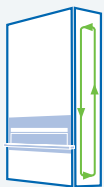


Dynamic storage and retrieval systems

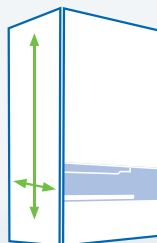
Innovative solutions for optimising your intralogistics



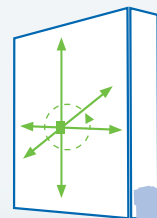
Vertical Carousel Family



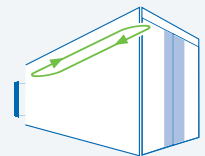
Vertical Lift Family



Vertical Buffer Family



Horizontal Carousel Family



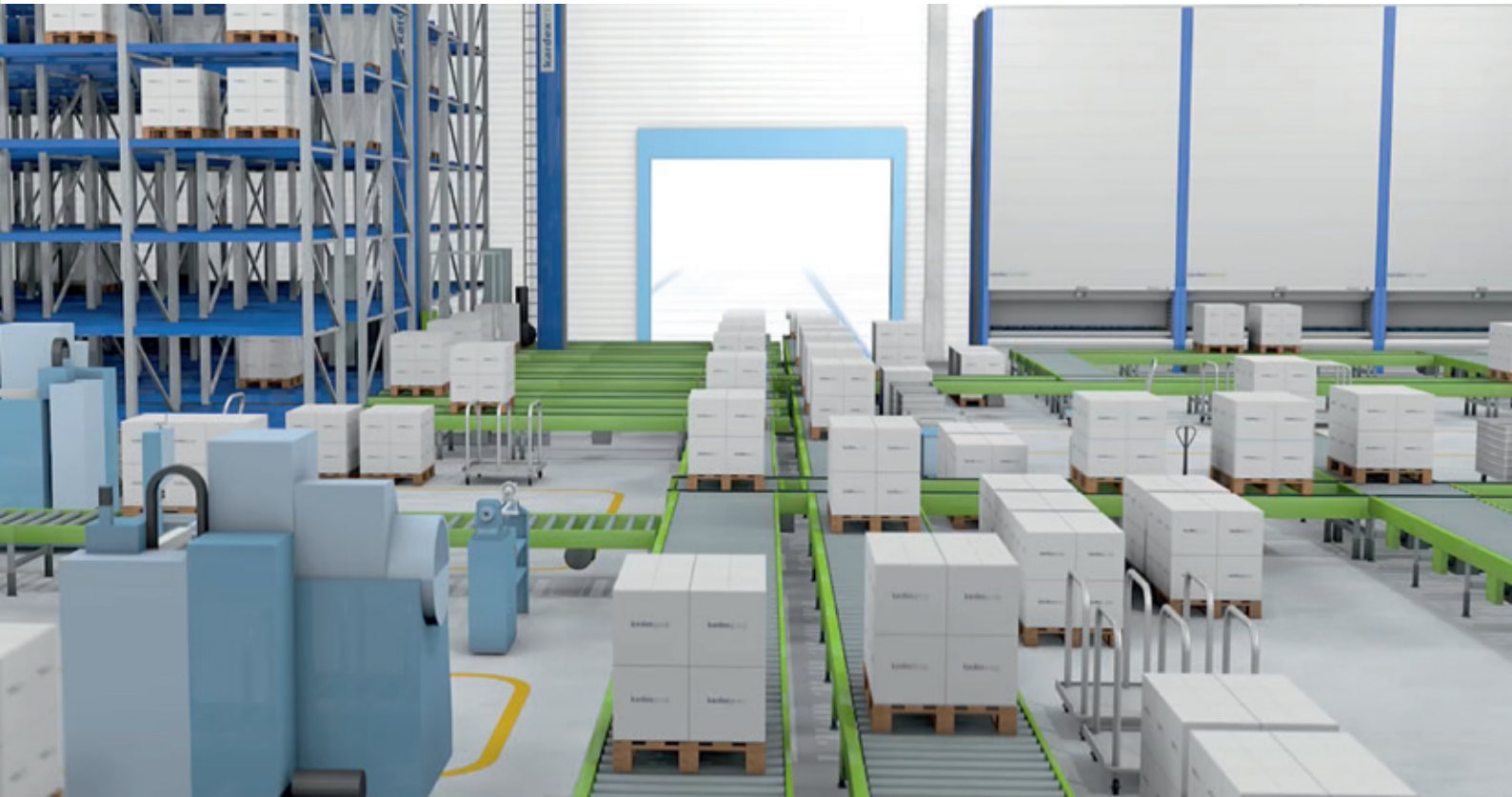
LIFE CYCLE SERVICE



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SOFTWARE SOLUTIONS
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Solutions from Kardex Remstar: Dynamic, efficient, economical – for making ideal use of your capacity

