

## More efficiency for handling goods. Our ETV 1/2/3 reach trucks.

Three model variations for a wide range of applications with up to 2,500 kg load capacity and lift heights of up to 13,000 mm.





# A varied portfolio for narrow aisles and high lift heights.

Only a perfectly tuned reach truck provides maximum throughput. That is why we offer you a comprehensive selection. With three different production series, we cater for a wide range of applications whilst ensuring optimum energy efficiency. Regardless of your special requirements – whether confined spaces or lift heights of up to 13,000 mm, capacities of up to 2,500 kg or individual customisation with various options – we have the truck you need.







# **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 all over the world for more than six decades. Today, every third reach truck on the market is a Jungheinrich truck. We also set benchmarks when it comes to the range of options - no one offers a greater selection.

#### The principle of reach mast technology

After the load is raised with the mast extended, the mast with the load between the support arms is pulled back inside the contours of the truck. This shortens the truck and allows for the load to be transported securely. A further advantage of this principle: The reach truck can service narrower aisles between racks. And the narrower the aisles, the more space can be used for racking on the same floor area.



#### Maximum efficiency on all levels

Our three ETV series set standards: in terms of throughput performance through higher acceleration rates, regarding lifting and reaching speeds as well as energy consumption levels due to their first-rate overall performance. This allows you to save up to 30 % in time. The secret behind these peak values: production from a single source. We develop and produce software, motors and control units in-house. Everything is perfectly synchronised and guarantees maximum power at minimum energy consumption.

## Lithium-ion batteries

for more flexibility

**technology** Complicated and tedious battery changing is a thing of the past. Today and tomorrow, our lithium-ion batteries enable fast and boost charging at short notice and at any time. The significantly greater efficiency levels also allow for long downtimes.



#### Two shifts on one battery charge

The optimised energy concept of our reach trucks ensure operation over two

entire shifts with a single battery charge. All by using a Jungheinrich standard battery, regardless of your operating conditions and the required throughout. Saving time and money is guaranteed.



## You determine the task. We deliver the solution.

Rarely, any two warehouse tasks are exactly the same. That's why we offer you three different kinds of reach trucks. This way, you can rely on maximum efficiency while working in the narrowest aisles, at the highest lift heights and with the heaviest loads.

### Series 1:

Compact chassis for the narrowest aisle widths.

	ETV 110	ETV 112
Capacity (kg)	1,000	1,200
Lift height (mm); min./max.	4,550/7,100	4,550/7,100
Aisle width (mm)	2,455	2,494
Truck width (mm)	1,120	1,120

### Series 2:

Maximum performance at minimum energy consumption.

	ETM 214	ETV 214	ETM 216	ETV 216
Capacity (kg)	1,400	1,400	1,600	1,600
Lift height (mm); min./max.	4,550/9,020	4,550/10,700	4,550/9,020	4,550/10,700
Aisle width (mm)	2,568	2,529	2,589	2,584
Truck width (mm)	1,120	1,270	1,120	1,270

### Series 3: Lifting the heaviest loads to the greatest heights.

	ETV 318	ETV 320	ETM 325	ETV 325
Capacity (kg)	1,800	2,000	2,500	2,500
Lift height (mm); min./max.	4,250/11,510	4,250/13,000	4,250/9,110	4,250/13,000
Aisle width (mm)	2,605	2,625	2,792	2,742
Truck width (mm)	1,270	1,290	1,198	1,348

**ETV version:** is able to lift Euro pallets between the support arms, allowing for the first rack beam to be fitted lower for the improved utilisation of space.

**ETM version**: offers – due to its narrow design – advantages for warehouses with drive-in racking and block storage.



## Our workspace fits everyone.

Every operator is different. That is why we have created a workplace that can adapt to its operator for maximum comfort. This ensures that the operator can tap the full potential of their forklift truck.

#### Productivity-enhancing ergonomics

The low entry height makes for easy boarding, whilst the generous footwell provides ample legroom. The seat with its three adjustable positions and high vibration absorption offers optimum positioning for every operator. The adjustable steering wheel and various storage compartments complete the ergonomic experience.

#### Low-vibration operator workplace

The low-vibration design of seat, seat panels and support structure guarantees increased productivity due to longer operating times – without exceeding limit values.

