Compact electric forklift truck with Jungheinrich proprietary AC technology and rear-wheel drive

Maximum performance with low energy consumption

Narrow tractor design for block stacking

**Spacious operator compartment** 

SOLO- or MULTI-PILOT (optional) hydraulic and directional control

Microprocessor-controlled, fully programmable AC electronic control



### EFG 110k-115

### Electric Three-Wheel Counterbalanced Truck (2,000-3,000 lbs.)

Rear-wheel drive, a compact design, high performance and an ergonomic operator compartment – these are the strengths of the EFG 110k–115 electric forklift trucks.

#### The advantages:

Greater maneuverability, excellent performance in restricted spaces and superior operator comfort.

The truck features a low step for a secure and comfortable entrance into the compartment. The adjustable steering column and a three-way adjustable, full-suspension seat offer customized

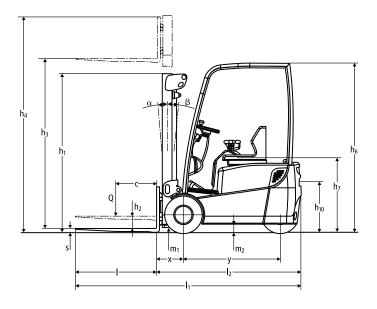
settings for every operator. The compartment offers superior headroom with an overhead guard that is 82.3 inches high. A "container overhead guard" with a height of 77.6 inches is available as an option.

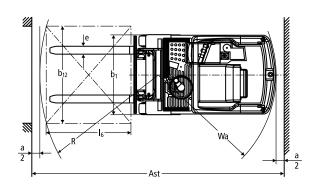
Excellent visibility and the ergonomically-positioned controls allow for precise handling. Hydraulic functions are activated by using the SOLO-PILOT control (separate levers) or the MULTI-PILOT control (all functions controlled by a joystick).

The informative operator display highlights important truck data, including operating hours, battery state-of-charge, lift interrupt, error codes and warning displays. The system also stores all relevant service data. Low steering and lever operating forces and a familiar automotive pedal layout ensure a productive operation. Enclosed AC motors enable smooth acceleration and make the EFG 110k-115 suitable for a variety of applications.



# **EFG 110k-115**





			Mast Table El	FG 110k-115			
Designation	Lift height h₃ inches	Free-lift h₂ inches	Collapsed mast height h₁ inches	Extended mast height h <sub>4</sub> inches	Tilt forward / backward degrees	Tru Width inches	rck Track inches
	90	5.9	65	139	5° / 4°	39.0	33.0
	118 <sup>1)</sup>	5.9 <sup>1)</sup>	79 <sup>1)</sup>	166 <sup>1)</sup>	5° / 6° 1)	39.0	33.0
T	122	5.9	81	170	5° / 6°	39.0	33.0
Two-stage	129	5.9	85	178	5°/6°	39.0	33.0
mast ZT (Limited free-lift)	141	5.9	91	190	5° / 6°	39.0	33.0
(Limited free-lift)	157	5.9	98	206	5° / 6°	39.0	33.0
	177	5.9	110	225	5° / 6°	41.8	35.8
	196	5.9	120	245	5° / 6°	41.8	35.8
	90	41	63	139	5°/4°	39.0	33.0
Tuyo stago	118	55	77	166	5°/6°	39.0	33.0
Two-stage mast ZZ	122	57	79	170	5°/6°	39.0	33.0
(Full free-lift)	129	61	83	178	5° / 6°	39.0	33.0
(ruii iree-iirt)	141	67	89	190	5° / 6°	39.0	33.0
	157	75	97	206	5° / 6°	39.0	33.0
	171	55	77	219	5°/6°	39.0	33.0
	177	57	79	225	5°/6°	41.8	35.8
Three-stage	189	61	83	237	5°/6°	41.8	35.8
mast DZ	196	64	86	245	5°/5°	41.8	35.8
(Full free-lift)	216	71	93	265	5° / 5°	41.8	35.8
	236	78	101	284	5° / 4°	41.8	35.8
	255	88	110	304	5° / 4°	41.8	35.8
1) Standard							