- 3 Why automated storage and retrieval systems?
- 4 – 5 Kardex Remstar LR and LT – Vertical Buffer Family
- 6 – 7 Kardex Remstar XP – Vertical Lift Family
- 8 – 9 Kardex Remstar RS – Vertical Carousel Family
- 10 – 11 Kardex Remstar Horizontal – Horizontal Carousel Family
- 12 – 13 Kardex Remstar Lektriever SYS – Vertical Carousel Family
- 14 Special solutions for climate control, drying, and clean room conditions
- 15 Software solutions for demanding logistics tasks
- 16 Kardex Remstar Drive and JMIF – links to external systems
- 17 Machine control center
- 18 We keep your logistics operation running – Life Cycle Service
- 19 Kardex Group – your reliable partner



Ensure maximum efficiency and productivity with dynamic storage and retrieval systems

No matter the product, a reliable and efficient storage and retrieval system significantly reduces staff requirements and cuts storage costs.

From efficient hardware to fully integrated systems, we develop and install storage and retrieval systems individually tailored to your needs. Each of our products provides maximum productivity, performance, and safety.

Our systems also improve ergonomics and efficiency and make optimal use of the available space securing long-term success and profitability.

The advantages at a glance:

– Productivity increased by up to 400%



– Up to 80% more efficient use of space



– Picking accuracy improved by up to 99%



– Stock level accuracy of up to 99%



Customer references
from various sectors

Kardex Remstar LR and LT: Fast bin-based order picking

The Kardex Remstar Vertical Buffer Family is the solution for fast-growing product ranges with limited storage space. A scalable shelf system with a movable mast transports the bin and slots seamlessly into processes and existing building layouts.



1

More efficient order picking

- Virtually zero error rate thanks to a single controlled bin
- Fast and precise picking using pick-to-light systems
- No manual storage location search
- Cut costs with automatic goods replenishment

2

Energy efficiency by design

- Energy consumption reduced by up to 60 % against comparable systems
- No energy recovery necessary

3

Lightning-quick access

- Single access opening significantly reduces travel time for goods picking
- High-speed picking for every unit size



The Kardex Remstar Vertical Buffer Family

Vertical Buffer Module – LR 35

Efficient order picking of small and lightweight goods.



Vertical Buffer Module – LT 35

The solution for vertically transporting goods at high speed with additional buffer functionality.



4

Flexible storage options

- A mixture of trays and bins can be stored
- A wide range of products and high storage capacity combined with fast access times and small storage volume per unit

5

More convenient picking

- Ergonomic working conditions
- Different ergonomically designed picking stations

6

Simple integration

- Thanks to its modular and scalable design, the Vertical Buffer Family can be perfectly adapted to processes and building layouts
- Fast project completion / delivery

Web



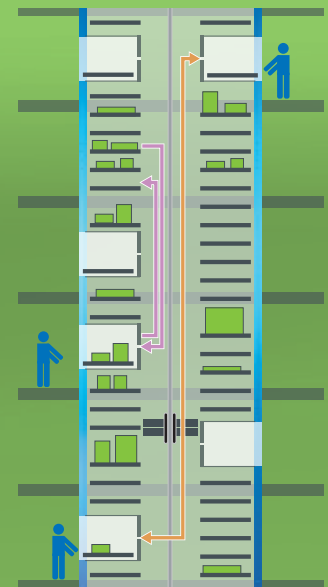
App



Kardex Remstar XP:

The dynamic lift system for highly dense storage on a small footprint

The Kardex Remstar Vertical Lift Family features automated high-bay storage systems with a modular design. The system works in line with the goods-to-person principle - ideal for optimal storage density and flexible, efficient storage strategies.



