

Ergonomics: efficient operating concept for more freedom of movement, with electrically adjustable control panel

Intelligence: truck tracking and behavior control via RFID technology for simple system integration

Energy Efficiency: run up to two shifts on one battery charge

Flexibility: versatile design with modular construction and optional performance and assistance packages

Technology-leading: semi-automated position approach with exclusive Warehouse Navigation System



## **EKV 410/412/514/516k/516**

### **Man-Up Turret Truck (2,200 - 3,500 lbs.)**

#### **Global leader**

The Jungheinrich® EKV series of turret trucks has been the global industry benchmark for years. Now with the introduction of maintenance-free synchronous AC motors, the standard for higher performance has been raised - all while further reducing energy loss by as much as 10 percent.

Since 2007, Jungheinrich systems trucks have used RFID transponder technology to track and control the behavior of turret trucks in the very narrow aisle. In addition, our exclusive Warehouse Navigation System uses this technology for fast, efficient and precise approach to pallet locations. Wasted travel, adjustments and back-tracking can be eliminated. The productivity gains are up to 25% in most applications. And even if requirements change in the future, the system remains flexible and can easily adapt to expansions and changing demands.

#### **High energy efficiency**

Jungheinrich's energy-efficient design allows the 80-Volt EKV series to run up to two shifts on one battery charge. Additionally, several EKV models also qualify under the two shifts/one battery charge guarantee program\*. The advantages: no interim charging, no battery changing and no additional charging equipment needed.

#### **Flexibility for your business**

Our modular performance and assistance packages ensure the EKV is specifically optimized for your unique application. The new Floor Pro option provides hydraulic vibration dampening over uneven floors for improved efficiency and performance. The sideshiftPLUS option helps facilitate load handling in different aisle widths and saves time, while allowing the EKV to work effectively in very narrow aisles.

#### **Operator Comfort**

The operator compartment offers plenty of space and storage for the operator, while a foldable seat and electrically adjustable control panel allow for comfortable standing or seated operation. The large front barrier window provides an excellent view of the forks allowing the operator to easily confirm proper load engagement.

