

**Powerful 3-phase AC technology drives the drive, lift<sup>1)</sup> and steering motors**

**Innovative, unique Integral Mast provides excellent rigidity, visibility and cushioning for efficient load handling**

**Ergonomic operator compartment offers a combination of comfort, stability and functionality**

**Operator display offers essential information in an easy-to-read format**

**Truck maintenance and troubleshooting have never been easier**



## EKS 230-330p

### 24 and 36 Volt Mid and High Level Order Picker (3000 lbs.)

The EKS series order picker excels in a wide range of warehouses, comfortably and efficiently, making it the right truck for your application.

**The key advantages:**

- Higher performance, due to 3-phase AC technology. AC motors also require no carbon brushes, which eliminates the cost of wear items, reduces the need for servicing and allows for extended operating times.
- The EKS series trucks boast one of the most rigid, robust masts in the market. With fork heights up to 366 inches (9,300 mm),

operators have the comfort and confidence to be efficient at any rack level. In addition, visibility through the unique Integral Mast is unprecedented in the industry.

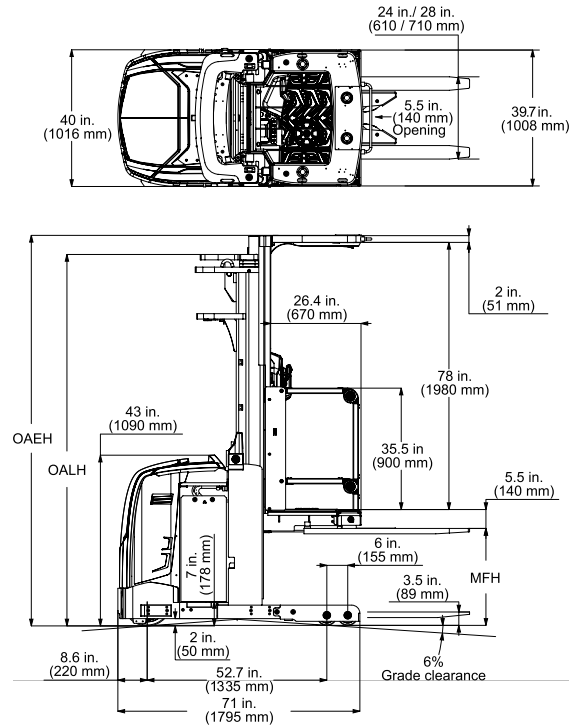
- Operators are more relaxed and productive, primarily due to the ergonomic and user-friendly compartment. The adjustable height control panel, the anti-fatigue, anti-slip floor mat and the intuitive, multifunction control handle minimize operator fatigue throughout the picking process. Productivity can be just as high in the last hour of the shift as in the first.
- The backlit, LCD operator display shows all of the information needed to perform the

task at hand. In addition, it allows operators to select a number of pre-programmed drive and hydraulic performance modes to customize the truck for a particular application or operator skill level. All information is immediately displayed, contributing to the operator's overall awareness — increasing confidence and leading to a more productive work environment.

- Uptime is a focal point of the EKS series truck design. Access to truck components or troubleshooting/maintenance software is easy and convenient, keeping the truck operating, rather than idle.

1) The EKS 230 has a DC hydraulic lift motor.

# EKS 230-330p



**Mast Table EKS 230-330p**

Model	Designation	Maximum Fork Height		Overall Lowered Height		Overall Extended Height		Free Lift	
		in	mm	in	mm	in	mm	in	mm
EKS 230	Two-stage	124	3150	95	2413	210	5321	0	0
		135	3429	95	2413	221	5601	0	0
		162	4115	109	2769	248	6287	0	0
		183	4648	119	3023	269	6820	0	0
		200	5080	127	3226	286	7252	0	0
		239	6071	147	3734	325	8242	0	0
	Three-stage	182	4623	95	2413	268	6795	0	0
		199	5055	95	2413	285	7226	0	0
		239	6071	109	2769	325	8242	0	0
EKS 230p/ EKS 330p	Two-stage	124	3150	95	2413	210	5321	0	0
		135	3429	95	2413	221	5601	0	0
		162	4115	109	2769	248	6287	0	0
		183	4648	119	3023	269	6820	0	0
		200	5080	127	3226	286	7252	0	0
		239	6071	147	3734	325	8242	0	0
	Three-stage	182	4623	95	2413	268	6795	0	0
		199	5055	95	2413	285	7226	0	0
		239	6071	109	2769	325	8242	0	0
		270	6858	119	3023	356	9030	0	0
		300	7620	135	3429	386	9792	0	0
		316	8026	141	3581	402	10198	0	0
		335	8509	147	3734	421	10681	0	0
		352	8941	153	3886	438	11113	0	0
		366	9296	157	3988	452	11468	0	0

