

Up to two shifts without changing the battery due to energy recovery and effective energy management

Modules for process integration: RFID technology, multiple height and weight checks, Logistics Interface

Up to 25 percent greater performance due to warehouse navigation with semi-automatic approach (optional)

Highly flexible model with modular construction and integrated RFID positioning technology

Ergonomic workstation with electrically adjustable control panel



## EKV 410

### Electric order picker/tri-lateral stacker (1,000 kg)

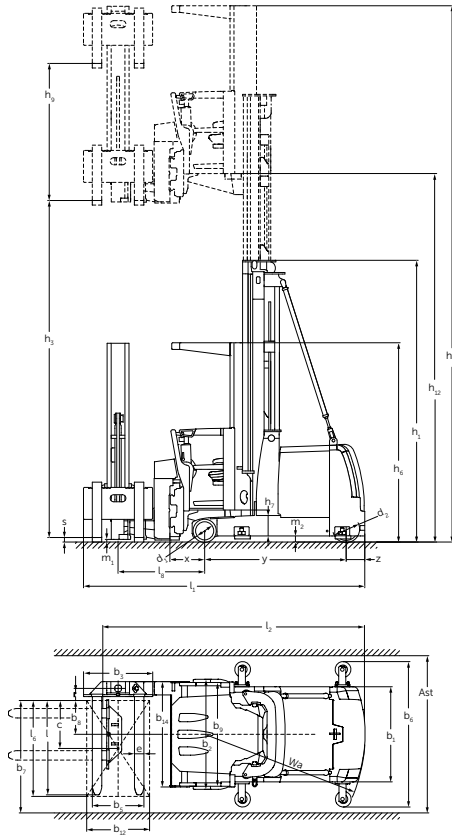
The EKV 410 high rack stacker ensures a high degree of efficiency in the narrow aisle warehouse. It sets new standards in terms of flexibility, economic efficiency and ergonomics. Flexibility through modular construction: The Jungheinrich modular system has more than 5 million possible configurations providing flexibility from the outset. The advantage is adaptability to any warehousing and logistics strategy. Intelligent truck management with our in-house electronic controller, and CAN bus system offers options for a wide range of requirements with a large number of additional safety features available. Excellent performance and energy efficiency: The important factors for fast throughput and outstanding cost efficiency. This is precisely what is offered by the Jungheinrich 3-phase AC technology with higher performance data and greater

dynamics, matched by improved energy utilisation. The advantage: Fully usable throughout two shifts in normal operation without battery change.

This high efficiency is available to the EKV operator with effortless ease. The cab offers a generously sized workplace with outstanding vision. The central point is the electrically adjustable control panel:

- Information transmitted via colour display. Important operating data is displayed rapidly and clearly in icon form.
- Soft keys to control functions and menus.
- Travel and hydraulics control via thumb operation.
- Two-handed operation for high safety and operating comfort. Sensors register the operator's touch and pass this information on to the on-board computer.

# EKX 410



Standard values for working aisle widths (mm)				
with rail guidance				
Pallet size [mm]	Stacking depth	Ast	Ast <sub>3</sub> /VDI theoretical	Ast <sub>3</sub> * practical
1200 x 800	1200	1640	3528	+500
1200 x 1200	1200	1640	3888	+500
800 x 1200	800	1440	3851	+500

\* The practical intersecting aisle width is a guide value.

with wire guidance				
Pallet size [mm]	Stacking depth	Ast	Ast <sub>3</sub> /VDI theoretical	Ast <sub>3</sub> * practical
1200 x 800	1200	1720	3535	+1000
1200 x 1200	1200	1720	3894	+1000
800 x 1200	800	1490	3851	+1000

\* The practical intersecting aisle width is a guide value.

