

Dynamic storage and retrieval systems

Innovative solutions, state-of-the-art software and top service to optimize your intralogistics



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 – Vertical Carousel Family
- 14 Special solutions for climate control, dry and cleanroom conditions
- 15 Software solutions for demanding logistics tasks
- 16 Kardex Remstar Drive and JMIF
- 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 lowers 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.

Benefits at a glance:

– Productivity increased by up to 400%



– Up to 85% more efficient use of space



– Picking accuracy improved by up to 99%



– Stock level accuracy of up to 99%



– Stock level accuracy of up to 99%

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

The Kardex Remstar Vertical Buffer Family is the solution for fast growing organizations with limited storage space. A scalable shelving system with a movable mast transports bins to an access opening – integrating seamlessly into existing processes and building layouts.



1

More efficient order picking

- Virtually zero mispicks due to a single controlled bin
- Fast and precise picking using pick-to-light systems
- No manual storage location search
- Reduce 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 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
- Easily manages a wide range of product sizes and weights

5

More convenient picking

- Ergonomic working conditions
- Multiple ergonomically designed picking stations available

6

Simple integration

- With a modular and scalable design, the Vertical Buffer Family adapts to existing processes and building layouts
- Fast project completion and delivery times

Kardex Remstar XP: The dynamic vertical lift system for compact storage in 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 floor space

- Limitless tray storage options
- One inch (25 mm) storage intervals
- Reduce storage space by up to 85% by utilizing the overhead height

2

Increased productivity

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

3

Improved accuracy

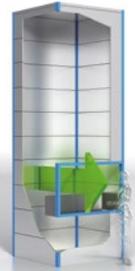
- Precise integration of pick-to-light systems, barcode readers and software interfaces
- Links to conveyor systems, robotic arms and hoists ensure maximum comfort at the workstation



The Kardex Remstar Vertical Lift Family

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

Ideal for storing light-weight and heavy goods.



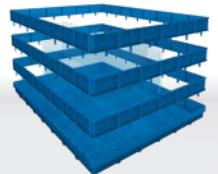
Vertical Lift Module – XPmultiple

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



Kardex VLM BOX

The Kardex VLM BOX is flexible in height, width and depth and the layout can be adapted whenever your storage demands change.



4

Ergonomics

- Goods-to-person principle
- Requested parts are automatically delivered to the ergonomic access opening
- Tray delivery height can be adjusted to the individuals 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

Kardex Remstar RS: Increase your speed and efficiency

The Kardex Remstar Vertical Carousel Family is based on the operating concept of a paternoster. RS Vertical Carousels work on the goods-to-person principle and are perfectly suited for similar sized goods with high picking frequency.



1

Speed and productivity

- Very high order picking productivity
- High running speed
- Optimized utilization and reduction of storage space
- Reduced picking errors
- Position indicators

2

More space. Better organization.

- Up to 75% more storage capacity
- Well organized storage of small parts
- Positioned at the point of use for rapid access
- Suitable for all types of storage containers and bins

3

Individuality and flexibility

- Modular structure
- Flexible carrier concept
- Can be retrofitted in a number of different ways
- Available as a stand-alone or integrated solution



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, mechanical engineering and 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
- Certified quality and environmental management systems

5

Technology

- Modern design
- Low-wear operation due 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”
- Ergonomic Design
- 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-effectively.



1

Productivity

- Goods are delivered 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 less walk and search time



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



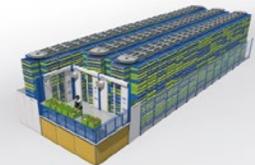
Four-carousel station



Multilevel station



Tall station with lifting platform



4

Variable Throughput for Peak Times

- 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 unauthorized access
- Optional 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

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

The Kardex Remstar Lektriever is an automated media storage system designed for storing various files and media in a small space – making it easier to keep documents accessible, safe and secure.



1

Ergonomics

- The requested media is automatically delivered 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

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



4

Color and Finish Options

- Available in a range of standard RAL colors to suit your office decor
- Work counters available in a range of colors and materials, to complement decor or specific applications

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

Kardex Remstar Special Solutions: Storing and picking orders in controlled ambient conditions



Maximum technical and quality standards – storage systems from Kardex Remstar for climate control, dry and cleanroom environments.

