

GEX16/18/20s

Electric Lift Trucks

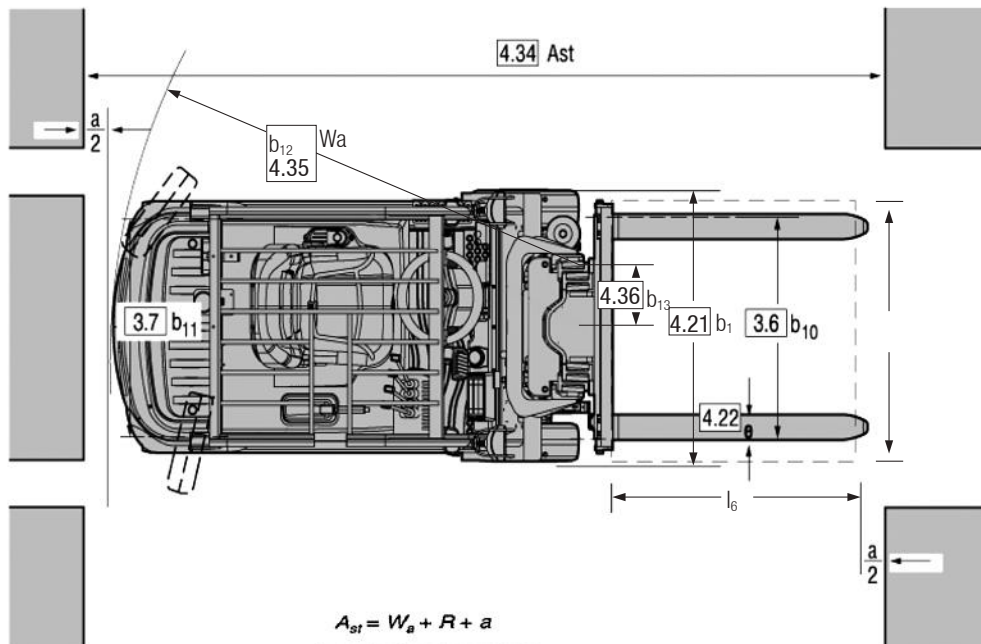
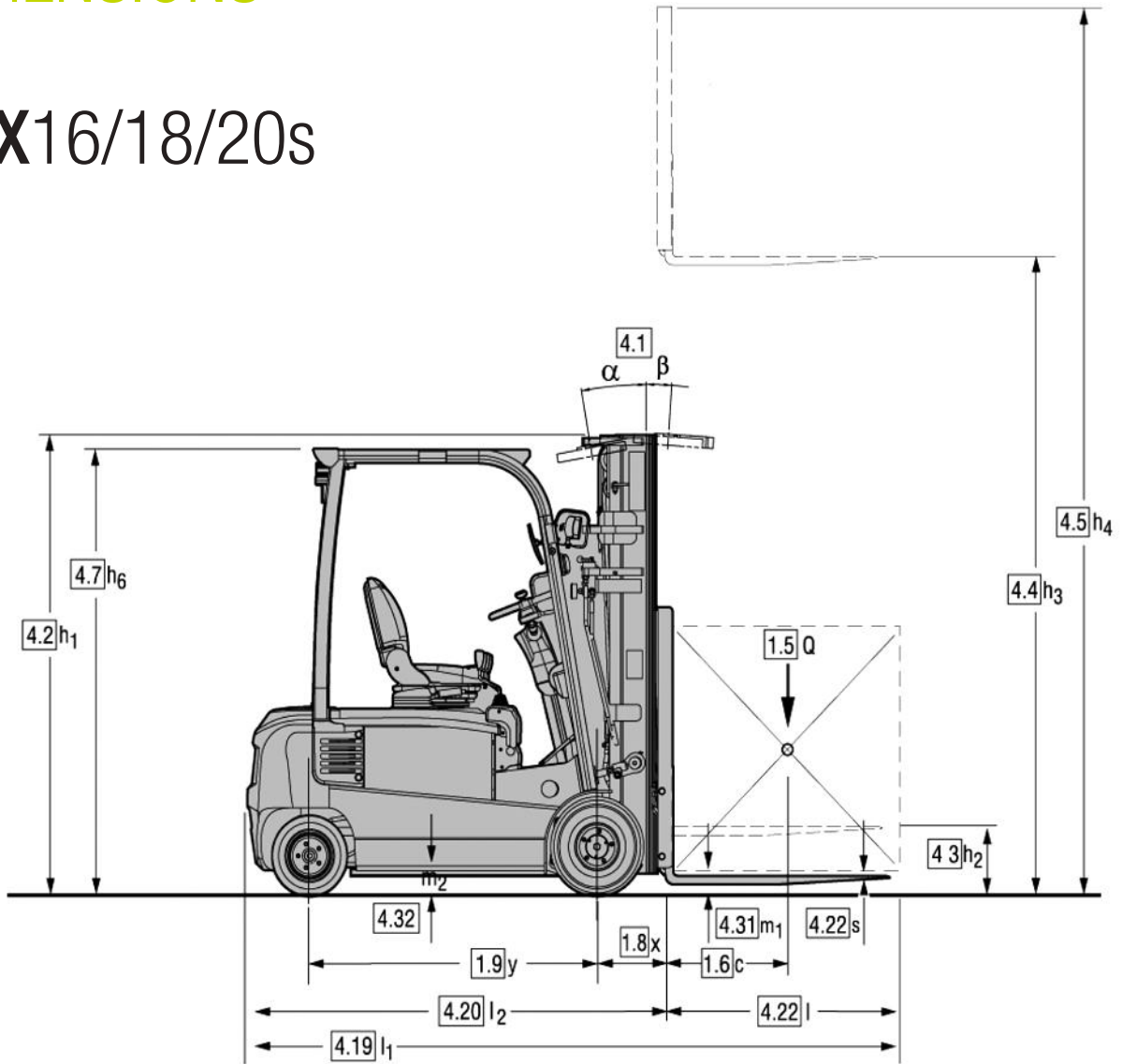
Superelastic Tyres

