

Versatile design with modular construction and intelligent truck management system

80 Volt 3-phase advanced AC technology providing powerful torque and high productivity

Low cost of operation through two-fold energy reclamation and effective energy management

Ergonomic workplace with electrically-adjustable operator's console



## EKV 513-515k

### Man-Up Turret Truck (2,750 - 3,300 lbs.)

The EKV 513–515k high-rack turret trucks stand for high performance in the narrow aisle warehouse. They set new standards for flexibility, low cost of operation and ergonomics.

#### **Versatility through modular construction**

The EKV high-rack turret trucks have over 5 million possible configurations providing design versatility from the start.

#### **The key advantages:**

The flexibility to adapt to any warehousing and logistics operation. Intelligent truck management with our proprietary electronic controller and CAN-Bus system keeps the options open for a wide range of requirements to precisely match the truck to the specific application.

Jungheinrich's 3-phase AC technology and industry leading controller and motor design provide excellent performance and energy efficiency – important factors for fast throughput and low cost of operation. These features allow operators to work up to two shifts on a single battery charge in most applications.

This high performance and efficiency is available to the operator from the moment they step into the operator's cab and turn on the EKV. The cab provides a generous workplace with excellent visibility.

At the center of the cab is the electronically-adjustable control panel, which provides the operator with a central location to access all truck controls and to view important operating parameters. All parameters and programs can be set individually.

- Softkeys are used to control functions and menus.
- Travel and hydraulics are controlled via thumb operation.
- Two-handed operation is used for maximum security and operating comfort. Sensors register the operator's touch and pass this information onto the onboard computer.

