

**AC drive system (24 volts)  
for greater torque and dynamic  
movement**

**Ergonomic workcentre  
for outstanding handling**

**Outstanding efficiency:  
high orderpicking performance levels  
with low energy consumption**

**Optionally available with walk-on  
load section (L) or auxiliary lift (Z)**



## **EKS 110**

### **Vertical Order picker (1000 kg)**

The EKS 110 is the ideal truck for stockpicking between the first and third levels. The platform and load section can be raised up to a height of 3000 mm. This allows for picking up to a height of 4600 mm.

The counterbalance design allows a wide range of load storage units to be raised off the ground both longitudinally and crosswise.

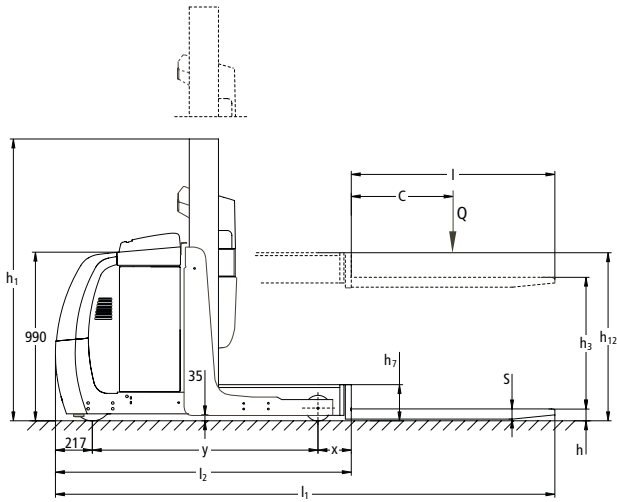
The load section is optionally available in a walk-on design (with a pallet surround, if required) or with auxiliary lift (without reducing the residual capacity). The auxiliary lift ensures that the picked goods can be stored at an accessible height.

Other ergonomic and technical innovations are included to make orderpicking faster, easier and above all more economical:

- Large storage areas on the battery cover (optional) and below the control unit.
- Extended operator platform width (optional).
- Sensitive speed control.
- Individual travel programs.
- Clearly defined driver's display.
- AC drive system (24 volts).

# EKS 110

EKS 110 L



EKS 110 Z

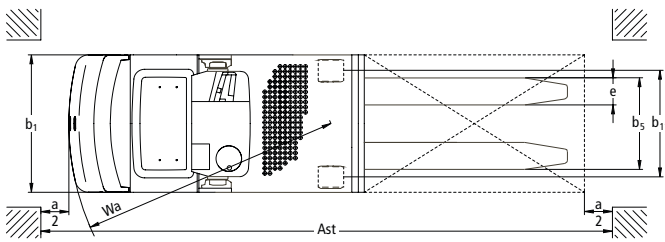
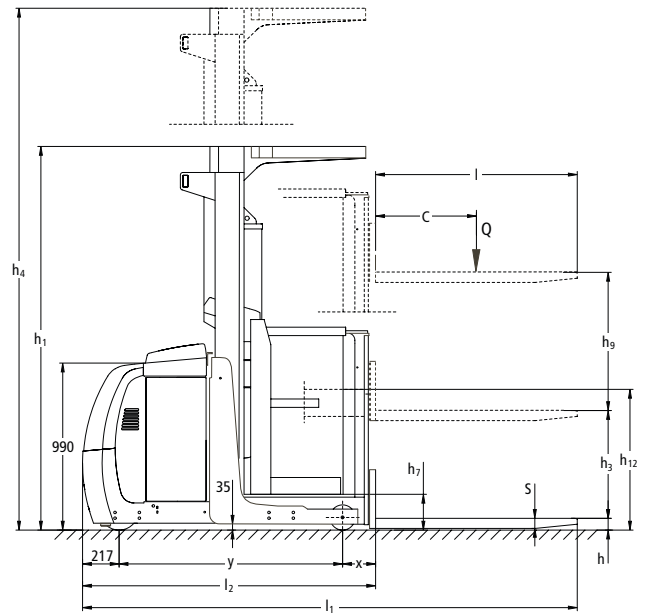


