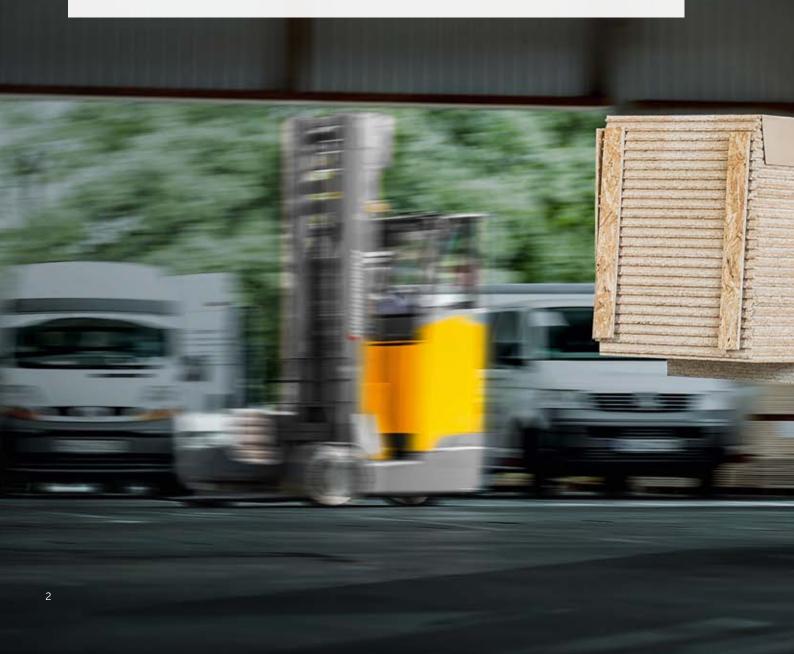


# The two-in-one forklift truck. Saving space and money.

The Jungheinrich ETV C reach truck offers the best solution for cost-effective stacking and retrieval at high lift heights and in confined spaces. It also replaces the need for an additional forklift truck. Thanks to superelastic tyres and greater ground clearance, it masters all indoor and outdoor tasks, making it your all-rounder for warehouse and yard.





## Greater ground clearance.

## Broader application areas.

#### Universal and cost-cutting

Conventional reach trucks demonstrate their strengths in the warehouse, whereas transport tasks in the yard are usually carried out by counterbalanced forklift trucks. With our ETV C, you have one for both. Superelastic tyres and greater ground clearance make it ideal for combined warehouse and yard applications, lorry loading and unloading as well as transport operations on poor surfaces.

This creates savings across the board. There are no procurement and maintenance costs for another truck, no additional parking place is required and personnel costs are reduced.

#### The advantages of our ETV C at a glance:

- Just one truck for loading and unloading lorries outside as well as transportation and stacking inside.
- More ground clearance.
- Handles uneven surfaces.
- Non-marking tyres protect the floor of the warehouse (optional).
- Requires less aisle width thanks to reach mast technology.
- Excellent visibility, even with high loads, due to sideways seating position.
- · Greater lift heights.
- · High gradeability.

#### Superelastic tyres for increased comfort and traction

In contrast to Vulkollan tyres, superelastic tyres deliver softer handling and markedly less floor loading – an advantage, for example, when used on various (indoor) floors. Hard jolts due to poor ground conditions are reduced, protecting the operator and the load. There is also noticeably less sinking into soft surfaces, such as asphalt, when external temperatures are high, while the low-profile design minimises wear.



Standard superelastic tyres





## **Enhanced efficiency thanks** to reach mast technology.

#### Over 60 years of experience

Our reach trucks have been reliably and efficiently stacking and transporting goods in warehouses across the world for more than six decades. Today every third reach truck on the market carries the Jungheinrich logo. Our wide range of trucks also sets a benchmark - no one offers more selection.

#### Principle of reach mast technology

After load handling with extended mast, the mast is pulled back with the load resting between the support arms inside the contours of the truck. This shortens the truck and enables the load to be transported securely. A further advantage of this principle: The reach truck requires less space in the aisles between the racking. And the narrower the aisles, the more space there is for racking on the same floor area.