#### Maximum ease of handling

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

### Comfortable position of steering wheel during forward travel

When travelling straight ahead, the steering wheel spinner knob is always positioned at the ergonomically ideal 9 o'clock position. This also applies if – while the truck is switched off – the steering wheel was moved or further turned in the 180° steering mode.



#### Safe cornering with curveCONTROL

Jungheinrich curveCONTROL automatically reduces the travel speed when cornering, depending on the steering angle. Electric braking is activated and keeps centrifugal forces at a constantly low level. The advantage: maximum safety with optimum utilisation of the truck's performance.

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

- Extremely stable mast with the highest residual capacities (1,000 kg up to a lift height of 13 m for the ETV 325).
- Maximum lift speeds, also with rated load.
- Mast reach damping system (optional) to prevent time-consuming mast sway during stacking and retrieval.
- Market-leading ratio between closed and lift height for operations with low overhead clearance.

#### Residual charge display to protect the battery

The battery's residual charge display indicates exactly when the battery will need recharging. As soon as the last bar disappears, lifting automatically ceases and the truck reduces its travel speed – still, the drive and mast reach functions required for changing the battery remain active. This significantly reduces the risk of the battery's harmful discharge.

#### Good visibility for better work conditions

- Narrow roof supports for excellent all-round visibility.
- 100% clear view with panorama roof (optional).
- Wide viewing window in the mast for optimum view of forks and load.
- Spotlight mounted on fork carriage (optional) for optimum visibility even in dark conditions.
- Video camera (optional) with additional colour display.

#### soloPILOT control lever

The soloPILOT control lever integrated into the armrest ensures precise fingertip control of travel/lift functions. The switches and levers are conventionally allocated with a single control function.

#### multiPILOT control lever (optional)

The multiPILOT control lever has a layout similar to a joystick with all functions comfortably accessible at the touch of the operator's fingers. multiPILOT is the ideal control option for maximum stacking and retrieval performance.



soloPILOT



#### Full control via operator display

The 4-inch full-colour display with high contrast combines a number of functions in one control panel. It indicates travel direction, travel programme, crawl speed, battery charge, warnings and more. Its function keys make it very easy to adjust performance parameters and additional functions such as lighting.

Handle bar for safe entry and exit

Adjustable steering wheel

Holder for bottles or cups

**Generous footwell** 

Low entry and exit height

Direct access to storage trays

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JUNGHEINRICH

#### Shoulder protection

Low-vibration seat offering more space to the left and right

#### Three travel programmes can easily be adjusted by the operator for every application and at any time.

**Profile 1:** For transporting especially sensitive goods or driving in sensitive environmental conditions.

**Profile 2:** For average speeds and maximum uptime.

**Profile 3:** For maximum acceleration, travel/ lift speed and throughput.

# You define the application. We deliver optimum performance.

### Options package

## **Efficiency:**

Ideal for saving energy during both driving and lifting.

#### Your requirement:

- Long operating times with only one battery.
- Excellent productivity.

#### Efficiency advantages:

- Optimum motor configuration for travel and lifting.
- No other reach truck requires less energy.

#### Options package

## drivePLUS:

Ideal for powerful acceleration and highest travel speed.

#### Your requirement:

- Long routes.
- High travel speed.

#### drivePLUS advantages:

- Powerful 8.5 kW drive motor.
- Switch between 180° and 360° steering at the touch of a button.

#### Options package

### liftPLUS:

Ideal for maximum lift speed.

#### Your requirement:

• Fast pallet throughput, even at high lift heights.

#### liftPLUS advantages:

- Maximum lift speed, also with rated load.
- High-performance pump motor with 15.5 kW power.
- Simultaneous lifting and reaching of forks.

#### Options package

## drive&liftPLUS:

Ideal for maximum throughput with optimum energy efficiency.

#### Your requirement:

- Long routes at high travel speeds.
- Fast pallet throughput, even at high lift heights.

#### drive&liftPLUS advantages:

- Maximum throughput at lowest energy consumption.
- Powerful 8.5 kW drive motor.
- Switch between 180° and 360° steering at the touch of a button.
- Maximum lift speed, also with rated load.
- High-performance pump motor with 15.5 kW power.
- Simultaneous lifting and reaching of forks.





