The Intelligent Hänel Control
and Software Technology

Innovative ideas. Sound technology. Flexible systems
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Hänel storage management systems: cost efficiency pure and simple!

Flexibility, efficiency and cost effectiveness – these are the requirements that today’s intralogistics must fulfill!

For over 50 years the name Hänel has stood for high-quality products in the storage technology sector.

Vertical carousels like the Hänel Rotomat® or vertical lift modules like the Hänel Lean-Lift® and the new Hänel Multi-Space® set the standard in the world of intralogistics.

60% savings in available floorspace and drastic reductions in the time it takes to access the stored items.

In addition to ergonomic work processes and extra protection for the stored articles, not to mention the wide range of other system advantages, the cost-efficiency of these systems is of prime importance.

The most stringent quality standards are applied to the storage units and the intelligent control technology from Hänel, making these products a worthwhile investment for your company.

Optimal processes in the Hänel storage units bring additional space and time savings

Control solutions such as the optimization run which automatically eliminates empty space arising from storage movements, or the Access Priority Factor which stores frequently needed containers closer to the retrieval point, are only two examples of the many highlights of Hänel control systems.

The smooth interaction of Hänel high-speed drives and microprocessor controllers allows the Hänel Lean-Lift® to achieve travel speeds up to 2.3 m per second.

Amortization of Hänel storage systems

Numerous add-on modules and the varied options for incorporating the control systems in existing IT installations offer you the optimum storage management package for your individual intralogistics needs.

The right decision

If you want to improve your intralogistics concept and save costs, you should first speak to the specialists from Hänel – with your cooperation they will develop ‘your made-to-measure intralogistics concept’.

Inventory overview and goods control

Join the many renowned companies worldwide who have decided on intelligent control and software solutions from Hänel!
## Hänel microprocessor control systems at a glance

<table>
<thead>
<tr>
<th>Models</th>
<th>MP 0 A</th>
<th>MP 12 D-S</th>
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<tr>
<td>Rotomat* Office Carousels</td>
<td>⚫</td>
<td>⚫</td>
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<td>Lockomat*</td>
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<td>⚫</td>
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<tr>
<td>Lean-Lift*</td>
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<td>⚫</td>
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<tr>
<td>Multi-Space*</td>
<td></td>
<td>⚫</td>
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</tbody>
</table>

### Display variants

| LED, 3-character, numeric           | ⚫      |         |
| VFD, 2-line, 20 characters each    | ⚫      |         |
| VFD, 4-line, 20 (40) characters each | ⚫  |         |
| CSTN colour display, 320 x 240 pixels |        | ⚫         |
| TFT colour display, 800 x 600 pixels, with Touchscreen technology |        | ⚫         |

### Functions

| Device control with direct selection of shelves/containers | ⚫      | ⚫         |
| Central control for connection of up to 99 storage units (database server) |        |         |
| Integrated Hänel storage management packages |        | ⚫         |
| Numerous add-on functions thanks to intelligent software modules |        | ⚫         |
| Integrated web server for direct access to the storage data by web browser |        |         |
| Multilingual user interface with Latin script | ⚫      | ⚫         |
| Multilingual user interface with UNICODE, e.g. for Chinese |        |         |
| Access authorization via RFID |        | ⚫         |
| Storage location display by compartment LEDs | ⚫      | ⚫         |
| Automated load imbalance indicator UL 2 for Rotomat*/Lockomat* | ⚫      | ⚫         |
| Optimization run on Lean-Lift® |        | ⚫         |
| Access Priority Factor with Lean-Lift® | ⚫      | ⚫         |
| Expanded safety bypass package (redundancy package) |        | ⚫         |

### Network/Peripherals

| RS232 interface for the connection of printers, barcode scanners, scales, etc. |        | 4 |
| Ethernet interface for quick and easy integration into existing corporate networks |        |         |
| Intelligent multipoint link for networking multiple storage units |        |         |
| Networking of 2 control systems with data exchange between the storage modules |        |         |
| Client control for connection to the central control system MP 100 D via Hänel multipoint interface |        |         |
| Client control for connection to the central control system MP 100 D via Ethernet |        |         |
| Client control for connection to a host system via RS 232 | ⚫      |         |
| Client control for connection to a host system via Ethernet |        |         |

