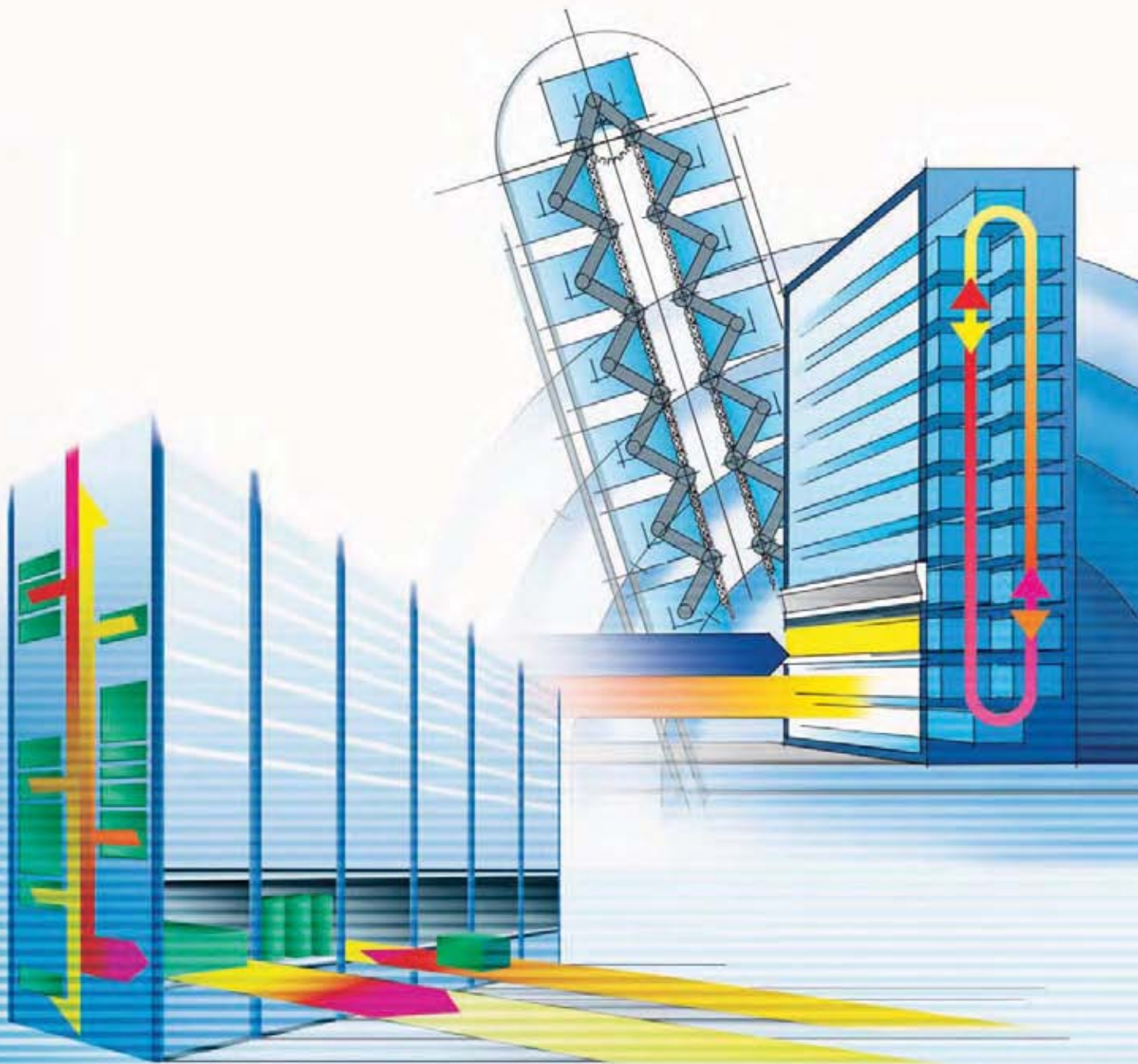


Hanel Office and Industrial Storage Systems Innovations and Perspectives in Intralogistics and Inventory Control



Innovative ideas. Sound technology. Flexible systems







Hänel ROTOMAT

Hänel LEAN-LIFT


Hänel LEAN-LIFT




<u>Creating the future, developing new ideas</u>	<u>3</u>
<u>Innovation, progress and experience over more than 50 years</u>	<u>4</u>
<u>Innovative development and the latest manufacturing technology</u>	<u>6</u>
<u>Quality without compromise</u>	<u>8</u>



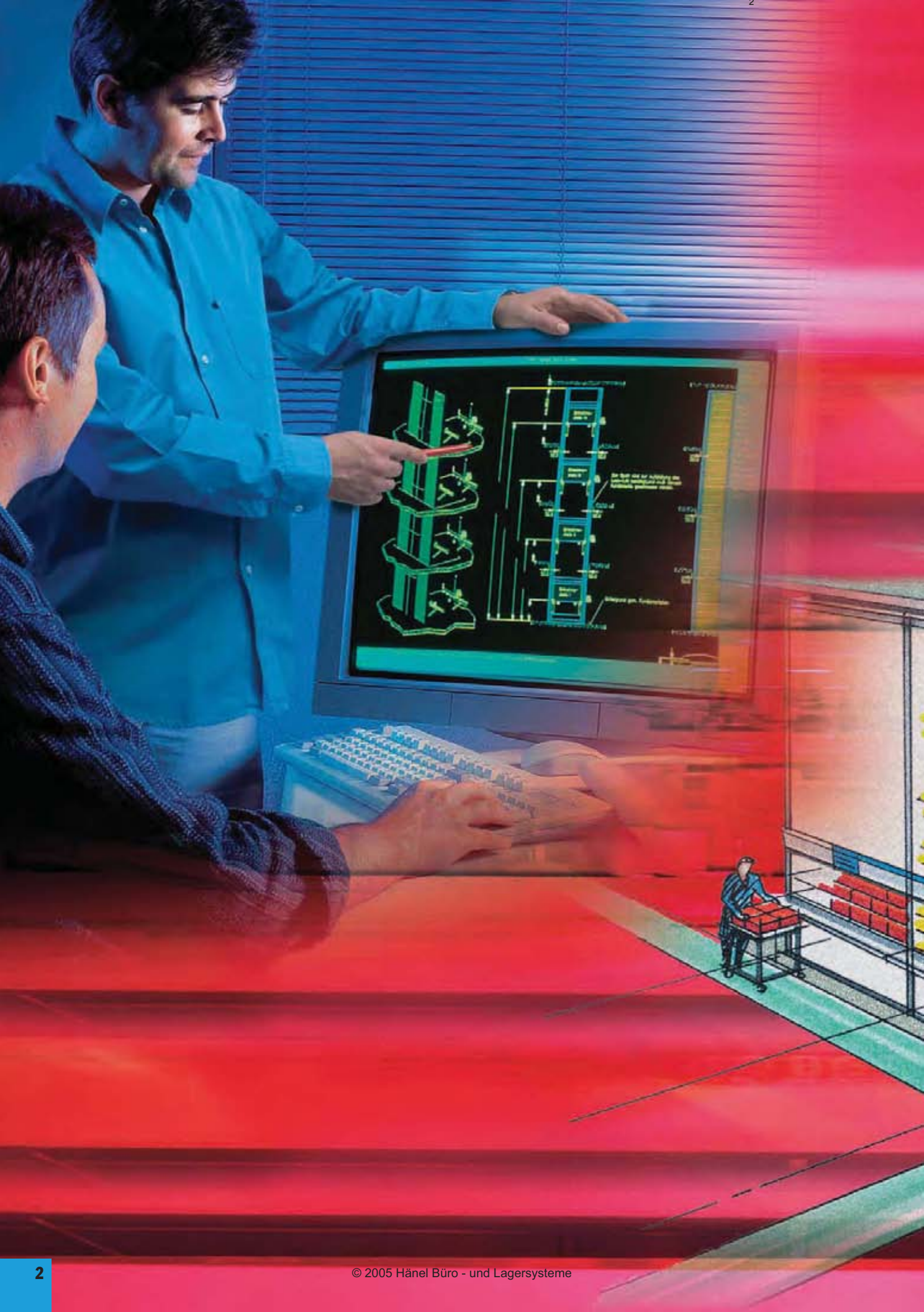
<u>Hanel Rotomat systems</u>	<u>11</u>
<u>The Hanel Rotomat principle</u>	<u>12</u>
<u>Hanel Rotomat industrial storage carousels</u>	<u>14</u>
<u>Unique and flexible</u>	<u>17</u>
<u>Streamlining operating procedures, increasing flexibility, lowering costs</u>	<u>18</u>
<u>Hanel's Rotomat office carousels</u>	<u>20</u>
<u>The perfect office system</u>	<u>23</u>
<u>Intelligent control technology</u>	<u>24</u>
<u>Hanel software solutions with custom options</u>	<u>26</u>

