

**All drives for travel, lifting and lowering in 3-phase AC technology**

**Space-saving through optimum truck geometry**

**Cockpit with ergonomic function design**

**High economic efficiency through energy reclamation during braking and lowering (optional)**

**MULTI-PILOT control lever**

**Curve Control for optimum safety during travel**



## **ETM 214/ETV 214/ETM 216/ETV 216**

### **Electric Reach Truck (1400, 1600 kg)**

Space-saving design, high performance data and ergonomically optimised working conditions. These are the strengths of Jungheinrich Reach Trucks 214/216.

The advantages: Space-saving through narrow working aisle widths from 2687 mm (according to VDI when picking up Euro pallets lengthways). Higher throughput efficiency – at the same time reduction of service requirements – through constant use of 3-phase AC technology. Motivated, relaxed operators through efficiency-promoting operating ergonomics.

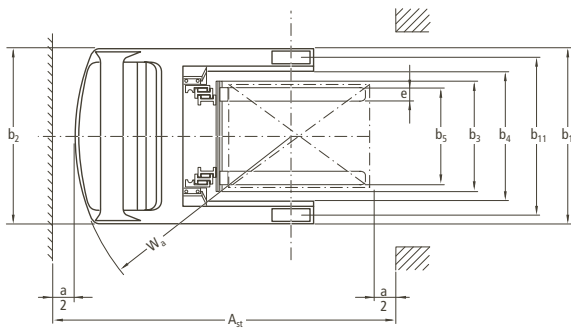
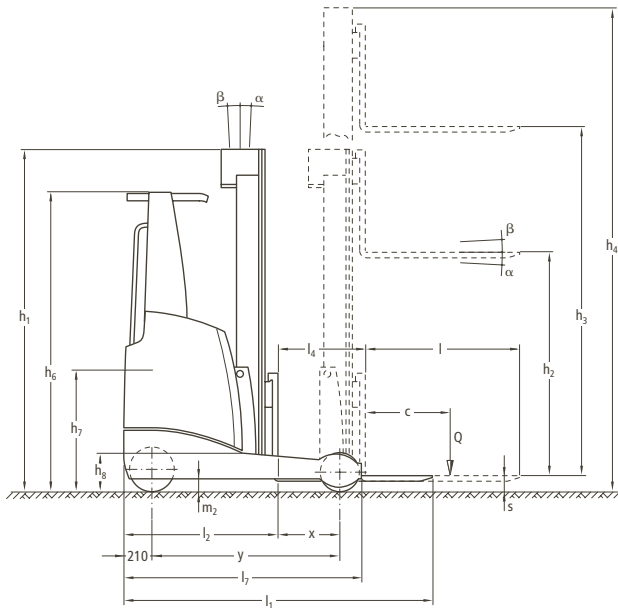
The operator feels the benefit of comfort from the start: from the lowered entry height he comfortably reaches the 5-fold adjustable comfort seat, adjustable armrest, MULTI-PILOT control lever and vertically/horizontally steplessly adjustable steering wheel.

By using the display/operating instruments arranged in front of him, he can call up all operational and safety-relevant data and individually adjust or select various travel programs. Arrangement and design of the instruments contribute towards safety as

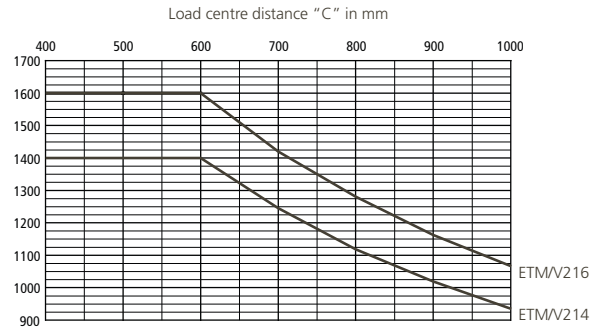
much as the excellent visibility through the panorama mast or operator-protecting roof.

The Jungheinrich reach trucks 214/216 thus provide the best preconditions for economic stacking and retrieval at high lift heights and in the most confined spaces. No matter whether for working in pallet, continuous or drive-in racking, whether for particularly narrow or low clearance heights, whether for single shift or multi-shift applications – the reach trucks 214/216 provide the ideal solution for every application.