**JUNGHEINRICH®**

# Technical Data

Characteristics	1.1	Manufacturer			Jungheinrich		Jungheinrich			
	1.2	Model			EKX 410		EKX 412			
	1.3	Drive			Electric		Electric			
	1.4	Type of operation			order picker turret truck		order picker turret truck			
	1.5	Load capacity / rated load	Q	lb	kg	2,200	1,000	2,600	1,200	
	1.6	Load center distance	c	in	mm	24.0	610	24.0	610	
	1.8	Load distance, center of load axle to traverse rack	x	in	mm	17.7	450	17.7	450	
	1.9	Wheelbase	y	in	mm	71.1	1,807	71.1	1,807	
	1.10	Center of drive wheel to counterweight		in	mm	12.6	320	12.6	320	
	Weights	2.1	Net weight including battery			lb	kg	13,007	5,900	13,261
2.2		Axle load, with load, front / rear			lb	kg	10,792 / 3,594	4,895 / 1,630	11,905 / 3,759	5,400 / 1,705
2.3		Axle load, without load, front / rear					7,613 / 5,395	3,453 / 2,447	7,716 / 5,523	3,500 / 2,505
Wheels, Chassis	3.1	Tires			Bestthane®					
	3.2	Tire size, at front	d <sub>1</sub>	in	mm	11.6 x 5.7	295 x 144	11.6 x 5.7	295 x 144	
	3.3	Tire size, at rear	d <sub>2</sub>	in	mm	13.5 x 4.3	343 x 110	13.5 x 4.3	343 x 110	
	3.5	Wheels, number front/rear (x = driven wheels)			2 / 1x					
	4.2	Collapsed mast height			h <sub>1</sub>	in	mm	112.2	2,850	112.2
4.4	Maximum fork height (MFH)			h <sub>3</sub>	in	mm	137.8	3,500	137.8	3,500
4.5	Overall extended height (OAE)			h <sub>4</sub>	in	mm	238.2	6,050	238.2	6,050
4.7	Overhead guard height			h <sub>6</sub>	in	mm	100.4	2,550	100.4	2,550
4.8	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	1,780	70.1	1,780
4.14	Maximum platform height			h <sub>12</sub>	in	mm	154.7	3,930	154.7	3,930
4.19	Overall length			l <sub>1</sub>	in	mm	144.3	3,665	144.3	3,665
4.20	Length to fork face, headlength			l <sub>2</sub>	in	mm	132.6	3,369	132.6	3,369
4.21	Overall width			b <sub>1</sub> / b <sub>2</sub>	in	mm	47.6 / 57.1	1,210 / 1,450	47.6 / 57.1	1,210 / 1,450
4.22	Fork dimensions, thickness / width / length			s/e/l	in	mm	1.57 x 4.72 x 47.24	40 x 120 x 1,200	1.57 x 4.72 x 47.24	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	34.6	880	34.6	880
4.25	Overall fork width			b <sub>5</sub>	in	mm	33.7	856	33.7	856
4.29	Stack-in dimension			b <sub>7</sub>	in	mm	52.4	1,330	52.4	1,330
4.30	Stack-in dimension from center of truck			b <sub>8</sub>	in	mm	18.9	480	18.9	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	Clear working aisle for 48 x 48 pallets (L x W)			Ast	in	mm	68.5	1,740	68.5	1,740
4.35	Turning radius			Wa	in	mm	83.5	2,122	83.5	2,122
4.38	Distance to swivel-forks' pivot point to traverse rack			l <sub>8</sub>	in	mm	43.4	1,103	43.4	1,103
4.39	Combined lift height			h <sub>3</sub> + h <sub>9</sub>	in	mm	207.9	5,280	207.9	5,280
4.40	Order picking height			h <sub>15</sub> (h <sub>12</sub> +63")	in	mm	217.7	5,530	217.7	5,530
4.41	Distance swivelling forks' pivot-point to steering (traverse) rack			l <sub>8</sub> - x	in	mm	25.7	653	25.7	653
4.42	Pallet width			b <sub>12</sub>	in	mm	48.0	1,219	48.0	1,219
4.43	Pallet length			l <sub>6</sub>	in	mm	48.0	1,219	48.0	1,219
4.44	Operator compartment entry width				in	mm	19.3	490	19.3	490
4.45	Operator compartment clear height				in	mm	82.7	2,100	82.7	2,100
4.46	Operator compartment outside width			b <sub>9</sub>	in	mm	56.7	1,440	56.7	1,440
4.47	Traverse rack width			b <sub>14</sub>	in	mm	56.7	1,440	56.7	1,440
4.48	Crane arm width			l <sub>10</sub>	in	mm	6.8	172	6.8	172
4.49	Distance swivelling forks' pivot-point to fork face			r	in	mm	5.7	144	5.7	144
Performance	5.1	Maximum travel speed, loaded / unloaded			mph	km / h	5.0 / 5.0	8.0 / 8.0	5.0 / 5.0	8.0 / 8.0
	5.2	Lift speed, loaded / unloaded			ft / min	m / s	78.7 / 78.7	0.40 / 0.40	78.7 / 78.7	0.40 / 0.40
	5.3	Lower speed, loaded / unloaded			ft / min	m / s	78.7 / 78.7	0.40 / 0.40	78.7 / 78.7	0.40 / 0.40
	5.4	Traverse speed loaded / unloaded			ft / min	m / s	78.7 / 78.7	0.40 / 0.40	78.7 / 78.7	0.40 / 0.40
	5.10	Service brake			reverse current/regenerative					
	5.11	Parking brake			Electric spring loaded / discs					
Motors	6.1	Drive motor rating S <sub>2</sub> 60 min.			hp	kW	9.3	6.9	9.3	6.9
	6.2	Lift motor kW output at S <sub>3</sub> 15%			hp	kW	13.4	10.0	13.4	10.0
	6.3	Battery compartment (L x W x H)			consult factory					
	6.4	Battery voltage			V	Ah	48	700	48	1,085
	6.5	Battery weight, nominal <sup>3)</sup>			lbs	kg	2,240	1,016	3,325	1,508
		Battery roller height			in	mm	12.8	325	12.8	325
Other	8.1	Type of drive control			Synchron Reluctance					
	8.4	Sound level at driver's ear			64					
	8.6	Steering			Electric					

In accordance with VDI Guideline 2198 this specification sheet provides details of the standard truck only.