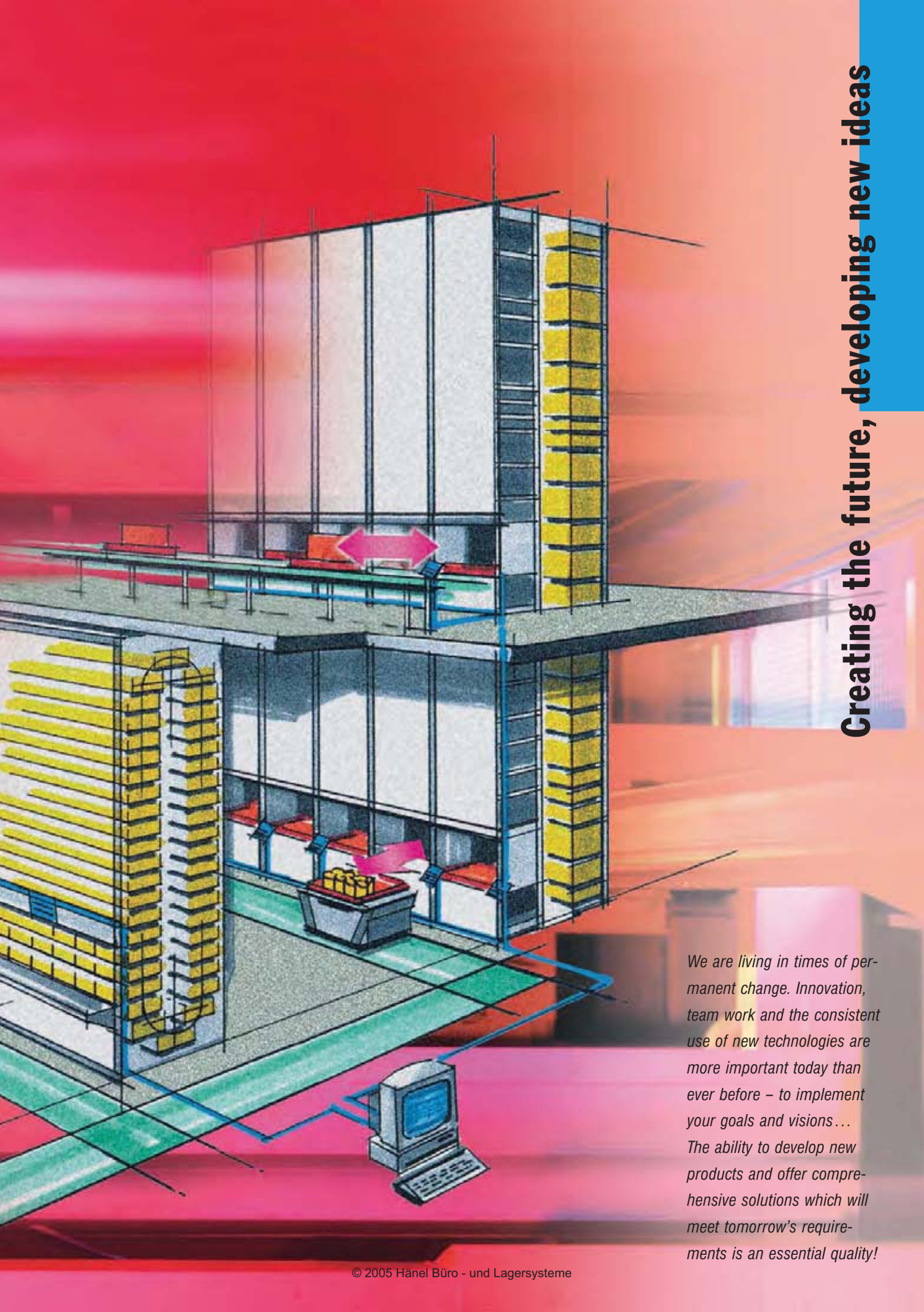


<u>Hanel Lean-Lift systems</u>	<u>29</u>
<u>The Hanel Lean-Lift principle</u>	<u>30</u>
<u>Giving flexibility new dimensions</u>	<u>33</u>
<u>Hanel's Lean-Lift – a variable system</u>	<u>34</u>
<u>Hanel's Lean-Lift control concept</u>	<u>36</u>



<u>Hanel worldwide</u>	<u>39</u>
<u>Successful companies opt for quality 'made by Hanel'</u>	<u>41</u>
<u>Our service is world class</u>	<u>42</u>
<u>Hanel customer service</u>	<u>44</u>





Creating the future, developing new ideas

We are living in times of permanent change. Innovation, team work and the consistent use of new technologies are more important today than ever before – to implement your goals and visions... The ability to develop new products and offer comprehensive solutions which will meet tomorrow's requirements is an essential quality!

Hanel Office and Industrial Storage Systems

Innovation, progress and experience over more than 50 years



The first Hanel office carousel in Europe in 1957

In 1957, more than 45 years ago, Gerhard Hänel, the founder of the company, was the first manufacturer in Europe to offer mass-produced office carousels using the Ferris wheel principle (vertical carousel concept).

Today Rotomat carousels and Hanel's Lean-Lifts are manufactured in the three plants and exported worldwide. Our primary goal is to develop the most economical and optimal solutions for our customers in industrial storage and office technology.

Innovation and performance, creative system solutions, new technologies and team spirit have made Hanel one of the leading manufacturers of industrial storage and office systems.

.....
»You will not be successful in any undertaking unless you are convinced you are the best in the world. You have to put your very soul into the business and the business into your soul«.

Thomas Watson
.....

Our solutions contribute to the success of our customers worldwide. For this reason, renowned companies opt for quality 'made by Hanel'.

The Hanel Company:

1953 – Gerhard Hänel forms the company **Hanel Büro- und Lagersysteme** in Bad Friedrichshall, Germany.

1957 – Hanel is the first manufacturer in Europe to offer mass-produced office carousels using the Ferris wheel principle.

1968 – Plant 2 is brought on line in Wiesentheid, Bavaria.

Introduction in the 70's of Hanel's first industrial vertical carousel.

1972 – Plant 3 takes up production in Altstätten near St. Gallen.

1973 – Hanel develops the first aluminium carousels.

1978 – Hanel designs a heavy duty carousel with a storage capacity of more than 10 metric tons.

The 80's see a vast extension of the range of industrial carousels worldwide. Hanel USA and Hanel France are founded. These are joined in 1990 by Hanel Netherlands.

1993 – Hanel Germany is the first company in its industry to be awarded the ISO 9001 certificate.

1994 – The first Lean-Lift with vertical lift technology and a capacity of 250 kg/552 lbs per container.

1995 – Hanel Altstätten is the first company in its industry to receive the ISO 9001 certificate in Switzerland.

1996 – Lean-Lift with a capacity of 500 kg/ 1,104 lbs per container.

1997/98 – Vast expansion of production facilities utilizing the latest engineering technology.

1999 – Lean-Lift with a capacity of 1,000 kg/ 2,208 lbs per container.

2001 – Hanel opens a new Demonstration Center in Bad Friedrichshall.

2003 – Hanel moves into its new administration building.

Today Hanel is one of the world's leading manufacturers of industrial storage and office organization systems, with sales centers in more than 40 countries.



Hanel plant 1
Bad Friedrichshall, Germany



Hanel plant 2
Wiesentheid/Bavaria, Germany



Hanel plant 3
Allstätten/St. Gallen, Switzerland

**Our experience gives us
the edge!**

Typical of Hanel: innovative developments and the most modern production technology

**Hanel – a company
committed to the highest
quality**



Quality starts with a systems consultation

No two Hanel carousels are the same. Simply because each application is unique.

