

24 Volt 3-phase AC technology for greater torque and responsiveness

Ergonomic design for outstanding handling

Excellent efficiency due to high performance levels with low energy consumption

Available with optional walk-on load section (L) or auxiliary lift (Z)



EKS 110

Vertical Order Picker (2200 lbs.)

The EKS 110 is the ideal truck for order picking in the first to third levels of racking. The platform and load section can be raised to a height of up to 118 inches, allowing individual items to be picked from heights up to 15 feet.

The travel and lift controls are designed to allow for simultaneous operation to get to the point of order picking faster. The counterbalance design also allows for

a wide range of loads to be handled. The load section is available with an optional walk-on design (with a pallet surround, if required) or with an auxiliary lift (without reducing the residual capacity). The auxiliary lift ensures that the picked goods can be placed at an ergonomically correct height.

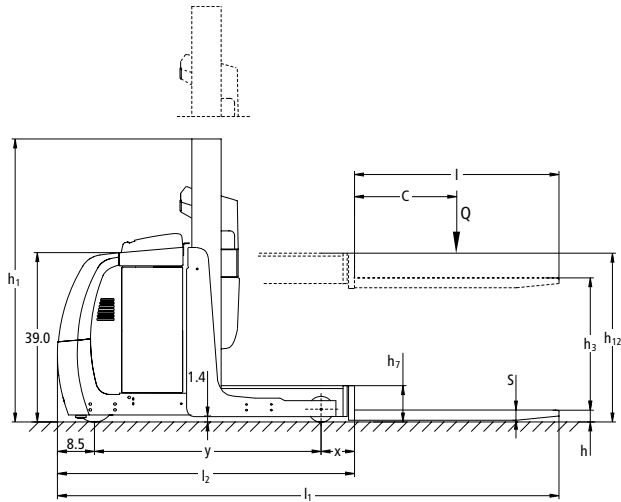
Additional ergonomic and technical features are utilized to make order picking easier,

faster and more economical. These features include:

- Large storage areas on the battery cover and below the control unit.
- Extended operator platform width (optional).
- Infinitely variable speed control.
- Individually adjustable travel parameters.
- Clear operator display.
- 24 Volt AC drive system.

EKS 110

EKS 110 L



EKS 110 Z

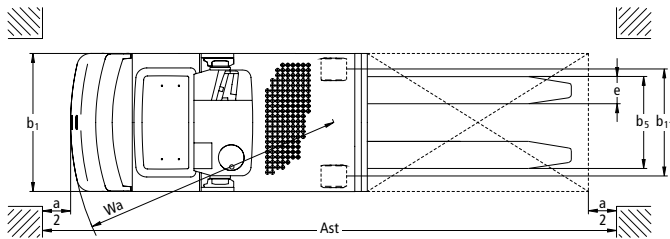
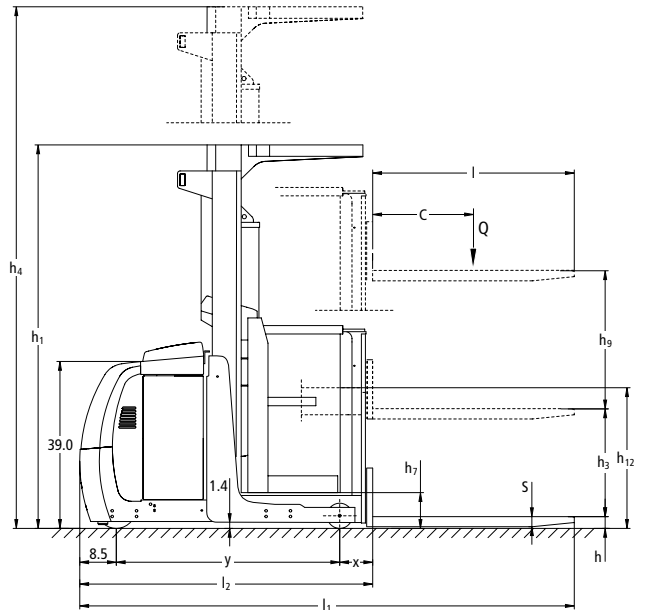


Illustration shows version 100 E

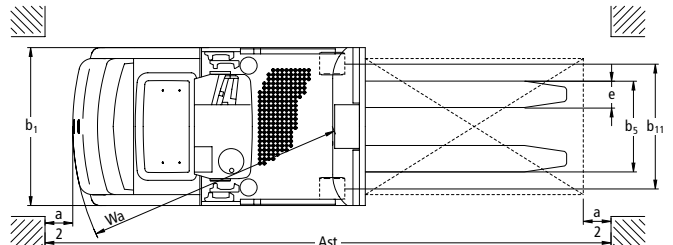


Illustration shows version 280 ZZ
Top view shown without overhead guard (OHG)