Illustration shows version 100 E

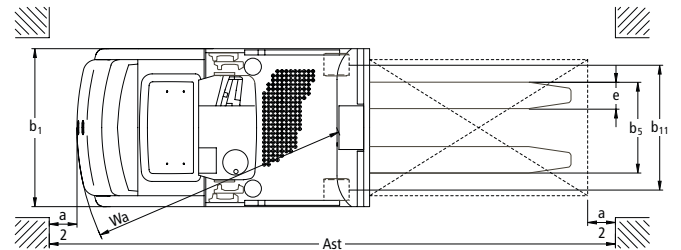


Illustration shows version 280 ZZ  
Top view shown without OHG

Mast Table EKS 110							
Mast	Lift height $h_3$ mm	Operator height $h_{12}$ mm	Orderpicking height $h_{12} + 1600$ mm	Closed mast height $h_1$ mm		Extended mast height $h_4$ mm	
				without OHG	with OHG	without OHG	with OHG
100 E	1000	1200	2800	1660 <sup>1)</sup>	2230 <sup>2)</sup>	2660 <sup>1)</sup>	3230 <sup>2)</sup>
160 E	1600	1800	3400	–	2260 <sup>1)</sup>	–	3830 <sup>2)</sup>
190 E	1900	2100	3700	–	2560 <sup>1)</sup>	–	4130 <sup>2)</sup>
280 ZZ	2800	3000	4600	–	2230 <sup>2)</sup>	–	5030 <sup>2)</sup>

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

# Technical Data in line with VDI 2198 as at: 04/2007

Identification	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1	
	1.2	Manufacturer's type designation	<b>EKS 110 (100 E)<sup>1)</sup></b>	<b>EKS 110 (160 E)<sup>1)</sup></b>	<b>EKS 110 (190 E)<sup>1)</sup></b>	<b>EKS 110 (280 ZZ)<sup>1)</sup></b>	1.2	
	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)	order picker	order picker	order picker	order picker	1.4	
	1.5	Load capacity/rated load	Q (t)	1.0	1.0	1.0	1.0	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)	178	178	178	185	1.8
	1.9	Wheelbase	y (mm)	1300	1300	1300	1360	1.9
	Weights	2.1	Service weight incl. battery (see line 6.5)	kg	1756 <sup>2)</sup>	1934 <sup>2)</sup>	1970 <sup>2)</sup>	2408 <sup>2)</sup>
2.2		Axle loading, laden front/rear	kg	476/2280 <sup>3)</sup>	456/2478 <sup>3)</sup>	456/2514 <sup>3)</sup>	800/2608 <sup>3)</sup>	2.2
2.3		Axle loading, unladen front/rear	kg	1078/678 <sup>3)</sup>	1100/834 <sup>3)</sup>	1108/862 <sup>3)</sup>	1387/1021 <sup>3)</sup>	2.3
Wheels, Chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	Vulkollan®	Vulkollan®	Vulkollan®	Vulkollan®	3.1	
	3.2	Tyre size, front	230x80	230x80	230x80	230x80	3.2	
	3.3	Tyre size, rear	150x130	150x130	150x130	150x130	3.3	
	3.7	Track width, rear	b <sub>11</sub> (mm)	630	630	630	760	3.7
Basic Dimensions	4.2	Lowered mast height	h <sub>1</sub> (mm)	1660 <sup>4)</sup>	2260	2560	2230	4.2
	4.4	Lift	h <sub>3</sub> (mm)	1000	1600	1900	2800	4.4
	4.5	Extended mast height	h <sub>4</sub> (mm)	2660 <sup>4)</sup>	3830	4130	5030	4.5
	4.7	Overhead load guard (cab) height	h <sub>6</sub> (mm)	2230 (optional)	2230	2230	2230	4.7
	4.8	Seat height / standing height	h <sub>7</sub> (mm)	200	200	200	200	4.8
	4.11	Additional lift	h <sub>9</sub> (mm)	800	800	800	800	4.11
	4.14	Standing height, elevated	h <sub>12</sub> (mm)	1200	1800	2100	3000	4.14
	4.15	Lowered height	h <sub>13</sub> (mm)	80	80	80	80	4.15
	4.16	Length of loading surface	l <sub>3</sub> (mm)	775 <sup>5)</sup>	775 <sup>5)</sup>	775 <sup>5)</sup>	775 <sup>5)</sup>	4.16
	4.19	Overall length	l <sub>1</sub> (mm)	2895	2895	2895	2965	4.19
	4.20	Length to face of forks	l <sub>2</sub> (mm)	1695	1695	1695	1765	4.20
	4.21	Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	810	810	810	940	4.21
	4.22	Fork dimensions	s/e/l (mm)	60 x 160 x 1200 <sup>6)</sup>	60 x 160 x 1200 <sup>6)</sup>	60 x 160 x 1200 <sup>6)</sup>	60 x 160 x 1200 <sup>6)</sup>	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	Width over forks	b <sub>5</sub> (mm)	540	540	540	540	4.25
4.26	Distance between support arms/loading surfaces	b <sub>4</sub> (mm)	430	430	430	560	4.26	
4.31	Ground clearance, laden, under mast	m <sub>1</sub> (mm)	35	35	35	35	4.31	
4.33	Aisle width for pallets 1000x1200 crossways	Ast (mm)	3040	3040	3040	3106	4.33	
4.34	Aisle width for pallets 800x1200 lengthways	Ast (mm)	3153	3153	3153	3220	4.34	
4.35	Turning radius	Wa (mm)	1518	1518	1518	1578	4.35	
Performance Data	5.1	Travel speed, laden/unladen	km/h	9.8/10.1	9.0/9.0	9.0/9.0	9.0/9.0	5.1
	5.2	Lift speed, laden/unladen	m/s	0.16/0.20	0.13/0.17	0.13/0.17	0.14/0.19	5.2
	5.3	Lowering speed, laden/unladen	m/s	0.21/0.19	0.21/0.19	0.21/0.19	0.25/0.19	5.3
	5.7	Gradient performance, laden/unladen	%	5/10	5/10	5/10	5/10	5.7
	5.11	Parking brake		inversion braking	inversion braking	inversion braking	inversion braking	5.11
E-Motor	6.1	Drive motor rating S <sub>2</sub> 60 min.	kW	2.5	2.5	2.5	2.5	6.1
	6.2	Lift motor rating at S <sub>3</sub> 15 %	kW	3	3	3	3	6.2
	6.2	Lift motor rating at S <sub>3</sub> 5 %	kW	2.2	2.2	2.2	2.2	6.2
	6.3	Battery acc. to DIN 43531 /35/36 A, B, C, no		DIN 43535 B	DIN 43535 B	DIN 43535 B	DIN 43535 B	6.3
	6.4	Battery voltage, nominal capacity K <sub>5</sub>	V/Ah	24/560	24/560	24/560	24/560	6.4
6.5	Battery weight	kg	480	480	480	480	6.5	
Others	8.1	Type of drive control		AC SpeedControl	AC SpeedControl	AC SpeedControl	AC SpeedControl	8.1
	8.4	Sound level at driver's ear acc. to EN 12 053	dB(A)	61	61	61	61	8.4