This is why, at Hanel, high-quality consultation takes priority along with product quality. Based on your requirements and our experience we develop a complete solution designed to your needs.

High-tech production to meet high performance demands

Highly qualified specialists put the ideas of the planning-engineer into production, using the latest manufacturing techniques. Together applying their knowledge and experience.

Even with automation, people count at Hanel. Experts coordinate the various steps in production, continuously keeping check on quality.

Our quality management system has passed the scrutiny of independent judges: Hänel Germany is the first company in the world in this industry to be awarded the DQS seal attesting to compliance with ISO 9001 – the highest international quality standard.



ZERTIFIKAT ◆ CERTIFICATE ◆ 認証證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE



The Certification Body
of TÜV Management Service GmbH

certifies that

Hänel GmbH & Co. KG
Büro- und Lagersysteme
Kocherwaldstr. 25 • D-74177 Bad Friedrichshall
Am Zollwasen 3 • D-97353 Wiesentheid

Hänel Co.
Büro- und Lagersysteme
Bafflesstrasse 21 • CH-9450 Altstätten/SG

has established
and applies a Quality System for
Design, Conception, Production, Distribution and
Maintenance of Office and Storage Systems.

An audit was performed, Report No. 70032353

Proof has been furnished that the requirements
according to

DIN EN ISO 9001:2000

are fulfilled. The certificate is valid until **September 2005**

Certificate Registration No. 701003201

Mannheim, October 31, 2002

H. Tenfelde

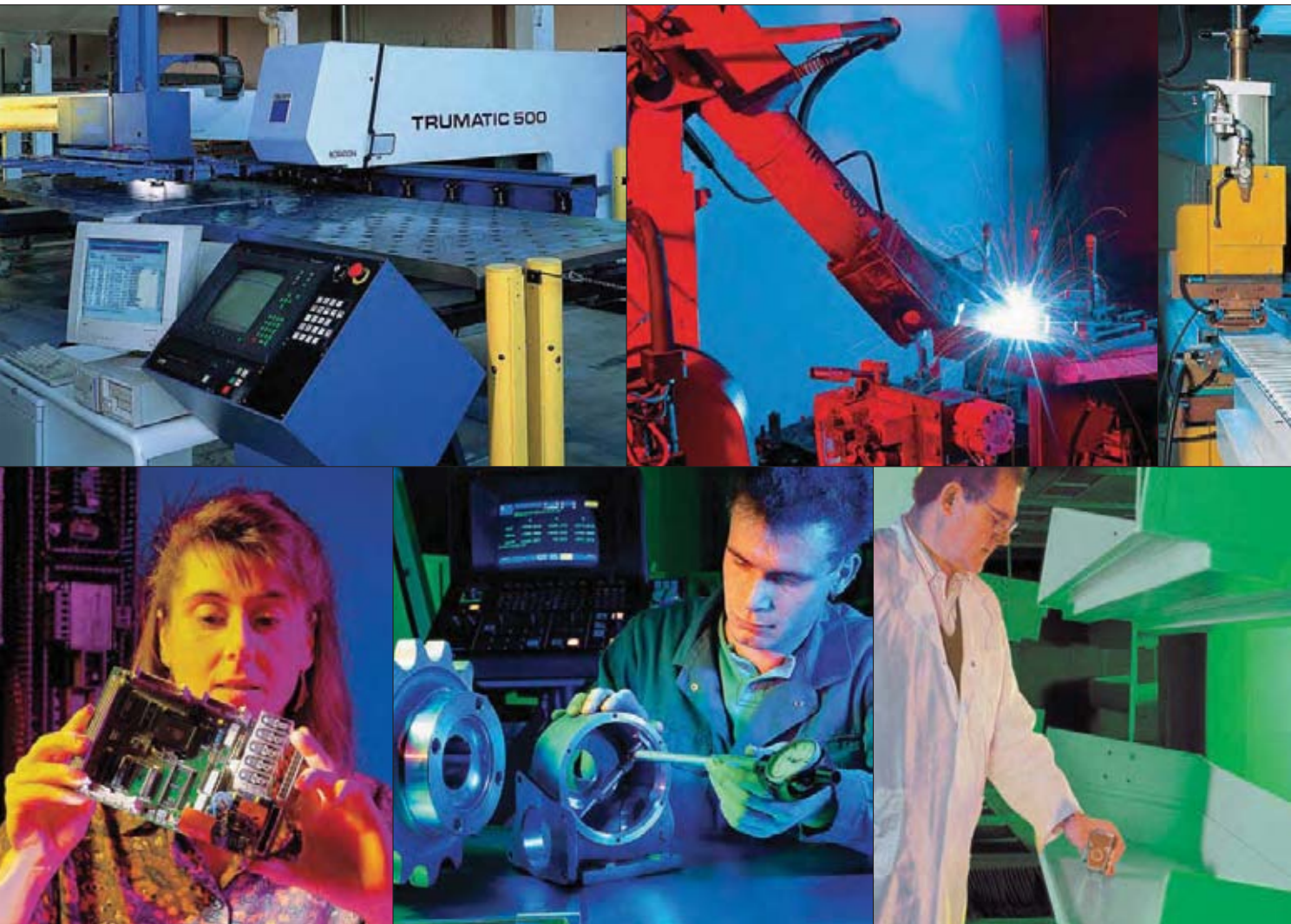
Certification Body
of TÜV Management Service GmbH
Unternehmensgruppe TÜV SÜD Deutschland



TGA-ZM-07-92

Quality without compromise

Highest quality, economic efficiency, technical reliability and safety are the features our customers appreciate most in Hanel's carousels



Every product that leaves our plant meets the most stringent demands: materials with excellent qualifications: perfect machining, modern control technology, convincing design and 'last but not least' user-friendliness.

Commitment to the environment

It goes without saying that production in our three plants adheres to the latest environmental guidelines, and even surpasses them. We only use environmentally friendly and recyclable materials.

Your claim to safety

All Hanel carousels carry the ETL listing certificate attesting to their safety.



suvaPro
CERTIFICATION



Computer-controlled central warehouse for worldwide dispatch of ball bearings





A typical function for the Hänel Rotomat: In 16 Hänel Rotomat carousels 17,500 dental products are prepared for dispensing by the computerized, fully automated system

Hanel Rotomat® systems

*Simply brilliant ...
The Hanel Rotomat system
has revolutionized storage,
preparation and access
times. Storage capacity is
increased by 60 %, an
enormous saving on work-
time.*



The Hanel Rotomat® principle

‘Vertical carousel technology’ – simply brilliant!

The principle is simple. What you can do with it is brilliant!

Each Hanel Rotomat is designed according to the tried-and-tested Ferris wheel principle (vertical carousels), i.e. the goods are brought to the operator and not vice versa.

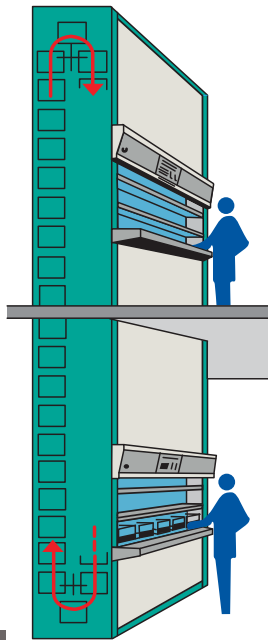
This saves time!

The compact construction allows **60% or more storage capacity** to be accommodated on minimal floor space by making use of the available room height.

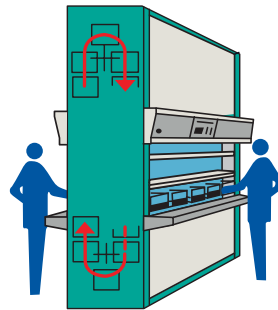
This saves costs!