Non-standard tires, different masts, optional equipment, etc. may result in different values.

1) with Speed Profile Plus, standard: (78.7 fpm / 78.7 fpm) / (0.4 mps / 0.4 mps)

2) with Lift Plus, standard: (98.4 fpm / 98.4 fpm) / (0.5 mps / 0.5 mps)

3) for minimum and maximum weights, (+/- 5%)

1.1			Jungheinrich		Jungheinrich		Jungheinrich	
1.2			<b>EKX 514</b>		<b>EKX 516k</b>		<b>EKX 516</b>	
1.3			Electric		Electric		Electric	
1.4			order picker turret truck		order picker turret truck		order picker turret truck	
1.5	lb	kg	3,000	1,400	3,500	1,600	3,500	1,600
1.6	in	mm	24.0	610	24.0	610	24.0	610
1.8	in	mm	17.5	445	17.5	445	17.5	445
1.9	in	mm	72.4	1,840	76.8	1,950	87.4	2,220
1.10	in	mm	11.1	282	11.1	282	11.1	282
2.1	lb	kg	14,440	6,550	15,146	6,870	17,637	8,000
2.2	lb	kg	12,610 / 4,145	5,720 / 1,880	13,647 / 4,542	6,190 / 2,060	14,528 / 6,195	6,590 / 2,810
2.3			8,708 / 5,732	3,950 / 2,600	8,973 / 6,173	4,070 / 2,800	10,097 / 7,540	4,580 / 3,420
3.1			Besthane®		Besthane®		Besthane®	
3.2	in	mm	15.0 x 7.6	380 x 192	15.0 x 7.6	380 x 192	15.0 x 7.6	380 x 192
3.3	in	mm	15.7 x 6.3	400 x 160	15.7 x 6.3	400 x 160	15.7 x 6.3	400 x 160
3.5			2 / 1x		2 / 1x		2 / 1x	
4.2	in	mm	116.3	2,955	116.3	2,955	116.3	2,955
4.4	in	mm	137.8	3,500	137.8	3,500	137.8	3,500
4.5	in	mm	238.2	6,050	238.2	6,050	238.2	6,050
4.7	in	mm	100.4	2,550	100.4	2,550	100.4	2,550
4.8	in	mm	16.9	430	16.9	430	16.9	430
4.11	in	mm	70.1	1,780	70.1	1,780	70.1	1,780
4.14	in	mm	154.7	3,930	154.7	3,930	154.7	3,930
4.19	in	mm	144.3	3,665	148.6	3,775	159.3	4,045
4.20	in	mm	133.0	3,379	137.4	3,489	148.0	3,759
4.21	in	mm	47.6 / 57.1	1,210 / 1,450	47.6 / 57.1	1,210 / 1,450	47.6 / 57.1	1,210 / 1,450
4.22	in	mm	1.97 x 4.72 x 47.24	50 x 120 x 1,200	1.97 x 4.72 x 47.24	50 x 120 x 1,200	1.97 x 4.72 x 47.24	50 x 120 x 1,200
4.23			2/B		2/B		2/B	
4.24	in	mm	34.6	880	34.6	880	34.6	880
4.25	in	mm	33.7	856	33.7	856	33.7	856
4.29	in	mm	52.4	1,330	52.4	1,330	52.4	1,330
4.30	in	mm	18.9	480	18.9	480	18.9	480
4.31	in	mm	3.1	80	3.1	80	3.1	80
4.32	in	mm	3.1	80	3.1	80	3.1	80
4.33	in	mm	68.5	1,740	68.5	1,740	68.5	1,740
4.35	in	mm	83.5	2,122	87.9	2,232	98.5	2,502
4.38	in	mm	43.4	1,103	43.4	1,103	43.4	1,103
4.39	in	mm	207.9	5,280	207.9	5,280	207.9	5,280
4.40	in	mm	217.7	5,530	217.7	5,530	217.7	5,530
4.41	in	mm	25.9	658	25.9	658	25.9	658
4.42	in	mm	48.0	1,219	48.0	1,219	48.0	1,219
4.43	in	mm	48.0	1,219	48.0	1,219	48.0	1,219
4.44	in	mm	19.3	490	19.3	490	19.3	490
4.45	in	mm	82.7	2,100	82.7	2,100	82.7	2,100
4.46	in	mm	56.7	1,440	56.7	1,440	56.7	1,440
4.47	in	mm	56.7	1,440	56.7	1,440	56.7	1,440
4.48	in	mm	6.8	172	6.8	172	6.8	172
4.49	in	mm	6.1	154	6.1	154	6.1	154
5.1	mph	km / h	5.6 / 5.6	9.0 / 9.0	5.6 / 5.6	9.0 / 9.0	5.6 / 5.6	9.0 / 9.0
5.2	ft / min	m / s	88.6 / 88.6	0.45 / 0.45	118.1 <sup>2)</sup> / 118.1 <sup>2)</sup>	0.60 <sup>2)</sup> / 0.60 <sup>2)</sup>	118.1 <sup>2)</sup> / 118.1 <sup>2)</sup>	0.60 <sup>2)</sup> / 0.60 <sup>2)</sup>
5.3	ft / min	m / s	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50	98.4 / 98.4	0.50 / 0.50
5.4	ft / min	m / s	78.7 / 98.4 <sup>1)</sup>	0.40 / 0.50 <sup>1)</sup>	78.7 / 98.4 <sup>1)</sup>	0.40 / 0.50 <sup>1)</sup>	78.7 / 98.4 <sup>1)</sup>	0.40 / 0.50 <sup>1)</sup>
5.10			reverse current/regenerative		reverse current/regenerative		reverse current/regenerative	
5.11			Electric spring loaded / discs		Electric spring loaded / discs		Electric spring loaded / discs	
6.1	hp	kW	12.1	9.0	12.1	9.0	12.1	9.0
6.2	hp	kW	33.5	25.0	33.5	25.0	33.5	25.0
6.3	in	mm	41.50 x 24.02 x 34.60	1,054 x 610 x 880	41.50 x 27.95 x 34.60	1,054 x 710 x 880	41.50 x 39.61 x 34.60	1,054 x 1,006 x 880
6.4	V	Ah	80	500	80	625	80	875
6.5	lbs	kg	3,138	1,423	3,700	1,678	5,042	2,287
6.6	in	mm	12.8	325	12.8	325	12.8	325
8.1			Synchron Reluctance		Synchron Reluctance		Synchron Reluctance	
8.4			64		64		64	
8.6			Electric		Electric		Electric	

