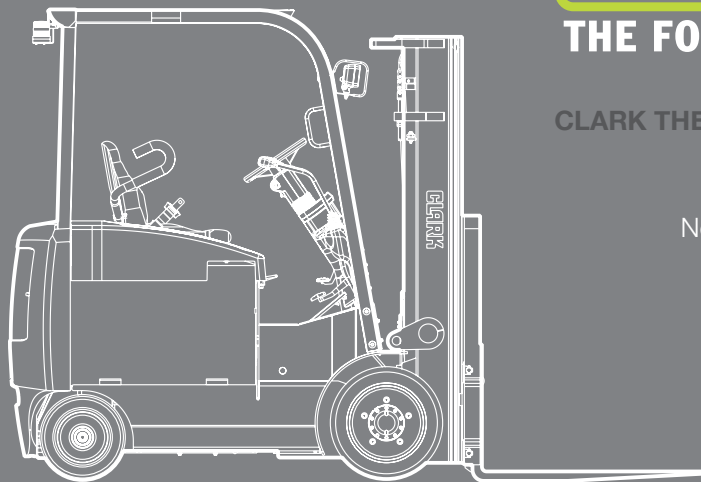


ELECTRIC RIDERS

Electric Lift Trucks
Solid Tires

ECX20	2000 kg
ECX25	2500 kg
ECX30	3000 kg
ECX30x	3000 kg

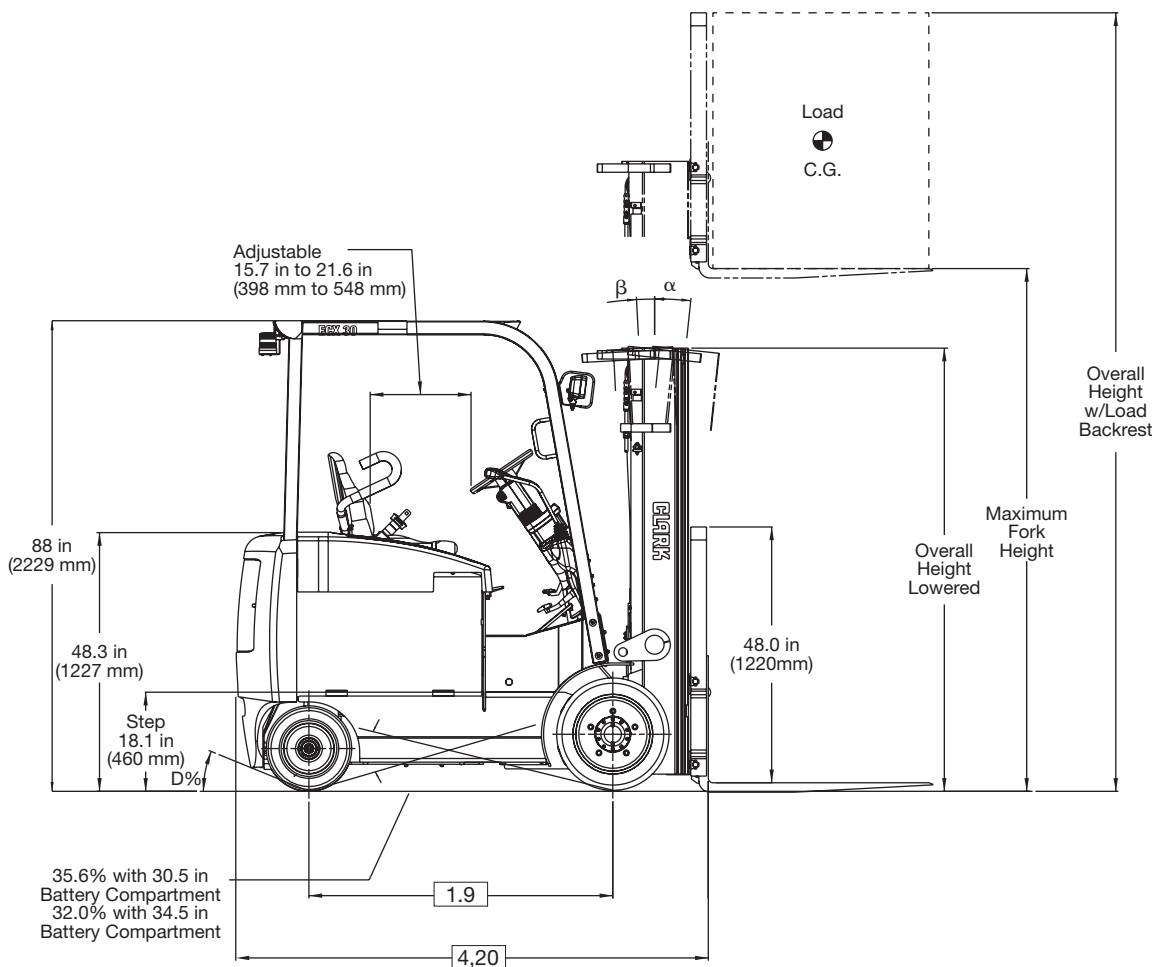
ECX20/25/30/30x



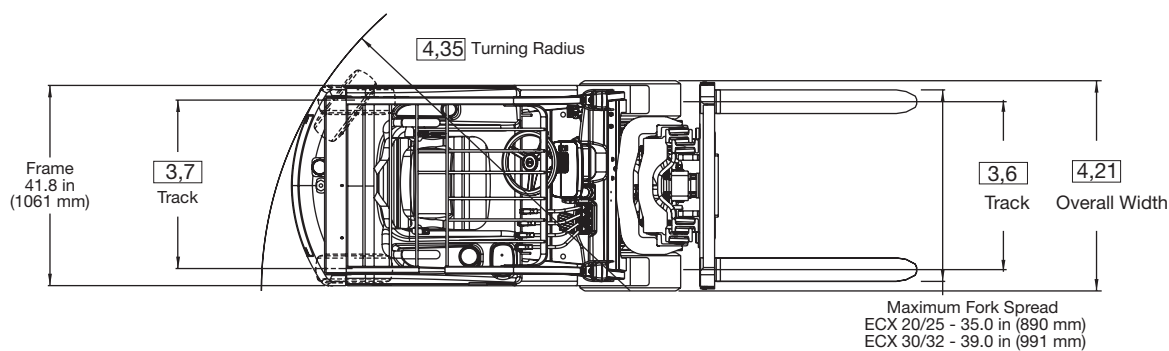
CLARK THE FORKLIFT

- Europe
- North America
- South Korea

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ECX 20/25/30/30x



DIMENSIONS

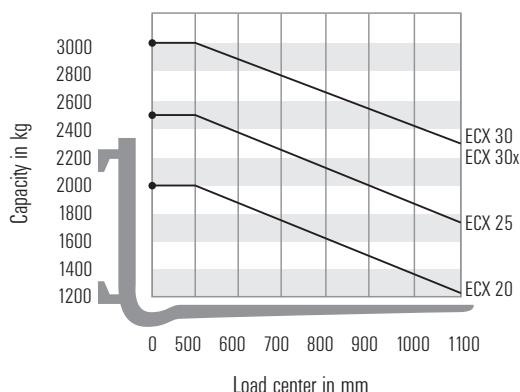
$$A_{st} = W_a + x + l_6 + a$$

a = 200 mm (safety distance)

For corresponding data see
Specification Chart.

Truck Capacities

Capacity at different load centres



Note:

The listed capacities are valid only for the standard upright in vertical position with standard fork carriage and standard forks, up to max. lifting height of 3300 mm. The centre of gravity of the load may be displaced by max. 100 mm against the longitudinal centre plane of the truck. Load centre is determined from top and front face of the forks. The values are based on a 1000 mm cube load configuration with the centre of gravity at the true centre of the cube. With upright tilted forward lower capacity values are valid. Attachments, longer forks, exceptional load dimensions and higher lifting heights can reduce the capacity. Please talk to your CLARK dealer if you require further information.