#### Maximum energy efficiency saves you money



Energy consumption

ETV series C: 4.5 kWh/100 pallets

Competition: Ø 6.1 kWh/100 pallets



ETV Series C: 69 pallets/h

Competition: Ø 53 pallets/h

Consumption and pallets transported per hour according to VDI 2198 and compared to the competition (average value)

#### Maximum efficiency on all levels

Our ETV C is setting the standard with its higher acceleration, faster lift and reaching speeds for more throughput, and first-rate overall performance. How do we achieve this? By developing and producing our own software, motors and controllers. Everything is perfectly coordinated to guarantee maximum power at minimum energy consumption.



#### Lithium-ion batteries for more flexibility

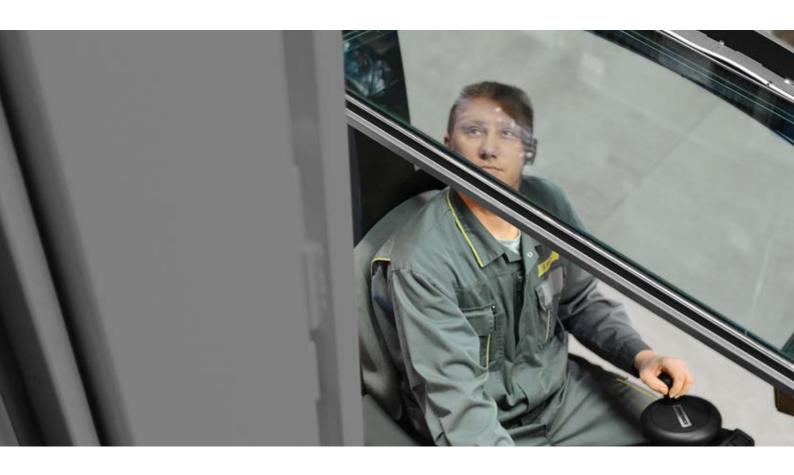
changing is now a thing of the past. Today and tomorrow, our lithium-ion batteries give you the opportunity for short-term fast charging and boost charging at all times. The significantly greater efficiency also allows for a long service life.



#### Two shifts on one battery charge

The optimised energy concept of our reach trucks mean that it is now possible to complete two shifts with a single

battery charge. All by using a Jungheinrich standard battery, irrespective of your specific conditions of use and the necessary throughout performance. This guarantees to save you time and costs.



## Our workplace fits everyone.

Every operator is different. That is why we have created a workplace that can adapt to its operator for maximum well-being, ensuring they can exploit the full potential of the forklift.

#### Productivity-enhancing ergonomics

The large footstep makes entry easy, while the generous footwell provides ample legroom. The seat has three adjustable positions with high absorption of vibrations for optimum positioning for every operator. The adjustable steering wheel and storage compartments complete the ergonomic experience.

#### Low-vibration operator's seat

The low-vibration design of seat, seat cover and seat support guarantees increased productivity due to longer operating hours. The superelastic tyres also provide additional cushioning.

#### Maximum ease of handling

Our reach trucks offer easy handling of both truck and load, with intuitive control of the hydraulic lever and travel direction switch, an automotive-style pedal arrangement and a short wheelbase. All of this helps make your operator's working day noticeably easier.

### Comfortable steering wheel position when travelling in a straight line

When travelling straight ahead, the steering wheel spinner knob is always positioned at the ergonomically ideal 9 o'clock position. Irrespective of whether the steering wheel was moved when the truck was switched off or was turned further in 180° steering mode, the steering control always returns the spinner knob back to the optimal position when travelling straight ahead.



#### Safe cornering with curveCONTROL

Jungheinrich curveCONTROL automatically reduces the travel speed when cornering, depending on the degree of the steer angle. Electric braking engages and keeps centrifugal forces at a constant low level. The advantage: maximum safety with optimum utilisation of truck performance.

#### The ideal basis for fast and reliable stacking

- Extremely stable mast with the highest residual capacities (1,100 kg up to a lift height of 7.4 m for the ETV C20).
- Maximum lift speeds, even with rated load.
- Market-leading closed height/lift height ratio for applications with low overhead clearance heights.