1

Save space and use the available height

- Limitless tray storage options
- 25 millimetres storage intervals
- Up to 85 % less space needed

2

Reduced staff requirements

- Travel and search times reduced
- Integrated LED pick-to-light systems for unit location

3

Accuracy

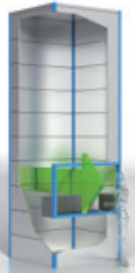
- Precise integration of pick-to-light systems, barcode readers, and software interfaces
- Links to conveyor systems, robotic arms, and hoists ensure maximum comfort at the workstation



The Kardex Remstar Vertical Lift Family

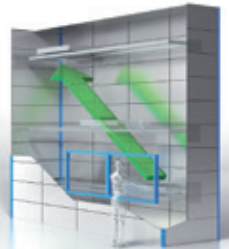
Vertical Lift Module – XP 250/500/700/1000

Ideal for storing light-weight and heavy goods.



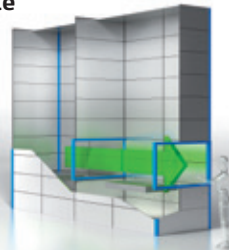
Vertical Lift Module – XPlus

Ideal large-capacity storage system consisting of up to four shuttle modules, which are linked to a hoist bar.



Vertical Lift Module – XPmultiple

The ideal single-system replaced the need for multiple and complex storage solutions.



4

Ergonomics

- Goods-to-person principle
- Requested parts are automatically conveyed to the ergonomic access opening
- Trays can be adjusted to the individual working height

5

Modularity

- Modular design
- The unit height can be adjusted quickly and individually

6

Reliability

- Rapid and accurate operating times achieved for large installations
- The Shuttle XP is the leading solution for layout, functionality and service

Web



App



Kardex Remstar RS:

Increase your speed and efficiency

The Kardex Remstar Vertical Carousel Family features automated vertical carousels. These are based on the operating concept of a paternoster and work in line with the goods-to-person principle perfectly suited to goods with high picking frequency.



1

Speed and productivity

- Very high order picking performance
- High cycle speed
- Optimised and condensed storage spaces
- Fewer order picking errors
- Position indicators

2

Space optimization and structuring

- Up to 60 % more storage capacity
- Organized storage of small parts
- Short distances – faster access
- Suitable for all commonly used storage bins and boxes

3

Individuality and flexibility

- Modular design
- Flexible carrier concept
- Can be retrofitted in many different ways with a number of options
- Available as a stand-alone system or as part of a group of machines



The Kardex Remstar Vertical Carousel Family

Vertical Carousel Module – RS 180

For light loads (up to 180 kg per carrier), such as textiles and small parts in bins. Industries: hotel and medical sectors, vehicle construction and mechanical engineering, electronics industry.



Vertical Carousel Module – RS 350

Great for medium-sized loads (up to 350 kg per carrier). For retrieving components, tools, and spare parts.



Vertical Carousel Module – RS 650

For heavy loads (up to 650 kg per carrier). For process-integrated use in the area of production, as an interim storage location for semi-finished products, for example, or as a buffer during drying phases.



4

Quality and efficiency

- Significantly lower life cycle costs (TCO) – uses less energy
- Made in Germany
- Global service network: Kardex Remstar Life Cycle Service
- Certified quality and environmental management systems



5

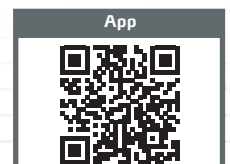
Technology

- Modern design
- Low-wear operation thanks to automatic chain tensioner
- State-of-the-art materials tested over a long period of time

