

# Safety.

Protecting people.  
Safeguarding values.  
Increasing efficiency.



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Leading provider of complete intralogistics solutions:  
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# We take you where you want to go. For sure!



Holistic safety in intralogistics is a prerequisite for sustainable productivity. Predictive safety and assistance systems from Jungheinrich ensure that everyone is optimally protected: people, trucks, goods and, of course, also your data. Discover how you can effectively protect your investment and create an environment for your employees that enables them to achieve maximum performance – safely.

# All-round safety for your warehouse.

Not just safe, but also future-proof.  
Thanks to our ground-breaking solutions.



## SOLUTIONS FOR AUTOMATION.

### Hazard-free man-machine collaboration.

Automation brings many benefits, such as more efficient processes and more flexibility. However, it also poses hazards due to the increased dynamics in the warehouse: more people and automated trucks often work together in confined spaces and at high speeds. With intelligent safety precautions such as the personal protection system PPS Anti Collision, we ensure that hazards are managed preventively. This means that man and machine are able to collaborate worry-free.



## SOLUTIONS FOR DIGITALISATION.

### Maximum data security in networked warehouse environments.

Data flows are the invisible force in the warehouse that network, control, coordinate and optimise everything. You can play it safe with Jungheinrich: we apply the highest standards in the development and operation of our solutions in order to maintain the integrity of your data. With us, you can also control exactly who has access to your trucks and who does not. This minimises the risk of accidents and property damage caused by excessive force.



### SOLUTIONS FOR ELECTRIFICATION.

The latest generation of lithium-ion trucks creates scope for safety.

Pioneering in terms of efficiency, compactness and safety. This is what innovative POWERLINE trucks from Jungheinrich represent. These lithium-ion trucks are masters of small dimensions, yet also industry giants when it comes to protecting the operator. A good example of this is the stand-on platform of the POWERLINE pallet stacker: it offers optimal three-sided protection despite compact truck dimensions.



### SOLUTIONS FOR ASSISTANCE SYSTEMS.

Thought out in detail, productive in use.

Jungheinrich understands everyday intralogistics and the challenges associated with it. In the field of assistance systems, Jungheinrich also aims to develop well thought-out solutions that are tailored precisely to your needs.

On the Jungheinrich assistance display, several assistance functions are integrated on one screen for the first time: the addedVIEW portfolio offers digital camera solutions for different applications, while in parallel zoneCONTROL defuses danger zones in the warehouse.

# Protect your investment. Sustainably.

This means that trucks and warehouse equipment remain undamaged. Even when conducting highly dynamic processes.

## THE FIXED ENTITIES IN THE WAREHOUSE DESERVE OUR FULL ATTENTION.

In your warehouse environment, it's all about achieving the best performance, every day. That is why you have invested in high-quality trucks and the right warehouse equipment, such as racking that stands up to your demands. We ensure that the hustle and bustle of everyday warehouse life does not harm your infrastructure: with a wealth of smart assistance systems and regular inspections, all components remain efficient and reliably protected from damage and collisions – even when there is a lot of activity in a confined space.

# Reliably safeguarding critical areas.

## zoneCONTROL. Intelligent hazard management in defined areas.

In every warehouse, there are zones that are particularly critical. For example, traffic junctions that are heavily frequented or with poor visibility – or even both at the same time. Where warehouse personnel and trucks share limited space, intelligent, predictive hazard management is necessary to prevent collisions and accidents. In addition, there are structural conditions such as narrow or low passageways that cannot be accessed by all trucks. Likewise, making is necessary in places where no goods may be unloaded.

With zoneCONTROL, you define these and other critical points with 100% specificity to your warehouse. As soon as a hazardous moment occurs, an action is triggered. For example, acoustic or visual warning signals alert truck operators and warehouse personnel to potential hazards. In other cases, the system actively intervenes in the truck control, for example by reducing the truck speed to enable better control.

The system is radio-based, and even existing fleets (including third-party trucks) can be easily be retrofitted with it.



# Hazard identified, hazard averted.

Irrespective of where hazards occur, zoneCONTROL makes every warehouse area safer.

## HIGH-TRAFFIC ZONES.

As soon as the truck enters the zone, a signal sounds and the speed is automatically reduced.



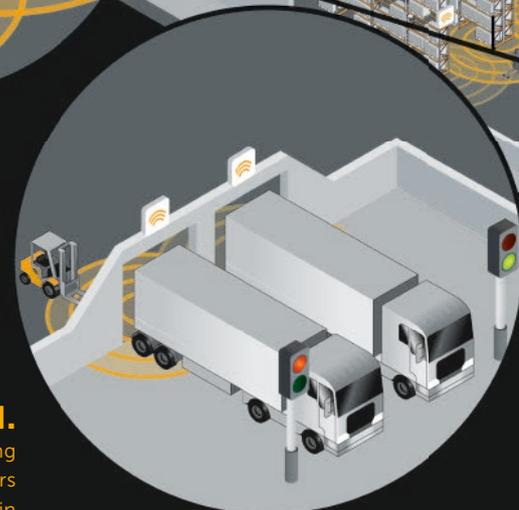
## COLLISION WARNING.

When a defined number of parties reach an intersection, trucks are set to slow travel and warning zone lights are activated.



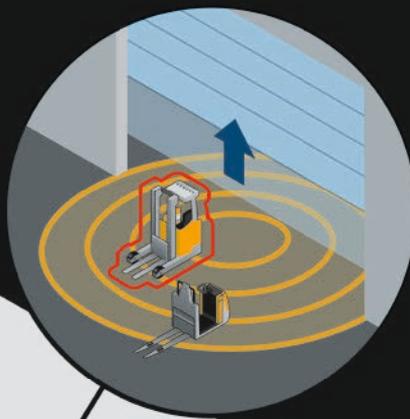
## RAMP PROTECTION.

Automatic slow travel for safe loading and unloading; information to operators that the loading process is still in progress, e.g. via traffic lights.



