High performance electric forklift with enclosed front wheel AC motor drive

5 individually adjustable working programs

Comfortable workstation with SOLO- or MULTI-PILOT control (optional)

Jungheinrich Curve Control for safer driving and cornering

Maintenance-free multiple disc brakes

EFG 425–430

Electric four-wheel forklift truck (2500 and 3000 kg)

The use of innovative three-phase AC technology opens up new possibilities and provides numerous advantages for electric forklift trucks:

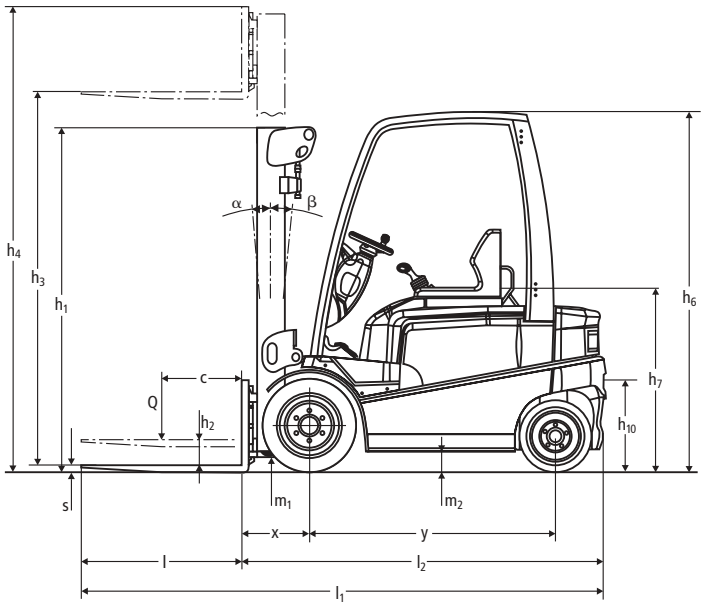
- Excellent performance values for acceleration, travel and lift speeds allow for maximum productivity.
- More work per battery charge as a result of optimum efficiency and more effective energy recovery.
- Precise hydrostatic power steering. Solid-state electric braking system feeds energy back to the battery when the accelerator is released.
- Maintenance-free brushless enclosed three phase AC motors protected to IP 54.

This ensures faster working cycles and significantly longer operation per battery charge. Low day-to-day operating costs, together with reduced maintenance requirements, guarantee outstanding economic efficiency.

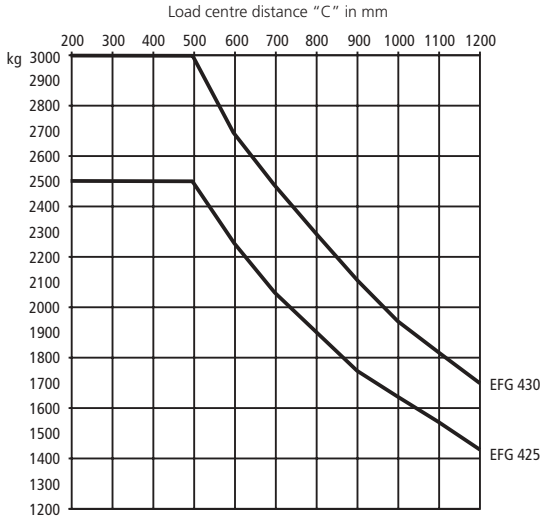
With exceptional travel and lift speeds, plus excellent acceleration and gradeability, these electric trucks produce handling performance similar to that of diesel and LPG forklifts. Enclosed motors and electronic systems make it possible to operate these vehicles inside as well as outdoors. Even difficult environments, such as heavy dust, chemicals and moisture, will not affect the reliability and performance of the motors. These AC electric forklift trucks can, therefore, be deployed almost anywhere. Whisper-quiet, emission-free operation benefits the working environment and the low rate of energy consumption reduces operating costs.

