Jungheinrich proprietary 3-phase AC technology in drive, lift and steering motors

Space-saving due to optimum truck design

Ergonomic operator compartment

Energy reclamation during braking and lowering (optional)

MULTI-PILOT control lever

Jungheinrich Curve Control for advanced stability during cornering

ETM 214/ETV 214/ETM 216/ETV 216

Electric Reach Truck (3000, 3500 lbs.*)

A space-saving design, an ergonomic operator compartment and high performance figures – these are the strengths of the ETM/ETV 214/216 reach trucks.

The key advantages:

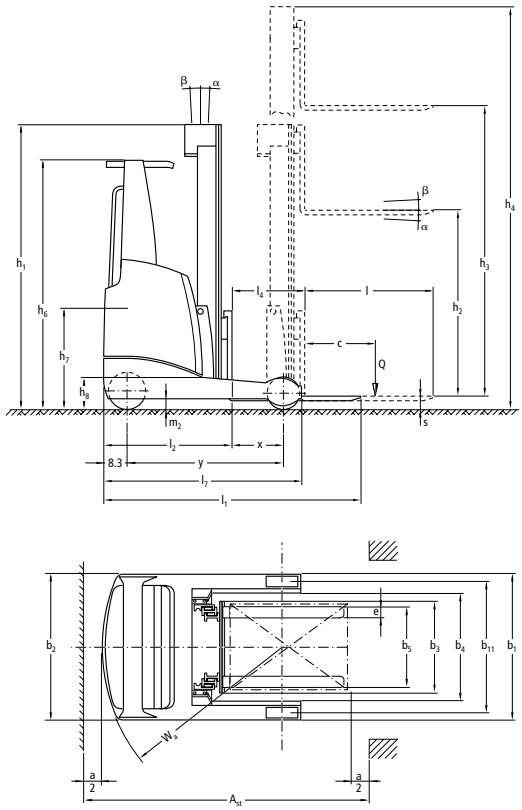
- Space-saving due to narrow working aisle widths from 106 inches.
- Constant use of 3-phase AC technology results in higher efficiency and reduced maintenance requirements.
- The operator benefits from state-of-the-art ergonomics.
- The compartment area has a lowered entry height, and the operator can easily reach the 5-fold comfortable seat, armrest and steering wheel, which are all adjustable, as well as the MULTI-PILOT control lever.

All operational data can be displayed and various travel programs can be selected or adjusted. The operator display and controls are centrally-positioned, and the excellent visibility through the panorama mast and overhead guard allow the operator to work with maximum confidence.

The ETM/ETV 214/216 provide the best operating conditions for efficient stacking and retrieval at high lift heights and in narrow aisles. Whether handling pallets, working in drive-in racking, or operating in single or multi-shift applications — these reach trucks are the ideal solution.

JUNGHEINRICH

ETM 214/ETV 214/ETM 216/ETV 216



Mast Table ETM 214/ETV 214/ETM 216/ETV 216						
Designation	Collapsed mast height h_1 inches	Lift height h_3 inches	Free-lift h_2 inches	Extended mast height h_4 inches	Mast tilt forward/backward degrees	Fork tilt forward/backward degrees
Two-stage mast ZT	77	114	3	154	2/5	–
	81	122	3	162	2/5	–
	87	133	3	174	2/5	–
	91	141	3	182	2/5	–
	95	149	3	189	1/5	–
	99	157	3	197	1/5	–
	107	173	3	213	1/5	–
Three-stage mast DZ (Full free-lift) [1]	77	167	37	207	1/5	–
	81	179	41	219	1/5	–
	87	196	47	237	1/5	2/5
	90	206	50	246	1/5	–
	91	208	51	249	1/5	2/5
	95	220	55	260	1/3	2/5
	97	225	56	265	1/3	–
	98	228	57	269	1/3	–
	99	232	59	272	1/3	2/5
	103	244	62	284	1/3	2/5
	107	255	66	296	0.5/2	2/5
	111	267	70	308	0.5/2	–
	113	275	73	316	0.5/2	–
	115	279	74	319	0.5/2	2/5
	117	287	77	328	0.5/1	–
	119	291	78	331	0.5/1	2/5
	123	303	82	343	0.5/1	2/5
	126	314	86	355	0.5/1	2/5
	130	326	90	367	0.5/1	2/5
	132	331	92	371	0.5/1	2/5
	136	343	96	383	0.5/1	2/5
	140	355	100	395	0.5/1	2/5
	145	370	105	410	–	2/5
	152	390	111	430	–	2/5
	156	403	116	443	–	2/5

1) ETM/ETV 214/216: h_3 from 167.3 inches to 355.1 inches, ETV 216 to 403.5 inches

* Includes standard load backrest with height of 39.4 inches.