## **Technical Data**

	1.1	Manufacturer (abbreviation)		Jungheinrich	Jungheinrich	Jungheinrich	Jungheinrich	1.1
1.2		Manufacturer's type designation		EFG 110k	EFG 110	EFG 113	EFG 115	1.2
tics	1.3	Drive		electric	electric	electric	electric	1.3
eris	1.4	Type of operation		seated	seated	seated	seated	1.4
+ + +	1.5	Load capacity / rated load	Q (lbs)	1,920	1,920	2,400	2,880	1.5
þar	1.6	Load center distance	c (inches)	24.0	24.0	24.0	24.0	1.6
0	1.8	Load distance, center of load axle to fork face	x (inches)	13.0 ¹)	13.0 <sup>1)</sup>	13.0 ¹)	13.0 ¹)	1.8
İ	1.9	Wheelbase	y (inches)	38.7	40.9	45.1	47.2	1.9
Weights	2.1	Service weight including battery (see line 6.5)	lbs	5,490	5,666	6,085	6,327	2.1
	2.2	Axle loading, loaded front / rear	lbs	6,482 / 1,213	6,493 / 1,378	7,474 / 1,367	8,389 / 1,246	2.2
	2.3	Axle loading, unloaded front / rear	lbs	2,414/3,075	2,524/3,142	2,723/3,362	2,800/3,527	2.3
Wheels/Chassis	3.1	Tires		solid pneumatic	solid pneumatic	solid pneumatic	solid pneumatic	3.1
	3.2	Tire size, front	inches	18 x 7-8	18 x 7-8	18 x 7-8	18 x 7-8	3.2
	3.3	Tire size, rear	inches	18 x 7-8	18 x 7-8	18 x 7-8	18 x 7-8	3.3
l se	3.5	Wheels, number front / rear (x = driven wheels)		2 / 1x	2 / 1x	2 / 1x	2 / 1x	3.5
١¥	3.6	Track width, front	b <sub>10</sub> (inches)	33.0	33.0	33.0	33.0	3.6
>	3.7	Track width, rear	b <sub>11</sub> (inches)	0	0	0	0	3.7
	4.1	Mast / fork carriage tilt, forward / backward	degrees	5/6	5/6	5/6	5/6	4.1
	4.2	Collapsed mast height	h₁ (inches)	79	79	79	79	4.2
	4.3	Free-lift	h <sub>2</sub> (inches)	5.9	5.9	5.9	5.9	4.3
Oimensions 4. 4. 4. 4. 4. 4.	4.4	Lift height	h₃ (inches)	118	118	118	118	4.4
	4.5	Extended mast height	h <sub>4</sub> (inches)	166	166	166	166	4.5
	4.7	Overhead guard height	h <sub>6</sub> (inches)	82.3	82.3	82.3	82.3	4.7
	4.8	Seat height / platform height	h <sub>7</sub> (inches)	35.4	35.4	35.4	35.4	4.8
	4.12	Tow hitch height	h <sub>10</sub> (inches)	25.0	25.0	25.0	25.0	4.12
	4.19	Overall length	I <sub>1</sub> (inches)	107.0	109.2	113.4	115.6	4.19
	4.20	Length to fork face (headlength)	l <sub>2</sub> (inches)	61.8	63.9	68.1	70.3	4.20
	4.21	Overall width	b <sub>1</sub> (inches)	39.03)	39.0 <sup>3)</sup>	39.0 <sup>3)</sup>	39.03)	4.21
	4.22	Fork dimensions	s / e / l (inches)	1.4 x 3.9 x 45.3 2A	4.22			
ł	4.23	Fork carriage ITA class 2 Fork carriage width	b <sub>3</sub> (inches)	37.4	37.4	37.4	37.4	4.24
	4.24	Ground clearance, loaded, under mast	m <sub>1</sub> (inches)	37.4	37.4	3.5	37.4	4.24
	4.31	Ground clearance, loaded, under mast	m <sub>2</sub> (inches)	3.9	3.9	3.9	3.9	4.32
ł	4.33	Aisle width for pallets 48 x 40 (L x W)	Ast (inches)	109.8 <sup>2)</sup>	111.9 <sup>2)</sup>	116.2 <sup>2)</sup>	118.3 <sup>2)</sup>	4.33
ł	4.35	Turning radius	Wa (inches)	48.8	50.9	55.2	57.3	4.35
	4.36	Internal turning radius	b <sub>13</sub> (inches)	0	0	0	0	4.36
	5.1	Travel speed, loaded / unloaded	mph	7.5 / 7.8	7.5 / 7.8	7.5 / 7.8	7.5 / 7.8	5.1
	5.2	Lift speed, loaded / unloaded	ft/min	55.1 / 98.4	57.1 / 98.4	49.2 / 98.4	47.2 / 98.4	5.2
	5.3	Lowering speed, loaded / unloaded	ft/min	114.2 / 118.1	114.2 / 118.1	114.2 / 118.1	114.2 / 118.1	5.3
) ue	5.5	Drawbar pull, loaded / unloaded	lbs	259 / 281	259 / 281	247 / 281	237 / 281	5.5
erformance	5.6	Maximum drawbar pull, loaded / unloaded, 60 min.	lbs	989 / 1,011	989 / 1,011	984 / 1,011	978 / 1,011	5.6
£	5.7	Gradeability, loaded / unloaded, 30 min.	%	8.5 / 12	8 / 11.5	7/11	6.5 / 10.5	5.7
۳	5.8	Maximum gradeability, loaded / unloaded, 5 min.	%	13 / 18	12.5 / 17.5	11 / 16.5	10/16	5.8
Motors	5.9	Acceleration time, loaded / unloaded, 10 meters	S	5.1 / 4.6	5.1 / 4.6	5.4 / 4.7	5.6 / 4.8	5.9
	5.10	Service brake		hydraulic	hydraulic	hydraulic	hydraulic	5.10
	6.1	Drive motor rating S <sub>2</sub> 60 min.	kW/HP	4.0 / 5.4	4.0 / 5.4	4.0 / 5.4	4.0 / 5.4	6.1
	6.2	Lift motor rating at S <sub>3</sub> 20%	kW/HP	6.0 / 8.0	6.0 / 8.0	6.0 / 8.0	6.0 / 8.0	6.2
	6.4	Battery voltage, nominal capacity (at 6 hour rate)	V/Ah	24 / 425–500	24/510–600	24 / 510–805	24 / 765–920	6.4
	6.5	Battery weight (minimum / maximum)	lbs	779 / 836	932 / 1,060	1,257 / 1,429	1,416 / 1,610	6.5
		Maximum battery compartment dimensions	I/w/h (inches)	10.75/32.68/24.69	12.87/32.68/24.69	17.13/32.68/24.69	19.25/32.68/24.69	
tails	8.1	Type of drive control		Impulse / AC	Impulse / AC	Impulse / AC	Impulse / AC	8.1
Det	8.2	Operating pressure for attachments	psi	2,321	2,321	2,683	3,046	8.2
Other Details	8.3	Flowrate for attachments	gpm	3.7	3.7	3.7	3.7	8.3
δ	8.4	Sound level at the driver's ear	dB(A)	63	63	63	63	8.4