# ETM 214/ETV 214/ETM 216/ETV 216



## Capacity



Mast Table ETM 214/ETV 214/ETM 216/ETV 216						
Designation	Closed mast height $h_1$ mm	Lift height $h_3$ mm	Free lift $h_2$ mm	Extended mast height $h_4$ mm	Mast tilt forward/backward $\alpha^\circ/\beta^\circ$	Fork tilt forward/backward $\alpha^\circ/\beta^\circ$
Two-stage ZT	1950	2900	80	3544	2/5	–
	2050	3100	80	3744	2/5	–
	2200	3400	80	4044	2/5	–
	2300	3600	80	4244	2/5	–
	2400	3800	80	4444	1/5	–
	2500	4000	80	4644	1/5	–
	2700	4400	80	5044	1/5	–
Three-stage DZ*	1950	4250	1306	4894	1/5	–
	2200	5000	1556	5644	1/5	2/5
	2300	5300	1656	5944	1/5	2/5
	2400	5600	1756	6244	1/3	2/5
	2500	5900	1856	6544	1/3	2/5
	2600	6200	1956	6844	1/3	2/5
	2700	6500	2056	7144	0.5/2	2/5
	2800	6800	2156	7444	0.5/2	2/5
	2900	7100	2256	7744	0.5/2	2/5
	3000	7400	2356	8044	0.5/1	2/5
	3100	7700	2456	8344	0.5/1	2/5
	3200	8000	2556	8644	0.5/1	2/5
	3300	8300	2656	8944	0.5/1	2/5
	3340	8420	2696	9064	0.5/1	2/5
	3440	8720	2796	9364	0.5/1	2/5
	3540	9020	2896	9664	0.5/1	2/5
	3670	9410	3026	10054	–	2/5
3840	9920	3196	10564	–	2/5	
3950	10250	3306	10894	–	2/5	