Mast Table EKS 110							
Mast Types	Lift height h_3 inches	Platform height h_{12} inches	Order picking height $h_{12}+63$ inches	Collapsed mast height h_1 inches		Extended mast height h_4 inches	
				without OHG	with OHG	without OHG	with OHG
100 E	39.4	47.2	110.2	65.4 ¹⁾	87.8 ²⁾	104.7 ¹⁾	127.2 ²⁾
160 E	63.0	70.9	133.9	–	89.0 ¹⁾	–	150.8 ²⁾
190 E	74.8	82.7	145.7	–	100.8 ¹⁾	–	162.6 ²⁾
280 ZZ	110.2	118.1	181.1	–	87.8 ²⁾	–	198.0 ²⁾

1) Highest point is lift mast
2) Highest point is overhead guard

Technical Data

as of: 01/2010

Characteristics	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1	
	1.2	Manufacturer's type designation	EKS 110 (100 E)¹⁾	EKS 110 (160 E)¹⁾	EKS 110 (190 E)¹⁾	EKS 110 (280 ZZ)¹⁾	1.2	
	1.3	Drive	electric	electric	electric	electric	1.3	
	1.4	Type of operation	order picker	order picker	order picker	order picker	1.4	
	1.5	Load capacity / rated load	Q (lbs)	2200	2200	2200	2200	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)	7.0	7.0	7.0	7.3	1.8
	1.9	Wheelbase	y (inches)	51.2	51.2	51.2	53.5	1.9
	Weights	2.1	Service weight incl. battery (see line 6.5)	lbs	3871 ²⁾	4264 ²⁾	4343 ²⁾	5309 ²⁾
2.2		Axle loading, loaded front / rear	lbs	1049 / 5027 ³⁾	1005 / 5463 ³⁾	1005 / 5542 ³⁾	1764 / 5750 ³⁾	2.2
2.3		Axle loading, unloaded front / rear	lbs	2377 / 1495 ³⁾	2425 / 1839 ³⁾	2443 / 1900 ³⁾	3058 / 2251 ³⁾	2.3
Wheels / Chassis	3.1	Tires	Vulkollan®	Vulkollan®	Vulkollan®	Vulkollan®	3.1	
	3.2	Tire size, front	inches	9.1 x 3.1	9.1 x 3.1	9.1 x 3.1	9.1 x 3.1	3.2
	3.3	Tire size, rear	inches	5.9 x 5.1	5.9 x 5.1	5.9 x 5.1	5.9 x 5.1	3.3
	3.7	Track width, rear	b ₁₁ (inches)	24.8	24.8	24.8	29.9	3.7
Dimensions	4.2	Collapsed mast height	h ₁ (inches)	65.4 ⁴⁾	89.0	100.8	87.8	4.2
	4.4	Lift height	h ₃ (inches)	39.4	63.0	74.8	110.2	4.4
	4.5	Extended mast height	h ₄ (inches)	104.7 ⁴⁾	150.8	162.6	198.0	4.5
	4.7	Overhead guard height	h ₆ (inches)	87.8 (optional)	87.8	87.8	87.8	4.7
	4.8	Seat height / platform height	h ₇ (inches)	7.9	7.9	7.9	7.9	4.8
	4.11	Auxiliary lift	h ₉ (inches)	31.5 ⁷⁾	31.5 ⁷⁾	31.5 ⁷⁾	31.5 ⁷⁾	4.11
	4.14	Maximum platform height	h ₁₂ (inches)	47.2	70.9	82.7	118.1	4.14
	4.15	Lowered fork height	h ₁₃ (inches)	3.1	3.1	3.1	3.1	4.15
	4.16	Length of loading surface	l ₃ (inches)	30.5 ⁵⁾	30.5 ⁵⁾	30.5 ⁵⁾	30.5 ⁵⁾	4.16
	4.19	Overall length	l ₁ (inches)	114.0	114.0	114.0	116.7	4.19
	4.20	Length to fork face (headlength)	l ₂ (inches)	66.7	66.7	66.7	69.5	4.20
	4.21	Overall width	b ₁ / b ₂ (inches)	31.9	31.9	31.9	37.0	4.21
	4.22	Fork dimensions	s / e / l (inches)	2.4 x 6.3 x 47.2 ⁶⁾	2.4 x 6.3 x 47.2 ⁶⁾	2.4 x 6.3 x 47.2 ⁶⁾	2.4 x 6.3 x 47.2 ⁶⁾	4.22
	4.23	Fork carriage ISO 2328, class / type A, B		FEM 2 A (optional)	FEM 2 A (optional)	FEM 2 A (optional)	FEM 2 A (optional)	4.23
	4.25	Overall fork width	b ₅ (inches)	21.3 ⁸⁾	21.3 ⁸⁾	21.3 ⁸⁾	21.3 ⁸⁾	4.25
4.26	Width between outriggers	b ₄ (inches)	16.9	16.9	16.9	22.0	4.26	
4.31	Ground clearance, loaded, under mast	m ₁ (inches)	1.4	1.4	1.4	1.4	4.31	
4.34	Aisle width for pallets 48 x 40 (L x W)	Ast (inches)	126.0	126.0	126.0	128.0	4.34	
4.35	Turning radius	Wa (inches)	59.8	59.8	59.8	62.1	4.35	
Performance	5.1	Travel speed, loaded / unloaded	mph	6.1 / 6.3	5.6 / 5.6	5.6 / 5.6	5.6 / 5.6	5.1
	5.2	Lift speed, loaded / unloaded	ft/min	31.5 / 39.4	25.6 / 33.5	25.6 / 33.5	27.6 / 37.4	5.2
	5.3	Lowering speed, loaded / unloaded	ft/min	41.3 / 37.4	41.3 / 37.4	41.3 / 37.4	49.2 / 37.4	5.3
	5.7	Gradeability, loaded / unloaded	%	5 / 10	5 / 10	5 / 10	5 / 10	5.7
	5.11	Parking brake		electro magnetic	electro magnetic	electro magnetic	electro magnetic	5.11
Motors	6.1	Drive motor rating S ₂ 60 min	kW / HP	2.5 / 3.4	2.5 / 3.4	2.5 / 3.4	2.5 / 3.4	6.1
	6.2	Lift motor rating at S ₃ 15%	kW / HP	3.0 / 4.0	3.0 / 4.0	3.0 / 4.0	3.0 / 4.0	6.2
	6.3	Lift motor rating at S ₃ 25%	kW / HP	2.2 / 3.0	2.2 / 3.0	2.2 / 3.0	2.2 / 3.0	6.3
	6.4	Battery voltage, nominal capacity (at 6 hour rate)	V/Ah	24 / 560	24 / 560	24 / 560	24 / 560	6.4
	6.5	Battery weight	lbs	1058	1058	1058	1058	6.5
Other Details	8.1	Type of drive control		AC SpeedControl	AC SpeedControl	AC SpeedControl	AC SpeedControl	8.1
	8.4	Sound level at the driver's ear	dB (A)	61	61	61	61	8.4