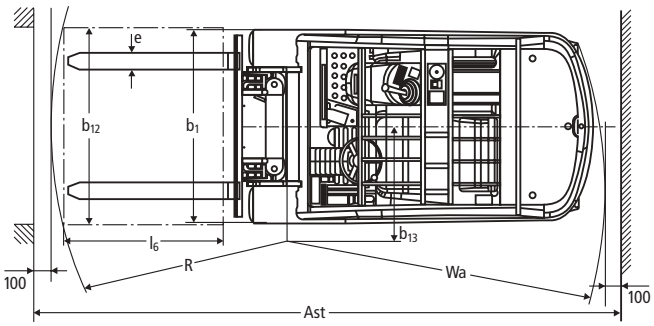
JUNGHEINRICH

EFG 425–430



Capacity





Mast table EFG 425–430								Capacity table (kg) c = 500 mm	
Designation	Lift height h_3 mm	Free lift h_2 mm		Closed mast height h_1 mm	Extended mast height h_4 mm		Tilt forward/ backward	without sideshift, single SE tyres	
		EFG 425	EFG 430		EFG 425	EFG 430	α/β (°)	EFG 425	EFG 430
Two-stage ZT	2900	150	150	2100	3496	3606	6/8	2500	3000
	3100	150	150	2200	3696	3806	6/8	2500	3000
	3300	150	150	2300	3896	4006	6/8	2500	3000
	3500	150	150	2400	4096	4206	6/8	2500	3000
	3700	150	150	2500	4296	4406	6/8	2500	3000
	4000	150	150	2650	4596	4706	6/8	2500	3000
	4300	150	150	2850	4925	5006	6/8	2500	3000
	4500	150	150	2950	5125	5206	6/8	2500	3000
	4700	150	150	3050	5325	5406	6/5	2450	2900
	5000	150	150	3200	5625	5706	6/5	2400	2800
	5500*	150	150	3500	6175	6206	6/5	2200	2550
	5800*	150	150	3650	6475	6506	6/5	2050	2400
Two-stage ZZ	2900	1479	1379	2065	3486	3586	6/8	2500	3000
	3100	1579	1479	2165	3686	3786	6/8	2500	3000
	3300	1679	1579	2265	3886	3986	6/8	2500	3000
	3500	1779	1679	2365	4086	4186	6/8	2500	3000
	3700	1879	1779	2465	4286	4386	6/8	2500	3000
	4000	2029	1929	2615	4586	4686	6/8	2500	3000
	4300	2200	2129	2815	4915	4986	6/8	2500	3000
	4500	2300	2229	2915	5115	5186	6/8	2300	3000
Three-stage DZ	4400	1479	1379	2065	4986	5086	6/8	2500	3000
	4700	1579	1479	2165	5286	5386	6/5	2450	2900
	5000	1679	1579	2265	5586	5686	6/5	2400	2800
	5500*	1879	1779	2465	6086	6186	6/5	2150	2500
	6000*	2079	1979	2665	6586	6686	6/5	1900	2200
	6500*	2279	2179	2865	7086	7186	6/3	1700	2000
	7000*	2479	2379	3065	7586	7686	6/3	1500	1800