\* ETM/V 214/216:  $h_3$  from 4250 mm to 9020 mm, ETV 216 to 10250 mm

# Technical Data in line with VDI 2198 as at: 02/2007

Identification	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1	
	1.2	Manufacturer's type designation	<b>ETM 214</b>	<b>ETV 214</b>	<b>ETM 216</b>	<b>ETV 216</b>	1.2	
		G = fork; E = integrated sideshift	GE	GE	GE	GE		
	1.3	Drive (electric – battery or mains, diesel, petrol, fuel gas, manual)	electric	electric	electric	electric	1.3	
	1.4	Type of operation (hand, pedestrian, standing, seated, order picker)	seated	seated	seated	seated	1.4	
	1.5	Load capacity/rated load Q (t)	1.4	1.4	1.6	1.6	1.5	
	1.6	Load centre distance c (mm)	600	600	600	600	1.6	
	1.8	Load distance, centre of drive axle to fork x (mm)	345 <sup>1)</sup>	417 <sup>1)</sup>	395 <sup>1)</sup>	395 <sup>1)</sup>	1.8	
		Mast pushed forward x <sub>1</sub> (mm)	205	205	205	205		
1.9	Wheelbase y (mm)	1410	1410	1460	1460	1.9		
Weights	2.1	Service weight incl. battery (see line 6.5) kg	2925	2950	3045	3070	2.1	
	2.3	Axle loading, fork retracted, unladen front/rear kg	1755/1170	1770/1180	1827/1218	1842/1228	2.3	
	2.4	Axle loading, fork advanced, laden front/rear kg	475/3806	522/3828	557/4088	560/4110	2.4	
	2.5	Axle loading, fork retracted, laden front/rear kg	1557/2768	1566/2784	1672/2973	1681/2989	2.5	
	Wheels, Chassis	3.1	Tyres (solid rubber, superelastic, pneumatic, polyurethane)	Vulkollan®	Vulkollan®	Vulkollan®	Vulkollan®	3.1
3.2		Tyre size, front	343 x 114	343 x 114	343 x 114	343 x 114	3.2	
3.3		Tyre size, rear	285 x 100	285 x 100	285 x 100	285 x 100	3.3	
3.5		Wheels, number front rear (x = driven wheels)	1x/2	1x/2	1x/2	1x/2	3.5	
3.7		Track width, rear b <sub>11</sub> (mm)	986	1136	986	1136	3.7	
Basic Dimensions		4.1	Mast/fork carriage tilt forward/backward α/β (°)	1/5 <sup>2)</sup>	1/5 <sup>2)</sup>	1/5 <sup>2)</sup>	1/5 <sup>2)</sup>	4.1
		4.2	Closed mast height h <sub>1</sub> (mm)	2300	2300	2300	2300	4.2
	4.3	Free lift h <sub>2</sub> (mm)	1656	1656	1656	1656	4.3	
	4.4	Lift height h <sub>3</sub> (mm)	5300	5300	5300	5300	4.4	
	4.5	Extended mast height h <sub>4</sub> (mm)	5944	5944	5944	5944	4.5	
	4.7	Overhead load guard (cab) height h <sub>6</sub> (mm)	2150	2150	2150	2150	4.7	
	4.8	Seat height/standing height h <sub>7</sub> (mm)	960	960	960	960	4.8	
	4.10	Height of wheel arms h <sub>8</sub> (mm)	285 <sup>3)</sup>	285 <sup>3)</sup>	285 <sup>3)</sup>	285 <sup>3)</sup>	4.10	
	4.19	Overall length l <sub>1</sub> (mm)	2418 <sup>1)</sup>	2346 <sup>1)</sup>	2418 <sup>1)</sup>	2418 <sup>1)</sup>	4.19	
	4.20	Length to face of forks l <sub>2</sub> (mm)	1268 <sup>1)</sup>	1196 <sup>1)</sup>	1268 <sup>1)</sup>	1268 <sup>1)</sup>	4.20	
	4.21	Overall width b <sub>1</sub> /b <sub>2</sub> (mm)	1120/1120	1270/1270	1120/1120	1270/1270	4.21	
	4.22	Fork dimensions s/e/l (mm)	40/120/1150	40/120/1150	40/120/1150	40/120/1150	4.22	
	4.23	Fork carriage ISO 2328, class/type A, B	2/B	2/B	2/B	2/B	4.23	
	4.24	Fork-carriage width b <sub>3</sub> (mm)	800/620	800/620	800/620	800/620	4.24	
	4.25	Width over forks b <sub>5</sub> (mm)	335/709	335/709	335/709	335/709	4.25	
	4.26	Distance between support arms/loading surfaces b <sub>4</sub> (mm)	782	932	782	932	4.26	
	4.28	Reach distance l <sub>4</sub> (mm)	550 <sup>1)</sup>	622 <sup>1)</sup>	600 <sup>1)</sup>	600 <sup>1)</sup>	4.28	
4.32	Ground clearance, centre of wheelbase m <sub>2</sub> (mm)	80	80	80	80	4.32		
4.33	Aisle width for pallets 1000x1200 crossways Ast (mm)	2701/2468 <sup>4)</sup>	2650/2396 <sup>4)</sup>	2715/2468 <sup>4)</sup>	2715/2468 <sup>4)</sup>	4.33		
4.34	Aisle width for pallets 800x1200 lengthways Ast (mm)	2757/2668 <sup>4)</sup>	2692/2596 <sup>4)</sup>	2762/2668 <sup>4)</sup>	2762/2668 <sup>4)</sup>	4.34		
4.35	Turning radius Wa (mm)	1613	1613	1663	1663	4.35		
4.37	Length across wheel arms l <sub>7</sub> (mm)	1792	1792	1842	1842	4.37		
Performance Data	5.1	Travel speed, laden/unladen km/h	14.0/14.0	14.0/14.0	14.0/14.0	14.0/14.0	5.1	
	5.2	Lift speed, laden/unladen m/s	0.44/0.70 <sup>2)</sup>	0.44/0.70 <sup>2)</sup>	0.40/0.70 <sup>2)</sup>	0.40/0.70 <sup>2)</sup>	5.2	
	5.3	Lowering speed, laden/unladen m/s	0.5/0.5 <sup>2)</sup>	0.5/0.5 <sup>2)</sup>	0.5/0.5 <sup>2)</sup>	0.5/0.5 <sup>2)</sup>	5.3	
	5.4	Reach speed, laden/unladen m/s	0.2/0.2 <sup>5)</sup>	0.2/0.2 <sup>5)</sup>	0.2/0.2 <sup>5)</sup>	0.2/0.2 <sup>5)</sup>	5.4	
	5.7	Gradient performance, laden/unladen %	9/13	9/13	8/12	8/12	5.7	
	5.8	Max. gradient performance, laden/unladen %	10/15	10/15	10/15	10/15	5.8	
	5.9	Acceleration time, laden/unladen s	4.8/4.4	4.8/4.4	4.8/4.4	4.8/4.4	5.9	
	5.10	Service brake	electric	electric	electric	electric	5.10	
	E-Motor	6.1	Drive motor rating S <sub>2</sub> 60 min kW	6.9	6.9	6.9	6.9	6.1
		6.2	Lift motor rating at S <sub>3</sub> 15% kW	10/14 <sup>6)</sup>	10/14 <sup>6)</sup>	10/14 <sup>6)</sup>	10/14 <sup>6)</sup>	6.2
6.3		Battery acc. to DIN 43531/35/36 A, B, C, no	43531 B	43531 C	43531 B	43531 C	6.3	
6.4		Battery voltage, nominal capacity K <sub>s</sub> V/Ah	48/420 <sup>1)</sup>	48/420 <sup>1)</sup>	48/420 <sup>1)</sup>	48/420 <sup>1)</sup>	6.4	
6.5		Battery weight kg	750	750	750	750	6.5	
		Battery dimensions l/w/h mm	1035/353/787	1223/283/787	1035/353/787	1223/283/787		
Other Details	8.1	Type of drive control	MOSFET Control AC	MOSFET Control AC	MOSFET Control AC	MOSFET Control AC	8.1	
	8.2	Operating pressure for attachments bar	150	150	150	150	8.2	
	8.3	Oil volume for attachments l/min	20	20	20	20	8.3	
	8.4	Sound level at driver's ear according to EN 12053 dB(A)	68	68	68	68	8.4	

