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 320/ETV 320/ETM 325/ETV 325

Electric Reach Truck (4400, 5500 lbs.*)

A space-saving design, high performance and an ergonomic operator's compartment – these are the strengths of the ETM/ETV 320/325 reach trucks.

The key advantages:

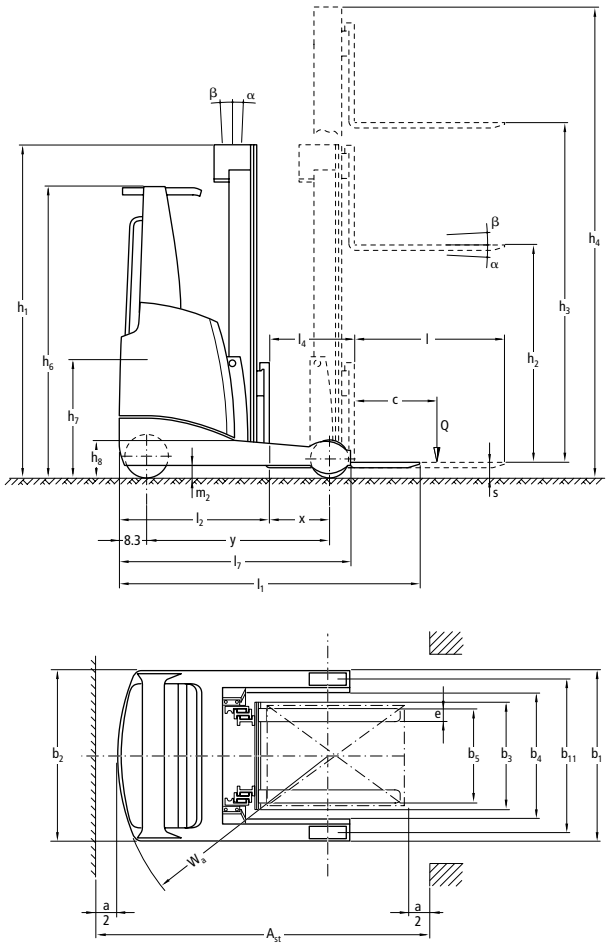
- Space-saving due to narrow working aisle widths from 110 inches.
- Constant use of 3-phase AC technology results in higher efficiency and reduced maintenance requirements.
- The operator benefits from the state-of-the-art ergonomics.
- The compartment area has a lowered entry height, and the operator can adjust the 3-fold comfortable seat, armrest, MULTI-PILOT control lever and steering wheel in both horizontal and vertical directions.

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 320/325 provide the best operating conditions for efficient stacking and retrieval at high lift heights and in narrow aisles. Whether handling pallets, operating in drive-in racking, working with low clearance heights, or operating in single or multishift applications – these reach trucks can be the ideal solution.

JUNGHEINRICH

ETM 320/ETV 320/ETM 325/ETV 325



Mast Table ETM 320 / ETV 320 / ETM 325 / ETV 325						
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 α° / β°	Fork tilt [1] forward / backward α° / β°
Three-stage mast DZ (Full free-lift)	80.7	167.3	41	207	1 / 5	–
	86.6	185.0	47	225	1 / 5	–
	90.6	196.8	51	237	1 / 5	–
	94.5	208.7	55	249	1 / 5	–
	97.6	218.9	58	259	1 / 3	–
	98.4	220.5	59	260	1 / 3	–
	102.4	232.3	62	272	0.5 / 2	–
	104.3	238.2	64	278	0.5 / 2	–
	106.3	244.1	66	284	0.5 / 2 [2]	2 / 5 [2]
	114.2	267.7	74	308	0.5 / 2 [2]	2 / 5 [2]
	116.1	273.6	76	313	0.5 / 2 [2]	2 / 5 [2]
	122.0	291.3	82	331	0.5 / 1 [2]	2 / 5 [2]
	130.0	315.0	90	355	0.5 / 1 [2]	2 / 5 [2]
	135.4	331.5	96	371	0.5 / 1 [2]	2 / 5 [2]
	139.4	343.3	100	383	0.5 / 1 [2]	2 / 5 [2]
	144.5	358.7	105	399	–	2 / 5
	151.2	378.7	111	419	–	2 / 5
	155.5	391.7	116	432	–	2 / 5
	159.1	402.4	119	442	–	2 / 5
	163.0	414.2	123	454	–	2 / 5
	165.4	421.3	125	461	–	2 / 5
	167.7	428.3	128	468	–	2 / 5
	170.9	437.8	131	478	–	2 / 5
	176.0	453.1	136	493	–	2 / 5
	182.7	473.2	143	513	–	2 / 5

