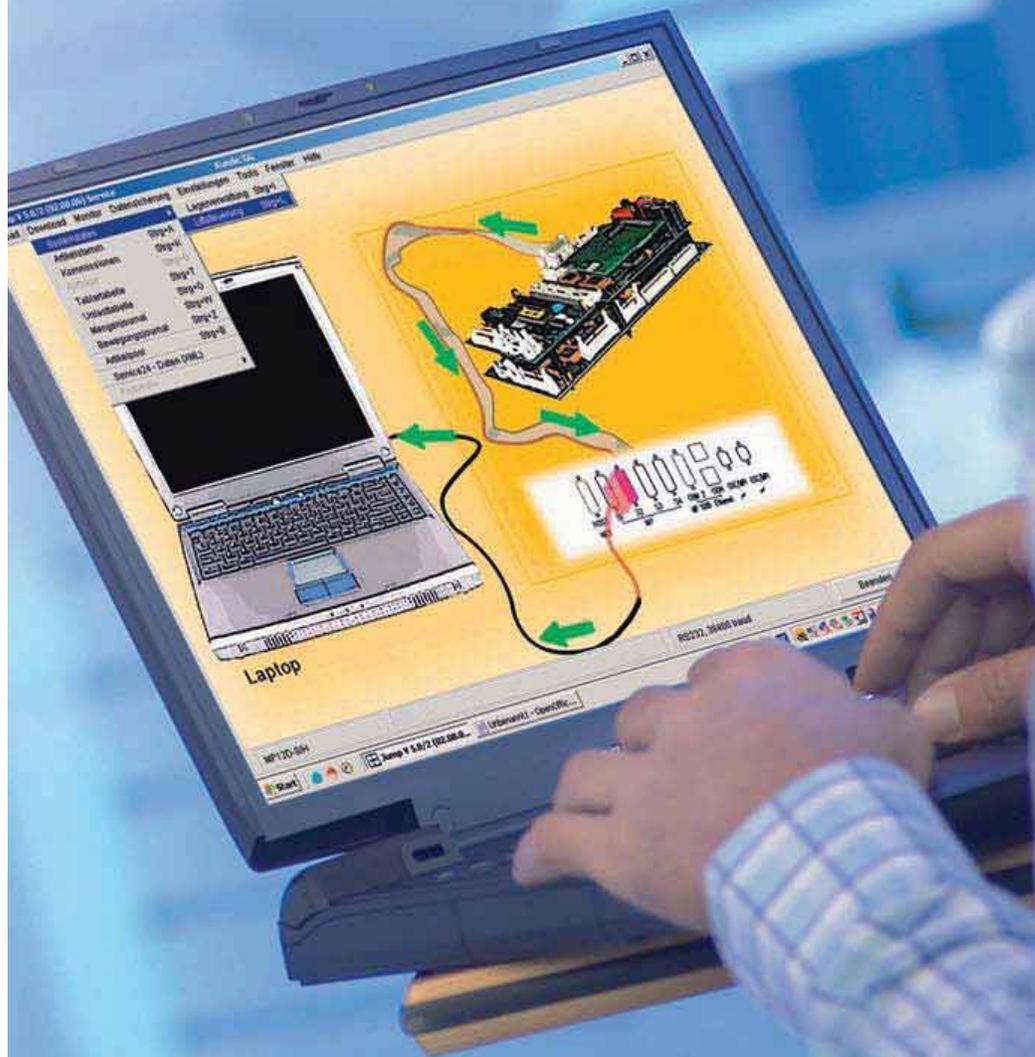
It's good to know there are people who understand their trade and who act responsibly.



The patented Hänel arresting device for safe maintenance of the Hänel Rotomat® industrial carousel

Play it safe

Only technicians trained and authorized by Hänel have the know-how and the technical resources to maintain Hänel industrial storage systems quickly and safely.



Quality signed and sealed

Innovative developments and state-of-the-art production technology

Hänel – a company committed to top quality

Quality starts with consulting

No two Hänel lifts are the same. Simply because each task requires a unique approach.

That's why, at Hänel, high quality of consultancy takes first place alongside product quality. On the basis of your requirements and our experience we develop a complete solution tailored to your needs.

