ACCESSIBILITY AND EASE OF MAINTENANCE

The racking system is divided into user-friendly sections in order to guarantee timely resolution of faults. A faulty shuttle can be removed from the system without difficulty and replaced by another shuttle if required. This feature means that full system availability can be restored in just minutes.

EFFICIENT AND EFFECTIVE

Consistent use of lightweight design principles means that the shuttle is lighter than its payload. As a result, the shuttle consumes very little power, which is reflected in turn by a short charging cycle. Use of a counterweight system has also increased lift efficiency by 40% in comparison to earlier models.

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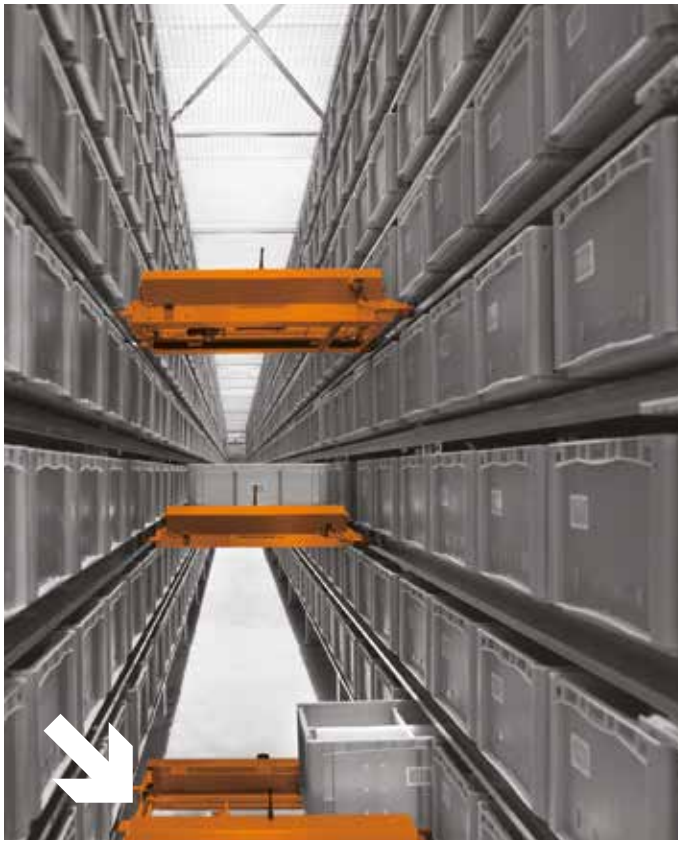