Technical Data

as of: 01/2010

Characteristics	1.1	Manufacturer (abbreviation)		Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1
	1.2	Manufacturer's type designation		**ETM 214**	**ETV 214**	**ETM 216**	**ETV 216**	1.2
		G = fork; E = integrated sideshift		GE	GE	GE	GE	
	1.3	Drive		electric	electric	electric	electric	1.3
	1.4	Type of operation		seated	seated	seated	seated	1.4
	1.5	Load capacity / rated load	Q (lbs)	3000	3000	3500	3500	1.5
	1.6	Load center distance	c (inches)	24	24	24	24	1.6
	1.8	Load distance, center of load axle to fork face	x (inches)	13.6 [1]	16.4 [1]	15.6 [1]	15.6 [1]	1.8
		Mast pushed forward	x_1 (inches)	8.1	8.1	8.1	8.1	
	1.9	Wheelbase	y (inches)	55.5	55.5	57.5	57.5	1.9
Weights	2.1	Service weight incl. battery (see line 6.5)	lbs	6449	6504	6713	6768	2.1
	2.3	Axle loading, unloaded front / rear	lbs	3869 / 2579	3902 / 2601	4028 / 2685	4061 / 2707	2.3
	2.4	Axle loading, forks extended, loaded front / rear	lbs	1047 / 8391	1151 / 8439	1228 / 9012	1235 / 9061	2.4
	2.5	Axle loading, forks retracted, loaded front / rear	lbs	3433 / 6102	3452 / 6138	3686 / 6554	3706 / 6590	2.5
Wheels/Chassis	3.1	Tires		Vulkollan®	Vulkollan®	Vulkollan®	Vulkollan®	3.1
	3.2	Tire size, front	inches	13.5 x 4.9	13.5 x 4.9	13.5 x 4.9	13.5 x 4.9	3.2
	3.3	Tire size, rear	inches	11.2 x 3.9	11.2 x 3.9	11.2 x 3.9	11.2 x 3.9	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_{11} (inches)	38.8	44.7	38.8	44.7	3.7
Dimensions	4.1	Mast / fork carriage tilt, forward / backward	degrees	1 / 5 [2]	1 / 5 [2]	1 / 5 [2]	1 / 5 [2]	4.1
	4.2	Collapsed mast height	h_1 (inches)	90.6	90.6	90.6	90.6	4.2
	4.3	Free-lift	h_2 (inches)	51 [7]	51 [7]	51 [7]	51 [7]	4.3
	4.4	Lift height	h_3 (inches)	208.7	208.7	208.7	208.7	4.4
	4.5	Extended mast height	h_4 (inches)	249 [7]	249 [7]	249 [7]	249 [7]	4.5
	4.7	Overhead guard height	h_6 (inches)	84.6	84.6	84.6	84.6	4.7
	4.8	Seat height / platform height	h_7 (inches)	37.8	37.8	37.8	37.8	4.8
	4.10	Height of outriggers	h_8 (inches)	11.2 [3]	11.2 [3]	11.2 [3]	11.2 [3]	4.10
	4.19	Overall length	l_1 (inches)	95.2 [1]	92.4 [1]	95.2 [1]	95.2 [1]	4.19
	4.20	Length to fork face (headlength)	l_2 (inches)	49.9 [1]	47.1 [1]	49.9 [1]	49.9 [1]	4.20
	4.21	Overall width	b_1 /b_2 (inches)	44.1 / 44.1	50.0 / 50.0	44.1 / 44.1	50.0 / 50.0	4.21
	4.22	Fork dimensions	s / e / l (inches)	1.6 / 4.7 / 45.3	1.6 / 4.7 / 45.3	1.6 / 4.7 / 45.3	1.6 / 4.7 / 45.3	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_3 (inches)	31.5 / 24.4	31.5 / 24.4	31.5 / 24.4	31.5 / 24.4	4.24
	4.25	Overall fork width	b_5 (inches)	13.2 / 27.9	13.2 / 27.9	13.2 / 27.9	13.2 / 27.9	4.25
	4.26	Width between outriggers	b_4 (inches)	30.8	36.7	30.8	36.7	4.26
	4.28	Reach distance	l_4 (inches)	21.7 [1]	24.5 [1]	23.6 [1]	23.6 [1]	4.28
	4.32	Ground clearance, center of wheelbase	m_2 (inches)	3.1	3.1	3.1	3.1	4.32
	4.33	Aisle width for pallets 40 x 48 (L x W)	Ast (inches)	99.2 / 89.9 [4]	97.2 / 87.1 [4]	99.7 / 89.9 [4]	99.7 / 89.9 [4]	4.33
	4.34	Aisle width for pallets 48 x 48 (L x W)	Ast (inches)	103.3 / 97.7 [4]	100.9 / 95.1 [4]	103.6 / 97.9 [4]	103.6 / 97.9 [4]	4.34
	4.35	Turning radius	Wa (inches)	63.5	63.5	65.5	65.5	4.35
	4.37	Length to tip of outrigger	l_7 (inches)	70.6	70.6	72.5	72.5	4.37
Performance	5.1	Travel speed, loaded / unloaded	mph	8.7 / 8.7	8.7 / 8.7	8.7 / 8.7	8.7 / 8.7	5.1
	5.2	Lift speed, loaded / unloaded	ft/min	86.6 / 137.8 [2]	86.6 / 137.8 [2]	78.7 / 137.8 [2]	78.7 / 137.8 [2]	5.2
	5.3	Lowering speed, loaded / unloaded	ft/min	98.4 / 98.4 [2]	98.4 / 98.4 [2]	98.4 / 98.4 [2]	98.4 / 98.4 [2]	5.3
	5.4	Reaching speed, loaded / unloaded	ft/min	39.4 / 39.4 [5]	39.4 / 39.4 [5]	39.4 / 39.4 [5]	39.4 / 39.4 [5]	5.4
	5.7	Gradeability, loaded / unloaded	%	9 / 13	9 / 13	8 / 12	8 / 12	5.7
	5.8	Max. gradeability, loaded / unloaded	%	10 / 15	10 / 15	10 / 15	10 / 15	5.8
	5.9	Acceleration time, loaded / unloaded	sec	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
Motors	6.1	Drive motor rating S_2 60 min	kW/HP	6.9 / 9.3	6.9 / 9.3	6.9 / 9.3	6.9 / 9.3	6.1
	6.2	Lift motor rating at S_3 15 %	kW/HP	13.4 / 18.8 [6]	13.4 / 18.8 [6]	13.4 / 18.8 [6]	13.4 / 18.8 [6]	6.2
	6.4	Battery voltage, nominal capacity (at 6 hour rate)	V/Ah	48 / 625-750 [1]	48 / 500-625 [1]	48 / 625-750 [1]	48 / 500-625 [1]	6.4
	6.5	Battery weight (minimum)	lbs	1653	1653	1653	1653	6.5
		Battery dimensions	l/w/h (inches)	40.7 / 13.9 / 31.0	48.1 / 11.1 / 31.0	40.7 / 13.9 / 31.0	48.1 / 11.1 / 31.0	
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	psi	2176	2176	2176	2176	8.2
	8.3	Flowrate for attachments	gpm	5.2	5.2	5.2	5.2	8.3
	8.4	Sound level at the driver's ear	dB(A)	68	68	68	68	8.4

