

## EK-X Technical Data

### Vertical Order Picker

---

EK-X 10

EK-X/Li-Ion



# EK-X 10 Vertical Order Picker

## The new dimension in order picking

This specification sheet to VDI guideline 2198 only gives the technical figures for selected equipment variants.

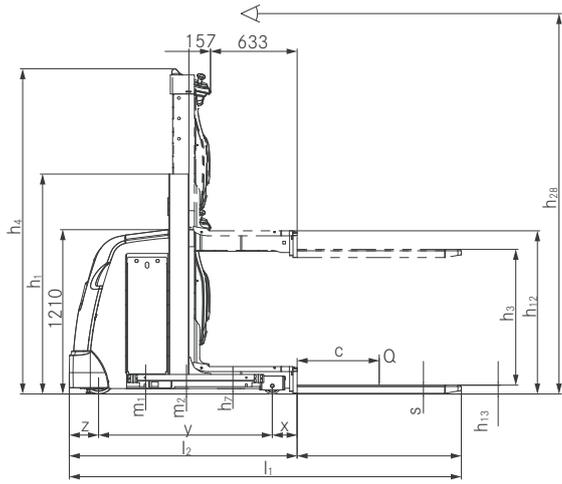


					STILL	STILL	STILL	
					<b>EK-X 10 single mast without additional lift</b>	<b>EK-X 10 single mast with additional lift</b>	<b>EK-X 10 telescopic mast</b>	
Distinguishing marks	1.1	Manufacturer						
	1.2	Manufacturer's type designation						
	1.3	Drive			Electric 24 V	Electric 24 V	Electric 24 V	
	1.4	Operator type			Standing/order-picker	Standing/order-picker	Standing/order-picker	
	1.5	Rated capacity/rated load	Q	kg	1000	1000	1000	
	1.6	Load centre distance	c	mm	400	400	400	
	1.8	Load distance, centre of drive axle to fork	x	mm	180	180	180	
	1.9	Wheelbase	y	mm	1270	1260	1415	
	Weights	2.1	Service weight (incl. battery)		kg	1564	2069	2711
2.2		Axle loading, laden	drive end/load end	kg	536/2028	688/2381	1050/2661	
2.3		Axle loading, unladen	drive end/load end	kg	1006/558	1168/901	1479/1232	
Tyres/chassis	3.1	Tyres			Polyurethane	Polyurethane	Polyurethane	
	3.2	Tyre size	drive end	mm	∅ 250 x 100	∅ 250 x 100	∅ 250 x 100	
	3.3	Tyre size	load end	mm	∅ 125 x 105	∅ 125 x 105	∅ 150 x 100	
	3.5	Wheels, number (x = driven wheels)	drive end/load end		1x / 2	1x / 2	1x / 2	
	3.7	Tread	load end	b <sub>11</sub>	mm	660	850	850
	4.2	Height	mast lowered	h <sub>1</sub>	mm	1620	2530	2900
	4.4	Lift		h <sub>3</sub>	mm	1000	1910	4550
Dimensions	4.5	Height	mast extended	h <sub>4</sub>	mm	2395	4170	6810
	4.7	Height of overhead guard (cabin)		h <sub>6</sub>	mm	-	2260	2260
	4.8	Stand height		h <sub>7</sub>	mm	200	200	200
	4.11	Additional lift		h <sub>9</sub>	mm	-	800	800
	4.14	Stand height, elevated		h <sub>12</sub>	mm	1200	2110	4750
	4.14.1	Order picking height (h <sub>12</sub> + 1600 mm)	elevated	h <sub>28</sub>	mm	2800	3710	6350
	4.15	Height	lowered	h <sub>13</sub>	mm	65	65	65
	4.19	Overall length		l <sub>1</sub>	mm	2465	2475	2630
	4.20	Length to face of forks		l <sub>2</sub>	mm	1665	1675	1830
	4.21	Overall width		b <sub>1</sub> /b <sub>2</sub>	mm	790/790	980/980	980/980
	4.22	Fork dimensions		s/e/l	mm	60/120/800	60/120/800	60/120/800
	4.23	Fork carriage ISO 2328, class/type A, B				Welded forks	Welded forks	Welded forks
	4.24	Fork-carriage width		b <sub>3</sub>	mm	-	740	740
	4.25	Distance between fork-arms		b <sub>5</sub>	mm	560	640	640
	4.27	Width across guide rolls		b <sub>6</sub>	mm	-	1375	1375
	4.31	Ground clearance, laden, below mast		m <sub>1</sub>	mm	40	40	38
	4.32	Ground clearance, centre of wheelbase		m <sub>2</sub>	mm	40	40	38
	4.34.1	Aisle width for pallets 1200 x 800 lengthwise		A <sub>st</sub>	mm	3122	-	-
	4.34.2	Aisle width for pallets 1200 x 800 crosswise		A <sub>st</sub>	mm	2834	1380	1380
	4.35	Turning radius		W <sub>a</sub>	mm	1485	1495	1650
4.42	Transfere aisle with, minimum		A <sub>u</sub>	mm	2834	2844	2999	
4.45	Clear driver compartment height inside			mm	-	2000	2000	
Performance data	5.1	Travel speed	laden/unladen	km/h	9.0/9.0	10.0/10.0	10.0/10.0	
	5.2	Lift speed	laden/unladen	m/s	0.15/0.19	0.18/0.25	0.22/0.31	
	5.3	Lowering speed	laden/unladen	m/s	0.30/0.24	0.30/0.24	0.30/0.24	
	5.9	Acceleration time (over 10 m)	laden/unladen	s	7/7	7/7	7/7	
	5.10	Service brake				Regenerative	Regenerative	Regenerative
Electric engine	6.1	Drive motor rating S2 60 min		kW	3.0	3.0	3.0	
	6.2	Lift motor rating at S3 15%		kW	3.2 <sup>1</sup>	4.0	7.6	
	6.3	Battery according to DIN 43535			3PzS 420/B	4PzS 560/B	4PzS 560/B	
	6.4	Battery voltage/nominal capacity K <sub>s</sub>		V/Ah	24/420	24/560	24/560	
	6.5	Battery weight (dependent on manufacturer ±5%)		kg	385	502	502	
Other	10.7	Sound level at the driver's seat		dB(A)	61	63	69	

