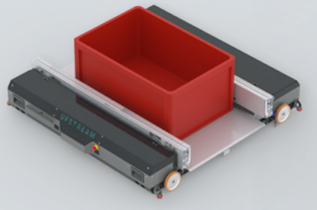
GEBHARDT Upstream®

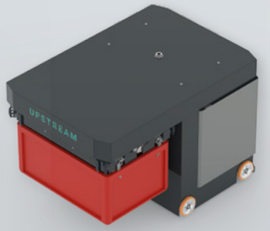
Modularity on All Levels

A SYSTEM THAT COVERS EVERYTHING

The dynamics of supply chains and sales markets have increased significantly in recent years, creating a demand for flexible and scalable solutions. The GEBHARDT Upstream® is characterised by its compact modular design. The flexibly scalable system can be adapted to the most diverse customer requirements in the best possible way and is easily expandable. Established GEBHARDT storage techniques, with no need for lifters and conventional conveyor technology, are used here. The GEBHARDT OLS X shuttle warehouse with horizontal roaming and a grid stored above it form the basis of the system. GEBHARDT Upstream® combines three active moving components in one system: The GEBHARDT StoreBiter® OLS X shuttle, the GEBHARDT StoreDiver bot and the GEBHARDT SimplePick Flexible workstation.



GEBHARDT StoreBiter® OLS X

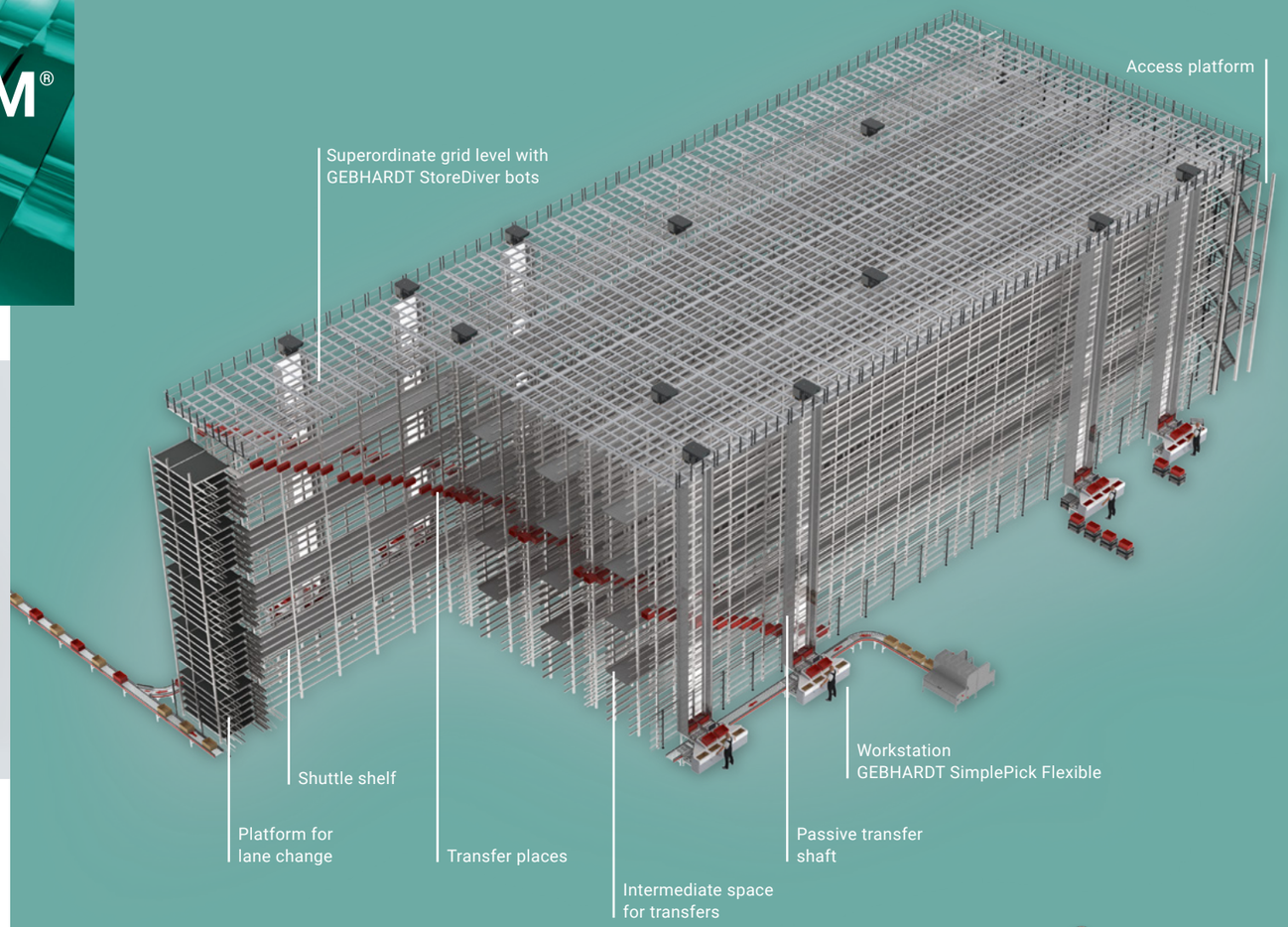


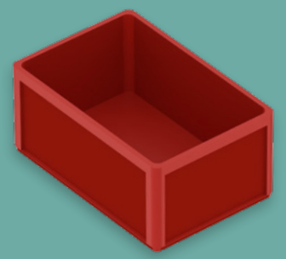
GEBHARDT StoreDiver

GEBHARDT SimplePick Flexible

REVOLUTIONISE WAREHOUSING: EFFICIENT FOCUS ON EFFICIENT OPTIMISATION SOLUTIONS