1) other battery sizes change these values
2) depending on mast
3) with load wheel covering +1.2 inches
4) without 8 inch maneuvering space; second value is for floor storage
5) lift height up to 220.5 inches
6) with regenerative lowering
7) includes load backrest with height of 39.5 inches.

This specification sheet only provides technical values for the standard truck. Non-standard tires, different masts, additional equipment, etc. could produce other values.

The Jungheinrich Advantage

High-performance mast
Jungheinrich masts provide maximum space utilization at high lift heights.
- Excellent visibility towards the load.
- Patented mast-reach cushioning, with travel speed automatically reduced to crawl speed if the load is raised above the free-lift height.
- Integrated sideshift.
- Low collapsed heights combined with high lift heights.
- Choice of mast tilt or fork tilt above certain lift heights.
- Extremely long lifespan due to high-quality mast profiles.
- High residual capacity at high lift heights.
- Lift heights up to 34 feet.

Ergonomic operator compartment
The operator compartment provides ideal working conditions for high performance and ease of operation.
- Comfortable seat with adjustment options (seat position, backrest, body weight) for every operator.
- Several storage areas.
- Important operating controls are easily accessible.
- Generous space available in compartment.
- 3-phase AC steering (180°/360°) with optimum steering wheel position.
- Automatic positioning of sideshift (center position) at the touch of a button (optional).


Ergonomic operator compartment


MULTI-PILOT

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

MULTI-PILOT
Centrally-positioned control lever to activate all hydraulic functions, including travel direction and the horn.
- All operating controls are visible and organized in a logical manner.
- Additional hydraulic functions (e.g. fork positioner, optional) can be controlled with the MULTI-PILOT.
- Maximum efficiency through simultaneous use of two hydraulic functions (e.g. lifting and reaching).
- Precise operation using proportional hydraulics for all functions.


Operator display

Operator display
High-quality control panel displaying the most important operating data.
- Travel direction and wheel position display.
- 180°/360° steering mode.
- Battery state-of-charge with residual running time display.
- Three adjustable travel programs to suit every application.
- Operating hours and clock.
- Lift height (optional).
- Center position sideshift (optional).

Onboard computer (optional)
The onboard computer combines several functions in one operating element that ensures economic performance and reliability during daily high-powered operations.
- Large color screen (TFT-Display).
- PIN access with user administration.
- Speed display.
- Input of height selection for faster stacking at high lift heights (optional).
- Control monitor for video camera (optional).

Jungheinrich proprietary 3-phase AC technology
Powerful 3-phase AC technology in drive, lift and steering motors offers several advantages over traditional DC motors.
- Powerful acceleration.
- Quick directional changes without delay.
- Greater operational availability due to maintenance-free motors without carbon brushes, brush springs or commutators.
- Longer operating times due to energy reclamation during braking and lowering of the load (optional).

1-877-JH-FORKS

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