6

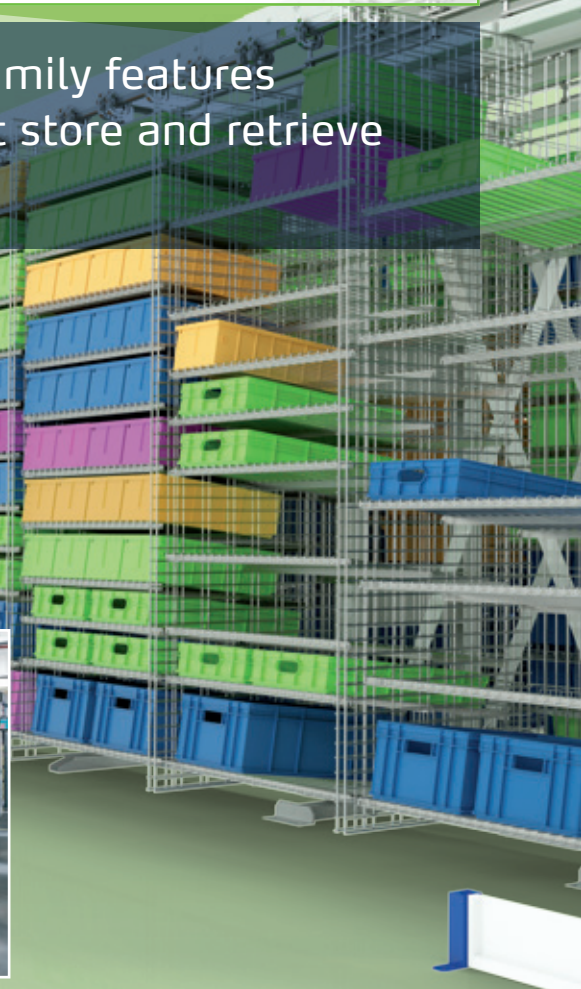
Ergonomics

- Goods-to-person principle
- Drive and view
- Optimal user-friendliness
- Lightweight sliding door
- Confirmation function (button and bar)



Kardex Remstar Horizontal: Time to open up the horizontal dimension of your storage space

The Kardex Remstar Horizontal Carousel Family features automated horizontal carousel systems that store and retrieve goods quickly, reliably, and cost-efficiently.



1

Productivity

- Goods are conveyed to the operator quickly, directly, and reliably
- Always takes the shortest route to the access opening
- Display tool assists the operator with order picking
- No more unproductive travel and search times

2

Picking performance

- Simultaneous carousel movements that are independent of one another ensure high order picking performance
- Pick-and-put accuracy of over 99 % thanks to optical indicators

3

Batch picking

- Paperless order picking possible
- Batching and simultaneous picking of several orders
- Significantly fewer journeys to the shelves required



The Kardex Remstar Horizontal Carousel Family

One picking station can consist of a minimum of two and a maximum of four Horizontal Carousels. Various layouts are possible, depending on the size and design of the system (examples):

Three-carousel station



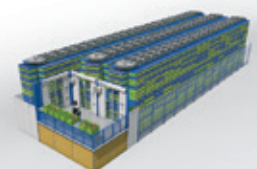
Four-carousel station



Multilevel station



Tall station with lifting platform



4

Variability

- Order picking at several stations makes it possible to achieve high throughput even at peak times and during seasonal fluctuations
- Not just one person, but several people can operate a system at the same time

5

Safety

- Meets the highest safety requirements
- A safety fence around the unit prevents accidents and unauthorised access
- Safety doors open and close automatically

6

Flexibility

- Suitable for a variety of different applications and ideal for storing a wide range of items
- Individual shelf steps within the carriers
- Efficient storage of large items

Web

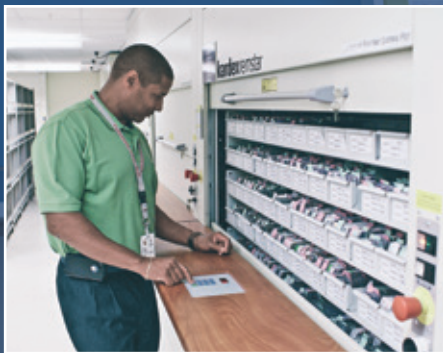


App



Kardex Remstar Lektriever SYS: Space-saving, secure, and controlled access to confidential media

The Kardex Remstar Lektriever is an automated space-saving storage system for folders, card files, and information media of all kinds which facilitates the secure management of documents.