The pluses

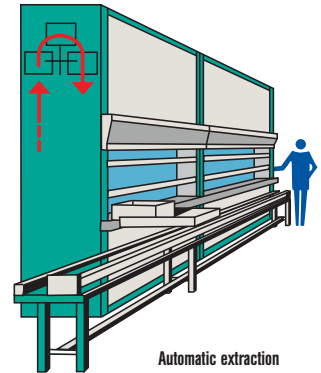
- ▶ Optimum utilization of floor space. The term upward mobility takes on a new meaning with the Rotomat!
- ▶ The Rotomat is as flexible as you need it. Units can stretch over several floors!
- ▶ Goods to user is the motto, not user to goods. Personnel costs and cycle times can be reduced!
- ▶ High-performance control units ensure that the Rotomat can be put to use flexibly and on an individual basis!
- ▶ The required parts or files are brought to the ergonomically positioned retrieval point at a touch of a button!
- ▶ Safety is considered of paramount importance. No climbing ladders; no danger for accidents!
- ▶ The Rotomat protects all documents and parts from dust, light and unauthorized access!



Retrieval at front over several floors

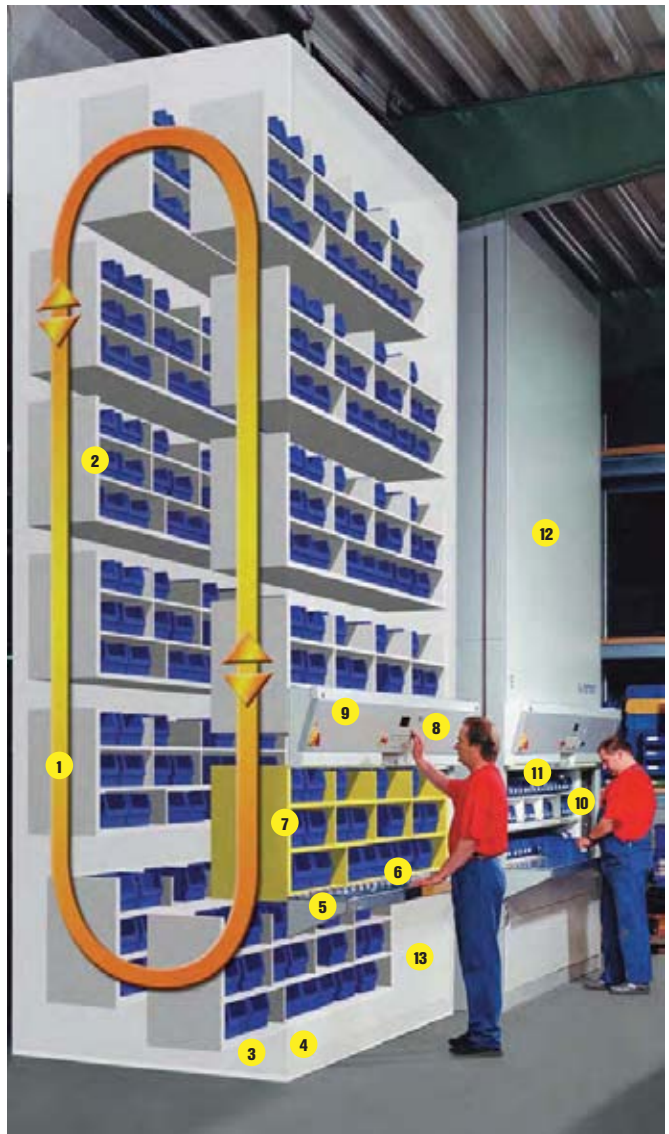


Retrieval at front and rear



Automatic extraction

- ❶ Carriers attached to the rotating mechanism
- ❷ Multifunction carrier for variable applications
- ❸ Drive system housed internally
- ❹ Soft start control using 3 phase motors
- ❺ Retrieval over stainless steel work counter (high grade steel)
- ❻ Hanel safety threshold
- ❼ Light barriers of BWS-S design
- ❽ Hanel microprocessor control unit
- ❾ Wiring cabinet
- ❿ Multifunction positioning system
- ⓫ Lockable sliding doors
- ⓬ Environmentally friendly powder-coat finish
- ⓭ Maintenance access conveniently positioned at the front



Using 6 Hänel Rotomat carousels, more than 10,000 retrievals are prepared punctually each day by the computerized system



Hanel Rotomat® industrial storage carousels: warehousing, materials handling and access times redefined

Simply brilliant. Whether you need materials supply right at the production line or computerized spare parts storage – the Rotomat does it all!

Everything is possible. You set the problem – we solve it!

Example 1: Instead of using awkward floor conveyor systems to retrieve tools from the storage rack, the Rotomat feeds them to the correct work height at the touch of a button.

Example 2: Small-parts containers on the production line are not labor intensively stacked, but delivered as required, and stocks are replenished continuously without interruption of work.

Example 3: Spare parts storage, retrieval and sorting are computer-assisted and protected from dust and damage.

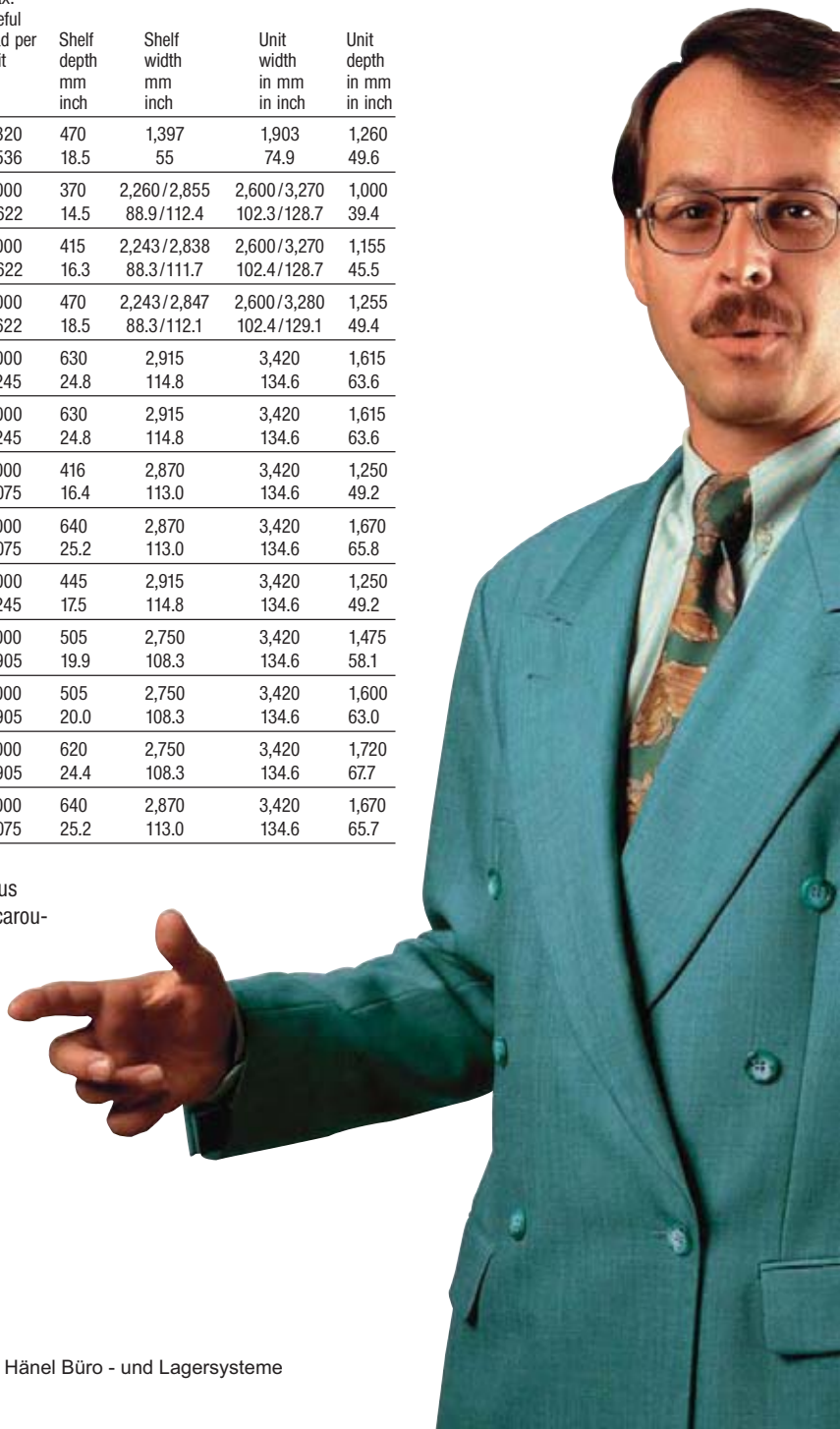
The pluses

- ▶ Fast storage and retrieval times!
- ▶ Interface with computer systems!
- ▶ Real-time inventory control guaranteed. No sudden parts shortage!
- ▶ Maximum use of the available floor space!
- ▶ Material supply at the production line which saves an enormous amount of time!
- ▶ Spare parts protected from dust and damage!
- ▶ Very economical and high in cost saving!