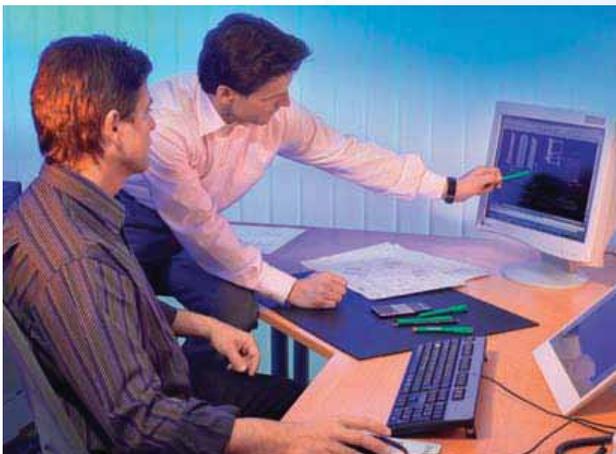
High-tech production for high-end demands

Highly qualified specialists implement the ideas of the planning engineers using cutting-edge manufacturing techniques. They act in concert to incorporate their know-how and experience.

Despite automation, the focus at Hänel is on people. They are the ones who coordinate the different production steps and monitor quality constantly.

On September 1, 1993, Hänel Germany was awarded the international certificate of quality according to ISO 9001 by the 'German Association for Certification of Quality Management Systems'. It was the first company in its field (vertical lift technology) worldwide to achieve this distinction.

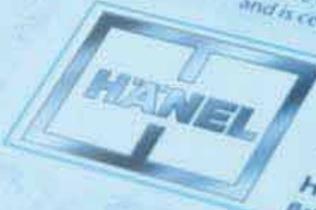
And in 2009 once again the process-oriented quality management of Hänel was acknowledged by the technical control board TÜV Hessen with the current DIN EN ISO 9001: 2008 Certificate.



TÜV PROFI CERT CERTIFICATE

Management system as per
DIN EN ISO 9001:2008

Evidence of conformity with the above standard(s) has been furnished
and is certified in accordance with TÜV-PROFICERT procedures for



Hänel GmbH & Co. KG
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Am Zollwasen 3 - D-97353 Wiesentheid
Hänel & Co. Büro- und Lagersysteme
Barnesstraße 21 - CH-9450 Altstätten/SG

scope

**Design, Conception, Production, Distribution and Maintenance
of Office and Storage Systems**

certification No. 73 100 2545
4184 8914
1st October 2011

Member of
TÜV

O. Malt
Darmstadt, 15th October 2009
Certification body of TÜV Hessen
Certification manager



Ideas that move the world . . .

Cutting-edge technology ‘Made by Hänel’

As one of the world’s market leaders for vertical carousels and vertical lift modules, Hänel is continuously expanding its network

Hänel already has representatives in over 60 countries so that our customers can be given optimal support and the increasing demand for Hänel products can be met.

Hänel exhibits its innovations in intra-logistics at numerous international trade fairs. For an up-to-date overview of trade fair dates, visit us on the Internet at

www.hanelworldwide.com

It’s all part of Hänel quality:
being there whenever you need us.
Worldwide . . .

The Hänel team is at your service.



- | | | | |
|----------------|---------------|--------------------|----------------------|
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| Australia | Great Britain | Morocco | South Korea |
| Austria | Greece | Netherlands | Spain |
| Bahrain | Hong Kong | New Zealand | Sweden |
| Belgium | Hungary | Nigeria | Switzerland |
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| China | Italy | Portugal | Tunisia |
| Costa Rica | Jordan | Qatar | Turkey |
| Croatia | Kuwait | Romania | Ukraine |
| Czech Republic | Latvia | Russian Federation | United Arab Emirates |
| Denmark | Lebanon | Saudi Arabia | USA |
| Egypt | Libya | Scotland | Vietnam |
| Estonia | Lithuania | Singapore | |
| Finland | Luxembourg | Slovakia | |
| France | Malaysia | Slovenia | |



We have more in store . . .

Hänel Rotomat® office carousels

The optimal filing systems for office and administration

Hänel started series-producing filing carousels (the first manufacturer in Europe to do so) over 50 years ago – and you reap the benefits of this long experience!

With the Hänel Rotomat® office carousel, we offer a flexible organization and filing system that adapts optimally to your needs.

The pluses

- ▶ Optimum use of floor space. There are no upper limits to the Rotomat®.
- ▶ High-performance controllers and interface with IT systems make the Rotomat® flexible and enable customized applications.
- ▶ The office worker no longer goes to the files, instead the files are brought automatically to the ergonomic retrieval height when requested.
- ▶ The Rotomat® protects all the files from dust, light and unauthorized access.