**NO UNLOADING.**

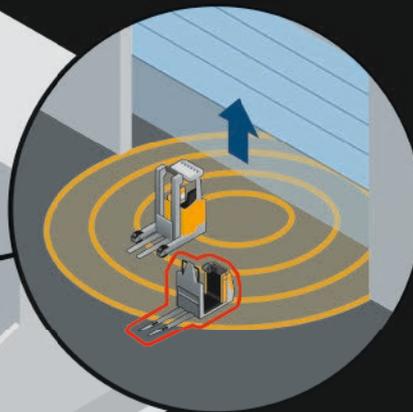
An indicator on the display informs truck operators of locations where goods may not be unloaded.



**GATEWAY PROTECTION.**

On approach, the following steps are initiated successively:

1. The display shows the maximum height.
2. The gate opens.
3. The truck switches to slow travel.



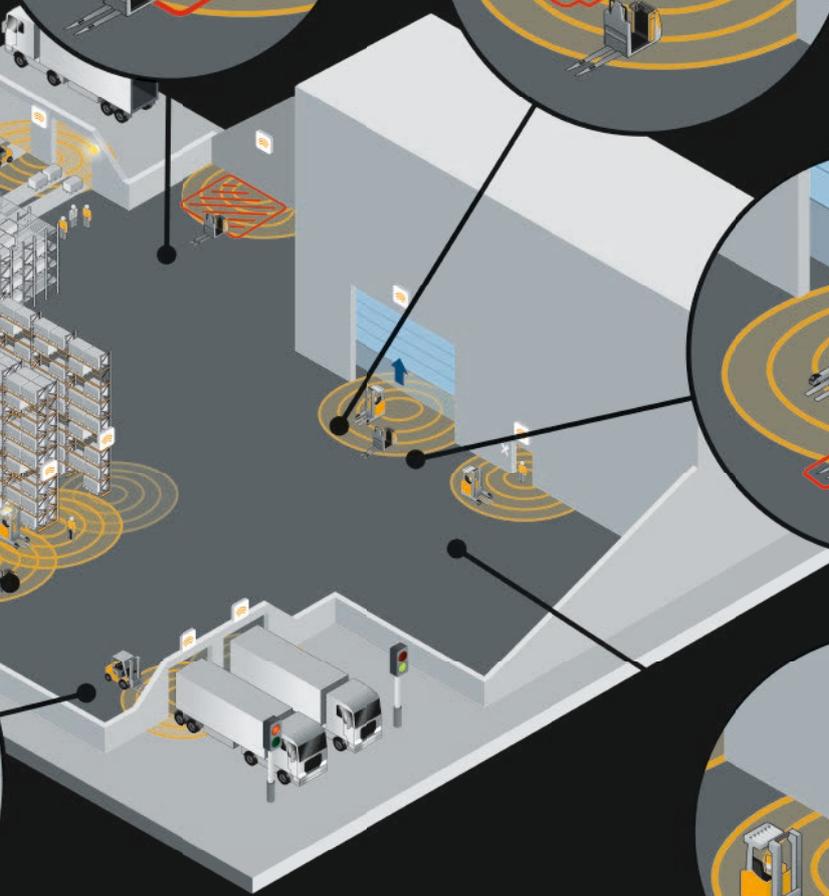
**ZONE MANAGEMENT.**

1. "No entry" shown on display.
2. The gate remains closed.
3. The truck switches to slow travel.



**PEDESTRIAN ZONE.**

Truck switches to slow travel.



# The ingenious visual aid for every situation.

addedVIEW. The digital camera portfolio.

Your operators need the best visibility in all directions in order to transport goods safely and to store and retrieve them. This is the only way to avoid collisions and thus damage to the truck and the warehouse equipment. However, the human eye, with its limited field of vision, is not able to detect all dangerous situations, e.g. obstacles to the rear. In these situations, addedVIEW proves to be an excellent "visual aid": a high-resolution digital camera system that captures all areas around the truck with pin-sharp clarity, making work much easier. A relaxed glance at the display is all it takes to get a precise all-round view and transport the goods quickly and safely to their destination.

- ▶ HD cameras for high-contrast images.
- ▶ The right visualisation aid for every work situation.
- ▶ Reversing camera for perfect visibility to the rear.
- ▶ Fork camera for safe, sensitive handling of goods, even at great heights.
- ▶ Available as a complete solution or only individual components.

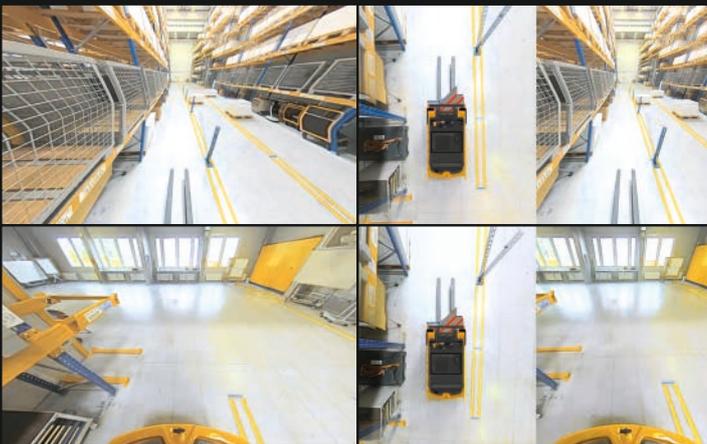


addedVIEW



### addedVIEW 360° CAMERA SYSTEM. BEST ALL-ROUND VIEW.

Each individual camera in the addedVIEW system delivers the highest image quality in isolation. All together, they provide a perspective that is unique: the "bird's-eye view" gives a 360° view from above. Consequently, operators will not miss anything in the future. The speed-dependent autozoom and automatic brightness adjustment allow outstanding orientation, even when travelling at speed or in suboptimal lighting. The result: faster, safer truck manoeuvring.



# Secure access to the truck.

Knowing at all times who is using which truck and when.

## EasyAccess.

### EASY IDENTIFICATION OF YOUR OPERATORS.

We offer different means (offline or stand-alone) and options for fast, reliable identity verification, for example entry of a PIN code via a keypad, on the display or with a personalised ID card. This enables you to define who has access to which truck based on the qualifications of your operators.



