CLARK
THE FORKLIFT

GEX40/45/50

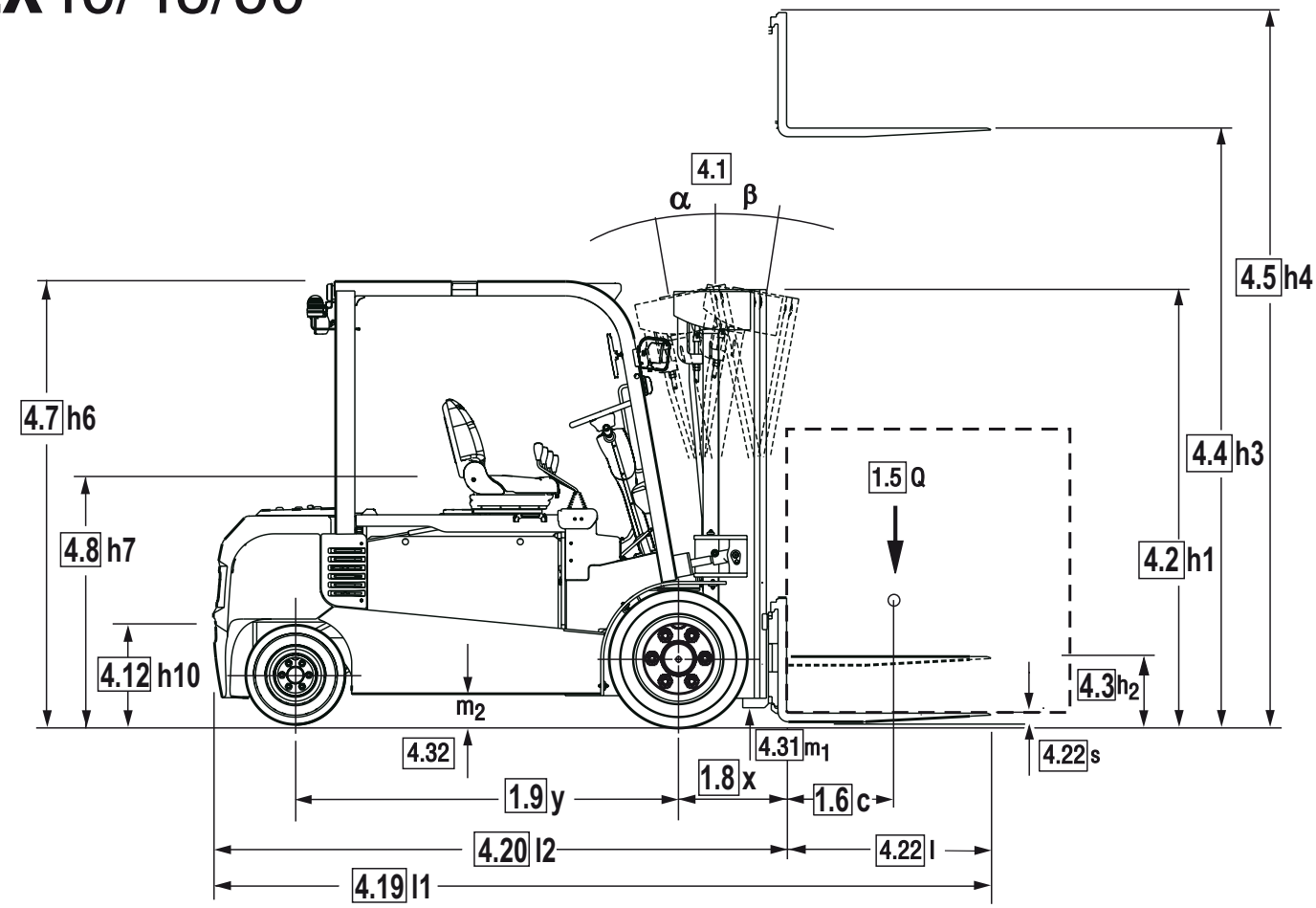
80V Electric Lift Trucks
Superelastic Tyres
4.000 kg 4.500 kg 5.000 kg