1.600 kg 1.800 kg 2.000 kg



DIMENSIONS

GEX16/18/20s



$$A_{st} = W_a + R + a$$

$$A_{st} = W_a + \sqrt{(\ell_6 + x)^2 + \left(\frac{b_{12}}{2} - b_{13}\right)^2} + a$$

applies only if $\frac{b_{12}}{2} \geq b_{13}$

For corresponding data see Specification Chart.

a = 200

SPECIFICATIONS

Product Specifications acc. to VDI 2198

| 1.1 Manufacturer (Abbreviation) | | CLARK | CLARK | CLARK | |
|---|---|--|----------------|----------------|----------------|
| Specifications | 1.2 Manufacturer's designation | GEX16 | GEX18 | GEX20s | |
| | 1.3 Drive unit | Elec-48V | Elec-48V | Elec-48V | |
| | 1.4 Operator type stand on / driver seated | Rider-seated | Rider-seated | Rider-seated | |
| | 1.5 Load capacity / rated load | Q (kg) | 1600 | 1800 | 2000 |
| | 1.6 Load centre distance | c (mm) | 500 | 500 | 500 |
| | 1.8 Load centre distance, centre of drive axle to fork face | x (mm) | 356 | 356 | 361 |
| | 1.9 Wheelbase | y (mm) | 1312 | 1420 | 1420 |
| Weight | 2.1 Service weight | kg | 3132 | 3235 | 3409 |
| | 2.2 Axle loading, laden front / rear | kg | 3979/753 | 4373/662 | 4759/650 |
| | 2.3 Axle loading, unladen front / rear | kg | 1416/1716 | 1490/1745 | 1559/1850 |
| Tyres, Chassis | 3.1 Tyre type, SE = superelastic, C = cushion | SE | SE | SE | |
| | 3.2 Tyre size, front, superelastic | 18x7-8 | 18x7-8 | 200/50-10 | |
| | 3.3 Tyre size, rear, superelastic | 15x4.5x8 | 15x4.5x8 | 15x4.5x8 | |
| | 3.5 Wheels, number front/rear (x = drive wheels) | 2x/2 | 2x/2 | 2x/2 | |
| | 3.6 Tread, front SE (C) | b10 (mm) | 905 | 905 | 915 |
| | 3.7 Tread, rear | b11 (mm) | 870 | 870 | 870 |
| | Dimensions | 4.1 Tilt of upright/fork carriage, a / b | deg | 6/6 | 6/6 |
| 4.2 Height, upright lowered | | h1 (mm) | 2060 | 2060 | 2060 |
| 4.3 Freelift | | h2 (mm) | 132 | 132 | 132 |
| 4.4 Lift height *1 | | h3 (mm) | 3085 | 3085 | 3085 |
| 4.5 Height, upright extended (with load backrest) | | h4 (mm) | 4309 | 4309 | 4304 |
| 4.7 Height overheadguard (Cabin) | | h6 (mm) | 2055 (2090) | 2055 (2090) | 2059 (2094) |
| 4.8 Seat height | | h7 (mm) | 1020 | 1020 | 1020 |
| 4.12 Coupling height | | h10 (mm) | 360 | 360 | 360 |
| 4.19 Overall length | | l1 (mm) | 3044 | 3154 | 3159 |