QUICKSTORE MICROSHUTTLE

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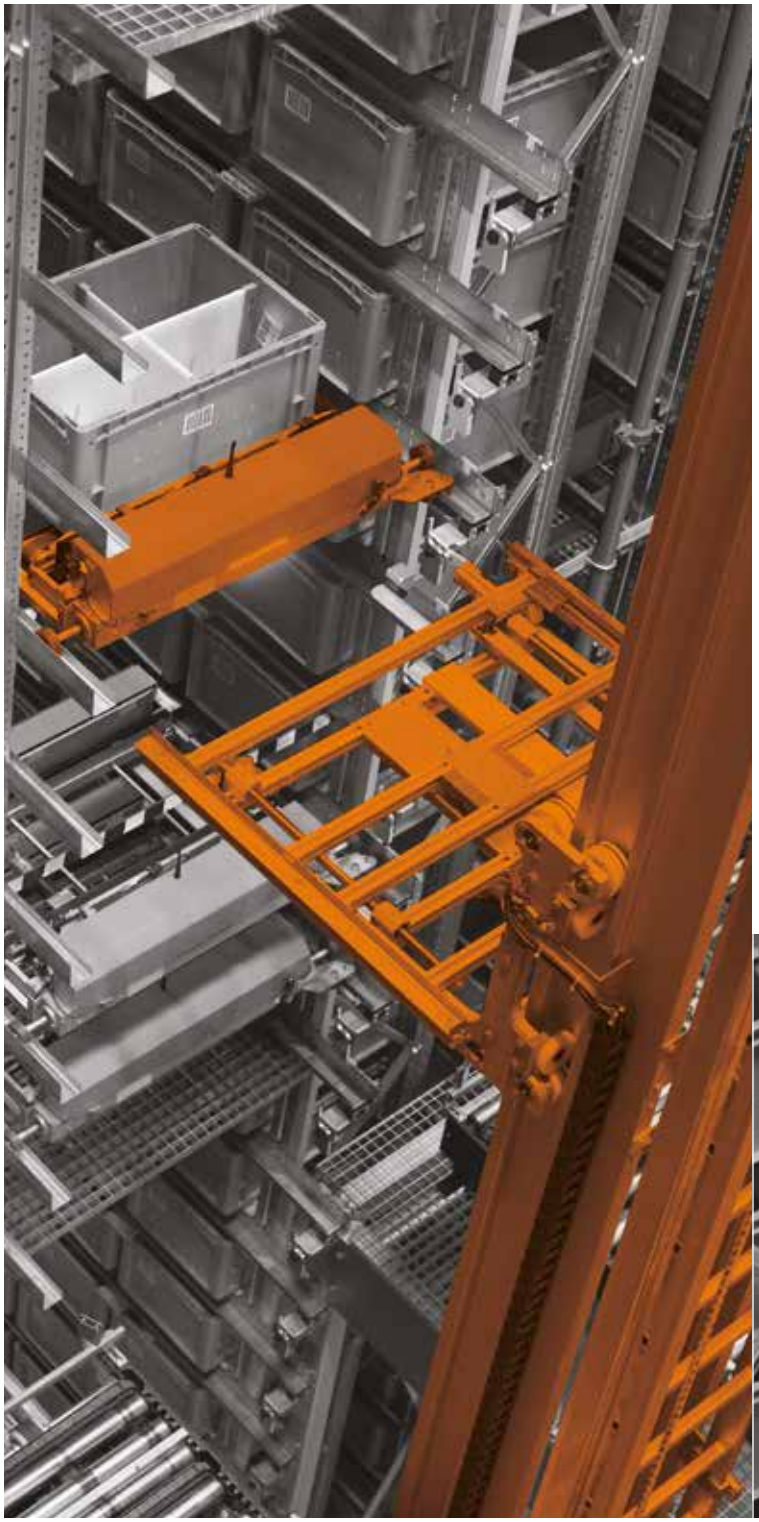
WORKING PRINCIPLE OF THE MICROSHUTTLE

After arrival at a racking storage level, the Microshuttle makes its way to the specified destination completely autonomously, puts items into storage or takes items out of storage at that location and subsequently travels back to the aisle entrance. This places minimum demands on the racking system. The shuttle requires neither a power rail nor a toothed belt to provide drive. Accurate positioning is achieved via the drive motor sensor and markings on the guide rail. When the lift associated with each aisle docks at the appropriate level on the guide rail, the Microshuttle moves onto the lifting frame and the charging procedure for its integrated battery pack is initiated. The lift transports the shuttle to the conveying level where tote exchange takes place. After this, the shuttle is transported to the next designated level where it leaves the lift with a fully charged battery pack and executes the goods movement task in accordance with the instructions it has received by wireless communication.



SCALABILITY

The lift brings the Microshuttle to every designated storage level. This means that a single Microshuttle can serve a complete storage aisle in combination with the aisle lift. When higher capacity is required, additional shuttles can be added to the system. When the lift reaches its maximum throughput, it can be extended by adding an additional lifting frame.

LOAD HANDLING

The flipper technology used for the Microshuttle is one of the fastest available in the market. When transferring a load, rubberised belts lift the container slightly and then pull it out of the storage location onto the shuttle. Minimum transfer times have been achieved even though acceleration is kept to moderate levels in order to protect the goods.