Dry, climate-controlled, clean – or all three at the same time? Room within a room or free-standing? No problem. Systems from Kardex Remstar can store your products under controlled conditions. They can be positioned as required without any structural restrictions and can even be attached to existing cleanrooms - for example, only the access opening is located in the cleanroom.

Kardex Remstar Dry Solution (drying):

- 10% relative humidity achieved by nitrogen flushing
- 5% relative humidity achieved by adsorption drying
- ESD-compatible design

Kardex Remstar Clima Solution (climate control):

- Store deep frozen down to -35°C (cold storage in hygiene design)
- Store goods at temperatures of up to $+60^{\circ}\text{C}$
- Temperature remains constant $\pm 1^{\circ}\text{C}$
- Dependent on the type of unit

Kardex Remstar Clean Solution (cleanroom):

- Clean room conditions compliant with EN-ISO classes 5 to 8 (5 on request)
- Constant temperature $\pm 1^{\circ}\text{C}$
- Overpressure/vacuum
- Smooth surfaces
- Hygienic design

Benefits at a glance:

- Low operating costs
- Absolute safety for the storage of sensitive parts
- Lower investment costs compared with conventional solutions
- Room-in-room solutions; independent cells can be located in the gray area
- Flexibility with the free positioning; no structural restrictions

Kardex Remstar Power Pick Global: The software innovation for controlling storage and retrieval solutions



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

Features of Keytec:

- 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 selectable from the list of optional modules and improve the efficiency and functionality of Power Pick Global.

Special programming:

Individual needs can be met with custom programming.

Benefits at a glance:

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

- State-of-the-art IT architecture
development environment
with thanks to the modern
development environment

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 integration into customer-specific processes and a reduction in the amount of training needed
- Can be installed without interfering with existing processes
- Available languages: German, English, French and Dutch (a tool for translating into other languages is integrated)

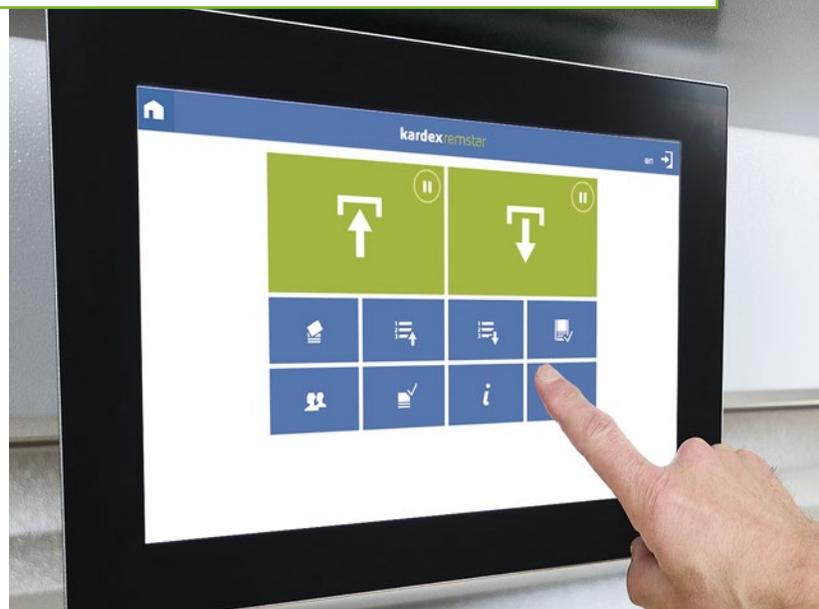
Kardex Remstar JMIF (Java Machine Interface)

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 Onboard Solutions: Innovative machine control center for the storage systems of Kardex Remstar



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

Logicontrol 100 "Pen & Paper"

The standard function replaces the classic paper problem. Via a simple article list, putting things into and removing them from storage without errors is made easy for the user. A storage place is allocated to the article and can be requested at any time using the article name.

Logicontrol 200 storage and stock management

The Logicontrol 200, based on the Logicontrol 100, however, also includes simple stock management. The user can obtain an overview at any time on material flows and stock levels. It's even possible to manage several linked devices.