# Technical Data

Characteristics	1.1 Manufacturer			Jungheinrich		Jungheinrich	
	1.2 Model			EKG 513		EKX 515k	
1.3 Drive	1.4 Type of operation			order picker / turret truck		order picker / turret truck	
	1.5 Load capacity / rated load	Q	lbs	kg	2,750	1,240	3,300
1.6 Load center distance	c	in	mm	24.0	610	24.0	610
1.8 Load distance, center of drive axle to fork	x	in	mm	17.3	440	17.3	440
1.9 Wheelbase	y	in	mm	71.9	1,826	75.8	1,926
1.10 Center drive wheel / counterweight	z	in	mm	11.0	280	11.0	280
Weights	2.1 Service weight including battery (see line 6.5)			lbs	kg	13,999	6,350
	2.2 Axle loading – loaded, drive / load			lbs	kg	12,610 / 4,145	5,720 / 1,880
	2.3 Axle loading – unloaded, drive / load			lbs	kg	8,488 / 5,512	3,850 / 2,500
3.1 Tires	3.2 Tire size, drive			Vulkollan®		Vulkollan®	
	3.3 Tire size, load			15.0 x 7.6		15.0 x 7.6	
3.5 Wheels – number, drive / load (x = driven wheels)			2 / 1x		2 / 1x		
3.6 Track width, drive side		in	mm	57.1	1,208	57.1	1,308
4.2 Collapsed mast height	h <sub>1</sub>	in	mm	117	2,955	117	2,955
4.4 Maximum fork height (MFH)	h <sub>3</sub>	in	mm	137	3,500	137	3,500
4.5 Overall extended height (OAE)	h <sub>4</sub>	in	mm	239	6,050	239	6,050
4.7 Overhead guard height	h <sub>6</sub>	in	mm	101	2,550	101	2,550
4.8 Seat height / platform height	h <sub>7</sub>	in	mm	16.9	430	16.9	430
4.11 Auxiliary lift	h <sub>9</sub>	in	mm	70	1,780	70	1,780
4.14 Maximum platform height	h <sub>12</sub>	in	mm	154	3,930	154	3,930
4.19 Overall length	l <sub>1</sub>	in	mm	128.0	3,250	131.9	3,350
4.20 Length to fork face, headlength	l <sub>2</sub>	in	mm	124.6	3,164	128.5	3,264
4.21 Overall width	b <sub>1</sub> / b <sub>2</sub>	in	mm	47.6 / 57.9	1,210 / 1,400	47.6 / 57.9	1,210 / 1,500
4.22 Fork dimensions, thick / width	s / e / l	in	mm	1.57 x 4.7 x 47.2	40 x 120 x 1,200	1.57 x 4.7 x 47.2	40 x 120 x 1,200
4.23 Fork carriage ISO 2328, class / type A,B				2 / B		2 / B	
4.24 Fork carriage width	b <sub>3</sub>	in	mm	18.9	480	18.9	480
4.25 Overall fork width	b <sub>5</sub>	in	mm	18.3	465	18.3	465
4.27 Width across guide rollers	b <sub>6</sub>	in	mm	60	1,500	60	1,600
4.29 Insert dimension	b <sub>7</sub>	in	mm	52.7	1,300	52.7	1,300
4.30 Insert dimension from vehicle centerline	b <sub>8</sub>	in	mm	19.5	480	19.5	480
4.31 Ground clearance, under mast (loaded)	m <sub>1</sub>	in	mm	3.1	80	3.1	80
4.32 Ground clearance, center of wheelbase	m <sub>2</sub>	in	mm	3.1	80	3.1	80
4.33 Aisle width (for 48 x 40 pallets (L x W))	Ast	in	mm	65.5 <sup>4)</sup>	1,660 <sup>4)</sup>	65.5 <sup>4)</sup>	1,660 <sup>4)</sup>
4.35 Turning radius	Wa	in	mm	82.9	2,106	86.9	2,206
4.38 Distance to swivel-forks' pivot point	l <sub>8</sub>	in	mm	35.6	904	35.6	904
4.39 Total lift	h <sub>3</sub> +h <sub>9</sub>	in	mm	207	5,280	207	5,280
4.40 Order picking height	h <sub>12</sub> +63.0	in	mm	217	5,530	217	5,530
4.41 Distance: swivel-forks' pivot point to steering (traverse) rack	l <sub>8</sub> -x	in	mm	18.3	464	18.3	464
4.42 Pallet width	b <sub>12</sub>	in	mm	40	1,016	40	1,016
4.43 Pallet length	l <sub>6</sub>	in	mm	48	1,219	48	1,219
4.44 Operator compartment entry width		in	mm	16.5	420	16.5	420
4.45 Operator compartment clear height		in	mm	82.7	2,100	82.7	2,100
4.46 Operator compartment outside width	b <sub>2</sub>	in	mm	56.7	1,440	56.7	1,440
4.47 Width traverse motor housing	b <sub>14</sub>	in	mm	56.7	1,440	56.7	1,440
4.48 Width extension arm	l <sub>10</sub>	in	mm	6.8	172	6.8	172
4.49 Distance – swivel-forks' pivot point to fork face	r	in	mm	6.1	154	6.1	154
Performance	5.1 Travel speed, loaded / unloaded (rail guided)			mph	kph	5.6 <sup>1)</sup> / 5.6 <sup>1)</sup>	9 <sup>1)</sup> / 9 <sup>1)</sup>
	5.2 Lift speed, loaded / unloaded			ft/min	m / s	82.7 / 82.7 <sup>2)</sup>	0.42 / 0.42 <sup>2)</sup>
	5.3 Lowering speed, loaded / unloaded			ft/min	m / s	88.6 / 88.6	0.45 / 0.45
	5.4 Reach speed, loaded / unloaded			ft/min	m / s	49.2 / 49.2 <sup>3)</sup>	0.25 / 0.25 <sup>3)</sup>
	5.10 Service brake					reverse current /regenerative	
	5.11 Parking brake					electric spring loaded / laminated	
Motors	6.1 Drive motor (rating S <sub>2</sub> 60 minutes)			hp	kW	10.2	7.6
	6.2 Lift motor rating at S <sub>3</sub> 25%			hp	kW	26.8	20
	6.4 Battery voltage			V		80	
	Battery Ah			Ah		500	
	6.5 Battery weight, minimum			lbs	kg	2,587	1,176
Other	8.1 Type of drive control			AC drive control		AC drive control	
	8.4 Sound level at driver's ear			dB (A)		68	
	8.6 Steering			electric		electric	

1) Speed depending on lift height.

2) Possible in connection with performance package to 102.4 ft./min. combined lifting of main and additional lift to 137.8 ft./min.

3) Possible in connection with performance package to 78.7 ft./min.

4) Rail-guided.

Note: all speeds are based on where conditions will allow maximum operation and performance packages.

