

INTRO HIGHLIGHTS	
Electric reach trucks. Compact experts for tight storage spaces.	03
NEXT-GENERATION OF LITHIUM-ION MODELS ETV SERIES 2i	
Compact intelligence using lithium power.	04-05
ETV SERIES 3i	
Powerful performance for heavy-duty tasks.	06-07
CLASSIC MODELS ETV / ETM SERIES 2	
Compact power for narrow aisles.	08-09
ETV / ETM SERIES 3	
Impressive heights with heavy loads.	10-11
MULTI-DIRECTIONAL SPECIALIST FOR LONG LOADS ETV SERIES Q	
Specialising in long loads in confined spaces.	12–13
INDOOR / OUTDOOR MODELS ETV SERIES C	
Reliable indoors. Effortless outdoors.	14-15
ENHANCEMENTS FOR GREATER SAFETY AND EFFICIENCY ASSISTANCE SYSTEMS AND PERFORMANCE PACKAGES	
Tailor-made for everyday warehouse operations – safer, faster, smarter.	16-17
E-MOBILITY LITHIUM-ION TECHNOLOGY	
For more power and fast charging times.	18-19
BEST PRACTICE	
The new standard in the lithium-ion family. Includes case study.	20-21
ADDITIONAL INFORMATION	
JUNGHEINRICH FACTS	
Leading provider of complete solutions in material handling: information on products, systems, services.	22–23

Electric reach trucks.

Compact experts for tight storage spaces.

and high availability.

Compact design. Agile manoeuvring in Impressive lift heights. narrow warehouse aisles, Storage heights of up to 14,000 mm. ensuring optimal use of Even vertical storage space space in the warehouse. can be optimally utilised. Optimum visibility of load and rack. The strut roof offers good upwards visibility. The panoramic glass roof offers an unrestricted view, for maximum control, efficiency and comfort. **High speed.**Optimised acceleration values and increased lift and reach speeds improve throughput. **Ergonomic workplace** Lithium-ion technology. Generous space for the operator with easy entry and exit and heightelectromobility in material adjustable seat. Key functions can be handling with our powerful operated without changing grip. battery solution. Achieving

A compact design combined with safe access to higher storage levels and optimal energy efficiency: this is the secret to the success of the Jungheinrich electric reach truck. These three pillars enable maximum performance in the smallest of spaces. For decades, we have been shaping the market with our technological innovations: we were pioneers in lithium-ion technology in the warehouse and have continued to optimise our trucks, adding numerous equipment options for every need and application scenario.

ETV 214i/216i.

The new dimension in cost efficiency.

Your entry to high-performance lithium-ion technology: the compact design of our series 2i ensures optimum manoeuvrability and space utilisation. Notably, the battery compartment is now significantly smaller compared to preceding models. With a capacity of 1.4 t and 1.6 t respectively, both models excel in productivity. They also offer the perfect triad of energy efficiency, ergonomics and future-oriented safety. The futuristic design with its innovative lighting concept is particularly striking:

- ▶ An ergonomic workplace with extremely low entry and exit height.
- ▶ Premium quality at a highly attractive purchase price.
- ▶ The option of an even more compact S battery compartment.
- ► Height-adjustable pneumatic suspension seat for smaller operators.
- ▶ Optimal visibility thanks to the panoramic overhead guard, available in a transparent or tinted design.
- Optional step-off warning by monitoring the seat position: warning signal when stepping down from a moving truck.
- ▶ Option to expand the battery capacity with a second battery module.



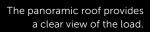
Ergonomically designed: the low step height facilitates frequent entry and exit.



Everything is perfectly organised thanks to numerous storage options.



The SmartStripe LED light strip ensures better visibility in the warehouse.







The standard comfort charging socket of the series 2i enables fast booster charging, resulting in continuous availability.

SERIES	ETV 214i	ETV 216i
Capacity / load in kg	1,400	1,600
Lift height (max.) in mm	10,070	10,070
Travel speed without load in km/h	11	11
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,775	2,780
Lift speed without load in m/s	0.68	0.68

The panoramic glass roof allows for an unrestricted view of the load, ensuring more precise, safe and efficient stacking and manoeuvring.



The optional lowering PRO technology ensures up to 10 % more throughput with a particularly smooth mast transition and the highest lowering speed in the market (up to 1.2 m/s).





An integrated Floor-Spot provides a visual warning in the travel direction, supplemented by proven Jungheinrich assistance systems such as curveCONTROL and driveCONTROL.

