



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



Ideas that move the world...



Contents

The principle	Page
Hänel Rotomat® storage carousels Optimizing procedures, increasing flexibility, lowering costs	1
The Hänel Rotomat® principle 'Vertical carousel technology' – simply brilliant	4 – 5
Hänel Rotomat® storage carousels at a glance	6 – 7
Less warehouse is more Distinct advantages over conventional rack storage and MLS	9
The access point	
Hänel multifunction carriers Adaptable and versatile	10 – 11
Always well stocked with great ideas The Hänel Rotomat® access point	12 – 13
Smart solutions	
Everything in balance High-tech for the storeroom	14
Keeping the wheels of industry turning The Hänel Rotomat® drive components	15
Real-life case studies	
Hänel Rotomat® storage carousels High-speed for the dispatch warehouse	18 – 19
Hänel Rotomat® storage carousels in high-speed versions	20 – 21
Handling heavy parts with ease The Hänel Rotomat® heavy-duty carousels	22 – 23
All parts safely in hand Orderly storage of small parts	24 – 25
Hänel Rotomat® ESD storage Protected storage in the electronics industry	26 – 27
Hänel Lockomat®	
Safe and secure retrieval	28 – 29
Hänel DryStore® CleanStore ClimateStore®	
Automated storage in a controlled atmosphere	30 – 31
Hänel custom solutions	
Medical engineering, hospitals and pharmacies	32 – 33
Hänel MP control systems and software	
Everything under control The control concept with brains	34
Everything you need – included in Integrated Hänel storage management	36 – 37
Interfacing with IT systems and peripheral devices	38
Our strength lies in our know-how Hänel software solutions made-to-measure	40
HänelSoft® the high-performance, flexible storage management system	42

Hänel MP control systems and software	Page
Automotive Dealer Management System Interface MP-Link	43
Hänel media library	
Experience the Rotomat® storage carousels in action in various video clips highlighting Hänel's innovative solutions	44 – 45
Hänel quality	
Quality through competence The Hänel service team	46 – 47
Quality signed and sealed Innovative developments and state-of-the-art production technology	48
Ideas that move the world... Cutting-edge technology 'Made by Hänel'	50
We have more in store...	52
The Hänel product portfolio	53

Legend

1 The principle of the Hänel Rotomat® storage carousel Vertical carousel technology – simply brilliant	1/4/5/9
2 Carrier suspension on 4-point sliding carriage principle	15
3 Internal drive system with 2 motors	4/15
4 Soft start with pole-switching motors	15
5 Access point with V2A work counter wear-resistant	13
6 Patented safety threshold switch optimal personal protection	13
7 Light barrier curtains compliant with DIN EN 15095	12
8 Hänel microprocessor controllers and Hänel software solutions	34 – 43
9 Wiring box with centrally housed electrical components	46
10 Multifunction positioning system for accurate positioning of shelf levels	14
11 Lockable sliding doors for inventory protection	13
12 Hänel EcoLoad® for balanced and efficient load distribution	14
13 Multifunction carriers with variable dividers and inserts	11/21/25
14 Compartment indicators for error-free retrieval	13
15 Environmentally friendly powder coating 50 % more abrasion-resistant	1
16 Barcode scanners and other peripheral devices	38 – 39



2

1

13

15

9

8

12

11

16

7

10

5

14

6

3

4

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

Up to 60 % more storage capacity

The Hänel Rotomat[®] storage 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[®] 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. Only environmentally friendly, recyclable materials are used.

With the intelligent energy management feature Hänel EcoMode[®], the Hänel storage systems can be switched to different standby modes. This allows energy consumption to be reduced to a minimum.

Our specialists will continue to work on the Hänel EcoConcept and develop further energy-efficient solutions for the Hänel storage systems.

The right decision

If you want to improve your intralogistics concept 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® storage carousels are powered by two 208 V or 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.





Kinet ROTOMAT

NEOCLAS
EQUIPMENT

"ALBUQUERQUE"
WORKS
ALBUQUERQUE

Hänel Rotomat® storage carousels at a glance



Rotomat® model	900/100	900/115	900/125	936
Maximum payload per shelf in kg/lbs	150/331	150/331	150/331	250/551
Maximum payload per carousel in kg/lbs	3,000/6,614	3,000/6,614	3,000/6,614	6,000/13,228
Shelf depth in mm/inches	370/14.57	416/16.38	470/18.50	630/24.80
Shelf width in mm/inches	2,243/ 88.31 2,838/111.73	2,243/ 88.31 2,838/111.73	2,243/ 88.31 2,847/112.09	2,915/114.76
Standard carousel width in mm/inches (customized carousel widths possible)	2,600/102.36 3,270/128.74	2,600/102.36 3,270/128.74	2,600/102.36 3,280/129.13	3,420/134.65
Carousel depth in mm/inches	1,000/39.37	1,155/45.47	1,255/49.41	1,615/63.58
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® storage carousels. For special features and customized compartment divisions, speak directly to our specialists (see also page 28).



