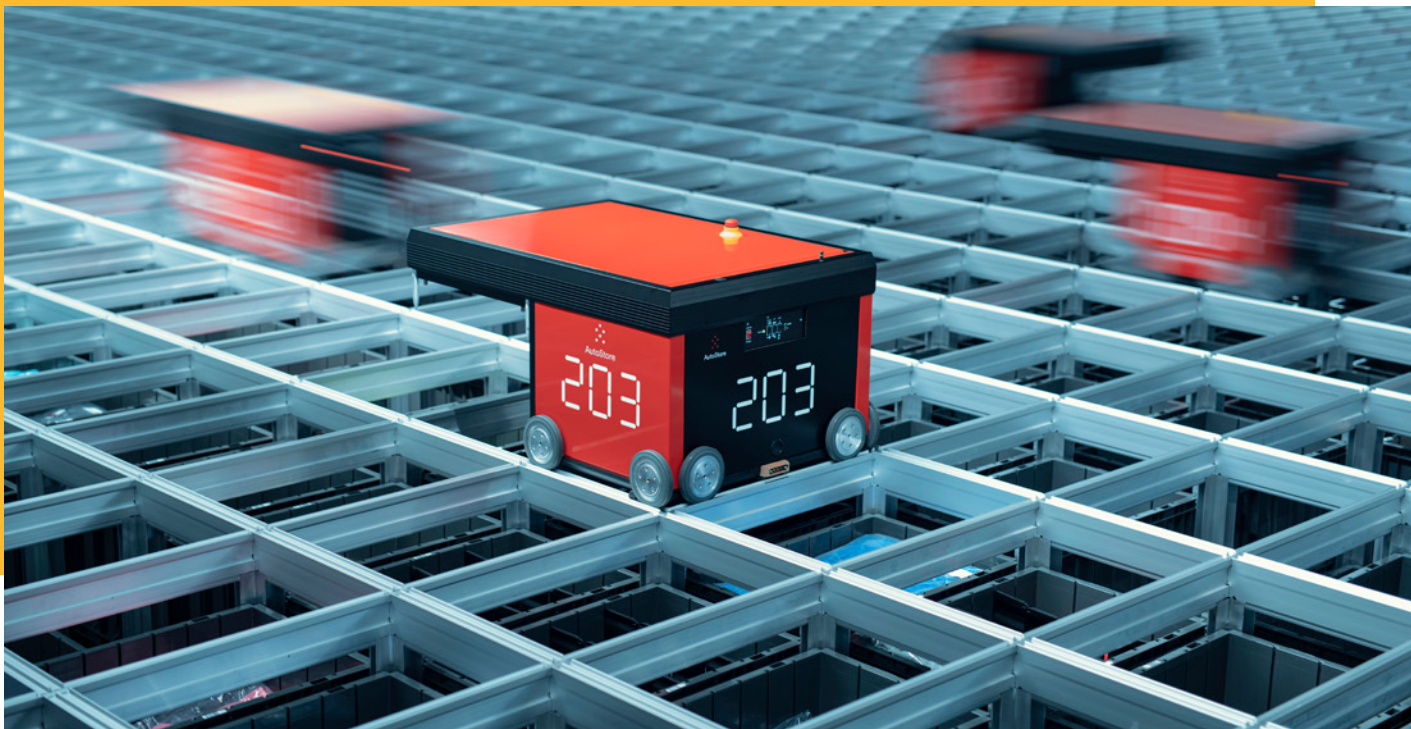


DEMATIC

Automated Systems Don't Have to Be Complicated to Work

AUTOSTORE™ EMPOWERED BY DEMATIC



WITH AUTOSTORE YOU EXPERIENCE

Forward-Thinking Fulfillment in Action

In supply chain unpredictability causes mistakes, malfunctions, and failures, future forward thinking is essential for profitability and to maintain a competitive advantage. AutoStore empowered by Dematic provides the key components to forecasting and scoping growth while you focus on meeting today's business targets.

