

A photograph of a large industrial warehouse interior. In the foreground, a long row of Kardex Miniload-in-a-Box Vertical Buffer Modules is visible. Each module consists of a tall, light-colored metal cabinet with a horizontal arm extending from the front. The arm holds a small, dark-colored storage box. The modules are arranged in a line, receding into the background. The warehouse has a high ceiling with a complex steel truss structure and large skylights. Several pendant lights hang from the ceiling. In the background, more warehouse equipment and structures are visible.

Kardex Miniload-in-a-Box

Vertical Buffer Module

Kardex Miniload-in-a-Box

The Kardex Miniload-in-a-Box* is part of the product family Vertical Buffer Module (VBM) and provides solutions for fast-growing product ranges with limited storage space. The system uses a lightweight mini-load crane with a telescopic gripper to individually transport bins or trays to the access opening point.

The Kardex Miniload-in-a-Box sets new standards in terms of speed, precision, and energy efficiency, offering highly-dense storage and precise picking for small parts and small-volume parts. It is fully scalable with a low investment point and provides a wide choice of inbound and outbound automated interfaces to integrate seamlessly with both existing processes or technology and future automation. The entire transition process from design and planning to implementation requires a quarter of the time compared to similar systems.

 [Learn more](#) in our customer success stories

Fast & accurate
picking

Flexible
**system
integration**

Fully
**scalable
design**

* formerly Kardex Compact Buffer



Application range

Order picking

By utilizing the goods-to-person principle and offering excellent retrieval performance and considerable space savings, VBMs are especially suitable to pick slow-moving goods. They accurately pick various kinds of articles in small quantities. The Kardex Miniload-in-a-Box offers unique benefits to companies with 24-hour service and overnight delivery of goods such as spare parts.

Order consolidation

To quickly and accurately consolidate orders before shipping or packing, the Kardex Miniload-in-a-Box combined with the Kardex Java Machine Interface (JMIF) software and automated conveyor connection is the recommended solution. Order bins are scanned, stored and retrieved just-in-time and in sequence without any human intervention.

Assembly kitting

The Kardex Miniload-in-a-Box combines order picking and buffering into one system. Complete assembly sets can be retrieved just-in-time and conveyed directly to the assembly workstations. It ensures a high availability and a permanent inventory overview. Compared to conventional shelving, throughput can be increased by up to 200%.

Main components



Rack system

- Scalable design in a 25 mm grid to store bins & trays
- The base frame guides the miniload crane & adjustable leveling feet easily adapt to uneven floors



Miniload crane

- Rotating gripper with telescopic load handling device moves bins or trays
- Lightweight construction enables high energy efficiency



Turntable

- Ergonomic access to one single bin & efficient picking at all unit dimensions
- Provides one bin & simultaneously prepares the next one



Single access opening

- Additional picking access & ideal for replenishment
- Enables controlled access to individual bins or trays



Software & control

- Web-based & compatible with a wide range of hardware
- Added value via enhanced functions



Unit dimensions in millimeters

Depth	2,350 (2,450)
Height	3,000 – 12,000 in 100 mm steps
Width	1,920 – 19,970 (20,025)

Payloads max.	35 kg / bin
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Performance	143 bin presentations per hour*
	130 bin presentations per hour**

Storage capacity	1,440 bins*
	2,880 bins**

Bin dimensions (in millimeters)	Standard mini-load system compatible bins 600 × 400 (up to 640 × 440)
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Standard technical data, other sizes possible on request

 [Learn more](#) about VBMs

* based on a 10m × 12m (W × H) unit with 600 × 400 × 220mm bins

** based on a 20m × 12m (W × H) unit with 600 × 400 × 220mm bins

Complementary technology

Kardex can install its Kardex Miniload-in-a-Box either as a stand-alone solution or integrated into an overall logistics concept. By adding further enhancements or combining it with other technologies, users benefit from higher performance results and see improvements in throughput and accuracy.



Workstation equipment

- LED pointer, position indicator, optical status signals, confirmation button, VESA bracket for monitor, sockets & interfaces



Conveyor connection

- Permanent retrieval and replenishment
- Combination of multiple units and remote workstations



Kardex VBM Box

- Maximum storage capacity
- Flexible in design, size and number of storage locations



Life Cycle Service

- Holistic, flexible, and modular service portfolio
- Remote support and optional services like smart monitoring, assistance and conferencing or analytics

Further options and storage environments with air conditioning, fire protection or esd versions are available.



Order picking with turntables and a conveyor system with put locations



Order consolidation with automatic conveyor connection

Smart Intralogistics Solutions

Kardex offers an A-Z product portfolio targeting the niche needs of various industries. Discover innovative offers ranging from everyday handling of bins and pallets or storage in controlled environments to fully-integrated automated storage solutions and material handling systems. From day one, the Life Cycle Service team works hand-in-hand to support your project implementation, maintenance and future plans.