Detailed information on Hanel industrial carousels is given in the individual brochures.

Model	Max. useful load per shelf kg lbs	Max. useful load per unit kg lbs	Shelf depth mm inch	Shelf width mm inch	Unit width in mm in inch	Unit depth in mm in inch
Rotomat 200-970	270 596	4,320 9,536	470 18.5	1,397 55	1,903 74.9	1,260 49.6
Rotomat 900/100	150 331	3,000 6,622	370 14.5	2,260/2,855 88.9/112.4	2,600/3,270 102.3/128.7	1,000 39.4
Rotomat 900/115	150/180 331/397	3,000 6,622	415 16.3	2,243/2,838 88.3/111.7	2,600/3,270 102.4/128.7	1,155 45.5
Rotomat 900/125	150 331	3,000 6,622	470 18.5	2,243/2,847 88.3/112.1	2,600/3,280 102.4/129.1	1,255 49.4
Rotomat 936	250 552	6,000 13,245	630 24.8	2,915 114.8	3,420 134.6	1,615 63.6
Rotomat 946	330 728	6,000 13,245	630 24.8	2,915 114.8	3,420 134.6	1,615 63.6
Rotomat 950	400 883	10,000 22,075	416 16.4	2,870 113.0	3,420 134.6	1,250 49.2
Rotomat 956	340 400	10,000 22,075	640 25.2	2,870 113.0	3,420 134.6	1,670 65.8
Rotomat 970	250 552	6,000 13,245	445 17.5	2,915 114.8	3,420 134.6	1,250 49.2
Rotomat 980	600 1,324	14,000 30,905	505 19.9	2,750 108.3	3,420 134.6	1,475 58.1
Rotomat 985 S	750 1,656	14,000 30,905	505 20.0	2,750 108.3	3,420 134.6	1,600 63.0
Rotomat 985	500 1,104	14,000 30,905	620 24.4	2,750 108.3	3,420 134.6	1,720 67.7
Rotomat 990	250 552	10,000 22,075	640 25.2	2,870 113.0	3,420 134.6	1,670 65.7

The table shows the various Hanel Rotomat industrial carousels.



Storage of mechanical parts for production and spare parts dispatch





Hänel ROTOMAT

Hänel ROTOMAT

Individual and variable

No two Hanel Rotomats are the same. Because every problem requires a unique solution

The application defines the solution

We design the carrier interior to accommodate the most varied of tasks within production systems and warehouse requirements.

Both shelves and mechanical parts are designed to match the size and weight of the storage material. It is this flexibility which makes the Rotomat so economical.

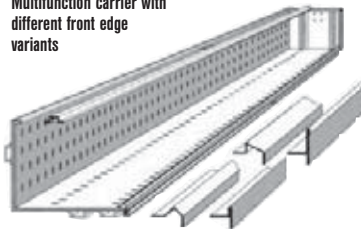
The Hanel multifunction carrier offers you an individual and variable interior, adapted to meet your specific requirements and solutions.

The wide range of accessories, such as containers, shaped inserts, small-parts trays, cutting tool holders, etc., turn the Rotomat into a complete storage/retrieval system which saves costs, makes optimum use of available space, facilitates work and minimizes distribution times.

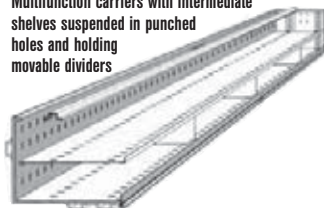
The pluses

- ▶ Hanel's multifunction carrier is absolutely stable and distortion free!
- ▶ Variable fittings, adaptable at any time!
- ▶ Compartments, storage boxes, bulky goods, drawers, almost anything is possible!
- ▶ Long life and high load capacity – up to 750 kg/1,655 lbs per carrier!

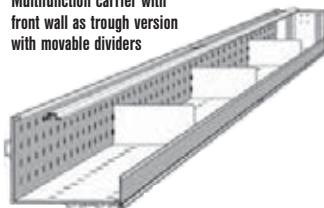
Multifunction carrier with different front edge variants



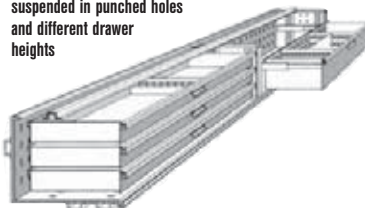
Multifunction carriers with intermediate shelves suspended in punched holes and holding movable dividers



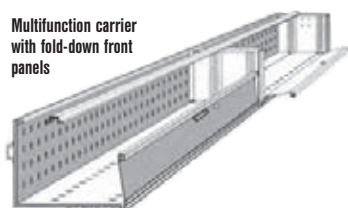
Multifunction carrier with front wall as trough version with movable dividers



Multifunction carrier with drawers suspended in punched holes and different drawer heights



Multifunction carrier with fold-down front panels



Shelves with protective flaps for smooth handling



Hanel tool carrier system



Storage of tools and devices



Small parts storage in plastic containers



Anti static shelves

Hanel offers customized solutions for warehouse technology, materials handling and warehouse communication

Streamlining operating procedures, increasing flexibility and lowering costs

**From high-tech components
to medical technology:
The Hanel Rotomat does
the job!**



A typical task for the Hanel Rotomat: Storing high-tech components and other sensitive products in a protected environment!

Example 1: Computerized warehousing in a modern microchip factory with the Hanel Rotomat. Hundreds of thousands of chips, all looking the same, are stored here. To prevent mistakes when storing and retrieving, Hanel developed this special Rotomat design with automatic compartment doors.

The pluses

- ▶ Error-free access!
- ▶ Computer-controlled storage!
- ▶ Economization of time and space!
- ▶ Optimum work procedures!

Component storage in a modern microchip factory

Example 2: Storage of surgical instruments and accessories in the central sterilization rooms of a hospital. Thousands of individual items are stored and protected in a Hanel Rotomat.

The pluses

- ▶ Tremendous economization of space!
- ▶ Simple operation, short storage and retrieval times!
- ▶ All stored articles are protected!
- ▶ High economic efficiency and cost reductions!

Example 3: Computer-controlled handling of components next to the PC board production line. A Hanel Rotomat storage system with 13 carousels and specially developed software tackles the job with ease.

The pluses

- ▶ The cycle times for orders were reduced by 80 %!
- ▶ Order processing time dropped from 5,000 to 1,000 hours!
- ▶ Stocks of manufactured goods were reduced by more than 60 %!
- ▶ Efficient streamlining of production procedures and consequently huge cost reductions!

Rotomat carousels for materials handling in PC board production

The examples show that the use of Hanel storage technology and warehouse communications can contribute substantially to the economic success of a company.

Storage of surgical instruments and medicines in a central hospital





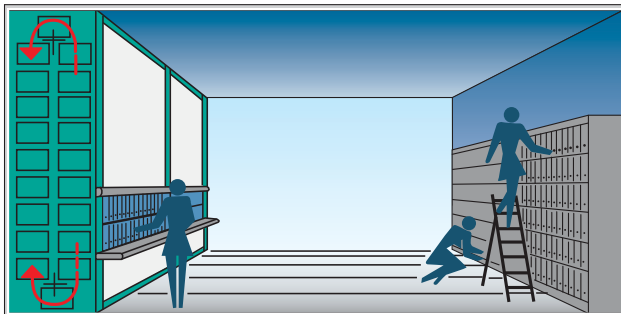
Hanel's Rotomat® office carousels – the optimum filing system for office and administration

Rationalization – cost reduction – efficiency: these are the requirements for today's modern office organization



The days when walls were lined with filing cabinets and when index cards archives gathered

Powerful microprocessor control unit integrated ergonomically into the work table



Modern Hanel Rotomat filing system filing saving over 50% space and time

Inconvenient conventional incurring high costs

dust, are over. The legwork and ladder-climbing used in searching for files is now over.

