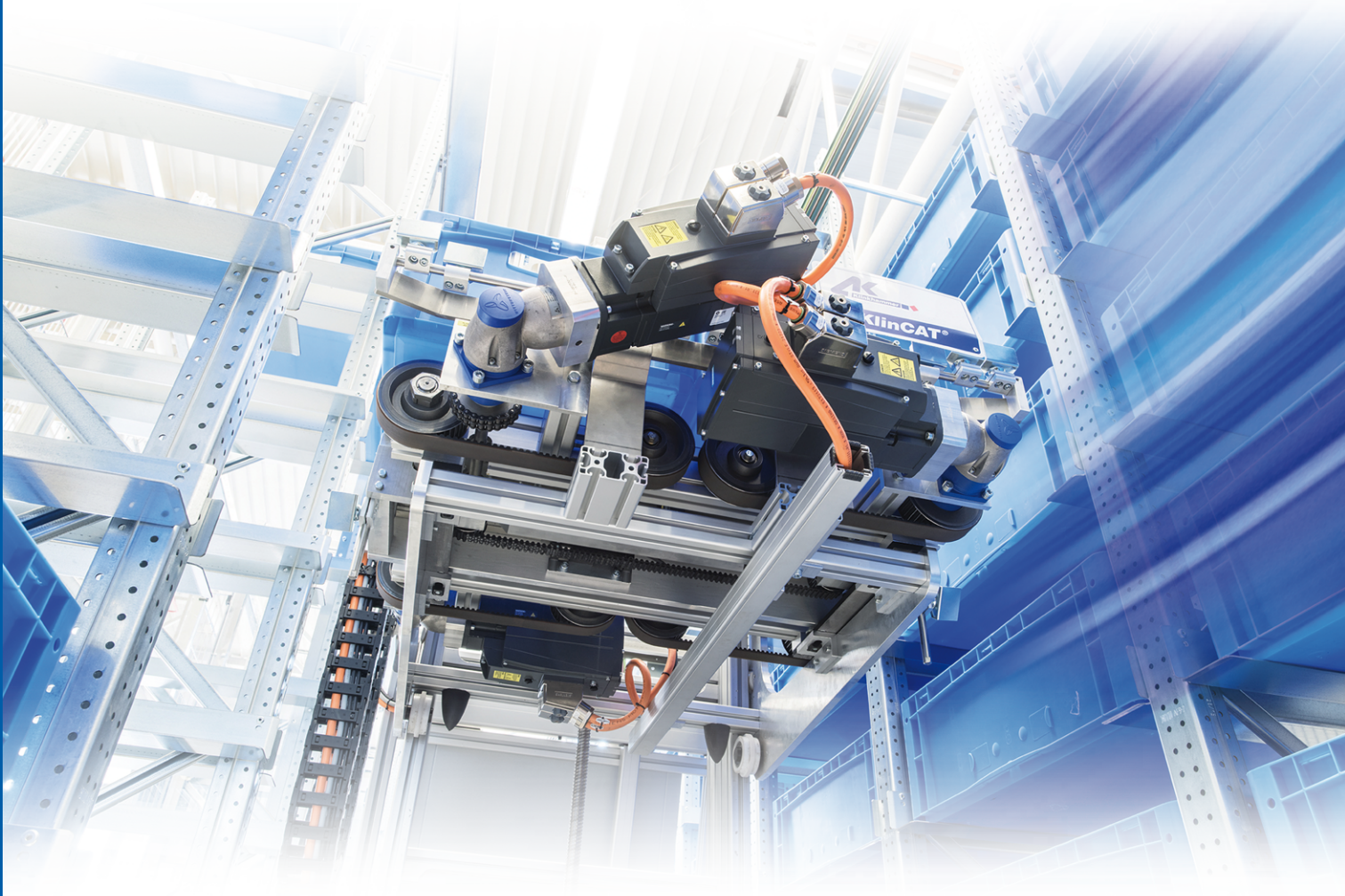


**The New Multilevel Shuttle Generation**  
**KlinCAT® Merges Storage/Retrieval Crane**  
**and Shuttle**







# KlinCAT® Combines the Benefits of Automatic Storage and Retrieval Crane and Shuttle

## High-performance multilevel shuttle system in lightweight design

With a lifting height of around 1.5 m KlinCAT® is able to reach up to 9 tote levels and can be used like a shuttle on several levels above each other. Thus, it can be scaled almost without limit. The load handling attachment of the device has been designed for cardboard boxes, trays or totes with a maximum weight of 50 kg each per loading device. KlinCAT® stands out for its compact design and its low weight and substantially contributes to an enhanced dynamics and a higher throughput. When comparing the drive parameters to automatic storage/retrieval cranes featuring a speed of around 5 m/s and to shuttle systems featuring a speed of around 2 m/s, KlinCAT® reaches powerful 4 m/s. Other advantages: Small bottom and top approach dimension to ensure a high storage density, an innovative, energy-efficient drive concept and low maintenance and investment costs.

### Control and software

The Klinkhammer Group offers from a single source all software modules being necessary for an efficient, fully automated warehouse and optimizes your flows of material. From the control of the KlinCAT® (PLC) to warehouse management systems,

material flow control, visualization, interface connections and service 24/7.