946	950	956	970	980	985 S	985	990	
330/728	400/882	340/750	250/551	600/1,323	750/1,653	500/1,102	250/551	
6,000/ 13,228	10,000/22,046	10,000/22,046	6,000/13,228	14,000/30,865	14,000/30,865	14,000/30,865	10,000/22,046	
630/24.80	416/16.37	640/25.20	445/17.52	505/19.88	505/19.88	630/24.80	640/25.20	
2,915/ 114.76	2,870/112.99	2,870/112.99	2,915/114.76	2,750/108.27	2,750/108.27	2,750/108.27	2,750/108.27	
3,420/ 134.65	3,420/134.65	3,420/134.65	3,420/134.65	3,420/134.65	3,420/134.65	3,420/134.65	3,420/134.65	
1,615/ 63.58	1,250/49.21	1,670/65.75	1,250/49.21	1,475/58.07	1,600/62.99	1,720/67.72	1,670/65.75	

								Page
✓	✓	✓	✓	✓	✓	✓	✓	15
✓	✓	✓	✓	✓	✓	✓	✓	14
✓	✓	✓	✓	✓	✓	✓	✓	12
✓	✓	✓	✓	✓	✓	✓	✓	15

●	●	●	●	●	●	●	●	38 – 43
●	●	●	●	●	●	●	●	38 – 39
●	●	●	●	●	●	●	●	36
●	●	●	●	●	●	●	●	4
●	●	●	●	●	●	●	●	
●	●	●	●	●	●	●	●	15
●	●	●	●	●	●	●	●	

✓ = Standard

● = Optional



Less warehouse is more

Distinct advantages over conventional rack storage and MLS

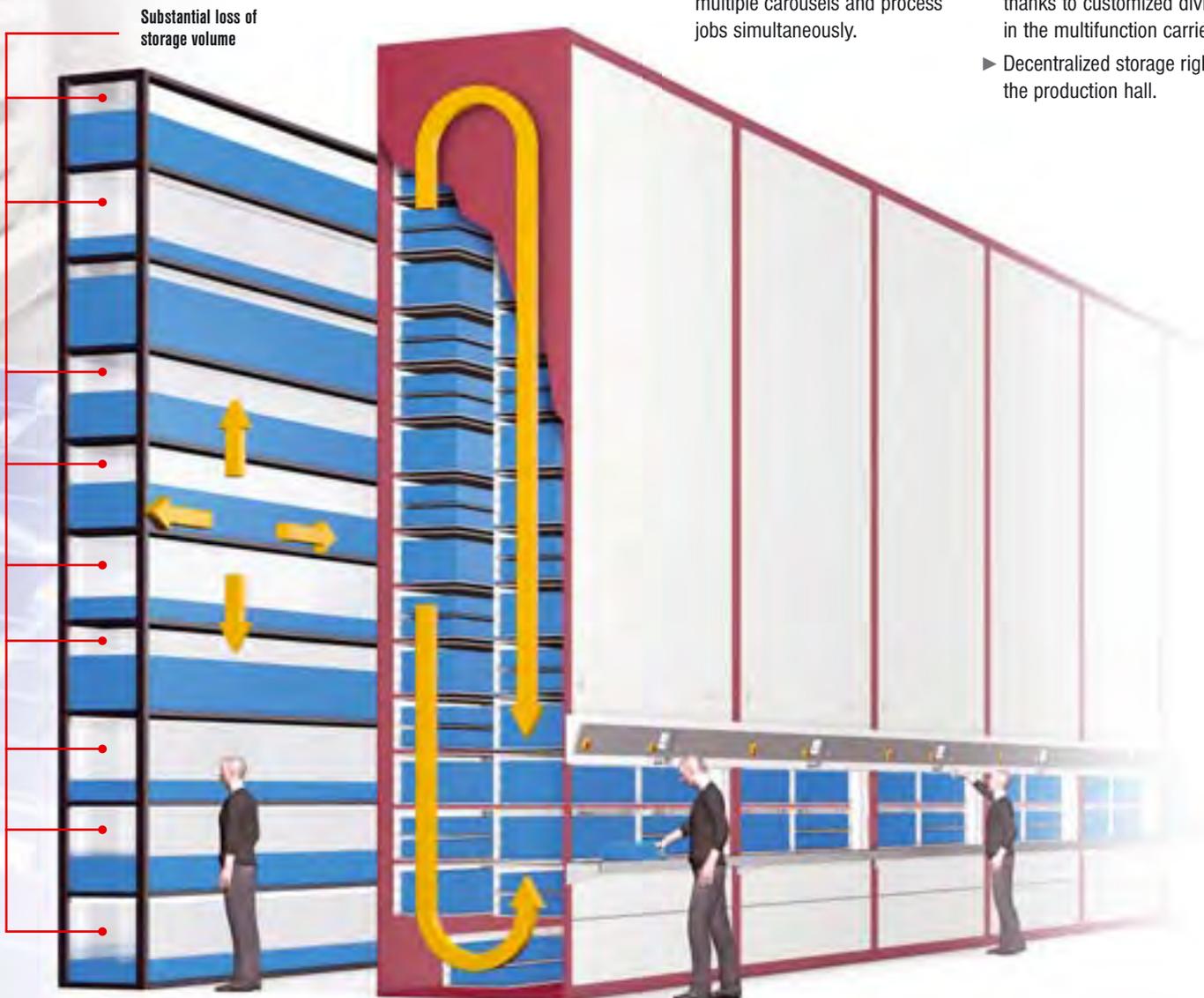
The Hänel Rotomat® offers up to 60 % more storage capacity than a miniload system or conventional rack store on the same footprint