SERIES	ETV 314i	ETV 316i	ETV 318i	ETV 320i	ETV 325i
Capacity / load in kg	1,400	1,600	1,800	2,000	2,500
Lift height (max.) in mm	10,070	10,070	12,530	14,000	14,000
Travel speed without load in km/h	14	14	14	14	14
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,786	2,790	2,790	2,794	2,883
Lift speed without load in m/s	0.81	0.81	0.64	0.64	0.64

ETV 314i-325i

A revolution in performance and comfort.

The perfect solution if low cost of ownership is your goal: the series 3i offers maximum performance and energy efficiency with high load capacities between 1.4 and 2.5 t, depending on the model. The compact design guarantees optimal use of your storage space and high manoeuvrability during operation. Battery capacity can be increased without modifying the battery compartment by adding additional modules. With the lowering PRO option, the lowering speed can be doubled, resulting in significantly faster operations:

- ► Top performance in the warehouse, customised to your requirements.
- ▶ Height-adjustable pneumatic suspension seat for operators.
- ▶ Optimal visibility thanks to the panoramic overhead guard, available in a transparent or tinted design.
- ▶ Optional step-off warning by monitoring the seat position: warning signal when stepping down from a moving truck.
- ▶ Option to expand battery capacity using additional battery modules.
- ▶ Optimisation of lowering speed and goods throughput with the lowering PRO option.
- ▶ Additional productivity increase thanks to the reachPRO option with the fastest reach speeds.



Engineered for comfort: the low entry height with optional step tread ensures easy entry and exit – even with frequent operator changes.

ETV 210-216 and ETM 214/216.

The space-saving all-rounders for significant efficiency gains.

The agile series 2 reach trucks enable maximum performance with minimal energy consumption. The compact design makes them the first choice for narrow aisle widths. With travel speeds of up to 14 km/h, these trucks accelerate your processes. The trucks are suitable for almost all types of warehouse, including live storage racking, pallet racking, drive-in racking and block storage. For the latter two types, the narrower ETM version is recommended. The models also score highly in terms of ergonomics: the entry area is comfortable, providing maximum legroom and a large, clear display for the operator. The trucks offer additional options such as maximum curve stability (curveCONTROL) and reduced mast movement. In summary, we offer the perfect universal solution for enhancing warehouse throughput and achieving efficiency gains rapidly across all transport and storage tasks:

- ► Compact design for narrow aisle widths.
- ▶ High residual capacities for increased throughput.
- ▶ Powerful mast for maximising space utilisation at great heights.
- ▶ Lithium-ion batteries provide maximum availability due to short charging times.
- ▶ loweringPRO option for up to twice the lowering speed.
- ► Ample space and comfort, even for tall operators.
- ► Tailor-made equipment options for every application.



loweringPRO. Maximum performance by doubling the lowering speed to up to 1.2 m/s.*



Panoramic glass roof for optimal visibility and protection from falling small parts.

^{*} This option is available for the ETV 214 and ETV 216.

A powerful mast allows for optimal use of vertical space.
Additionally, high residual capacities help to achieve the full potential of any warehouse.

The integrated fork positioner facilitates the safe handling of diverse load carriers.







The compact dimensions of the series 2 are ideal for narrow working aisles, enabling highly efficient use of space.

SERIES	ETV 210	ETV 212	ETM 214	ETV 214	ETM 216	ETV 216
Capacity / load in kg	1,000	1,200	1,400	1,400	1,600	1,600
Lift height (max.) in mm	7,400	7,400	9,020	10,700	9,020	10,700
Travel speed without load in km/h	11	11	11 / 14	11 / 14	11 / 14	11 / 14
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,686	2,689	2,757	2,694	2,762	2,753
Lift speed without load in m/s	0.48	0.43	0.7	0.7	0.7	0.7



The robust construction of the series 3 trucks ensures the safe storing and removal of heavy loads at significant heights.

Even in narrow working aisles, the ETV series 3 can lift loads up to 14 m.





Optimal visibility and protection are always assured by the panoramic glass roof.

SERIES	ETV 318	ETV 320	ETM 325	ETV 325
Capacity / load in kg	1,800	2,000	2,500	2,500
Lift height (max.) in mm	11,510	14,000	11,510	13,000
Travel speed without load in km/h	11-14	11-14	14	14
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,790	2,794	3,031	2,883
Lift speed without load in m/s	0.64	0.64	0.64	0.64

ETV 318-325 and ETM 325.

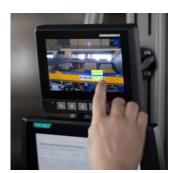
Making heavy loads go high.