## ACCESS CONTROL VIA JUNGHEINRICH FMS.

### WE MAKE ACCESS MANAGEMENT MORE FLEXIBLE.

You can also maintain full control of your fleet even with high personnel turnover. Thanks to access control, operator authorisations can easily be assigned, managed and tracked in our fleet management system, the Jungheinrich FMS. You are proactively informed of expiring operator authorisations and can evaluate driving applications quickly and easily.

# Fully operational trucks.

Smooth functionality for safe driving.



## PRE-OP CHECK AND CHECKLISTS. FOR MAXIMUM OPERATIONAL READINESS, AT ALL TIMES.

The earlier wear and damage are detected, the longer the life of your trucks and the greater the operational safety at all times. By using functional tests and checklists carried out before the start of a journey, before a change of operator or even after impact events, you can optimise the maintenance of your trucks, ensuring that trucks are fully operational – and stay that way.

## SHOCK MANAGEMENT. CLEAR ALLOCATION OF IMPACT DAMAGE.

Long shifts lead to fatigue and endanger truck operators, warehouse staff and, of course, the trucks themselves if they are no longer being properly controlled. In combination with the shock management module of the Jungheinrich FMS, the shock sensor helps to detect, analyse and prevent improper handling of the truck in the future.



# Professional racking inspection.

Our team handles the statutory inspections.

Your warehouse equipment withstands high loads on a daily basis and should be able to keep adapting to your needs. If your range changes, for example, the loads may also change and as a result the structure. Jungheinrich ensures that you remain flexible while staying safe – with standard-compliant warehouse equipment and annual rack inspections as a guarantee for sustainable productivity. In the event of damage, we recommend that, for legal reasons, you use exclusively original spare parts.

## INSPECTION AS PER DIN EN 15635.

Our accredited rack inspectors have the necessary expertise to conduct qualified professional inspections in accordance with European standard EN 15635. The annual inspections take place during operation so that you remain productive at all times. The inspection sticker documents that you as the operating company have implemented this safety-relevant measures required by the Occupational Health & Safety Act.

### Your benefits:

- ▶ Inspection sticker certifying the inspection.
- ▶ Immediate repair using original spare parts.
- ▶ Increased safety and productivity in the warehouse.

## RAL QUALITY MARK: ENHANCED SAFETY.

As well as meeting legal requirements, Jungheinrich consistently undertakes to guarantee maximum quality and safety standards. We can demonstrate this through the RAL quality mark. It shows that we regularly have our work monitored by an independent institute right from the production of our warehouse equipment. We also operate our own test centre in Norderstedt near Hamburg so that we can put our products through their paces.



Racking Inspection



Your next inspection

Note: The inspection sticker does not replace the full inspection report.

**JUNGHEINRICH**

### How the inspection takes place:



Racking system inspection in accordance with DIN EN 15635 (use and maintenance of warehouse equipment).



Comparison of the load capacity signage with the actual rack structure.



Check of the construction of the racking system in accordance with the assembly drawing (where available).



Visual inspection of uprights and beams for visible deformation and damage, carried out from the warehouse floor.



Test sticker is issued to certify successful inspection.



Test report is provided.



Offers are submitted as necessary for replacement of damaged parts.

# Focusing on personnel.

Safety for truck operators and warehouse personnel.



## COMPREHENSIVE PROTECTION, AT ALL TIMES.

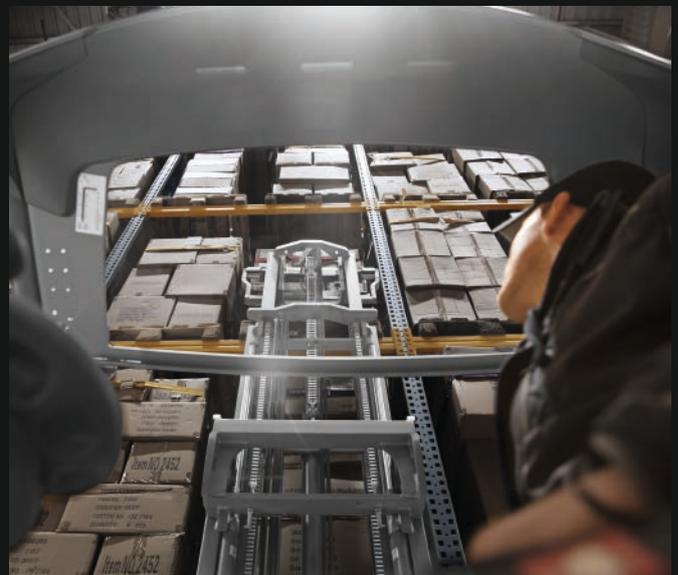
Protecting your employees from accidents is a top priority for us as a family-owned company. We use numerous technologies and assistance systems to ensure that people and industrial trucks are able to cooperate collision-free, even in dynamic environments, and master critical situations with ease. Find out how we actively protect your personnel at work.

# For the best visibility.

Enabling your employees to keep an eye on everything.

## **PANORAMIC OVERHEAD GUARD. FOR AN EXTENDED FIELD OF VISION AND FIRST-CLASS PROTECTION.**

The panoramic overhead guard enables safe, comfortable working even where storage and removal are carried out at great heights. Operators have a complete all-round view while also being safely protected from small parts falling out of the racks. This is ensured by the robust, scratch-resistant polycarbonate window.



## **addedVIEW REVERSING CAMERA. AVOIDS COLLISIONS THANKS TO IMPROVED VISIBILITY.**

Objects or obstacles must be expected behind the truck. Often there is little space available for manoeuvring. Here, operators need a visual assistance system to adequately plan driving manoeuvres.

The addedVIEW Reversing camera provides a high-resolution image of the area behind the truck, thus helping to avoid collisions.

# Safe operation. Anywhere.

zoneCONTROL protects your employees in critical warehouse areas.

Occupational accidents due to high truck density and ever faster processes are a real danger for employees in the warehouse. Many measures are now already in place to protect your personnel due to statutory regulations on occupational health and safety. However, these regulations are often too general to respond efficiently to the specific hazards in your environment. zoneCONTROL enables you to go into much more detail about the critical areas in your warehouse. This makes it possible for every single employee to be protected from hazards – even during periods of peak operation.



