carer
Electric Forklift Trucks

A
SERIES

Introducing the GAME-CHANGER in IC to Electric Conversions



A80X
A80900X
A90X
A100X



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The **A series** [A80X, A80@900X, A90, A100X] is the ultimate expression of technological research developed by the Carer technical department. It's an eco-friendly, noiseless forklift truck: a good alternative to traditional IC forklifts, contributing to reduce the impact of your work on global warming.

Nominal capacity up to 6000 mm lifting height (side shifter included).

MAIN FEATURES

- **Ideal for outdoor use**
  - front & rear superelastic tyres same size
  - excellent ground clearance
- **Excellent performances**
  - travel speed up to 20 km/h and lifting speed up to 0.38-0.50 m/sec
- **Two powerful AC drive motors** integrated in the front axle to generate acceleration, torque and fast travel speed
- **High autonomy** guaranteed by efficiency and battery up to 96 V - 1680 Ah

- Advanced Multifunctional Display (AMD)
- Luxury seat with automatic weight adjustment
- Automatic parking brake
- Tilting cylinders on the roof
- Proportional reduction of travel speed when cornering
- Lateral battery extraction system
- Rearview camera



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Electronics

All truck functions are managed by sophisticated double microprocessor-controlled electronics and regenerative braking. High-efficiency AC traction and pump motors.

Brakes and Energy Regeneration

The oil bath brake system is extremely effective and long lasting. Energy regeneration can be carried out by braking, releasing the accelerator, reversing the direction and by positive dynamic braking. The electric brake doesn't depend on the friction between the tires and the ground and ensures a greater contact of the truck to the ground.

Motors

Electric motors are built and tested by CARER with the most advanced technologies. The AC high efficiency motors perform at high torque, guaranteeing speed, high performances and maneuverability. The highly advanced manufacturing technique makes them reliable and durable even under stress.

Two 15 kW traction motors and one 52 kW pump motor work at up to 5400 rpm, providing high torque and high reduction gear. The motors are IP54 protected against access of dust and water and they allow to optimize power consumption and to guarantee extremely quiet operation. The new front axle consists of a unique block of two independent units: right and left gear boxes and motors.

Battery

96 V battery, with capacities up to 1680 Ah. The battery is divided two side-by-side boxes and it allows to have easy, safe and fast battery replacement.

Masts

The masts are designed and developed in order to guarantee the highest visibility. They are specifically designed with a superior welded profile, 8 bearings and an increased wheelbase to suit all applications. The profiles are cold treated to provide optimum resistance to bending and twisting.

The tilting cylinders mounted on the roof structure ensure load stability, high residual capacity and lower torsion to the mast.


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A100X

Rearview Camera

As standard the machine presents an integrated rearview camera to increase the driver's comfort and safety driving backward.

Operator Compartment

The overhead guard is specifically designed and manufactured using a narrow pillar profile to provide high visibility in all directions.

The forklift is equipped with separate, sealed cabs mounted on silent blocks to provide maximum comfort for the driver, offering a perfect isolation in terms of noiselessness and vibrations. Moreover, the hydraulic pump and front axle gears with helical mechanism ensure maximum silence in all conditions of use.

The operator compartment is spacious and with a generous foot plate. The steering wheel is inclinable and its height adjustable. The comfort seat is heated cushioned full air suspension, with automatic weight adjustment, armrest, backrest extension and safety belt.

Advanced Multifunctional Digital Display

Via an LCD 5.7" advanced multifunctional display, it is possible to adjust the settings of the truck depending on the applications and wishes of the operators to increase the benefits in terms of high performance and comfort. It allows to monitor vehicle speed, driving direction, battery state of charge, drive instantaneous consumption, battery voltage, working hours.

The warning lights show: parking brake, brake failure, no activation of the micro-seat, headlights and direction indicators.

A80X
A80900X
A90X
A100X



Ergonomics

The optimal driving position offers excellent visibility in all directions.

Access to the machines is facilitated by wide non-slip steps and a big handle access. To guarantee the maximum comfort to the driver, the machine has an ergonomic, fabric, heated seat with air suspension and lumbar support.

The armrest is integrated with mini-levers and command buttons. The pedal system can be configured on the specific customer needs: double pedals, directional control at steering wheel or armrest, central brake pedals.



Efficiency

High energy efficiency is ensured by the use of the best market technologies.

The forklift is equipped with two high-speed traction motors with high-reduction gear boxes to provide high productivity.

The electrical system layout has been designed to provide the maximum efficiency and reduce Joule-effect losses. The hydraulic system has been developed using larger sections to decrease the power losses and supplying a significant efficiency increase. The electric valve bank is managed directly by a stepper motor in each section to reduce energy consumption in all the functions and improve the responsiveness.



Optional

A wide range of options allows to tailor the truck to the various operational needs: **fingertip**, **joystick**, **heating**, **air conditioning**, **radio with remote control**, **electronic key access**, **weight indicator system**, **front camera** and many other accessories enhance the comfort of the driver and help managing information of the vehicle operation from remote.