1

Ergonomics

- Automated retrieval (requested item is conveyed to the user)
- No physical demands, such as long walks or bending and stretching when fetching documents
- People with disabilities or restricted physical mobility are not at a disadvantage

2

Increased productivity

- Work can be performed standing up or sitting down
- Productivity with the Kardex Remstar Lektriever is almost twice as high as with manual systems (e.g. drawer and cabinet systems)

3

Maximum storage performance

- A smaller footprint is required
- The units can be installed right up to the ceiling
- They can extend over several floors
- Almost twice as efficient as drawer or horizontal cabinet systems



4

Individuality

- Any color can be selected for an individual look
- The design of the paneling and table surface can be configured individually

5

Security

- Confidential documents are securely stored
- Legal regulations to protect the rights of individuals can be met
- Access codes or PIN numbers so that only selected individuals can open the system

6

Further advantages

- Flexibility
- Secure investment
- Perfect integration in the office setting

Web



Kardex Remstar special solutions: Store and pick orders under controlled conditions



Maximum technical and quality standards – storage systems from Kardex Remstar for climate control, drying, and clean room conditions.

Dry, climate-controlled, clean – or all three at once? Room within a room or free-standing? You decide. That's because Kardex Remstar systems allow you to store your products under controlled conditions. They can be installed in any desired location with no structural restrictions and can also be linked to existing clean rooms. For example: only the access opening will be located in the clean room.

Kardex Remstar Dry Solution (drying):

- 10 % relative humidity through nitrogen purging
- Adsorption drying (application: storage of SMD components)
- ESD-compatible design

Kardex Remstar Clima Solution (climate control):

- Store goods at temperatures as low as -35°C (chilled storage system)
- Store goods at temperatures of up to $+60^{\circ}\text{C}$
- Temperature remains constant $\pm 1\text{ K}$
- Dependent on the type of unit

Kardex Remstar Clean Solution (clean room):

- Clean room conditions compliant with EN-ISO classes 5 to 8 (5 on request)
- Temperature remains constant $\pm 1\text{ K}$
- Positive/negative pressure
- Smooth surfaces
- Hygienic design

The advantages at a glance:

- Low operating costs
- Absolutely secure storage of sensitive parts
- Lower investment costs compared to conventional solutions
- Room-in-room solutions; independent cell can be located in the gray area
- Free positioning ensures flexibility; no structural restrictions

Kardex Remstar Power Pick Global: User-friendly solutions



Cut travel time when picking goods, significantly reduce order picking times, unlock valuable warehouse resources, and increase productivity with Power Pick Global.

Features of the Keytec basic version:

- User administration (user accounts and access rights)
- Management of materials and their properties
- Warehouse management
- Bin management (bin types and their dimensions)
- Storage space management
- Unplanned storage (individual, manual storage and retrieval)
- Basic report generation (predefined storage statistics and lists)
- Logging of entries and other software events

Tailored software packages based on professional advice:

Keytec:

This is the basic Power Pick Global package and covers all the basic functions of a flexible warehouse management solution.

Optional module(s):

These are freely selectable from the list of optional modules and improve the efficiency and functionality of Power Pick Global.

Special programs:

Individual needs can be met with customised programs.

The advantages at a glance:

- Software-assisted processes and checks (e.g. barcode checks)
- More efficient use of dynamic and static storage systems
- Functional scalability thanks to modular structure
- Secure and future-proof investment thanks to the modern development environment
- State-of-the-art IT architecture (client/server)

(client/server)

– State-of-the-art IT architecture

– Functional scalability

Kardex Remstar Drive and JMIF: Innovative communication solutions to link to external systems



Solutions for networking external management systems with dynamic storage technology

Kardex Remstar Drive

All dynamic storage systems from Kardex Remstar and many systems from other manufacturers can be controlled using Kardex Remstar Drive directly from SAP®. The management of the storage space is handled completely by the leading SAP® system.

The advantages of Kardex Remstar Drive:

- Complete integration of Kardex Remstar Drive into SAP®
- Simple installation with no training period
- Simple integration into customer-specific processes and a reduction in the amount of training needed
- Can be installed without endangering or influencing existing processes
- Available languages: German, English, French, and Dutch (a tool for translating into other languages is integrated)

Kardex Remstar JMIF (Java Machine Interface)

JMIF is a tool used for communicating between dynamic storage technology and external systems (e.g. warehouse management systems, handling equipment, robots, conveyor technology, signal lights, WMS).