Characteristics	1.1 Manufacturer			Jungheinrich		Jungheinrich	
	1.2 Model			EKG 513		EKX 515	
1.3 Drive	1.4 Type of operation			order picker / turret truck		order picker / turret truck	
	1.5 Load capacity / rated load	Q	lbs	kg	3,300	1,485	3,300
1.6 Load center distance	c	in	mm	24.0	610	24.0	610
1.8 Load distance, center of drive axle to fork	x	in	mm	17.3	440	17.3	440
1.9 Wheelbase	y	in	mm	87.5	2,222	87.5	2,222
1.10 Center drive wheel / counterweight	z	in	mm	11.0	280	11.0	280
Weights	2.1 Service weight including battery (see line 6.5)			lbs	kg	17,417	7,900
	2.2 Axle loading – loaded, drive / load			lbs	kg	14,528 / 6,195	6,590 / 2,810
	2.3 Axle loading – unloaded, drive / load			lbs	kg	9,877 / 7,540	4,480 / 3,420
3.1 Tires	3.2 Tire size, drive			Vulkollan®		Vulkollan®	
	3.3 Tire size, load			15.0 x 7.6		15.0 x 7.6	
3.5 Wheels – number, drive / load (x = driven wheels)			2 / 1x		2 / 1x		
3.6 Track width, drive side	b <sub>10</sub>	in	mm	57.1	1,308	57.1	1,308
4.2 Collapsed mast height	h <sub>1</sub>	in	mm	117	2,955	117	2,955
4.4 Maximum fork height (MFH)	h <sub>3</sub>	in	mm	137	3,500	137	3,500
4.5 Overall extended height (OAE)	h <sub>4</sub>	in	mm	239	6,050	239	6,050
4.7 Overhead guard height	h <sub>6</sub>	in	mm	100.4	2,550	100.4	2,550
4.8 Seat height / platform height	h <sub>7</sub>	in	mm	16.9	430	16.9	430
4.11 Auxiliary lift	h <sub>9</sub>	in	mm	70	1,780	70	1,780
4.14 Maximum platform height	h <sub>12</sub>	in	mm	154	3,930	154	3,930
4.19 Overall length	l <sub>1</sub>	in	mm	143.5	3,646	143.5	3,646
4.20 Length to fork face, headlength	l <sub>2</sub>	in	mm	140.2	3,560	140.2	3,560
4.21 Overall width	b <sub>1</sub> / b <sub>2</sub>	in	mm	47.6 / 57.9	1,210 / 1,500	47.6 / 57.9	1,210 / 1,500
4.22 Fork dimensions, thick / width	s / e / l	in	mm	1.57 x 4.7 x 47.2	40 x 120 x 1,200	1.57 x 4.7 x 47.2	40 x 120 x 1,200
4.23 Fork carriage ISO 2328, class / type A,B				2 / B		2 / B	
4.24 Fork carriage width	b <sub>3</sub>	in	mm	18.9	480	18.9	480
4.25 Overall fork width	b <sub>5</sub>	in	mm	18.3	465	18.3	465
4.27 Width across guide rollers	b <sub>6</sub>	in	mm	60	1,600	60	1,600
4.29 Insert dimension	b <sub>7</sub>	in	mm	52.7	1,300	52.7	1,300
4.30 Insert dimension from vehicle centerline	b <sub>8</sub>	in	mm	19.5	480	19.5	480
4.31 Ground clearance, under mast (loaded)	m <sub>1</sub>	in	mm	3.1	80	3.1	80
4.32 Ground clearance, center of wheelbase	m <sub>2</sub>	in	mm	3.1	80	3.1	80
4.33 Aisle width (for 48 x 40 pallets (L x W))	Ast	in	mm	65.5 <sup>4)</sup>	1,660 <sup>4)</sup>	65.5 <sup>4)</sup>	1,660 <sup>4)</sup>
4.35 Turning radius	Wa	in	mm	98.5	2,502	98.5	2,502
4.38 Distance to swivel-forks' pivot point	l <sub>8</sub>	in	mm	35.6	904	35.6	904
4.39 Total lift	h <sub>3</sub> +h <sub>9</sub>	in	mm	207	5,280	207	5,280
4.40 Order picking height	h <sub>12</sub> +63.0	in	mm	217	5,530	217	5,530
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4.47 Width traverse motor housing	b <sub>14</sub>	in	mm	56.7	1,440	56.7	1,440
4.48 Width extension arm	l <sub>10</sub>	in	mm	6.8	172	6.8	172
4.49 Distance – swivel-forks' pivot point to fork face	r	in	mm	6.1	154	6.1	154
Performance	5.1 Travel speed, loaded / unloaded (rail guided)			mph	kph	5.6 <sup>1)</sup> / 5.6 <sup>1)</sup>	9 <sup>1)</sup> / 9 <sup>1)</sup>
	5.2 Lift speed, loaded / unloaded			ft/min	m / s	92.5 / 92.5 <sup>2)</sup>	0.47 / 0.47 <sup>2)</sup>
	5.3 Lowering speed, loaded / unloaded			ft/min	m / s	88.6 / 88.6	0.45 / 0.45
	5.4 Reach speed, loaded / unloaded			ft/min	m / s	49.2 / 49.2 <sup>3)</sup>	0.25 / 0.25 <sup>3)</sup>
	5.10 Service brake					reverse current /regenerative	
	5.11 Parking brake					electric spring loaded / laminated	
Motors	6.1 Drive motor (rating S <sub>2</sub> 60 minutes)			hp	kW	10.2	7.6
	6.2 Lift motor rating at S <sub>3</sub> 25%			hp	kW	26.8	20
	6.4 Battery voltage			V		80	
	Battery Ah			Ah		625	
	6.5 Battery weight, minimum			lbs	kg	4,552	2,070
Other	8.1 Type of drive control			AC drive control		AC drive control	
	8.4 Sound level at driver's ear			dB (A)		68	
	8.6 Steering			electric		electric	