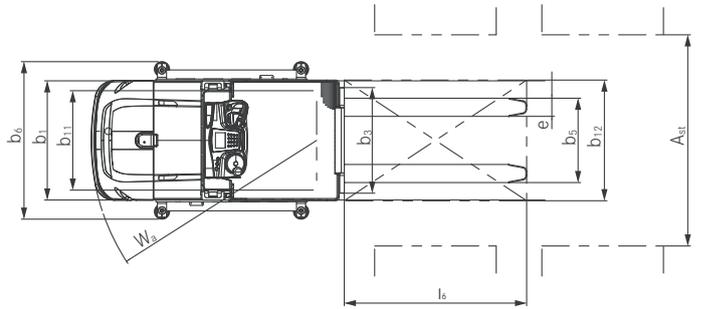
With our VNAP tool we will calculate the technical specifications of the truck with your individual equipment.  
The calculated speed profiles are based on our floor quality rules. Subject to change without notice. Values can vary ±10%.

<sup>1</sup> S3 = 10%

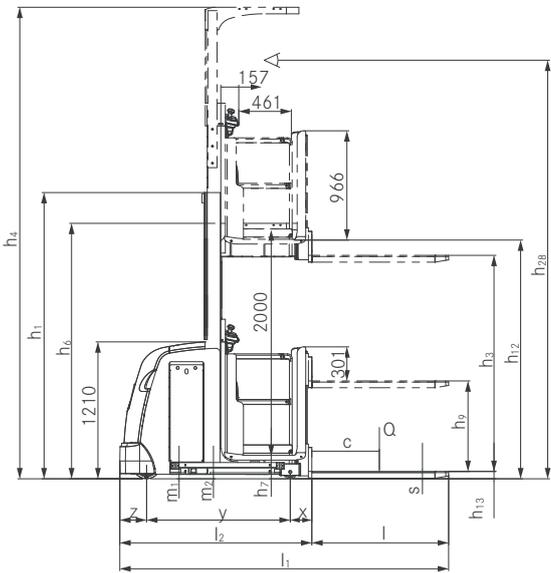
EK-X 10 Vertical Order Picker  
 Technical Drawings