## Performance data for options packages

		Efficiency		
Series 1	ETV	110	112	
Travel speed	km/h	11	11	
Drive motor	kW	6	6	
Lift speed with nominal load	m/s	0.49	0.45	
Lift motor	kW	13.3	13.3	
Energy consumption per VDI at 35 operations/h, nominal load		2.65	2.88	
Max. throughput (VDI operations)	t/h	44	53	
Energy consumption per VDI at max. operations,				
half nominal load	kWh/h	2.71	2.88	

	Effici	ency	drivePLUS		liftPLUS		drive&l	iftPLUS
ETM/ETV	214	216	214	216	214	216	214	216
km/h	11	11	14	14	11	11	14	14
kW	6	6	8.5	8.5	6	6	8.5	8.5
m/s	0.38	0.35	0.38	0.35	0.51	0.48	0.51	0.48
kW	13.3	13.3	13.3	13.3	15.5	15.5	15.5	15.5
kWh/h	3.21	3.48	3.3	3.51	3.35	3.77	3.44	3.86
t/h	57.3	64.4	60.0	67.7	61.4	69.3	64.1	72.6
kWh/h	2.97	3.11	3.25	3.37	3.4	3.5	3.68	3.76
	km/h kW m/s kW kWh/h t/h	ETM/ETV     214       km/h     11       kW     6       m/s     0.38       kW     13.3       kWh/h     3.21       t/h     57.3	km/h       11       11         kW       6       6         m/s       0.38       0.35         kW       13.3       13.3         kWh/h       3.21       3.48         t/h       57.3       64.4	ETM/ETV       214       216       214         km/h       11       11       14         kW       6       6       8.5         m/s       0.38       0.35       0.38         kW       13.3       13.3       13.3         kWh/h       3.21       3.48       3.3         t/h       57.3       64.4       60.0	ETM/ETV       214       216       214       216         km/h       11       11       14       14         kW       6       6       8.5       8.5         m/s       0.38       0.35       0.38       0.35         kW       13.3       13.3       13.3       13.3         kWh/h       3.21       3.48       3.3       3.51         t/h       57.3       64.4       60.0       67.7	ETM/ETV       214       216       214       216       214         km/h       11       11       14       14       11         kW       6       6       8.5       8.5       6         m/s       0.38       0.35       0.38       0.35       0.51         kW       13.3       13.3       13.3       13.3       15.5         kWh/h       3.21       3.48       3.3       3.51       3.35         t/h       57.3       64.4       60.0       67.7       61.4	ETM/ETV       214       216       214       216       214       216       214       216         km/h       11       11       14       14       11       11         kW       6       6       8.5       8.5       6       6         m/s       0.38       0.35       0.38       0.35       0.51       0.48         kW       13.3       13.3       13.3       13.3       15.5       15.5         kWh/h       3.21       3.48       3.3       3.51       3.35       3.77         t/h       57.3       64.4       60.0       67.7       61.4       69.3	ETM/ETV       214       216       214       216       214       216       214         km/h       11       11       14       14       11       11       14         kW       6       6       8.5       8.5       6       6       8.5         m/s       0.38       0.35       0.38       0.35       0.51       0.48       0.51         kW       13.3       13.3       13.3       13.3       15.5       15.5       15.5         kWh/h       3.21       3.48       3.3       3.51       3.35       3.77       3.44         t/h       57.3       64.4       60.0       67.7       61.4       69.3       64.1

		Efficiency		drivePLUS	liftPLUS	PLUS drive		LUS
Series 3	ETM/ETV	318	320	318	318	318	320	325
Travel speed	km/h	11	11	14	11	14	14	14
Drive motor	kW	6	6	8.5	6	8.5	8.5	8.5
Lift speed with nominal load	m/s	0.32	0.30	0.32	0.46	0.46	0.44	0.41
Lift motor	kW	13.3	13.3	13.3	15.5	15.5	15.5	15.5
Energy consumption per VDI a 35 operations/h, nominal load		4.1	4.37	4.19	4.23	4.32	4.52	4.96
Max. throughput (VDI operations)	t/h	67.6	77.9	69.7	70.7	72.8	85.4	99.2
Energy consumption per VDI at max. operations, half nominal load	kWh/h	3.41	3.54	3.65	3.77	4.01	4.15	4.28



Faster, easier and safer stacking and retrieval operations with positionCONTROL

# We give you all the options.

Our ETV 1, 2 and 3 trucks are serial trucks, yet they can be tailored to your needs: Our wide range of options makes almost anything possible, ensuring that our reach trucks fully satisfy your application and safety requirements.