1) Speed depending on lift height.

2) Possible in connection with performance package to 102.4 ft./min. combined lifting of main and additional lift to 137.8 ft./min.

3) Possible in connection with performance package to 78.7 ft./min.

4) Rail-guided.

Note: all speeds are based on where conditions will allow maximum operation and performance packages.

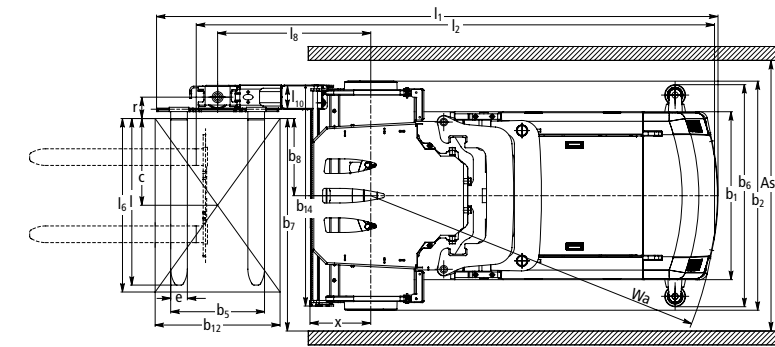
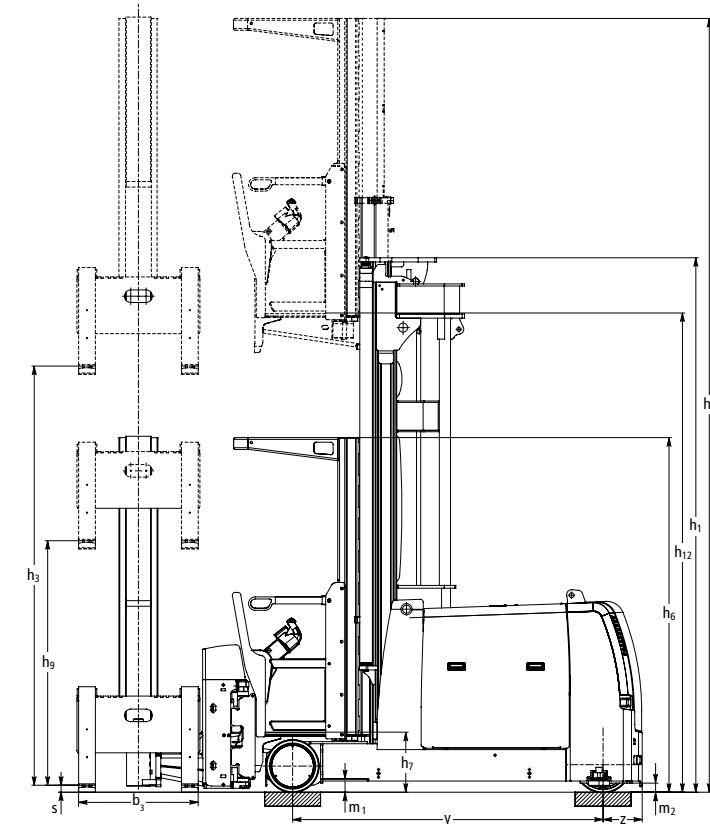
# The Jungheinrich Advantage