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® storage 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.



Miniload system/conventional rack storage

Hänel Rotomat®



Free/unused storage capacity



Goods stored



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/ 1,652 lbs 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

Durable V2A work counter

The wear-resistant V2A work counter of the Hänel Rotomat® is very durable and not only looks good, but also enables users to pick, put and slide the storage bins with ease. 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

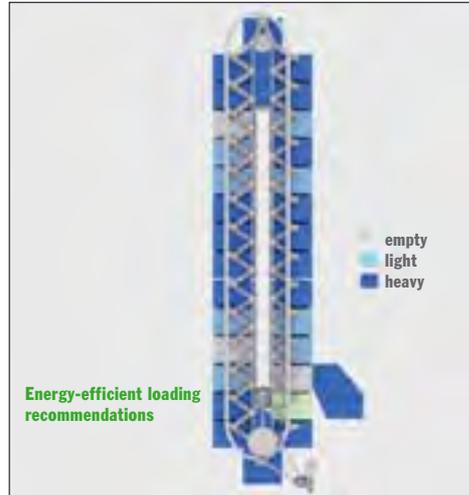
Hänel microprocessor controllers with new features

The Hänel Rotomat® also has a smart energy conservation concept – the Hänel EcoLoad®.

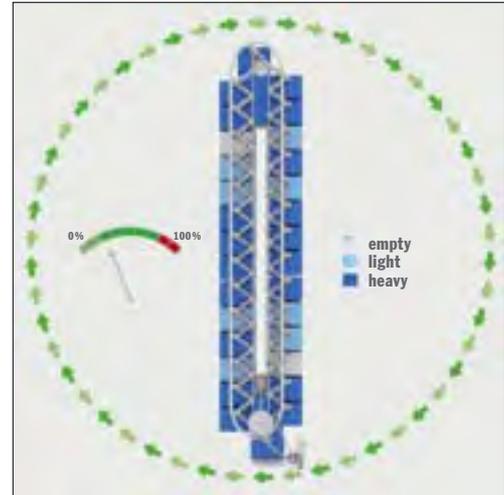
As the Rotomat® works on the principle of rotation, a lot of energy can be saved by ensuring even load distribution. So the load status of the Hänel Rotomat® is continuously monitored.

This enables the Hänel microprocessor controller to achieve optimum distribution of the storage items thanks to loading recommendations. If the recommendations are followed by the operating personnel, the storage goods are always evenly distributed.

As a result, very little energy is required for the rotation movement.