# The way is clear for optimum productivity.

Comprehensive zoneCONTROL safety design for a leading natural cosmetics manufacturer.

## CHALLENGES.

The cosmetics manufacturer's main warehouse is a hectic place every day: frenetic loading and unloading at the ramp, while obscured intersections and other critical points posed an increased safety risk for warehouse personnel and operators. The goal was to significantly reduce these hazardous moments. In order to maintain high levels of productivity, only insignificant changes were to be made to work processes.

## SOLUTION.

With a completely individual safety design utilising zoneCONTROL, it was possible to significantly reduce the risk of accidents. Critical zones were precisely defined and then fitted with appropriate measures. Measures taken included acoustic warning signals on the trucks, automatic slow travel mode at especially busy points and the wearing of personnel tags. The feedback has been positive throughout; personnel are noticeably relieved in their workload and able to concentrate 100% on their core tasks once more. The radio-based system is also future-proof, as new components can be added at any time.

## PROJECT IN FIGURES

**5**  
defined zones

**10**  
people per tag

**7**  
trucks in the  
integrated fleet



More details on this successful project can be found **here** on our YouTube channel!

# Automatically safe.

Hazard-free warehouse operation  
in automated environments.

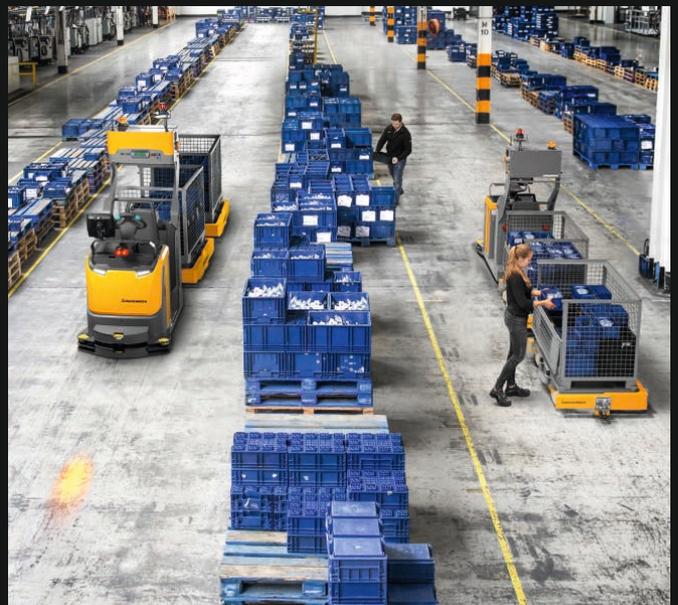
## **360° SAFETY SENSOR TECHNOLOGY. OUR 360° SAFETY CONCEPT FOR MAXIMUM SAFETY IN THE AUTOMATED WAREHOUSE.**

The autonomous mobile robot arculee S creates safe operation in the man-machine environment thanks to its 360° safety sensor technology. The 360° safety concept allows monitoring of the entire truck contour and brings the arculee S to a safe stop in front of people or obstacles.



## **PPS STANDARD / PPS PLUS / PPS ANTI COLLISION. THE PERSONAL PROTECTION SYSTEM FOR ALL APPLICATIONS.**

Modern, large warehouses encompass several zones. Many tasks must be carried out at high speed, with pedestrians and (automated) trucks frequently crossing paths. Collision protection is particularly important here. We work with you to develop a safety layout that identifies potential danger points and helps to mark them.



# The perfect speed.

On the move at an appropriate speed for every situation.

## INDOOR/OUTDOOR SENSOR. ENVIRONMENT-DEPENDENT CHANGE OF PACE.

The indoor/outdoor sensor uses radar to detect whether the truck is in a hall or outdoors. Depending on this, it reduces or increases its maximum speed. In this way, the speed can be automatically set to slow travel in indoor areas where many people and trucks are on the move.



## curveCONTROL. GUARANTEED SAFE CORNERING.

Depending on the load and the steering wheel's angle of lock, curveCONTROL automatically brakes the truck when cornering. This keeps the truck stable, reduces the risk of falling loads and minimises the risk of collision.

## driveCONTROL. SAFE MANOEUVRING, EVEN WITH LOADS.

driveCONTROL automatically controls the truck speed depending on the current lift height. This increases safety when travelling with the pallet raised. The goods are more stable. Warehouse personnel are not endangered by falling loads.



# See and be seen.

Visual aids and identification of the operator.

## **FLOOR-SPOT.** **SPOT ON IN BLIND SPOTS.**

Jungheinrich Floor-Spot warns other trucks and pedestrians in good time that a truck is approaching. For this purpose, a red or blue LED dot is projected onto the ground 5 m in front of or behind the truck, which can also be activated or deactivated with the respective direction of travel.



## **accessCONTROL.** **EFFECTIVE PREVENTION OF UNAUTHORISED ACCESS.**

Every operator must identify himself or herself with a PIN code before the truck can be operated. An additional mechanism ensures that truck operators also observe all aspects of their own safety: only when seat occupancy is detected and the seat belt has been fastened are operating functions enabled.

# Keeps you on your toes.

Optimum protection for feet at all times.

## THREE-SIDED STAND-ON PLATFORM. SMALL TRUCKS, GREAT SAFETY CONCEPT.

Today's trucks should be small, agile and powerful. However, there must be no compromise on safety. The compact ERC 216zi electric stacker truck from the innovative POWERLINE series with integrated lithium-ion battery shows how this is possible. The stable, cushioned stand-on platform is closed on three sides and offers the best foot protection.



## FOOT PROTECTION TILLER. EXACTLY THE RIGHT DISTANCE.

The foot protection tiller ensures that the truck and the operator always maintain sufficient distance, on straight stretches as well as when cornering or driving on ramps.

# Transporting goods with great care.

Solutions for safe storage and removal.