- Equipment variant available
- Equipment variant not available

1) Only in conjunction with TFT display
<table>
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<th>MP 12 N-H</th>
<th>MP 100 D</th>
<th>More information on page</th>
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The standard control system for the Hänel Rotomat®
**MP 0 A – the compact standard control system for the Hänel Rotomat®**

- Direct selection of shelf levels by entering the shelf number.
- Digital display of shelf number at the retrieval point.
- Messages displayed in plain text.
- When the MFPS positioning system is used: individually programmed stop positions, position monitoring.
- Automatic load imbalance warning with shelf recommendation integrated in the display.
- 16 different language versions available.
- Optional interface card with RS 232 port for PC.
- Operating mode can be set for manual or computer operation.
- Activation of compartment and sub-compartment displays.
- Key lock function.
- Operation with 2 access openings possible.
- Emergency operation with closed access opening.

**The MP 0 A with 3-character digital display plus numeric keypad and additional function keys**

- Direct selection of shelf levels by entering the shelf number.
- Digital display of shelf number at the retrieval point.
- Numerical message display with error codes.
- When the MFPS positioning system is used: individually programmed stop positions, position monitoring.
The Hänel compact control system MP 12 D–S

The MP 12 D–S – the compact control system for Rotomat®, Lockomat®, Lean-Lift® and Multi-Space®

MP 12 D–S

The high-performance Hänel compact controller MP 12 D–S enables different modes of operation and is available in 3 different display variants.

It is the compact controller with extensive integrated storage management functions for article numbers, storage locations, stored quantity, minimum inventory and other additional data fields. Management of job lists and parts lists is also included.

There are four serial RS 232 interfaces for the connection of computers, barcode scanners, badge readers and other peripheral devices.

Messages are displayed in plain text. The storage locations are identified in the display and by way of LEDs in front of the shelf.

The Access Priority Factor stores frequently required containers close to the retrieval point. This enables even quicker access to the stored items.

The integrated optimization run automatically eliminates empty spaces that have arisen following storage movements and so achieves optimal packing density in the storage space available.

The pluses

- Memory available for pick lists.
- Storage lists can be displayed on the screen or printed out.
- Graphical display of the lift run on the TFT screen.
- Display texts and messages can be selected from 17 languages.
- Different system settings for printouts, control and operating functions, and storage management functions.
- Serial interface for exchanging data with higher-level systems.
- Up to 4 retrieval openings per device are possible.

The menu structure of the MP 12 D–S touchscreen version

A Interactive user interface

Easy, user-friendly operation of all the functions via the touchscreen. Clear display of all the relevant information about the stored items and storage locations.

B Up-to-date device information

Display of device number, retrieval point (if there are multiple retrieval points) and shelf number.

C General display/input field

For entering all control commands using the keyboard, such as direct shelf selection.

A detailed description of the integrated storage management can be found on Pages 10 – 13.
The top control system from Hänel
MP 12 N–S

The MP 12 N–S with integrated Ethernet interface: the top controller for Hänel storage units!

**MP 12 N–S**

The MP 12 N-S offers numerous features in addition to the functions of the MP 12 D-S. The integrated Ethernet interface allows trouble-free hook-up to host systems.

Different storage management packages (article, tool and file management) are available and can be operated easily via the touchscreen.

The optional camera in the Hänel Lean-Lift® takes a current container photo after every S/R operation.

**The MP 12 N–S: The ultimate in user convenience and functionality!**

**The pluses**

- The integration of the Unicode standard means the user interface can be displayed in virtually any language.
- Two MP 12 N-S controllers can be networked with each other for joint storage management. This allows each controller to show the inventory overview of both units.
- Integrated FTP client for data exchange.
- Up-to-date storage data can be called up via the web server on the intranet or Internet.
- Ethernet interface as standard.
- Up to 8 retrieval points per storage unit are possible.

**The menu structure of the touchscreen version**

**A Interactive browser interface**

- Easy, user-friendly operation of all the functions via the touchscreen.
- Clear display of all the relevant information about the stored items and storage locations in the web browser.

**B Up-to-date device information**

- Display of device number, retrieval point (if there are multiple retrieval points) and shelf number.

**MP 12 N–S**

- Ethernet interface as standard.
- Up to 8 retrieval points per storage unit are possible.

**General display/input field**

- For entering all control commands using the keyboard, such as direct shelf selection.

