3-phase, heavy-duty fork lift truck with enclosed, twin motor front-wheel drive

Five individually adjustable operating programs

High residual capacity

Jungheinrich curveCONTROL for safer travel and cornering

Maintenance-free multi-disc brakes

EFG 216kn/316n/320n

Electric three-wheel and four-wheel fork lift trucks (1,600/2,000 kg)

The use of innovative 3-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 and solid-state electric braking when the accelerator is released.
- Maintenance-free brushless enclosed 3-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.
Compact design makes the three-wheel/ four-wheel truck extremely manoeuvrable and allows fast operation in the most confined spaces for example lorries, containers or railway wagons. The closed design and the front wheel drive ensure a universal suitability and optimal traction on gradients and slippery surfaces.

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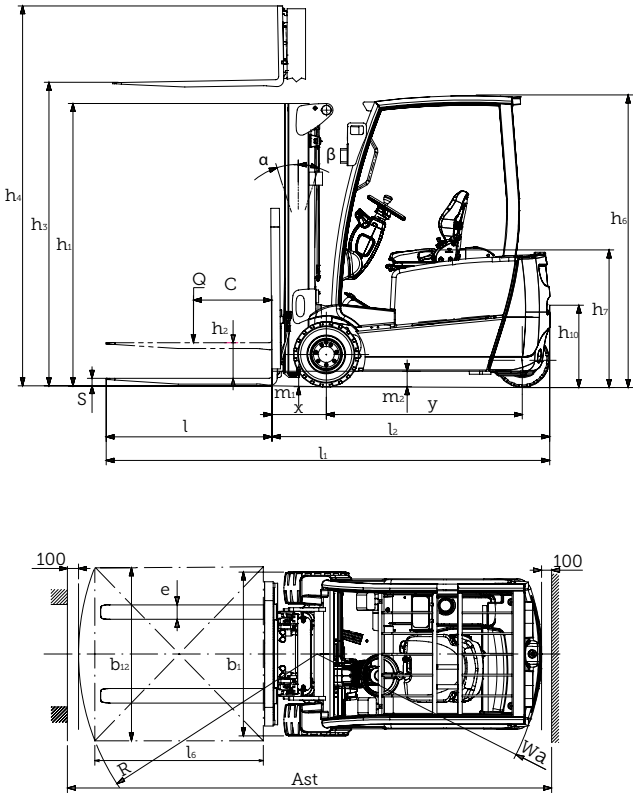
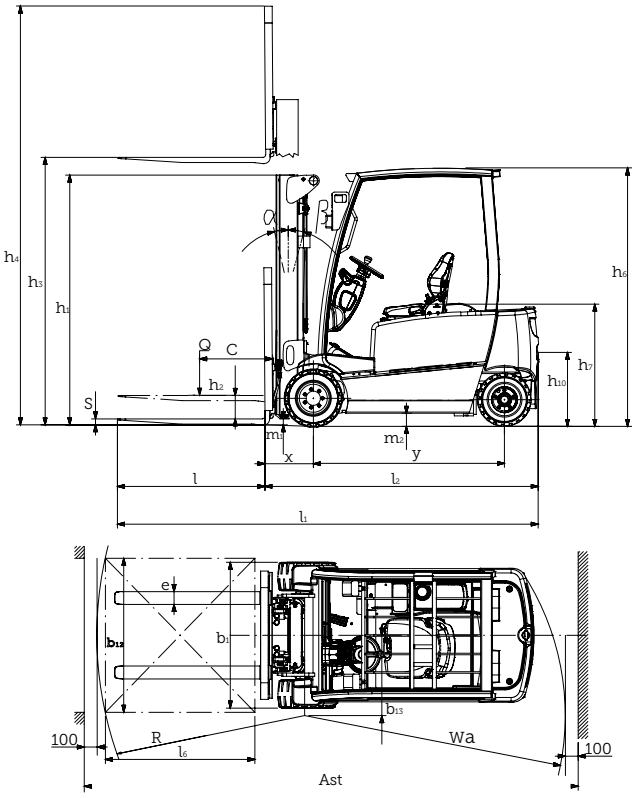
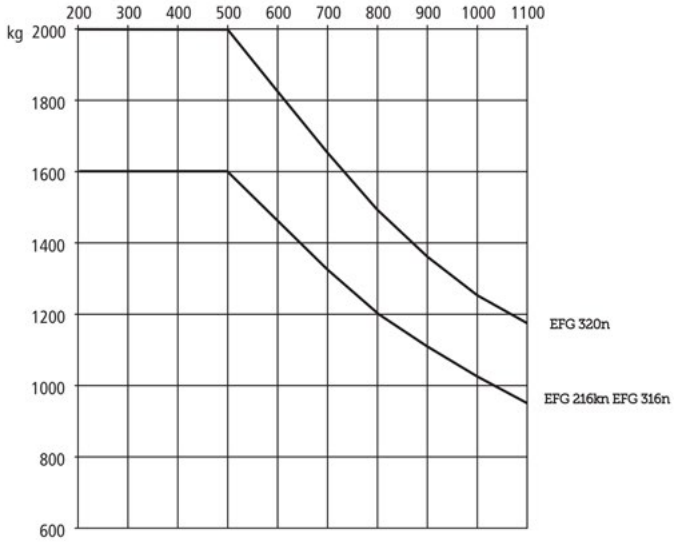