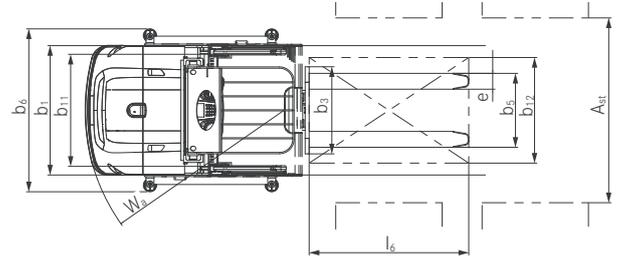
Side view single mast without auxiliary lift



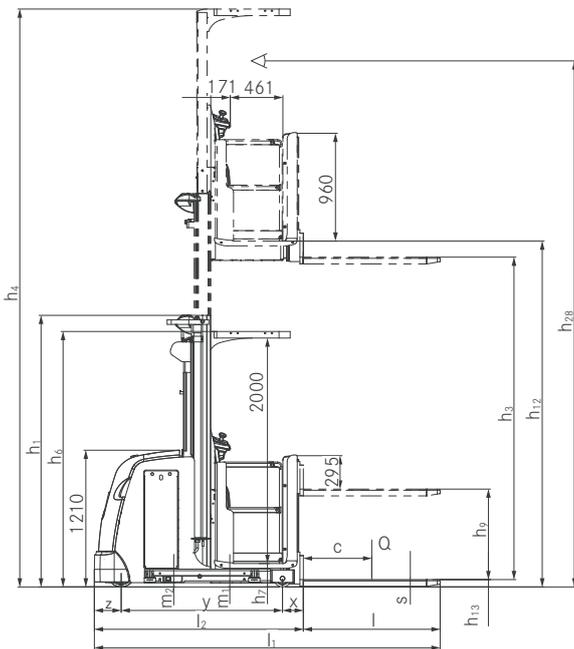
Top view single mast without auxiliary lift



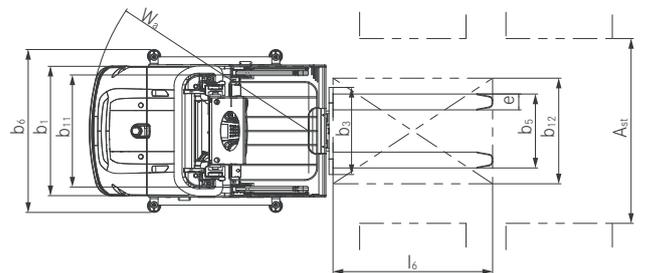
Side view single lift mast with auxiliary lift