**Switchover of view mode**

- For switching between browser view and camera view (if there is a camera integrated in the storage unit).

**A detailed description of the integrated storage management can be found on Pages 10 –13.**

Main menu of the MP 12 N-S with integrated tool management module

View in camera mode. All storage changes can be tracked on the basis of container photos.

Main menu of storage management package ‘Item storage management’
The client control systems MP 12 D–H and MP 12 N–H for Hänel storage units with central storage management

**MP 12 D–H**

The MP 12 D–H offers the same functionality as the MP 12 D–S. It is an operating controller that accesses a central storage management system. The internal storage management modules from Hänel are not included.

In a network of up to 99 storage units, each unit can be controlled individually and independently of the others at its own operating (client) controller.

The storage management of all the units in the network is performed centrally via an MP 100 D control system or a PC-supported storage management program.

The MP 12 D–H is connected via the integrated serial multipoint link.

**MP 12 N–H**

The MP 12 N–H is networked with its host system either via the serial multipoint link or the integrated Ethernet interface.

In conjunction with the TFT touchscreen, the graphical user interfaces of different storage management systems can be displayed via web browser.
The central control system
MP 100 D

The central control system MP 100 D was developed so that large-scale storage installations can be managed comfortably with the integrated storage management packages from Hänel. It manages the data of up to 99 storage units (depending on the version).

The client controllers MP 12 D–H or MP 12 N–H are used as the operating units at each carousel/lift – this means each storage unit can be operated independently of the others.

All the articles in storage are managed centrally via the MP 100 D. The PC flashcard has enough space for 100,000 part numbers in up to 400,000 storage locations and 4,000 pick/job/parts lists containing up to 100,000 items.

Powerful order picking functions make work in the storeroom much easier. Pick and put lists, for example, can be processed either sequentially or according to route-optimized or time-optimized considerations. Route information is memorized to ensure the user covers the shortest distances.

For high-speed order picking, the optional shelf/container pre-positioning function is used, which positions all the storage units simultaneously.

The standard Ethernet interface provides for data exchange with higher-level host systems. Hook-up is simple thanks to an FTP client and data conversion software contained in the MP 100 D.

The integrated web server ensures that the storage data are available in the customer’s computer network.

The integrated Hänel storage management packages can be adapted to individual customer requirements with numerous supplementary modules.

The pluses

- Management of the data of up to 99 storage units (depending on the version).
- Route information is memorized to ensure that the user covers the shortest distances.
- FTP client for quick and easy connection.
- Data conversion software.
- Integrated web server for data retrieval via intranet or Internet.
- Ethernet interface for data exchange with higher-level systems (host, ERP systems, etc.)

The MP 100 D – high-performance central control system for up to 99 storage units

A detailed description of the integrated storage management can be found on Pages 10–13.
The integrated storage management packages of the MP control systems from Hänel

**Intelligent storage management with the storage management packages from Hänel**

Contained in the compact controller MP 12 D–S and the top controller MP 12 N–S as well as the central control system MP 100 D is a Hänel storage management package. That means all the storage management is already integrated.

No additional PC is required!

Three storage management packages are available:

- Hänel item management
- Hänel tool management
- Hänel file management

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

<table>
<thead>
<tr>
<th>Functions</th>
<th>MP 12 D–S</th>
<th>MP 12 N–S</th>
<th>MP 100 D</th>
</tr>
</thead>
<tbody>
<tr>
<td>All storage units in the network can be operated simultaneously</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Items can be stored across multiple storage units and managed centrally</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>The flash PC card offers memory space for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum number of articles</td>
<td>10,000</td>
<td>10,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Pick lists/Jobs</td>
<td>1,000</td>
<td>1,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Pick-list items/Job items</td>
<td>25,000</td>
<td>25,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Maximum number of storage locations</td>
<td>100,000</td>
<td>100,000</td>
<td>400,000</td>
</tr>
<tr>
<td>Number of storage locations per item</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>Number of items per storage location</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
</tbody>
</table>

**Storage management package**

- Item management
- File management
- Tool management

| Storage of article name and 25 freely assignable special data fields in the article master data | max. 40 characters | 40 characters | 40 characters |
| Pick list management with 25 freely assignable special data fields in header and position | max. 40 characters | 40 characters | 40 characters |
| Job management (priority-driven processing) with acknowledgement of the quantity actually withdrawn | - | 0 | 0 |