- 1) Data applies unless otherwise specified for options L and Z
- 2) For auxiliary lift Z: + 224.9 lbs.
- 3) For auxiliary lift Z: approx. + 11.0 / + 213.8 lbs.
- 4) With overhead guard: + 22.4 inches
- 5) For auxiliary lift Z: - 2.6 inches
- 6) For auxiliary lift Z: 2.6 x 6.3 x 47.2 inches; with fixed carriage
- 7) Z version only
- 8) with fixed carriage

The Jungheinrich Advantage

24 Volt 3-phase AC technology

Jungheinrich AC motors provide greater power and reduce operating costs during the life of the truck. The benefits include:

- Outstanding efficiency and excellent energy conservation.
- Powerful acceleration.
- Fast reversing without hesitation.
- No carbon brushes – the traction motor is maintenance-free.

Smooth lifting and lowering

The platform raises and lowers in a consistent, smooth process resulting from the special modulation of the hydraulic pump and valves. The cushioned platform provides additional operating comfort. The advantages:

- Physical relief for the operator.
- Additional protection for sensitive loads.
- Minimal wear due to reduced stress on the truck.

Controlled travel

The Jungheinrich SpeedControl system provides smooth, precise control of the travel speed.

- The requested travel speed is maintained in every travel situation. The traction controller can be programmed for different applications: ultra smooth movement when precise, low speeds are required; faster travel and acceleration when higher performance is needed.



Operator's display

- Individually adjustable travel parameters (e.g. acceleration, top speed, regenerative braking) ensure optimum adjustment to every application.
- The operator can choose from 3 different travel programs.
- Very low noise when lifting and driving.

Operator display

High-quality control panel that displays the most important operating data.

- Travel direction and wheel position display.
- Battery condition with residual running time display.
- Selected travel program with performance features.
- Operating hours and time.

Ergonomic control unit

- The angled steering wheel supports natural hand movements and virtually eliminates wrist strain.
- Easily accessible buttons and switches allow the operator to control the truck with minimal hand movements.

Excellent efficiency and reliability

High acceleration levels and fast travel / lift speeds provide excellent conditions for order picking performance. Several performance features ensure high reliability.

- Secure handling around corners due to a low center of gravity.
- Rigid chassis and mast design limit truck lean and flex during operation.
- Travel performance is precisely tuned, based on a combination of lift height and steering angle, to allow for maximum productivity and operator confidence throughout the work shift.

Less maintenance

Service-friendly components ensure long-term reduction of operating costs.



Control console

- AC motors eliminate the need for maintenance associated with DC motors, such as brushes, brush springs or a commutator.
- Easy access to all components through the front / side panels due to the optimum layout of auxiliary hydraulics.

Optional equipment

- Pallet protection for walk-on load lifting devices.
- Guidance controls, aisle recognition and end-of-aisle protection device for narrow-aisle applications.
- Platform extensions.
- Secondary operator position in fork direction.
- Cold store package.
- Working lights on overhead guard.
- Warning light on overhead guard.



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