1) ETV 320 / 325 only
2) Choice of mast tilt or fork tilt; a truck can be ordered with one or the other but not both.
* Includes standard load backrest with height 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 320 DZ** [6]	**ETV 320 DZ** [6]	**ETM 325 DZ** [6]	**ETV 325 DZ** [6]	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)	4400	4400	5500	5500	1.5
	1.6	Load center distance c (inches)	24.0	24.0	24.0	24.0	1.6
	1.8	Load distance, center of load axle to fork face x (inches)	12.3[1]	15.8[1]	18.4[1]	19.7[1]	1.8
		Mast pushed forward x_1 (inches)	8.8	8.8	8.8	8.8	
	1.9	Wheelbase y (inches)	59.5	59.5	65.6	65.6	1.9
Weights	2.1	Service weight lbs	7826[1]	8047[1]	7937[1]	8157[1]	2.1
	2.3	Axle loading, unloaded front / rear lbs	4744 / 3082	4877 / 3170	4859 / 3078	4991 / 3164	2.3
	2.4	Axle loading, forks extended, loaded front / rear lbs	1261 / 10975	1283 / 11173	1305 / 12143	1327 / 12341	2.4
	2.5	Axle loading, forks retracted, loaded front / rear lbs	3979 / 8256	4068 / 8389	4403 / 9046	4480 / 9189	2.5
Wheels/Chassis	3.1	Tires	Vulkollan®	Vulkollan®	Vulkollan®	Vulkollan®	3.1
	3.2	Tire size, front inches	13.5 x 4.5	13.5 x 4.5	13.5 x 5.5	13.5 x 5.5	3.2
	3.3	Tire size, rear inches	14.0 x 4.2	14.0 x 4.2	14.0 x 5.3	14.0 x 5.3	3.3
	3.5	Wheels, number front / rear (x = driven wheels)	1x / 2	1x / 2	1x / 2	1x / 2	3.5
	3.6	Track width, front b_{10} (inches)	–	–	–	–	3.6
	3.7	Track width, rear b_{11} (inches)	39.6	45.5	40.7	46.6	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)	94.5	94.5	94.5	94.5	4.2
	4.3	Free-lift h_2 (inches)	55[7]	55[7]	55[7]	55[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)	14.0[3]	14.0[3]	14.0[3]	14.0[3]	4.10
	4.19	Overall length l_1 (inches)	100.3[1]	96.8[1]	100.3[1]	99.0[1]	4.19
	4.20	Length to fork face (headlength) l_2 (inches)	55.0[1]	51.5[1]	55.0[1]	53.7[1]	4.20
	4.21	Overall width b_1 /b_2 (inches)	44.9 / 44.1	50.8 / 50.0	47.2 / 44.1	53.1 / 50.0	4.21
	4.22	Fork dimensions s / e / l (inches)	2.0 / 5.5 / 45.3	2.0 / 5.5 / 45.3	2.0 / 5.5 / 45.3	2.0 / 5.5 / 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	31.5	31.5	31.5	4.24
	4.25	Overall fork width b_5 (inches)	14.0 / 29.0	14.0 / 29.0	14.0 / 29.0	14.0 / 29.0	4.25
	4.26	Width between outriggers b_4 (inches)	31.1	37	31.1	37.0	4.26
	4.28	Reach distance l_4 (inches)	21.1[1]	24.6[1]	27.7[1]	29.0[1]	4.28
	4.32	Ground clearance, center of wheelbase m_2 (inches)	3.7	3.7	3.7	3.7	4.32
	4.33	Aisle width for pallets 48 x 48 (L x W) Ast (inches)	110.3 / 103.0[4]	107.5 / 99.5[4]	111.5 / 103.0[4]	110.5 / 101.7[4]	4.33
		Truck diagonal D (inches)	82.4	85.9	88.1	91.6	
	4.35	Turning radius Wa (inches)	67.3	67.3	73.4	73.4	4.35
	4.37	Length to tip of outrigger l_7 (inches)	75.6	75.6	81.7	81.7	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	63.0 / 118.1[2]	63.0 / 118.1[2]	59.1 / 118.1[2]	59.1 / 118.1[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	Reach speed, loaded / unloaded ft/min	23.6[2]	23.6[2]	23.6[2]	23.6[2]	5.4
	5.7	Gradeability, loaded / unloaded %	7 / 11	7 / 11	6 / 10	6 / 10	5.7
	5.8	Max. gradeability, loaded / unloaded %	10 / 15	10 / 15	10 / 15	10 / 15	5.8
	5.9	Acceleration time, loaded / unloaded s	5.3 / 4.6	5.3 / 4.6	5.4 / 4.6	5.4 / 4.6	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	10/14[5] I 13.4/18.8[5]	10/14[5] I 13.4/18.8[5]	10/14[5] I 13.4/18.8[5]	10/14[5] I 13.4/18.8[5]	6.2
	6.4	Battery voltage, nominal capacity (at 6 hour rate) V/Ah	48 / 560[1]	48 / 560[1]	48 / 560[1]	48 / 560[1]	6.4
	6.5	Battery weight lbs	2066[1]	2066[1]	2066[1]	2066[1]	6.5
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	2321	2321	2321	2321	8.2
	8.3	Flowrate for attachments gpm	4.0	4.0	4.0	4.0	8.3
	8.4	Sound level at the driver's ear dB(A)	70	70	70	70	8.4

1) other battery sizes change these values
2) depending on mast
3) with load wheel covering + 1.2 inches
4) without 8" maneuvering space; second value is for floor storage
5) without regenerative lowering 13.4 HP
6) with three-stage mast, 208" lift height
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 excellent capacity and space utilization to high lift heights.
- Excellent visibility towards 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.
- Extremely long lifespan due to high-quality mast profiles.
- High residual capacity to high lift heights.
- Lift heights up to 39.4 feet.

Ergonomic operator compartment
The operator's compartment provides ideal working conditions for high performance and ease of operation.
- Comfortable seat with adjustment options (sitting position, backrest, body weight) for every operator.
- Several storage compartments.
- Important operating functions are easily accessible.
- Generous space available in compartment.
- 3-phase AC steering (180° / 360°) with optimum steering wheel position.


Ergonomic operator compartment


MULTI-PILOT

- Automatic positioning of sideshift (center 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 activate all hydraulic functions, control travel direction and the horn.
- All operating functions are in view and organized in a logical manner.


Operator display

- 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
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 time.
- 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 for drive, lift and steering motors offers several advantages over traditional direct current motors.
- Powerful acceleration.
- Quick plugging without hesitation.
- 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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