**Storage strategies such as FIFO, FIFO with return storage, random access to storage locations, fixed storage location and random storage**

| Storage location size (container size) in width, depth and height (optional) | - | 0 | 0 |
| Automatic size-related (free) storage location search | - | 0 | 0 |
| Minimum inventory monitoring with warning when minimum level reached and printout of a reorder suggestion list | - | 0 | 0 |
| Quantity factor and availability check for order picking | - | 0 | 0 |
| Optimization run with the Lean-Lift® | - | 0 | 0 |
| Access Priority Factor with the Lean-Lift® | - | 0 | 0 |

**Order picking/job strategies for processing**

- Sequential (in fixed sequence)
- Route-optimized (shortest route through all storage locations)
- Route list for route optimization across multiple storage units
- Time-optimized

| Comprehensive print lists | - | 0 | 0 |
| Storage data retrievable via web browser | - | 0 | 0 |

| Data exchange with host systems | RS 232 | Files via FTP | Files via FTP |
| Various supplementary modules for package expansion | - | 0 | 0 |

- Standard function
- Function not available
Selecting item for storage/retrieval

After an article is selected, a detailed list of the article information is displayed.

Storage location search

When a container size is entered (optionally specifying the height) the control system suggests the next free storage location.

Entering supplementary data

An article name can be given in addition to the article number. With the option 'item pool management' other data fields can also be maintained.

Information on article data

Once a search term has been entered, the result is displayed as a table.

Any data fields can be selected as search fields, e.g. article number, article name, etc.
The following supplementary modules are available to make the Hänel microprocessor control systems even more powerful:

**MP supplementary module 01**
Management of external containers
Complete containers/trays with the articles stored on them can be removed from the Lean-Lift® and transported to the production line on a trolley, for example.

When the container is returned to storage, the articles that have been added/removed are booked to the lift.

**MP supplementary module 02**
Access code management
Different user groups can be defined via user management. A user group is given access rights to certain areas of the store (storage unit, shelf/container or in the case of the Rotomat® to individual storage compartments).

Each user receives a user number and password and is assigned to a group, thereby permitting access to certain storage areas.

**MP supplementary module 03**
Item pool management
Item pool data are not dependent on storage location; they are data used to describe the articles, such as article number, name, or additional fields defined by customers themselves.

Item pool data can be transmitted via the interface during operation and therefore can be updated at any time.

**MP supplementary module 07**
Barcode cross-check
When an article is stored or retrieved, the user is prompted to enter the article number as a check; for example via barcode.

This ensures that the user puts in or takes out the correct article.

**MP supplementary module 08**
Free space management
Articles can be stored in different container types of predefined sizes.

These data are assigned to the individual shelves/containers as fixed parameters.

Empty containers can be added or deleted at any time.

The automatic storage location search then suggests an empty container of the required type.

**Supplementary module**
Integrated camera
Every time a container is moved, a camera integrated in the Lean-Lift® takes a picture of the container.

A fixed number of pictures per container are archived, so that changes to materials on the container can be tracked.

The photo information can be used to identify an article on a container directly at the control panel and bring it to the retrieval point.

**Access authorization via RFID also possible.**
**MP supplementary module 04**

**Management of storage location height**

A relative height can be assigned to each shelf/container. The automatic storage location search suggests a location with the required height to the user.

In the Lean-Lift® specifically, this means optimum space utilization can be achieved by storing only parts of the same height on one container. Containers that are loaded too high can be rejected by the lift depending on the setting.

**MP supplementary module 05**

**Minimum storage time**

Articles that have to be kept in storage for a predefined period of time are managed with this module. They can only be withdrawn after the specified time has elapsed.

Application example: The goods must be kept in temporary storage to harden, cool down, etc., before they can be passed on to production.

**MP supplementary module 06**

**Operations journal**

For the purpose of collecting operating data, all the storage/retrieval operations, including the quantity, cost center, job number, storage locations, or freely definable data, can be recorded in the operations journal and printed out or sent to the host system.

**Shelf pre-positioning**

Parallel and serial shelf pre-positioning are used to achieve more efficient order picking.

**Inventory function**

The inventory function offers the possibility of continuous stock taking, i.e. all the storage locations for an article must be checked physically at least once a year with respect to their contents and this information documented.