Top view single lift mast with auxiliary lift



Side view telescopic mast with auxiliary lift



Top view telescopic lift mast with auxiliary lift

## EK-X 10 Vertical Order Picker Mast Tables

EK-X 10 single mast without additional lift	Height, mast lowered	$h_1$	mm	1,620	2,120	2,530
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	1,065	1,565	1,975
	Total lift	$h_{24} (h_3 + h_9)$	mm	1,000	1,500	1,910
	Nominal lift	$h_3$	mm	1,000	1,500	1,910
	Height, lowered	$h_{13}$	mm	65	65	65
	Additional lift	$h_9$	mm	0	0	0
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	1,200	1,700	2,110
	Picking height	$h_{28} (h_{12} + 1600)$	mm	2,800	3,300	3,710
	Height, mast extended <sup>1</sup>	$h_4$	mm	2,395	3,760	4,170
EK-X 10 single mast with additional lift	Height, mast lowered	$h_1$	mm	1,620	2,120	2,530
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	1,865	2,365	2,775
	Total lift	$h_{24} (h_3 + h_9)$	mm	1,800	2,300	2,710
	Nominal lift	$h_3$	mm	1,000	1,500	1,910
	Height, lowered	$h_{13}$	mm	65	65	65
	Additional lift	$h_9$	mm	800	800	800
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	1,200	1,700	2,110
	Picking height	$h_{28} (h_{12} + 1600)$	mm	2,800	3,300	3,710
	Height, mast extended <sup>1</sup>	$h_4$	mm	2,395	3,760	4,170
EK-X 10 telescopic mast without additional lift	Height, mast lowered	$h_1$	mm	2,400	2,900	
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	3,615	4,615	
	Total lift	$h_{24} (h_3 + h_9)$	mm	3,550	4,550	
	Nominal lift	$h_3$	mm	3,550	4,550	
	Height, lowered	$h_{13}$	mm	65	65	
	Additional lift	$h_9$	mm	0	0	
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	3,750	4,750	
	Picking height	$h_{28} (h_{12} + 1600)$	mm	5,350	6,350	
	Height, mast extended <sup>1</sup>	$h_4$	mm	5,810	6,810	
EK-X 10 telescopic mast with additional lift	Height, mast lowered	$h_1$	mm	2,400	2,900	
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	4,415	5,415	
	Total lift	$h_{24} (h_3 + h_9)$	mm	4,350	5,350	
	Nominal lift	$h_3$	mm	3,550	4,550	
	Height, lowered	$h_{13}$	mm	65	65	
	Additional lift	$h_9$	mm	800	800	
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	3,750	4,750	
	Picking height	$h_{28} (h_{12} + 1600)$	mm	5,350	6,350	
	Height, mast extended <sup>1</sup>	$h_4$	mm	5,810	6,810	

<sup>1</sup> Dimensions  $h_4$  apply for driver roof with a clear height of 2000 mm

## Detailed Photos



Perfect visibility through the mast for safe and fast manoeuvrability



Flexible mounting options for ideal working conditions

EK-X 10 Vertical Order Picker  
Detailed Photos



Safe two-hand operation of the auxiliary lift



Optional STILL Safety Light increases warehouse safety



Customer-specific access concepts



Knee upholstery on the load end cabin wall



Controls on both sides of the cabin



Truck-specific equipment options



Easy battery change and safe positioning of the battery

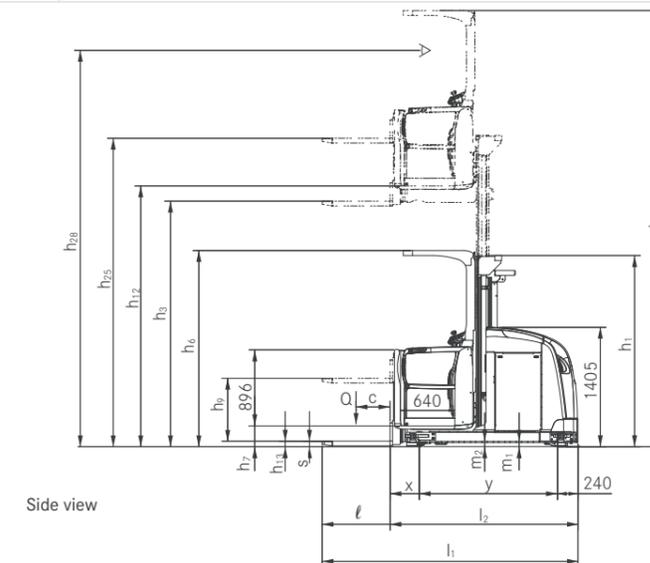
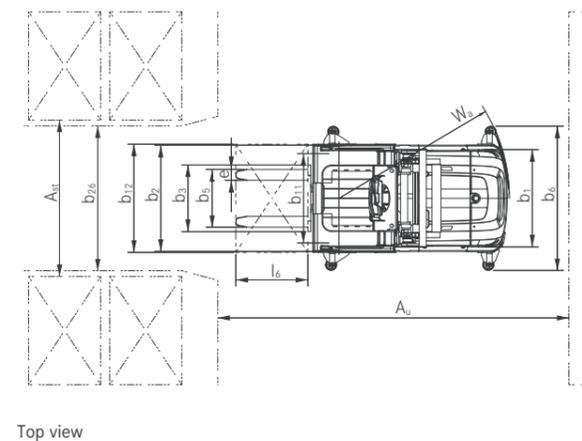


