

A

SERIES

Introducing
the GAME-CHANGER in IC
to Electric Conversions



A 80600 X
A 80900 X
A 801100 X
A 90 X
A 100 X
A 120 X



carer

Electric Forklift Trucks

The **A series** [A 80 X, A 80/900 X, A 80/1100 X, A 90, A 100 X, A 120 X] 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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Rearview Camera

As standard the machine presents an integrated rear-view 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.

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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.

| | | C.A.R.E.R. Srl | | | | | | | |
|----------------|-------------------------|---|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| IDENTIFICATION | 1.1 | Manufacturer | | | | | | | |
| | 1.2 | Manufacturer's type designation | A 80 X | A 80@900 X | A80@1100X | A 90 X | A 100 X | A120X | |
| | 1.3 | Drive | electric | electric | electric | electric | electric | electric | |
| | 1.4 | Operator type | seat | seat | seat | seat | seat | seat | |
| | 1.5 | Load capacity/rated load | Q (t) | 8 | 8 | 8 | 9 | 10 | 12 |
| | 1.6 | Load centre distance | C (mm) | 600 | 900 | 1100 | 600 | 600 | 600 |
| | 1.8 | Load distance | X (mm) | 720 ⁽¹⁾⁽²⁾ | 740 ⁽¹⁾⁽²⁾ | 700 ⁽¹⁾⁽²⁾ | 730 ⁽¹⁾⁽²⁾ | 760 ⁽¹⁾⁽²⁾ | 710 ⁽¹⁾⁽²⁾ |
| | 1.9 | Wheelbase | Y (mm) | 2365 | 2500 | 2500 | 2500 | 2500 | 2800 |
| | WEIGHTS | 2.1 | Weight | (kg) | 14100 | 16950 | 17960 | 16770 | 17460 |
| 2.2 | | Axle loading, laden front / rear | (kg) | 19469 / 2631 | 21732 / 3218 | 23094 / 2866 | 21980 / 3790 | 24200 / 3260 | 27236 / 3084 |
| 2.3 | | Axle loading, unladen front / rear | (kg) | 7000 / 7100 | 8480 / 8470 | 9174 / 8786 | 8190 / 8580 | 8760 / 8700 | 9620 / 8700 |
| WHEELS | 3.1 | Tyres type | | SE-SEG | SEG | SEG | SEG | SEG | SEG - PN |
| | 3.2 | Tyre size, front | | 355/50-20 8.25-15 | 300-15 | 300-15 | 300-15 | 300-15 | 355/65-15 315/70-15 |
| | 3.3 | Tyre size, rear | | 300-15 | 300-15 | 300-15 | 300-15 | 300-15 | 300-15 315/70-15 |
| | 3.5 | Wheels, number front rear (x = driven wheels) | | 2X/2 | 4X/2 | 4X/2 | 4X/2 | 4X/2 | 4X/2 |
| | 3.6 | Track width, front | b10 (mm) | 1500 1560 | 1660 | 1660 | 1660 | 1660 | 1850 1800 |
| | 3.7 | Track width, rear | b11 (mm) | 1450 | 1450 | 1450 | 1450 | 1450 | 1440 |
| | DIMENSIONS | 4.1 | Tilt of mast / fork carriage forward / backward | α/β (°) | 6 / 10 ⁽²⁾ | 6 / 10 ⁽²⁾ | 6/10(2) | 6 / 10 ⁽²⁾ | 6 / 10 ⁽²⁾ |
| 4.2 | | Closed mast height | h1 (mm) | 2800 | 2890 | 2950 | 2890 | 2950 | 2950 |
| 4.3 | | Free lift | h2 (mm) | 100 | 100 | 100 | 100 | 100 | 100 |
| 4.4 | | Lift (standard mast) | h3 (mm) | 3400 | 3400 | 3400 | 3400 | 3400 | 3400 |
| 4.5 | | Height, mast extended | h4 (mm) | 4650 | 4750 | 4800 | 4750 | 4800 | 4800 |
| 4.7 | | Height of overhead guard | h6 (mm) | 2895 | 2895 | 2895 | 2895 | 2895 | 2895 |
| 4.8 | | Seat height | h7 (mm) | 1700 | 1700 | 1700 | 1700 | 1700 | 1700 |
| 4.12 | | Coupling height | h10 (mm) | 820 | 820 | 820 | 820 | 820 | 820 |
| 4.19 | | Overall length | L1 (mm) | 4770 | 5530 | 5890 | 4930 | 4950 | 5190 |