**Lending management**

Lending management is useful for the storage of articles that are not consumables but are always returned to the lift. The lending management function asks the identity of the person borrowing the item and saves this.

The lending overview list shows which articles have been borrowed, for how long, and by whom.
Almost all Hänel control systems are equipped as standard with 4 serial interfaces for the connection of peripheral devices

Peripheral devices can be optimally connected to the intelligent Hänel microprocessor control systems via the integrated RS 232 interfaces.

The centralized position of all the peripheral units needed for order picking, such as RFID systems, barcode and badge readers, printers and scales, guarantees the best possible user convenience, saves work time and ensures smooth workflow.

The MP 12 N controllers offer the additional option of connecting network components via the integrated Ethernet interface.

**The pluses**
- Simple, quick connection of peripheral units!
- Rational workflow thanks to ergonomic positioning of peripheral devices!
- Flexible positioning with the Hänel Vario arm system!
- Smooth work procedures resulting in time saved!

**The Hänel control system offers a wide range of options for connecting peripheral devices!**
Ergonomic integration of the control terminal

Maximum user comfort thanks to individual, needs-based positioning of the control keyboard

Hänel offers various solutions for ergonomic integration of the control terminal – depending on the needs of the customer.

Hänel Lean-Lift® control keyboard on movable Vario arm (standard)

Control keyboard fixed to the container support (optional)

Control keyboard swivel-mounted on the Lean-Lift® housing (optional)

Control keyboard on movable stand at working height (optional)

Keyboard in the Rotomat® control box above the retrieval point, keys positioned centrally at eye level (standard)

Pull-out keyboard housed beneath the Rotomat® work counter

On the Hänel office Rotomat® the control panel is integrated ergonomically into the work counter
Intelligent high-tech components: the Hänel safety concept!

Safe loading with the intelligent load imbalance indicator UL 2 from Hänel

The automated load imbalance indicator not only displays the imbalance status in the Rotomat®, but also recommends which shelf to load or unload in order to avoid uneven load distribution.

This information is provided by the UL2’s own microprocessor. The load imbalance indicator is in constant communication with the Hänel microprocessor control systems.

The compartment sub-level display in front of each storage compartment ensures no mistakes are made. Compartment and sub-level are displayed on the LED strip as either one or two digits.

Accurate positioning of the compartment level

The opto-electronic Hänel positioning system MFPS 1 allows the exact stop position for each sub-level to be individually programmed. Programming is easy with the Teach-in procedure!

Error-free access thanks to integrated sub-level display

Each retrieval item is accurately positioned and can be adjusted as necessary.

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Optimal storage due to exact height measurement of articles

The article height is measured precisely so that containers are stored in optimal packing density. Light barriers measure the height in pitches of 25 mm, 37.5 mm, 75 mm, 90 mm or 125 mm. When the container is pulled in, the highly accurate light barriers measure the storage items, and the Hänel microprocessor control searches for the best slot in the Hänel Lean-Lift® for the given height.

With its height sensors, profile wall and Hänel container engineering, the Hänel Lean-Lift® offers vertical optimization and height optimization in one!

Precise weight measured by the Hänel weighing device

An electronic 4-point weighing system weighs each container in the retrieval point. The current weight is shown on the keyboard display.

The weighing device allows the maximum payload of the individual containers and of the entire Lean-Lift® to be recorded.

‘ESB’ – Expanded Safety Bypass Package

Hänel storage systems work reliably and have a low failure rate. If a malfunction should arise, however, the ‘Expanded Safety Bypass Package’ from Hänel comes into effect in defined cases.

By activating the ESB system directly at the Hänel microprocessor controller, the user can continue to operate the Lean-Lift® in these cases.

So if the safety light barriers in the access point fail, for example, it is still possible to operate the Lean-Lift® with the sliding door closed.

Additional sensors in the access point and on the extractor, together with various positioning systems, continue in certain cases to guarantee safe and reliable operation until the Hänel service technician arrives.

The intelligent safety package for increased availability of the Hänel storage systems!
Hänel control systems with integrated storage management packages networked with computer systems

The practice-oriented Hänel microprocessor control systems offer the perfect storage management solution.

Hänel's individual device controllers MP 12 D–S and MP 12 N–S as well as the central control system MP 100 D already have extensive storage management functionality and therefore offer the ideal conditions for connection to higher-level ERP (Enterprise Resource Planning) systems.