as of: 02/2011



<sup>1) 13.3</sup> inches with DZ (three-stage) mast; with integrated sideshift: x = 14.3 inches (14.6 inches with DZ mast); with sideshift attachment: x = 15.4 inches (15.7 inches with DZ mast)
2) Without an 8 inch maneuvering space; data is for ground storage
3) 41.8 inches for masts with h<sub>3</sub> (MFH) dimension of 177 inches or higher

## The Jungheinrich® Advantage

#### **High productivity**

Exceptional productivity due to the comfortable operator compartment, high performance characteristics and low life-cycle costs.

#### High residual capacity

Lift heights up to 171 inches on the EFG 115 and 188 inches on the EFG 110k/110/113 can be achieved without reducing nominal capacity. This is due to excellent stability.

#### Innovative motor technology

Drive and lift motors with AC technology and excellent heat management (no fans required).



Drive and lift motor with AC technology

#### Performance-enhancing workplace

- Standard high overhead guard for superior headroom.
- Clear view: mast and fork carriage allow for excellent visibility to the forks.
- Comfortable, fatigue-free operation of travel direction and hydraulics by SOLO-PILOT or MULTI-PILOT (optional) controls.
- Hydraulic power steering is precise and low-effort (5.2 turns for 180° angle of lock)



SOLO-PILOT

#### Significantly-reduced maintenance

- Single-piece metal cover ensures quick and easy access to the battery compartment.
- Low-maintenance AC motors.
- Fully-enclosed motors and electronic components comply with IP 54, protecting against dust, dirt and moisture ingress.
- Prolonged service intervals, up to 500 operating hours.
- Hydraulic pinion gear steering eliminates the need for chains.

#### **Economic driving and lifting**

- AC technology ensures exceptional performance.
- Regenerative braking system.
- No motor fans required.
- Significantly longer work cycles, increasing the intervals for charging.
- Progressive lowering brake valve allows for a consistent lowering speed with and without a load.

#### Innovative drive and steering technology

- Programmable performance parameters ensure maximum flexibility.
- 5 drive programs can be individually selected and adjusted (optional).
- Curve Control reduces travel speed when cornering.

#### **SOLO-PILOT**

SOLO-PILOT (standard equipment) combines the direction switch, horn and the lifting/ lowering function in one control lever. Additional functions, such as forward/backward tilting, sideshifting (optional) and auxiliary hydraulics (optional), can be operated with additional levers placed directly next to the lift/lower lever.

#### **MULTI-PILOT**

MULTI-PILOT (optional) combines all hydraulic functions in one joystick. All functions are easily controlled with minimal hand movements. The adjustable armrest (optional) and ergonomically-positioned handle provide support to the operator's arm and hand. Controlling several functions at once is quick and easy with the MULTI-PILOT.



MULTI-PILOT

## Jungheinrich proprietary AC technology motors

Fully enclosed, brushless AC motors are the key components of the low maintenance drive unit. They are resistant to dust, dirt and moisture. The temperature control protects the motors from overheating by adjusting the performance.