## Faster, easier and safer stacking and retrieval operations with positionCONTROL

Just press the SNAP button: By briefly reducing the lift speed, the next racking beam is approached automatically and the load stops precisely at the required lift height. The correct height is detected with or without load.

#### Your benefits:

- Avoiding 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 racking.



#### Rack height select with liftNAVIGATION

LiftNAVIGATION takes positionCONTROL a step further and is used to connect the truck to your Warehouse Management System. The WMS automatically transmits the target height to the truck control system. All your operator has to do is activate the lift function. The truck then automatically performs the fine positioning of the forks at the specified lift height.

#### Your benefits:

- Incorrect stacking due to approaching the wrong rack height is rendered impossible.
- No additional costs due to incorrect shipments.
- No costly and time-intensive searches for incorrectly stored pallets.
- Operations are significantly faster and easier.



#### Continuous monitoring of capacity limit with operationCONTROL

operationCONTROL ensures that the maximum permissible load weight is not exceeded. Lift height and load weight are continuously monitored and displayed. When the capacity limit is reached, a warning signal sounds and a warning symbol lights up.

#### Your benefits:

- Increased safety for all personnel.
- Fewer accidents due to operating errors.



• Helpful support for new operators

### Up-to-date stock details thanks to radio data transmission and barcode scanner

The radio data connection allows for wireless data transfer. Radio data terminals allow for intuitive and paperless operations in real time, whilst the barcode scanner ensures fast and reliable identification of goods. This prevents errors in the work process.



Video monitoring

#### Stacking and retrieval via video monitoring

4 Our video camera allows for the precise and quick access of extremely high locations. The position of the camera on the forks enables your operators to efficiently and reliably control stacking and retrieval operations from their seating position/viewpoint. They no longer have to look up, which noticeably reduces the strain on their shoulders and neck. Also, information on the pallets is easily visible, even at great heights.



Weight check

#### Weight check at the touch of a button

The weighing function provides reassurance that the residual capacity has not been exceeded. The weight (50 kg tolerance range) appears on the monitor at the touch of a button.

#### Fastest possible mast reach with liftCONTROL

5 Sensor rollers in the mast and pressure sensors in the hydraulic circuit provide data for calculating the maximum reaching speed for the mast. The speed for the mast reach is then maximised depending on the lift height and load weight. This optimised reaching speed further boosts throughput by up to 13%.

#### Mast reach damping system

6 While extending the mast at greater heights, heavy load weights can cause vibrations, which noticeably slow the positioning of the pallet. Our mast reach damping system minimises these fluctuations, thereby significantly contributing to increased efficiency.

Duration of vibrations without mast reach damping



80 % less time required due to mast reach damping



**Central sideshift at the push of a button** Simple, reliable and fast: The central positioning of the sideshift occurs automatically, eliminating the time-consuming, cautious approach of the required position.

### 8 Horizontal fork alignment at the touch of a button

Particularly at high lift heights, the forks' tilt position is often very hard to detect. The automatic horizontal positioning significantly simplifies and accelerates pallet entry.





LED spotlights on the fork carriage with positioning laser

## 9 Spotlights on the fork carriage provide ideal visibility

In dark environments, our LED spotlights on the fork carriage provide the best visibility, even at high lift heights. The latest lighting technology with top luminosity and energy efficiency ensures optimum lighting of rack rows and storage bays. The spotlights are mounted on the side to still be visible when the load is raised. Stacking and retrieval operations are performed automatically at a predefined lift height to avoid blinding anyone.

### **10** Easier stacking and retrieval with positioning laser

Our positioning lasers significantly simplify the stacking and retrieval process and increase the safety for load and rack. The laser sources are integrated into the fork tips, projecting a red line on the area ahead. This allows the operator to adjust the fork more accurately to be able to drive effortlessly into the pallet. Thanks to the powerful laser light, good visibility is ensured even at lift height above 10 m. **100% clear view thanks to panorama roof panel** Maximum visibility: The panorama roof panel without cross beams provides maximum visibility of the load and forks.