* width of chassis is 1276 mm

Technical Data in line with VDI 2198 as at: 09/2005

Identification	1.1	Manufacturer (abbreviation)		Jungheinrich		Jungheinrich		Jungheinrich	1.1
	1.2	Manufacturer's type designation		**EFG 425k**	**EFG 425**	**EFG 425ks**	**EFG 425s**	**EFG 430**	1.2
	1.3	Drive (electric – battery or mains, diesel, petrol, fuel gas, manual)		electric		electric		electric	1.3
	1.4	Type of operation (hand, pedestrian, standing, seated, order picker)		seated		seated		seated	1.4
	1.5	Load capacity/rated load	Q (t)	2.5		2.5		3	1.5
	1.6	Load centre distance	c (mm)	500		500		500	1.6
	1.8	Load distance, centre of drive axle to fork	x (mm)	425 [1]		425 [1]		430 [2]	1.8
	1.9	Wheelbase	y (mm)	1537	1681	1537	1681	1681	1.9
Weights	2.1	Service weight incl. battery (see line 6.5)	kg	4600	4750	4600	4750	5100	2.1
	2.2	Axle loading, laden front/rear	kg	6300/800	6400/850	6300/800	6400/850	7250/850	2.2
	2.3	Axle loading, unladen front/rear	kg	2300/2300	2530/2220	2300/2300	2530/2220	2600/2500	2.3
Wheels, Chassis	3.1	Tyres (solid rubber, superelastic, pneumatic, polyurethane)		SE		SE		SE	3.1
	3.2	Tyre size, front (∅ x width)		23x9-10		23x9-10		23x10-12	3.2
	3.3	Tyre size, rear (∅ x width)		18x7-8		18x7-8		18x7-8	3.3
	3.5	Wheels, number front/rear (x = driven wheels)		2x/2		2x/2		2x/2	3.5
	3.6	Track width, front	b_{10} (mm)	990		990		956	3.6
	3.7	Track width, rear	b_{11} (mm)	920		920		920	3.7
Basic Dimensions	4.1	Mast/fork carriage tilt forward/backward	α/β (°)	6/8		6/8		6/8	4.1
	4.2	Lowered mast height	h_1 (mm)	2200		2200		2200	4.2
	4.3	Free lift	h_2 (mm)	150		150		150	4.3
	4.4	Lift height	h_3 (mm)	3100		3100		3100	4.4
	4.5	Extended mast height	h_4 (mm)	3696		3696		3806	4.5
	4.7	Overhead load guard (cab + 15 mm) height	h_6 (mm)	2215		2215		2215	4.7
	4.8	Seat height/standing height	h_7 (mm)	1060		1060		1060	4.8
	4.12	Coupling height	h_{10} (mm)	390/550		390/550		390/550	4.12
	4.19	Overall length	l_1 (mm)	3428	3572	3428	3572	3577	4.19
	4.20	Length to face of forks	l_2 (mm)	2278	2422	2278	2422	2427	4.20
	4.21	Overall width	b_1/b_2 (mm)	1196/–		1196/–		1196/–	4.21
	4.22	Fork dimensions	s/e/l (mm)	40x120x1150		40x120x1150		45x125x1150	4.22
	4.23	Fork carriage ISO 2328, class/type A, B		ISO 2A		ISO 2A		ISO 3A	4.23
	4.24	Fork carriage width	b_3 (mm)	1120		1120		1120	4.24
	4.31	Ground clearance, laden, under mast	m_1 (mm)	110		110		110	4.31
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	125		125		125	4.32
	4.33	Aisle width for pallets 1000x1200 crossways	Ast (mm)	3675	3825	3675	3825	3830	4.33
	4.34	Aisle width for pallets 800x1200 lengthways	Ast (mm)	3875	4025	3875	4025	4030	4.34
	4.35	Turning radius	Wa (mm)	2050	2200	2050	2200	2200	4.35
	4.36	Smallest pivot point distance	b_{13} (mm)	650	695	650	695	695	4.36
Performance Data	5.1	Travel speed, laden/unladen	km/h	17/18	17/17	20/20		20/20	5.1
	5.2	Lift speed, laden/unladen	m/s	0.44/0.54		0.55/0.60		0.50/0.60	5.2
	5.3	Lowering speed, laden/unladen	m/s	0.58/0.56		0.58/0.56		0.58/0.56	5.3
	5.5	Drawbar pull, laden/unladen S_2 60 min	N	3600/4000	3500/3900	5200/5500	5100/5500	4800/5300	5.5
	5.6	Max. drawbar pull, laden/unladen S_2 5 min	N	12300/12700	12200/12600	14500/15000		14000/14500	5.6
	5.7	Gradient performance, laden/unladen S_2 30 min	%	8.5/14	7.5/13	12/19	11/17	10/17	5.7
	5.8	Max. gradient performance, laden/unladen S_2 5 min	%	18/29	17/27	21/35	20/32	18/29	5.8
	5.9	Acceleration time, laden/unladen	s	4.3/4.0	4.4/4.1	4.1/3.7		4.2/3.8	5.9
	5.10	Service brake		hydr.		hydr.		hydr.	5.10
E-Motor	6.1	Drive motor rating S_2 60 min	kW	11		14.5		14.5	6.1
	6.2	Lift motor rating at S_3 15 %	kW	16		23.5		23.5	6.2
	6.3	Battery acc. to DIN 43531/35/36 A, B, C, no		DIN 43536 A		DIN 43536 A		DIN 43536 A	6.3
	6.4	Battery voltage, nominal capacity K_5	V/Ah	80/560	80/700	80/560	80/700	80/700	6.4
	6.5	Battery weight	kg	1575	1855	1575	1855	1855	6.5
		Battery dimensions l/w/h	cm	1028/711/784	1028/855/784	1028/711/784	1028/855/784	1028/855/784	
	6.6	Energy consumption acc. to VDI cycle [3]	kWh/h	5.6	5.7	5.7	5.8	6.3	6.6
Other Details	8.1	Type of drive control		Impulse/AC		Impulse/AC		Impulse/AC	8.1
	8.2	Operating pressure for attachments	bar	200		200		200	8.2
	8.3	Oil volume for attachments	l/min	30		30		30	8.3
	8.4	Sound level at driver's ear according to EN 12053	dB(A)	70		71		71	8.4
	8.5	Tow coupling, type DIN		DIN 15170-H		DIN 15170-H		DIN 15170-H	8.5