EFG 316n/ 320n



Capacity (kg)



Load centre distance “c” in mm

EFG 216kn/316n/320n

Standard mast designs EFG 216kn/316n/320n						
	Lift h_3 (mm)	Lowered mast height h_1 (mm)	Free lift h_2 (mm)		Extended mast height[1] h_4 (mm)	Mast tilt forward / back α/β (°)
			EFG 216kn / 316n	EFG 320n		
Duplex ZT	3000	2000	150	150	4220	7/5
	3300	2150	150	150	4520	7/5
	3600	2300	150	150	4820	7/5
	4000	2500	150	150	5220	7/5
	4500	2800	150	150	5720	7/5
	5000	3050	150	150	6220	7/5
Duplex ZZ	3300	2105	1545	1488	4520	7/5
	3600	2255	1695	1638	4820	7/5
	4000	2455	1895	1838	5220	7/5
Triplex DZ	4500	2005	1445	1388	5720	7/5
	4800	2105	1545	1488	6020	7/5
	5000	2180	1620	1563	6220	7/5
	5500	2355	1795	1738	6720	7/5
	6000	2555	1995	1938	7220	7/5
	6500	2805	2245	2188	7720	7/5

[1] Including additional load guard with 665 mm

Technical data in line with VDI 2198

Identification	1.1	Manufacturer (abbreviation)			Jungheinrich		
	1.2	Model			**EFG 216kn**	**EFG 316n**	**EFG 320n**
	1.3	Drive			Electric		
	1.4	Manual, pedestrian, stand-on, seated, order picker operation			seat		
	1.5	Load capacity/rated load	Q	t	1.6	1.6	2
	1.6	Load centre distance	c	mm	500		
	1.8	Load distance	x	mm	352[1)]		
	1.9	Wheelbase	y	mm	1,357	1,490	1,490
Weights	2.1.1	Net weight incl. battery (see row 6.5)		kg	2,990	3,025	3,230
	2.2	Axle load with load front/rear		kg	4,015 / 575	3,890 / 730	4,675 / 555
	2.3	Axle load without load front/rear		kg	1,410 / 1,580	1,375 / 1,650	1,530 / 1,700
Wheels / frame	3.1	Tyres			SE / SE		
	3.2	Tyre size, front		mm	18 x 7-8	18 x 7-8	200 / 50-10
	3.3	Tyre size, rear		mm	140 / 55-9	16 x 6-8	16 x 6-8
	3.5	Wheels, number front/rear (x = driven wheels)			2x/2		
	3.6	Tread width, front	b_{10}	mm	904	904	915
	3.7	Tread width, rear	b_{11}	mm	176	830	830
Basic dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β	°	7/5		
	4.2	Mast height (lowered)	h_1	mm	2,000		
	4.3	Free lift	h_2	mm	150		
	4.4	Lift	h_3	mm	3,000		
	4.5	Extended mast height	h_4	mm	4,220		
	4.7	Height of overhead guard	h_6	mm	2,000		
	4.8	Seat height/stand height	h_7	mm	950		
	4.12	Coupling height	h_{10}	mm	560	410	410
	4.12.1	2nd coupling height		mm	0	580	580
	4.19	Overall length	l_1	mm	3,049	3,260	3,260
	4.20	Length to face of forks	l_2	mm	1,899	2,110	2,110
	4.21	Overall width	b_1/b_2	mm	1,060	1,060	1,120
	4.22	Fork dimensions	s/e/l	mm	40 / 100 / 1,150		
	4.23	Fork carriage ISO 2328, class/type A, B			2A		
	4.24	Fork carriage width	b_3	mm	980		
	4.31	Floor clearance with load under mast	m_1	mm	80		
	4.32	Ground clearance, centre of wheelbase	m_2	mm	90		
	4.33	Aisle width for pallets 1000 x 1200 sideways	Ast	mm	3,224	3,582	3,582
	4.34	Aisle width for pallets 800 x 1200 lengthways	Ast	mm	3,348	3,782	3,782
	4.35	Turning radius	W_a	mm	1,545	2,030	2,030
	4.36	Smallest pivot point distance	b_{13}	mm	0	635	635
Performance data	5.1	Travel speed, laden/unladen		km/h	16 / 16	16.5 / 17	17 / 17.2
	5.2	Lift speed, laden/unladen		m/s	0.38 / 0.59	0.47 / 0.61	0.39 / 0.52
	5.3	Lowering speed, laden/unladen		m/s	0.55 / 0.55		
	5.5	Drawbar pull w. / w.o. load		N	2,150 / 2,450	2,100 / 2,450	1,900 / 2,300
	5.6	Max. drawbar pull, laden/unladen		N	12,700 / 12,700	12,700 / 12,700	12,300 / 12,000
	5.7	Gradeability laden/unladen		%	7.3 / 12.3	7 / 11	5.7 / 10.4
	5.8	Max. gradeability, laden/unladen		%	20 / 35		
	5.9	Acceleration time w. / w.o. load		S	3.8 / 3.4	3.8 / 3.4	4 / 3.5
	5.10	Service brake			hydraulic/mechanical		
Electrics	6.1	Drive motor, output S2 60 min.		kW	4.0 / 4,0		
	6.2	Lift motor, output at S3 15%		kW	10.0		
	6.3	Battery as per DIN 43531 /35/36 A, B, C, no			A 43531		
	6.4	Battery voltage/nominal capacity K5		V/Ah	48 / 625	48 / 750	48 / 750
	6.5	Battery weight		kg	924	1,090	1,090
		Battery dimensions L/W/H		mm	827 / 627 / 627		
	6.6	Energy consumption according to VDI cycle		kWh/h	4.1[2)]	4.3[2)]	4.8[2)]
Misc.	8.1	Type of drive control			Impuls/AC		
	8.2	Working pressure for attachments		bar	200		
	8.3	Oil flow for attachments		l/min	25		
	8.4	Sound pressure level at operator's ear as per EN 12053		dB (A)	66	67	67
	8.5	Trailer coupling, model/type DIN			15170/type H	DIN 15170/H	DIN 15170/H