| 4.20 Length to face of forks | | l2 (mm) | 1976 | 2084 | 2089 |
| 4.21 Width | | b1 (mm) | 1059 | 1059 | 1122 |
| 4.22 Fork dimensions | | s*e*l (mm) | 40x100x1070 | 40x100x1070 | 40x100x1070 |
| 4.23 Fork carriage DIN 15173, A, B | | | II A | II A | II A |
| 4.24 Fork carriage width | | b3 (mm) | 940 | 940 | 940 |
| 4.31 Ground clearance minimum, laden | | m1 (mm) | 85 | 85 | 85 |
| 4.32 Ground clearance centre of wheelbase | | m2 (mm) | 84 | 84 | 87 |
| 4.34 Stacking aisle for pallets (l6 • b12) 1000 x 1200 across | | Ast (mm) | 3275 | 3391 | 3395 |
| 4.34 Stacking aisle for pallets (l6 • b12) 800 x 1200 along | Ast (mm) | 3410 | 3522 | 3527 | |
| 4.35 Turning radius | Wa (mm) | 1620 | 1728 | 1728 | |
| 4.36 Internal turning radius | b13 (mm) | 72 | 52 | 52 | |
| Performance | 5.1 Travel speed laden/unladen | Km/h | 15/16 | 15/16 | 15/16 |
| | 5.2 Lift speed laden/unladen | m/s | 0,40/0,50 | 0,37/0,50 | 0,35/0,50 |
| | 5.3 Lowering speed laden/unladen | m/s | 0,57/0,52 | 0,57/0,52 | 0,57/0,52 |
| | 5.6 Max. drawbar pull laden/unladen (S2 5 min) *2 | N | 7277/16357 | 7698/16397 | 7326/16053 |
| | 5.8 Max. gradeability laden/unladen (S2 5 min) *2 | % | 21,3/37,7 | 22,1/35,2 | 22,4/31,8 |
| | 5.10 Service brake | | Wet disc brake | Wet disc brake | Wet disc brake |
| Drive line | 6.1 Drive motor rating (S2 60 min) | kW | 2x4.4 | 2x4.4 | 2x4.4 |
| | 6.2 Lift motor rating (S3 15%) | kW | 15,2 | 15,2 | 15,2 |
| | 6.3 Battery acc. to DIN43531/35/36 | | DIN43531A | DIN43531A | DIN43531A |
| | 6.4 Battery voltage, nominal capacity K5 | V/Ah | 48/460(500) | 48/575(625) | 48/575(625) |
| | 6.5 Battery weight (min) | kg | 708 | 856 | 856 |
| Misc. | 8.1 Type of control | | AC/Inverter | AC/Inverter | AC/Inverter |
| | 8.2 Operating pressure for attachments | bar | max. 140 | max. 140 | max. 140 |
| | 8.4 Sound level, driver's ear | dB (A) | 72 | 72 | 72 |

*1 Further lift heights see upright table

*2 At friction coefficient $\mu=0.8$ with 1.6 km/h

All values shown are for standard lift truck with standard equipment. If the truck is supplied with options, values may change. All values given 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.