## THESE SYSTEMS MAXIMISE SAFETY.

Maximum precision is required at the moments when goods and merchandise are picked up or set down by the truck. One wrong movement, a few millimetres too much or too little can be critical here – and the packaging or even the contents are damaged, representing a financial risk for you. We support your operators with a range of assistance systems to bring every conceivable item of cargo safely to its destination.



# addedVIEW Fork camera.

Makes goods handling more intelligent and safer.

The **addedVIEW Fork camera** produces a high-contrast, high-resolution image with optimised chiaroscuro techniques, enabling product labels to be read directly from the screen. It is integrated into the fork and thus robustly protected from collision with pallets.

In the version with the **virtual horizontal laser and positioning aid**, the storing and removal process is considerably simplified and also made safer.

The **version with a scanning function** has many additional advantages: the error-prone scanning of goods with the hand scanner is no longer necessary. The fork scan performed by the camera only needs to be confirmed by the operator with the button or directly on the touch screen, and the information is sent to the Jungheinrich WMS and all common WMS systems. This reduces error rates, noticeably improves work ergonomics and increases the process speed.



# Careful handling of goods.

Storing and removal with greater sensitivity.

## **LOWERING SPEED REDUCTION. GENTLE DEPOSITING OF GOODS ON THE FLOOR.**

On the one hand, storage and removal processes should be completed quickly in order to increase efficiency. On the other hand, the goods must not be damaged in the process. Reducing the lowering speed over the final millimetres prevents damage caused by fast, rough depositing of goods on the floor. Your goods remain intact – and nor do the forks suffer any damage.

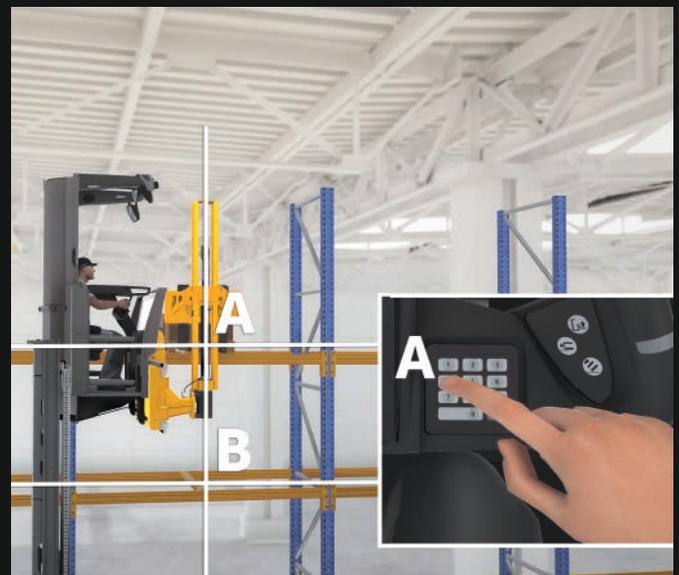


# Full control over height and load.

With these assistance systems, every work cycle automatically becomes safer.

## **positionCONTROL.** **CONVENIENT PRESELECTION OF LIFT HEIGHTS.**

Do you manually control the correct rack height on every work cycle? This can be tiring and therefore also hazardous in the long run. Imprecise control can cause damage to goods, forks or even people as a result of falling loads. The automatic lift height selection makes work easier and ensures greater efficiency due to faster workflows.