Standard Mast Types Two-Stage Mast ZT												EKX 513	EKX 515k	EKX 515
Lift height		Total lift		Standing height		Order picking height		Collapsed mast height		Extended mast height				
$h_3$		$h_{total} (h_3+h_9)$		$h_{12}$		$h_{15}$		$h_1$		$h_4$				
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			
118	3,000	188	4,780	135	3,430	198	5,030	107	2,705	219	5,550	•	•	•
128	3,250	198	5,030	144	3,680	200	5,280	112	2,830	229	5,800	•	•	•
137	3,500	207	5,280	154	3,930	217	5,530	117	2,955	239	6,050	•	•	•
147	3,750	217	5,530	164	4,180	227	5,780	122	3,080	248	6,300	•	•	•
157	4,000	227	5,780	174	4,430	237	6,030	127	3,205	258	6,550	•	•	•
167	4,250	237	6,030	184	4,680	247	6,280	132	3,330	268	6,800	•	•	•
177	4,500	247	6,280	194	4,930	257	6,530	137	3,455	278	7,050	•	•	•
187	4,750	257	6,530	203	5,180	266	6,780	141	3,580	288	7,300	•	•	•
196	5,000	266	6,780	213	5,430	276	7,030	146	3,705	298	7,550	•	•	•
206	5,250	275	7,030	223	5,680	286	7,280	151	3,830	308	7,800	•	•	•
216	5,500	285	7,280	233	5,930	296	7,530	156	3,955	317	8,050	•	•	•
226	5,750	295	7,530	243	6,180	306	7,780	161	4,080	327	8,300	•	•	•
236	6,000	306	7,780	253	6,430	316	8,030	166	4,205	337	8,550	•	•	•
246	6,250	316	8,030	263	6,680	326	8,280	175	4,430	347	8,800	•	•	•
255	6,500	326	8,280	272	6,930	335	8,530	180	4,555	357	9,050	•	•	•
265	6,750	335	8,530	282	7,180	35	8,780	185	4,680	367	9,300	•	•	•
275	7,000	345	8,780	292	7,430	355	9,030	190	4,805	377	9,550	•	•	•
285	7,250	355	9,030	302	7,680	365	9,280	195	4,930	386	9,800	•	•	•
295	7,500	365	9,280	312	7,930	375	9,530	200	5,055	396	10,050	•	•	•
305	7,750	375	9,530	322	8,180	385	9,780	204	5,180	406	10,300	•	•	•
315	8,000	385	9,780	331	8,430	394	10,030	209	5,305	416	10,550	•	•	•
324	8,250	394	10,030	341	8,680	404	10,280	218	5,530	426	10,800	•	•	•
334	8,500	404	10,280	351	8,930	414	10,530	223	5,655	436	11,050	•	•	•
344	8,750	414	10,530	361	9,180	424	10,780	228	5,780	445	11,300	•	•	•
354	9,000	424	10,780	371	9,430	434	11,030	233	5,905	455	11,550	•	•	•
364	9,250	434	11,030	381	9,680	444	11,280	238	6,030	465	11,800	•	•	•
374	9,500	444	11,280	390	9,930	453	11,530	243	6,155	475	12,050	•	•	•
383	9,750	453	11,530	400	10,180	463	11,780	248	6,280	485	12,300	•	•	•
393	10,000	463	11,780	410	10,430	473	12,030	253	6,405	496	12,550	•	•	•