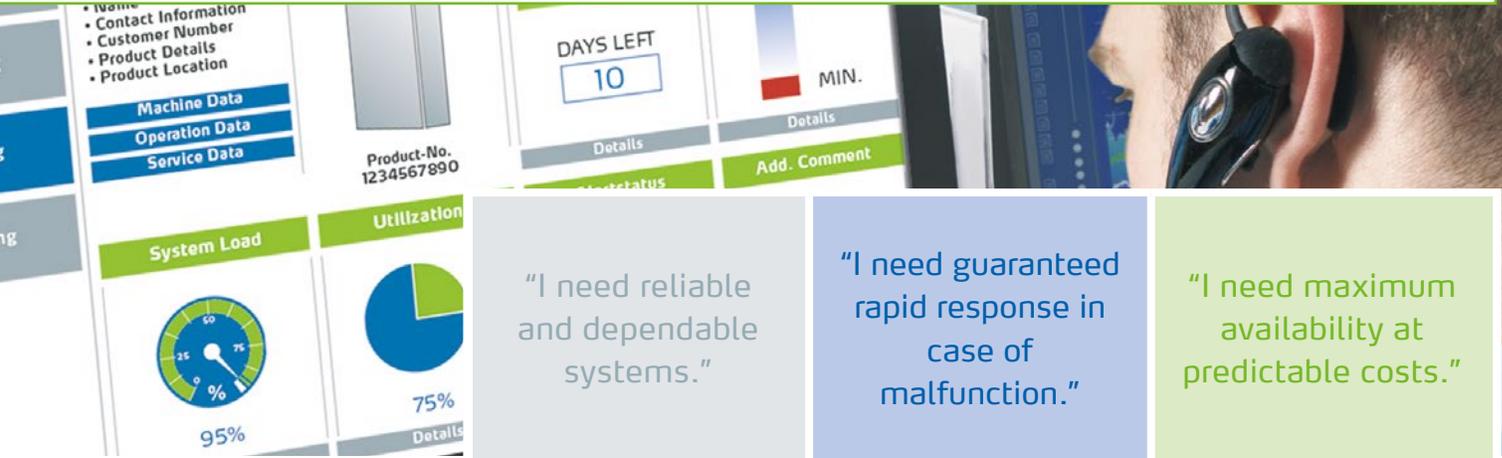
Power Pick Onboard: Fully integrated onboard storage management software

Power Pick Onboard is the latest control generation and offers, in addition to the wide range of standard functions, a large operator panel, easier control, a basic inventory function and connection to a host system. This means that processes become even easier and faster.

Advantages of our control systems:

- ⊕ Modern and intuitive operation concept
- ⊕ Lower cost thanks to integrated hardware
- ⊕ Planning and investment security
- ⊕ Ergonomic working conditions
- ⊕ Comprehensive storage management
- ⊕ ROI in 12 to 24 months

Kardex Remstar service contracts: Scalable to meet your needs



"I need reliable and dependable systems."

"I need guaranteed rapid response in case of malfunction."

"I need maximum availability at predictable costs."

BASE Care

FLEX Care

FULL Care

Annual maintenance and inspection	✓	✓	✓
Priority OnSite & Helpdesk Support	✓	✓	✓
16h OnSite reaction time		✓	✓
2h Helpdesk guaranteed reaction time		✓	✓
Helpdesk unlimited calls		✓	✓
OnSite Repairs & Spare Parts			✓
Travel Cost for Repairs **			✓
Remote Assistance & Analytics		optional	discounted
Multiple maintenance cycles per year	optional	optional	optional
Up to 24/7 OnSite & Helpdesk support *		optional	optional
Up to 2h OnSite reaction time *		optional	optional
Up to 1h Helpdesk reaction time *		optional	optional

* Support hours and reaction time subject to local availability.

** Travel costs included, depending on country.

Further information:

www.kardexremstar.com

Do you require further service?

No problem: Our authorized distributor 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
Brazil
Canada
Chile
China
Colombia

Cyprus
Czech Republic
Denmark
Finland
France
Germany
Great Britain
Hungary

India
Italy
Malaysia
Mexico
Netherlands
Norway
Poland
Russia

South Africa
Spain
Sweden
Switzerland
Turkey
USA

Further information:



www.kardexremstar.com