Battery compartment cover can be opened and closed without tools



Distinguishing marks	1.1		STILL	STILL	STILL	STILL
	1.2		<b>EK-X telescopic mast</b>	<b>EK-X triplex mast</b>	<b>EK-X/Li-Ion telescopic mast</b>	<b>EK-X/Li-Ion triplex mast</b>
	1.3		Electric 24 V	Electric 24 V	Electric 48 V	Electric 48 V
	1.4		Standing/order-picker	Standing/order-picker	Standing/order-picker	Standing/order-picker
	1.5		Q	kg 1000	1000	1200
	1.6		c	mm 400	400	400
	1.8		x	mm 345	405	345
	1.9		y	mm 1487	1595	1520
	2.1			kg 2887	3688	2948
	2.2		drive end/load end	kg 1094/2793	1502/3186	1027/3121
	2.3		drive end/load end	kg 1636/1250	2062/1627	1664/1283
	3.1			Polyurethane	Polyurethane	Polyurethane
	3.2		drive end	mm $\varnothing$ 360 x 130	$\varnothing$ 360 x 130	$\varnothing$ 360 x 130
	3.3		load end	mm $\varnothing$ 180 x 156	$\varnothing$ 180 x 156	$\varnothing$ 180 x 156
	3.5		drive end/load end	1x / 2	1x / 2	1x / 2
	3.7		load end	b <sub>11</sub> mm 700	1000	700
	4.2		mast lowered	h <sub>1</sub> mm 2250	2250	2250
	4.3			h <sub>2</sub> mm -	1600	-
	4.4			h <sub>3</sub> mm 2825	4410	2825
	4.5		mast extended	h <sub>4</sub> mm 5315	6900	5315
	4.7			h <sub>6</sub> mm 2490	2490	2490
	4.8			h <sub>7</sub> mm 240	240	240
	4.11			h <sub>9</sub> mm 740	740	740
	4.14		elevated	h <sub>12</sub> mm 3065	4650	3065
	4.14.1		elevated	h <sub>28</sub> mm 4665	6250	4665
	4.15		lowered	h <sub>13</sub> mm 65	65	65
	4.19			l <sub>1</sub> mm 3277	3126	3310
	4.20			l <sub>2</sub> mm 2077	2326	2110
	4.21			b <sub>1</sub> /b <sub>2</sub> mm 880/880	1180/1180	880/880
	4.22			s/e/l mm 55/120/1200	55/120/800	55/120/1200
	4.23			Welded forks	Welded forks	Welded forks
	4.24			b <sub>3</sub> mm 660	740	660
	4.25			b <sub>5</sub> mm 560	640	560
	4.27			b <sub>6</sub> mm 1155	1375	1155
	4.31			m <sub>1</sub> mm 50	50	50
	4.32			m <sub>2</sub> mm 50	50	50
	4.34.1			A <sub>st</sub> mm 1160	-	1160
	4.34.2			A <sub>st</sub> mm -	1380	-
	4.35			W <sub>6</sub> mm 1732	2040	1765
	4.42			A <sub>u</sub> mm 3528	3586	3561
	4.44			mm 640	640	640
	4.45			mm 2200	2200	2200
	5.1		laden/unladen	km/h 10.0/10.0	10.0/10.0	11.0/11.0
	5.2		laden/unladen	m/s 0.23/0.30	0.20/0.30	0.32/0.40
	5.3		laden/unladen	m/s 0.28/0.28	0.28/0.28	0.35/0.35
	5.9		laden/unladen	s 7/7	7/7	6/6
	5.10			Regenerative	Regenerative	Regenerative
	6.1			kW 4.0	4.0	6.5
	6.2			kW 7.6	7.6	13
	6.3			6 EPzS 840/A	8 EPzS 1120/A	3 EPzS 420/A
	6.4			V/Ah 24/840	24/1120	48/420 Li-Ion 48/813
	6.5			kg 687	883	739
	10.7			dB(A) 61	61	61

With our VNAP tool we will calculate the technical specifications of the truck with your individual equipment. The calculated speed profiles are based on our floor quality rules. Subject to change without notice. Values can vary ±10%.