Standard mast designs EKX 410						
	Lift h <sub>3</sub>	Lowered mast height h <sub>1</sub>	Free lift h <sub>2</sub>	Extended mast height h <sub>4</sub>	Overall height h <sub>3</sub> + h <sub>9</sub>	Order picking height h <sub>15</sub>
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
Duplex ZT	3000	2600	-	5550	4780	5030
	3500	2850	-	6050	5280	5530
	4000	3100	-	6550	5780	6030
	4500	3350	-	7050	6280	6530
	5000	3600	-	7550	6780	7030
	5500	3850	-	8050	7280	7530
	6000	4100	-	8550	7780	8030
	6500	4375	-	9050	8280	8530
Triplex DZ	7000	4650	-	9550	8780	9030
	7500	4925	-	10050	9280	9530
	4500	2625	75	7050	6280	6530
	5000	2800	250	7550	6780	7030
	5500	2975	425	8050	7280	7530
	6000	3150	600	8550	7780	8030
	6500	3325	775	9050	8280	8530
7000	3500	950	9550	8780	9030	
7500	3675	1125	10050	9280	9530	

# Technical data in line with VDI 2198

Identification	1.1	Manufacturer (abbreviation)		Jungheinrich
	1.2	Model		<b>EKX 410</b>
	1.3	Drive		Electric
	1.4	Manual, pedestrian, stand-on, seated, order picker operation		order picker tri-lateral stacker
	1.5	Load capacity/rated load	Q t	1
	1.6	Load centre distance	c mm	600
	1.8	Load distance	x mm	445
	1.9	Wheelbase	y mm	1,802
	1.10	Centre of drive wheel/counterweight	z mm	237
	Weights	2.1.1	Net weight incl. battery (see row 6.5)	kg
2.2		Axle load with load front/rear	kg	5,200 / 1,490
2.3		Axle load without load front/rear	kg	3,590 / 2,100
Wheels / frame	3.1	Tyres		Vulkollan
	3.2	Tyre size, front	mm	Ø 295 x 144
	3.3	Tyre size, rear	mm	Ø 343 x 110
	3.5	Wheels, number front/rear (x = driven wheels)		2 / 1 x
	3.6	Tread width, front	b <sub>10</sub> mm	1,356
	Basic dimensions	4.2	Mast height (lowered)	h <sub>1</sub> mm
4.4		Lift	h <sub>3</sub> mm	5,000
4.5		Extended mast height	h <sub>4</sub> mm	7,550
4.7		Height of overhead guard	h <sub>6</sub> mm	2,550
4.8.1		Standing height	h <sub>7</sub> mm	430
4.11		Auxiliary lift	h <sub>9</sub> mm	1,780
4.14		Standing height raised	h <sub>12</sub> mm	5,430
4.19		Overall length	l <sub>1</sub> mm	3,582
4.20		Length to face of forks	l <sub>2</sub> mm	3,286
4.21		Overall width	b <sub>1</sub> /b <sub>2</sub> mm	1,210 / 1,500
4.22		Fork dimensions	s/e/l mm	40 / 120 / 1,200
4.23		Fork carriage ISO 2328, class/type A, B		2B
4.24		Fork carriage width	b <sub>3</sub> mm	880
4.25		Width across forks	b <sub>5</sub> mm	856
4.27		Width over guide rollers	mm	1,600
4.29		Reach, sideways	mm	1,343
4.30		Reach, sideways from centre of truck	mm	505
4.31		Floor clearance with load under mast	m <sub>1</sub> mm	80
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> mm	80
4.33.2		Working aisle width for 1000 x 1200 pallet	A <sub>st</sub> mm	1,640
4.35		Turning radius	W <sub>a</sub> mm	2,039
4.38		Distance swivelling fork pivot point	mm	1,103
4.38.1		Total lift	mm	6,780
4.38.2		Order picking height	mm	7,030
4.38.3		distance swivelling forks pivot-point to steering rack	mm	659
4.38.4		Pallet width	mm	1,200
4.38.5		Pallet length	mm	1,200
4.38.6		Clear width of operator entrance	mm	420
4.38.7		Inner clear height of operator compartment	mm	2,100
4.38.8		Outer width of operator compartment	mm	1,440
4.38.9		Width of swivel reach frame	mm	1,440
4.38.10	Wide jib	mm	172	
4.38.11	Distance swivelling forks pivot-point to back of forks	mm	144	
Performance data	5.1	Travel speed, laden/unladen	km/h	9 / 9 <sup>3)</sup>
	5.2	Lift speed, laden/unladen	m/s	0.36 / 0.4 <sup>1)</sup>
	5.3	Lowering speed, laden/unladen	m/s	0.4 / 0.4
	5.4	Traverse speed w. / w.o. load	m/s	0.3 / 0.3 <sup>2)</sup>
	5.10	Service brake		reverse current/generated
	5.11	Parking brake		Electric spring loaded / discs
Electrics	6.1	Drive motor, output S2 60 min.	kW	6.9
	6.2	Lift motor rating at S3 25%	kW	9.5
	6.3	Battery as per DIN 43531 / 35/36 A, B, C, no		6 PzS 750
	6.4	Battery voltage/nominal capacity K5	V/Ah	48 / 750
	6.5	Battery weight	kg	1,010
Misc.	8.1	Type of drive control		AC Control
	8.4	Sound pressure level at operator's ear as per EN 12053	dB (A)	60
	8.6	Steering		electric