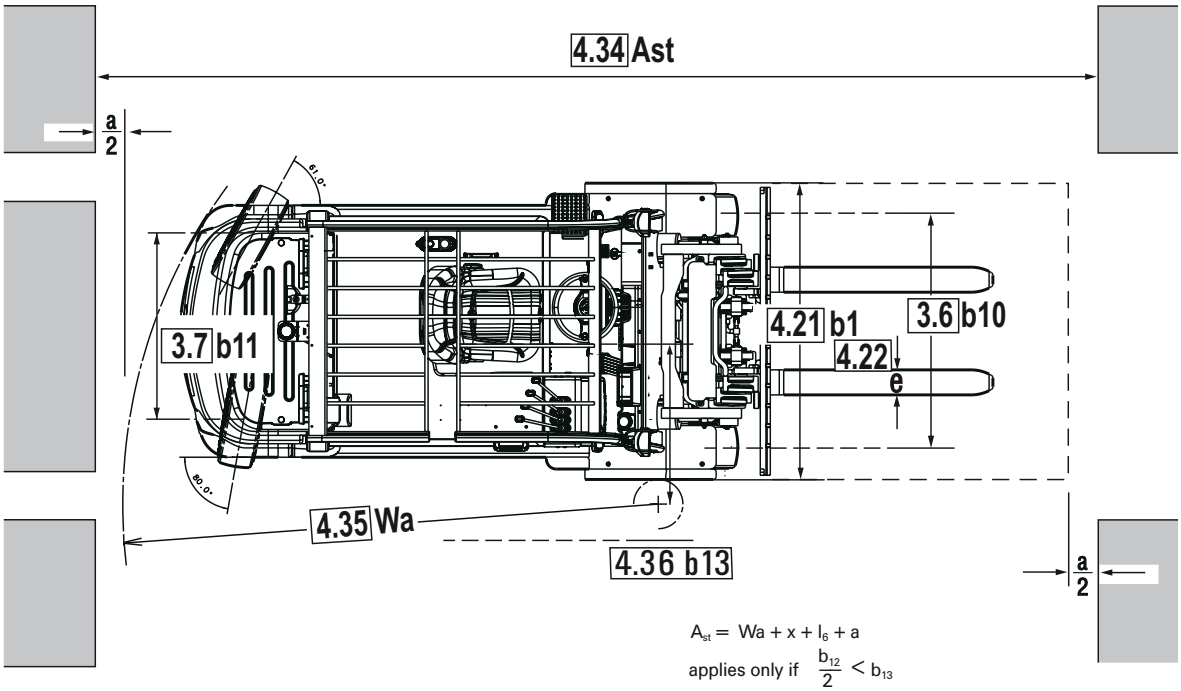
Li-ion
CLARK Lithium-Ion-Power

www.clarkmheu.com

DIMENSIONS

GEX40/45/50





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

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

$A_{st} = Wa + \sqrt{(l_6 + x)^2 + \left(\frac{b_{12}}{2} - b_{13}\right)^2} + a$

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

a = 200

For corresponding data see Specification Chart.