Panorama roof panel

**12 Safety at any blind spots with Floor Spot** Floor Spot projects a red dot on the floor around 5 m ahead of the truck. Especially at blind intersections or at the end of rack aisles, the Floor Spot alerts an approaching truck in time to respond.





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

With the choice between 180° and 360° steering, we can provide you with the perfect solution for every application, as both types of steering

offer advantages. You can switch the steering mode at the touch of a button whenever required, even while driving. This allows you to adapt the steering to match every application.

#### 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 follows the steering wheel beyond 90°.
- Rapid change of travel direction without having to stop and switch.

#### Automatic crawl speed with driveCONTROL

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

### **13** Optimum traction via traction control system (ASR)

Optimum traction is ensured with braking of the drive wheel, which would otherwise spin on wet or dusty floors.

#### Your benefits:

- High acceleration and turnover speed despite smooth and slippery surfaces.
- Reliable steering response when braking during evasive manoeuvring.
- Excellent directional stability.
- Reduced wear of drive wheel.



Fork positioner

#### Safe and reliable load handling with attachments

To extend the application range of your truck, we offer you individually tailored attachments. They are mounted and meticulously tested in our factory to ensure that they provide maximum safety and reliability.

#### **Telescopic fork**

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

#### Fork positioner

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

#### Limit switch system

An optional limit switch system (ESA) ensures safety by preventing damage to the load, support arms or forks. When being lowered, retracted or extended, the forks are automatically stopped in an end position, averting a collision with the support arms.

#### Enabling switch for clamping attachments

When using clamping attachments, an enabling switch can optionally be added to the controller. Only if the switch is additionally used, can the clamp be opened or closed, making handling of sensitive loads even safer.

#### An even better overview: 6-inch full-colour display

A little more of everything – with a screen diagonal of 142 mm, displays and symbols appear larger and handling is even easier. Similar to our standard 4-inch full-colour display, the high-contrast 6-inch full-colour display also offers numerous functions. It indicates travel direction, travel programme, crawl speed, battery charge, warnings and more. Its function keys make it very easy to adapt performance parameters and additional functions such as lighting.



6-inch full-colour display

#### Seat options for any requirement

Good seating makes work easier and enhances performance. Choose from four models:

#### Standard comfort seat

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

#### Comfort seat with heater

The standard comfort seat enhanced with adjustable lumbar support plus additionally integrated seat heating. Activation via button directly on the seat.

#### Comfort seat with air cushioning

With a fabric cover and fully automatic air cushioning via 48-V compressor. Offers automatic operator weight adjustment in the range of 45–170 kg, eliminating manual readjustments – even when used by different operators. Each of your operators automatically sits in the optimum position.

#### Leather comfort seat

Ideal for use in cold stores and damp environments. With a genuine leather cover and integrated seat and backrest heating. 3-level thermostat control and LED display, adjusted by buttons directly on the seat.

#### EasyAccess for protected access

EasyAccess protects the forklift truck against unauthorised use. Authorisation management is directly controlled via the truck's display. Customised to your requirements and company size – you can choose between the softkey, PIN code and transponder options.

#### Softkey

• Up to ten authorised users 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.
- Use of existing transponders (ISO 14443) is possible.



Comfort seat with air cushioning

#### 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 heater or panoramic mirror), there is an optimum solution for every season. And the modular design allows for individual adjustments to suit your applications.

Choose from two versions:

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

#### Your benefits:

- 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).

Cabin features	Comfort I	Comfort II
Tubular steel frame	•	•
Windscreen made of polycarbonate (Margard) with electric wipers and washer system	•	•
Polycarbonate roof window (Margard)	•	•
Side windows made from polycarbonate (Margard), both sliding, emergency hammer	•	•
Electric fan (single stage)	•	•
Interior lighting	•	•
Fixed lockable entry door, polycarbonate (Margard) window with door electric wiper and washer system	-	•
Roof wiper (manual)	•	•
Panoramic mirror	0	0
Heating	_	0
Audio preparation	0	0
Working lights, beacon/strobe light	0	0

• standard optionalal – not available



## Cold store equipment for maximum performance at the lowest temperatures

Only the goods should be frozen solid in a cold store. Even at -30 °C, the flow of goods must remain flexible and on the move. The best way to ensure this is with our reach trucks in cold store version, which reliably protect the operator and truck technology. Both for intensive long-term use as well as for use in both the cold store and in normal temperatures. Cold store equipment comprises:

- Enclosed plugs for reliable signal exchange, even with heavy condensation.
- Sealed controls for maximum functional safety down to -30 °C.
- Heated leather seat for suitable working temperatures.
- Overhead guard with close strut spacing for protection against ice.
- Cold store cabin with different window variants and separate heating for head and leg compartment.