PRODUCT DESCRIPTION

Two powerful AC motors driving the front wheels, a very sturdy design without unnecessary plastic components and an extremely short wheel-base, distinguish the GEX series from CLARK. Suitable for most applications thanks to a solid „Built to Last ©“ construction and well thought-out driver's compartment.

Operator's Compartment

A large low positioned step, together with a grab handle on the drivers guard column allows easy access to the ergonomically designed operator's compartment. A full width rubber floor covering in the footwell ensures a firm footing in all conditions. The tilting steering column and an easily adjustable comfort seat, gives maximum legroom enabling optimal adjustment to suit any driver.

The operator's foot pedals are arranged in the automotive fashion to avoid any confusion. The fully directional operating levers move smoothly giving precise control and are located at a perfect height to enable easy handling and a firm grip.

Essential operating data is displayed in real-time on the clear TFT LCD colour display. Three individually programmable operating modes (Economy-Normal-Power) as well as an additional crawl function allows you to optimally adapt the vehicle to the relevant work situation.

Easily accessible stowage compartments as well as quick access to the hand brake and emergency stop switch complete this impressive operator's compartment.

Motor, drive and control

Two powerful 4.4 kW AC motors driving the front wheels and 48 Volt three-phase current technology ensure excellent acceleration and high performance. The maintenance free AC motors ensure running costs are kept to a minimum. The temperatures of the motors and controller are constantly monitored with the power being automatically adjusted to prevent design limits being exceeded.

The ZAPI DUAL AC control is equipped with modern MOSFET and CAN bus technology and is located safely, high in the counterweight, where it is protected, yet easily accessible. The motor and controller temperature monitoring devices serves to protect your investment.

Brake system

Three independent brake systems (electrical, foot and parking brake) ensure increase efficiency through improved utilisation of the battery capacity and high safety. Fully enclosed oil-immersed multiple-disc, foot and parking brake provide constant brake performance in all conditions. The regenerative electrical brakes return energy to the battery during each braking action. This process saves energy costs, reduces brake wear and extends the driving time per battery charge.

If the driving direction is changed by operation of the direction lever, the electronics ensure gentle braking and progressive acceleration in the new direction of travel. The fully enclosed service brakes are protected against dust, damp and aggressive particles. Use under difficult environmental conditions is therefore possible without any problems. The standard ramp start feature enables controlled operation of the truck on gradients and precise handling on loading platforms.

Steering system

The 101° degree angle of the steer wheels turns the GEX four-wheel forklift almost on the spot – similar to the three-wheel forklift. Even in this position, smooth start up and control is maintained due to the independent front wheel drive.

Depending on the angle of the steer wheels, the speed and direction of rotation of the front wheels is controlled in such a way that significant wear of the tyres is avoided. When cornering, the traction speed is automatically reduced proportional to the degree of turn.

Hydraulic system

The independent, AC powered hydraulic pump only pumps the required oil volume for the relevant task, ensuring optimum energy efficiency and longer battery shift life. The internal gear hydraulic pump is distinguished by especially low pump noise combined with high efficiency. This saves energy and reduces the heat load on the hydraulics.

The steel hydraulic tank ensures good heat dissipation for the hydraulic oil ensuring long service life for the hydraulic components. The full-flow return line filtration filters the oil to the tank at each reverse flow. Large particles are filtered directly via a suction filter, thereby preventing them from entering the oil circuit. This ensures a long service life for all hydraulic components.

Upright

The clear-view uprights are available in Standard, Hilo and Triplex versions. The interlocking profiles provide high strength and improved safety, even at high levels. Enclosed canted rollers minimize deflection and can easily be adjusted without major disassembly.

Tilt cylinders are mounted in spherical bushings, eliminating hydraulic seal strain, thereby increasing the service life of the complete cylinder.