Weight distribution in the Hänel Rotomat® is measured continuously so that if a load becomes uneven, a relocation of goods is recommended by the Hänel EcoLoad® warning device to optimize energy efficiency



When the load is evenly distributed in the Hänel Rotomat® very little energy is required for the rotation movement

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

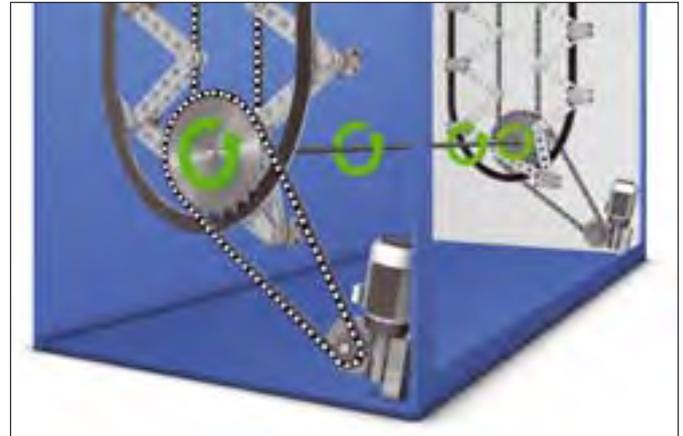
The Hänel Rotomat® drive components

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® storage carousels are equipped with twin motors. This guarantees less wear and quieter running. The right and left drive motors are controlled

in sync. 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® storage 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® storage 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® storage 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 Rotomat® storage carousels continuously. As the Hänel microprocessor control systems are linked up to the enterprise resource planning system, the orders are displayed directly at the microprocessor controllers and the Hänel storage carousels are pre-positioned in working groups.

Numerous customers worldwide use Hänel Rotomat® storage 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® storage carousels each with an overall height of 9 m/30 ft.



... Main storage area at basement level

Optimal use of the available storage area on multiple floors.





Hänel storage carousels in high-speed version

Boost order picking performance with the Hänel Rotomat® high-speed version

The speed of rotation has been improved by up to 70%, depending on the application. Special multifunction carriers have been developed for this purpose to give the storage goods added security.

Moreover, the user can pick articles from the lower section of the carrier as well as from the upper section. An additional integrated light curtain ensures that Hänel's high security standards are met.

A further storage location display for the upper section of the carrier has also been incorporated.

Barcode scanners are used to identify the items to be picked, and the Rotomat® moves to the storage position without any additional input at the control unit. This eliminates the need to enter a confirmation.

The average access time is consequently reduced by up to 40%, so once again Hänel has succeeded in substantially improving order picking performance.

Customers are already using the high speed version of the Hänel Rotomat® storage carousel for their order picking with great success.



The double-row compartment indicator reliably shows the correct storage location



Rapid data entry for articles with the fixed-mount barcode scanner

Speed of rotation increased by up to 70 percent



Two light-barrier curtains ensure order picking is safe across the entire access area





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

Protected interim storage of sensitive aircraft turbine shafts in the Hänel Rotomat® storage 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® storage carousels can also cope with heavy and bulky storage items. Offering standard widths up to 3,420 mm / 135" (greater widths also possible), standard carrier payloads of up to 750 kg / 1,653 lbs maximum and total payloads of up to 14,000 kg / 30,865 lbs 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® 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® storage carousel



Heavy components and assemblies neatly stored



Tool storage in the Rotomat® storage 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® storage 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® storage 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® storage carousel can be combined with systems like the Hänel ClimateStore®, the Hänel DryStore® or the Hänel CleanStore® (for further information, turn to pages 30–31).



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.





Hänel *ROTOM*

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® storage 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.

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.

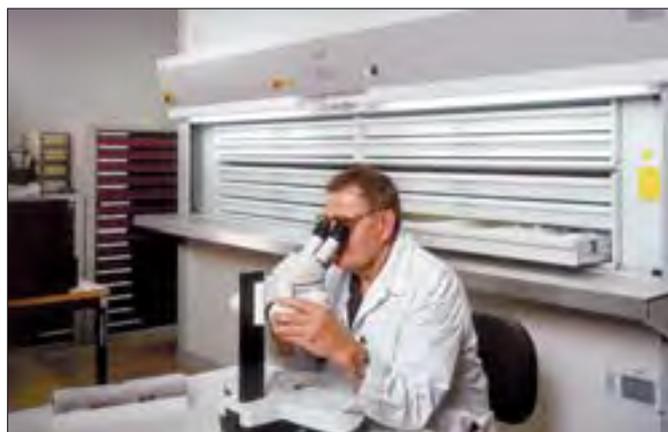
The Rotomat® is the perfect handling system for protected storage and quick retrieval of a wide range of objects.