1) 452 mm with DZ mast, with integrated sideshift: x = 437 mm (464 mm with DZ mast), with sideshift attachment: x = 483.5 mm (510.5 mm with DZ mast)
2) 457 mm with DZ mast, with integrated sideshift: x = 444 mm (471 mm with DZ mast), with sideshift attachment: x = 502 mm (529 mm with DZ mast)
3) 45 VDI working cycles/h

This specification sheet according to VDI regulation 2198 only provides technical values for the standard truck. Non-standard tyres, different masts, additional equipment, etc. could produce other values.

Make use of the advantages

Superior operator comfort
Functionality and ergonomics of the driver environment guarantees relaxed and fatigue-free work over long shifts:
- Low access step. Large, level foot well with automotive pedal lay-out.
- Steering column and comfort seat allow multiple adjustments for optimum seating position.
- Floating Cab module cushions road shocks and vibrations.
- Clear view: mast and fork carriage allow for excellent visibility to load and road.
- Hydraulic power steering is precise and low effort, without kick-back.


SOLO-PILOT

- Comfort Display provides up-to-date information on vital vehicle conditions at a glance.
- Comfortable, fatigue-free operation of direction and hydraulics by SOLO-PILOT control (separate levers) or MULTI-PILOT control (optional) all functions in one lever.
- Convenient storage for documents and the operators belongings.

Safe, wear-free braking – parking brake with automatic operation
Three distinct systems ensure safe, precise and largely wear-free braking:
- Regenerative electric braking in reversing mode and regular brake pedal use.


MULTI-PILOT

- Multiple oil disc brakes act as a safety back-up. Wear-free and fully enclosed.
- The parking brake is electrically operated through spring accumulation. It automatically engages when the forklift is stationary and releases again when the truck starts to drive. This way any uncontrolled rolling of the truck can be eliminated.

Maintenance free electric motors
Proven AC technology: drive motor, hydraulic pump motor, steering motor. High performance, low energy consumption, less maintenance:
- High torque for rapid work cycles.
- Up to 15 % higher energy efficiency than shunt motors.
- In many cases one battery charge is sufficient for two work shifts.
- No brushes, no collector – no maintenance expense.
- Fully enclosed and protected to IP 54. Long life, even under dusty and damp conditions.
- 2 years warranty on all motors.

Active safety
Excellent drive dynamics and performance also demand a high degree of safety:
- Jungheinrich Curve Control automatically reduces travel speed when cornering.
- Automatic parking brake ensures controlled operation on ramps and slopes.
- Very low centre of gravity improves stability and residual capacity.
- Long wheelbase ensures stable handling and smooth travel.
- Electronic and hydraulic overload protection guard.
- Emergency cut off switch quickly accessible.
- Reliable data transfer between electronic components through CAN-Bus technology.

Comfort Display

Intelligent electronics
BoardControl electronic system permanently controls and monitors all truck functions.
- Smooth driving, dynamic reversing and precise load positioning with a minimum of energy.
- 5 application programs can be individually adapted to ensure optimal performance in any application.
- Diagnostic system monitors all components and provides service data memory for rapid and cost-effective maintenance.
- Comfort Display with digital service hour meter (actual or cyclic duration factor), battery discharge indicator plus lift cut-out, clock, error code and warning displays.
- Electronic steer wheel position indicator.

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ISO 9001, ISO 14001 Certification of Quality and Environment Management.

Jungheinrich trucks conform to the European Safety Requirements.

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Well worthwhile

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