#### Residual charge display to protect the battery

The battery's residual charge display indicates exactly when the battery will need recharging. When the last bar goes out, the lift function is automatically deactivated and the truck reduces its travel speed – although the drive and mast reach functions required for changing the battery will remain available. This means the risk of dangerously draining the battery is significantly reduced.

#### Good visibility for quality work

- Narrow roof supports for excellent all-round visibility.
- 100 % clear view with panorama roof (optional).
- Wide visual range offered by the mast for best view of forks and load.
- Spotlight on the fork carriage (optional) for optimum visibility even in dark conditions.

#### soloPILOT control lever

The soloPILOT control lever integrated into the armrest ensures precise fingertip control of travel/lift functions. The switches and levers are arranged in a conventional manner to provide a single control function.

#### multiPILOT control lever (optional)

The multiPILOT control lever is designed like a joystick. All functions are comfortably located for the operator's hands. multiPILOT is the ideal control option for maximum stacking and retrieval performance.



soloPILOT











Fast, easy and reliable stacking and retrieval operations with positionCONTROL

## We give you all the options.

You can customise our ETV C16/C20 reach trucks to best suit your needs. Our wide range of options make almost anything possible to ensure that our forklift trucks are well-suited to your application and safety requirements.

## Fast, easy and reliable stacking and retrieval operations with positionCONTROL

Just press the SNAP button: This briefly reduces the lift speed, allowing for automatic approach of the next racking beam and precise positioning of the load at the required lift height. The correct height is detected either with or without a load.

#### Advantages:

- Prevention of collisions with the next highest rack beam.
- Greater throughput due to faster stacking and retrieval.
- Ergonomic operations by positioning the operating terminal within easy reach.
- Less damage to goods and racks.





Weight check

### Continuous monitoring of capacity limit with operationCONTROL

operationCONTROL ensures the maximum admissible load weight is never exceeded. The lift height and load weight are continuously monitored and displayed. When the limit capacity is reached, a warning tone sounds and a warning symbol lights up.

#### Advantages:

- Increased safety for all colleagues.
- Fewer accidents due to operating errors.
- Helpful support for new operators.



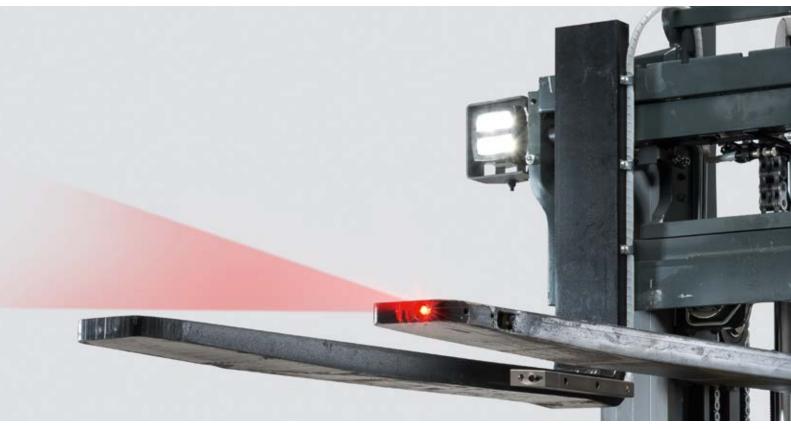
The weighing function provides reassurance that the residual capacity has not been exceeded. At the touch of a button, the weight – with a tolerance range of  $50\,\mathrm{kg}$  – is indicated on the monitor.

Weight check at the touch of a button

Central sideshift at the push of a button
Simple, reliable and fast. The automatic centralising of the sideshift means there is no time-consuming "feeling your way" to the required position.

### Wireless data processing and barcode scanner for up-to-date stock details

The data radio connection allows for wireless data transfer. Intuitive radio data terminals enable paperless working in real time. The barcode scanner ensures fast and reliable identification of goods, preventing errors in the work process.



