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-

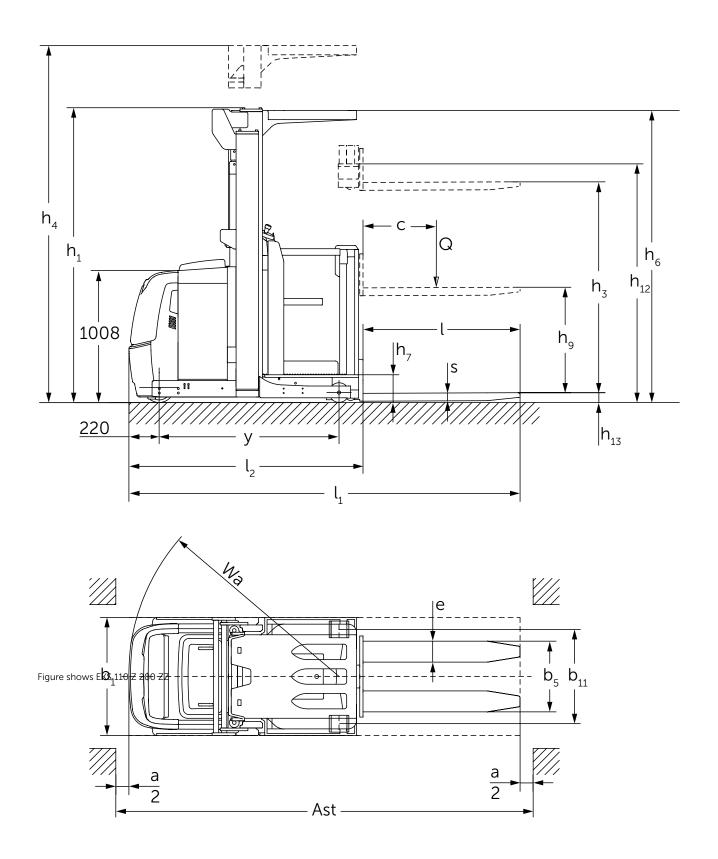
tribute towards efficient order picking. Various options packages and the load/steer angle-dependent Curve Control assistance system fully exploit the strengths of the EKS 110: Dynamic acceleration, safe cornering and high maximum speed with the best possible energy utilisation.

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



Technical data in line with VDI 2198

	1.1	Manufacturer (abbreviation)				Jupah	oinrich			
	1.1				Jungheinrich EKS 110					
_	1.2	Model			L 100 E			1 200 77		
lentifica	 1 7	Drive			L 100 E	L 160 E	L 190 E	L 280 ZZ		
	1.3	Drive			Electric					
	1.4	Manual, pedestrian, stand-on, seated, order picker operation	0		Order pickers					
	1.5	Load capacity/rated load	Q	t						
-	1.6	Load centre distance	С	mm		100				
	1.8	Load distance	X	mm	143	143	143	180		
heels / frame Weights	1.9	Wheelbase	У	mm	1,330	1,330	1,330	1,385		
	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		
	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		mm	630	630	630	720		
	4.2	Mast height (lowered)		mm	1,6505)	2,260	2,560	2,250		
	4.4	Lift		mm	1,000	1,600	1,900	2,800		
	4.5	Extended mast height	h ₄	mm	2,6502)	3,830	4,130	5,030		
	4.7	Height of overhead guard	h ₆	mm	2,2301)	2,230	2,230	2,230		
	4.8.1	Standing height	h ₇	mm		20	00			
	4.14	Standing height raised	h ₁₂	mm	1,200	1,800	2,100	3,000		
ns	4.15	Height, lowered	h ₁₃	mm	80					
Basic dimensions	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		
gi	4.21	Overall width	b ₁ /b ₂	mm	810	810	810	900		
ŝ	4.22	Fork dimensions	s/e/l	mm	60 / 160 / 1,200					
Ba	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						
	4.33	Aisle width for pallets 1000×1200 sideways	Ast	mm	3,039	3,039	3,039	3,127		
	4.34	Aisle width for pallets $800 imes 1200$ lengthways	Ast	mm	3,149	3,149	3,149	3,240		
	4.35	Turning radius	Wa	mm	1,548	1,548	1,548	1,603		
	4.38.2	Order picking height	-	mm	2,800	3,400	3,700	4,600		
rfor	5.1	Travel speed, laden/unladen		km/h	10.5 / 13 ³⁾	10 / 124)	10 / 124)	9 / 114)		
	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			system		
	5.11	Parking brake			electromagnetic					
	6.1	Drive motor, output S2 60 min.		kW	3.2					
tric	6.2	Lift motor, output at \$3 15%		kW	3.0	3.0	3.0	0.0		
	6.2	Lift motor kW output at \$3 20%		kW	0.0	0.0	0.0	6.0		
	6.3	Battery as per DIN 43531 /35/36 A, B, C, no			0.0	B 43535				
	6.4	Battery voltage/nominal capacity K5		V/Ah			620			
	6.5	Battery weight		kg	480					
	8.1	Type of drive control		y	AC SpeedControl					
Misc	8.4	Sound pressure level at operator's ear as per EN 12053		dB (A)	61					
	8.6	Steering		GD (A)	Electric power steering					
	0.0	Jucching			Electric power steering					