The costs for logistics real estate are rising. Especially near cities, systems are needed to optimise space consumption with ideal height utilisation. Optimal utilisation of existing building volumes can be achieved by eliminating many travel paths of shuttles or robots. GEBHARDT Upstream® can take up dimensions of up to 100 m in length and 18 m in height, resulting in efficient use of storage areas.



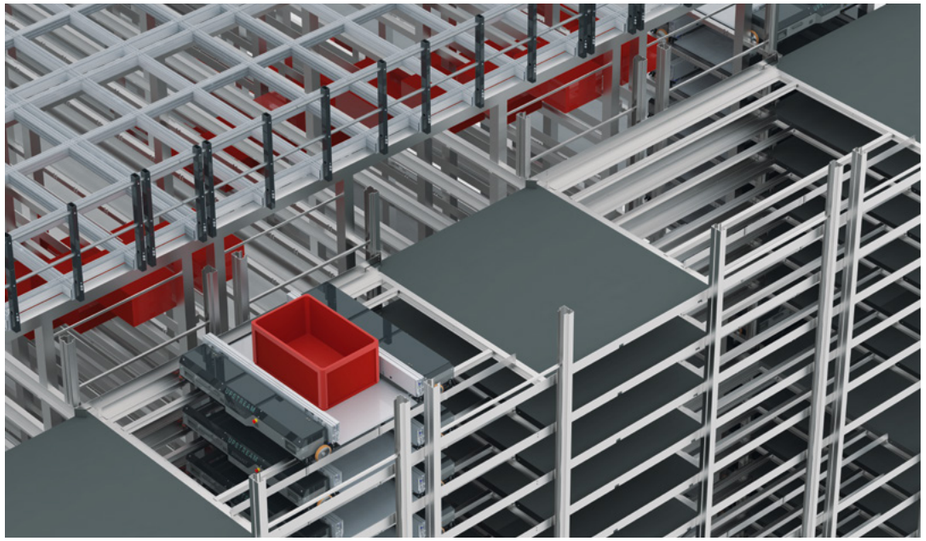


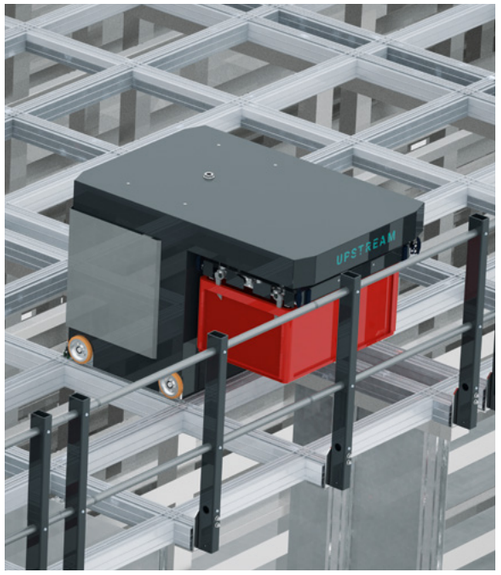
Standard container
600 x 400 x (min.) 60 mm
(L x B x H)

Different container heights possible in one system.

GEBHARDT STOREBITER® OLS X

GEBHARDT StoreBiter® OLS X shuttles take over the storage and retrieval within the warehouse and transfer the containers to the GEBHARDT StoreDiver robots via transfer stations between the shelf rows. A wide variety of length, width and height ratios can be realised in order to adapt to the customer's space conditions. Euro-standard containers of different heights can be stored in each storage level. The simple and reliable design increases the system availability compared to systems with vertical transport of the shuttles. Due to its standardised design, the compact system requires no complex pre-zone conveyor technology.





EFFICIENT ORDER PROCESSING WITH THE GEBHARDT SIMPLEPICK FLEXIBLE

The GEBHARDT SimplePick Flexible workstation allows several target containers and simultaneous orders to be processed. The workstation design of the GEBHARDT SimplePick Flexible is developed according to ergonomic principles.