The MP 12 D–S is connected via the RS 232 interface.

The MP 12 N–S and the MP 100 D are integrated into the corporate network via the standard Ethernet interface.
The Hänel controllers MP 12D–H or MP 12N–H are operated directly from a PC-supported storage management system or by the customer’s own software.

With the Hänel lift/carousel controllers MP 12D–H, MP 12N–H and the MP 12N–H [HOST DATA] the customer can use an already existing storage management software package. Controllers MP 12D–H and MP 12N–H are linked into the corporate network via a PC.

The MP 12N–H [HOST DATA] can be connected to the storage management system directly without an additional PC. It has a data buffer and the ‘Host communication’ module.

More information on the MP 12N–H [HOST DATA] can be found on Page 20.

Hänel offers a highly competent service for customers who want to use their own software in conjunction with Hänel storage units!
The control system with integrated data buffer
MP 12 N–H [HOST DATA]

Processing pick and put items from the data buffer

The MP 12 N–H [HOST DATA] receives the storage and retrieval information from the higher-level computer system. This information is stored temporarily in a buffer on the controller side. After it has been processed an acknowledgement is sent back to the higher-level system.

Main menu

The data records in the buffer can be processed via the control keyboard or by touchscreen. The integrated web server offers the option of displaying the buffer contents according to different criteria either directly at the control panel or via an external PC browser.

Processing data records

The data records contain the storage and retrieval information such as job number, part number, storage location and quantity. Processing can be sequential or priority-driven.

Configuration software

The customer-specific format of the data records can be defined using the configuration software. The basic configuration is set up just once, then the integrated software module ‘Host communication’ allows easy import/export of files in CSV format.
Hänel storage management programs enable cost-effective and efficient work processes

Hänel storage management programs are intelligent software systems for computerized materials handling with Hänel storage units. These systems handle the administration of storage locations, articles, tools, inventory, order picking and replenishment.

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 safe 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 ERP programs.
- Interface to the Hänel 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.

**Software systems rationalize storage operations and provide optimal transparency in the storeroom!**
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.

HänelSoft® basic package

HänelSoft® offers a wide range of functions for efficient storage management even in the basic version:

- Master data management for recording the article number, name and additional information, for defining storage strategies and for article properties!
- Definition of storage structures!
- Interface to the Hänel storage systems: requesting items/parts directly at the MP control unit!
- Pick and put operations based on article properties and storage strategy!
- Minimum inventory!
- Information and analysis on the screen or on printout!
- HOST interface – for manual data import and export!
- Management of manual storerooms!

The HänelSoft® 3-D storage visualization offers maximum storage transparency

The three-dimensional graphical storeroom overview shows the current situation on every storage level and this enables a visual search for storage locations.

Optimum use of the storeroom can be controlled by defining container types in different sizes.

HänelSoft® and the Hänel microprocessor controller combine to create the perfect storage operation system!
Intelligent add-on modules are available to meet a wide variety of storage management needs:

<table>
<thead>
<tr>
<th>Module</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>010 Additional workstation</td>
<td>License for additional screen-based HänelSoft® workstations.</td>
</tr>
<tr>
<td>(Client)</td>
<td></td>
</tr>
<tr>
<td>020 License for connecting</td>
<td>The basic package includes the license for 2 lifts.</td>
</tr>
<tr>
<td>additional lifts</td>
<td></td>
</tr>
<tr>
<td>040 Interface to MP 12 A</td>
<td>For connecting the microprocessor control system MP 12 A to HänelSoft®.</td>
</tr>
<tr>
<td>control systems</td>
<td></td>
</tr>
<tr>
<td>090 Remote maintenance</td>
<td>Software for remote maintenance of HänelSoft® by modem, ISDN card, etc.</td>
</tr>
<tr>
<td>100 Automatic article number</td>
<td>New article numbers are automatically suggested by HänelSoft®.</td>
</tr>
<tr>
<td>assignment</td>
<td></td>
</tr>
<tr>
<td>110 Storage container</td>
<td>Definition and assignment of the loading tools to individual shelves or</td>
</tr>
<tr>
<td>management</td>
<td>shelf areas.</td>
</tr>
<tr>
<td>120 Storage manipulation</td>
<td>All the inventory data for an article can be modified with this module. A</td>
</tr>
<tr>
<td></td>
<td>special change journal is used to log these manipulations.</td>
</tr>
<tr>
<td>200 Job management incl.</td>
<td>Pick and put lists are created, imported and processed.</td>
</tr>
<tr>
<td>parts list management</td>
<td>Materials can be reserved and stockouts displayed.</td>
</tr>
<tr>
<td>201 Job optimization*</td>
<td>Boosts the order picking performance by simultaneously positioning the</td>
</tr>
<tr>
<td></td>
<td>shelves/containers of multiple storage units.</td>
</tr>
<tr>
<td>220 Automatic HOST-</td>
<td>Time-controlled, automated data exchange with the HOST system.</td>
</tr>
<tr>
<td>communication</td>
<td></td>
</tr>
<tr>
<td>230 Inventory</td>
<td>Generates count lists for continuous or periodic inventory that are</td>
</tr>
<tr>
<td></td>
<td>processed directly at the lift control unit.</td>
</tr>
<tr>
<td></td>
<td>Stock-taking journal for export to the HOST system.</td>
</tr>
<tr>
<td>240 Access code management</td>
<td>User management with the added feature of access rights to individual</td>
</tr>
<tr>
<td></td>
<td>lifts or parts of lifts. Identification can be carried out at the lift</td>
</tr>
<tr>
<td></td>
<td>keyboard.</td>
</tr>
<tr>
<td>250 Management of</td>
<td>Containers that have been removed can be buffered in an external storage</td>
</tr>
<tr>
<td>external containers</td>
<td>place (e.g. assembly site). The articles remain assigned to these</td>
</tr>
<tr>
<td></td>
<td>containers. Used quantities are subsequently booked in the system.</td>
</tr>
<tr>
<td>300 Batch management</td>
<td>Certain articles can be identified as batch articles and stored with</td>
</tr>
<tr>
<td></td>
<td>the batch number. The articles can be retrieved with or without the</td>
</tr>
<tr>
<td></td>
<td>batch number being specified.</td>
</tr>
<tr>
<td>310 Input of booking</td>
<td>Input of individually configurable booking fields directly at the lift</td>
</tr>
<tr>
<td>fields</td>
<td>control units.</td>
</tr>
<tr>
<td>320 Expire date/</td>
<td>An expiry date or expiry period can be defined for each article.</td>
</tr>
<tr>
<td>Expire time</td>
<td>Articles that have expired are barred from retrieval.</td>
</tr>
<tr>
<td>330 Minimum storage time</td>
<td>A minimum storage time can be defined for each article.</td>
</tr>
<tr>
<td></td>
<td>Only when this period has elapsed can the article be retrieved.</td>
</tr>
<tr>
<td>400 Article picture</td>
<td>A picture is assigned to the article master record. For more detailed</td>
</tr>
<tr>
<td></td>
<td>information, turn to page 24.</td>
</tr>
<tr>
<td>410 Shelf picture</td>
<td>Each time a pick or put operation is booked, an up-to-date photo is</td>
</tr>
<tr>
<td></td>
<td>taken. For more information, turn to page 24.</td>
</tr>
<tr>
<td>500 HänelSoft® server for</td>
<td>Basic module for connecting mobile terminals via W-LAN.</td>
</tr>
<tr>
<td>mobile terminals</td>
<td>For more detailed information, turn to page 26.</td>
</tr>
<tr>
<td>510 Client license for</td>
<td>Workstation license for each portable terminal.</td>
</tr>
<tr>
<td>mobile terminals</td>
<td>For more information, turn to page 26.</td>
</tr>
</tbody>
</table>

*only in conjunction with job management
**HänelSoft® Picture – optimal overview of shelf contents**

**Visual display of the stored items**

### Module 400

**Article picture**

A picture (drawing, photo, etc.) can be assigned to the item in the article master record.

If a digital camera is connected to the HänelSoft® PC, the picture can be taken with this module and integrated directly in the article master data.

This photo is available in all the article and storage lists as well as in the graphical container view.

### Module 410

**Container picture**

One or more cameras are integrated in the Lean-Lift® per access point. Each time a pick or put operation is performed, an up-to-date container photo is taken.

The container photo is displayed in the graphical storage overview of HänelSoft®. This guarantees an optimal visual overview of the storage situation at all times.