[1)] +25 mm for DZ mast; for integral sideshift: x=375 mm (+25 mm for DZ mast); for sideshift attachment: x=410.5 mm (+25 mm for DZ mast)
[2)] 45 VDI work cycles/h

In accordance with VDI Guideline 2198 this specification sheet provides details of the standard truck only. Non-standard tyres, different masts, optional equipment, etc. may result in different values.

EFG 216kn/316n/320n

Benefit from the advantages

Comfort Display


soloPILOT

Superior operator comfort
Functionality and ergonomic of the driver environment guarantees relaxed and fatigue-free work over long shifts:
- Low access steps. Large, level foot well with automotive pedal lay-out.
- Adjustable steering column and hydraulic comfort seat for optimum seating position.
- Floating cab module cushions road shocks and vibrations.
- Clear view: mast and fork carriage allow for excellent visibility of the load and of the road.
- Hydraulic power steering is precise, requiring the minimal amount of effort without kick-back.
- Comfort Display provides up-to-date information on vital vehicle conditions at a glance.
- Comfortable, fatigue-free operation of direction and hydraulics by soloPILOT control (separate levers).
- Convenient storage for documents and the operators belongings.

Safe, wear-free braking
Three distinct systems ensure safe, precise and largely wear-free braking:
- Regenerative electric braking and regular brake pedal use.
- Multiple oil disk brakes act as a safety back-up. Wear-free and fully enclosed.
- Parking brake uses the service brake system through a separate electric activation system. Operation warning light in the driver's console.

Maintenance free electric motors
Proven AC technology:2 drive motors, 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.
- No brushes, no collector-no maintenance expense.
- Fully enclosed and protected to IP 54. Long life, even under dusty and damp conditions.

Active safety
Excellent drive dynamics and performance also demand a high degree of safety:
- curveCONTROL automatically reduces travel speed when cornering.
- Rollback protection ensures controlled operation on ramps and slopes.
- Very low centre of gravity improves stability and residual capacity.
- Unique steering axle with low profile tyres ensures stable handling and smooth travel.
- Electronic and hydraulic overload protection guard.
- Traction Control ensures optimum torque in curves.
- Emergency cut off switch quickly accessible.
- Reliable data transfer between electronic components through CAN-Bus technology.

Intelligent electronics
Board Control electronic system permanently controls and monitors all truck functions.
- Smooth driving, dynamic reversing and precise load positioning with a minimum use of energy.
- 5 application programmes 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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The German production facilities in Norderstedt, Moosburg and Landsberg are certified. ISO 9001 ISO 14001

Jungheinrich fork lift trucks meet European safety requirements. CE

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