Short container change times enable the dynamic processing of orders. With the logistics software GEBHARDT StoreWare you can optimally manage your warehouse. The software solution combines material flow (MFS) and warehouse management (LVS) into one platform. Thus, customers benefit from a large amount of available data centrally in one place. Each GEBHARDT StoreWare module is available individually and can be combined with the GEBHARDT Galileo IoT® and Galileo Insight platforms.The UI design of GEBHARDT StoreWare also ensures pleasant working. In addition, the use of the GEBHARDT SimplePick Flexible enables delivery of the target totes or cartons through conveyor technology. The use of automated guided vehicles (AGV) can achieve a highly flexible container supply. GEBHARDT StoreWare has interfaces to ERP and WMS systems. Through Deep Reinforcement Learning, optimal route finding and throughput increase can be achieved. Thanks to modern 3D visualisation using GEBHARDT StoreWare, errors in the system can be corrected as quickly as possible.

GEBHARDT STOREDIVER

The individuality of customer orders is becoming increasingly important, especially in customer marketing. This also depends on the arrangement of goods in the packages. Through AI-optimised route planning and delivery of the source containers by the robots, the GEBHARDT StoreDiver enables sequencing and can respond in particular to the requirements of very small order quantities.

The GEBHARDT StoreDiver moves freely on the grid level and takes over the containers from the transfer points within the shelf of the automatic small parts warehouse. The transfer system creates highly efficient access zones and offers sequence-accurate delivery to the workstations through direct access to the totes. Workstations and I/O conveyor systems are possible on three sides of the warehouse. The grid on the warehouse allows totes to be loaded and unloaded on each side of the warehouse.

EASE OF MAINTENANCE AS THE KEY TO EFFICIENCY

The basis of GEBHARDT Upstream® is proven shuttle maintenance concepts. Robots are brought onto the access platform with scissor lifts or simple crane installations, and it is, therefore, not necessary for maintenance personnel to enter the superimposed grid. The GEBHARDT Upstream® storage concept does without vertical conveyors on the storage system. Previous market solutions required a complete shutdown of the entire plant. With GEBHARDT Upstream®, continued operation of the unaffected areas is possible. During the development of the access concepts, the value was placed on the greatest possible ease of maintenance for the maintenance personnel. In the event of malfunctions and failure of robots or shuttles, the established malfunction handling procedures of the individual systems can be used.

ONE SYSTEM – MANY ADVANTAGES

- Modular design – expandable at any time
- Short commissioning time of only 6 months*
- Flexible scaling of the number of shuttles and robots
- Direct access to individual containers without relocation
- Sequence-accurate delivery to the workstations
- Container weights of up to 50 kg
- Storage height of up to 18 m
- Greatest possible ease of maintenance for the maintenance staff
- No container changing time at the workstation
- No complex continuous conveying technology and no need for lifters
- Higher throughput rates by adding additional shuttles, robots or workstations

* depending on project size and geometry

Max.
bearing height

18 m

Max.
container weight

50 kg

From order
to start-up*

6 months

Provisioning time*
per container max.

2 min.

Energy-saving
ultracaps

48 V

PREPARED FOR EMERGENCIES – MAXIMUM SAFETY FOR YOUR STORAGE SYSTEM

GEBHARDT Upstream® uses existing fire protection concepts that are based on the fire protection requirements for automatic miniload warehouses. Due to the great accessibility, proven sprinkler technologies can be used. This means that the warehouse is quickly extinguished in case of a fire and cost-intensive CO_2 systems are no longer necessary as standard. Ultracaps with a 48 V power supply also ensure the highest possible system safety.

DESIGNING INTRALOGISTICS CONSCIOUSLY

Sustainability is also an omnipresent topic in intralogistics. By dispensing with classic conveyor technology and vertical conveyors, only the containers that are actually needed are moved. GEBHARDT Upstream® does not use energy-intensive 400 V technology and avoids high stand-by consumption of stationary systems. The OLS X shuttles and robots are equipped with long-life ultracap technology, enabling 24/7 operation. Lithium or lead batteries have been completely eliminated.

Learn more:
bit.ly/gebhardt-upstream-3d-en

Or at **gebhardt.com**

NEXT GENERATION INTRALOGISTICS

Already in its third generation, the name GEBHARDT is closely associated with innovative intralogistics solutions. The company has always developed, manufactured and installed individual products as well as complete turnkey solutions. The portfolio includes storage systems, conveyor systems, sorting and order picking systems as well as goods lifts, automated guided vehicles and software applications.

The complete range of systems, intelligent software and life cycle services enables the most reliable and efficient automation technology for retail & e-commerce, food & beverages, automotive, healthcare, contract logistics, fashion & consumer goods and industry.

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