

Maximum picking performance
with low energy consumption

Powerful motor for maximum
throughput efficiency

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



EKS 110

Vertical Order Picker (2,200 lbs.)

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 118" (3 m.), order picking heights of up to 181" (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 8.7 mph (14 km/h). Acceleration is also optimized to contribute towards efficient order picking. Various option packages and the load/steer angle-dependent Curve Control system fully exploit the strengths of the EKS 110:

- Dynamic acceleration
- Better handling during cornering
- High maximum speed with the best possible energy utilization

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 full-color 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.

Technical Data

Characteristics	1.1	Manufacturer			Jungheinrich		Jungheinrich			
	1.2	Model			EKS 110 (110 E) ¹⁾		EKS 110 (160 E) ¹⁾			
	1.3	Drive			electric		electric			
	1.4	Type of operation			order picker		order picker			
	1.5	Load capacity / rated load	Q	lbs	kg	2,205	1,000	2,205	1,000	
	1.6	Load center distance	c	in	mm	24.0	610	24	610	
	1.8	Load distance, center of drive axle to fork		in	mm	5.6	148	5.6	143	
	1.9	Wheelbase	y	in	mm	52.4	1,330	52.4	1,330	
	Weights	2.1	Service weight without battery			lbs	kg	2,604 ²⁾	1,181 ²⁾	2,877 ²⁾
2.1.1		Service weight including battery (see line 6.5)			lbs	kg	3,607 ²⁾	1,637 ²⁾	3,880 ²⁾	1,761 ²⁾
2.2		Axle loading – loaded, drive / load			lbs	kg	1,080 / 4,774 ³⁾	491 / 2,170 ³⁾	1,135 / 4,992 ³⁾	516 / 2,269 ³⁾
2.3		Axle loading – unloaded, drive / load			lbs	kg	2,317 / 1,338 ³⁾	1,053 / 608 ³⁾	2,405 / 1,522 ³⁾	1,093 / 692 ³⁾
Wheels, Chassis	3.1	Tire type / material			Vulkollan®		Vulkollan®			
	3.2	Tire size, drive		in	mm	9.1 x 3.1	230 x 80	9.1 x 3.1	230 x 80	
	3.3	Tire size, load		in	mm	5.9 x 5.1	150 x 130	5.9 x 5.1	150 x 130	
	3.5	Wheels, number, drive / load (x=driven)			1x / 2		1x / 2			
	3.7	Track width, drive / load (center of tires)	b ₁₁	in	mm	24.8	630	24.8	630	
Dimensions	4.2	Lowered mast height	h ₁	in	mm	65.0 ⁴⁾	1650 ⁴⁾	89.0	2,260	
	4.4	Maximum fork height (MFH)	h ₃	in	mm	39.4	1,000	63.0	1,600	
	4.5	Overall extended height (OAE)		in	mm	104.3 ⁴⁾	2650 ⁴⁾	150.8	3,830	
	4.7	Overhead load guard (cab) height		in	mm	87.8 (optional)	2,230 (optional)	87.8	2,230	
	4.8	Seat height / standing height		in	mm	7.9	200	7.9	200	
	4.11	Auxiliary lift		in	mm	31.5 ⁷⁾	800 ⁷⁾	31.5 ⁷⁾	800 ⁷⁾	
	4.14	Maximum platform height		in	mm	47.2	1,200	70.9	1,800	