The right file is found among thousands of hanging folders in seconds

Hänel Lean-Lift®

Vertical technology – simply brilliant

The Hänel Lean-Lift® is both storage rationalization and goods protection in one: At the center of this closed system is a computer-controlled positioning lift – the

‘extractor’. In front of it and behind it are the storage shelves. This is where the articles are stored in height optimized containers in height optimized positions.

The pluses

- ▶ Fast storage and retrieval times.
- ▶ High storage density, even when articles have different heights.
- ▶ Improved order-picking performance.
- ▶ Load-bearing capacity of up to 1,000 kg per tray.
- ▶ Load-bearing capacity of up to 60,000 kg per Lean-Lift® (higher payloads on request).
- ▶ Integrated storage management.



Depending on the height of the Hänel Lean-Lifts®, access points can be installed on different floors. Several people can use the Hänel Lean-Lift® simultaneously at different positions and levels

Hänel Multi-Space®

The new definition of vertical lift technology

The innovative 3-axis storage system from Hänel with the many advantages of time-proven Hänel Lean-Lift® technology. Whether it operates as a stand-alone solution, in a network with other

Multi-Space® units or in combination with Lean-Lifts® and Rotomats® – the Hänel Multi-Space® offers another innovative solution for your intralogistics!

The pluses

- ▶ Unique extractor design in state-of-the-art lightweight construction (as used in bridge engineering) guarantees maximum stability.
- ▶ The Hänel Multi-Space® offers modular scalability in height and width – up to a total width of over 9 meters.
- ▶ Variable container widths, different payload capacities and the Hänel multiple pitch ensure the optimal solution for any challenge to compact storage.



Two Hänel Multi-Space® units each 9.57 m wide constitute the central store for the production hall

The Hänel product portfolio – the right solution for every need!



Hänel Rotomat® office carousel

The Hänel Rotomat® is the optimal filing system for office and administration.

Folders, index cards or files – the Hänel Rotomat® keeps them all in order. It finds the right file from among thousands of hanging folders and retrieves it in seconds. The powerful Hänel micro-processor control systems enable the Rotomat® to be networked directly with a PC.

All Rotomat® office carousels are also available in a version suitable for disabled operators.



Hänel Rotomat® industrial carousel

Each Hänel Rotomat® is designed according to the tried-and-tested Ferris wheel model (vertical carousel principle) which means: goods to man and not man to goods.

The compact construction enables up to 60% more storage capacity to be created on a minimal footprint by making use of the available room height. No two Hänel Rotomats® are the same, because each task demands a precisely defined solution.



Hänel Lockomat®

The Hänel Lockomat® is the ideal storage system for safe and secure provisioning of small parts, tools, electronic components, medicines, etc.

User authentication is provided by ID card, PIN code or optionally by transponder. The Hänel Lockomat® can be used in a wide range of sectors: the chemical industry, banking, pharmacies, etc.: wherever items that look the same on the outside but are entirely different on the inside need to be stored and retrieved quickly and without error.



Hänel Lean-Lift®

The Hänel Lean-Lift® is both storage rationalization and goods protection in one: At the center of the 'cabinet' is a computer-controlled positioning lift – called the 'extractor'. In front of it and behind it are the storage shelves. This is where the articles are kept in containers.

The storage locations are accessed automatically under electronic control by means of the extractor, which stores or retrieves the requested container. The goods are then delivered to the retrieval area at the correct ergonomic height.



Hänel Multi-Space®

Hänel has optimized the principle of 3-axis storage systems with the Hänel Multi-Space®. In addition to the many advantages of the Hänel Lean-Lift® technology, the Hänel Multi-Space® offers maximum flexibility, speed and use of space.

With its advanced technology, Hänel is able to offer a 3-axis storage system over 9 m in width. The Hänel Multi-Space® can even be varied in width and height once installed – an innovation from Hänel!

Even the number of retrieval points is variable and can be changed at any time.



The intelligent Hänel control and software technology

Our strength lies in our know-how. Because only object-related, practice-oriented microprocessor control units can offer you a complete storage management system. Hänel storage systems can also be controlled via a computer interface, of course. Interface with enterprise resource planning systems is no problem. Hänel also offers software solutions for individual requirements.

Hänel**Büro- und Lagersysteme**

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Subject to revision

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