<sup>1)</sup> In connection with performance package to 0.42 m/s

<sup>2)</sup> possible in connection with performance package to 0.4 m/s

<sup>3)</sup> possible in connection with performance package to 10.5 km/h

# Benefit from the advantages



Battery cover



## Pioneering 3-phase AC technology

There are now more than 150,000 Jungheinrich trucks with 3-phase AC technology in use worldwide. This expertise is reflected in our current drive and control generation:

- High throughput levels.
- Low energy consumption.

## Control and CAN-Bus system

- All movements can be parameterised.

## Economic energy management

- Double energy-saving benefits through regenerative braking and lowering.
- Longer operating times on a single battery charge (up to 2 shifts).
- Active energy and battery management.
- Longer battery service life.
- 930 Ah battery (optional)
- Shorter charge times.
- Battery rollers for quick battery changing.

## RFID ground control (optional)

- Truck control using transponder technology.
- Continuous measurement of travel distance for precise ID of all warehouse areas.
- High degree of flexibility in terms of switching functions (end of aisle safety control, lift/travel cutouts, speed reductions)
- Drive speeds optimised according to floor topology.

## Jungheinrich warehouse navigation system (optional)

- Linking the ETX to a Warehouse Management System (WMS) using a radio data terminal or scanner.
- Direct transfer of the destination in the narrow aisle via the truck computer.
- Automatic vertical and horizontal positioning in stacking or order picking modes.
- Effective dual cycling.
- RFID location detection prevents trucks reaching incorrect destinations.
- High level of flexibility in the warehouse with adaptation to existing WMS.
- Throughput improved by up to 25%.

## Ergonomic benefits and comfort

- Generously dimensioned cab entry.
- Outstanding visibility of load load and aisle due to low swivelling sideshift guidance and clear-view masts.
- Cushioned, adjustable/foldable Comfort seat.
- Electrically adjustable control panel with colour display.
- Soft keys with numeric keypad.
- Switchless two-handed operating concept.
- End position/limit and transfer cushioning of all hydraulic functions.

## Commissioning and maintenance

- Quick and reliable commissioning using 'teach-in' process.
- 1000 service hours maintenance interval.

- Transmission oil in swing bearing does not require replacement during the life of the part.
- Electronics with wear-free sensor system.

## Reliable operation – high availability

- 70% fewer cables and plugs due to CAN-Bus system.
- Torsion-resistant mast for high residual capacities and reduced mast sway.
- Robust and maintenance-free three-phase AC drive systems without wearing parts.

## Additional equipment

- Mechanical rail guidance.
- Wire guidance for precise control in the aisle with no mechanical stress on components.
- Radio with CD player and MP3 interface.
- Synchronised traverse.
- Mechanical and electrical interfaces for material flow management systems.
- Jungheinrich ISM: Information system for truck management.
- Truck interface for accepting work plans.
- Cut-out on overhead guard.

## Integrated Jungheinrich personnel protection system (PPS)

- On-site integration with the operating computer.
- Project planning, commissioning and maintenance by Jungheinrich.

## Jungheinrich UK Ltd.

Head Office:  
 Sherbourne House  
 Sherbourne Drive  
 Tilbrook  
 Milton Keynes MK7 8HX  
 Telephone 01908 363100  
 Fax 01908 363180

info@jungheinrich.co.uk  
 www.jungheinrich.co.uk

The German production facilities in Norderstedt, Moosburg and Landsberg are certified. **ISO 9001**  
**ISO 14001**

Jungheinrich fork lift trucks meet European safety requirements.



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