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IDENTIFICATION	1.1	Manufacturer			C.A.R.E.R. Srl			
	1.2	Manufacturer's type designation			A 80 X	A 80@900 X	A 90 X	A 100 X
	1.3	Drive			electric	electric	electric	electric
	1.4	Operator type			seat	seat	seat	seat
	1.5	Load capacity/rated load	Q	(t)	8	8	9	10
	1.6	Load centre distance	C	(mm)	600	900	600	600
	1.8	Load distance	X	(mm)	720 (1) (2)	740 (1) (2)	730 (1) (2)	760 (1) (2)
	1.9	Wheelbase	Y	(mm)	2365	2500	2500	2500
WEIGHTS	2.1	Weight		(kg)	14100	16950	16770	17460
	2.2	Axle loading, laden front / rear		(kg)	19469 / 2631	21732 / 3218	21980 / 3790	24200 / 3260
	2.3	Axle loading, unladen front / rear		(kg)	7000 / 7100	8480 / 8470	8190 / 8580	8760 / 8700
WHEELS	3.1	Tyres type			SE-SEG	SEG	SEG	SEG
	3.2	Tyre size, front			355/50-20 8.25-15	300-15	300-15	300-15
	3.3	Tyre size, rear			300-15	300-15	300-15	300-15
	3.5	Wheels, number front rear (x = driven wheels)			2X/2	4X/2	4X/2	4X/2
	3.6	Track width, front	b10	(mm)	1500 1560	1660	1660	1660
	3.7	Track width, rear	b11	(mm)	1450	1450	1450	1450
DIMENSIONS	4.1	Tilt of mast / fork carriage forward / backward	α/β	(°)	6 / 10 (2)	6 / 10 (2)	6 / 10 (2)	6 / 10 (2)
	4.2	Closed mast height	h1	(mm)	2800	2890	2890	2950
	4.3	Free lift	h2	(mm)	100	100	100	100
	4.4	Lift (standard mast)	h3	(mm)	3400	3400	3400	3400
	4.5	Height, mast extended	h4	(mm)	4650	4750	4750	4800
	4.7	Height of overhead guard	h6	(mm)	2895	2895	2895	2895
	4.8	Seat height	h7	(mm)	1700	1700	1700	1700
	4.12	Coupling height	h10	(mm)	820	820	820	820
	4.19	Overall length	L1	(mm)	4770	5530	4930	4950
	4.20	Length to face of forks	L2	(mm)	3570	3730	3730	3750
	4.21	Overall width	b1/b2	(mm)	1830 2000	2200	2200	2200
	4.22	Fork dimensions	ExSxL	(mm)	200x60x1200	200x70x1800	200x60x1200	200x60x1200
	4.23	Fork carriage iso 2328/30, FEM/A,B			4A	4A	5A	5A
	4.24	Fork-carriage width	b3	(mm)	1800	2000	2000	2000
	4.31	Ground clearance, laden, below mast	m1	(mm)	200	200	200	200
	4.32	Ground clearance, centre of wheelbase	m2	(mm)	220	220	220	220
	4.33	Aisle width for pallets 1000x1200 crossways	Ast	(mm)	5120	5300	5300	5310
	4.34	Aisle width for pallets 800x1200 lengthways	Ast	(mm)	5320	5500	5500	5510
	4.35	Turning radius	Wa	(mm)	3200	3350	3350	3350
	4.36	Internal turning radius	b13	(mm)	1100	1200	1200	1200
PERFORMANCE	5.1	Travel speed, laden / unladen		(km/h)	19 / 20	19 / 20	19 / 20	17 / 19
	5.2	Lift speed, laden / unladen		(m/s)	0.38 / 0.5	0.38 / 0.5	0.38 / 0.5	0.32 / 0.44
	5.3	Lowering speed, laden / unladen		(m/s)	0.5 / 0.4	0.5 / 0.4	0.5 / 0.4	0.5 / 0.4
	5.5	Drawbar pull, laden / unladen (S2 60')		(N)	8300 / 9400	8200 / 9400	8200 / 9400	7900 / 9300
	5.6	Max. drawbar pull, laden / unladen (S2 5')		(N)	32000 / 33100	31900 / 33000	31900 / 33000	31500 / 32900
	5.7	Gradeability, laden / unladen (S2 30')		(%)	7.5 / 12.6	7.2 / 11.9	7.2 / 11.9	6.4 / 11.4
	5.8	Max. gradeability, laden / unladen (S2 5')		(%)	14.7 / 23.9	14.2 / 22.7	14.2 / 22.7	12.6 / 21.8
	5.9	Acceleration time, laden / unladen (10 m)		(s)	6.5 / 5.1	6.6 / 5.2	6.6 / 5.2	7 / 5.3
	5.10	Service brake			electric	electric	electric	electric
MOTOR / BATT.	6.1	Drive motor rating (S2 60')		(kW)	2x15	2x15	2x15	2x15
	6.2	Lift motor rating (S3 20%)		(kW)	52	52	52	52
	6.4	Battery voltage	U	(V)	96	96	96	96
	6.4.1	Rated capacity	K5	(Ah)	1395 / 1475 (TENSOR)	1550 / 1680 (TENSOR)	1550 / 1680 (TENSOR)	1550 / 1680 (TENSOR)
	6.5	Battery weight minimum/maximum		(kg)	4000 / 4200	4300 / 4500	4300 / 4500	4300 / 4500
OTHERS	8.1	Type of drive control			inverter	inverter	inverter	inverter
	8.2	Operating pressure for attachments		(bar)	250	250	250	250
	8.4	Sound level at the driver's ear		(dBA)	-	-	-	-

VDI 2198

Rev2 06/02/2017

(1) With side-shifter integrated in the mast.

(2) Depending on kind of mast: at lifting height over 5.5m, tilting has to be limited at 6°/6°.

Wheels tyre legend: SE super elastic - SEGEM super elastic twins - C cushion - L pneumatic - VLK vulkolan: for tires NO MARKING - OIL RESISTANT, please contact Carer.
The performance data refer to a forklift truck in perfect working condition, with battery weight corresponding to the values given in 6.5.

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.
The C.A.R.E.R. products and specifications are subject to change without notice.

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