The Rotomat automatically brings the required file or media to the ergonomically designed retrieval point at the touch of a button.

Microprocessor control units offer the possibility of networking the Rotomat directly with a PC or connecting other peripheral devices. Office organization of this kind should be as common as the desk-top computer.



... for vertical suspended folders



... for lateral suspended folders



... for vertical standing folders



... for lateral standing folders



... for vertical tray



... for index card boxes



The required file is at your fingertips in seconds. No drawers to pull open, no distances to walk, no ladders to climb.

Folders, index cards, files – the Hanel Rotomat keeps them all in order

A Hänel achievement:
over 100,000 folders are
stored in 10 Rotomat carousels
for quick and easy access



Hänel ROTOMAT



The perfect office organization

The central filing system of a nationwide bank: all the customer files are stored in hanging folders in 5 Rotomat office carousels

No doubt you have considered introducing the optimum filing system for all your records and files.

Many offices and administrations have been successfully using the Hanel Rotomat carousels for years, making good use of all the many advantages of these automated filing systems.

Rotomat 200

for hanging folders, lateral suspended folders, files, index card

Rotomat 300

for oblique style lateral suspended folders

Rotomat 400

for lateral letter or legal folders

Rotomat 500

for binders and large books

Rotomat 600

for toptab hanging folders

Rotomat 7-600

for toptab folders

Rotomat 700

for index cards, microfiche, drawings, DP accessories, stationery, etc.

All Rotomat office carousels can be supplied in our design for disabled operators.

Detailed information on Hanel office carousels is available in the Hanel office carousel systems brochure Bürolift-Republik sowie in den Einzelprospekten.



Hanel's Rotomat[®] systems – the intelligent control technology

Whether you are interested in parts management or office filing organization, it is ultimately the control system that determines the operation and efficient effect



The new control keyboard of the Hanel Rotomat with CSTN panorama color display (optional)

To ensure that the Rotomat can be incorporated effortlessly into any logistics and organization system, we have developed a variety of different control types:

► **MP 0A** – the standard control unit. The number of the required carrier is entered on the numeric keypad. The number is displayed digitally for control purposes. The stop position can be programmed individually.

► **MP 0A-ZD** – this control system offers many options for manual or computerized control. Direct selection of carrier, compartment and compartment depth. Identification and access of the storage location by bar code reader. Alphabetical filing management for storing files. Operation at two separate retrieval points. Computer link via RS 232 or Centronics interface.

► **MP 12D-S**

High-performance compact control unit with numerous functions. Control and warehouse management in one unit. Article number, storage location, quantity, minimum inventory and container size can be programmed. Job and parts list administration is also integrated. Four serial RS 232 interfaces enable a computer, printer and other peripheral devices to be connected.

► **MP 12N-S**

TFT touch-screen technology makes it even easier to use. The integrated Ethernet interface allows quick and easy incorporation in the customer's computer network. Users are given direct access to the web page of the MP 12N-S via the web server with Internet Explorer. The optional shelf camera takes a new picture of the shelf after every storage or retrieval operation.

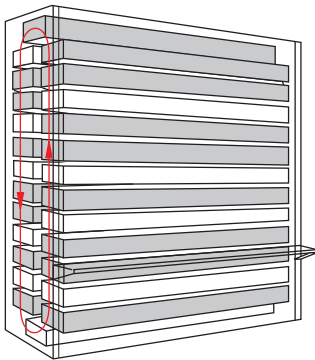




User-friendly entry of article number
by bar code reader

We also offer warehouse organization solutions networked to Host computer systems so that all the features of electronic warehouse communication can be utilized completely.

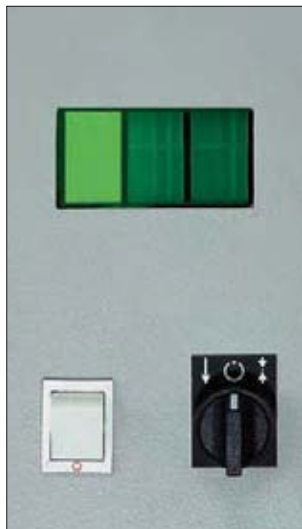
Hanel's automated load imbalance indicator UL2 prevents uneven load conditions



Recording the article number when goods are stored and display for control purposes



Direct access by PC. Keyboard and monitor are conveniently positioned on the Hanel Vario-Arm systems



Central arrangement of all the peripheral units needed for order picking



The compartment depth display ensures that the right articles are accessed

Hanel control technology: control at your finger tips

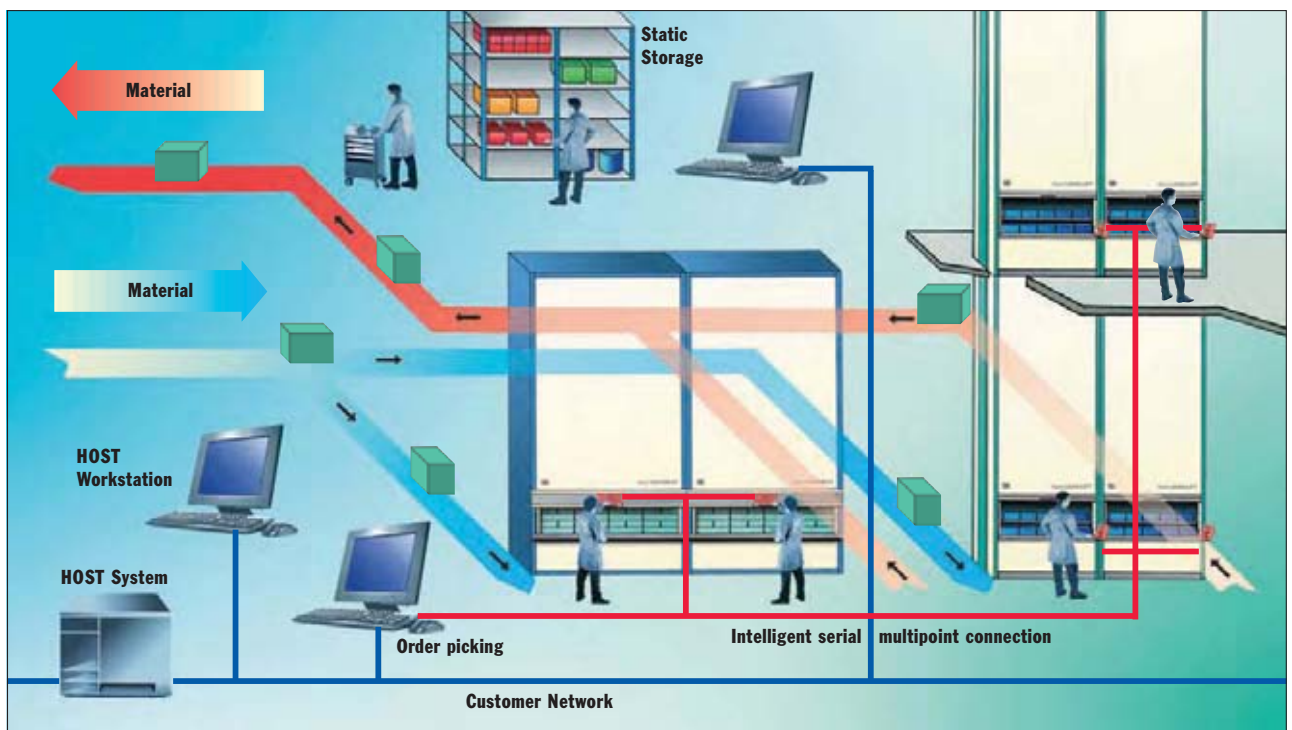


Hanel's automated load imbalance indicator UL 2 will recommend storage location

In the following pages we can only show you a small portion of our product capabilities. Our control system brochure provides a comprehensive overview.

Fast and easy connection to different software products

Existing inventory management software can be adapted easily to handle Hanel storage systems



Existing programs administer the storage locations and the entire data related to the different articles. The open RS 232 interface of the Hanel control unit allows any software to be adapted without difficulty.

