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## Vertical order picker EKS 210/312

1000/1200 kg capacity



Jungheinrich  
Plants, Sales and  
Services Europe  
ISO 9001/ISO 14001



Jungheinrich trucks  
conform to the European  
Safety Requirements.

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## The pair.

More order picking performance. More potential.

### Order picking is becoming increasingly important

The demand of the modern sales channel for speed and flexibility is extremely high. Especially in e-commerce businesses or just-in-time production processes. These demands are reflected directly in the order picking profile within the warehouse.

The result: The range of lines (SKU's) in large central stores is increasing – and batch sizes are decreasing. Articles to be picked have to be collected and despatched at an ever increasing pace.

The demands on order picking trucks, and operators, regarding picking performance, flexibility and operating time are growing steadily.

### Whether the application is wide aisle or narrow aisle – Jungheinrich provides a requirement-specific solution for both:

The EKS 210 is suitable for lift heights to 6000 mm. This truck is only 900 mm wide and is particularly compact and manoeuvrable – ideal for unguided applications, e.g. in wide aisles. Naturally the EKS 210 can be specified for wire or rail guided environments as required.

The EKS 312 is a 1200 kg machine with lift heights to 9500 mm and order picking heights to 11,300 mm. The 312 is particularly effective in narrow aisles and may be tailored to suit your application with walk out platforms or cages, extending its application area even further.





## Whatever lies ahead of you ...

... you are prepared for it with the EKS.

Production of the EKS is only started after a Jungheinrich Sales Professional has analysed your requirement. By understanding your individual site application, including the order picking demands and the order picking strategy to be employed, he can offer you the optimum EKS solution.



Modular construction creates maximum flexibility for the configuration of the truck and allows optimum design. The following is a selection of options:

- Different chassis and cab widths
- A flexible operating console concept including height adjustment
- Different load handling systems (Z/L version or walk-on platform)
- A variety of personnel protection systems

Added to this are a number of performance characteristics that make the EKS "receptive" for future changes:

- Adapter system for easy cab width adjustment to new situations
- RFID Transponder technology (see later section)

### Site Specific Set Up

All parameters are adjustable so that the EKS provides you with maximum performance **and** economic efficiency at any time. If your operation changes in the course of time, so can the set up.

- Individual travel programs
- Variable programming
- Horizontal positioning (optional)
- Height selection (optional)



## Top performance starts at the bottom.

The EKS memorises every cm<sup>2</sup> of your warehouse via transponder technology.

### The floor determines the performance

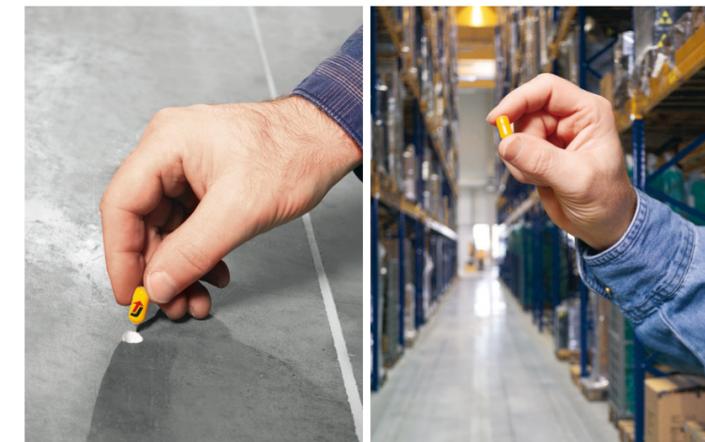
Even the best truck cannot fully realise its level of performance on a poor floor. A few "bad" sections result in efficiency reduction over the entire warehouse. The EKS with RFID technology (optional)

provides optimum performance availability: It memorises uneven floor sections in the warehouse and reduces the travel speed precisely where it is necessary. If several trucks are used, these floor profiles can be transmitted via USB interfaces to all trucks in the warehouse.