## EK-X Vertical Order Picker Mast Tables

EK-X telescopic masts with additional lift	Height, mast lowered	$h_1$	mm	2,250	2,450	2,900	3,400	3,900	4,400	4,900	5,400
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	3,625	4,025	4,925	5,925	6,525	7,525	8,525	9,325
	Total lift	$h_{24} (h_3 + h_9)$	mm	3,565	3,965	4,865	5,865	6,465	7,465	8,465	9,265
	Nominal lift	$h_3$	mm	2,825	3,225	4,125	5,125	5,725	6,725	7,725	8,525
	Height, lowered	$h_{13}$	mm	60	60	60	60	60	60	60	60
	Additional lift	$h_9$	mm	740	740	740	740	740	740	740	740
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	3,065	3,465	4,365	5,365	5,965	6,965	7,965	8,765
	Picking height	$h_{28} (h_{12} + 1600)$	mm	4,665	5,065	5,965	6,965	7,565	8,565	9,565	10,365
	Height, mast extended <sup>1</sup>	$h_4$	mm	5,115	5,515	6,415	7,415	8,015	9,015	10,015	10,815
EK-X triplex masts with additional lift	Height, mast lowered	$h_1$	mm	2,250	2,450	2,900	3,400	3,900	4,500		
	Total lift above floor	$h_{25} (h_3 + h_9 + h_{13})$	mm	5,210	5,810	7,160	7,960	9,460	10,960		
	Total lift	$h_{24} (h_3 + h_9)$	mm	5,150	5,750	7,100	7,900	9,400	10,900		
	Nominal lift	$h_3$	mm	4,410	5,010	6,360	7,160	8,660	10,160		
	Free lift	$h_2$	mm	1,600	1,800	2,250	2,750	3,250	3,850		
	Height, lowered	$h_{13}$	mm	60	60	60	60	60	60		
	Additional lift	$h_9$	mm	740	740	740	740	740	740		
	Stand height, elevated	$h_{12} (h_3 + h_7)$	mm	4,650	5,250	6,600	7,400	8,900	10,400		
	Picking height	$h_{28} (h_{12} + 1600)$	mm	6,250	6,850	8,200	9,000	10,500	12,000		
	Height, mast extended <sup>1</sup>	$h_4$	mm	6,700	7,300	8,650	9,450	10,950	12,450		

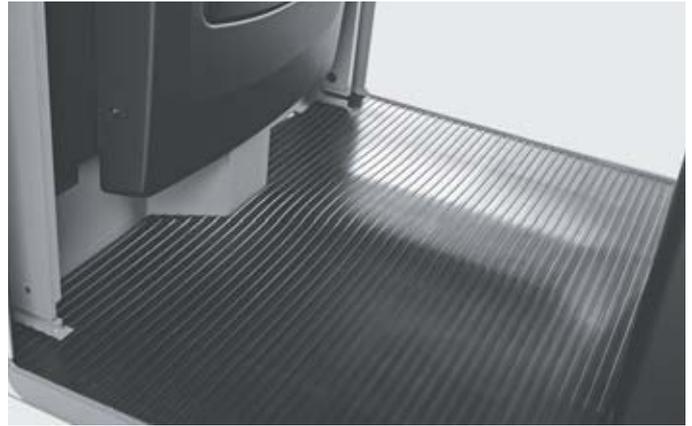
<sup>1</sup> Dimensions  $h_4$  apply for driver roof with a clear height of 2000 mm. Intermediate heights on request.