The advantages of Kardex Remstar JMIF:

- Can be used across platforms thanks to Java® technology
- Based on widely used and intensively tested open source components
- Executable as a service or in a console without a user interface
- Highly paralleled (multithreaded)
- Several machines can be controlled without compromising performance
- Highly configurable with a wide range of options

Kardex Remstar Logicontrol 100/200: The machine-based control center for Kardex Remstar storage systems



Innovation at the touch of a button: The intelligent generation of control units for automated storage and retrieval systems from Kardex Remstar.

The machine-based control center, consisting of hardware, software, and a control unit with touch screen, is a highly efficient solution for order picking and retrieval. The required item can be stored away or retrieved with just a few clicks. The Logicontrol system combines various functions in one panel and – depending on requirements – is available in two versions:

Logicontrol 100 – “Pen & Paper”

The standard function on the Kardex Remstar control center, the Logicontrol 100, replaces classic paperwork. Error-free storage and retrieval is made easy for the user thanks to a simple item list. An item just has to be given an allocated storage space. A fully alphanumeric keyboard is optionally available.

Logicontrol 200 – warehouse and inventory management

The Logicontrol 200 is based on the functions of the Logicontrol 100, but also features simple storage space management, which allocates the items either a fixed or variable storage location.

This gives the user an overview of the material flow and inventory at all times. A total of up to 8,000 different items, 8,000 different storage spaces, seven bin sizes, and a network of up to three machines can be managed at the same time. An external Ethernet interface for connecting a PC or laptop is included in this control center version.

Logitools – the administration tool for Logicontrol 200


The Logitools Web application for administrative purposes can be accessed via a Web browser and allows the database to be edited.

The following functions are available:

- Database backup and recovery
- Data import, export, and migration
- Data editing and deletion

The integrated journal and list function helps the user to track activities and find or print data.

Kardex Remstar service contracts: Scalable to meet your needs

 <p>I require reliable and fail-safe systems.</p>	 <p>I need guaranteed fast assistance in the event of a breakdown.</p>	 <p>I need maximum availability and predictable costs.</p>
<h2>Base Care</h2> <p>Maintenance and safety check</p>	<h2>Flex Care</h2> <p>Reaction time</p> <p>Help desk support</p> <p>Maintenance and safety check</p>	<h2>Full Care</h2> <p>Repair and spare parts</p> <p>Reaction time</p> <p>Help desk support</p> <p>Maintenance and safety check</p>
<h3>Options</h3> <p>More intervals</p>	<h3>Options</h3> <p>Remote Support</p> <p>Faster reaction time</p> <p>Maximum availability</p> <p>More intervals</p>	<h3>Options</h3> <p>Remote Support</p> <p>Faster reaction time</p> <p>Maximum availability</p> <p>More intervals</p>



Further information:
www.kardex-remstar.com

Do you require further service?
No problem: Our service management team will be happy to work with you to find the right solution. Put us to the test!

Kardex Group:

Your reliable partner for automated storage and retrieval systems



kardexgroup

The Kardex Group is one of the world's leading manufacturers of customized dynamic storage and retrieval systems.

Our organization specializes in the developments of innovative products and services. In close cooperation with you, we work on significantly strengthening your competitive position by exceeding your expectations and requirements. By successfully implementing our business aims, we offer our employees a wide range of opportunities and prospects for challenging and vibrant careers.

kardexremstar

Kardex Remstar is one of the world's leading manufacturers of automated storage and retrieval systems. Since 1973, we have successfully installed over 140,000 systems in the "Commerce", "Warehouse", and "Office" segments.

