

Maximum picking performance with the lowest energy consumption

Powerful motor for maximum throughput efficiency

Optionally with walk-on load section (L) or auxiliary mast (Z)

Optimised order picking thanks to WMS connection via Logistics Interface



EKS 110

Vertical order picker (1,000 kg)

The EKS 110 is the ideal truck for order picking processes from the first to the third racking levels. With a maximum platform height of 3 m, order picking heights of up to 4.6 m can be reached.

The cantilevered design enables both open and closed pallets to be picked up.

Options available for the load section are fixed forks (can also be walked on with a guard (L)) and auxiliary lift (Z) for the ergonomic depositing of picked items.

The new 3.2-kW drive system facilitates travel speeds of up to 14 km/h. The acceleration values are also optimised to con-

tribute towards efficient order picking. Various options packages and the load/steer angle-dependent Curve Control assistance system fully exploit the strengths of the EKS 110: Dynamic acceleration, safe cornering and high maximum speed with the best possible energy utilisation.

The EKS 110 workstation is designed to make work easier:

- Optimum movement options enable fatigue-free working when entering and exiting and when travelling and order picking.
- Intuitive and ergonomic arrangement of all controls.
- The 4-inch display provides information on the battery charge status, number of service hours, travel speeds and provides a choice of three travel programs via soft key.