SPECIFICATIONS

Product Specifications acc. to VDI 2198

	1.1 Manufacturer (Abbreviation)		CLARK	CLARK	CLARK
Specifications	1.2 Manufacturer's designation		**GEX40**	**GEX45**	**GEX50**
	1.3 Drive unit		Electro-80V	Electro-80V	Electro-80V
	1.4 Operator type		Driver seated	Driver seated	Driver seated
	1.5 Load Capacity / rated load	Q (kg)	4000	4500	4990
	1.6 Load Center distance	c (mm)	500	500	500
	1.8 Load Center distance, centre of drive axle to fork face*1	x(mm)	535	535	535
	1.9 Wheelbase	y (mm)	2000	2000	2000
Weight	2.1 Service weight *2	kg	7019 (6852)	7499 (7332)	7909 (7742)
	2.2 Axle loading, laden front / rear *2	kg	9795 (9723) 1225 (1129)	10745 (10673) 1255 (1159)	11450 (11379) 1449 (1353)
	2.3 Axle loading, unladen front / rear *2	kg	3725 (3653) 3295 (3199)	3916 (3845) 3583 (3488)	3878 (3807) 4031 (3936)
Tyres, Chassis	3.1 Tyre type, SE = superelastic		SE	SE	SE
	3.2 Tyre size, front		250 - 15	28 x 12.5 - 15	28 x 12.5 - 15
	3.3 Tyre size, rear		21 - 8 - 9	21 - 8 - 9	21 - 8 - 9
	3.5 Wheels, number front / rear (x=drive wheels)		2 X / 2	2 X / 2	2 X / 2
	3.6 Tread, front	b10 (mm)	1150	1180	1180
	3.7 Tread, rear	b11 (mm)	1000	1000	1000
Dimensions	4.1 Tilt of upright / fork carriage	deg	8 / 8	8 / 8	8 / 8
	4.2 Height, upright lowered	h1 (mm)	2225	2225	2225
	4.3 Freelift	h2 (mm)	130	130	130
	4.4 Lift height *3	h3 (mm)	3000	3000	3000
	4.5 Height upright extended (with load backrest)	h4 (mm)	4232	4232	4232
	4.7 Height overheadguard (cabin)	h6 (mm)	2310 (2360)	2310 (2360)	2310 (2360)
	4.8 Seat height / stand height	h7 (mm)	1280	1280	1280
	4.12 Coupling height	(mm)	500	500	500
	4.19 Overall length	l1 (mm)	4001	4001	4036
	4.20 Length to face of forks	l2 (mm)	2931	2931	2966
	4.21 Width	b1 (mm)	1396	1490	1490
	4.22 Fork dimensions	s*e*l (mm)	50 x 122 x 1070	50 x 150 x 1070	50 x 150 x 1070
	4.23 Fork carriage ISO 2328, A, B		CLASS IIIA	CLASS IIIA	CLASS IIIA
	4.24 Fork carriage width	b3 (mm)	1324	1438	1438
	4.31 Ground clearance minimum, unladen	m1 (mm)	135	135	135
	4.32 Ground clearance center of wheelbase	m2 (mm)	152	152	152
	4.34 Aisle Width for pallets 1000 x 1200 crossways	(mm)	4410	4410	4435
	4.34 Aisle width for pallets 800 x 1200 lengthways	(mm)	4610	4610	4635
	4.35 Turning radius	Wa (mm)	2675	2675	2700
	4.36 Internal Turning radius	b13 (mm)	738	785	785
Performance	5.1 Travel speed laden / unladen	km/h	20 / 21	19 / 20	19 / 20
	5.2 Lift speed laden / unladen	m/s	0.35 / 0.47	0.33 / 0.47	0.31 / 0.47
	5.3 Lowering speed laden / unladen	m/s	0.53 / 0.5	0.53 / 0.5	0.53 / 0.5
	5.6 Max. drawbar pull laden / unladen * 2 *4	N	3341 (3348) / 2616 (2566)	3302 (3309) / 2739 (2698)	3266 (3276) / 2700 (2660)
	5.8 Max. gradeability laden / unladen *2 *4	%	25 (25) / 34 (31)	20 (21) / 31 (28)	20 (21) / 31 (28)
	5.10 Service brake		Wet disc brake	Wet disc brake	Wet disc brake
Drive line	6.1 Drive motor rating (S2 60min)	kW	11.3 x 2	11.3 x 2	11.3 x 2
	6.2 Lift motor rating (S3 15 %)	kW	26	26	26
	6.3 Battery acc .to DIN43531 / 35 / 36 A, B, C, no		DIN 43531A	DIN 43531A	DIN 43531A
	6.4 Battery voltage, nominal capacity	V/Ah	80 / 840 (775)	80 / 840 (775)	80 / 840 (775)
	6.4.1 Battery voltage / nominal capacity with Li-Ion	V/Ah	80 / 560	80 / 560	80 / 560
	6.5 Battery weight (Min)	kg	2069 (1770)	2069 (1770)	2069 (1770)
	6.6 Energy consumption acc, to VDI cycle	kWh/h	-	-	-
Misc.	8.1 Type of control		AC / Inverter	AC / Inverter	AC / Inverter
	8.2 Operating pressure for attachments		adjustable	adjustable	adjustable
	8.3 Oil volume for attachments (adjustable)	l/min	max. 35	max. 35	max. 35
	8.4 Sound level, driver's ear according to DIN 12053	dB (A)	74	74	74