Hänel Rotomat® storage 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®

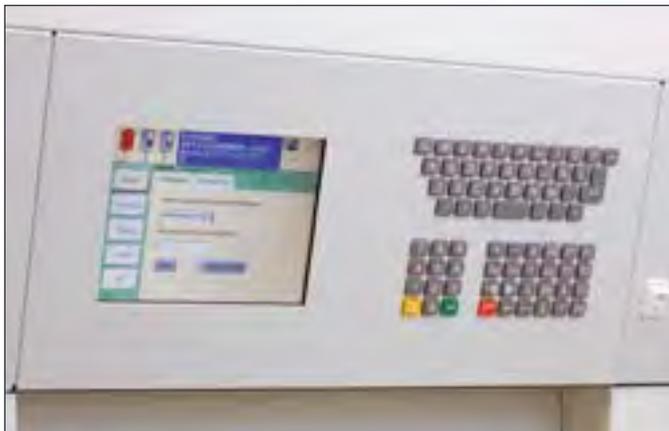


The pharmacy as a distribution center – an ingenious concept

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 12 N-StandAlone top controller with touchscreen technology

Whether you use the Hänel storage systems as stand-alone solutions with integrated inventory management or want to integrate the control units into a higher-level ERP system – the top controller MP 12 N from Hänel has everything already built in.

There are four different operating modes available, so you can choose the right one for your storage management:

- MP 12 N-StandAlone**
- MP 12 N-HostWeb**
- MP 12 N-HostData**
- MP 12 N-HostCom**

MP 12 N-StandAlone

This has the complete storage management package integrated, so no additional PC is required. The Ethernet interface makes hook up to your IT environment easy. A web server is also available so that the storage data can be displayed on the intranet.

MP 12 N-HostWeb

Storage management is performed in the higher-level host system. An integrated web browser displays any required web page on the control unit via the HTML interface. The web applications are operated via touchscreen on the control units.

MP 12 N-HostCom

In the mode, storage management is also performed in the higher-level host system, and the lifts are controlled via the user interface of the external storage management software. For storage and retrieval, a drive command is sent to the lift controller by the storage management software. Communication takes place via TCP/IP.

MP 12 N-HostData

The control system for quick and easy connection of our storage devices to the customer's ERP system. This version offers a file interface for storage and retrieval orders (pick lists) or individual data records. Data conversion is handled in the control system. The exchange of data is automatic and time-controlled. Route-optimized processing of orders is possible across multiple Hänel storage systems.

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

Up to 99 Rotomat® storage carousels can be managed 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 12 N-StandAlone simply by using the browser – making the storage situation transparent at all times.
- ▶ Software for the exchange of data is integrated.
- ▶ Customized expansion possible with versatile supplementary modules.

Networking with IT systems

Of course it is possible to hookup 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 via the integrated communication software.

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-StandAlone** 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
[t/↓/+ / X→/CE]

MENU INFO ON LEFT 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-Stand-Alone 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.