## At a glance. **Our most important options.**

### What can be combined

with our option packages and series?

Assistance system/option         streament option         or streament option         or streament option         or streament option           1         positionCONTROL         0         0         0         0         1         1         1           2         itfINAVIGATION         0         0         0         0         1         1         1           3         operationCONTROL         0         0         0         0         1         1         1           4         Video monitoring (carnera/monitor)         0         0         0         0         1         1         1           5         itfCONTROL         0         0         0         0         1         1         1         1           4         Video monitoring (carnera/monitor)         0         0         0         1         1         1           5         itfCONTROL         0         0         0         0         1         1         1           6         Mast reach damping system         -         -         0         0         1         1           6         Horizontal fork alignment (at the touch of a button)         0         0         0         1         1			A	.1 <sup>5</sup>	6	APLUS	112	WA 21A12	13201325
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2       IrtNAVIGATION       0       <									
3         operationCONTROL         0		0	0	0	0	✓	~	✓	
Radio data transmission/barcode scanner       0       0       0       0       0       0       0       0       0       0         4       Video monitoring (camera/monitor)       0 <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>_</td> <td>~</td> <td>~</td> <td></td>		0	0	0	0	_	~	~	
Weight check (at the touch of a button) $\circ$ $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ S         liftCONTROL         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Central sideshift (at the touch of a button) $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ B         Horizontal fork alignment (at the touch of a button) $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ JLED spotlights on the fork carriage $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ LED spotlights on the overhead guard $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ 1D         Panorama roof panel $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$		0	0	0	0	✓	✓	✓	
Weight check (at the touch of a button) $\circ$ $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ S         liftCONTROL         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Mast reach damping system         -         - $\circ$ $\circ$ $\checkmark$ $\checkmark$ G         Central sideshift (at the touch of a button) $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ B         Horizontal fork alignment (at the touch of a button) $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ JLED spotlights on the fork carriage $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ LED spotlights on the overhead guard $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ 1D         Panorama roof panel $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$	4 Video monitoring (camera/monitor)	0	0	0	0	√	✓	✓	
6Mast reach damping system0001-VV7Central sideshift (at the touch of a button)000000000000VVV8Horizontal fork alignment (at the touch of a button)0000000001-VVV9LED spotlights on the fork carriage0000000VVVV9LED spotlights on the overhead guard000000VVVV10Positioning laser000000VVVV11Panorama roof panel000000VVVV12Floor Spot0000000VVVV13Traction control system (ASR)-00000VVVV13Traction control system for attachments (ESA)000000VVVV146-inch full-colour display0000000VVVV15Seat (with heater/air cushioning/leather)000000VVVV15EasyAccess (softkey/PIN code/transponder)0000	Weight check (at the touch of a button)	0	0	0	0	✓	✓	✓	
7       Central sideshift (at the touch of a button)       0	5 liftCONTROL	-	_	0	0	_	✓	✓	
8       Horizontal fork alignment (at the touch of a button)       0       0       0       0        ✓       ✓         9       LED spotlights on the fork carriage       0       0       0       0       ✓       ✓       ✓         10       Positioning laser       0       0       0       0       ✓       ✓       ✓         11       Panorama roof panel       0       0       0       0       ✓       ✓       ✓         12       Floor Spot       0       0       0       0       ✓       ✓       ✓         12       Floor Spot       0       0       0       0       ✓       ✓       ✓         13       Traction control system (ASR)       -       0       0       0       ✓       ✓       ✓         14       6-inch full-colour display       0       0       0       ✓       ✓       ✓       ✓         15       Seat (with heater/air cushioning/leather)       0       0       0       ✓       ✓       ✓       ✓         16       EasyAccess (softkey/PIN code/transponder)       0       0       0       ✓       ✓       ✓       ✓	6 Mast reach damping system	-	_	0	0	_	~	✓	