**Your advantage:** Optimised speed profiles dependent on the floor topology – for as much performance as possible and as much safety as required.

### The advantage of RFID floor control:

- Optimised speed profiles
- Cost effective and simple installation
- Permanent information exchange between floor and truck
- Safe and targeted approach of all switch-off, controlling and safety functions (e.g. aisle recognition, aisle cut-off, height cut-off)
- Optimum flexibility regarding possible changes in warehouse structure
- Optimisation of throughput performance with warehouse navigation





## “You have arrived at your destination!”

### The EKS with warehouse navigation.

#### From A to B in the shortest time in the shortest route

That is the advantage of a car with navigation system and this is now available for the first time in a narrow aisle warehouse on the EKS.

RFID technology makes it possible: The EKS permanently states its position via transponder in the floor. Orders from the Warehouse Administration system can be transmitted through to the EKS control system. The EKS knows which location to travel to.

The operator only has to press the controls for travelling/lifting and the truck automatically approaches the exact location in diagonal travel – in the shortest possible time, eliminating wasted energy.

Once arrived at the location a working light comes on at the respective side of the aisle. This also provides an opportunity to reduce lighting requirements in the Warehouse.

#### The advantages:

- Targeted approach saves time and money. Productivity/picking performance increases by up to 25 %.
- Picking quality increases. Wrong picks are avoided; the EKS approaches the exact pallet position prescribed by the system.
- The operator's job is much easier. There is no need for constant reorientation. He can no longer go to the wrong destination or make incorrect picks ...



## The perfect fit for any operator.

The EKS adjusts to any operator.



### Room for performance

The narrow aisle stays "outside": The EKS operator compartment wins right from the start with its generous feeling of space and the ergonomics of operating units optimally adjusted to each other. It starts with the extremely low entry, continues with generous knee and legroom and culminates in headroom that even lets 2 m tall operators stand up comfortably and straight.

### MULTI-PILOT operating lever

All hydraulic functions as well as travel direction/travel speed and horn are controlled by the MULTI-PILOT – effortless control with one hand. The left hand stays free for steering through the ergonomically angled wheel.

### Improved economy with improved ergonomics

- Optimum order picking position of pallet due to additional lift
- Clear and precise information (e.g. on the steering angle, charge condition or lift height) due to display with graphics capabilities
- Fast data entry (e.g. for optional PIN lock) with numeric keyboard

### Modular operating console

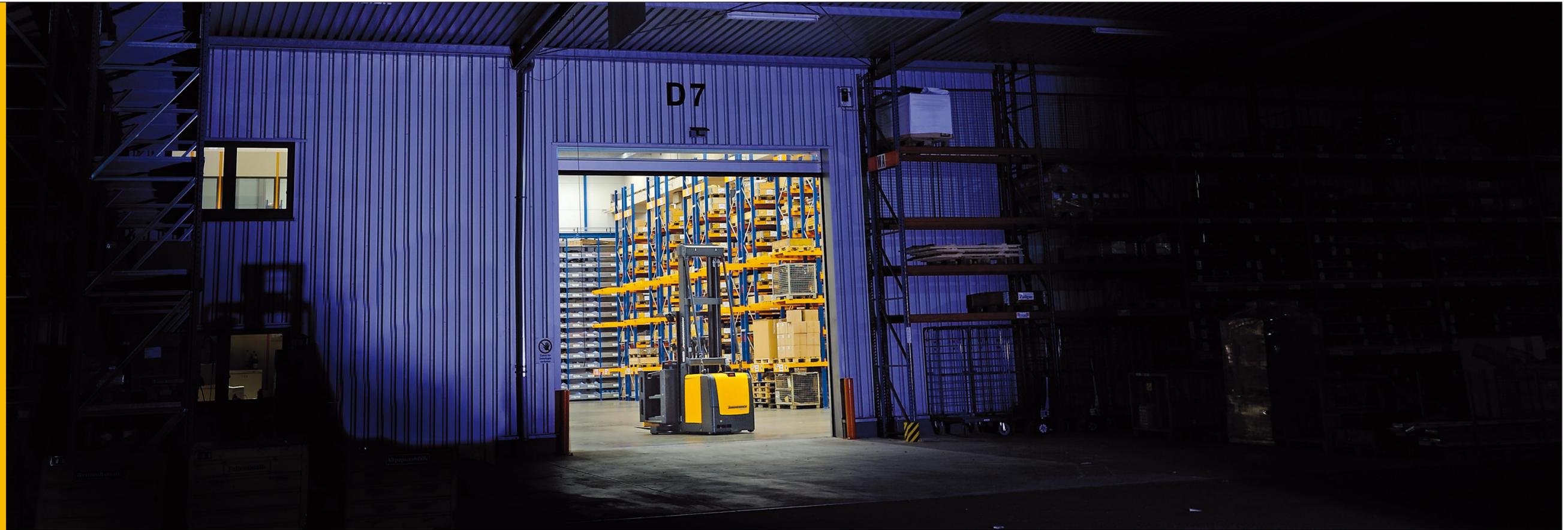
Every application makes different demands on the operator. Every operator makes different demands on the truck. This is why the EKS provides three operating variants:

- Operation in load direction (for frequent picks on short distances)
- Operation in drive direction (for fast travel over long distances)
- Operation in load and drive direction (for mixed applications)

Added to this are many pockets and trays for working papers and utensils, so that the operator always keeps track of things in his immediate surroundings.

### Well placed with adjustable operating consoles

Function follows the operator: Height-adjustable operating consoles can be brought into an optimal position at the press of a button. This helps all operators to quickly find the ideal position – for relaxed travelling and ergonomic order picking.



## First in the morning and last at night.

The EKS bursting with energy.



### News from the pioneer of 3-phase AC technology

More performance with less maintenance and low energy consumption at the same time. These are the main advantages of 3-phase AC technology. Jungheinrich has set standards in every respect in this area for almost 15 years. Jungheinrich engineers have now approached the limits of physics and have improved efficiency even further. The result is shown here.

### Energy reclamation

The EKS does not only save energy, it also reclaims it. The motors work as energy sources during braking and while lowering the load and then feed the electric current back into the battery or make it immediately available for other movements. The advantages: Optimised energy management and low wear on components such as the brake.



### Controlling energy

The EKS computer system does not only control the truck and its performance, it also controls energy flows and provides an active energy and battery management. This keeps the energy source always effective and treats the battery with care even at high power consumption. The advantages: Optimised efficiency and maximised battery life.

### Saving energy

Extremely long operating times – up to 2 shifts – with one battery charge. This has been the domain of the Jungheinrich Systems trucks for a long time. The new EKS generation goes one better: Despite increased dynamics with up to 15% more picking performance, the EKS does not use any more energy than its predecessor. This will also provide new impetus to your own intralogistics!



## In peak form for peak periods.

The operator assistance systems create safety.

### Dual control systems for maximum safety

The EKS computer system has two components: one master computer and one safety module. Both components continuously exchange information and as a redundant system they monitor each other. You benefit from the safety achieved.

### Personnel protection system – factory fitted

The personnel protection system (PSS) from Jungheinrich installed at the factory is part of the complete solution for complete internal logistics. Linked directly to the Can Bus truck control system the PSS can be maintained by Jungheinrich engineers. Everything from one supplier – as Jungheinrich customers have known and appreciated for over 50 years.