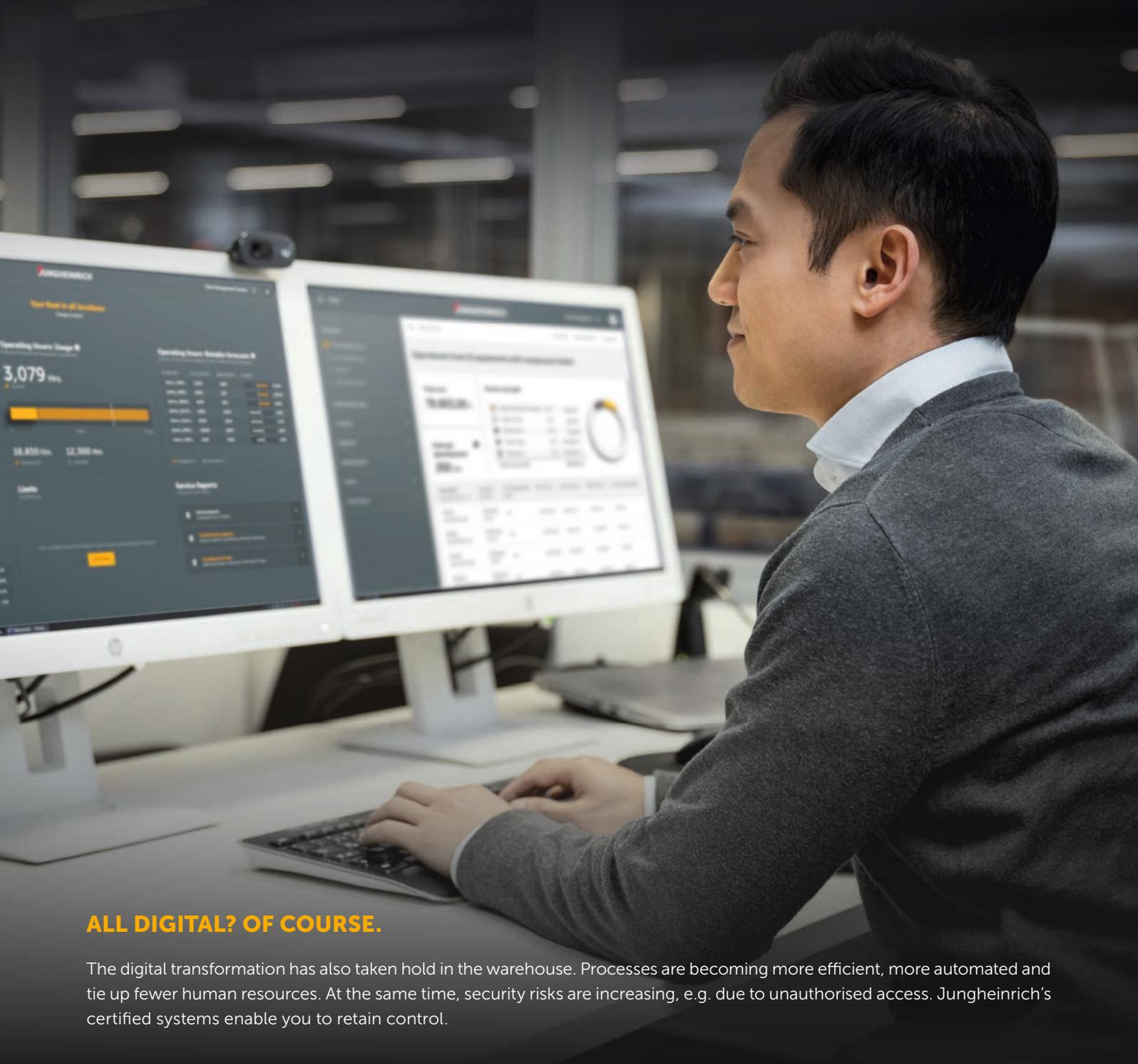


## **operationCONTROL.** **CAPACITY SAFELY CONTROLLED.**

You want to make your processes efficient, transporting as many goods as possible per trip. However, ultimately, overloading your trucks is ultimately inefficient and dangerous. For example, you risk the truck tipping over. With operationCONTROL, the load weight and the lift height are recorded. If the maximum capacity is exceeded, a warning signal sounds. This ensures that trucks and warehouse personnel are protected.

# Maximum safety for man and machine.

Digital solutions for cross-site fleet control.



## ALL DIGITAL? OF COURSE.

The digital transformation has also taken hold in the warehouse. Processes are becoming more efficient, more automated and tie up fewer human resources. At the same time, security risks are increasing, e.g. due to unauthorised access. Jungheinrich's certified systems enable you to retain control.

# Comprehensive fleet management.

Safe. Efficient. Customisable.

The Jungheinrich FMS fleet management system is the digital solution for efficient and cross-site management and optimisation of your truck fleet. The web-based tool combines truck data and commercial data in a single system, providing comprehensive analyses to serve as an ideal basis for making important business decisions.

Thanks to intelligent access control, reporting of impact events as well as cost and productivity data, you can use the Jungheinrich FMS to increase the utilisation of your fleet, reduce operating costs and enhance safety levels for both man and machine. All you need to do is decide which modules to include in your solution.

## THE KEY BENEFITS INCLUDE:

- ▶ Future-proof, scalable IoT platform that helps to continuously optimise the economical use of trucks.
- ▶ High security of your data and IT thanks to state-of-the-art encryption standards in compliance with statutory regulations (EU GDPR).
- ▶ Central management of all locations thanks to intuitive, cloud-based user interface.
- ▶ Full control over access authorisation to every single truck in your fleet, thereby protecting against unauthorised use.
- ▶ Immediate notification of impact events to boost safety.
- ▶ Individually configurable, situation-appropriate truck responses, e.g. slow travel.
- ▶ Hierarchical rights and roles concept for centralised or decentralised control of the fleet.



DEPARTURE CONTROL



ACCESS CONTROL



SHOCK MANAGEMENT



PRE-OP CHECK



# Enhance the safety of your fleet.

## Modular solutions for access management and damage reports.

### ACCESS BUNDLE.

The Access Bundle comprises two modules: Access control and departure control. Access control is the intelligent alternative to the universal truck key. It ensures that only authorised persons use the respective truck. Departure control checks the condition of the truck before departure and helps with predictive maintenance.

- ▶ Simple assignment and management of operator authorisations for individual trucks or groups of trucks.
- ▶ Proactive information regarding expiring operator authorisations.
- ▶ Evaluation of driving applications.
- ▶ Enhanced safety in the warehouse thanks to early detection of damage to trucks.
- ▶ Opportunity for the operator to inspect the industrial truck prior to commissioning.
- ▶ Documentation of the inspection with export function to Excel.
- ▶ Reduction of repair costs through early detection of wear.

### SAFETY BUNDLE (INCLUDES ACCESS BUNDLE).

In addition to access control, this bundle contains the shock management and Pre-op Check modules. The first records any excessive force on the truck and contributes to the seamless documentation of damage, and the second checks the truck safety before departure.

- ▶ Maximum transparency thanks to the overview of all current impacts within the last 24 hours directly on the dashboard.
- ▶ Notification of moderate or severe impact events in Fleet Management.
- ▶ Enhanced safety due, for example, to automatic triggering of slow travel or shutdown following an impact event.
- ▶ Individual checklists for truck inspection prior to departure: check of all safety-relevant parameters (e.g. tyre tread).
- ▶ Pre-configured impact parameters for each truck type with optional customisation.
- ▶ Analysis and filtering of all impact events over an individual time period.

**VIEW AND VISIBILITY:  
SEE AND BE SEEN.**

<b>addedVIEW Reversing camera</b>	Digital rear view camera that reliably shows the user the area behind the industrial truck on the assistance display at all times. For safe and precise reversing.
<b>Camera with person detection</b>	Intelligent camera system that distinguishes people from other obstacles in real time. For accident-free forward and reverse travel.
<b>Reverse area warning system</b>	Optical and acoustic warning signal that varies in intensity and volume depending on the distance from the object. For safe manoeuvring in the warehouse.
<b>addedVIEW 360° camera system</b>	360° all-round visibility is made possible with the aid of four digital cameras. For safe and precise manoeuvring in the warehouse.
<b>addedVIEW Fork camera</b>	Digital camera that reliably shows the position of the forks on the assistance display at all times. For safe and efficient goods handling, even at high stacking heights.
<b>Horizontal laser in fork tip</b>	A horizontal laser integrated into the fork tip that projects a guide line onto the pallet or rack. For accident-free storing and removal.
<b>Laser on fork carrier</b>	Cross laser mounted on the fork carrier for precise positioning of goods. For safe and efficient storage.
<b>Panoramic overhead guard</b>	Scratch-resistant window for a full field of vision without distracting struts. For a perfect view and first-class protection.
<b>Side/rear-view mirrors</b>	Mirrors for monitoring the area behind the truck and for detecting persons or objects in the truck environment. For safer manoeuvring.
<b>Panoramic mirror</b>	Convex mirror displaying the area to the rear of the operator when in motion. For accident-free reverse travel.
<b>Working lights</b>	LED spotlights with maximum luminosity and energy efficiency, which illuminate the work area with state-of-the-art lighting technology. For the best view of the work processes.
<b>Warning zone lights</b>	Warning zone lights such as Floor-Spot or Floor-Stripe offer the opportunity to project illuminated markings onto the floor. The markings indicate potential sources of danger even from far away. For maximum visibility in obscured warehouse areas.
<b>Flashing/beacon light</b>	Optical warning on the truck with the aid of a strobe light or beacon. For maximum visibility from a long distance.
<b>DayLED daytime running lights</b>	Optical signal of an approaching truck in the form of continuous lighting in the direction of travel. For maximum visibility in dark warehouse areas.