# Technical Data

as of: 05/2010

Characteristics	1.1	Manufacturer		Jungheinrich		Jungheinrich		Jungheinrich		1.1
	1.2	Model		<b>EKS 230</b>		<b>EKS 230p</b>		<b>EKS 330p</b>		1.2
		Power voltage		24V		24V		36V		
	1.3	Power type		Electric		Electric		Electric		1.3
	1.4	Type of operation		Order Picker		Order Picker		Order Picker		1.4
	1.5	Load capacity / rated load	lbs kg	3000	1360	3000	1360	3000	1360	1.5
	1.6	Load center distance	in mm	24	610	24	610	24	610	1.6
	1.8	Load distance, center of load wheel to fork face	in mm	7.0	177	7.0	177	7.0	177	1.8
	1.9	Wheelbase	in mm	52.7	1335	52.7	1335	52.7	1335	1.9
Weights	2.1	Truck weight (empty) with min. battery (see line 6.5)	lbs kg	6480	2940	6480	2940	7160	3250	2.1
	2.2	Axle loading, loaded front / rear		25% / 75%		25% / 75%		25% / 75%		2.2
	2.3	Axle loading, unloaded front / rear		54% / 46%		54% / 46%		54% / 46%		2.3
Wheels	3.1	Tires		Vulkollan®		Vulkollan®		Vulkollan®		3.1
	3.2	Tire size, drive	in mm	14.2 x 5.5	360 x 140	14.2 x 5.5	360 x 140	14.2 x 5.5	360 x 140	3.2
	3.3	Tire size, load	in mm	5.9 x 3.9	150 x 100	5.9 x 3.9	150 x 100	5.9 x 3.9	150 x 100	3.3
	3.5	Wheels, number drive/load		1/4		1/4		1/4		3.5
	Dimensions	4.2	Overall lowered height (OALH)	in mm	95.0	2413	95.0	2413	95.0	2413
4.3		Free fork height (FFH)	in mm	0.0	0.0	0.0	0.0	0.0	0.0	4.3
4.4		Maximum fork height (MFH)	in mm	124.0	3150	124.0	3150	124.0	3150	4.4
		Maximum fork height with rated load	in mm	316	8026	316	8026	316	8026	
4.5		Overall extended height (OAEH)	in mm	209.5	5321	209.5	5321	209.5	5321	4.5
4.7		Overhead guard height	in mm	89.0	2260	89.0	2260	89.0	2260	4.7
4.8		Operator platform step height	in mm	9.0	229	9.0	229	9.0	229	4.9
4.19		Overall length	in mm	113.1	2872	113.1	2872	113.1	2872	4.19
4.20		Length to fork face (headlength)	in mm	71.0	1805	71.0	1805	71.0	1805	4.20
4.21		Overall width	in mm	40.0	1016	40.0	1016	40.0	1016	4.21
4.22		Fork dimensions (length x width x thick)	in mm	42x4x1.5	1067x102x38	42x4x1.5	1067x102x38	42x4x1.5	1067x102x38	4.22
4.25		Fork spacing (min / max)	in mm	24 / 28	610 / 710	24 / 28	610 / 710	24 / 28	610 / 710	4.25
4.27		Overall width with rail guidance (min / max)	in mm	49.2 / 69.7	1250 / 1770	49.2 / 69.7	1250 / 1770	49.2 / 69.7	1250 / 1770	4.27
4.31		Ground clearance, under mast	in mm	2.0	50	2.0	50	2.0	50	4.31
4.32		Ground clearance, center of wheelbase	in mm	2.0	50	2.0	50	2.0	50	4.32
4.35		Turning radius	in mm	67.1	1705	67.1	1705	67.1	1705	4.35
4.40		Order picking height (MFH + 51.5")	in mm	192.5	4890	192.5	4890	192.5	4890	4.40
4.46		Operator compartment outside width	in mm	39.7	1008	39.7	1008	39.7	1008	4.46
		Baseleg overall width	in mm	40	1016	40	1016	40	1016	
	Pallet clamp opening	in mm	5.5	140	5.5	140	5.5	140		
	Battery roller height	in mm	7.0	178	7.0	178	7.0	178		
Performance	5.1	Travel speed, loaded / unloaded <sup>1)</sup>	mph km/h	6.5 / 6.5	10.5 / 10.5	6.5 / 6.5	10.5 / 10.5	7.0 / 7.0	11.3 / 11.3	5.1
	5.2	Lift speed, loaded / unloaded <sup>1)</sup>	ft/min m/s	39.4 / 57.0	0.20 / 0.29	52.0 / 75.0	0.26 / 0.38	61.0 / 83.0	0.31 / 0.42	5.2
	5.3	Lowering speed, loaded / unloaded <sup>1)</sup>	ft/min m/s	84.6 / 80.7	0.43 / 0.41	84.6 / 80.7	0.43 / 0.41	84.6 / 80.7	0.43 / 0.41	5.3
	5.10	Service brake		Regenerative		Regenerative		Regenerative		5.10
	5.10	Parking brake		Electric Disc		Electric Disc		Electric Disc		5.10
Motors		Traction motor type		AC Induction		AC Induction		AC Induction		
	6.1	Drive motor rating 60 min	HP kW	5.0	3.7	5.0	3.7	5.5	4.1	6.1
		Pump motor type		DC		AC Induction		AC Induction		
	6.2	Pump motor rating 5 min	HP kW	9.5	7.1	9.5	7.1	9.5	7.1	6.2
		Steering motor type		AC Induction		AC Induction		AC Induction		
	6.3	Steering motor rating 30 min	HP kW	0.4	0.3	0.4	0.3	0.4	0.3	6.3
	6.4	Maximum battery capacity (at 6 hour rate)	Ah	1085		1085		775		6.4
	6.5	Battery weight (minimum / maximum)	lbs kg	920 / 2000	417 / 907	920 / 2000	417 / 907	1600 / 2000	726 / 907	6.5
	Battery compartment size	width length height	in mm	38.6 14.25 32.25	981 362 819	38.6 14.25 32.25	981 362 819	38.6 14.25 32.25	981 362 819	