A defined number of pictures is archived per container so that material changes on the container can be tracked.
Efficient work methods with HänelSoft®
storage management system

Maximum control of material stocks with HänelSoft®

HänelSoft® controls the flow of materials into and out of the store.

It supports the warehouse staff with route-optimized storage and retrieval procedures and helps by offering them suggestions of empty spaces when they are looking for storage locations.

Every movement of materials is logged in the HänelSoft® database.

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!
- Exchange of data with all the well-known ERP systems!
- Can be expanded at any time with the addition of further units!

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- Can be expanded at any time with the addition of further units!
Wireless terminal for managing manual storerooms

The intelligent solution for mixed-mode stores

Portable mobile terminals with W-LAN technology connect conventional storerooms online to the HänelSoft server.

The supplementary module HänelSoft MobileClient makes work easy and user-friendly.

Storage and retrieval operations are recorded directly at the racks with the wireless terminal and transferred straight to the HänelSoft server. This ensures that a complete inventory overview is always available in real time.

Terminals with integrated barcode scanner offer quick and secure data collection and prevent input errors.

Accurate data collection via mobile terminal with barcode scanner
Bundled power for your storage management

The user interface of the HänelSoft® storage management software is now available right at the storage units.

The touchscreen technology provides maximum operator comfort.

All pick and put operations can be booked directly at the storage unit via touchscreen. The article information is displayed in a clearly structured format.

With the online connection, all storage movements are transmitted immediately to the HänelSoft® server. This means each client control unit offers a complete inventory overview.

The system can be incorporated optimally and with minimal effort into an existing corporate network via the integrated Ethernet interface.

So HänelSoft® can be used directly at the storage units without an additional PC.

Control solutions that are truly convincing!

User-friendly TFT touchscreen technology

Operator-friendly photographic overview of stored articles and locations

Input errors are avoided thanks to the clear, easily-followed prompts
It doesn’t matter whether the software system is a commercially available one or the customer’s own – all Hänel storage units can be operated without difficulty via the Ethernet or RS 232 interface.

Hänel offers all its customers a competent service enabling Hänel storage units to be linked up with the most varied of storage management solutions.

Numerous projects have already been planned and implemented by the specialists from Hänel.

These include the integration of Hänel storage units with many products already established on the market such as: AUTOTAS, COSCOM, DATOS, FASYS, INFOR, SAP, TDM, TMS, VIADAT, etc.

On this page we can only show you a few examples from a multitude of customized solutions. We would be delighted to tell you about more tried-and-tested installations on request.

Hänel supports you with comprehensive documentation, competent service, and decades of experience when it comes to linking up the Hänel storage systems to your software!

The dispatch store of the SCHLAFHORST company uses SAP as its enterprise resource planning system. Eight Hänel Lean-Lifts are integrated into the customized system via the IDOC interface from SAP.

AIRBUS uses storage management software specially programmed for its warehousing situation. Ten Hänel Lean-Lifts work seamlessly with this solution.

The HANSAFLEX company uses storage management systems from VIASTORE as subsystems for managing all areas of the store-room. Two Hänel Rotomats, each equipped with a VIASTORE PC workstation, are used for parts order picking.
Hänel storage management programs are made-to-measure software solutions

Hänel microprocessor control systems working in conjunction with tailored software programs from Hänel can increase the performance and efficiency of any storage and materials handling logistics.

The prerequisite for a successful logistics concept is a thorough analysis of the tasks required.

The experienced Hänel specialists develop the optimum combination of hardware and software that meets the customer’s specific needs and can be expanded effortlessly.

High-tech for high-end demands

Innovation and performance, dynamism and ideas, new technologies and team spirit have made Hänel one of the leading vendors of logistics and materials handling systems.

Throughout the world our solutions contribute to the success of our customers. That’s why so many leading names opt for quality ‘Made by Hänel’.

Everything from a single source

Hänel offers the tailored complete solution. The advantage for customers: one address to turn to for all services, whether it be the storage system, control software or logistics concept.

Our quality management system has passed the scrutiny of independent judges: in 1993 Hänel Germany was the first company in its field (vertical lift technology) worldwide to be awarded the ISO 9001 certificate attesting to the highest international quality standards.

Our strength lies in our know-how!
Experience Hänel live
with the new Hänel Double-CD.
Simply request!