	4.15	Lowered fork height		in	mm	3.1	80	3.1	80	
	4.16	Length of platform		in	mm	30.5 ⁵⁾	775 ⁵⁾	30.5 ⁵⁾	775 ⁵⁾	
	4.19	Overall length (including forks)		in	mm	113.8	2,890	113.8	2,890	
	4.20	Length to fork face, headlength		in	mm	66.5	1,690	66.5	1,690	
	4.21	Overall width – chassis / wheel legs		in	mm	31.9 / 31.9	810 / 810	31.9 / 31.9	810 / 810	
	4.22	Fork dimensions, thickness / width / length		in	mm	2.4 x 6.3 x 47.2 ⁶⁾	60 x 160 x 1200 ⁶⁾	2.4 x 6.3 x 47.2 ⁶⁾	60 x 160 x 1200 ⁶⁾	
	4.25	Overall fork width (fixed carriage)		in	mm	21.3	540	21.3	540	
4.26	Distance between wheelarms (BLO)		in	mm	16.9	430	16.9	430		
4.31	Ground clearance, under mast (loaded)		in	mm	1.4	35	1.4	35		
4.34	Aisle width (for 48 x 40 pallets (L x W))		in	mm	126.0	3,200	126.0	3,200		
4.35	Turning radius		in	mm	60.9	1,548	60.9	1,548		
Performance	5.1	Travel speed, loaded / unloaded		mph	kph	6.1 / 6.3	9.8 / 10.1	5.6 / 5.6	9.9 / 9.9	
	5.2	Lift speed, loaded / unloaded		ft / min	m / s	37.4 / 51.2	0.19 / 0.26	29.5 / 39.4	0.15 / 0.20	
	5.3	Lowering speed, loaded / unloaded		ft / min	m / s	47.2 / 47.2	0.24 / 0.24	45.3 / 43.3	0.23 / 0.22	
	5.7	Gradeability, loaded / unloaded			%	7 / 10		7 / 10		
	5.8	Maximum gradeability loaded / unloaded			%	10 / 15		10 / 15		
	5.9	Acceleration time loaded / unloaded			Sec	5.1 / 4.8		5.1 / 4.8		
	5.10	Service brake			regenerative electric		regenerative electric			
	5.11	Parking brake			electromagnetic		electromagnetic			
	Motors	6.1	Drive motor (rating 60 minutes)		hp	kW	3.75	2.8	3.75	2.8
		6.2	Lift motor rating at 15%		hp	kW	4.0	3.0	4.0	3.0
6.4		Battery voltage / nominal capacity		V	Ah	24 / 620		24 / 620		
6.5		Battery weight, minimum		lb	kg	1,047	475	1,047	475	
6.5.1		Battery dimensions (length x width x height)		in	mm	14.00x24.57x30.87	356x624x784	14.00x24.57x30.87	356x624x784	
6.5.2		Battery roller height (option)		in	mm	6.7	170	6.7	170	
Other	8.1	Type of drive control			AC Speed Control		AC Speed Control			
	8.4	Sound level at driver's ear		dB (A)	61		61			
	8.5	Steering			Electric Power Steering		Electric Power Steering			
1) Data applies unless otherwise specified for configurations L and Z					5) For auxiliary lift Z: -2.6 inches (-65mm)					
2) For auxiliary lift Z: +264.6 lbs. (120 kg)					6) For auxiliary lift Z: 2.6 x 6.3 x 47.2 inches (65 x 160 x 1,200mm);					
3) For auxiliary lift Z: approximately +44 / +221 lbs. (+20 / +100 kg)					with fixed carriage.					
4) With overhead guard: +22.8 inches (+580mm)					7) Z configuration only					

