Compact three-phase AC powered, rear-wheel drive fork lift truck

Optimum energy efficiency

Ergonomic workstation

Compact dimensions

Processor-controlled, upgradeable AC electronics

EFG 110/110k/113/115

Electric three-wheel counterbalanced fork lift truck (1,000/1,250/1,500 kg)

Rear-wheel drive, compact design, high performance data and optimum ergonomically optimised working conditions – these are the strengths of our EFG 110k/110-115 electric three-wheel counterbalanced fork lift trucks.

The design allows for high manoeuvrability, as well as fast manoeuvring in HGVs, wagons and containers. The ergonomic and performance-enhancing cockpit is characterised by a low entry height of only 520 mm. This guarantees easy and safe boarding.

Individual adjustment options for all operator sizes are possible thanks to the adjustable steering column and the 3-way adjustable comfort seat. At 2090 mm high, the comfort high roof offers plenty of headroom (container roof with a height of 1970 mm optional).

The hydraulic levers and soloPILOT (raising/lowering, direction change and horn in one lever) are comfortably situated for the operator's hands. The excellent all-round visibility increases safety.

The comfort display is configured for viewing when looking in the direction of the forks. All service-relevant data is stored. Clear text displays provide information about operating hours as well as the battery charge (including lift cut-out).

With low steering/lever positioning forces, the power generated by the 3-phase AC motor, summarised as per IP 54, is easily adjusted. Dynamic, smooth acceleration is optimally supported by the conventional accelerator/brake pedal configuration. The EFG 110k/110-115 electric three-wheel counterbalanced fork lift truck is convincing both indoors and outdoors.

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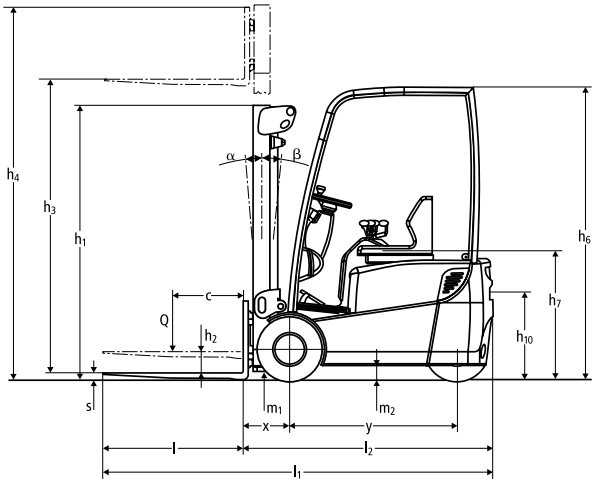
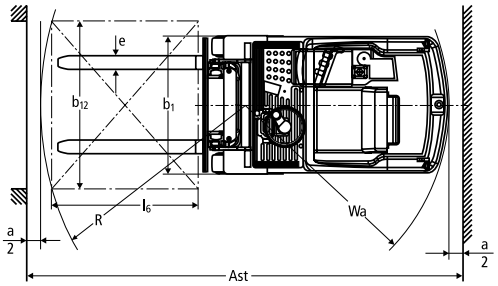
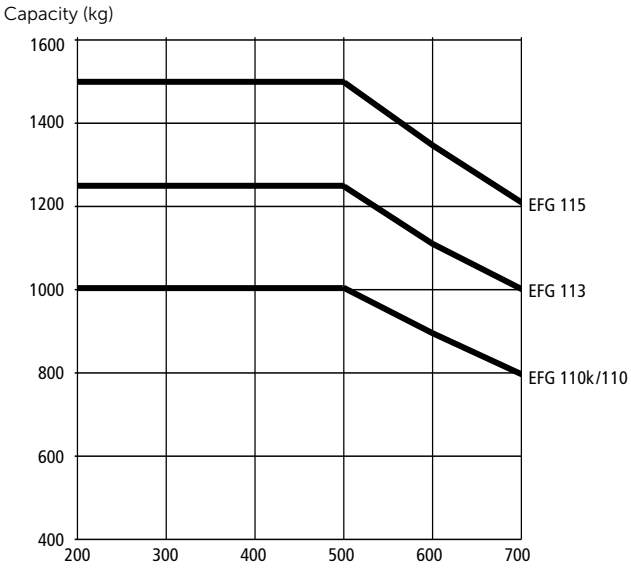
EFG 110/110k/113/115