EKS 110

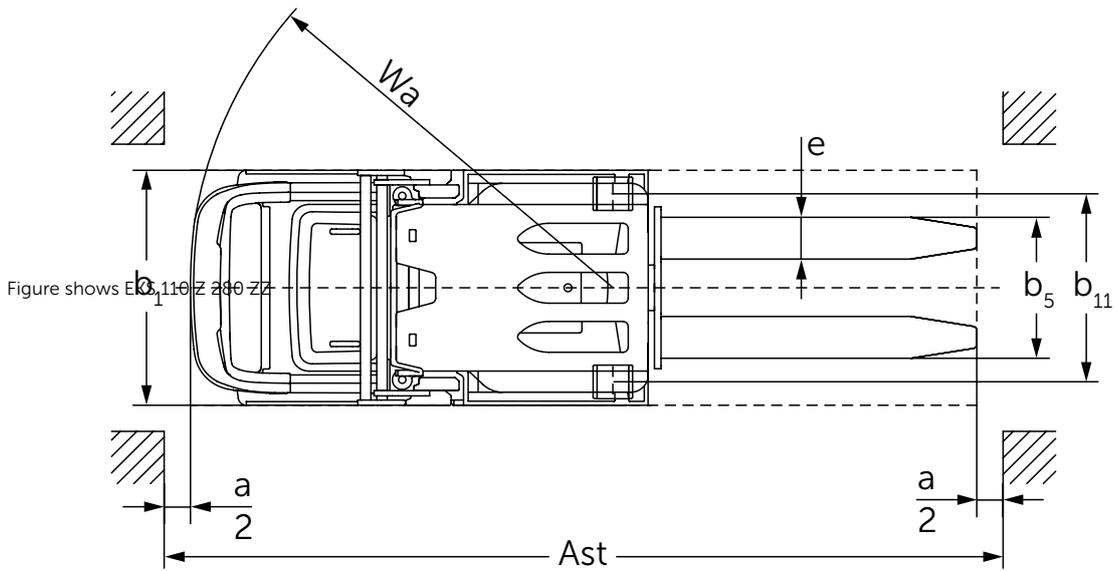
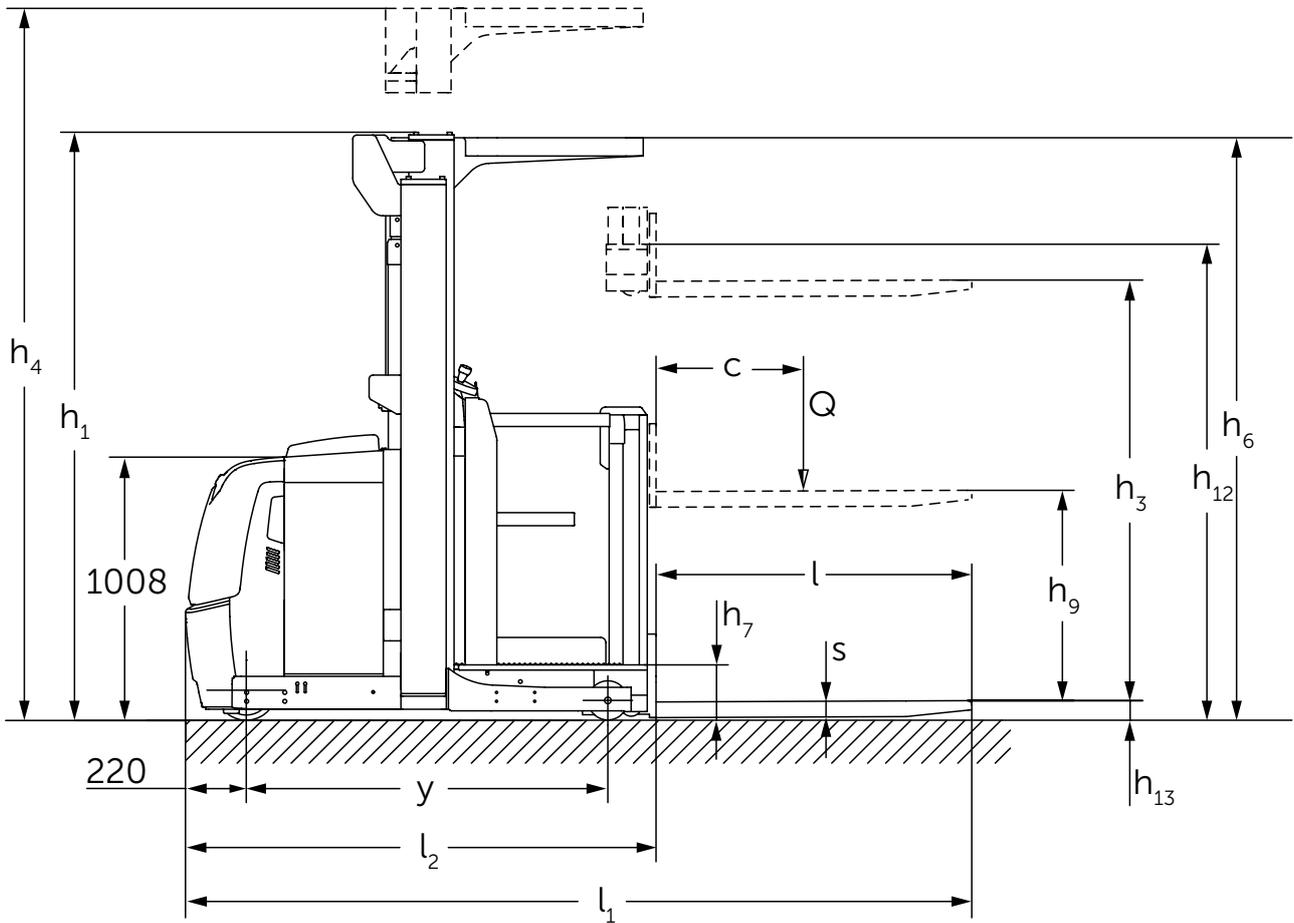