Standard Mast Types Two-Stage Mast ZT																
Lift height		Combined lift height		Order picking height		Overall extended height		EKX 410	EKX 412	Collapsed mast height		EKX 514	EKX 516k	EKX 516	Collapsed mast height	
$h_3$		$h_{total}(h_3+h_9)$		$h_{15}(h_{12}+63")$		$h_4$				$h_1$					$h_1$	
in	mm	in	mm	in	mm	in	mm			in	mm				in	mm
118	3,000	188	4,780	198	5,030	218	5,550	•	•	103	2,600	•	•	•	107	2,705
137	3,500	207	5,280	217	5,530	238	6,050	•	•	113	2,850	•	•	•	117	2,955
157	4,000	227	5,780	237	6,030	258	6,550	•	•	123	3,100	•	•	•	127	3,205
177	4,500	247	6,280	257	6,530	278	7,050	•	•	132	3,350	•	•	•	137	3,455
196	5,000	266	6,780	276	7,030	297	7,550	•	•	142	3,600	•	•	•	146	3,705
216	5,500	286	7,280	296	7,530	317	8,050	•	•	152	3,850	•	•	•	156	3,955
236	6,000	306	7,780	316	8,030	337	8,550	•	•	162	4,100	•	•	•	166	4,205
255	6,500	325	8,280	335	8,530	356	9,050	•	•	173	4,375	•	•	•	180	4,555
275	7,000	345	8,780	355	9,030	376	9,550	•	•	184	4,650	•	•	•	190	4,805
295	7,500	365	9,280	375	9,530	396	10,050	•	•	194	4,925	•	•	•	200	5,055
314	8,000	385	9,780	394	10,030	415	10,550	—	•	205	5,200	•	•	•	209	5,305
334	8,500	404	10,280	414	10,530	435	11,050	—	•	216	5,475	•	•	•	223	5,655
354	9,000	424	10,780	434	11,030	455	11,550	—	—	—	—	•	•	•	233	5,905
374	9,500	444	11,280	453	11,530	474	12,050	—	—	—	—	•	•	•	243	6,155
393	10,000	463	11,780	473	12,030	494	12,550	—	—	—	—	—	•	•	253	6,405
413	10,500	483	12,280	493	12,530	514	13,050	—	—	—	—	—	•	•	263	6,655