Space Savings

- High density storage provides more storage locations than traditional warehousing
- Reduces footprint used for storage by 40–60%

Better Inventory Control

- Product is inaccessible until an order is placed removing the need for end of year inventory counts and reducing picking errors
- Orders are pulled and consolidated in a single location

Limited Downtime

- There is no single point of failure, the system boasts 98% availability throughout the year
- Runs 24/7



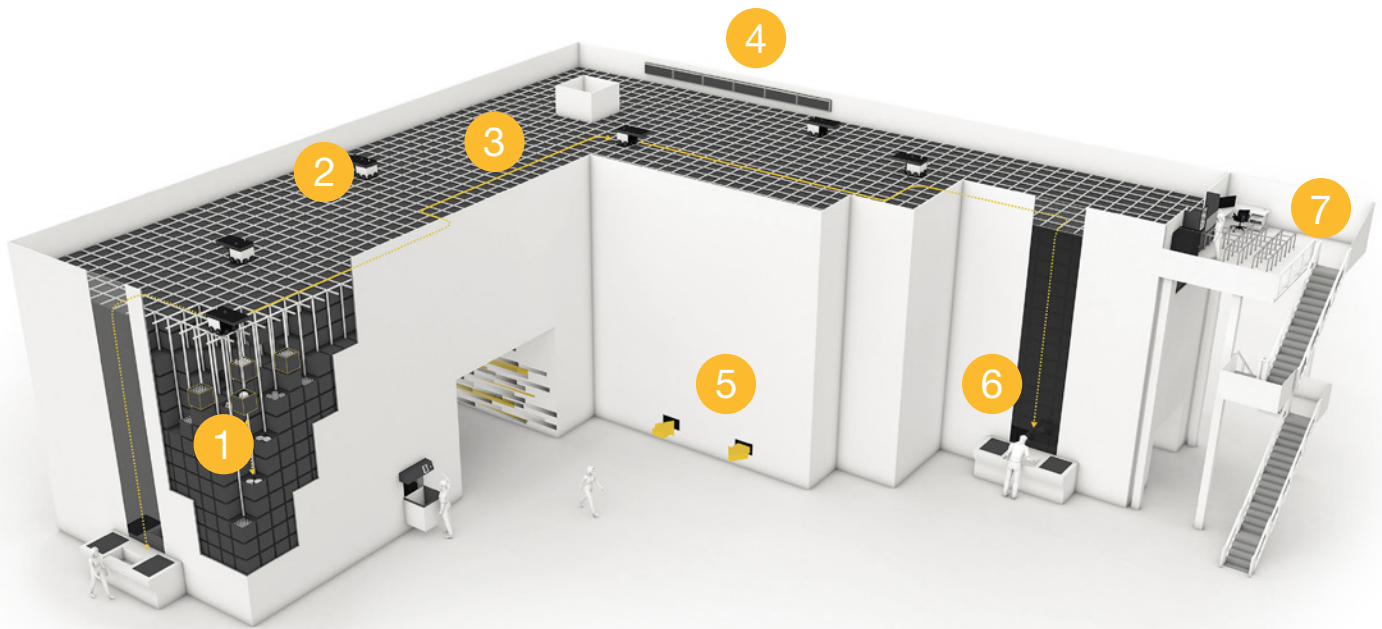


Higher Flexibility

- Easily integrates into your existing warehouse and expands without interrupting operations
- Modular construction that fits around pillars, in odd shapes, or in low ceiling heights

Energy Savings

- Awarded for its low power consumption, the system runs on the same amount of energy as a conventional vacuum
- Uses onboard energy regeneration systems that only recharge batteries at optimal times to prevent overcharging or slowing the operation



How It's Made

Made up of five different modules, the system is easy to install, simple to understand, and is flexible to easily expand.

1 Bins

Bins are inducted into the grid.

2 Robots

Robots retrieve bins to ports.

3 Grid

Bins are stacked in a compact grid.

4 Chargers

Energy efficient robots are charged on the grid.