This specification sheet only provides technical values for the standard truck. Non-standard tires, different masts, additional equipment, etc., could produce other values. Rights reserved for technical changes and improvements.

Characteristics	1.1	Manufacturer			Jungheinrich		Jungheinrich			
	1.2	Model			EKS 110 (190 E) ¹⁾		EKS 110 (280 ZZ) ¹⁾			
	1.3	Drive			electric		electric			
	1.4	Type of operation			order picker		order picker			
	1.5	Load capacity / rated load	Q	lbs	kg	2,205	1,000	2,205	1,000	
	1.6	Load center distance	c	in	mm	24	610	24	610	
	1.8	Load distance, center of drive axle to fork		in	mm	5.6	143	7.1	180	
	1.9	Wheelbase	y	in	mm	52.4	1,330	54.5	1,385	
	Weights	2.1	Service weight without battery		lbs	kg	2,939 ²⁾	1,333 ²⁾	3,942 ²⁾	1,788 ²⁾
2.1.1		Service weight including battery (see line 6.5)		lbs	kg	3,942 ²⁾	1,789 ²⁾	4,945 ²⁾	2,244 ²⁾	
2.2		Axle loading – loaded, drive / load		lbs	kg	1,113 / 5,075 ³⁾	506 / 2,307 ³⁾	167 / 5,513 ³⁾	762 / 2,506 ³⁾	
2.3		Axle loading – unloaded, drive / load		lbs	kg	2,385 / 1,604 ³⁾	1,084 / 729 ³⁾	2,939 / 2,050 ³⁾	1,336 / 932 ³⁾	
Wheels, Chassis	3.1	Tire type / material			Vulkollan®		Vulkollan®			
	3.2	Tire size, drive		in	mm	9.1 x 3.1	230 x 80	9.1 x 3.1	230 x 80	
	3.3	Tire size, load		in	mm	5.9 x 5.1	150 x 130	5.9 x 5.1	150 x 130	
	3.5	Wheels, number, drive / load (x=driven)			1x / 2		1x / 2			
	3.7	Track width, drive / load (center of tires)	b ₁₁	in	mm	24.8	630	28.4	720	
Dimensions	4.2	Lowered mast height	h ₁	in	mm	100.8	2,560	89.0	2,250	
	4.4	Maximum fork height (MFH)	h ₃	in	mm	74.8	1,900	110.2	2,800	
	4.5	Overall extended height (OAE)		in	mm	162.6	4,130	198.0	5,030	
	4.7	Overhead load guard (cab) height		in	mm	87.8	2,230	87.8	2,230	
	4.8	Seat height / standing height		in	mm	7.9	200	7.9	200	
	4.11	Auxiliary lift		in	mm	31.5 ⁷⁾	800 ⁷⁾	31.5 ⁷⁾	800 ⁷⁾	
	4.14	Maximum platform height		in	mm	82.7	2,100	118.1	3,000	
	4.15	Lowered fork height		in	mm	3.1	80	3.1	80	
	4.16	Length of platform		in	mm	30.5 ⁵⁾	775 ⁵⁾	30.5 ⁵⁾	775 ⁵⁾	
	4.19	Overall length (including forks)		in	mm	113.8	2,890	117.5	2,985	
	4.20	Length to fork face, headlength		in	mm	66.5	1,690	70.1	1,780	
	4.21	Overall width – chassis / wheel legs		in	mm	31.9 / 31.9	810 / 810	35.4 / 35.4	900 / 900	
	4.22	Fork dimensions, thickness / width / length		in	mm	2.4 x 6.3 x 47.2 ⁶⁾	60 x 160 x 1200 ⁶⁾	2.4 x 6.3 x 47.2 ⁶⁾	60 x 160 x 1200 ⁶⁾	
	4.25	Overall fork width (fixed carriage)		in	mm	21.3	540	21.3	540	
4.26	Distance between wheelarms (BLO)		in	mm	16.9	430	20.5	520		
4.31	Ground clearance, under mast (loaded)		in	mm	1.4	35	1.4	35		
4.34	Aisle width (for 48 x 40 pallets (L x W))		in	mm	126.0	3,200	128.0	3,251		
4.35	Turning radius		in	mm	60.9	1,548	63.1	1,603		
Performance	5.1	Travel speed, loaded / unloaded		mph	kph	5.6 / 5.6	9.9 / 9.9	5.6 / 5.6	9.9 / 9.9	
	5.2	Lift speed, loaded / unloaded		ft / min	m / s	29.5 / 39.4	0.15 / 0.20	45.3 / 61.0	0.23 / 0.31	
	5.3	Lowering speed, loaded / unloaded		ft / min	m / s	45.3 / 43.3	0.23 / 0.22	55.1 / 51.2	0.28 / 0.26	
	5.7	Gradeability, loaded / unloaded			%	7 / 10		7 / 10		
	5.8	Maximum gradeability loaded / unloaded			%	10 / 15		10 / 15		
	5.9	Acceleration time loaded / unloaded			Sec	5.1 / 4.8		5.1 / 4.8		
	5.10	Service brake					regenerative electric		regenerative electric	
	5.11	Parking brake					electromagnetic		electromagnetic	
Motors	6.1	Drive motor (rating 60 minutes)		hp	kW	3.75	2.8	3.75	2.8	
	6.2	Lift motor rating at 15%		hp	kW	4.0	3.0	8.0	6.0	
	6.4	Battery voltage / nominal capacity		V	Ah	24 / 620		24 / 620		
	6.5	Battery weight, minimum		lb	kg	1,047	475	1,047	475	
	6.5.1	Battery dimensions (length x width x height)		in	mm	14.00x24.57x30.87	356x624x784	14.00x24.57x30.87	356x624x784	
	6.5.2	Battery roller height (option)		in	mm	6.7	170	6.7	170	
Other	8.1	Type of drive control				AC Speed Control		AC Speed Control		
	8.4	Sound level at driver's ear			dB (A)	61		61		
	8.5	Steering				Electric Power Steering		Electric Power Steering		
1) Data applies unless otherwise specified for configurations L and Z					5) For auxiliary lift Z: -2.6 inches (-65mm)					
2) For auxiliary lift Z: +264.6 lbs. (120 kg)					6) For auxiliary lift Z: 2.6 x 6.3 x 47.2 inches (65 x 160 x 1,200mm);					
3) For auxiliary lift Z: approximately +44 / +221 lbs. (+20 / +100 kg)					with fixed carriage.					
4) With overhead guard: +22.8 inches (+580mm)					7) Z configuration only					