Figure shows EKS 110 Z 280 ZZ

Technical data in line with VDI 2198

		Jungheinrich						
		EKS 110						
		L 100 E	L 160 E	L 190 E	L 280 ZZ			
Identification	1.1	Manufacturer (abbreviation)						
	1.2	Model						
	1.3	Drive	Electric					
	1.4	Manual, pedestrian, stand-on, seated, order picker operation	Order pickers					
	1.5	Load capacity/rated load	Q	t	1			
	1.6	Load centre distance	c	mm	600			
	1.8	Load distance	x	mm	143	143	143	180
	1.9	Wheelbase	y	mm	1,330	1,330	1,330	1,385
	Weights	2.1.1	Net weight incl. battery (see row 6.5)	kg	1,661	1,785	1,813	2,268
2.2		Axle load with load front/rear	kg	491 / 2,170	516 / 2,269	506 / 2,307	762 / 2,506	
2.3		Axle load without load front/rear	kg	1,053 / 608	1,093 / 692	1,084 / 729	1,336 / 932	
Wheels / frame	3.1	Tyres	Vu					
	3.2	Tyre size, front	mm	ø 230 x 80				
	3.3	Tyre size, rear	mm	ø 150 x 130				
	3.5	Wheels, number front/rear (x = driven wheels)	1x / 2					
	3.7	Tread width, rear	b ₁₁	mm	630	630	630	720
Basic dimensions	4.2	Mast height (lowered)	h ₁	mm	1,650 ⁵⁾	2,260	2,560	2,250
	4.4	Lift	h ₃	mm	1,000	1,600	1,900	2,800
	4.5	Extended mast height	h ₄	mm	2,650 ²⁾	3,830	4,130	5,030
	4.7	Height of overhead guard	h ₆	mm	2,230 ¹⁾	2,230	2,230	2,230
	4.8.1	Standing height	h ₇	mm	200			
	4.14	Standing height raised	h ₁₂	mm	1,200	1,800	2,100	3,000
	4.15	Height, lowered	h ₁₃	mm	80			
	4.19	Overall length	l ₁	mm	2,890	2,890	2,890	2,980
	4.20	Length to face of forks	l ₂	mm	1,690	1,690	1,690	1,780
	4.21	Overall width	b ₁ /b ₂	mm	810	810	810	900
	4.22	Fork dimensions	s/e/l	mm	60 / 160 / 1,200			
	4.25	Width across forks	b ₅	mm	540			
	4.26	Width between support arms/loading surfaces	b ₄	mm	430	430	430	520
	4.31	Floor clearance with load under mast	m ₁	mm	35			
	4.33	Aisle width for pallets 1000 x 1200 sideways	Ast	mm	3,039	3,039	3,039	3,127
	4.34	Aisle width for pallets 800 x 1200 lengthways	Ast	mm	3,149	3,149	3,149	3,240
4.35	Turning radius	W _a	mm	1,548	1,548	1,548	1,603	
4.38.2	Order picking height		mm	2,800	3,400	3,700	4,600	
Performance data	5.1	Travel speed, laden/unladen	km/h	10.5 / 13 ³⁾	10 / 12 ⁴⁾	10 / 12 ⁴⁾	9 / 11 ⁴⁾	
	5.2	Lift speed, laden/unladen	m/s	0.19 / 0.26	0.15 / 0.2	0.15 / 0.2	0.23 / 0.31	
	5.3	Lowering speed, laden/unladen	m/s	0.24 / 0.24	0.23 / 0.22	0.23 / 0.22	0.28 / 0.26	
	5.7	Gradeability laden/unladen	%	5 / 10				
	5.10	Service brake	electromagnetic spring-loaded brake system					
	5.11	Parking brake	electromagnetic					
Electrics	6.1	Drive motor, output S2 60 min.	kW	3.2				
	6.2	Lift motor, output at S3 15%	kW	3.0	3.0	3.0	0.0	
	6.2	Lift motor kW output at S3 20%	kW	0.0	0.0	0.0	6.0	
	6.3	Battery as per DIN 43531 /35/36 A, B, C, no	B 43535					
	6.4	Battery voltage/nominal capacity K5	V/Ah	24 / 620				
	6.5	Battery weight	kg	480				
Misc.	8.1	Type of drive control	AC SpeedControl					
	8.4	Sound pressure level at operator's ear as per EN 12053	dB (A)	61				
	8.6	Steering	Electric power steering					

¹⁾ Overhead guard optional

²⁾ With 3230 mm OHG

³⁾ With Drive Plus options package (standard: 10 / 10 km/h)

⁴⁾ With Drive Plus options package (standard: 9 / 9 km/h)