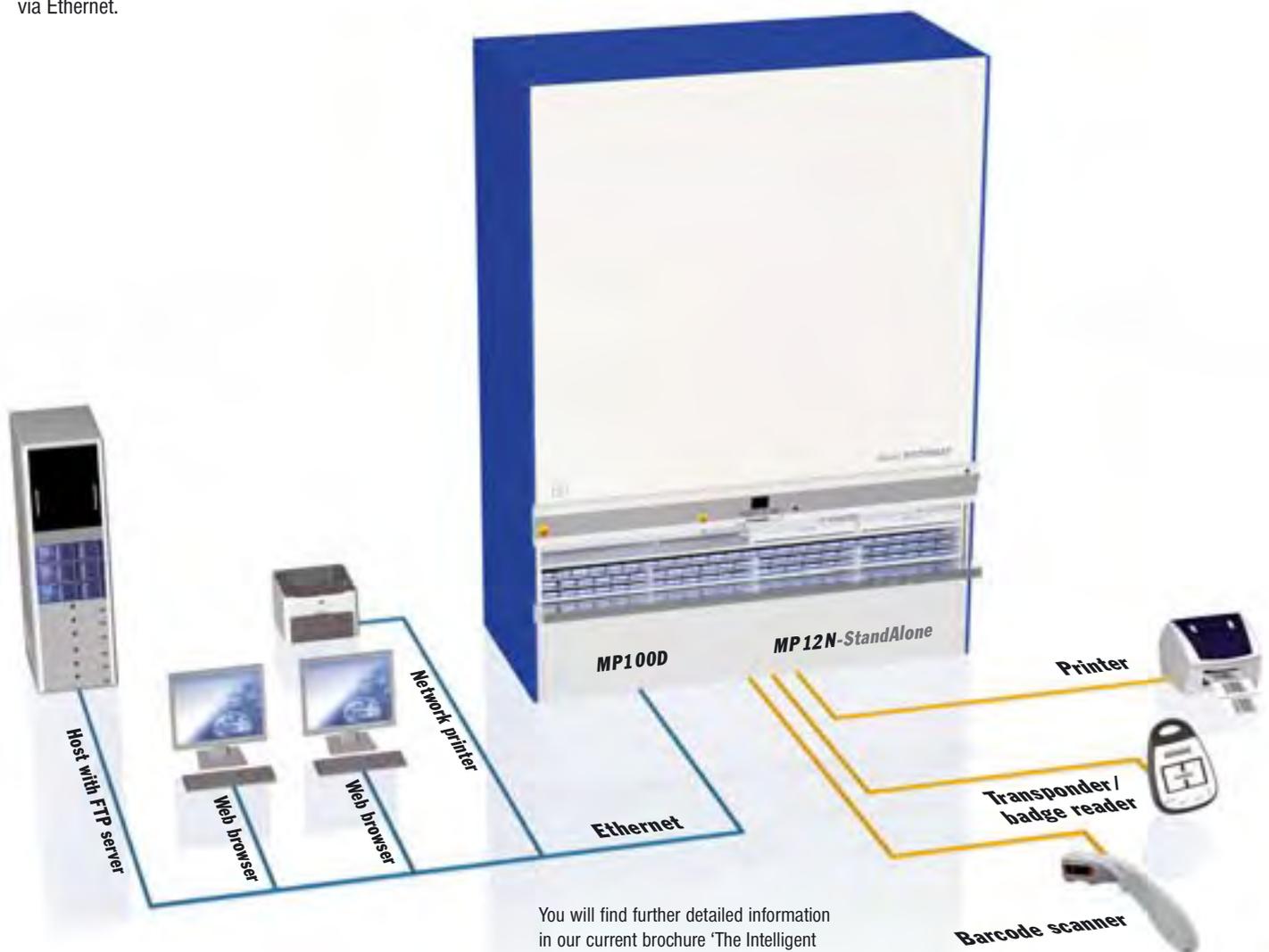
The integrated web server allows all the data for storage management to be displayed conveniently via the intranet using a web browser and also to be printed out.

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.

Hänel offers special software solutions for every application:

HänelSoft®

The powerful software package that can be tailored to each customer's needs thanks to useful configuration options and a range of standard modules.

Hänel TDM

The ideal solution for your tool management.

Warehouse Management System WMS

The complete solution for your warehouse management with Hänel storage systems – from incoming goods to dispatch.

In cooperation with our partner viastore systems, we offer the viad@t software solution, an innovative application for intralogistics and warehouse management.

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 carousel 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!

HänelSoft®

User

Password

Login



Start

Uprzemysłowy

HänelSoft® – the high-performance, flexible storage management system

HänelSoft® enables cost-efficient and forward-thinking work methods

HänelSoft® is a powerful software package that offers practical configuration options and numerous add-on modules enabling it to be individually tailored to any customer's needs.

The optimally designed interaction between HänelSoft® and the Hänel lift control systems guarantees efficient storage operations.

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 storage.

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

- ▶ One warehouse computer manages and controls up to 32 storage units – minimum IT expense, maximum storage convenience.
- ▶ Operators work directly at the storage units - which is ergonomic, practical and time-saving.
- ▶ Asynchronous processes at the storage units – each one works independently.
- ▶ Prioritized storage location search in front of the corresponding storage unit.



The network and web functionality is already integrated in the MP 12 N-HostWeb control system. This means the Hänel user interface is available directly at each Lean-Lift® without the need for an additional PC workstation.



Automotive Dealer Management System Interface MP-Link

A direct link between inventory stored in Hänel Lean-Lifts® and Rotomats® and the Automotive Dealer Management Systems (DMS)

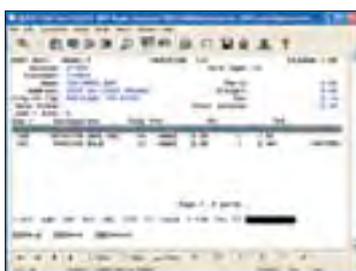
The Hänel MP Link was developed specifically for applications at automotive, truck and motorcycle dealerships.