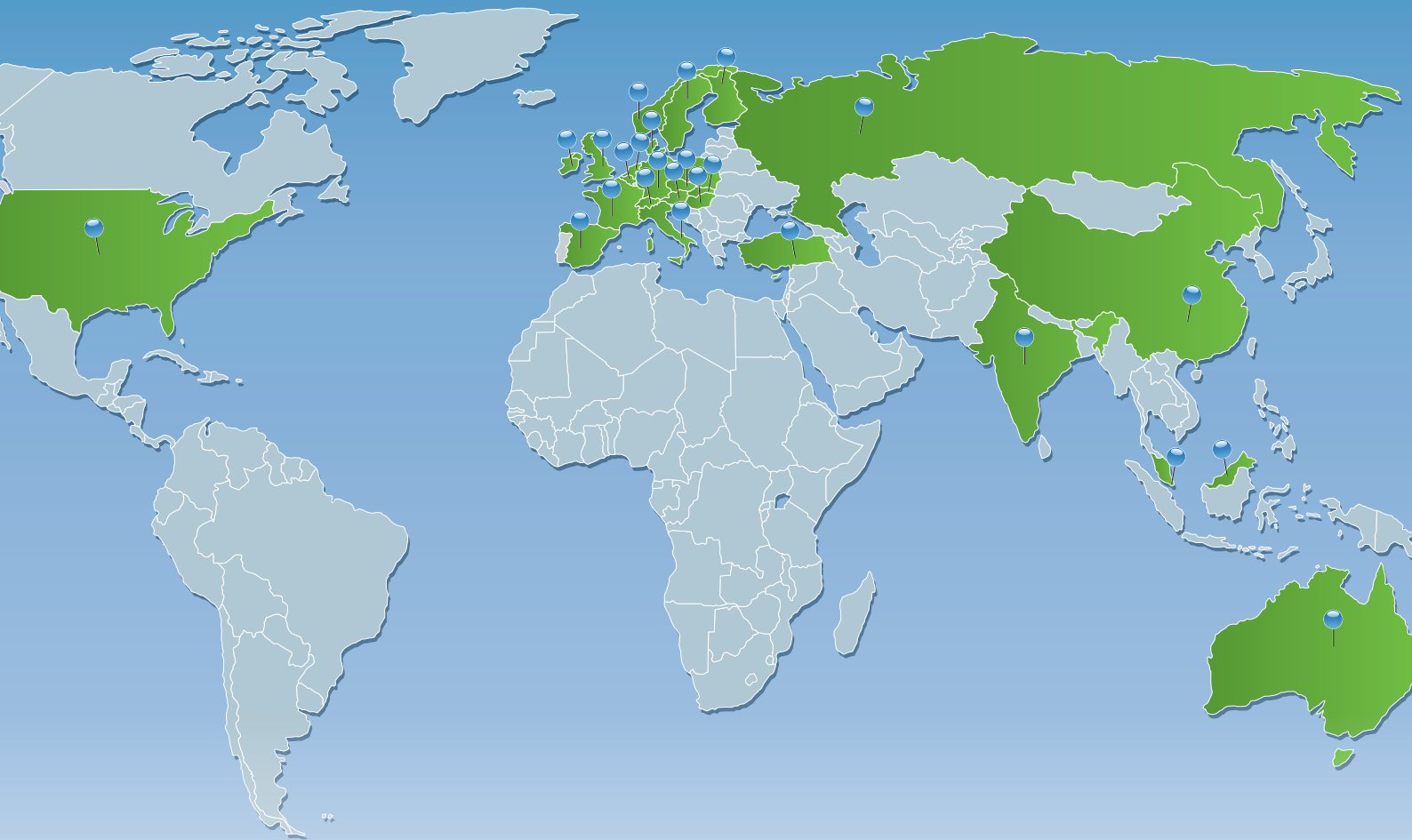
Each of our products has been developed with the aim of increasing your productivity and improving the efficiency of your work processes. Our tailored solutions allow you to make the best use of your warehouse space.

kardexmlog

Kardex Mlog, based in Neuenstadt am Kocher, is one of the leading suppliers of automated storage and material flow systems. It has been part of the Kardex Group since May 2010 and has over 40 years of experience in the planning, installation, and maintenance of fully automated logistics solutions.

Whether modernizing existing units during ongoing operations or installing new turnkey systems, Kardex Mlog has the ideal logistics concept for your high-bay warehouse.

Kardex Remstar: Always close to you – Worldwide



Australia
Austria
Belgium
China
Cyprus
Czech Republic
Denmark

Finland
France
Germany
Great Britain
Hungary
India
Italy

Malaysia
Netherlands
Norway
Poland
Russia
Spain
Sweden

Switzerland
Turkey
USA



Further information: www.kardex-remstar.com



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