⁵⁾ with OHG 2230 mm

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		EKS 110							
		Z 100 E	Z 160 E	Z 190 E	Z 280 ZZ				
Identification	1.1	Manufacturer (abbreviation)							
	1.2	Model							
	1.3	Drive		Electric					
	1.4	Manual, pedestrian, stand-on, seated, order picker operation		Order pickers					
	1.5	Load capacity/rated load	Q	t	1				
	1.6	Load centre distance	c	mm	600				
	1.8	Load distance	x	mm	148	148	148	185	
	1.9	Wheelbase	y	mm	1,330	1,330	1,330	1,385	
Weights	2.1.1	Net weight incl. battery (see row 6.5)		kg	1,763	1,907	1,953	2,390	
	2.2	Axle load with load front/rear		kg	489 / 2,274	508 / 2,399	504 / 2,449	754 / 2,636	
	2.3	Axle load without load front/rear		kg	1,062 / 701	1,083 / 824	1,079 / 874	1,328 / 1,062	
Wheels / frame	3.1	Tyres		Vu					
	3.2	Tyre size, front		mm	ø 230 x 80				
	3.3	Tyre size, rear		mm	ø 150 x 130				
	3.5	Wheels, number front/rear (x = driven wheels)		1x / 2					
	3.7	Tread width, rear	b ₁₁	mm	630	630	630	720	
Basic dimensions	4.2	Mast height (lowered)		h ₁	mm	1,650 ⁵⁾	2,260	2,560	2,250
	4.4	Lift		h ₃	mm	1,000	1,600	1,900	2,800
	4.5	Extended mast height		h ₄	mm	2,650 ²⁾	3,830	4,130	5,030
	4.7	Height of overhead guard		h ₆	mm	2,230 ¹⁾	2,230	2,230	2,230
	4.8.1	Standing height		h ₇	mm	200			
	4.11	Auxiliary lift		h ₉	mm	800			
	4.14	Standing height raised		h ₁₂	mm	1,200	1,800	2,100	3,000
	4.15	Height, lowered		h ₁₃	mm	80			
	4.19	Overall length		l ₁	mm	2,895	2,895	2,895	2,985
	4.20	Length to face of forks		l ₂	mm	1,695	1,695	1,695	1,785
	4.21	Overall width		b ₁ /b ₂	mm	810	810	810	900
	4.22	Fork dimensions		s/e/l	mm	60 / 160 / 1,200			
	4.25	Width across forks		b ₅	mm	540			
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4.33	Aisle width for pallets 1000 x 1200 sideways		Ast	mm	3,039	3,039	3,039	3,127	
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4.35	Turning radius		W _a	mm	1,548	1,548	1,548	1,603	
4.38.2	Order picking height			mm	2,800	3,400	3,700	4,600	
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	5.2	Lift speed, laden/unladen		m/s	0.19 / 0.26	0.15 / 0.2	0.15 / 0.2	0.23 / 0.31	
	5.3	Lowering speed, laden/unladen		m/s	0.24 / 0.24	0.23 / 0.22	0.23 / 0.22	0.28 / 0.26	
	5.7	Gradeability laden/unladen		%	5 / 10				
	5.10	Service brake		electromagnetic spring-loaded brake system					
	5.11	Parking brake		electromagnetic					
Electrics	6.1	Drive motor, output S2 60 min.		kW	3.2				
	6.2	Lift motor kW output at S3 5 %		kW	2.2				
	6.2	Lift motor, output at S3 15%		kW	3.0	3.0	3.0	0.0	
	6.2	Lift motor kW output at S3 20%		kW	0.0	0.0	0.0	6.0	
	6.3	Battery as per DIN 43531 /35/36 A, B, C, no		B 43535					
	6.4	Battery voltage/nominal capacity K5		V/Ah	24 / 620				
6.5	Battery weight		kg	480					
Misc.	8.1	Type of drive control		AC SpeedControl					
	8.4	Sound pressure level at operator's ear as per EN 12053		dB (A)	61				
	8.6	Steering		Electric power steering					

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EKS 110



EKS 110 standard mast designs								
Mast		mm						
L version								
100 E	1.000	1.200	2.800	1.650	2.230	2.650	3.230	1.000
160 E	1.600	1.800	3.400	-	2.260	-	3.830	1.600
190 E	1.900	2.100	3.700	-	2.560	-	4.130	1.900
280 ZZ	2.800	3.000	4.600	-	2.250	-	5.030	2.800
Z version								
100 E	1.000	1.200	2.800	1.650	2.230	2.650	3.230	1.800
160 E	1.600	1.800	3.400	-	2.230	-	3.230	2.400
190 E	1.900	2.100	3.700	-	2.560	-	4.130	2.700
280 ZZ	2.800	3.000	4.600	-	2.250	-	5.030	3.600

EKS 110



Standard equipment:

- Robust steel front cover.
- Maintenance-free 3.2 kW drive.
- Wear-free inversion brake.
- Energy recovery while braking.
- Sensitive lifting and lowering.
- Very roomy and ergonomic cab with low entry step.
- DIN-A4 writing pad with paper clip.
- Stand-on platform with sound-insulating floor covering.
- Upholstered backrest.
- Open storage tray in knee area.
- Graphics-compatible colour display with soft keys.
- Load-side operation of the additional lift.
- Side gates from h₃=1200 mm.
- Good accessibility to the battery.
- Shrink wrap holder integrated into front cover (only E version).