- 1) Data applies unless otherwise specified for variants L and Z  
 2) For aux. lift Z: + 102 kg  
 3) For aux. lift Z: approx. + 5/+ 97 kg  
 4) With overhead guard: + 570 mm  
 5) For aux. lift Z: – 65 mm  
 6) For aux. lift Z: 65x160x1200 mm

# Make use of the advantages

## Innovative AC Technology

Jungheinrich AC motors offer more power while at the same time reducing the running costs over the life cycle of the truck. The benefits include:

- High levels of efficiency and excellent energy conservation.
- Powerful acceleration.
- Quick reversing without having to "think".
- No carbon brushes – the traction motor is maintenance-free.
- Two-year warranty for the traction motor.

## Smooth Raising and Lowering

The platform raises and lowers in a consistent and smooth process thanks to special modulation of the hydraulic pump and the valves. A rubber mat provides additional operating comfort. The advantages include:

- Tangible relief for the driver.
- Additional protection for sensitive loads.
- Minimal wear through reduction in dynamic stress.

## Travel in comfort

The Jungheinrich SpeedControl system provides comfortable, precise control of the travel speed:



Driver's display

- The speed indicated by the travel switch is maintained in every situation. By programming the traction controller to suit the application at hand, sensitive shunting is possible even at low speeds.
- Adjustable travel parameters (e.g. acceleration, limit speed, motor brake) allow you to tailor the truck to your individual requirements.
- The operator can choose from 3 different travel programs.
- Very low noise levels when lifting and travelling.

## Driver display

High level control instrument for displaying the most important operational data:

- Travel direction and wheel position display.
- Battery status with residual charge display.
- Selected travel program with performance features.
- Hourmeter/time.

## Comfortable control unit

- The inclined steering wheel supports the natural hand movement and avoids straining the wrists.
- Easily accessible buttons and travel switches allow you to operate the truck in comfort with minimum hand movements.

## High levels of efficiency and safety

High acceleration levels and fast travel/lift speeds provide the best conditions for orderpicking performance. A range of active and passive performance features provide the necessary degree of safety:

- Secure bend handling through low-lying centre of gravity.
- Steel supports for extra tipover protection in extreme situations.
- Outstanding use of maximum permissible travel speed through a combination of lift height and steering angle dependent speed reduction.



Control unit

## Less maintenance

Service-friendly components ensure that running costs are considerably reduced over the long term:

- Maintenance-free AC drive motors without carbon brushes.
- Easy access to all units through easy opening front/side panels and optimised layout of auxiliary hydraulics.

## Optional equipment

- Provision for radio.
- Pallet protection for walk-on load lifting devices.
- Guidance controls, aisle recognition and end of aisle protection device for narrow aisle store applications.
- Platform extensions.
- Second operator position in fork direction.
- Cold store version.
- Work lights on overhead guard.
- Beacon on overhead guard.

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Certification of Quality and  
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Jungheinrich trucks  
conform to the European  
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