• Truck model, available mast

Standard Mast Types Three-Stage Mast DZ												EKX 513	EKX 515k	EKX 515
Lift height		Total lift		Standing height		Order picking height		Collapsed mast height		Extended mast height				
$h_3$		$h_{total} (h_3+h_9)$		$h_{12}$		$h_{15}$		$h_1$		$h_4$				
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm			
157	4,000	227	5,780	174	4,430	237	6,030	101	2,550	258	6,550	•	•	•
167	4,250	237	6,030	184	4,680	247	6,280	104	2,625	268	6,800	•	•	•
177	4,500	247	6,280	194	4,930	257	6,530	107	2,710	278	7,050	•	•	•
187	4,750	257	6,530	203	5,180	266	6,780	110	2,795	288	7,300	•	•	•
196	5,000	266	6,780	213	5,430	276	7,030	114	2,895	298	7,550	•	•	•
206	5,250	276	7,030	221	5,680	286	7,280	118	2,995	308	7,800	•	•	•
216	5,500	286	7,280	233	5,930	296	7,530	122	3,095	317	8,050	•	•	•
226	5,750	296	7,530	243	6,180	306	7,780	126	3,195	327	8,300	•	•	•
236	6,000	306	7,780	253	6,430	316	8,030	130	3,295	337	8,550	•	•	•
246	6,250	316	8,030	263	6,680	326	8,280	134	3,395	347	8,800	•	•	•
255	6,500	326	8,280	272	6,930	335	8,530	138	3,495	357	9,050	•	•	•
265	6,750	335	8,530	282	7,180	345	8,780	142	3,595	367	9,300	•	•	•
275	7,000	345	8,780	292	7,430	355	9,030	145	3,695	377	9,550	•	•	•
285	7,250	355	9,030	302	7,680	365	9,280	150	3,795	386	9,800	•	•	•
295	7,500	365	9,280	312	7,930	375	9,530	154	3,895	396	10,050	•	•	•
305	7,750	375	9,530	322	8,180	385	9,780	158	3,995	406	10,300	•	•	•
315	8,000	385	9,780	331	8,430	394	10,030	162	4,095	416	10,550	•	•	•
324	8,250	394	10,030	341	8,680	404	10,280	166	4,195	426	10,800	•	•	•
334	8,500	404	10,280	351	8,930	414	10,530	170	4,295	435	11,050	•	•	•
344	8,750	414	10,530	361	9,180	424	10,780	174	4,395	445	11,300	•	•	•
354	9,000	424	10,780	371	9,430	434	11,030	178	4,495	455	11,550	•	•	•
364	9,250	434	11,030	381	9,680	444	11,280	181	4,595	465	11,800	•	•	•
374	9,500	444	11,280	390	9,930	453	11,530	185	4,695	475	12,050	•	•	•
383	9,750	453	11,530	400	10,180	463	11,780	189	4,790	485	12,300	•	•	•
393	10,000	463	11,780	410	10,430	473	12,030	192	4,875	495	12,550	•	•	•
403	10,250	473	12,030	420	10,680	483	12,280	197	4,980	504	12,800	•	•	•
413	10,500	483	12,280	430	10,930	493	12,530	199	5,045	514	13,050	•	•	•
423	10,750	493	12,530	440	11,180	503	12,780	202	5,130	524	13,300	•	•	•
433	11,000	503	12,780	450	11,430	513	13,030	206	5,215	534	13,550	•	•	•
442	11,250	513	13,030	459	11,680	522	13,280	209	5,300	544	13,800	•	•	•
452	11,500	522	13,280	469	11,930	532	13,530	213	5,395	554	14,050	•	•	•
462	11,750	532	13,530	479	12,180	542	13,780	216	5,480	573	14,550	•	•	•
472	12,000	542	13,780	489	12,430	552	14,030	219	5,565	573	14,550	•	•	•
482	12,250	552	14,030	499	12,680	562	14,280	223	5,650	583	14,800	•	•	•
492	12,500	562	14,280	509	12,930	572	14,530	227	5,750	593	15,050	•	•	•

• Truck model, available mast



Standard values for working aisle widths													
Pallet size (L x W)		Stacking-in depth		Clear aisle width (Ast)		Transfer aisle (Ast <sub>2</sub> ) theoretical		Transfer aisle (Ast <sub>3</sub> ) theoretical		Transfer aisle (Ast <sub>3</sub> ) theoretical		Transfer aisle (Ast <sub>3</sub> )* practical	
With rail guidance						EKX 513		EKX 515k		EKX 515			
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
48 x 48	1,219 x 1,219	48	1,219	65.5	1,660	156.3	3,967	160.9	4,087	172.5	4,382	+19.7	+500
48 x 40	1,219 x 1,016	48	1,219	65.5	1,660	142.8	3,627	146.7	3,726	158.4	4,023	+19.7	+500
48 x 48	1,219 x 1,219	48	1,219	67.5	1,710	166.9	4,239	170.9	4,341	182.5	4,636	+39.4	+1,000
48 x 40	1,219 x 1,016	48	1,219	67.5	1,710	151.7	3,853	163.5	4,153	175.2	4,450	+39.4	+1,000

\*The practical transfer aisle width is a reference value.  
Note: Ast refers to the normal aisle. Ast<sub>2</sub> refers to the transfer aisle.