1) other battery sizes change these values 2) dependent on mast 3) with load wheel covering +30 mm 4) for floor storage 5) up to 5600 mm lift height 6) with regenerative lowering

# Make use of the advantages

## High-performance mast

Jungheinrich masts provide maximum safety and space utilisation to high lift heights:

- Excellent visibility towards load.
- Patented mast reach cushioning; in addition, the travel speed is automatically reduced to crawl speed if the load is raised above the free lift height.
- Integrated sideshift.
- Lowest clearance heights together with high lift heights.
- Choice of mast tilt or fork tilt.
- Extremely long lifespan through high-quality sections.
- High residual capacity to high lift heights.
- Lift heights up to 10250 mm.

## Ergonomic operator cab

The operator compartment provides ideal working conditions for highest performance and ease of operation.

- Comfort seat adjustable to any driver (sitting position/backrest/body weight).
- Many depositing facilities.
- Important operating elements are accessible without reaching round.
- Generous available space.
- 3-phase AC steering (capable of being switched over from 180° to 360°) with optimised steering wheel position.



Ergonomic operator cab



MULTI-PILOT

- Automatic positioning of sideshift (centre position) at the touch of a button (optional).
- Automatic horizontal positioning of forks (with fork tilt) at the touch of a button (optional).

## MULTI-PILOT Control Lever

Centrally positioned control lever to control all hydraulic functions, choice of travel direction and horn.

- All operating elements are within sight and each take up a clear function.
- No reaching round is required even during the use of additional hydraulic functions (e.g. fork adjuster, optional).



Operator Display

- Maximum throughput efficiency through simultaneous use of two hydraulic functions (e.g. lifting and reaching).
- Precise operation through proportional hydraulics for all functions.

## Operator Display

High-quality control instrument for the display of most important operating data.

- Travel direction and wheel position display.
- 180°-/360° steering mode.
- Battery condition with residual running time display.
- Selected travel program with performance characteristics.
- Operating hours.
- Time.
- Lift height (optional).
- Centre position sideshift (optional).

## Onboard Computer (optional)

The onboard computer combines several functions in one operating element that ensure economic performance and reliability during daily high-powered operations.

- Large colour screen (TFT-Display).
- PIN access entitlement with user administration.
- Speed display.
- Input of height selection for faster depositing at high lift heights (optional).
- Control monitor for video camera (optional).

## 3-phase AC technology

Powerful 3-phase AC technology for simultaneous travel, lift and steering drive offers a range of advantages compared with traditional direct current motors.

- Powerful acceleration.
- Quick reversing without "moment of reflection".
- High operational availability through maintenance-free motors without carbon brushes.
- Longer operating times through energy reclamation when speed is taken back and during lowering of load (optional).

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