Standard mast designs EFG 110/110k/113/115													
	Lift h_3 (mm)	Lowered mast height h_1 (mm)			Free lift h_2 (mm)			Extended mast height h_4 (mm)			Mast tilt forward/back α/β (°)		
		EFG 110	EFG 110k	EFG 113 / 115	EFG 110	EFG 110k	EFG 113 / 115	EFG 110	EFG 110k	EFG 113 / 115	EFG 110	EFG 110k	EFG 113 / 115
Duplex ZT	2300	1650	1650	1650	150	150	150	2850	2850	2850	5/4	5/4	5/4
	3000	2000	2000	2000	150	150	150	3550	3550	3550	5/6	5/6	5/6
	3100	2050	2050	2050	150	150	150	3650	3650	3650	5/6	5/6	5/6
	3300	2150	2150	2150	150	150	150	3850	3850	3850	5/6	5/6	5/6
	3600	2300	2300	2300	150	150	150	4150	4150	4150	5/6	5/6	5/6
	4000	2500	2500	2500	150	150	150	4550	4550	4550	5/6	5/6	5/6
	4500	2800	2800	2800	150	150	150	5050	5050	5050	5/6	5/6	5/6
	5000	3050	3050	3050	150	150	150	5550	5550	5550	5/5	5/5	5/5
Duplex ZZ	2300	1605	1605	1605	1055	1055	1055	2850	2850	2850	5/4	5/4	5/4
	3000	1955	1955	1955	1405	1405	1405	3550	3550	3550	5/6	5/6	5/6
	3100	2005	2005	2005	1455	1455	1455	3650	3650	3650	5/6	5/6	5/6
	3300	2105	2105	2105	1555	1555	1555	3850	3850	3850	5/6	5/6	5/6
	3600	2255	2255	2255	1705	1705	1705	4150	4150	4150	5/6	5/6	5/6
	4000	2455	2455	2455	1905	1905	1905	4550	4550	4550	5/6	5/6	5/6
Triplex DZ	4350	1955	1955	1955	1405	1405	1405	4900	4900	4900	5/6	5/6	5/6
	4500	2005	2005	2005	1455	1455	1455	5050	5050	5050	5/6	5/6	5/6
	4800	2105	2105	2105	1555	1555	1555	5350	5350	5350	5/6	5/6	5/6
	5000	2180	2180	2180	1630	1630	1630	5550	5550	5550	5/5	5/5	5/5
	5250	2255	2255	2255	1705	1705	1705	5800	5800	5800	5/5	5/5	5/5
	5500	2355	2355	2355	1805	1805	1805	6050	6050	6050	5/5	5/5	5/5
	6000	2555	-	2555	2005	-	2005	6550	-	6550	5/4	-	5/4
	6500	-	-	2805	-	-	2255	-	-	7050	-	-	5/4

Technical data in line with VDI 2198

Identification	1.1	Manufacturer (abbreviation)			Jungheinrich			
	1.2	Model			**EFG 110**	**EFG 110k**	**EFG 113**	**EFG 115**
	1.3	Drive			Electric			
	1.4	Manual, pedestrian, stand-on, seated, order picker operation			seat			
	1.5	Load capacity/rated load	Q	t	1	1	1.25	1.5
	1.6	Load centre distance	c	mm	500			
	1.8	Load distance	x	mm	330[1)]			
	1.9	Wheelbase	y	mm	1,038	984	1,146	1,200
Weights	2.1.1	Net weight incl. battery (see row 6.5)		kg	2,570	2,490	2,760	2,870
	2.2	Axle loading, laden front/rear		kg	2,945 / 625	2,940 / 550	3,390 / 620	3,805 / 565
	2.3	Axle loading, unladen front/rear		kg	1,145 / 1,425	1,095 / 1,395	1,235 / 1,525	1,270 / 1,600
Wheels / frame	3.1	Tyres			SE			
	3.2	Tyre size, front		mm	18 x 7-8			
	3.3	Tyre size, rear		mm	18 x 7-8			
	3.5	Wheels, number front/rear (x = driven wheels)			2/1x			
	3.6	Tread width, front	b_{10}	mm	838			
	3.7	Tread width, rear	b_{11}	mm	0			
Basic dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β	°	5/6			
	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	3,550			
	4.7	Height of overhead guard	h_6	mm	2,090			
	4.8	Seat height/standing height	h_7	mm	900			
	4.12	Coupling height	h_{10}	mm	635			
	4.19	Overall length	l_1	mm	2,773	2,719	2,881	2,935
	4.20	Length to face of forks	l_2	mm	1,623	1,569	1,731	1,785
	4.21	Overall width	b_1/b_2	mm	990			
	4.22	Fork dimensions	s/e/l	mm	35 / 100 / 1,150			
	4.23	Fork carriage ISO 2328, class/type A, B			2A			
	4.24	Fork carriage width	b_3	mm	950			
	4.31	Floor clearance with load under mast	m_1	mm	90			
	4.32	Ground clearance, centre of wheelbase	m_2	mm	100			
	4.33	Aisle width for pallets 1000 x 1200 crossways	Ast	mm	2,952	2,898	3,060	3,114
	4.34	Aisle width for pallets 800 x 1200 lengthways	Ast	mm	3,074	3,020	3,182	3,236
	4.35	Turning radius	W_a	mm	1,293	1,239	1,401	1,455
	4.36	Smallest turning radius	b_{13}	mm	0			
Performance data	5.1	Travel speed, laden/unladen		km/h	12 / 12.5			
	5.2	Lift speed, laden/unladen		m/s	0.29 / 0.5	0.28 / 0.5	0.25 / 0.5	0.24 / 0.5
	5.3	Lowering speed, laden/unladen		m/s	0.58 / 0.6			
	5.5	Drawbar pull, laden/unladen		N	1,150 / 1,250	1,150 / 1,250	1,100 / 1,250	1,055 / 1,250
	5.6	Max. drawbar pull, laden/unladen		N	4,400 / 4,500	4,400 / 4,500	4,375 / 4,500	4,350 / 4,500
	5.7	Gradeability, laden/unladen		%	8 / 11.5	8.5 / 12	7 / 11	6.5 / 10.5
	5.8	Max. gradeability, laden/unladen		%	12.5 / 17.5	13 / 18	11 / 16.5	10 / 16
	5.9.1	Acceleration time, laden/unladen (to 10 m)		S	5.1 / 4.6	5.1 / 4.6	5.4 / 4.7	5.6 / 4.8
	5.10	Service brake			hydraulic			
Electrics	6.1	Drive motor, output S2 60 min.		kW	4.0			
	6.2	Lift motor, output at S3 15%		kW	6.0			
	6.3	Battery as per DIN 43531/35/36 A, B, C, no			A 43535			
	6.4	Battery voltage/nominal capacity K5		V/Ah	24 / 625	24 / 500	24 / 875	24 / 1,000
	6.5	Battery weight		kg	450	380	600	690
		Battery dimensions L/W/H		mm	830 / 327 / 627	830 / 273 / 627	830 / 435 / 627	830 / 489 / 627
	6.6	Energy consumption as per EN 16796		kWh/h	2.6[2)]	2.6[2)]	2.7[2)]	2.7[2)]
		CO- Equivalent as per EN 16796		kg/h	1.4	1.4	1.5	1.5
	6.7	Throughput		t/h	60	60	76	93
	6.8	Energy consumption at max. throughput		kWh/h	3.3	3.2	3.5	3.7
Misc.	8.1	Type of drive control			Impuls/AC			
	8.2	Working pressure for attachments		bar	160	160	185	210
	8.3	Oil flow for attachments		l/min	14			
	8.4	Sound pressure level at operator's ear as per EN 12053		dB (A)	63			
	8.5	Trailer coupling, model/type DIN			DIN 15170-H			