LED spotlights on fork carriages and positioning laser

## Best visibility with LED spotlights on the fork carriage

In dark environments, our LED spotlights on the fork carriage provide the best visibility, even at high lift heights. The latest lighting technology with maximum luminosity and energy efficiency ensures optimum lighting of pallet rack row and compartment. The headlights are positioned on the side of the vehicle so they are effective even when the load is raised. They are switched on and off automatically at a specific lift height to avoid dazzling oncoming traffic.

## Easier stacking and retrieval thanks to positioning laser

Our positioning lasers greatly simplify the stacking and retrieval process and increase the safety for load and rack. The laser sources are integrated into the fork tips. They project a red line on the surrounding area, which allows your operator to adjust the position of the fork for more precise positioning of the pallet. The powerful laser light ensures good visibility, even at lift heights above 10 m.

100% clear view panorama roof panel
Maximum visibility: The panorama roof panel without the interference of cross beams provides maximum visibility of load and forks.



Panorama roof panel





Switching from 180° to 360° steering

Safety at all blind spots with Floor Spot Floor Spot projects a red spotlight on the floor about 5 m in front of the truck. Especially at blind intersections or at the end of rack aisles, this alerts an approaching truck in time to respond.

#### Automatic crawl speed with driveCONTROL

driveCONTROL limits the acceleration and maximum travel speed (adjustable between 1.4 and 10 km/h), once the forks are raised above the free lift. This increases safety when manoeuvring with a raised pallet in front of the storage rack, while still ensuring more precise manoeuvring during the work cycle.

#### Switching from 180° to 360° steering as required

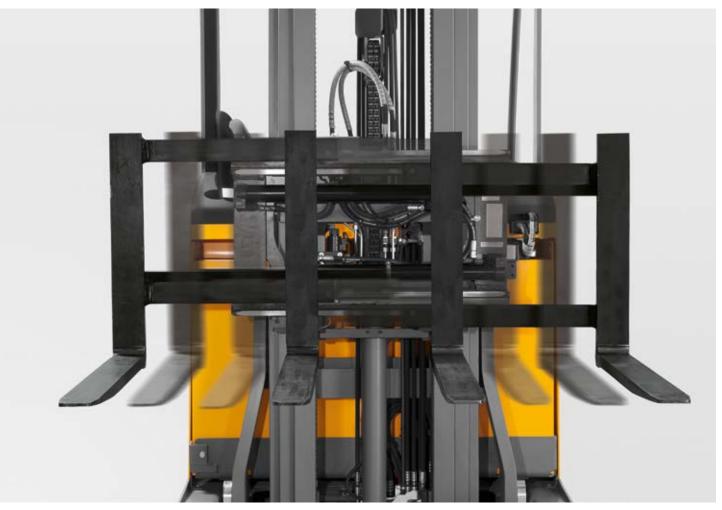
The possibility to choose between 180° and 360° steering gives you the right solution for every application. Each type of steering has its own strengths. You can switch the steering mode at the touch of a button whenever required, even while driving. This allows you to adapt steering perfectly to new operating requirements.

#### The advantages of 180° steering:

- The drive wheel can move a maximum of 90° to either side.
- Accidental changes in direction due to oversteering are prevented.
- Smaller turning radii.
- Minimum space required for turning in front of the pallet compartment.

#### The advantages of 360° steering:

- Endless steering: The drive wheel also follows the steering wheel beyond 90°.
- Rapid change of travel direction without having to stop and switch.



Fork positioner

#### Safe load handling with attachments

We offer tailor-made attachments to expand the application range of your truck. These applications are mounted and thoroughly tested in our production facility to ensure maximum safety and reliability.

#### **Telescopic forks**

Our telescopic forks enable the fork lengths to be adapted quickly, e.g. for carrying frequently changing load lengths, one-sided lorry loading or double-deep pallet storage in the rack.

#### Fork positioner

Our fork positioner is used to adjust the distance between the forks. This means loads of different widths – with and without entry slots – can be easily and safely lifted at the touch of a button from the comfort of the operator's seat.

#### Limit switch system

An optional limit switch system ensures safety during operation. When being lowered, retracted or extended, the forks are automatically stopped in an end position, preventing a collision with the support arms.

#### Acknowledgement button for forklift clamps

An acknowledgment button can be optionally integrated into the controller if clamping load attachments are used. The clamps can only be opened or closed if the button is additionally operated. This ensures safe handling of sensitive loads.