5 Software

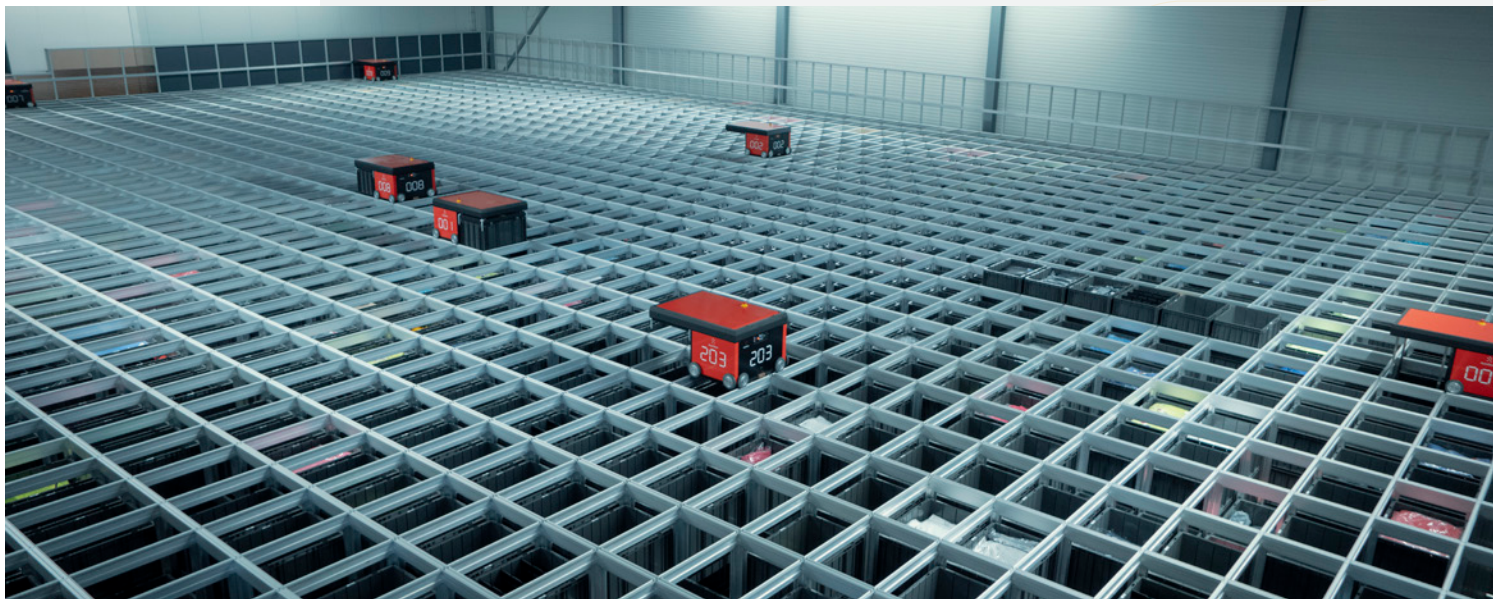
The optimal interface between your WMS and the system.

6 Workstations

Ports where products enter and leave the system.

7 Controller

Directs and manages the movement of the robots.



How It Works

The bin storage cube can be configured up to a height of 6 meters (approximately 20 feet). Higher storage heights are possible by building AutoStore subsystem structures on mezzanine platforms. There are no dedicated access aisles, the entire cube can be used to store product. The robots drive on the top of the grid to access inventory stored in the bins below. The bins are put-away, retrieved, and delivered to the ports or workstations as required. The mechanical system design omits a single point of failure that could stop the entire system material flow.

NOTE

The system footprint layout is custom for each application. An installation can consist of anywhere from a few robots to hundreds, from hundreds of bins to thousands.

The AutoStore subsystem is standardized using modular components. For example, each robot, bin and workstation is pre-engineered and manufactured as a standard component. The AutoStore controller is the module that provides machine control, directing the robots. It features put-away location management that optimizes storage locations for efficient access — bins with SKUs that are used most often are stored near the top of the grid.