EK-X Vertical Order Picker  
Detailed Photos



Spacious driver workplace



Shock-absorbing floor with integrated drive switch



Tilting bar for ergonomic order picking to the last article on the pallet



Drive end and load end operation for optimum truck utilisation



Maximum space for order picking thanks to walk-on pallet



Easy and safe pallet access through open barrier

## EK-X Vertical Order Picker

### The new dimension in order picking

---

Optimum use of storage space: picking heights of up to 12 metres

Large and spacious cabin for maximum freedom of movement

Optimally adjustable to any warehouse: customised solution thanks to modular design



It's the Prince of Pickers and Nobility in any narrow-aisle warehouse: the EK-X vertical order picker sets the benchmark in terms of performance, picking height, residual load capacity, functionality and ergonomics.

The EK-X forges ahead into new dimensions of efficient goods handling with driving speeds up to 13 km/h and lifting speeds up to 0.4 m/s. Thanks to the OPTISPEED system, this compact warehouse helper is always on the move at maximum speed – without impairing safe driving.

Other features include an excellent field of view and a maximum pick height of 12 meters – outstanding in the truest sense of the word – as well as a roomy, shock-absorbing driver's cabin.

In short: if you want the most efficient, user-friendly picking warehouse management, you can't do without an EK-X. Moreover, the modular system allows the optimum EK-X to be custom-built for every warehouse.

## Extensive Equipment

---

### Power

---

- Maintenance-free 3-phase drive unit, 24 V or 48 V
- Effective goods handling due to very high driving and lifting speeds (13 km/h and 0.4 m/s)
- Enough energy for multi-shift operations thanks to battery capacities up to 1240 Ah (24 V) or 930 Ah (48 V)
- Powerful auxiliary lift for efficient order picking
- Top availability: The Li-Ion battery bundles a lot of energy and can be quickly and easily opportunity charged

### Precision

---

- Sensitive operation and stepless control of lift speed thanks to state-of-the-art proportional valve technology
- Power-optimized driving speeds through accurate height sensing
- Maximum possible operating speed for each load weight thanks to the OPTISPEED-System
- Easier workload through semiautomatic approach to shelf with OPTISPEED 4.0

### Ergonomics

---

- Quick, safe personnel entry and exit thanks to generously sized, low-level entry area
- High degree of movement freedom due to roomy driver's cabin
- Shock-absorbing floor with integrated drive switch guarantees relaxed working

- Effective working with any body size thanks to low cabin wall and small distance to load carrier
- Optional tilting side barriers for even easier access to goods
- Intuitive and optionally height-adjustable control panel for ergonomic work
- Wide variety of equipment options for the driver's cabin (e.g. attachment system for terminals etc., storage option, leaning support, 12 volt power socket)

### Safety

---

- Safe handling in a very narrow aisle with mechanical or inductive guidance
- Long-life, energy-saving LED headlights for optimum visibility
- Optional OPTISAFE system gives optimum support when navigating and operating the vehicle in sensitive warehouse areas
- Safe operation through sensor-controlled two-handed operation
- Faster servicing due to easily accessible service points

### Environmental responsibility

---

- Longer operating time and optimum use of resources through energy recovery during braking and lowering operations
- Blue-Q efficiency mode saves up to 10 percent energy at the push of a button without sacrificing power
- 90 percent of all the materials used are recyclable