## STORAGE AND RETRIEVAL: SAFE AND EFFICIENT STACKING OPERATIONS IN THE RACKING.

<b>positionCONTROL</b>	Automatic approach to the next racking support at exactly the right lift height, programmable according to customer requirements. For precise and fast storage at the desired lift height.
<b>liftCONTROL</b>	Reduction of the mast tilt speed from an individually defined lift height. For safe load handling at high lift heights.
<b>reachCONTROL</b>	Optimisation of reach and mast tilt speed depending on load weight and lift height. For a high level of safety at optimised reach speeds.
<b>operationCONTROL</b>	Recording of the load weight and the lift height and an automatic check of the residual capacity. For timely warning of overload during storage.
<b>Lift height restriction</b>	Limitation of and display of the maximum possible lift height. For more protection of the infrastructure in the warehouse.
<b>Lowering speed reduction</b>	Automatic reduction of the lowering speed over the last millimetres when depositing on the ground. For safe handling of the goods and prevention of damage to the goods.
<b>Protective mesh cover on overhead guard</b>	Wire mesh on the roof struts that prevents injury to the operator. For increased protection of the truck operator from falling parts.
<b>360° safety sensor technology</b>	Comprehensive scanner system for all-round personal protection in shared areas. For increased safety in automated transport.
<b>Obstacle detection scanner</b>	Additional scanner for detecting objects above and partly below the scanning level of the personal protection scanner. For improved machinery protection.
<b>driveCONTROL</b>	Automatic travel speed adjustment depending on the current lift height. For safe, controlled manoeuvring with raised pallet.
<b>curveCONTROL</b>	Automatic speed reduction when cornering. For safe and controlled cornering.
<b>Indoor/outdoor sensor</b>	Radar sensor on the cabin overhead guard which identifies whether the truck is indoors or outdoors. For safe travel adapted to local conditions.
<b>Foot protection tiller</b>	Automatic adjustment of the travel speed depending on the tiller angle. For safe, easy manoeuvring with the tiller raised.

## TRANSPORT: SAFE INTERNAL TRANSPORT OF GOODS.

<b>Automatic speed reduction</b>	Automatic reduction of travel speed from a defined lift height. For safe travel with raised forks.
<b>tiltCONTROL</b>	Automatic backward tilt of the mast as soon as the load weight reaches approximately one third of the rated capacity. For safe and controlled load handling.
<b>Magnetic rubber fork covers</b>	Stable transport of goods with sensitive surfaces. For the reliable and careful transport of goods.
<b>Lowering lock during travel</b>	Locking of the lift and lower function during travel. For the safe transport of goods.
<b>Limit switch system</b>	Sensor on the mast that prevents forks from becoming caught on the support arms. For the protection of the forks.
<b>Shock sensor</b>	Acoustic sensor that registers an impact when a set threshold is exceeded. For reduction of impact damage.
<b>zoneCONTROL</b>	Modular, flexible assistance system with automatic acoustic and visual warnings of trucks and personnel. For situation-specific mitigation of risks in the warehouse.
<b>Acoustic warning signals</b>	Acoustic warning signal that is activated depending on the travel direction. For improved awareness during reverse travel.
<b>Collision warning system</b>	An optical and audible early warning system for people, whether driving or on foot. Use at blind spots and intersections.
<b>Load guard</b>	Bracing on the fork carrier or on the truck structure. For improved stability of goods.
<b>Foot protection sensor</b>	Laser barrier that brings the truck to a standstill as soon as a foot/leg protrudes beyond the truck contour. For travelling safely while on the stand-on platform.
<b>Electric door monitoring</b>	Truck can only be moved when the cabin door is closed. For improved safety during frequent entry and exit.
<b>EasyAccess</b>	Release of the truck must be via input of a code or use of a transponder. For greater control over the use of the fleet.
<b>accessCONTROL</b>	Travel is only enabled once the seat belt has been fastened. For reliable protection against unsecured truck use.

## NARROW-AISLE OPERATION: SAFETY IN VERY CONFINED SPACES.

<b>Electrical locking of the side gates</b>	Electrical locking of the side gate as soon as the platform is raised. For employee safety when order picking at upper levels.
<b>Speed reduction via transponder</b>	Travel speed profiles optimised to the floor topology. For simple and safe control of the trucks in defined areas.
<b>Floor Pro</b>	Vibration absorber that compensates on the attachment handler, enabling up to 33 percent greater travel speed in narrow aisles. For safe and fast travel, including on uneven surfaces.
<b>PPS Anti Collision</b>	Integrated personal and collision protection system that detects obstacles by means of a laser scanner. For maximum safety in narrow aisles with high levels of activity.
<b>PPS Standard / PPS Plus</b>	Integrated personal protection system. For maximum safety in narrow aisles.