| 4.20 | | Length to face of forks | L2 (mm) | 3570 | 3730 | 3690 | 3730 | 3750 | 3990 |
| 4.21 | | Overall width | b1/b2 (mm) | 1830 2000 | 2200 | 2200 | 2200 | 2200 | 2500 |
| 4.22 | | Fork dimensions | ExSxL (mm) | 200x60x1200 | 200x70x1800 | 200x70x2200 | 200x60x1200 | 200x60x1200 | 200x70x1200 |
| 4.23 | | Fork carriage iso 2328/30, FEM/A,B | | 4A | 4A | 4A | 5A | 5A | CARER |
| 4.24 | | Fork-carriage width | b3 (mm) | 1800 | 2000 | 2000 | 2000 | 2000 | 2200 |
| 4.31 | | Ground clearance, laden, below mast | m1 (mm) | 200 | 200 | 200 | 200 | 200 | 200 |
| 4.32 | | Ground clearance, centre of wheelbase | m2 (mm) | 220 | 220 | 220 | 220 | 220 | 220 |
| 4.33 | | Aisle width for pallets 1000x1200 crossways | Ast (mm) | 5120 | 5300 | 5250 | 5300 | 5310 | 5910 |
| 4.34 | | Aisle width for pallets 800x1200 lengthways | Ast (mm) | 5320 | 5500 | 5450 | 5500 | 5510 | 6110 |
| 4.35 | Turning radius | Wa (mm) | 3200 | 3350 | 3350 | 3350 | 3350 | 4000 | |
| 4.36 | Internal turning radius | b13 (mm) | 1100 | 1200 | 1200 | 1200 | 1200 | 1770 | |
| PERFORMANCE | 5.1 | Travel speed, laden / unladen | (km/h) | 19 / 20 | 19 / 20 | 18 / 20 | 19 / 20 | 17 / 19 | 15 / 19 |
| | 5.2 | Lift speed, laden / unladen | (m/s) | 0.38 / 0.5 | 0.38 / 0.5 | 0.38 / 0.5 | 0.38 / 0.5 | 0.32 / 0.44 | 0.25 / 0.33 |
| | 5.3 | Lowering speed, laden / unladen | (m/s) | 0.5 / 0.4 | 0.5 / 0.4 | 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 | 8200 / 9400 | 7900 / 9300 | 7000 / 8800 |
| | 5.6 | Max. drawbar pull, laden / unladen (S2 5') | (N) | 32000 / 33100 | 31900 / 33000 | 31700 / 32900 | 31900 / 33000 | 31500 / 32900 | 30500 / 32000 |
| | 5.7 | Gradeability, laden / unladen (S2 30') | (%) | 7.5 / 12.6 | 7.2 / 11.9 | 6.8 / 11.6 | 7.2 / 11.9 | 6.4 / 11.4 | 5 / 9 |
| | 5.8 | Max. gradeability, laden / unladen (S2 5') | (%) | 14.7 / 23.9 | 14.2 / 22.7 | 13.4 / 22.3 | 14.2 / 22.7 | 12.6 / 21.8 | 10 / 17.5 |
| | 5.9 | Acceleration time, laden / unladen (10 m) | (s) | 6.5 / 5.1 | 6.6 / 5.2 | 6.6 / 5.2 | 6.6 / 5.2 | 7 / 5.3 | 6.5 / 5 |
| | 5.10 | Service brake | | electric | electric | electric | electric | electric | electric |
| | MOTOR / BATT. | 6.1 | Drive motor rating (S2 60') | (kW) | 2x15 | 2x15 | 2x15 | 2x15 | 2x15 |
| 6.2 | | Lift motor rating (S3 20%) | (kW) | 52 | 52 | 52 | 52 | 52 | 52 |
| 6.4 | | Battery voltage | U (V) | 96 | 96 | 96 | 96 | 96 | 96 |
| 6.4.1 | | Rated capacity | K5 (Ah) | 1395 / 1475 (TENSOR) | 1550 / 1680 (TENSOR) | 1550 / 1680 / 1720 | 1550 / 1680 (TENSOR) | 1550 / 1680 (TENSOR) | 1550 / 1680 / 1720 |
| 6.5 | | Battery weight minimum/maximum | (kg) | 4000 / 4200 | 4300 / 4500 | 4300 / 4500 | 4300 / 4500 | 4300 / 4500 | 4300 / 4500 |
| OTHERS | 8.1 | Type of drive control | | inverter | inverter | inverter | inverter | inverter | inverter |
| | 8.2 | Operating pressure for attachments | (bar) | 250 | 250 | 250 | 250 | 250 | 250 |
| | 8.4 | Sound level at the driver's ear | (dBA) | - | - | - | - | - | - |

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