Optional equipment:

- Lateral battery exchange.
- Several battery compartments from 375 Ah to 620 Ah.
- Mobile battery changing devices.
- Lithium-ion batteries.
- Drive Plus for increased travel speed.
- Additional lift for ergonomic storing of goods.
- Various fork dimensions.
- Fork carriage with adjustable and removable forks.
- Load-side gates (L version).
- Pallet reinforcement for walk-on pallet (L version).
- Order picking platforms.
- Platform extensions.
- Order picking optimisation due to warehouse management system connection via Logistics Interface.
- Guidance controls, aisle recognition and end of aisle control for use in narrow aisles.
- Steer angle-dependent speed reduction Curve Control.
- Jungheinrich jetPILOT.
- Dual control operation.
- Touch mode.
- Different access systems.
- DayLED.
- LED working lights.
- LED interior lighting.
- Beacon.
- Radio data bracket.
- Tray on battery lid.
- USB interface as power supply.
- Cold store package (alternating and continuous operation).

Benefit from the advantages



Ergonomic workstation



Operators display



Comfortable floor covering on the stand-on platform



Controls and additional display in load direction (optional)

Efficient order picking

Order-picking even in the toughest of applications thanks to a capacity of up to 1000 kg with a load centre of 600 mm. Stable cornering thanks to a low load centre provides a feeling of security in every travel situation.

The optimised lowering of the walk-on load section (optional) means that the platform plus loading device is lowered to the optimally lowest level when order picking – for the lowest entry every time and no depositing of the pallet.

Particularly with low lift heights and frequent entry and exit, the touch mode provides a fast way of reaching the next picking point. With the auxiliary lift, the touch mode is located on the backrest to enable direct access to the loading device.

Ergonomic workstation

- Low entry height for easy entry and exit.
- Padded backrest for efficient depositing of goods on the forks and a continuous, comfortable rubber mat providing noticeable relief for the operator.
- The tilted steering wheel supports natural hand movements and thus protects the operator's joints.
- Instead of conventional steering, the optional jetPILOT is also available, which enables intuitive and comfortable operation as in a car.

- Good storage capabilities are offered by the integrated DIN A4 holder and other storage compartments. All the equipment required for order picking as well as personal items can be stowed away.

Robust design

- High-quality stainless steel skirt raised extra high on the front panel.
- Impact-protected steel drive panel protects the components behind it.
- Optional rubber or steel bumper provides additional protection.

All the better to see and be seen

- Integrated DayLED daytime running lights for better visibility in poorly lit warehouses (optional).
- LED working lights on the overhead guard can be used as additional running lights or to illuminate the racking when order picking (optional).
- The LED workstation lighting ensures that the operator position is well lit (optional).
- Floor Spot: The risk of collision at blind spots is significantly reduced by a dot of red light projected on the floor approximately 3 m in front of the truck (optional).

Long operation times

- Energy-saving three-phase technology and high battery capacities ensure long operation times.
- Different battery sizes available ranging from 375 Ah to 620 Ah.

- Lateral battery removal for multi-shift operation (optional).

Lithium-ion technology

- High level of availability due to extremely short charging times: With just 30 minutes of intermediate charging the battery charge is at 50%, and is at 100% after 80 minutes.
- No battery replacement required.
- Dielectric strength ensures full performance at all times.
- Costs saved compared with lead-acid batteries due to a longer service life and freedom from maintenance.
- No charging rooms or ventilation required as there is no gas formation.

High process reliability thanks to order-picking optimisation

The EKS 110 is connected to a Warehouse Management System (WMS) via our middleware, the Jungheinrich logistics interface. Orders are transferred in uncomplicated fashion to the truck controller via the interface software so that additional functions are created. Benefit from numerous advantages:

- Process reliability thanks to real-time feedback to the WMS.
- Targeted reduction of safety risks as the travel parameters can be influenced by the WMS.
- Ergonomic order picking via an additional display in the load direction.
- Save time by confirming orders via a push button.

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The German production facilities in Norderstedt, Moosburg and Landsberg are certified. **ISO 9001**
ISO 14001

Jungheinrich fork lift trucks meet European safety requirements.



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