Upright table

Capacity at different load centres

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Standard ECX 20, 25, 30

(2 Stage Mast, standard free lift)

V	2120	1525	110
V	2680	1805	110
V	2980	1955	110
V	3300	2115	110
V	3725	2405	110
V	3860	2480	110
V	4165	2750	110
V	4380	2950	110
V	4620	3180	110
V	5170	3445	110

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2 h5*
------------	---------------------	---------------------------	------------------

Hi-Lo ECX 20, 25, 30

(2 Stage Mast, full free lift)

H	2935	2005 (2020)	1382 (1332)
H	3255	2165 (2180)	1542 (1492)
H	3530	2305 (2320)	1682 (1632)
H	3750	2455 (2470)	1832 (1782)
H	3910	2530 (2545)	1907 (1857)

* without LBR
(l) are ECX30 specifications

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Triple ECX 20, 25, 30

(3 Stage Mast, full free lift)

M	3860	1805	1241 (1181)
M	4320	1995	1391 (1331)
M	4800	2115	1551 (1491)
M	5210	2255	1691 (1631)
M	5520	2405	1841 (1781)
M	5740	2480	1916 (1856)
M	6100	2640	2076 (2016)
M	6370	2750	2186 (2126)
M	6830	2950	2386 (2326)
M	7315	3180	2616 (2556)

* without LBR
(l) are ECX30 specifications

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2 h5*
------------	---------------------	---------------------------	------------------

Standard ECX 30x

(2 Stage Mast, standard free lift)

V	3250	2115	115
V	3650	2405	115

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2 h5*
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Triple ECX 30x

(3 Stage Mast, full free lift)

M	3700	1805	1131
M	4160	1955	1281
M	4800	2170	1496
M	5050	2255	1581
M	5360	2405	1731

* without LBR

ELECTRIC RIDERS

All values shown are for standard lift truck with standard equipment. If the truck is supplied with options, values may vary +5% and -10% due to the motor and system tolerances and represent nominal values obtained under typical operating conditions. Specifications for Non-emission limited truck.

