

Clean, Controlled & Secure Storage

Protecting sensitive goods in demanding environments.

Solution Guide

kardex



Protecting goods

Many industries often require storage and handling of goods in controlled environments. Protecting goods from dust particles and pollutants (such as micro-organisms, spores and germs) can be quite a challenge for many operations.
High dollar goods (for semiconductor manufacturing), finished goods (for medical device manufacturing), specialty instruments (for hospital supply) and other highly specialized goods must be stored and handled in controlled environments to maintain their usability. When these goods are exposed to the natural elements or unauthorized personnel, they can become contaminated or infected and often must be discarded or cleaned.

Automated storage and retrieval systems (ASRS) from Kardex Remstar can be used in cleanroom, temperature controlled and low humidity/dry environments to protect stored goods and reduce operating costs. These controlled environment solutions reduce floor space by up to 85% and increase productivity by reducing the walk and search time commonly associated with manual pick systems.
In addition, units can also be equipped with pick-to-light technology, bar code scanning and batch pick and replenishment stations increasing inventory control and security.

- Compliance with climate and cleanroom requirements
- Error-free workflow
- 100% traceability
- Reduce floor space by up to 85%

Cleanroom environments

Kardex units provide particle-free environments, meeting the conditions in compliance with cleanroom classes EN-ISO 5 to 8 (or classes 100 to 100,000). To reduce air particles as much as possible, the Vertical Lift Module (VLM) Kardex Shuttle is equipped with roller-based trays which do not produce dust.

In addition, the VLM air conditioning solution (ACS) is equipped with dual access doors to reduce exposure to dust, dirt, particles, germs and other harmful pollutants. Controlled air streams can also ensure cleanroom conditions are maintained inside the unit.

- Constant temperatures +/–1 K
- Cleanroom classifications ranging from EN-ISO 5 to 8 (5 on request)
- Positive/negative pressure

Benefit from dust-free storage to fulfill any product requirements



Temperature controlled environments

Many stored goods are vulnerable to temperature changes. They quickly become contaminated if temperatures are not properly managed. This applies to a very vast range of products, from frozen foods to hospital supplies to pharmaceutical products, all of which require storage at constant temperatures.

The Vertical Lift Module Kardex Shuttle and the Vertical Carousel Module (VCM) Kardex Megamat both come equipped with an integrated air conditioning system to protect stored goods. The automated storage systems can maintain a consistent temperature (+/- 1). Additionally, Kardex clima solutions feature temperature mapping, heated and insulated switch cabinets and humidity control to maintain peak performance levels.

- High performance of the components at constant temperatures between -22 and +131 degrees Fahrenheit (-30 to +55 degrees Celsius)
- Constant temperatures +/–1 K
- Humidity control

Control temperature and humidity as needed to protect sensitive items



Low humidity / Dry environments

Automated storage and picking solutions can also be used in dry room applications, providing a relative humidity at or below 5%. In addition to a sealing system and an airlock in the access opening, a dehumidification device is designed for use with the VLM and VCM to ensure humidity levels are maintained within the unit.

- 10% relative humidity (r.h.) through nitrogen purging
- 5% r.h. adsorption drying
- ESD-compatible design

Keep humidity levels low
to protect your goods



Overview

Kardex will customize a solution based on your needs. The table below shows the various options for temperature controlled, dry and cleanroom environments based on the product type.

		Temperature controlled		Dry environment	Clean environment
Kardex Shuttle	500	-4 to +131 F	-20 to +55 C	< 5%	ISO 6 to 8
	700	-4 to +131 F	-20 to +55 C	< 5%	ISO 6 to 8
Kardex Megamat	180	+35 to +104 F	-2 to +40 C	< 5%	ISO 8
	350	+35 to +104 F	-2 to +40 C	< 5%	ISO 5 to 8
	650	-22 to +104 F	-35 to +60 C	< 5%	ISO 5 to 8

Protection
of stored goods

Increased
storage
utilization

Increased
picking
performance

About Kardex

Kardex is a leading global partner for intralogistics solutions in an attractive and growing market. The Group offers premium automated products, standardized systems, and life cycle services that guarantee high availability and low total cost of ownership.

Kardex provides an intelligent entry into automation with its dynamic storage and retrieval systems, offers integrated material handling systems, small parts storage systems, and automated high-bay warehouses, and acts as a global AutoStore™ partner, offering flexible and modular storage and order fulfillment solutions.

The Group employs around 2,900 people in over 30 countries.
Kardex Holding AG has been listed on the SIX Swiss Exchange since 1989.

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