# The Jungheinrich Advantage

## Pioneer of 3-phase AC technology

Over 400,000 Jungheinrich 3-phase AC trucks are in use all over the world. This depth of knowledge is reflected in today's drive and control technology:

- Excellent productivity.
- Low energy consumption.
- Reduced maintenance and wear.

## High productivity

- AC motors with high torque.
- Excellent acceleration and fast main and auxiliary lift speeds.
- Simultaneous lifting/lowering of main and auxiliary lift.
- Smooth and quiet fork traverse and rotate system with high function speed.
- Travel speed is maximized depending on travel direction and fork height.
- Fast working cycles with synchronized traverse / rotate (optional).

## Performance module options for highest versatility

- "Lifting" module: Lift speed up to 102 ft./min. and optimization of traverse/rotate movement with load recognition (on the EKX 515 model).
- "Traverse/rotate" module: Load recognition for automatic adjustment of hydraulic function speeds with and without load (on the EKX 513 model).
- "Floor quality recognition" module: Optimization of travel speed depending on warehouse floor conditions (in connection with RFID floor control).
- "Capacity" module: Increased residual capacities with stabilizers.

## Energy management module

- Doubled energy reclamation through regenerative braking and lowering.
- Longer operating times with one battery charge (up to two shifts).
- Shorter charging times.
- Active energy/battery management.
- Longer battery life.
- Battery rollers for quick battery change.

## RFID floor quality recognition (Optional)

- Truck control with RFID transponder technology.
- Permanent location identification for precise positioning and recognition of all warehouse areas.

- High flexibility regarding programming of truck performance limits based on location (end of aisle slowdown or stop, lift/travel cutoff, speed reduction).
- Optimization of travel speed relative to floor conditions.

## Infinite control of hydraulic motor speed for high efficiency

- Hydraulic pump motors only run at speed required to complete requested action so no energy is wasted.
- Powerful, efficient motors run cooler for even greater efficiency.
- Seamless operation of all functions together.

## Integrated Jungheinrich personnel protection system (PPS)

- Optionally available, the protection system is factory installed and integrated into the truck's electronic control system/CAN-Bus.
- Senses presence of pedestrians in working aisle and alerts operator; slows and/or stops the truck as necessary.

## Ergonomics and comfort

- Generously dimensioned entrance into the operator's cab.
- Large footwells and adjustable knee supports make room for a wide variety of operator sizes.
- Design allows for excellent visibility towards the load with low mounted turret and clear view masts.
- The seat is spring cushioned, adjustable and foldable to ensure full-shift comfort.
- Electrically-adjustable operating console with color display.
- Soft-key pad with number block.
- Truck performance can be set for each specific operator or can be selected by the operator to suit the needs of the load. (optional)
- Switchless, two-handed operating concept for reliability.
- All hydraulic functions have end of travel dampening for smooth operation and maximum load stability.

## Control and CAN-Bus system

- All functions are adjustable.
- Electronically controlled drive-wheel brake and electromagnetic, laminated, wear-free brake on load wheels.
- Active or passive stabilizers for maximum capacities to high lift heights (optional).

## Commissioning and maintenance

- A "teach-in" process during installation "teaches" the truck the exact configuration of the warehouse for maximum utilization.
- Integrated diagnostic system for remote maintenance via modem.
- Up to 500-hour service intervals.
- Electronics with wear-free sensor system and a sealed drive unit with lifetime-rated gear oil for reduced maintenance costs.
- Revolution counter on wheels with traction control and wear recognition on drive wheel.

## Reliable operation – high utilization

- Robust and wear-free 3-phase AC motors require no downtime for maintenance.
- 70% fewer cables and plugs due to CAN-Bus system design.
- Extremely torsion-resistant mast for high residual capacities and low mast sway.

## Additional equipment available

- Mechanical rail guidance.
- Inductive (wire) guidance for precise control in the aisle with no mechanical wear of components.
- Modular telescopic forks for multiple pallet dimensions.
- Comfort package with workplace lighting, mirror and fans.
- Synchronized rotation of forks.
- Mechanical and electrical support for warehouse material flow management systems.
- Truck preparation for working platforms.
- Modular system for lift and travel stop as well as speed reduction.

## 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.



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