# EK-X Vertical Order Picker

## Equipment Variants



		EK-X 10 b <sub>1</sub> = 790 mm	EK-X 10 b <sub>1</sub> = 980 mm	EK-X 24 V b <sub>1</sub> = 880-1580 mm	EK-X 48 V b <sub>1</sub> = 880-1580 mm
Driver workplace	Shock-absorbing work space for optimum comfort on bumpy floors and trespases	●	●	●	●
	Integrated storage compartments, bottle holder	●	●	●	●
	LCD display indicating truck status and lift height	○	○	●	●
	Tilting barrier for optimum reach	○	○	○	○
	Cabins for different widths	○	○	○	○
	Control panel on mast end	●	●	●	●
	Control panel on mast end or on both sides	○	○	○	○
	Height-adjustable control panel	—	—	○	○
	Auxiliary lift control on both sides	○	○	○	○
	Knee upholstery for support when order picking	○	○	○	○
	Adjustable lean on support for load end work	○	○	○	○
	Overhead guard height 2000 mm	○	○	●	●
	Overhead guard height 2200 mm	○	○	○	○
Steering	Steering wheel or steering knob	●	●	●	●
	Redundant steering safety system	●	●	●	●
	Fully electric 180° steering	●	●	●	●
Mast	Free view mast	—	—	●	●
	Single mast	○	○	—	—
	Tele mast	○	○	○	○
	Triple free view mast with free view	—	—	○	○
	Mast transition dampening	—	—	●	●
Auxiliary lift	○	○	○	○	
Hydraulics	Noise-optimised hydraulic pump	●	●	●	●
	Proportional valve technology for particularly sensitive movements	●	●	●	●
	Individual parametrisation of hydraulic functions	●	●	●	●
	Energy recovery when lowering	—	—	●	●
Drives	Jerk-free, stepless acceleration up to top speed	●	●	●	●
	Maintenance-free drives for driving, steering and lifting	●	●	●	●
	Fully capsulated, dirt- and dust-resistant component	●	●	●	●
	Integrated current and temperature sensors for function monitoring	●	●	●	●
Brakes	Regenerative brake system	●	●	●	●
	Energy recovery when braking	●	●	●	●
	Additional electric load wheel brake	—	—	○	○
Battery system	Battery roller track for lateral battery change	○	○	○	○
	Battery change by forklift truck	—	—	○	○
	Battery change by crane	○	○	—	—
	Battery compartment for 360 Ah to 465 Ah	●	—	—	●
	Battery compartment for 400 Ah to 500 Ah	—	○	—	—
	Battery compartment for 480 Ah to 620 Ah	○	○	—	○
	Battery compartment for 720 Ah to 930 Ah	—	○	●	○
	Battery compartment for 720 Ah to 1240 Ah	—	—	○	○
	273 Ah STILL Li-Ion battery	○	○	○	○
	813 Ah STILL Li-Ion battery	○	○	○	○
Lateral battery compartment cover	○	○	○	○	
Safety and performance	FleetManager: access authorisation, shock detection, reports	○	○	○	○
	Rail guidance with entrance rollers	○	○	○	○
	Wire guidance with automatic loop finder	—	○	○	○
	OPTISPEED: lift height- and load-controlled speed control	—	—	○	○
	PIN code access, keyless with push button	○	○	○	○
	Warning light	○	○	●	●
	STILL Safety Light	○	○	○	○
	Spot lights	○	○	○	○
	Dimmable cabin light	○	○	○	○
	Plastic overhead guard cover	○	○	○	○
	Steering angle-controlled cornering speed reduction	○	○	●	●
	Lift cut-out and lowering stop	○	○	○	○
	Drive cut-out	○	○	○	○
	Preparation for PSA	—	○	○	○
	Automatic end-of-aisle stop	—	○	○	○
	Heavy Duty performance package for lifting	○	○	○	○
	Heavy Duty performance package for driving	—	—	○	○
	Contactless collision guard on overhead guard	○	○	○	○
	Anti-static version	○	○	○	○
Auxiliary equipment	Different fork lengths	○	○	○	○
	FEM fork carriage	○	○	○	○
	Preparation for data terminal and printer	○	○	○	○
	Cold store version	○	○	○	○
	Fan	○	○	○	○
	Mounting bar system for terminal, writing pad and other accessory	○	○	○	○
	Preparation for radio	○	○	○	○
	Walk-on pallet with railing	○	○	○	○
	12 V socket	○	○	○	○
Pedestrian operation for floor level order picking	○	○	—	—	

● Standard ○ Optional — Not available



STILL GmbH  
Berzeliusstraße 10  
D-22113 Hamburg  
Tel.: +49 (0)40/73 39-20 00  
Fax: +49 (0)40/73 39-20 01  
info@still.de

**For further information please visit:**  
**[www.still.eu](http://www.still.eu)**

STILL is certified in the following areas: Quality management, occupational safety, environmental protection and energy management.



first in intralogistics