SPECIFICATIONS

1.1 Manufacturer (Abbreviation)		CLARK	CLARK	CLARK	CLARK	
Characteristics	1.2 Manufacture's designation	ECX20	ECX25	ECX30	ECX30x	
	1.3 Drive Unit	Elec-48V	Elec-48V	Elec-48V	Elec-48V	
	1.4 Operator type stand on/driver seated	Rider-Seated	Rider-Seated	Rider-Seated	Rider-Seated	
	1.5 Load Capacity/ rated load	Q(Kg)	2000	2500	3000	3000
	1.6 Load Center distance	c (mm)	500	500	500	500
	1.8 Load center distance, centre of drive axle to fork face	x (mm)	391	391	396	413
	1.9 Wheelbase	y (mm)	1346	1346	1346	1448
Weight	2.1 Service weight	kg	4110	4600	4860	5150
	2.2 Axle loading, laden front/rear	kg	5220/890	5997/1103	6829/1031	7010/1140
	2.3 Axle loading, unladen front/rear	kg	1900/2210	1844/2756	1832/3028	2010/3140
Tires, Chassis	3.1 Tire type P=pneumatic, SE=superelastic, C=cushion	C	C	C	C	
	3.2 Tire size, front	21x7x15	21x8x15	21x8x15	21x9x15	
	3.3 Tire size, rear	16x6x10.5	16x6x10.5	16x6x10.5	16x6x10.5	
	3.5 Wheels, number front/rear (x=drive wheels)	2x/2	2x/2	2x/2	2x/2	
	3.6 Tread, front	b10 (mm)	884	909	909	927
	3.7 Tread, rear	b11 (mm)	869	869	869	869
	Dimensions	4.1 Tilt of upright/fork carriage, α/β	(deg)	8/8	8/8	8/8
4.2 Height, upright lowered		h1 (mm)	2115	2115	2115	2115
4.3 Freelif		h2 (mm)	110	110	110	110
4.4 Lift height 1)		h3 (mm)	3300	3300	3300	3225
4.5 Height, upright extended 2)		h4 (mm)	4520	4520	4520	4445
4.7 Height overheadguarded (cab): Std./ Container		h6 (mm)	2235	2235	2235	2235
4.8 Height to operator's seat		h7 (mm)	-	-	-	-
4.12 Height, drawbar coupling		h10 (mm)	-	-	-	-
4.19 Overall length		l1 (mm)	3138	3224	3262	3376
4.20 Length to face of forks		l2 (mm)	2071	2157	2195	2309
4.21 Width		b1 (mm)	1063	1114	1114	1154
4.22 Fork dimensions		s,e,l (mm)	40x100x1067	40x100x1067	45x122x1067	50x122x1067
4.23 Fork carriage ISO 2328, A, B			CL IIA	CL IIA	CL IIIA	CL IIIA
4.24 Fork carriage width		b3 (mm)	940	940	940	940
4.31 Ground clearance minimum, unladen		m (mm)	85	85	85	85
4.32 Ground clearance center of wheelbase	m2 (mm)	114	114	114	114	
4.35 Turning radius	Wa (mm)	1783	1845	1877	1989	
4.3 Right angle stack aisle (add load leng & clearance)	Ast (mm)	2174	2236	2273	2402	
Performance	5.1 Travel speed laden/unladen	km/h	17.4/18.2	17.1/17.7	15.8/17.4	15.1/16.7
	5.2 Lift speed laden/unladen	m/s	0.38/0.60	0.36/0.60	0.31/0.50	0.31/0.50
	5.3 Lowering speed laden/unladen	m/s	0.44/0.43	0.44/0.43	0.45/0.43	0.45/0.43
Drive Line	7.1 Type of battery		Lead-acid	Lead-acid	Lead-acid	Lead-acid
	7.2 Maximum capacity of battery	AH/5hr	660	660	740	845
	7.3 Minimum weight of battery	kg	1203	1203	1203	1437
	7.4 Power of drive motor	kW	15	15	15	15
	7.5 Power of hydraulic motor	kW	18,7	18,7	18,7	18,7
	7.6 Drive motor control		Mosfet Inverter	Mosfet Inverter	Mosfet Inverter	Mosfet Inverter
	7.7 Speed control		Mosfet Inverter	Mosfet Inverter	Mosfet Inverter	Mosfet Inverter
	7.8 Hydraulic motor control		Mosfet Inverter	Mosfet Inverter	Mosfet Inverter	Mosfet Inverter
Miscellaneous	8.1 Operating pressure for attachments	kg/cm ²	140	140	140	140
	8.2 Sound level, driver's ear 3)	dB (A)	71	71	71	71

1) See Upright Table. Contact CLARK Representative for additional lift heights 2) Without LBR 3) Equivalent permanent sound-pressure level LpAeq, T in accordance with ISO EN 12053

The CLARK ECX 20/30x Series cushion tire, 100% AC electric lift truck is designed for the most demanding distribution and manufacturing applications. Its sleek, attractive styling make this workhorse aesthetically pleasing and comfortable to operate yet still maintains the muscle and durability to get the job done. To accomplish this, the ECX has incorporated many of the popular features from our successful heart of the line internal combustion trucks.

Operator Comfort / Convenience

- Low 18.1", non-skid steps – both sides
- Grab handles – both sides
- Hydrostatic power steering
- Foot applied, hand released parking brake
- Rubber, silent block steer axle mounts
- Silent upright staging
- High visibility uprights
- Offset steering wheel and cowl mounted levers positioned comfortably at shoulder width
- Dash display with operating and diagnostic information
- Tilttable steering pylon
- Parking brake reminder

The comfortable operator compartment allows easy entry and exit, assisted by non-skid steps and grab handles on both sides. The low cowl, high visibility upright and longitudinal overhead guard bars combine to provide optimum visibility. The ECX is equipped with the CLARK safety seat, seat belt, seat belt reminder and battery restraint system. A parking brake reminder alerts the operator to set the brake when leaving the truck.

Hydraulic levers are conveniently located on the cowl. These levers and the offset 13.75" diameter steering wheel are strategically located relative to the operator's seated position for increased comfort. A visual dash display provides a ten-segment battery status indicator and hour meter plus operational and diagnostic codes in both text and numeric form. Once properly set, the lift interrupt circuit helps protect the battery by disabling lift when the battery is approximately 80% discharged.