An integral tilt-lock valve prevents excessive tilt speeds and unintentional operation of the upright.

The upset forged forks ensure long service life and are hook mounted and pin lockable to ensure accurate for positioning.

A hydraulic cushioning valve reduces upright shocks and allows smooth lifting and lowering at all times, ensuring a long service life and less product damage. The sturdy 6-roller fork carriage features enclosed canted rollers together with adjustable side thrust rollers, preventing carriage jamming when handling offset loads.

Further standard equipment

Working headlights, acoustic reversing alarm, combination rear lights incorporating brake and reverse light, paintwork in a bright safety colour „CLARK Green“, driver's compartment and upright in matt black, wheel rims in white finish.

Optional equipment

Pneumatic or non-marking tyres, side battery change, attachments, cabs, mini-levers and much more

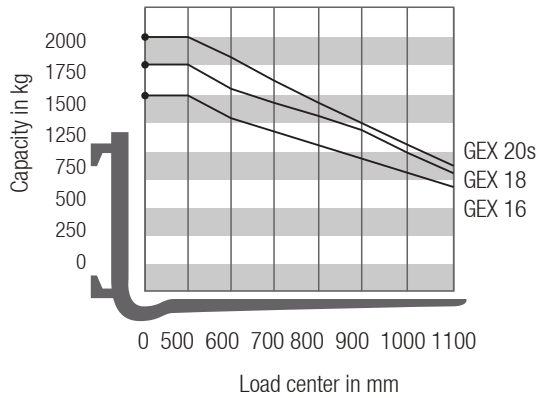
Safety

The GEX series is CE certified and corresponds to all European safety standards for counterbalanced forklift trucks.

Talk to your CLARK dealer to find the optimum equipment for you.

GENERAL DATA

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 3085 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 GEX16/18/20s

| Mast type | Maximum Fork Height (h3) | Mast Lowered (h1) | Mast Extended (h4) | | Free lift (h2) | |
|-----------|--------------------------|-------------------|--------------------|-----------------------|--------------------|-----------------------|
| | | | with load backrest | without load backrest | with load backrest | without load backrest |
| | mm | mm | mm | mm | mm | mm |
| Standard | 2545 | 1792 | 3771 | 3169 | 132 | 132 |
| | 2795 | 1917 | 4021 | 3419 | | |
| | 3085 | 2060 | 4311 | 3709 | | |
| | 3285 | 2162 | 4511 | 3909 | | |
| | 3639 | 2339 | 4865 | 4263 | | |
| | 4069 | 2612 | 5295 | 4693 | | |
| | 4365 | 2812 | 5591 | 4989 | | |
| | 4653 | 3007 | 5879 | 5277 | | |
| Triple | 3970 | 1835 | 5194 | 4594 | 611 | 1211 |
| | 4345 | 1960 | 5569 | 4969 | 736 | 1336 |
| | 4780 | 2105 | 6004 | 5404 | 881 | 1481 |
| | 5185 | 2255 | 6409 | 5809 | 1031 | 1631 |
| | 5565 | 2415 | 6789 | 6189 | 1191 | 1791 |
| | 5740 | 2480 | 6964 | 6364 | 1256 | 1856 |
| | 6015 | 2605 | 7239 | 6639 | 1381 | 1981 |
| | 6470 | 2795 | 7694 | 7094 | 1571 | 2171 |
| 7075 | 3050 | 8299 | 7699 | 1826 | 2426 | |
| HI-LO | 2925 | 1960 | 4149 | 3549 | 736 | 1336 |
| | 3215 | 2105 | 4439 | 3839 | 881 | 1481 |
| | 3515 | 2255 | 4739 | 4139 | 1031 | 1631 |
| | 3695 | 2345 | 4919 | 4319 | 1121 | 1721 |
| | 3810 | 2415 | 5034 | 4434 | 1191 | 1791 |

Performance may vary +5% and -10% due to motor and system efficiency tolerance. The performance shown represents nominal values which may be obtained under typical operating conditions of a machine. CLARK products and specifications are subject to change without notice.



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