The powerful series 3 reach trucks impress with their durable chassis and extremely stable mast. They effortlessly lift loads to lift heights of up to 14,000 mm, with minimal mast sway thanks to optional active mast transition cushioning. While the ETV can accommodate Euro pallets between the support arms, the ETM provides advantages for drive-in racking and block storage due to its narrower design. With all models, you can achieve improved throughput while optimising energy consumption. Advanced lithium-ion batteries (optional) with a long lifespan, quick booster charging and maintenance-free operation guarantee sustained performance. Equipment options like the panoramic overhead guard and addedVIEW Fork camera provide maximum control at high lift heights, rounding off the perfect package:

- ► Extremely stable construction ensures high residual capacities and a prolonged lifespan in demanding conditions.
- ► Electric load wheel brakes for enhanced safety.
- ▶ 180° and 360° steering enables flexible manoeuvring.
- ▶ loweringPRO option for up to twice the lowering speed.
- ► Spacious, ergonomic workplace.
- ► Tailor-made equipment options for every application.



One-handed control of all functions thanks to multiPILOT.



The fork camera allows for safe and rapid storing and removal even at great heights.

ETV Q20/Q25.

The leaders in long goods transport.

Long cargo combined with narrow storage aisles and large lift heights presents a challenging combination! The agile, yet precise, ETV Q multi-directional reach trucks are the perfect solution to overcome this challenge. They can transport loads of 8 m in length and lift them up to 10,700 mm, even in the tightest spaces. The electronic all-wheel steering allows for a minimal turning radius and rapid changes of direction. Operators can choose between different steering modes, such as modified normal travel, turning on the spot, or transverse and parallel travel. A simple tap on the control panel is sufficient – the forklift trucks will then operate in the desired mode. Maximum directional stability is achieved because all three wheels can be moved independently. The optional panoramic glass roof provides a clear view upwards when lifting the load, and an optional fork positioner allows the forks to be adapted to the load width, ensuring long loads can be safely transported on the forks. The package is made even more appealing with high energy efficiency and the option of powerful, maintenance-free lithium-ion technology:

- ▶ Electronic all-wheel steering for confident manoeuvring in tight spaces.
- ► Travel direction display and simple program selection make for light work.
- ▶ High steering precision for the safe transport of long loads in narrow aisles.
- ► Effortless handling with a soloPILOT or multiPILOT control lever.
- ▶ Different fork positioners enable adaptation to the cargo.
- ▶ Additional assistance systems and options.



The ETV Q has steerable and brakeable load wheels for safer manoeuvring in transverse travel.



Clear display with travel direction display for the five different steering modes.

Various fork positioners enable the handling of loads with different dimensions.





The ETV Q enables the transport of long loads even in narrow working aisles.



Safe manoeuvring is possible even during transverse travel.

SERIES	ETV Q20	ETV Q25
Capacity / load in kg	2,000	2,500
Lift height (max.) in mm	10,700	10,700
Travel speed without load in km/h	14	14
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,792	2,872
Lift speed without load in m/s	0.64	0.64



The ETV C16/C20 is suitable for both indoor and outdoor use.





Thanks to the operator's cabin, deployment is possible even in adverse weather conditions.

The super-elastic tyres facilitate driving on uneven surfaces.

SERIES	ETV C16	ETV C20
Capacity / load in kg	1,600	2,000
Lift height (max.) in mm	7,100	7,400
Travel speed without load in km/h	12.5	12.5
Aisle width in mm (pallet 800 x 1,200 lengthwise)	2,829	2,871
Lift speed without load in m/s	0.7	0.6

ETV C16/C20.

Operates at full capacity, both indoors and outdoors.

Like having two forklift trucks in one: the flexible series C reach trucks are equally at home both in the warehouse and in the yard. In the storage area, they can reach rack heights of up to 7,400 mm. Outdoors, they excel with their confident manoeuvring on uneven asphalt, for example when loading and unloading lorries. The super-elastic tyres cushion rough transitions between indoor and outdoor areas effectively, ensuring a relaxed driving experience and safe transportation of the load. Ergonomically arranged displays and controls plus excellent mast visibility provide operators with full control at all times. For frequent outdoor use, the operator's cabin is available as an option. With powerful, maintenance-free lithium-ion technology, the series C also performs excellently in multi-shift operation. Short booster charging times ensure the high availability of the trucks:

- ▶ Optimised for combined indoor and outdoor use.
- ▶ High ground clearance for safe travel on uneven surfaces.
- ► Comfortable transverse seating position for perfect visibility.
- ▶ Precise operation using the soloPILOT or multiPILOT control lever.
- curveCONTROL for maximum driving safety.
- ► A variety of assistance systems.
- Optional: operator's cabin for outdoor use.