Your Options

Dematic offers AutoStore solutions to fit the throughput needed in your business. We'll help you identify the right system for your operation today while helping to forecast future growth and scope out possible expansion for long-term.

Low-to-Medium Throughput — AutoStore Red Line

Red Line is the award-winning flagship module suited for most users and applications. Extremely versatile and reliable, it features R5 and R5+ Robots with canopy design, opportunity charging, precision driving with track-sensors that recalibrate for every cell, and wireless control. The Robots allow for different sized grids and bins (totes).

Workstation Port Options Include

- The CarouselPort, a tri-armed highspeed port designed to operate in harmony with the robots to ensure it is always full of ready bins
- The ConveyorPort, a simple conveyor belt to move the bins to the operators
- The SwingPort, a rotating arm that presents one bin to the operator, while a second bin is positioned waiting on the opposite end of the arm

R5

Maximum grid height of
16 Bin levels with the 330
Bin: 5,376 mm floor depth
(without Robot), 7,511
mm maximum total height
(including service wall)

Supports 220 mm and 330
mm bin sizes

R5+

Maximum grid height of
14 levels with the 425
Bin: 6,044 mm floor depth
(without Robot), 8,179
mm maximum total height
(including service wall)

Supports 220 mm, 330 mm
and 425 mm bin sizes





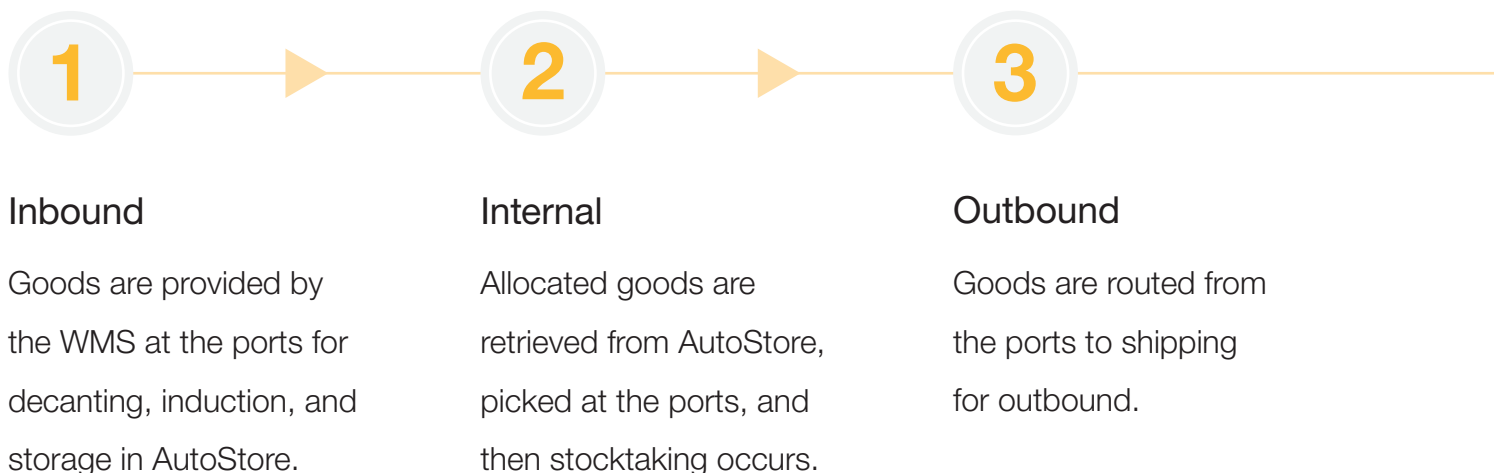
High Throughput — AutoStore Black Line

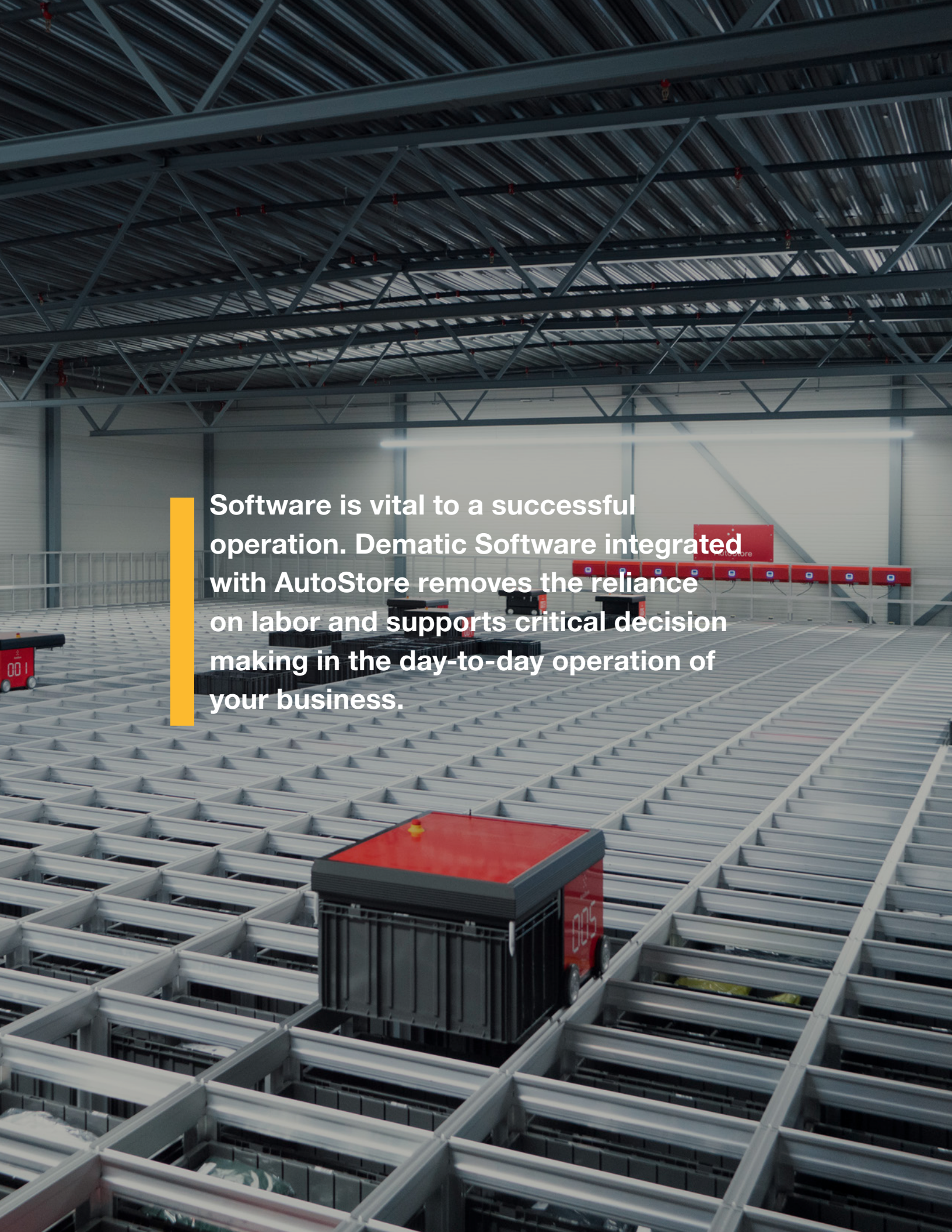
Black Line delivers extra performance and is designed for high throughput systems. It features the B1 Robot, a slimmed down, lighter robot than the Red Line with a cavity design. The B1 includes exchangeable BattPack™ Lithium-ion battery technology and Direct Drive Wheels. The Black Line is often paired with RelayPort workstations, modular workstations with a picking module and three to six buffer modules to support high capacity and greater flexibility.