### Low investment and life-cycle costs

- Less devices, easily accessible
- Each shuttle level can be walked on
- During maintenance no outage of the entire aisle

### Ultralight and compact

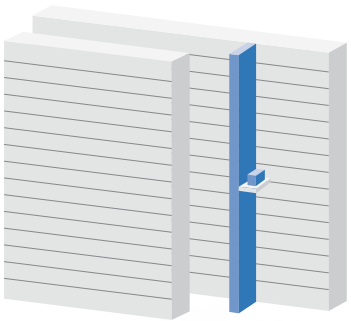
- Telescopic table with 50% weight reduction
- Redesign of belt conveyors, lightweight material

### Small bottom and top approach dimension

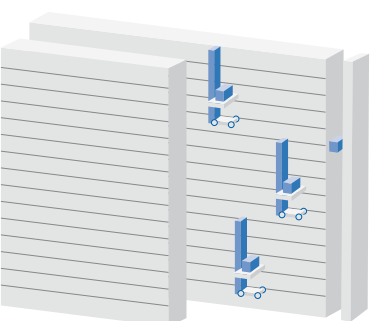
- Drives not under the telescopic table, but laterally mounted
- High storage density

### Optimal energy balance

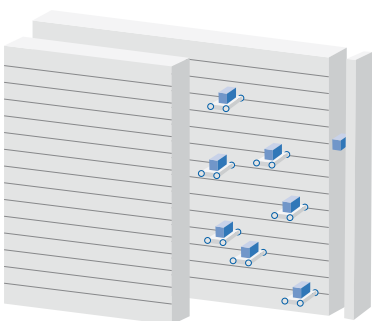
- Lightweight design
- Energy-efficient drive concept



AS/RS



KlinCAT®



Shuttle

Speed of travel axis		
5 m/s	4 m/s	2 m/s
Acceleration		
3 m/s²	2 m/s²	2 m/s²

### Advantages compared to AS/RS

- High performance, multiplied throughput
- Flexible and adaptable
- Scalable thanks to modular structure
- Easy maintenance, each shuttle level can be reached by foot

### Advantages compared to shuttle

- Low investment despite high performance
- Easy maintenance, less devices, easily accessible
- Access to several levels

## KlinCAT® at a Glance

### Goods to be conveyed

Totes, cardboard boxes, trays

### Drive speed

4 m/s at an acceleration of 2 m/s<sup>2</sup>

### Lifting height

Up to 1.56 m, max. 9 tote levels

### Payload

2 x 30 kg / 1 x 50 kg

### Drive concept

Siemens Sinamics S120,  
decentralized servo drives  
with DRIVE-CLiQ

### Energy transmission

3-pin conductor line

### Tote sizes

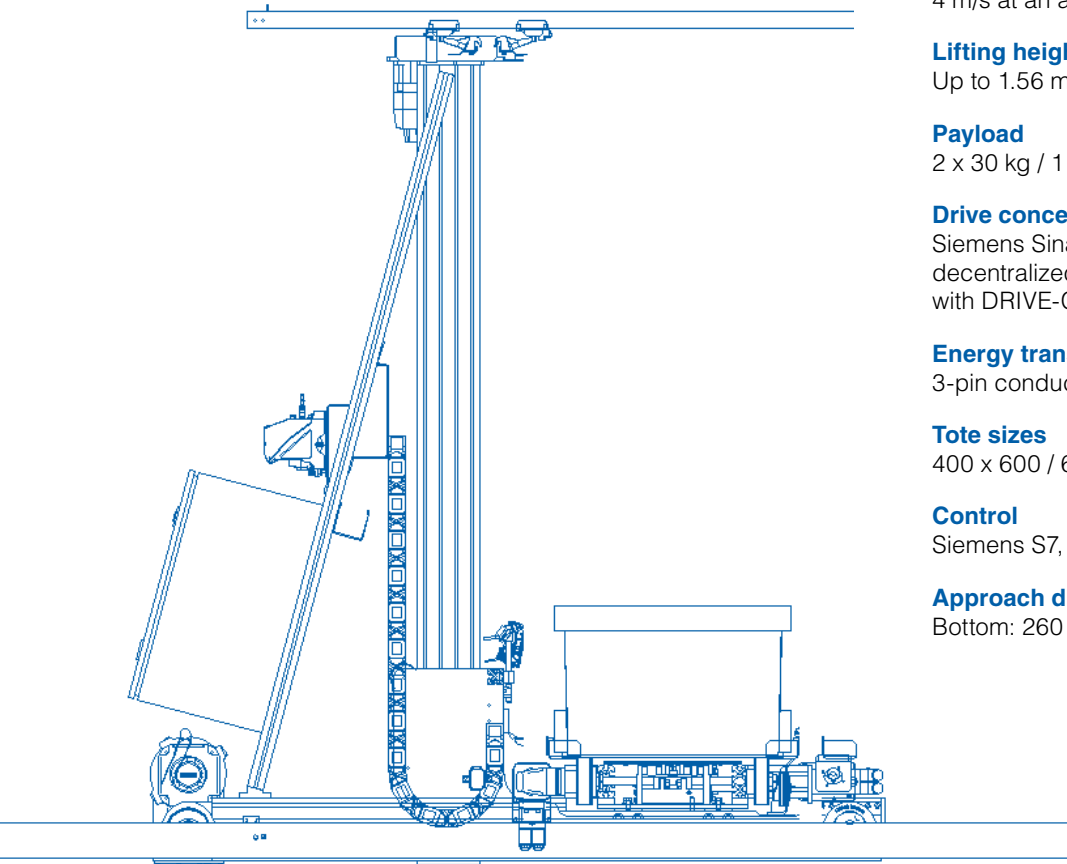
400 x 600 / 600 x 800 mm

### Control

Siemens S7, programming: Klinkhammer

### Approach dimension

Bottom: 260 mm, top: 330 mm



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