The high ground clearance guarantees comfortable travel even over thresholds without bottoming out.



The high-quality tyres leave no marks or stains on the floor.

Assistance systems and performance packages.

Adapt your forklift trucks to your requirements.

Technological innovation based on requirements – that is what you can expect from Jungheinrich. With our extensive range of assistance systems and additional service packages, you can achieve greater performance, improved ergonomics and maximum safety for humans, machines and your warehouse equipment. Choose which features respond best to your challenges!



EASE OF USE

soloPILOT

Millimetre precision through sensitive control of all functions: Hydraulic functions can be effortlessly selected and the travel direction determined using the control lever. Optimal control of additional attachments such as a fork positioner.

multiPILOT

Ergonomic, intuitively operated joystick variant that is pulled back to lift and pushed forward to lower. Two hydraulic movements can also be performed simultaneously, for example lifting and extending the mast. This enables faster, more efficient operation.



PROCESS STABILITY

addedVIEW Fork camera

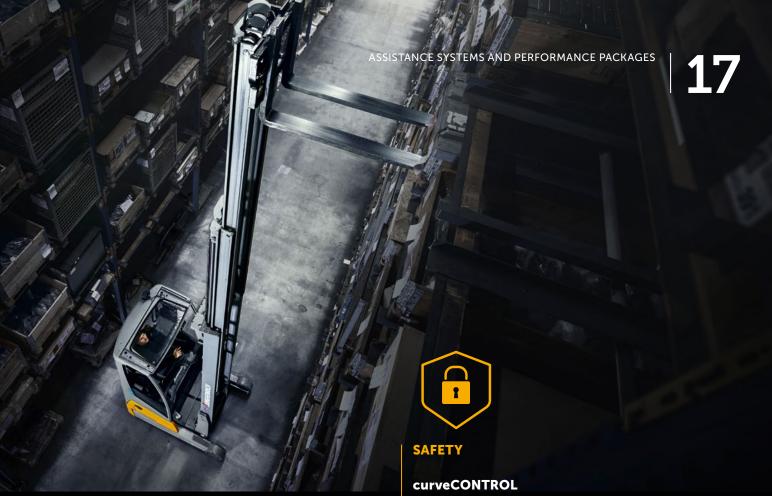
The digital camera reliably displays the position of the forks on the assistance display at all times. The optional virtual horizontal laser with positioning aid supports storing and removal even at high lift heights. Additional option: barcode scanning with connection to a warehouse management system for secure processes.

liftNAVIGATION

Automatic lift height selection with connection to the warehouse management system (WMS). Data stored in the WMS transmits the target lift height, and the truck automatically takes over the fine positioning. For added process reliability and fewer errors during order processing.

position CONTROL

The programmable lift height selection for quick and easy stacking and retrieval. The SNAP function allows the operator to automatically stop at the next rack level with a simple gesture.





PERFORMANCE

drivePLUS

For top operator performance with minimised energy consumption. Perfect for frequent long-distance driving.

liftPLUS

For operations at high lift heights: lift speeds are increased, enhancing productivity.

drive&liftPLUS

For operations with long travel distances and high lift heights. Maximum performance with high residual capacity.

loweringPRO

The lowering PRO assistance system enables maximum performance by doubling the lowering speed to up to 1.2 m/s. This represents a 2 % increase in pallet throughput. The smooth mast transition ensures goods can be raised and lowered with the utmost safety (optional).

reachCONTROL

Depending on the load weight and lift height, our reach CONTROL assistance system automatically adjusts the reach truck's reach and tilt speeds. This ensures safe and efficient handling and reduces time spent by up to 1 or 2 %.

The travel speed is automatically reduced while cornering, based on the current steering angle and loading situation. This way, your operators can navigate every curve with confidence.

driveCONTROL

Automatic travel speed adjustment depending on the current lift height. For safe, controlled manoeuvring with raised pallet.

EasyAccess

Access control by entering an access code (softkey) on the display, using a PinCode or via a transponder. Only then is the truck enabled. This prevents unauthorised operators. Function available even without a fleet management system.

operationCONTROL

The operationCONTROL assistance system records the current load weight and lift height and issues a warning signal as soon as the residual capacity of the truck is exceeded. After the pallet has been picked up, the maximum lift height for this weight is displayed, so the operator knows whether the pallet can be lifted into the desired pallet space. This prevents the forklift trucks from tipping, ensuring swift operation with enhanced safety.

zoneCONTROL

By zoning the warehouse, zoneCONTROL recognises all critical areas on site and monitors them with centimetre precision. The system responds to the specific situation: it alerts the operating personnel, warns the surrounding area or, if necessary, intervenes in the truck control. This, for example, prevents collisions and guarantees safe movement in the warehouse.