This enables the inventory management software to rationalize warehousing operations in conjunction with the intelligent Hanel control units. It offers an optimum overview of inventory movements and provides crucial data for materials planning and ordering.

Hanel storage systems with adapted inventory control software guarantee major rationalization advantages in the handling of goods for production and dispatch, and for spare parts and tool storage.

The pluses

- ▶ Optimization of capacity usage!
- ▶ Faster and more reliable access for storage and retrieval operations!
- ▶ Reduction of inventory as a result of precise accounting!
- ▶ Up-to-the-minute overview of inventory situation!
- ▶ Reduction of inventory costs due to accurate evaluation capabilities!
- ▶ Materials planning support!



Complete automation!

Hanel industrial lifts can be charged and unloaded fully automatically and are computer controlled.

Example: buffer stores for engine blocks

3 Hanel Lean-Lifts are directly integrated in the production process and are linked to production systems via a portal robot. They fulfil 2 functions, acting as:

- ▶ a buffer store for high-quality aluminium engine blocks, de-coupling the different production areas and preventing shut-down periods!
- ▶ a climatic cell with adjustable storage temperature (20 degrees Celsius here) which can be regulated within a narrow tolerance range. This enables absolutely precise machining of engine blocks in the subsequent production process!

Performance which Hanel is proud of!



This is Hanel Lean-Lift quality:
Computer-controlled small parts
storage for production and spare
parts dispensing



Hanel Lean-Lift® systems

Simply ingenious...

The Hanel Lean-Lift system with vertical technology.

The Lean-Lift fits into available room heights, similar to a high bay warehouse.

Unlike a high bay warehouse, however, the Lean-Lift stores the parts without any loss of storage space at an optimum access height. This results in maximum storage capacity on a minimum footprint.

An economic solution, you must agree.



The Hanel Lean-Lift® principle

‘Vertical lift technology’ – simple yet powerful!



- ❶ The ‘Extractor’ stores and retrieves the articles
- ❷ 4-chain-system for optimum guidance of the extractor
- ❸ Storage locations with stored articles
- ❹ Container for holding and transporting the articles
- ❺ Integrated frame profile for height-optimized placement of the containers
- ❻ Soft start control with frequency converter
- ❼ Self-monitoring light barriers in BWS-S design
- ❽ Lockable sliding doors for article protection
- ❾ Environmentally friendly powder-based finish ensures 50 % higher scuff resistance
- ❿ Hanel microprocessor control unit on movable Vario-arm
- ⓫ Wiring cabinet – the electronics are easy to access
- ⓬ Photo-sensors for height detection to measure article heights and safety
- ⓭ Service door conveniently positioned at the side

The automated ‘high-bay warehouse in a cabinet’

The Lean-Lift from Hanel is both storage efficiency and goods protection in one: at the center of the ‘cabinet’ is a computerized lift – called the ‘extractor’.

In front and behind it are the storage shelves. This is where the articles are stored in containers.

The storage locations are accessed through electronic control by the extractor. It stores or retrieves the container requested. The system is operated comfortably at the optimum ergonomic height at the retrieval zone.

The pluses

- ▶ Over 60 % more storage capacity!
- ▶ Optimum storage capacity, due to height-optimized storage!
- ▶ Storage and handling of bulky and heavy parts!
- ▶ Load-carrying capacity per container up to 1,000 kg/2,208 lbs!
- ▶ Load-carrying capacity per Lean-Lift up to 60,000 kg/132,450 lbs (tested statics)!
- ▶ Material to operator, not operator to material: this saves time!
- ▶ Protection of stored articles!
- ▶ High efficiency and cost savings!
- ▶ Storage of dissimilar sized items!

Hanel Lean-Lift in a high-speed version

Lean-Lifts with a container load capacity of up to 500 kg/1,104 lbs, now in a high-speed version.

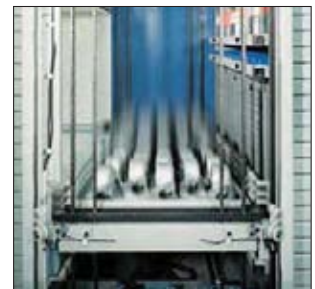
- Vertical speed:** with empty extractor 2.3 m/sec, with loaded extractor 1 m/sec!
- Horizontal speed:** jolt-free 0.5 m/sec!



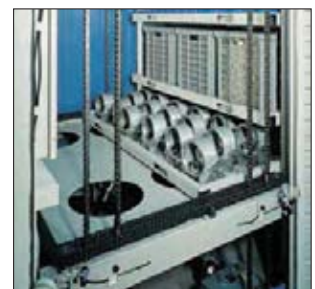
The container is pushed into the access opening...



The extractor pulls the container...



travels to the best storage position...



and stores the container using minimum space.

The Hänel Lean-Lift at work as a materials handling system near the production line



Machine parts of varied sizes are stored and retrieved from 5 adjacent Lean-Lifts – the maximum room height is used



The Lean-Lift[®] from Hanel gives flexibility new dimensions

Hanel's Lean-Lift system offers unlimited options

With Hanel's Lean-Lift system you can expand or modify your storage capacity at any time without difficulty.

Maximum utilization of the available space

Lean-Lifts from Hanel can be situated side-by-side or over several floors – like a high-bay storage system. This creates maximum storage capacity on a minimal footprint.

Open to all

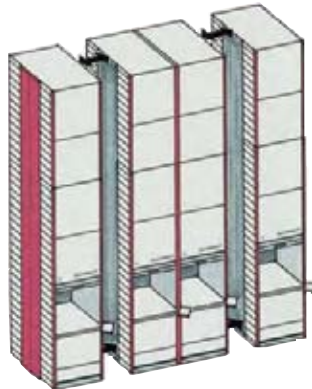
Retrieval points can be installed on more than one floor, depending on the height of the Hanel Lean-Lift. Several users can operate the Lean-Lift at the same time from different positions and levels.

The pluses

- ▶ Every cubic foot is optimally used – this is total efficiency!
- ▶ Problem-free adaptation to work requirements!
- ▶ Several users can operate it at the same time!
- ▶ Improvement in storage management!
- ▶ More flexibility offered through step-by-step expansion!
- ▶ Visible investment returns!

Our ideas lower your costs: Hanel's Lean-Lift with vertical technology

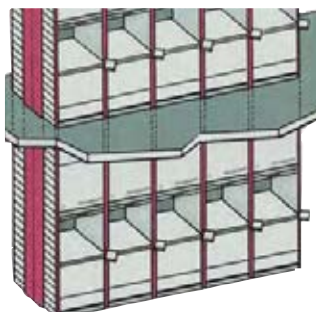
Every Lean-Lift from Hanel can be used as a 'stand-alone system'. By adding additional Lean-Lifts storage capacity can be expanded gradually as needed.



And the sky is the limit as far as the Lean-Lift's 'upward mobility' is concerned. The Lean-Lifts from Hanel can be combined over several floors – like a high-bay storage system.

Levels can be added by way of solid butt joints with plug welding.

Detailed information can be found in the brochure on Hanel's Lean-Lifts.



A Lean-Lift system with retrieval over several floors

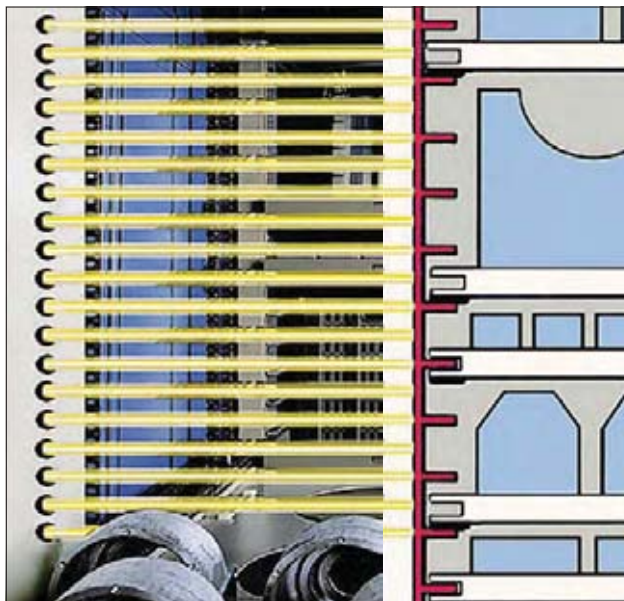
A wide range of varied storage articles demands a variable system: the Lean-Lift® from Hanel

An ingenious design: Hanel's frame profile with 75 mm / 2.95", 90 mm / 3.54" or 125 mm / 4.92" steps enables optimum, space-saving storage in the extreme

The Hanel frame profile offers a whole raft of possibilities: it is installed as a fixed wall with integrated slots in 75 mm/2.95", 90 mm/3.54" or 125 mm/4.92" steps. Smooth design on the outside – storage slots on the inside!