9       LED spotlights on the fork carriage       0       0       0       0       1       1         LED spotlights on the overhead guard       0       0       0       0       1       1         10       Positioning laser       0       0       0       0       1       1         11       Panorama roof panel       0       0       0       0       1       1       1         12       Floor Spot       0       0       0       0       1       1       1         Toggle switch 180°-/360° steering       -       0       0       0       1       1       1         13       Traction control system (ASR)       -       0       0       0       1       1       1         14       6-inch full-colour display       0       0       0       0       1       1       1         15       Seat (with heater/air cushioning/leather)       0       0       0       1 <td>7 Central sideshift (at the touch of a button)</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>✓</td> <td>~</td> <td>~</td> <td></td>	7 Central sideshift (at the touch of a button)	0	0	0	0	✓	~	~	
LED spotlights on the overhead guard0000√✓10Positioning laser00000√✓✓11Panorama roof panel00000✓✓✓12Floor Spot00000✓✓✓✓12Floor Spot00000✓✓✓✓13Traction control system (ASR)-0000✓✓✓146-inch full-colour display0000✓✓✓✓15Seat (with heater/air cushioning/leather)0000✓✓✓✓16EasyAccess (softkey/PIN code/transponder)00000✓✓✓✓00000000✓✓✓✓	8 Horizontal fork alignment (at the touch of a button)	0	0	0	0	-	✓	✓	
10Positioning laser000001111Panorama roof panel0000001112Floor Spot00000001112Floor Spot0000011113Traction control system (ASR)-00011113Traction control system for attachments (ESA)0000111146-inch full-colour display000011115Seat (with heater/air cushioning/leather)000001116EasyAccess (softkey/PIN code/transponder)00000-11000000000111	9 LED spotlights on the fork carriage	0	0	0	0	✓	✓	✓	
11 Panorama roof panel       0       0       0       0       1       1       1         12 Floor Spot       0       0       0       0       0       1       1       1         12 Floor Spot       0       0       0       0       0       1       1       1         13 Traction control system (ASR)       -       0       0       0       0       1       1       1         14 6-inch full-colour display       0       0       0       0       1 <td< td=""><td>LED spotlights on the overhead guard</td><td>0</td><td>0</td><td>0</td><td>0</td><td>✓</td><td>✓</td><td>~</td><td></td></td<>	LED spotlights on the overhead guard	0	0	0	0	✓	✓	~	
12       Floor Spot       0 <td< td=""><td>10 Positioning laser</td><td>0</td><td>0</td><td>0</td><td>0</td><td>✓</td><td>~</td><td>✓</td><td></td></td<>	10 Positioning laser	0	0	0	0	✓	~	✓	
Toggle switch 180°-/360° steering-•-•-•··· <t< td=""><td>11 Panorama roof panel</td><td>0</td><td>0</td><td>0</td><td>0</td><td>✓</td><td>✓</td><td>~</td><td></td></t<>	11 Panorama roof panel	0	0	0	0	✓	✓	~	
driveCONTROL (via free lift) $\circ$ $\bullet$ $\bullet$ $\bullet$ $\bullet$ $\checkmark$ $\checkmark$ $\checkmark$ 13Traction control system (ASR) $ \circ$ $ \circ$ $ \circ$ $ \checkmark$ $\checkmark$ Limit switch system for attachments (ESA) $\circ$ $\circ$ $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ Enabling switch for clamping attachments $\circ$ $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ $\checkmark$ 146-inch full-colour display $\circ$ $\circ$ $\circ$ $\circ$ $\bullet$ $\checkmark$ $\checkmark$ 15Seat (with heater/air cushioning/leather) $\circ$ $\circ$ $\circ$ $\circ$ $\checkmark$ $\checkmark$ 16EasyAccess (softkey/PIN code/transponder) $\circ$ $\circ$ $\circ$ $\circ$ $\bullet$ $\checkmark$ $\checkmark$ Cabins* $\circ$ $\circ$ $\circ$ $\circ$ $\circ$ $\bullet$ $\bullet$ $\bullet$ $\bullet$ $\bullet$	12 Floor Spot	0	0	0	0	✓	✓	~	
13 Traction control system (ASR)-0-0-0-Limit switch system for attachments (ESA)00000000Enabling switch for clamping attachments000000000146-inch full-colour display000000000015Seat (with heater/air cushioning/leather)000000000016EasyAccess (softkey/PIN code/transponder)0000000000Cabins*000000000000	Toggle switch 180°-/360° steering	-	•	-	•	✓	✓	~	
Limit switch system for attachments (ESA)OOOOIIIEnabling switch for clamping attachmentsOOOOIII146-inch full-colour displayOOOIII15Seat (with heater/air cushioning/leather)OOOIII16EasyAccess (softkey/PIN code/transponder)OOOIIIOOOOIIII	driveCONTROL (via free lift)	0	٠	•	•	✓	~	~	
Enabling switch for clamping attachments       0       0       0       0       ✓       ✓         14       6-inch full-colour display       0       0       0       0       ✓       ✓         15       Seat (with heater/air cushioning/leather)       0       0       0       ✓       ✓       ✓         16       EasyAccess (softkey/PIN code/transponder)       0       0       0       0       ✓       ✓	13 Traction control system (ASR)	-	0	-	0	-	✓	~	
146-inch full-colour display000011115Seat (with heater/air cushioning/leather)000011116EasyAccess (softkey/PIN code/transponder)0000111Cabins*000000111	Limit switch system for attachments (ESA)	0	0	0	0	✓	✓	~	
15       Seat (with heater/air cushioning/leather)       ○       ○       ○       ○       ✓       ✓       ✓         16       EasyAccess (softkey/PIN code/transponder)       ○       ○       ○       ○       ✓       ✓       ✓         Cabins*       □       □       □       □       □       □       □       □       ✓       ✓	Enabling switch for clamping attachments	0	0	0	0	✓	✓	~	
16       EasyAccess (softkey/PIN code/transponder)       ○       ○       ○       ○       ✓       ✓       ✓         Cabins*       ○       ○       ○       ○       ○       ○       ✓       ✓       ✓	14 6-inch full-colour display	0	0	0	0	~	✓	~	
Cabins* ○ ○ ○ ○ ─ ✓ ✓	15 Seat (with heater/air cushioning/leather)	0	0	0	0	~	✓	~	
	16 EasyAccess (softkey/PIN code/transponder)	0	0	0	0	~	✓	~	
	Cabins*	0	0	0	0	-	✓	~	
Cold store equipment	Cold store equipment	0	0	0	0	✓	✓	~	