6-inch full colour display

An even better view: 6-inch full-colour display

A little more of everything – with a screen diagonal of 142 mm, displays and icons appear larger and operation is even easier. Like our standard 4-inch full-colour display, the 6-inch high-contrast, full-colour display also offers a wide range of functions. It shows direction of travel, travel programme, crawl speed, battery charge status, warnings and more. The function keys provide a very easy way to adjust performance parameters and auxiliary functions such as lighting.

#### EasyAccess for protected access

EasyAccess protects the truck against unauthorised use. Authorisation can be managed directly on the truck display. You can choose between the softkey, PIN code and transponder options to match your requirements and the size of your company.

#### Softkey

• Up to ten access authorisations can be assigned.

#### PIN code

• Up to 100 different codes can be set for individual access authorisation.

#### Transponder

- Up to 100 different transponder cards can be read for individual access authorisation.
- Existing transponders (ISO 14443) can be used.

Seat options to suit every need
A good sitting position makes working easier, while increasing output. Choose from five models:

#### Comfort seat in synthetic leather (standard)

With a synthetic leather cover, excellent cushioning and adjustable backrest. Spring deflection: 80 mm, adjustable weight range: 45–170 kg.

#### Comfort seats in fabric

With a fabric cover, excellent cushioning and adjustable backrest. Spring deflection: 80 mm, adjustable weight range: 45–170 kg.

#### Comfort seat with heating

Like the fabric comfort seat but with adjustable lumbar support. Additionally integrated seat heating, activated via a button directly on the seat.

#### Leather comfort seat with heating

With genuine leather and integrated seat and backrest heating. 3-level thermostat control and LED display, adjustable via buttons directly on the seat.



Comfort seat with air cushioning

#### Comfort seat with air cushioning

With a fabric cover and fully automatic air cushioning via a 48-V compressor, the seat offers automatic adjustment to the operator's weight in the range from 45–170 kg. This eliminates manual readjusting, even when changing from one operator to another. Every one of your operators will automatically be optimally seated.







#### Cabin for any kind of weather

If your trucks are frequently used outside, our driver cabins offer your operators a comfortable working environment.

Thanks to a wide range of equipment options (e.g. with heating or panoramic mirror), there is an optimal solution for every season. And the modular design allows for individual adjustments to suit your applications.

#### Choose from two designs:

- **Comfort I** for occasional use outdoors with fast entry and exit.
- **Comfort II** for frequent outdoor use with completely enclosed cabin for optimum all-round protection.

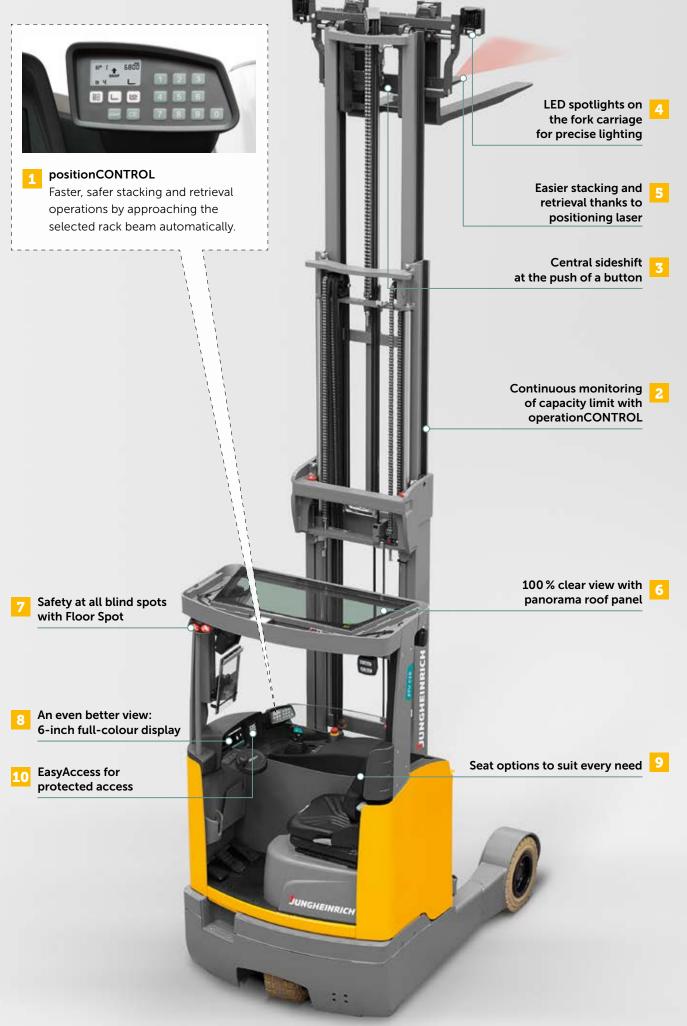
#### Advantages:

- Unobstructed upward view.
- Front and side windows are made of polycarbonate (Margard).
- The side windows are sliding windows and offer maximum ventilation even at high external temperatures.
- Easy entry with wide angle door opening. A pneumatic spring makes it easier to open the door (lockable).

Equipment features of cabin	Comfort I	Comfort II
Tubular steel frame	•	•
Windscreen made of poly- carbonate (Margard) with electric wipers and washer system	•	•
Polycarbonate roof (Margard)	•	•
Side windows made of polycarbonate (Margard), both sides sliding, emergency hammer	•	•
Electric fans	•	•
Interior lighting	•	•
Fixed lockable entry door, polycarbonate window (Margard) with electric wipers and washer system	-	•
Roof wiper (manual)	•	•
Panoramic mirror	0	0
Heating	-	0
Preparation for audio	0	0
Working lights, beacon/ strobe light	0	0

• standard optional – not available

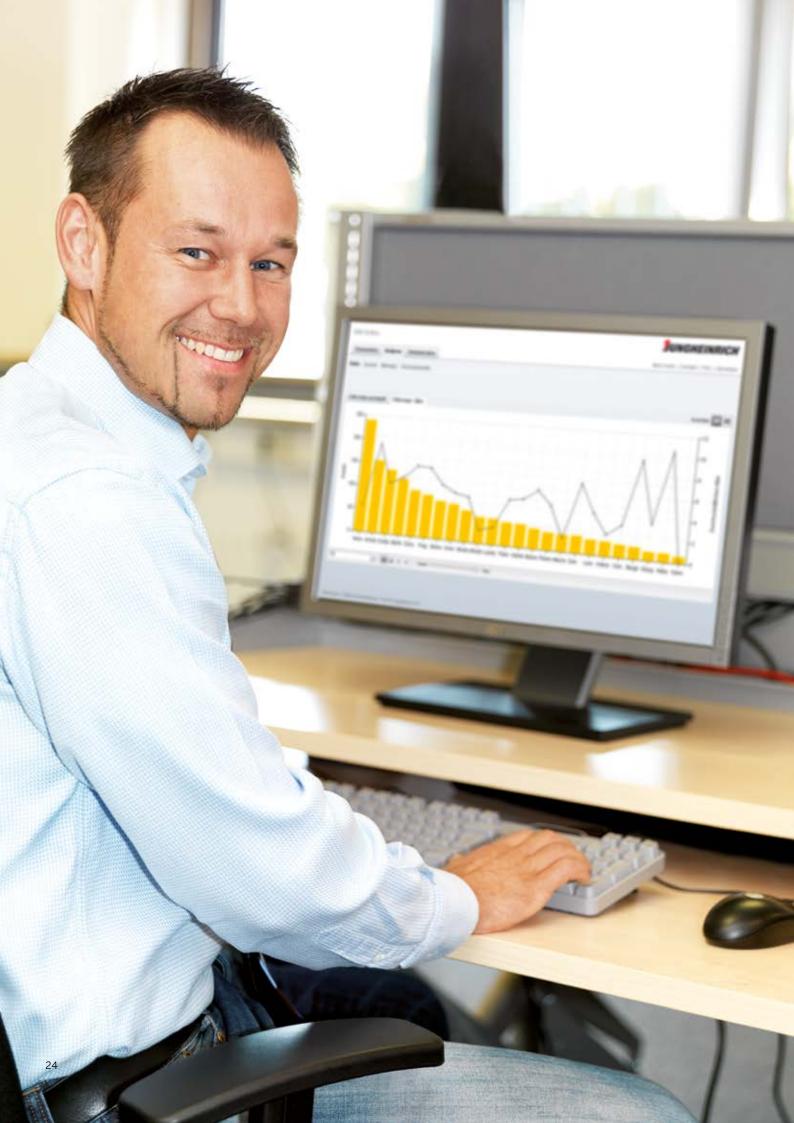




## At a glance. Our most important options.

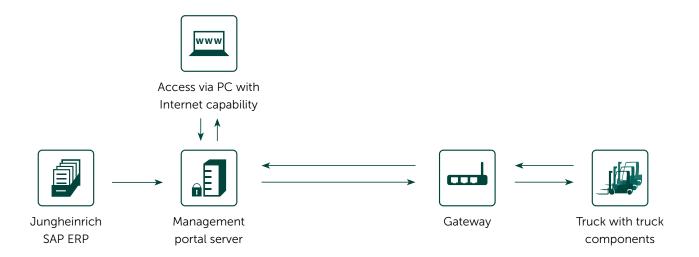
	Assistance system/option	Configuration	ETV C16	ETV C20
1	positionCONTROL	0	✓	✓
2	operationCONTROL	0	✓	✓
	Wireless data transmission/barcode scanners	0	✓	✓
	Weight control (at the touch of a button)	0	✓	✓
3	Central sideshift (at the push of a button)	0	✓	✓
4	LED spotlights on the fork carriage	0	✓	✓
	LED spotlights on the overhead guard	0	✓	✓
5	Positioning laser	0	✓	✓
6	Panoramic roof panel	0	✓	✓
7	Floor Spot	0	✓	✓
	Steering wheel knob in 9 o'clock position	•	✓	✓
	Toggle switch 180°/360° steering	0	✓	✓
	curveCONTROL	•	✓	✓
	driveCONTROL (above free lift)	0	✓	✓
	driveCONTROL (within free lift)	0	✓	✓
	Load wheel guard	•	✓	✓
	Limit switch system for attachments	0	✓	✓
8	6-inch full-colour display	0	✓	✓
9	Seats (with heating/leather/air cushioning)	0	✓	✓
10	EasyAccess (softkey/PIN code/transponder)	0	✓	✓
	Cabins	0	✓	✓

<sup>•</sup> standard ○ optional ✓ available