• Truck model, available mast

Standard Mast Types Three-Stage Mast DZ																
Lift height		Total lift		Order picking height		Overall extended height		EKX 410	EKX 412	Collapsed mast height		EKX 514	EKX 516k	EKX 516	Collapsed mast height	
$h_3$		$h_{total}(h_3+h_9)$		$h_{15}(h_{12}+63")$		$h_4$				$h_1$					$h_1$	
in	mm	in	mm	in	mm	in	mm			in	mm				in	mm
157	4,000	227	5,780	237	6,030	258	6,550	—	—	—	—	•	•	•	101	2,550
177	4,500	247	6,280	257	6,530	278	7,050	•	•	104	2,625	•	•	•	107	2,710
196	5,000	266	6,780	276	7,030	297	7,550	•	•	111	2,800	•	•	•	114	2,895
216	5,500	286	7,280	296	7,530	317	8,050	•	•	118	2,975	•	•	•	122	3,095
236	6,000	306	7,780	316	8,030	337	8,550	•	•	125	3,150	•	•	•	130	3,295
255	6,500	325	8,280	335	8,530	356	9,050	•	•	131	3,325	•	•	•	138	3,495
275	7,000	345	8,780	355	9,030	376	9,550	•	•	138	3,500	•	•	•	146	3,695
295	7,500	365	9,280	375	9,530	396	10,050	•	•	145	3,675	•	•	•	154	3,895
314	8,000	385	9,780	394	10,030	415	10,550	—	•	152	3,850	•	•	•	162	4,095
334	8,500	404	10,280	414	10,530	435	11,050	—	•	159	4,025	•	•	•	170	4,295
354	9,000	424	10,780	434	11,030	455	11,550	—	—	—	—	•	•	•	177	4,495
364	9,250	434	11,030	444	11,280	465	11,800	—	—	—	—	•	•	•	181	4,595
374	9,500	444	11,280	453	11,530	474	12,050	—	—	—	—	•	•	•	185	4,695
393	10,000	463	11,780	473	12,030	494	12,550	—	—	—	—	—	•	•	192	4,875
413	10,500	483	12,280	493	12,530	514	13,050	—	—	—	—	—	•	•	199	5,045
433	11,000	503	12,780	512	13,030	533	13,550	—	—	—	—	—	—	•	206	5,215
452	11,500	522	13,280	532	13,530	553	14,050	—	—	—	—	—	—	•	213	5,395
472	12,000	542	13,780	552	14,030	573	14,550	—	—	—	—	—	—	•	220	5,565
492	12,500	562	14,280	572	14,530	593	15,050	—	—	—	—	—	—	•	227	5,750
511	13,000	581	14,780	591	15,030	612	15,550	—	—	—	—	—	—	•	235	5,950
531	13,500	601	15,280	611	15,530	632	16,050	—	—	—	—	—	—	•	247	6,250
551	14,000	621	15,780	631	16,030	652	16,550	—	—	—	—	—	—	•	258	6,550
570	14,500	640	16,280	650	16,530	671	17,050	—	—	—	—	—	—	•	270	6,850