Parts department personnel process all transactions through the established DMS systems just as they did before installing Hänel units.

MP Link establishes a valuable connection between Hänel units and DMS systems creating improved productivity and increased inventory accuracy.

The pluses

- ▶ Utilize existing DMS terminals.
- ▶ No additional PC or middle-ware required.
- ▶ Data base reconciliation is done in real time.
- ▶ Easy connection with bar code scanners and other peripherals.
- ▶ Visibility to system via external PC's and common web browsers.



ADP, R&R and other popular
DMS interfaces available

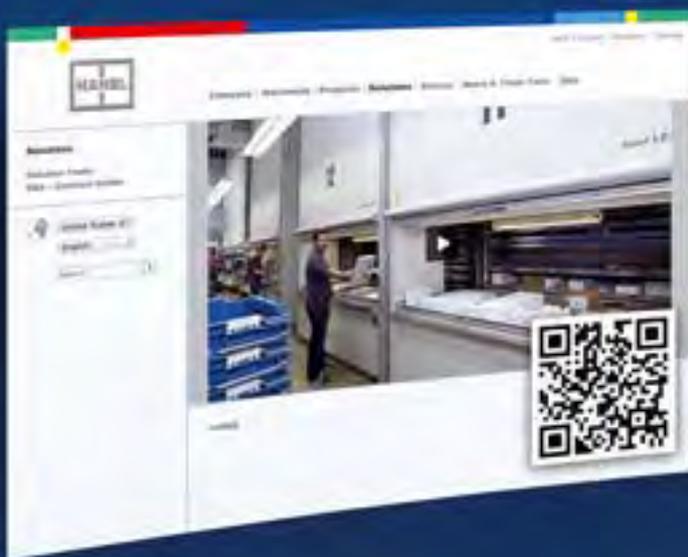


Parts department personnel interface
with the Hänel MP Link utilizing existing
DMS terminals

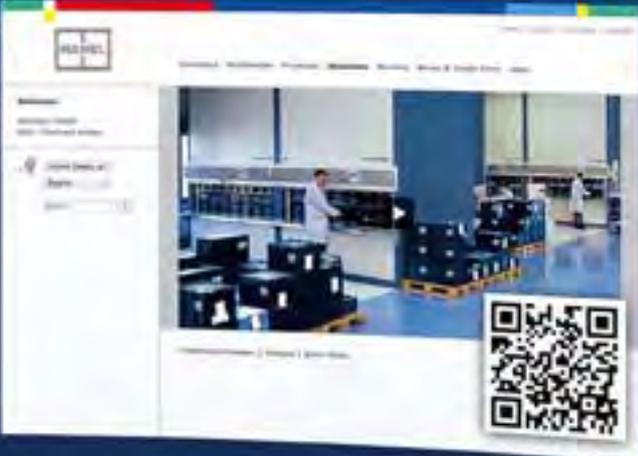
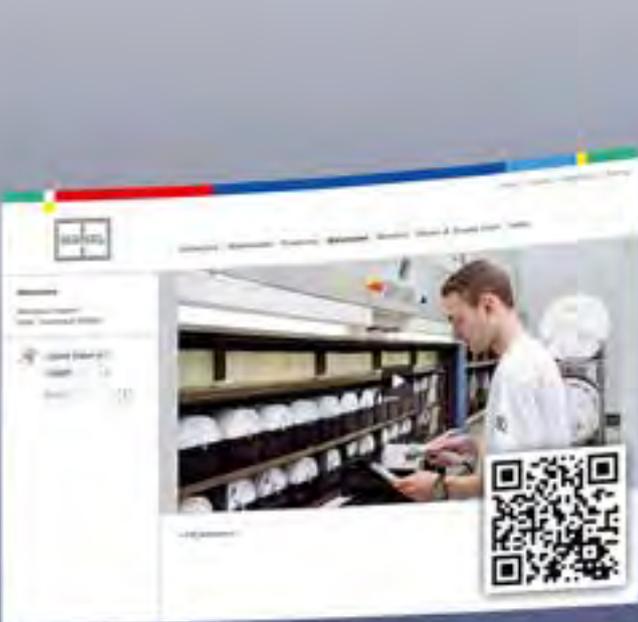


Hänel Office and Storage Systems

Media library



Scan the QR code to watch a video clip that highlights Hänel's innovative solutions



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® storage carousel

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.