The rounded body design reduces sharp edges and corners for operator comfort and safety. Silent upright staging and rubber silent block steer axle mounts combine to provide smoother, quieter operation.

AC Motors

- 100% AC system
- All motors are totally enclosed
- High torque drive motors provide high draw bar pull and gradeability

All motors used on the ECX are brushless induction motors. By eliminating brushes, CLARK has made brush changes and turning of commutators unnecessary. All motors are totally enclosed to seal out contaminants and are equipped with a temperature monitoring device that signals the control to cut back power if motor temperatures approach their limit. Encoders that provide accurate speed feedback to the control are standard on all motors. The heavy-duty drive motor produces outstanding draw bar pull allowing the ECX to ascend grades that were once only negotiable by internal combustion trucks.

Electrical Controls

- AC Traction and Pump Controls
- Drive system stall warning
- Three forms of regenerative braking: accelerator pedal release, brake pedal actuation and reversing of the directional lever
- Ramp start and controlled roll-back features
- Accurate speed control
- High acceleration rates and rapid reversal of direction possible
- Fully adjustable to meet your specific needs
- Advanced thermal protection system
- High operating efficiency

Every ECX comes standard with a hydraulic pump control and fully proportional lift. The pump motor only spins as fast as the operator requests, reducing energy

consumption. All controls are sealed so they are environmentally protected and frame mounted high off the ground behind the counterweight for protection. The controls have low audible noise, improved acceleration and increased operating time per battery charge. Forward, reverse and bypass (1A) contactors are eliminated, reducing maintenance. The standard motor encoder allows vehicle speed to be accurately regulated even under varying load and operating conditions. Three forms of regenerative braking return energy to the battery. Self diagnostic capabilities of the control and storage of status codes aid trouble shooting and minimize downtime.

Drive Line

- Quiet, helical gear construction
- Automotive drum and shoe brakes
- Axle housing supports upright on large trunion mounts

"Plug-in" drive motor design mates the splined armature shaft directly to the axle assembly for positive alignment and improved heat dissipation. Helical drive gears provide smooth, quiet operation. Brakes can be easily accessed without upright removal. The responsive single-stage master cylinder allows low and consistent pedal effort. Brakes are quiet and feature an industrial-grade self adjuster. Foot actuated, hand released parking brake offers reduced effort operation and incorporates independent cables which engage the service brakes.

Hydraulic System

- Adjustable flow regulation
- Built-in port for pressure checks
- Single auxiliary valve is standard
- Continuous fluid filtration
- O-ring face seals reduce leaks, simplify service

Continuous fluid filtration achieves high filtering efficiency with a 10 micron return line filter and a 100 mesh suction strainer. Hydraulic cushioning contributes to smoother operation by eliminating harsh upright staging. Tilt cylinder design allows intruck packing replacement.

Steering

- Full hydrostatic power steering
- Compact axle design with integral, double acting steer cylinder

Spindle assemblies with king pins and tapered roller bearings provide rugged, easily serviced assemblies. Rubber, silent block mounts support the axle, absorb shock and reduce noise and vibration. Metal shields protect bearing seals from string and other debris while grease fittings extend linkage, king pin and bearing service life.

Uprights

- High visibility two, three and four stage uprights
- All roller construction reduces friction and energy consumption
- C-channel outer rails and I-section inner and intermediate rails increase strength and rigidity

Upright and carriage rollers are canted to handle normal as well as side thrust loads. ITA class II and III carriages incorporate six main rollers, adjustable side thrust rollers and tapered fork bars for improved visibility.

The load backrest design provides optimum visibility and the mounting bolts are offset to prevent load and rack damage. A Hydraulic tilt lock valve prevents improper tilt cylinder operation, integral flow limiting valves prevent rapid carriage descent in the event of a line failure and lowering control allows faster lowering speeds when empty or with light loads.

Standard Features

Overhead guard, 48 in. load backrest, single auxiliary valve, cowl mounted hydraulic levers, electric horn and adjustable seat. High visibility CLARK green finish with non glare black trim and bright white wheels. Operator manual, data plate and service information labels are permanently affixed to truck. CLARK's Employer's Guide to Material Handling Safety and operator safety video are provided with each truck.



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