Lithium-ion technology.

Uncompromising top performance.

As material handling pioneer, we focus on innovative technologies to inspire our customers, streamline processes and create an optimal working environment for operators.

Over 70 years ago, we launched the first electric trucks, marking the start of a real success story. More than a decade ago we began a new era, with the introduction of our first lithium-ion models. These extremely powerful trucks combined excellent energy efficiency with easy maintenance, eliminating the need for battery changes. This was a major breakthrough, and we have continued to build on it — with ongoing improvements, an expanding portfolio for every application, and innovation that never ceases to impress.

Looking to the future also means focusing on recycling. We take back old batteries, giving them a second or even third life before returning up to 95% of the materials to the recycling loop.

INNOVATIVE SOLUTIONS THROUGH EXPERTISE

- ► Always at the forefront of technology thanks to in-house research, development and production.
- ► Fully integrated system connecting truck, battery and charging technology.
- Extensive expertise to deliver the ideal solution, from planning to implementation.
- Wide range of applications supported by a refined portfolio.

ENERGY EFFICIENCY MEETS DURABILITY

- Exceptional performance thanks to high voltage stability.
- ▶ 30% more efficient than lead-acid batteries.
- ► Fast charging and top-up charging for maximum availability.
- ▶ Up to 3 times longer lifespan than lead-acid batteries.
- ▶ Up to 20% lower CO₂ emissions compared to lead-acid batteries.
- ► Virtually maintenance-free, with no need for battery replacement.
- ► Safe, with advanced lithium iron phosphate cell chemistry.
- ► Environmentally friendly, with very low fire risk.
- ► The in-house battery management system protects against overcharging overheating, and voltage imbalances.





On course for growth with Jungheinrich.

Danish discount retailer relies on partner Jungheinrich.

CHALLENGE.

The Danish retail chain NORMAL has grown significantly in recent years. The discounter is increasingly popular, particularly in northern European countries. The pallet spaces in the newly built central warehouse total 100,000; this means more orders need to be processed in less time. Material handling also now demands powerful and even more efficient solutions. The constant readiness of forklift trucks is essential to manage the rapidly increasing order volume. In the past, NORMAL has relied on Jungheinrich and industrial trucks with lithium-ion technology. Innovation, service readiness and impeccable quality are among the strengths that NORMAL values in Jungheinrich.

SOLUTION.

NORMAL deploys a large number of Jungheinrich trucks, while the newly built warehouse now predominantly uses li-ion models. When NORMAL signed the contract with Jungheinrich, there was little competition in this segment of ultra-compact forklift trucks with integrated lithium-ion batteries. NORMAL knowingly chose progressive, cutting-edge technology because the agile ETV 216i offer maximum performance in compact spaces and impresses with its durability and ease of use. To ensure everything runs smoothly, two Jungheinrich engineers are on site round the clock. They are tightly integrated into NORMAL's processes and provide a reliable point of contact. Additionally, they maintain the fleet, ensuring the constant operational readiness of the industrial trucks.

PROJECT IN FIGURES:

650

branches in eight countries are supported by NORMAL.

100,000

pallet spaces in the newly built warehouse.

57

ETV 216i in deployment, plus many other trucks.





A leader in material handling.

There for you across the globe.



Our own direct sales companies in 42 countries.

Partner companies in more than 80 other countries.

More than 21,000 employees.

More than 6,000 service engineers worldwide.

Founded in 1953, Jungheinrich is one of the world's leading providers of material handling 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.



AUTOMATION

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. This enables us to work together to raise your efficiency and productivity to a whole new level.



NEW TRUCKS

Lifting, stacking, transporting, order picking – electrically 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 for warehouses of all sizes. Combined with Jungheinrich industrial trucks and IT solutions, the result is a future-proof, integrated material handling 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 that 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 the utmost efficiency. Systems from different manufacturers can also be integrated with ease.



CONSULTING

Products and services must meet your exact requirements. That's why our consulting service combines a high level of technical ability with process knowledge and in-depth industry expertise. This enables us to 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.



SERVICE AND SUPPORT

The trouble-free operation of your material handling solution is our top priority. That's 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.



Certified information security ISO/IEC 27001: The highest security standards apply to the development and operation of our digital solutions to protect your information.

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



Jungheinrich trucks conform to the European Safety Requirements.

Jungheinrich Aktiengesellschaft

Friedrich-Ebert-Damm 129 22047 Hamburg Germany Telephone +49 40 6948-0 Telefax +49 40 6948-1777

info@jungheinrich.com www.jungheinrich.com