## Always up to date.

## Lower your fleet operating costs with ISM Online.



#### ISM Online for efficient fleet management

ISM Online is a web-based information system for the analytical collection, monitoring and evaluation of data for a wide range of truck types. It can be used at multiple locations as well internationally and is manufacturer independent. For maximum data transparency and the cost-optimised structuring of industrial truck fleets. Seven different modules can be individually combined to lower operating costs and increase warehouse safety:

#### Basic module

The Basic module helps you get an overview of your fleet's equipment at all locations.

#### **Operating Costs module**

The Operating Costs module provides a detailed account of costs along with an overview of billing documents, service reports and operating hours.

#### Maintenance Management module

The Maintenance Management module gives you a complete overview of all maintenance and safety inspections at any time, independent of your service contract partner. Thanks to the four-week reminder function you always have all inspection appointments in view so you can schedule preventive maintenance measures into your daily business well in advance.

#### Safety module

This module enables you to increase safety in your warehouse while at the same time lowering costs due to forced damage through access control, operator management and impact detection. Truck configuration is performed online from a PC.

#### **Productivity module**

Would you like to make your fleet even more productive and find out how your industrial trucks are being used? This module provides you with reports that will do just that – allowing you to evaluate truck usage and optimise the current use of the fleet.

#### **Battery Management module**

The Battery Management module allows you to monitor the battery of your electric fork lift trucks, identify malfunctions quickly and take selective measures. The added transparency will help you extend the service life of the battery, thereby avoiding unnecessary maintenance and procurement costs.