*1 Load center distance is for Standard and Hi-Lo uprights with FEM forks. For triple stage uprights add + 34 mm. For Clark integral side-shifter add + 74 mm. For Clark hook on side-shifter add + 78 mm. *2 Figures in brackets showing the values for the GEX40-50 version with battery 775Ah (optional placeholders in the battery compartment required). *3 Further lift heights see upright table. *4 At friction coefficient μ=0.6 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 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, distinguish the GEX 40-50 series from CLARK. Suitable for most applications thanks to a solid"built to last"construction and well thought-out driver's compartment.

Lithium-ion technology

Due to fast charging times, GEX40-50 electric forklifts with lithium-ion (Li-Ion) battery can be used almost without interruption. Benefit from the advantages of the optionally available fully integrated Li-Ion battery. The CLARK Li-Ion battery with 80 volts and 560 Ah is available. The 80 volt, 120 A charger requires a heavy current connection (CEE 16 A plug). The charging status of the Li-Ion battery is displayed via the vehicle display. The battery management system (BMS) has a safety shutdown and thus ensures safe use of the battery. Possible error codes of the BMS are also shown on the vehicle display.

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 confusi on. 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 emergency stop switch and an ideally positioned foot operated parking brake, completes this impressive operator's compartment.

Motor, drive and control

Two powerful 11.3 kW AC motors driving the front wheels and 80 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

Even at maximum steering position, a 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. The sturdy fork carriage features enclosed canted rollers together with adjustable side thrust rollers, preventing carriage jamming when handling offset loads. With triple stage uprights 2 primary cylinders will be installed to give an excellent view to the forks.

Further standard equipment

Working headlights, 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

Side battery change, attachments like fork positioners and sideshifters (hook on or integrated), cabs, mini- lever with armrest, various seat options and much more.

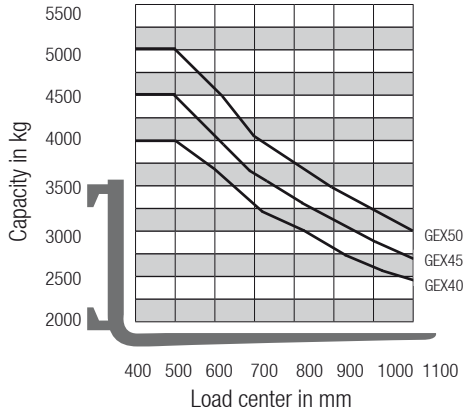
Safety

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 3000 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 GEX 40/45/50

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	2500	1975	3732	3249	130	130
	2700	2075	3932	3449		
	3000	2225	4232	3749		
	3300	2375	4532	4049		
	3500	2475	4732	4249		
	3700	2575	4932	4449		
	4000	2725	5232	4749		
	4500	2975	5732	5249		
	5000	3225	6232	5749		
Triple	3700	2002	4952	4469	782	1265
	4000	2102	5252	4769	882	1365
	4300	2202	5552	5069	982	1465
	4500	2269	5752	5269	1049	1532
	4800	2369	6052	5569	1149	1632
	5000	2436	6252	5769	1216	1699
	5500	2603	6752	6269	1383	1866
	6000	2770	7252	6769	1550	2033
	6500	2937	7752	7269	1717	2200
	7000	3104	8252	7769	1884	2367
HI-LO	2700	2099	4572	4089	879	1362
	3000	2249	4247	3764	1029	1512
	3300	2399	4444	3961	1179	1662

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.

CLARK
THE FORKLIFT

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Fork Lift Trucks

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