All dimensions with 42 inch (nominal) forks unless otherwise noted.

1) Maximum speed attainable, after break-in period, varies with truck weight, rolling resistance, mast height, options and battery condition.

2) Unless otherwise indicated, values are based on the lowest two-stage mast and smallest operator compartment/baseleg overall width (OAW).

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.

# The Jungheinrich Advantage

## Enhanced visibility, heavy-duty mast

The unique Integral Mast is designed specifically for very narrow warehouses:

- A very rigid Integral Mast design reduces sway at high lift heights.
- This mast yields extremely high capacities with a narrow chassis, helping to improve your warehouse utilization.
- Since there is no free-lift cylinder, the controls are located between the mast channels, which helps to increase visibility through the mast.
- Electric cushioning stabilizes the load during the final inches of lifting and lowering, helping to protect pallets, while providing a more comfortable ride for the operator.
- Travel speeds are automatically reduced at higher lift heights or increased steering angles.
- The standard lift height indicator allows the operator to find precise rack heights.
- The maximum lift height can be programmed to help reduce the chance of damage to the facility.

## Premium ergonomics

Operators experience superior comfort as a standard feature:

- The control panel can be raised or lowered to the optimum operating position.



Operator compartment

- The ergonomic, easy-to-access pallet clamp pedal activates a generous 5.5" standard opening.
- The intuitive multifunction control handle, steering wheel and operator presence pedal are naturally positioned to promote comfortable control.
- The control handle is positioned for ease of activation by operators with a variety of hand sizes and glove styles.
- The steering wheel is strategically located and angled to maximize comfort.
- The large, low-profile, padded operator presence pedal promotes easy activation from a variety of operator positions.
- Molded rubber, anti-fatigue, anti-slip floor mats cover the entire standard operator compartment.

## Interactive operator display

The informative, interactive display serves as the focal point for obtaining information and status updates:

- Informative icons and text messages indicate battery state-of-charge, time, travel speed, travel direction, truck status, limiting condition and performance mode.
- Four factory-set performance modes are designed for various applications and operator skill levels. The modes can be easily selected via the display.
- All drive and hydraulic functions are individually programmable to enable the truck performance to be modified. Many of the functions are customizable through the display.
- Technicians can troubleshoot systems via the display.

## Powerful 3-phase AC technology

The EKS series uses powerful 3-phase AC technology for drive, lift<sup>1)</sup> and steering:

- Lower energy consumption, due to more efficient electrical management systems.
- Precise control, ideal for fast picking applications.

1) The EKS 230 has a DC hydraulic lift motor.



Interactive operator display

- Smooth lifting and lowering of the platform provides comfort and reliability for the operator.
- Lower maintenance costs with the omission of high-wear components.
- Longer operating times, due to energy reclamation during braking.

## Ease of serviceability

The order picker truck was designed with uptime in mind:

- One-button access to all chassis components.
- The control system features fully integrated, individual units, permitting more cost effective, trouble-free diagnosis.
- The CAN-Bus system promotes real-time communication between control modules and technician for more detailed diagnostics.
- Easy access to the drive tire and load wheels.
- The state-of-the-art control handle utilizes solid state hall-effect devices.
- The easy-to-read display records the following data during a truck limiting event:
  - event number and description
  - control module affected
  - battery state-of-charge
  - time of the event
  - truck hours



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