¹⁾ Overhead guard optional

- ²⁾ With 3230 mm OHG
- $^{\scriptscriptstyle 3)}\,$ 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

In accordance with VDI Guideline 2198 this specification sheet provides details of the standard truck only. Non-standard tyres, different masts, optional equipment, etc. may result in different values.

Technical data in line with VDI 2198

1.1					ما به می ا	مأبعينا مام			
1.2	Manufacturer (abbreviation)			Jungheinrich EKS 110					
1.2	Model			7400 5			7 000 77		
4 7				2 100 E			Z 280 ZZ		
		-							
		С	mm		1				
	Load distance	х	mm	148	148		185		
	Wheelbase	у	mm	1,330	1,330		1,385		
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		
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 (\times = driven wheels)			1x / 2					
3.7	Tread width, rear	b ₁₁	mm	630	630	630	720		
4.2	Mast height (lowered)		mm	1,6505)	2,260	2,560	2,250		
4.4	Lift		mm	1,000	1,600	1,900	2,800		
4.5	Extended mast height		mm	2,650 ²⁾	3.830	4.130	5,030		
							2,230		
	-			_,	_,				
	-			1 200			3,000		
				1,200			3,000		
				2 895			2,985		
							1,785		
							900		
				010			900		
				7.070	7.407				
					-		3,127		
			mm				3,245		
		Wa	mm				1,603		
	Order picking height		mm			3,700	4,600		
5.1			km/h	10.5 / 133)	10 / 124)		9 / 114)		
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					
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 \$3 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				480					
			5	AC SpeedControl					
			dB (A)						
8.6	Steering			Electric power steering					
	2.2 2.3 3.1 3.2 3.3 3.5 4.2 4.4 4.5 4.4 4.5 4.7 4.8.1 4.11 4.14 4.15 4.19 4.20 4.21 4.22 4.25 4.26 4.31 4.33 4.34 4.35 4.38.2 5.1 5.2 5.3 5.7 5.10 5.11 6.1 6.2 6.2 6.2 6.3 6.4	1.4 Manual, pedestrian, stand-on, seated, order picker operation 1.5 Load capacity/rated load 1.6 Load centre distance 1.8 Load distance 1.9 Wheelbase 2.1.1 Net weight incl. battery (see row 6.5) 2.2 Axle load with load front/rear 3.1 Tyres 3.2 Tyre size, front 3.3 Tyre size, rear 3.5 Wheels, number front/rear (x = driven wheels) 3.7 Tread width, rear 4.2 Mast height (lowered) 4.4 Lift 4.5 Extended mast height 4.7 Height of overhead guard 4.8.1 Standing height raised 4.11 Auxiliary lift 4.14 Standing height raised 4.15 Height, lowered 4.20 Length to face of forks 4.21 Overall width 4.22 Fork dimensions 4.23 Width between support arms/loading surfaces 4.31 Floor clearance with load under mast <	1.4Manual, pedestrian, stand-on, seated, order picker operation1.5Load capacity/rated loadQ1.6Load capacity/rated loadC1.8Load distancex1.9Wheelbasey2.1.1Net weight incl. battery (see row 6.5)C2.2Axte load with load front/rearC3.1TyresC3.1TyresC3.2Tyre size, rearC3.5Wheels, number front/rear (x = driven wheels)T3.5Wheels, number front/rear (x = driven wheels)T4.2Mast height (lowered)h14.4Lifth34.5Extended mast heighth44.7Height of overhead guardh64.8.1Standing height raisedh124.11Auxiliary lifth94.14Standing height raisedh214.20Length to face of forksb24.21Overall widthb21/b24.22Fork dimensionss/s/L4.23Width across forksb34.34Aisle width for pallets 800 x 1200 sidewaysAst4.35Turning radiusWa4.36.2Order picking heightC5.10Service brakeC5.11Travel speed, laden/unladenC5.2Lift speed, laden/unladenC5.3Lowering heightC5.4Dirie motor, output 453 5%C5.5Battery vottage/nominal capacity K5C<	1.4Manual