Grooves in the container sides allow further height optimization in 25 mm/0.98" and 37.5 mm/1.48" steps!

In this way Hanel offers more options with different pitches!



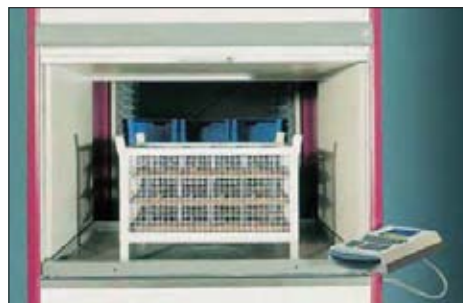
Hanel's height sensors in 25 mm / 0.98", 37.5 mm / 1.48", 75 mm / 2.95", 90 mm / 3.54" and 125 mm / 4.92" steps

Different height-measuring light barriers, designed to fit the pitch profile exactly, measure the storage items and store the containers according to their individual height without any loss of space!

A priority system allows the storage locations closest to the retrieval point to be allocated manually or automatically – time-consuming relocation operations are no longer necessary. Only the Lean-Lift from Hanel offers you this!

The pluses

- ▶ Optimum, compact storage even when articles are of different heights
- ▶ Hanel's Lean-Lift always offers compact and variable storage – without the need for any mechanical or electronic adjustment!



Hanel's multifunction container with optimal punched slots for individual positioning of dividers



Even highly varied and bulky articles such as pallets, engine blocks, tools, paint buckets, crates or cable drums are no problem for the Hanel Lean-Lift





The load-carrying capacity of automated storage and materials handling systems is determined by the weight and dimensions of the stored articles.

This is where the Lean-Lift from Hanel performs the extraordinary:

load capacity per container up to 1,000 kg/2,208 lbs, total load capacity 20,000 kg/44,000 lbs to 60,000 kg/132,450 lbs full use of the feed/retrieval opening 740 mm/29.5" high and more.



Hanel's Lean-Lift® control concept: a resourceful system

Our strength lies in our know-how because only object-related, practice-oriented microprocessor control systems can offer you a complete storage management system



The variable control keyboard of the Hanel Lean-Lift is positioned at the side of the access opening for ergonomic convenience. No more strenuous overhead reaching.

MP 12 D – S

High-performance compact control unit with numerous functions. Control and inventory management in one unit. The article number, storage location, quantity, minimum inventory and storage location size can be programmed. Job management and parts list management are also integrated. Four serial RS 232 interfaces enable a computer, printer and other peripheral devices to be connected.

MP 12 N – S

TFT touch-screen technology makes it even easier to use. The integrated Ethernet interface allows quick and easy incorporation in the customer's computer network. Users are given direct access to the web page of the MP 12 N-S via the web server with Internet Explorer. The optional shelf camera takes a new picture of the shelf after every storage or retrieval operation.

MP 100 D – Powerful storage management intelligently implemented!

Up to 99 Lean-Lifts can be controlled simultaneously with the MP 100 D.

The pluses

- ▶ Hardware and software are integrated in the Lean-Lift, so no additional PC required!
- ▶ No complicated software installation on PC!
- ▶ Direct hook-up to corporate network via Ethernet!
- ▶ MP 100 D data can be viewed by browser – ensuring constant transparency in the storeroom!
- ▶ No additional communication software needed!
- ▶ Automatic processing of jobs according to priority!

Hanel software made-to-measure

At your request the Hanel specialists will develop with you a tailored software concept that meets your precise requirements. We offer Windows-based PC software!



Central storage and handling of assemblies and spare parts in 10 Hänel Lean-Lift units



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Proven technology.
Flexible systems

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Hanel worldwide



*We are there for you...
Because we are represented
by Hanel agents across the
globe, who will advise you,
plan for you and attend to
your after-sales needs.
Worldwide...*

The Hänel Lean-Lift used for materials handling right at the production line



Successful companies worldwide opt for quality and first-rate technology 'made by Hanel'



Hanel carousels are exported to almost every country in the world through some 40 foreign agencies.

Throughout the world renowned companies have opted for Hanel products. Throughout the world our solutions have made a decisive contribution to the success of our customers!

The right decision

If you want to improve your operation, your office organization and cut costs, you should first speak with our system specialists – together we can work out a solution for you!



Our service is world class

We see worldwide customer service as our obligation: Hanel is represented in over 40 countries in the world



Part of Hanel quality is being there whenever you need us. Worldwide ...

The employees in our agencies are factory trained and approach their jobs in expert fashion.

Whether a warehouse management concept needs to be developed, operating personnel need to be trained or maintenance and repair work needs to be done, the Hanel team is at your disposal.

Algeria	Germany	Malaysia	Slovenia
Argentina	Great Britain	Morocco	South Africa
Australia	Greece	Mexico	Spain
Austria	Hongkong	Netherlands	Sweden
Belgium	Hungary	Norway	Switzerland
Brazil	Indonesia	Oman	Taiwan
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Hänel
Büro- und Lagersysteme
P. O. Box 1161
D - 74173 Bad Friedrichshall
Tel. 07136/277-0
Fax 07136/277201
E-mail: info@haenel.de
www.hanelworldwide.com



Hänel
Büro- und Lagersysteme
Bafflesstrasse 21
CH - 9450 Altstätten/SG
Tel. 071/7573080
Fax 071/7573085
E-mail: info@haenel.ch
www.haenel.ch



Hanel Systèmes
Europarc · 139, Chemin des Bassins
F - 94035 Créteil Cédex
Tél. 01 45 13 96 10
Fax 01 45 13 96 13
E-mail: hanel@hanel.fr
www.hanel.fr



Hänel
Kantoor- en Magazijnsystemen
De Linie 3D
NL - 2905 AX Capelle a/d IJssel
Tel. 010/4504450
Fax 010/4503577
E-mail: info@haenel.nl
www.haenel.nl



Hanel
Storage Systems
121 Industry Drive
Pittsburgh, PA 15275
Tel. (412) 787-3444
Fax (412) 787-3744
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www.hanel.us



Hanel Customer Service: accurate, fast and reliable

Good to know that there are professionals!

The most important job for our customer service department is to maintain the uptime and operation of your system.

Breakdowns on a Hanel Lift System are very rare. Should it happen, our customer service is a reliable partner.

The service team is always up to date on the newest Hanel Technology

Today's technology changes and renews constantly. Our Service technicians keep up with this development.

Continuous, on hand training certification and seminars allow our service team to be experts about our equipment.





Hänel

Büro- und Lagersysteme

P. O. Box 1161
D - 74173 Bad Friedrichshall
Tel. 07136/277-0
Fax 07136/277201
E-mail: info@haenel.de
www.hanelworldwide.com

Hänel

Büro- und Lagersysteme

Bafflesstrasse 21
CH - 9450 Altstätten/SG
Tel. 071/7573080
Fax 071/7573085
E-mail: info@haenel.ch
www.hanel.ch

Hanel Systèmes

Europarc - 139, Chemin des Bassins
F - 94035 Créteil Cédex
Tél. 01 45 13 96 10
Fax 01 45 13 96 13
E-mail: hanel@hanel.fr
www.hanel.fr

Hänel

Kantoor- en Magazijnsystemen

De Linie 3D
NL - 2905 AX Capelle a/d IJssel
Tel. 010/4504450
Fax 010/4503577
E-mail: info@haenel.nl
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Hanel

Storage Systems

121 Industry Drive
Pittsburgh, PA 15275
Tel. (412) 787-3444
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Subject to revision

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