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## 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 as 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 all your fleet's equipment at all locations.

#### **Operating Costs module**

Would you like to see a detailed account of costs and an overview of billing documents, service reports and operating hours? Then this is just the right module for you.

#### Maintenance Management module

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

#### Safety module

This module enables you to increase the safety in your warehouse while at the same time lowering costs of forced damage through access control, driver administration and impact detection. Truck configuration is performed online via 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. You can evaluate truck usage and optimise the current use of the fleet.

#### **Battery Management module**

You can use the Battery Management module to monitor the battery of your electric fork lift trucks, quickly identify operator errors 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 trucks against unauthorised use? With the Access Control module you can conveniently control and define access online and individually for employees, division/department and truck. Automatic shutdown of the truck when it is not being used will help you increase warehouse safety and lower 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 %. They do so with a wide range of technological and ergonomic advantages to reduce all the expenses that make up the Total Cost of Operations (TCO) to minimum levels, from purchase to disposal. We call this promise BestInvest. It helps you transform your costs into profitable investments. So that you can make the best total investment decision.

#### The right racking for the right truck

We can provide you with the complete solution: Integrated warehouse planning to ensure 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 warehouses. 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 services fits your specific application flexibly, whilst ensuring 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 it with our rental and financing solutions. This way, you retain your line of credit and no capital is tied up. We also provide full support for the truck to ensure problem-free operation. And when the work is done, you can simply return the truck to us or trade it for another.





## First TÜV-certified product life-cycle 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 2000 have drastically reduced the  $CO_2$  emissions of our entire truck line. The complete Jungheinrich product cycle now features these innovations, from manufacturing through usage to refurbishing. And Jungheinrich 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, immediately and 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. CE

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