pedestrian, stand-on, seated, order picker operationQ.t1.5Load capacity/rated loadQ.t1.6Load capacity/rated loadxmm1.8Load distancexmm2.1Netweight incl. battery (see row 6.5)X.kg2.1Akle load with load front/rearKgkg2.1Tyres ize, rontmmmm3.1Tyre size, frontmmmm3.3Tyre size, rearMmm3.4Liftmmh_1mm4.2Mast height (lowered)h_1mm4.3Extended mast heighth_4mm4.4Lifth_6mm4.5Extended mast heighth_6mm4.8.1Standing height raisedh_1mm4.11Auxilary lifth9mm4.12Overall kinght fraisedh_1mm4.13Standing height raisedh_1mm4.24Standing height raisedh_2mm4.25Vicith across forksksmm4.26Vicith horae of forksksmm4.31Foor clearance with load under mastm_1mm4.32Foor clearance with load under mastm_1mm4.33Aise width for pallets 800 × 1200 sidewaysAstmm4.34Aise width for pallets 800 × 1200 sidewaysAstmm4.35Turning radiusM_2m/5mm5.4Vicith pal	1.4Manual, pedestrian, stand-on, seated, order picker operation \Box \Box 1.5Load capacit/rated load Q tt1.6Load centre distance x mm1.481.8Load distance x mm1.481.9Wheelbase y mm1.3302.1.1Net weight incl battery (see row 6.5) x kg 4.89 / 2.2742.3Ade load with out load front/rear kg 1.062 / 7013.1Tyres mm mm 1.062 / 7013.2Tyre size, frontmmmm6303.3Tyre size, rearmm1.650°4.43.4Lift h_3 mm1.060°4.4Lift h_3 mm1.0004.5Extended mast height h_4 mm2.650°4.7Height flowered) h_6 mm2.230°4.8.1Standing height raised h_{12} mm2.8354.11Auxiliary liftMmm2.8954.20Length to face of forks l_4 mm4.3004.21Overall widthface of forks l_4 mm4.22Gord intersions k_6 mm1.6954.24Height, lowered h_{33} mm1.6954.25Width bactoss forks k_6 mm1.6954.24Standing height raised h_{12} mm1.6954.25Width harcoss forks k_6 mm3.0394.26<	1.3 Drive Elect the stand-on, seated, order picker operation 1.4 Manual, pedestrian, stand-on, seated, order picker operation O t Corder 1 1.5 Load capacity/rate load O t Corder 1 1.8 Load distance x mm 148 148 148 1.9 Wheelbase y mm 1.330 1.330 1.330 2.1 Netweight incl. battery (see row 6.5) kg 4.69 1.62 / 701 1.08 / 2.399 2.3 Axte load without load front/rear kg 1.06 / 701 1.08 / 2.399 2.3 Axte load without load front/rear kg 1.06 / 701 1.08 / 2.399 2.3 Axte load without load front/rear kg 1.06 / 701 1.08 / 2.309 3.7 Treester, front mm v 1.x 3.7 Tread width, rear ba mm 1.00 1.600 4.600 4.1 Multing tith mm 2.300 2.2300 2.2300 2.2300 2.2300 2.2300 2.2300 2.2300 2.2300	13 Drive Image Image <thimage< th=""> <thimage< th=""> <thimage< th=""> <thimag< td=""></thimag<></thimage<></thimage<></thimage<>		

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

In accordance with VDI Guideline 2198 this specification sheet provides details of the standard truck only. Non-standard tyres, different masts, optional equipment, etc. may result in different values.

EKS 110



EKS 110 standard mast designs									
Mast		mm	mm	mm		mm		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-insulat-
- ing 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)

• 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 per-
- formance 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.

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.



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info@jungheinrich.com www.jungheinrich.com The German production facilities in Norderstedt, Moosburg and Landsberg are certified. ISO 14001

> Jungheinrich fork lift trucks meet European safety requirements.