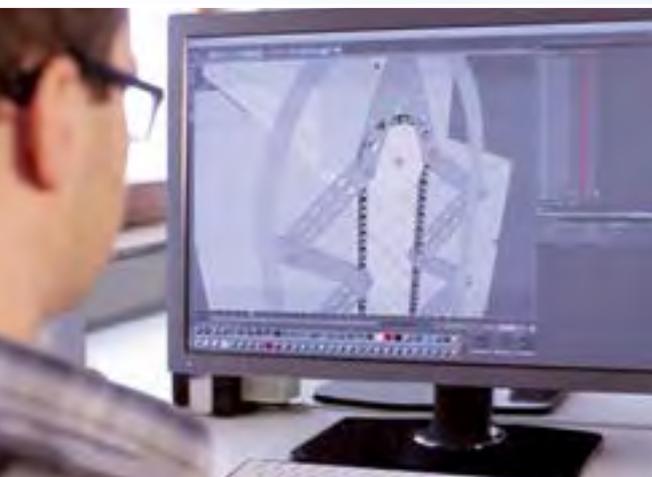
High-tech production for high-end demands

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) to achieve this distinction.

And in 2014 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.





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
Büro- und Lagersysteme
Kocherwaldstraße 25 - D-74177 Bad Friedrichshall
Am Zollwasen 3 - D-97353 Wiesentheid
Hänel & Co. Büro- und Lagersysteme
Bafflesstraße 21 - CH-9450 Altstätten/SG

scope:

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

Registration No. **73 100 2545**
4284 0660

Certificate valid from 2014-10-24 to 2017-10-23



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.hanel.us

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

The Hänel team is at your service.



- | | | | |
|----------------|------------|--------------------|--------------------------|
| Australia | Greece | Netherlands | South Africa |
| Austria | Hungary | New Zealand | South Korea |
| Bahrain | India | Nigeria | Spain |
| Belgium | Irak | Norway | Sweden |
| Brazil | Iran | Oman | Switzerland |
| Bulgaria | Ireland | Philippines | Syria |
| Canada | Italy | Poland | Taiwan |
| Chile | Jordan | Portugal | Thailand |
| China | Kuwait | Qatar | Turkey |
| Czech Republic | Latvia | Romania | United Arab Emirates |
| Denmark | Lebanon | Russian Federation | United States of America |
| Estonia | Libya | Saudi Arabia | Vietnam |
| Finland | Lithuania | Serbia | |
| France | Luxembourg | Singapore | |
| Germany | Malaysia | Slovakia | |
| Great Britain | Mexico | Slovenia | |



● Hänel distribution partners

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 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 / 2,205 lbs per tray.
- ▶ Load-bearing capacity of up to 60,000 kg / 132,278 lbs 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 almost 9 m / 30 ft.
- ▶ 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 / 31.4 ft 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® storage 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 almost 9 m/30 ft wide. 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 knowledge. 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. HänelSoft® for example is a powerful software package that can be tailored to any customer's individual needs.

Hänel

Storage Systems

121 Industry Drive
Pittsburgh, PA 15275
Tel. +1 (412) 787-3444
Fax +1 (412) 787-3744
E-Mail: info@hanel.us
www.hanel.us

Hänel

Büro- und Lagersysteme

P. O. Box 1161
D-74173 Bad Friedrichshall
Tel. +49 (0) 71 36 / 277-0
Fax +49 (0) 71 36 / 27 72 01
E-Mail: info@haenel.de
www.haenel.eu

Hänel

Büro- und Lagersysteme

Bafflesstrasse 21
CH-9450 Altstätten SG
Tel. +41 (0) 71 757 30 80
Fax +41 (0) 71 757 30 85
E-Mail: info@haenel.ch
www.haenel.ch

Hanel Systèmes

Europarc · 139, Chemin des Bassins
F-94035 Créteil Cedex
Tél. +33 (0) 1 45 13 96 10
Fax +33 (0) 1 45 13 96 13
E-Mail: hanel@hanel.fr
www.hanel.fr

Hänel

Kantoor- en Magazijnsystemen

Nieuwland Parc 13a
NL-2952 DA Alblasserdam
Tel. +31 (0) 78/89076 50
Fax +31 (0) 78/89076 59
E-Mail: info@haenel.nl
www.haenel.nl

Experience Hänel live
with the latest Hänel
USB stick.

Send in for one now!



Innovative ideas. Sound technology. Flexible systems