EKS 110

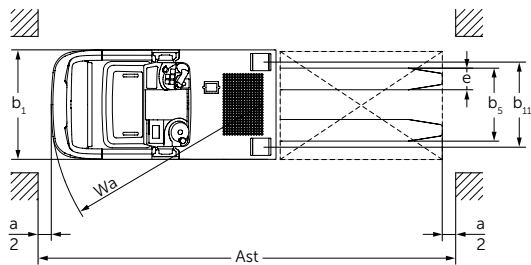
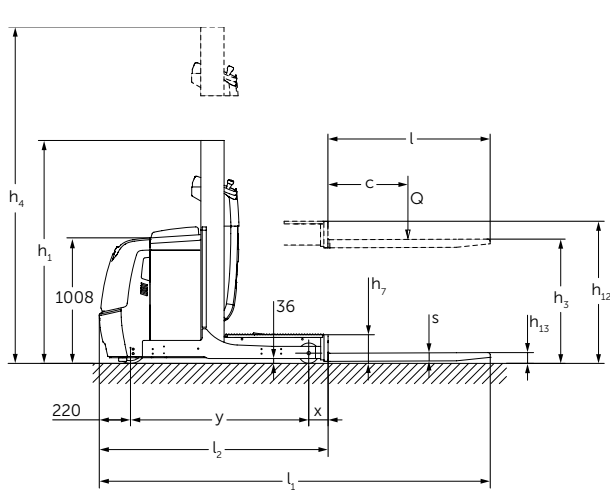


Illustration shows version 100 E.

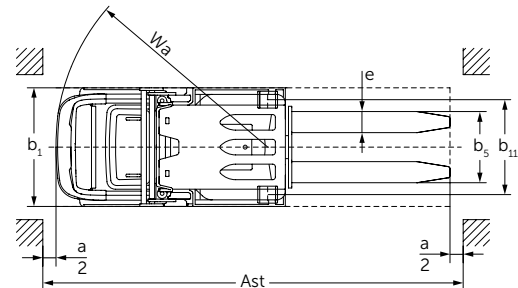
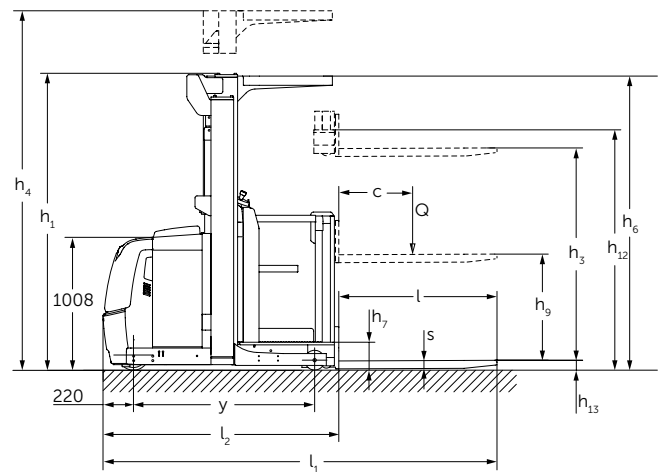


Illustration shows version 280 ZZ.
Top view shown without overhead guard (OHG).