• Truck model, available mast





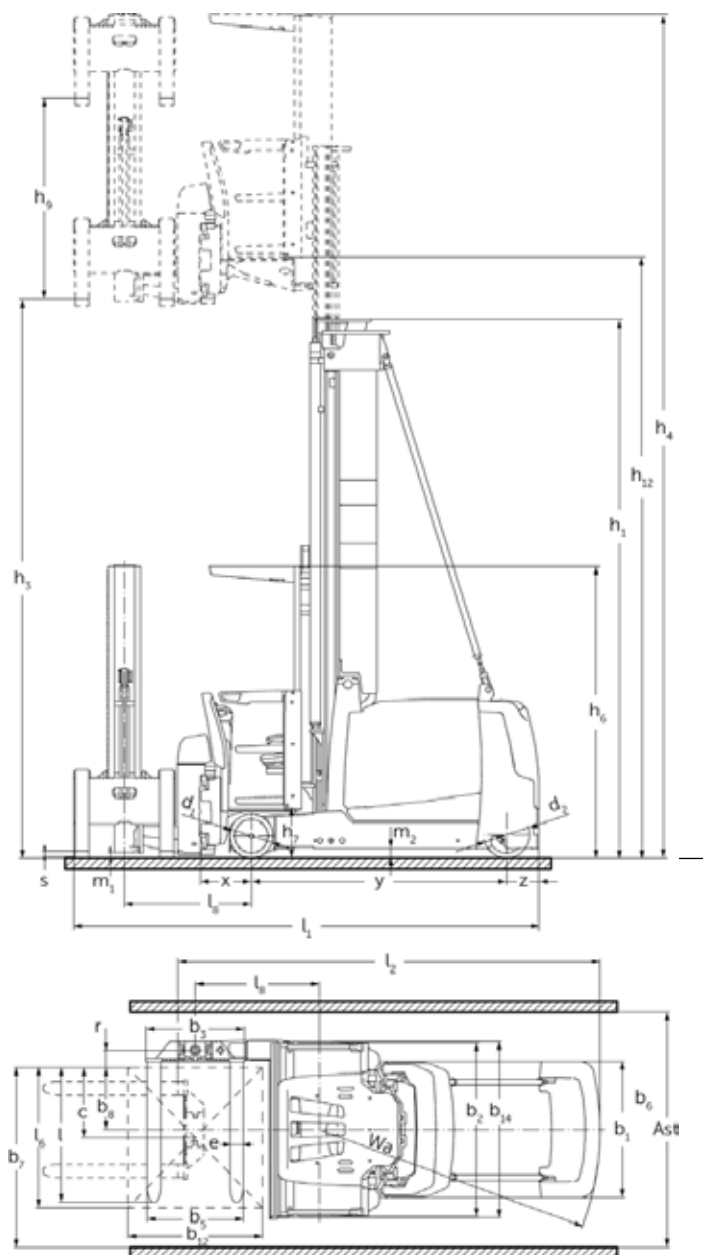
Center operation control  
(standard on all EKX 4 and 5 series configurations)



Split operation control  
(optional on all EKX 4 and 5 series configuration,  
but not compatible with freezer package on  
any model)

Freezer preparation with heated cab  
(optional with EKX 514, 516k and 516)

# The Jungheinrich Advantage



Note: Equipping this model (these models) with a power source (e.g. Lithium-ion, Hydrogen Fuel cell, etc.) that has not been previously approved by the factory is considered a modification. Per OSHA 1910.178 and ANSI/ITSDF B56.1, please consult with your factory representative prior to installing any non-OEM power source that has not been previously approved.

Standard values for working aisle widths													
Pallet size (L x W)		Stacking-in depth		Clear aisle width (Ast)		Transfer aisle (Ast <sub>t</sub> ) theoretical						Transfer aisle (Ast <sub>t</sub> )* practical	
		With rail guidance				EKK 410/412/514		EKK 516k		EKK 516			
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
48 x 40	1,219 x 1,016	48	1,219	66.5	1,689	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	66.5	1,689	156.3	3,967	160.9	4,087	172.5	4,382	+19.7	+500
		With wire guidance				EKK 410/412/514		EKK 516k		EKK 516			
48 x 40	1,219 x 1,016	48	1,219	68.5	1,740	151.7	3,853	163.5	4,153	175.2	4,450	+39.4	+1,000
48 x 48	1,219 x 1,219	48	1,219	68.5	1,740	166.9	4,239	170.9	4,341	182.5	4,636	+39.4	+1,000

\*The practical transfer aisle width is a reference value.  
 Note: (Ast) refers to the clear working aisle. (Ast<sub>t</sub>) refers to the transfer aisle.