#### **Access Control module**

Would you like to protect your industrial trucks against unauthorised use? With the Access Control module you can conveniently control access to your trucks online and define separate access keys for employees, divisions/departments and trucks. Automatic shutdown of the truck when it is not being used will help you increase warehouse safety while reducing operating costs.

## The best investment.

## For every budget and the environment.

#### BestInvest

Our reach trucks reduce your long-term operating costs by up to 20 %. With a wide range of technological and ergonomic advantages that reduce all of the expenses – making up the Total Cost of Operations (TCO) – to minimum levels, from purchase to disposal. We call this promise Bestlnvest. It helps you transform your costs into profitable capital expenditures to ensure you make your best investment decision.

#### The right racking for the right truck

We can provide you with the complete solution: Integrated warehouse planning ensures that racking and trucks work "hand in hand" as parts of a single system. From project planning through CAD drafting to handover. From modular racking systems through system platforms to high-bay warehouse. From consultancy through installation to service. We offer a one-stop shop.

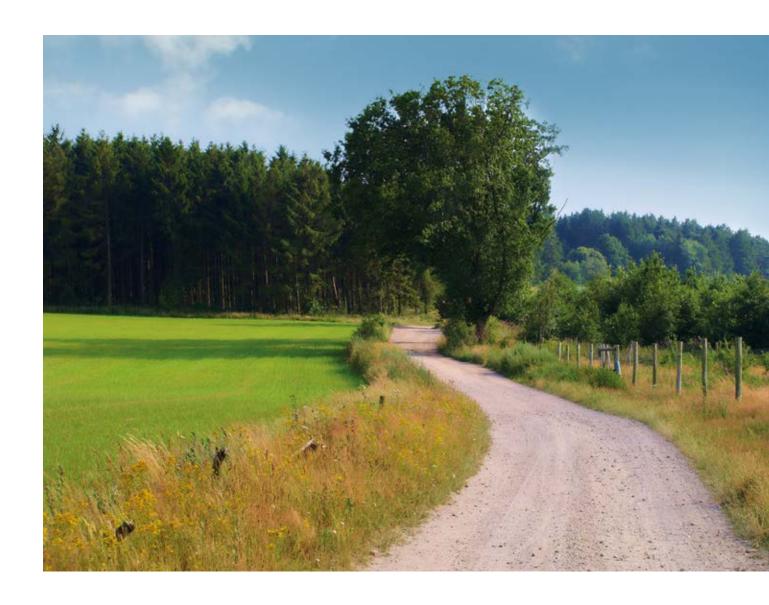
#### Service with the expertise of the manufacturer

Benefit from our service. Benefit from the manufacturer's expertise. Whether you choose a full-service agreement or individually arranged maintenance intervals, our service flexibly adapts to your application and offers you long-term investment and planning security. In addition, our comprehensive direct sales network and superbly trained engineers ensure rapid response times, minimum downtimes and low operating costs.

#### Flexible use without risk

Tap into the full economic potential of our reach trucks by combining your truck with our rental and financing solutions. This way, you retain your credit line and no capital will be tied up. We also provide full support for trucks and ensure problem-free operation. And when the work is done, you can simply return the truck to us or trade it in for another one.





#### The first TÜV-certified product lifecycle assessment in the industry

TÜV Nord has systematically analysed the life-cycle assessment of our manufacturing steps relevant to environmental protection, certifying it in accordance with DIN EN ISO 14040. This means that Jungheinrich is the first forklift truck manufacturer to hold the environmental rating "Geprüfte Produkt-Ökobilanz" [Certified Product Life-Cycle Assessment].



#### Lower emissions – lower energy costs

Our trucks have become up to 30% more efficient in the last ten years. Technological innovations and further development since the year 2000 have drastically reduced the  $\rm CO_2$  emissions of our entire truck portfolio. The complete Jungheinrich product cycle now features these innovations, from manufacturing through usage to refurbishing. And our high-tech solutions are really setting standards in the usage phase, which is where 80 to 90% of all emissions occur. You can easily use this Jungheinrich advantage to your benefit, considerably reducing your energy costs while noticeably boosting your throughput rates.

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



Jungheinrich trucks conform to the European Safety Requirements.

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