



# Hänel Rotomat<sup>®</sup> industrial carousels: Efficient storage, optimized access times, ergonomic materials handling



Ideas that move the world ...



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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’.





# 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® 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.

Miniload system/  
conventional rack storage

Hänel Rotomat®

 Free/unused storage capacity

 Goods stored

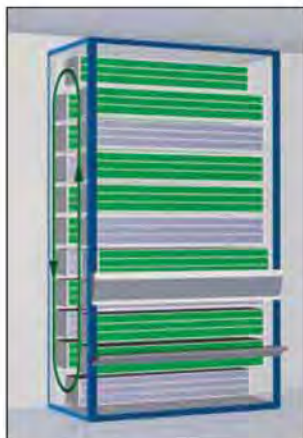
# Everything in balance

## High-tech for the storeroom

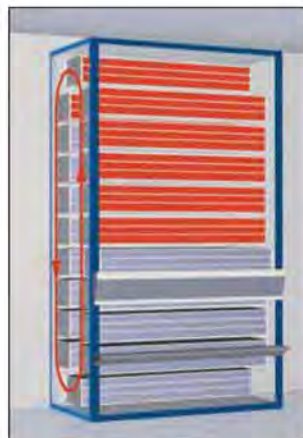
### Safe loading thanks to the intelligent load imbalance warning devices UL 2 and UL 3 from Hänel

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 micro-processor control unit.

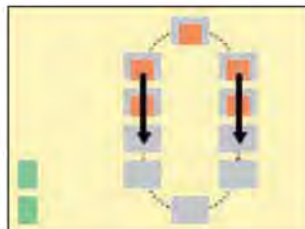


Uneven loads prevented by the load imbalance device UL 3

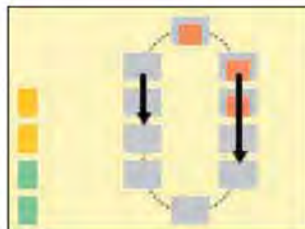


Unacceptably uneven load distribution without the load imbalance device

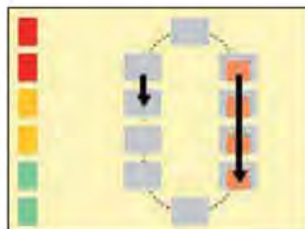
### Load imbalance shown on the control display (UL 3)



Optimal load distribution



Minor load imbalance: Load imbalance warning device gives storage recommendation

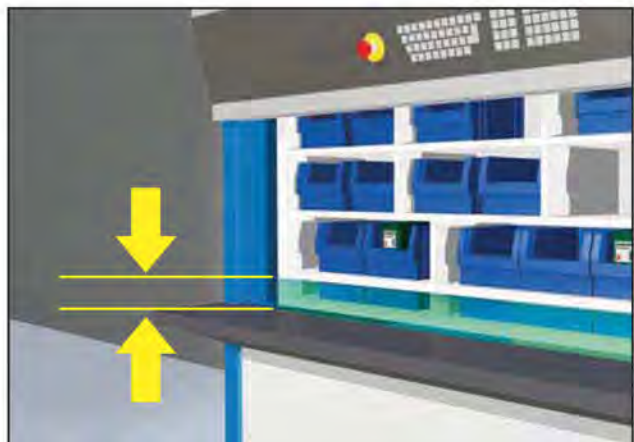


Load imbalance status: If storage recommendations are continually ignored, a load imbalance status can arise. Stock relocations are then recommended

### Accurate positioning of the shelf levels

The Hänel Rotomat<sup>®</sup> 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

# 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



**The Hänel Rotomat<sup>®</sup>  
industrial carousel as  
a buffer store**

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



# Keeping the wheels of industry turning

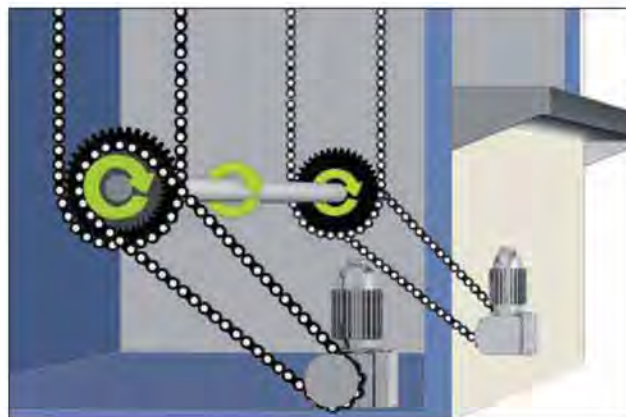
## The Hänel Rotomat® drive components

### 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.



# 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-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 12 N-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 12 N-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 12 N-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'.



**Buffer store in the production hall**

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

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