*Fork design and carriage design may be different than illustrated.

Mast Table EKS 110

	Collapsed Mast Height h_1				Lift Height h_3		Platform Height h_{12}		Extended Mast Height h_4				Order Picking Height $h_{12} + 63$	
	Without Overhead Guard ¹⁾		With Overhead Guard ²⁾						Without Overhead Guard ¹⁾		With Overhead Guard ²⁾			
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
100 E	65.0	1,650	87.8	2,230	39.4	1,000	47.2	1,200	104.3	2,650	127.1	3,230	110.2	2,800
160 E	—	—	89.0	2,260	63.0	1,600	70.9	1,800	—	—	150.8	3,830	133.9	3,400
190 E	—	—	100.8	2,560	74.8	1,900	82.7	2,100	—	—	162.6	4,130	145.7	3,700
280 ZZ	—	—	89.0	2,250	110.2	2,800	118.1	3,000	—	—	198.0	5,030	181.1	4,600

1) Highest point is lift mast.

2) Highest point is overhead guard.



Standard equipment:

- Robust steel covers.
- Powerful 3.2kW drive motor.
- Regenerative braking for gradual slowing and energy recovery.
- Proportional lifting and lowering.
- Ergonomic cabin with low step height and freedom of movement.
- Paperwork holder & writing surface.
- Edge-to-edge floor cushioning across the entire operator platform.
- Padded backrest.
- Conveniently located open storage compartment.
- Full-color, interactive instrument display with soft key menu selection buttons.
- Load-side operation of the auxiliary mast forks.
- Operator side gates (standard when ordered with lifting heights at 47" / 1200 mm or higher).
- Easy access to the battery.
- Shrink wrap / cellophane roll storage well integrated in hood. (-E version only)

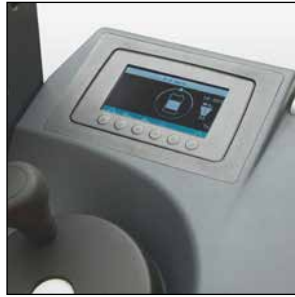
Optional equipment:

- Side battery removal.
- Drive Plus performance option for increased travel speed.
- Auxiliary mast to raise pallet to comfortable height for easier load building.
- Various fork dimensions.
- Optional ITA/ISO Fork Carriage for use with hook-mount forks.
- Platform extensions.
- Electric steering.
- Dual controls.
- Drive & lift control via external buttons.
- PIN code access system to start unit.
- DayLED daytime running lights.
- LED work light.
- LED interior lighting.
- Rotating beacon.
- Accessory mounting bracket.
- Storage on the battery cover.
- USB port 5V power supply.

The Jungheinrich Advantage



Ergonomic workstation



Driver's display



Comfortable flooring on the entire operator platform



Controls and additional display in load direction

Efficient order picking

Order-picking even in tough applications thanks to a capacity of up to 2,200 lbs. (1,000 kg.) with a load center of 24" (600 mm.) The low load provides stable cornering, giving operators a feeling of security while traveling.

The optimized lowering of the walk-on load section (optional) means that the platform plus loading device is lowered to the 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 drive control via external jog buttons provides a fast way of reaching the next picking point. With the auxiliary lift, the touch mode button is located on the backrest to enable direct access to the loading device.

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.

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

Optimal visibility

- 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 10 ft. (3 m.) in front of the truck (optional).

Long operation times

- Energy-saving 3-phase technology and high battery capacities ensure long operation times.
- Lateral battery removal for multi-shift operation (optional).

Parts when you need them

Jungheinrich's Parts Fast or Parts Free Guarantee ensures next-business-day delivery by 5:00 PM of all Jungheinrich parts in the United States, or they're free, including freight. For customers in Canada and Mexico, the guarantee ensures shipping of parts within 24 hours from the time the order was placed by the dealer. See your local Jungheinrich dealer for program details.

* Programs may be subject to change without notice and may vary by region. Please ask your local Jungheinrich dealer for complete terms and conditions.