## FLEET MANAGEMENT: SAFETY FOR YOUR FLEET.

<b>Jungheinrich FMS</b>	Digital solution for cross-location management of the truck fleet. For improved transparency and maximum efficiency.
<b>Shock management module</b>	Triggering of slow travel or shutdown following an impact, individually configurable and with notification in case of medium or severe impact events in fleet management. For maximum transparency of the fleet status and maximum safety.
<b>Access control module</b>	Regulation of truck access per employee, per group of truck operators or according to areas or departments. For the sustainable containment of warehouse accidents.
<b>Pre-op Check module</b>	Checking the truck's condition prior to starting a journey using individual checklists, at defined intervals or after an impact event. For improved operator safety and maximum operational readiness of the fleet.

## WAREHOUSE MANAGEMENT: SECURITY FOR YOUR DATA AND PROCESSES.

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<b>Jungheinrich WMS</b>	Intuitive software solution for holistic management, control and optimisation of the warehouse. For sustainably efficient warehouse processes.
<b>warehouseNAVIGATION</b>	Direct transfer of the destination position from the Warehouse Management System (WMS) to the truck control system. For added process reliability and fewer errors during order processing.
<b>liftNAVIGATION</b>	Automatic lift height selection with connection to the Warehouse Management System (WMS). For added process reliability and fewer errors during order processing.
<b>driveNAVIGATION</b>	Information system that transmits the next pick position from the Warehouse Management System (WMS) to the truck control system; the approach to the destination location is automatic. For added process reliability and fewer errors during order processing.

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## SERVICES: GUARANTEED AVAILABILITY OF YOUR TRUCKS, SYSTEMS AND WAREHOUSE EQUIPMENT.

<b>Jungheinrich Full Service</b>	A full-service contract individually tailored to your needs, with regular inspections and maintenance intervals. For early detection and reduction of wear and minimisation of repairs and downtime.
<b>Forklift repair service</b>	Efficient spare parts logistics with overnight delivery of original spare parts directly to the after-sales service van. Shorter downtimes thanks to fast communication channels and response times.
<b>Safety service</b>	The basic package with all legally required checks. For reliable service, controlled quality and maximum performance.
<b>Maintenance service</b>	Inspections and maintenance at regular intervals. For early detection and reduction of wear and long-term operational readiness of your trucks and systems.
<b>Hydraulic oil service</b>	Professional and sustainable handling by Jungheinrich oil service experts. For worry-free compliance with all environmental regulations.
<b>Battery service</b>	Battery service to avoid repairs and downtime. For early detection and reduction of wear and high-performance batteries at all times.
<b>Charger service</b>	Charger service to ensure compliance with all regulations and inspection deadlines. For chargers that perform well at all times.
<b>Tyre service</b>	Tyre service with time-saving tyre change directly on site. Maximum safety and efficiency thanks to Jungheinrich wheels and rollers.
<b>Jungheinrich powerSCAN</b>	Check-up service to evaluate battery usage as well as software updates and visual checks on the condition of the battery. For batteries with long life and full performance.
<b>SAFEwalk</b>	Comprehensive risk assessment based on a standardised checklist, carried out by specially trained Jungheinrich employees. For increased safety in the entire warehouse environment.
<b>Racking inspection</b>	Qualified inspection by in-house, association-certified racking inspectors during ongoing operation. For flawless warehouse equipment without the risk of accidents.
<b>Jungheinrich training</b>	Qualified, needs-based training in compliance with all ordinances and regulations. For expert, reliable handling of trucks and storage equipment.

# A leader in intralogistics. There for you across the globe.



● Our own direct sales  
companies in  
42 countries.

○ Partner companies  
in more than 70 other  
countries.

More than 19,000  
employees.

More than 6,000 service  
engineers worldwide.

Founded in 1953, Jungheinrich is one of the world's leading providers of intralogistics solutions. With a comprehensive portfolio of industrial trucks, automated systems and warehouse equipment and services, we offer tailor-made solutions that allow you to devote your full attention to your core business. With our unique direct sales and service network, you can call upon a reliable partner who is at your side at all times, wherever you may be in the world.



### **AUTOMATED SYSTEMS**

Based on our comprehensive process knowledge and extensive experience in a wide range of industries, we can provide you with tailor-made automated systems, ranging from semi to fully automated solutions. We will thus work together to raise your efficiency and productivity to a whole new level.



### **NEW TRUCKS**

Lifting, stacking, transporting, order picking – electrically, by combustion engine or by hand? Our product portfolio contains the perfect trucks for your needs.



### **WAREHOUSE EQUIPMENT**

From pallet racking to automated small parts warehouses, we have the right solution for every item and warehouses of all sizes. Combined with Jungheinrich industrial trucks and IT solutions, the result is a future-proof, integrated intralogistics concept of unique quality.



### **RENTAL**

Forklift truck rental is not just an ideal solution for addressing short-term or seasonal requirements. Jungheinrich offers "power on demand" for all companies, regardless of their size or industry. There are rental solutions available to suit all requirements, with trucks available instantly in a wide number of variants across the globe.



### **USED TRUCKS**

JUNGSTARS are used trucks from Jungheinrich, which are among the best on the market. With high-end reconditioning according to our 5-star principle, every truck is returned to an outstanding technical and visual condition to satisfy the highest safety and sustainability standards.



### **DIGITAL SOLUTIONS**

With intelligent software and sophisticated hardware components, we ensure complete digital networking within your warehouse. All processes can be monitored centrally and controlled with utmost efficiency. Systems from different manufacturers can also be integrated with ease.



### **CONSULTING**

Products and services must meet your exact requirements. That is why our consulting service combines a high level of technical ability with process knowledge and in-depth industry expertise. We can thus work together to identify the perfect complete solution.



### **FINANCING**

Jungheinrich Financial Services is your reliable partner throughout the entire life cycle of your Jungheinrich product. We offer individual solutions for trucks, racking, warehousing and system solutions, while taking your budget and the special requirements of your business into account.



### **AFTER SALES**

The trouble-free operation of your intralogistics solution is our top priority. That is why we offer reliable, global support for your trucks and systems with more than 6,000 qualified service engineers. This allows us to be on-site within a very short time frame to restore the availability of your trucks and systems.

**ISO 9001** The German production facilities  
**ISO 14001** in Norderstedt, Moosburg  
and Landsberg are certified.

 Jungheinrich trucks  
conform to the European  
Safety Requirements.

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