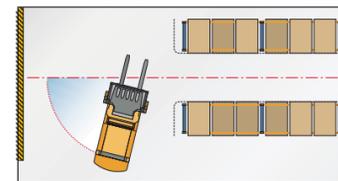
### Inductive guidance: More speed with safety

Extremely high guidance precision is the characteristic of Jungheinrich inductive guidance. This is facilitated by the steering drive in 3-phase AC technology that

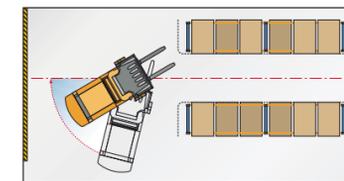
performs a permanent, unnoticeable course correction. A decisive advantage over traditional hydraulic steering. Mechanical rail guidance is available as an alternative.

### Other advantages:

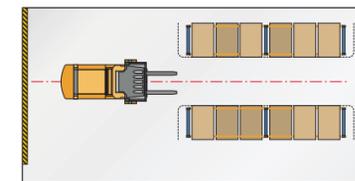
- Approach angles up to 90°
- Reduced transfer aisle requirements
- Minimal approach positioning times
- High travel speeds
- Adjustment to different frequencies in the floor installation



Approach and access to guide wire in load direction



Recognition of guide wire and triggering automatic tracking process



Tracking completed and active automatic guidance in narrow aisle



## The genius of construction lies in its simplicity.

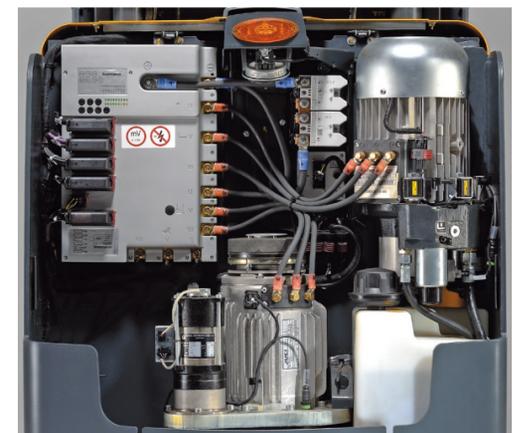
Anyone is able to build complicated constructions.

It takes designers and engineers great skill during the development of complex and intelligent Systems trucks to construct them as simply as possible. One look at the motor compartment of the EKS shows this quite clearly. About 30% less cable connections, a minimum of hydraulic hoses and compact units of electronics, drive and hydraulics are clearly visible performance characteristics en route to increasingly lower maintenance work and energy consumption.

The advantages:

- Straightforward construction = straightforward maintenance
- Fewer cables and hoses = short routes = lower energy consumption
- Fast commissioning

In contrast to competitors trucks – where the hydraulics blocks are milled – the EKS hydraulics block is cast. The oil channels with regard to bends and crossovers are optimally designed and cause significantly less swirls and internal resistance. The advantage: Considerably less energy requirement for all hydraulic movements.





## Complete solutions for complete internal logistics.

Customer Service, Racking Systems, Warehouse Planning, Rental / Financial Services.

Pallet trucks, forklift trucks, order pickers and tow tractors in more than 600 truck variants. Added to this is a multitude of additional services. This makes Jungheinrich into an internal logistics services provider who will pave your way towards a complete logistics solution.

**Direct Customer Service network**  
 Circa 500 of our own service engineers are available in 6 countrywide locations. Every one of them is a Jungheinrich professional: mechanic, electrician, electronics and hydraulics specialist combined in one person. And he will usually be with you within four hours.



**For the right truck the right racking**  
 Jungheinrich provides you with the complete solution: comprehensive warehouse planning that sees truck and racking as a system working "hand in hand". From projecting via CAD planning to handing over the key. From shelving via system-built platforms right up to high bay racking. From consultation via assembly to Service. Everything from one supplier. Everything from Jungheinrich, your "architect" for complete internal logistics.

**Financial Services and Rental Service**  
 Jungheinrich provides you with a number of tailor-made solutions that optimally adapt to your general economic, tax and balance sheet conditions – even if these change during the course of time. So that you always react flexibly. Your specialist adviser will be pleased to calculate which solution would be the most optimal for your application.