NOTE

In modular AutoStore fashion, Black Line and Red Line modules can be integrated — system designs can be refined with both lines working together.

A Simple Flow





Software is vital to a successful operation. Dematic Software integrated with AutoStore removes the reliance on labor and supports critical decision making in the day-to-day operation of your business.

Integrating with Your WMS, WES, and WCS

Software integration is key to meeting ROI targets. While it is possible for the AutoStore Controller to interface with a custom WMS or WCS, often the process requires more time and labor from your business. For simple integration Dematic provides warehouse execution software (WES) to interface between your host system and the AutoStore Controller. This provides benefits in overall operation and in the maintenance of the system.

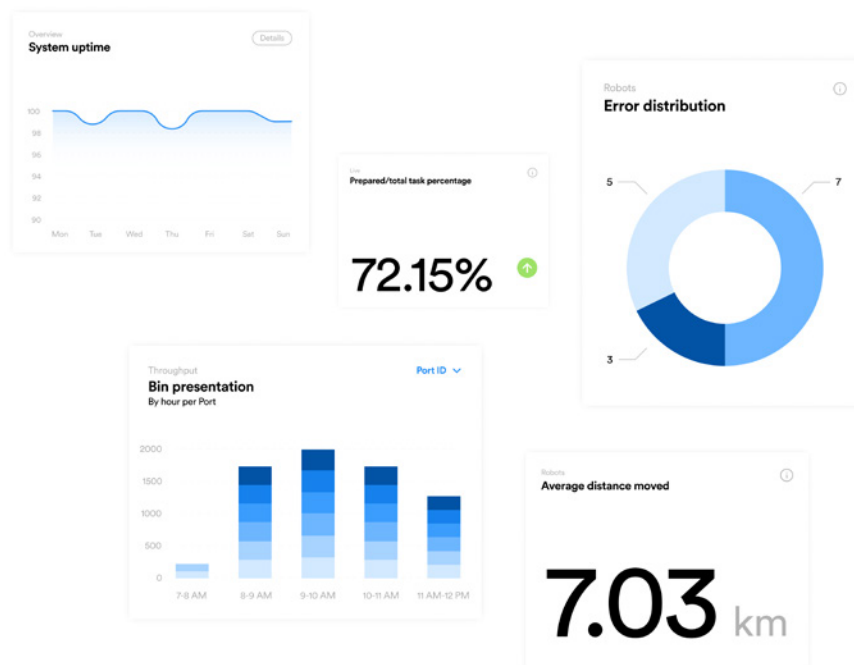
Dematic Software also provides robust picking capabilities to suit e-commerce and omnichannel operations such as batch picking, wave picking, and cluster picking.

Operational Benefits

- Enable operational decision-making
- Track operator performance
- Monitor KPIs throughput rates and cycle times
- Assess problematic SKUs

Maintenance Benefits

- Track system and subsystem uptime
- Prioritize maintenance activities
- Improve preventative maintenance
- Reduce mean time to repair (MTTR)



\$4M

Automated operational reporting and reduced downtime can exceed \$4 million in savings over 5 years.



Software Features You Need

Software must be a part of your decision-making process when considering and AutoStore solution. Dematic will provide you with information on how to best reduce operation and deployment costs while building efficient strategies using AutoStore features and preserving your software investment.

SAP Certified

For businesses using SAP, Dematic is certified to support the integration of AutoStore into your current SAP platform, whether WM or EWM. In this scenario an expertly trained software technician will work with your team to connect AutoStore to SAP and provide training so that your SAP investment is maximized with the system.

Power the Future of Commerce



Dematic designs, builds, and supports intelligent automated solutions empowering and sustaining the future of commerce for its customers in manufacturing, warehousing, and distribution. With research and development engineering centers, manufacturing facilities, and service centers located around the world, the Dematic global network has commissioned thousands of customer installations for some of the world's leading brands. Headquartered in Atlanta, Dematic is a member of KION Group, one of the world's leading suppliers of industrial trucks and supply chain solutions.



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