1) 337 mm for DZ mast; for integral sideshift: x = 362 mm (DZ mast 369 mm); for sideshift attachment: x = 390 mm (DZ mast 397 mm)
2) 45 working cycles / h

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

Benefit from the advantages


Drive and lift motor with 3-phase AC technology


soloPILOT


multiPILOT

Outstanding price/performance ratio
- First-class design of operator seat, high performance data and low life-cycle costs give an outstanding price/performance ratio.

High residual capacity
- Full rated capacity up to 4500 mm (EFG 115) or 5000 mm (EFG 110k/110/113) can be achieved. This is due to excellent stability and safety.

Innovative motor technology
Drive and lift motor with 3-phase AC technology with excellent thermal economy (no fans required).

Performance-enhancing workstation
Relaxed, fatigue-free work, even during long shifts due to ergonomically designed workstation:
- Standard comfort high roof for superior headroom.
- Outstanding visibility through panorama mast and fork carriage.
- Comfortable operation due to combined travel direction/hydraulic lever or multiPILOT (optional).
- Easier hydraulic power steering (5.2 revolutions for 180º steering angle).

Significantly reduced maintenance
- Single-piece metal cover ensures quick and easy access to the battery compartment.
- Dirt, damp and water-resistant motors due to encapsulated design and electronic components complying to IP 54.
- Prolonged service intervals: only every 1000 operating hours or every 12 months.
- Hydraulic steering with fully encapsulated cog-wheel system.
- Maintenance and wear-free motors in AC technology.

Economic driving and lifting
- 3-phase AC technology ensures optimum performance.
- Energy recovery system.
- Omission of motor fans.
- Significantly prolonged work cycles and correspondingly reduced battery exchange.
- Progressive lowering brake valve, allows equal lowering speed with and without load.

Innovative steering and safety technology
- Impulse AC technology steering, allows sensitive driving.
- Programmable performance parameters ensure flexibility.
- 5 selectable travel programs (optional).
- Automatic reduction of travel speed when cornering by curveCONTROL (optional).

soloPILOT (standard equipment)
- Combination of the lifting/lowering, travel direction switch and horn functions in one control lever.
- Operation of the additional functions - forward/backward tilting, sideshift (optional) and additional hydraulics (optional) with controls positioned directly in line.

multiPILOT (optional)
- Combination of all drive and hydraulic functions into one central control lever.
- Smooth activation of all control commands without moving the hand.
- Ergonomically optimised handle.
- Also possible to smoothly operate several hydraulic functions at the same time.

3-phase AC motors
- Maintenance-free drive with fully enclosed 3-phase AC motors with no carbon brushes.
- Resistant to dust, dirt and damp.
- Excellent thermal economy (fans are not required) due to drive and lift motor in 3-phase AC technology.

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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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