# The Jungheinrich Advantage

## Ergonomics

- Padded knee supports for comfort while order picking.
- Comfortable sitting or standing operation due to the spring-loaded, adjustable and foldable seat.
- Large LCD color display with all important information at a glance. High flexibility through softkey control.
- Comfort package with bright LED work lights and dual operator fans.
- Electronic power steering for easy, precise maneuvering.
- Modular storage systems (optional).

## Productivity

- Simultaneous functionality of main and auxiliary masts saves time for greater productivity.
- Crane arm with auxiliary mast for additional 70" lift.
- Electromagnetic spring-loaded brakes on EKK 5-series load and drive wheels.
- Diagonal drive with direction and height-dependent speed profiles for maximum productivity.
- Jungheinrich curveCONTROL for calculated speed reduction while steering into curves outside the aisle.

## Intelligent Systems

- RFID technology for tracking and controlling truck behavior in the very narrow aisle (optional).
- Wire guidance with multi-frequency control (optional).
- Warehouse Navigation System with precise location approach and automatic stacking procedure (optional).

## Commissioning And Maintenance

- Quick and reliable commissioning through teach-in process.
- The integrated diagnostic system allows for fast and accurate fault diagnosis.
- 1,000 hour service intervals lower maintenance costs and provide greater reliability.
- Maintenance-free synchronous AC motors and wear-free sensor systems ensure high operational reliability.

## Flexibility

- Multiple optional performance packages to meet application and throughput demands.
- Available assistance systems for improved processing and easier pallet handling.
- CAN-Bus system for reliable data transfer and high flexibility.

## High Energy Efficiency

- Exclusive synchronous AC motor technology reduces energy losses and allows even longer operating times.
- Dual energy recovery during braking and lowering via patented hydraulic valve technology.
- Reduced energy consumption from compact hydraulic system with short transmit distances and less resistance.
- Compact electronics mean less cables and connectors, and tuning of all components to one another.
- Active battery and energy management reduces the current peaks and conserves the battery and components.
- High performance allows up to two shifts on a single battery charge on 514/516k/516 models.

## Assistance Systems (optional)

- Jungheinrich warehouseNAVIGATION for semi-automated location approach.
- Jungheinrich Logistics Interface middleware for easy connection to any existing WMS.
- Stack-by-Light spotlights for directional-assisted stacking.
- Pick-by-Light spotlights for directional-assisted order picking.
- operationCONTROL for load weight indication on the display and warning signal if parameterized weight is exceeded.
- positionCONTROL for height pre-selection.
- Floor Spots as visual warning signals for pedestrians - available in both directions.

## warehouseNAVIGATION System (Optional)

- Up to 25% higher throughput efficiency in the very narrow aisle warehouse.
- Simple connection of the EKK to the customer Warehouse Management System (WMS) via the Logistics Interface middleware.
- Automatic horizontal and vertical positioning within +/- 2mm accuracy.
- Automatic stacking and retrieval operation.
- Automatic confirmations back to the WMS eliminate manual scanning for process reliability and time savings.
- High flexibility to accommodate future warehouse expansion.

## Performance Packages

- liftPLUS for increased lifting speeds.
- speedprofilePLUS for weight-based optimization of traverse speed.
- Residual capacityPLUS for increasing residual capacities.
- Floor Pro system for hydraulic vibration dampening on uneven floors.
- sideshiftPLUS for up to 4" additional shift on each side.

## Optional Features

- Freezer preparation with heated cabin for optimal operator comfort and productivity in freezing environments (optional with EKK 514, 516k and 516)
- Split operation control at seat armrests provides an alternative solution to the standard single piece centered operation control console (not compatible with freezer package on any EKK model).
- Synchronized swiveling and traversing of the forks (automatic process).
- Modular storage systems.
- Wire or rail guidance for efficient control.
- Auxiliary mast with higher additional lift.
- Symmetrical fork positioner to accommodate different size pallets and load widths.
- Asymmetrical fork positioner for adaptation to load size and sideshift for comfortable order picking.
- Jungheinrich radio data terminals with electrical interfaces for WMS.
- Jungheinrich barcode scanner and holder with multiple mounting positions.
- Easy Access Entry System via soft key, PIN code or transponder.

## 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.