CLARK
THE FORKLIFT

SE16/20

48-Volt Electric 4 wheel Lift Trucks
1600 kg
2000 kg

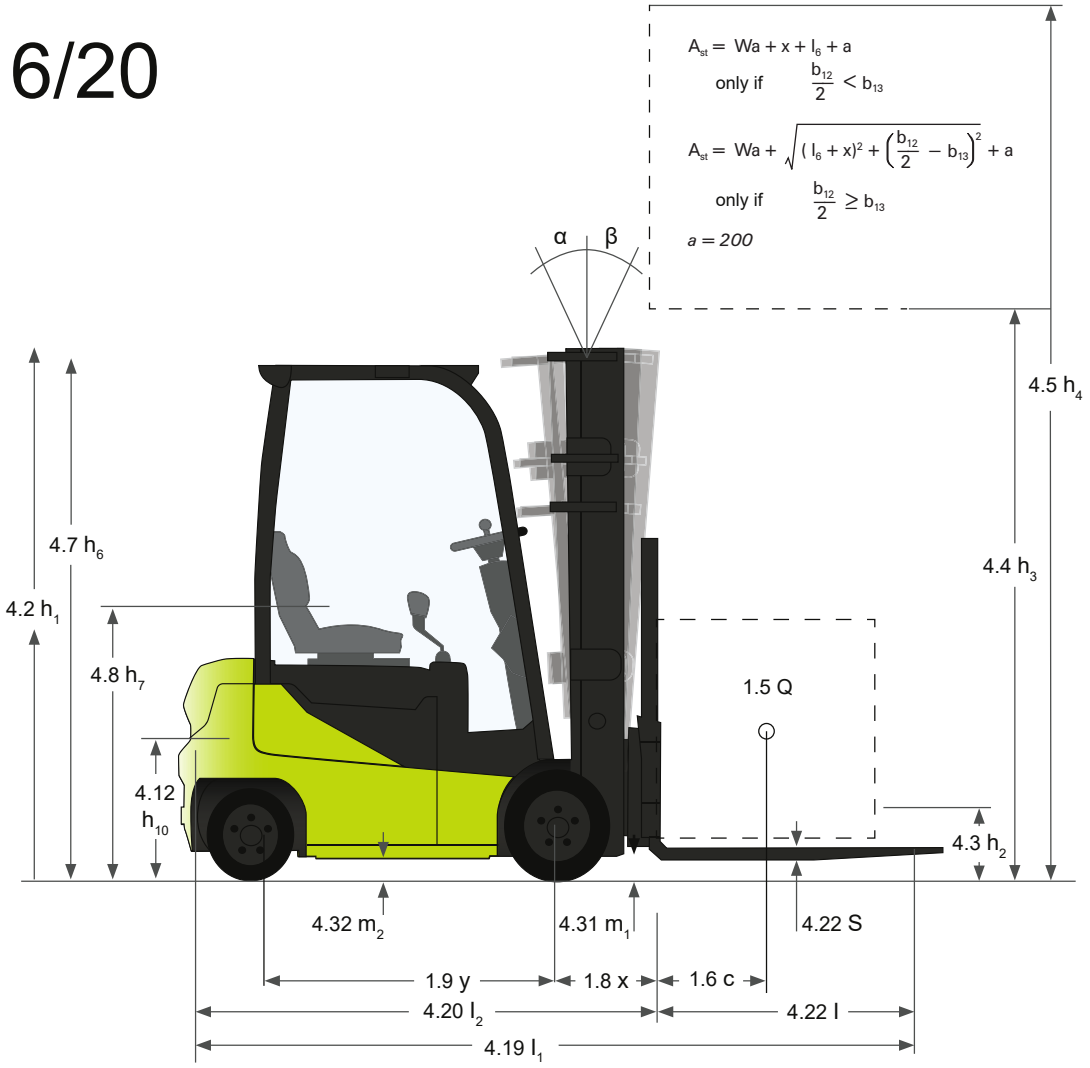
S SERIES ELECTRIC

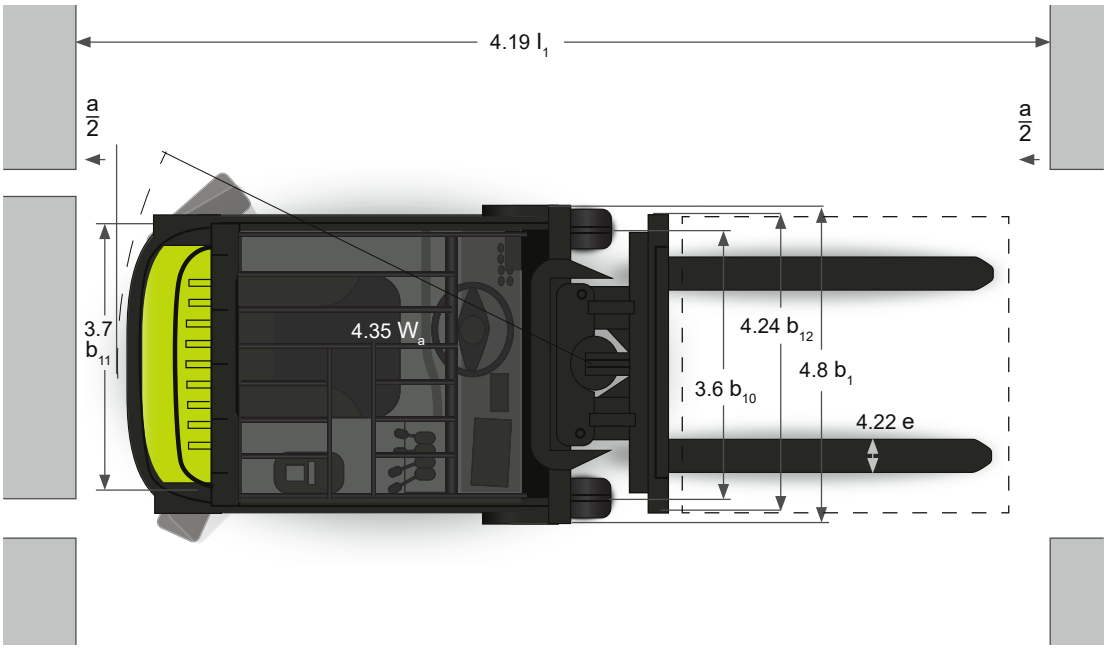
LI-ION

www.clarkmheu.com

DIMENSIONS

SE16/20





For corresponding data see specification chart.

SPECIFICATIONS acc. to VDI 2198

	1.1	Manufacturer (Abbreviation)		CLARK	CLARK
Specifications	1.2	Manufacturer's designation		SE16	SE20
	1.3	Drive unit		Electric-48V	Electric-48V
	1.4	Operator type stand on/driver seated		Driver-seated	Driver-seated
	1.5	Load capacity/rated load	Q (kg)	1600	2000
	1.6	Load centre distance	c (mm)	500	500
	1.8	Load centre distance, centre of drive axle to fork face	x (mm)	356	361
	1.9	Wheelbase	y (mm)	1312	1420
Weight	2.1	Service weight	kg	3152	3429
	2.2	Axle loading, laden front/rear	kg	3997 / 755	4777 / 652
	2.3	Axle loading, unladen front/rear	kg	1425 / 1727	1568 / 1861
Tyres, Chassis	3.1	Tyre type, SE = superelastic, C = cushion		Superelastic (SE)	Superelastic (SE)
	3.2	Tyre size, front, superelastic		18 x 7-8	200 / 50-10
	3.3	Tyre size, rear, superelastic		15 x 4,5 x 8	15 x 4,5 x 8
	3.5	Wheels, number front/rear (x = drive wheels)		2 x / 2	2 x / 2
	3.6	Tread, front	b_{10} (mm)	905	915
	3.7	Tread, rear	b_{11} (mm)	870	870
Dimensions	4.1	Tilt of upright/fork carriage, α / β	deg	6 / 6	6 / 6
	4.2	Height, upright lowered	h_1(mm)	2060	2060
	4.3	Freelift	h_2 (mm)	127	132
	4.4	Lift height *1	h_3 (mm)	3085	3085
	4.5	Height, upright extended	h_4 (mm)	4306	4311
	4.7	Height overheadguard (Cabin)	h_6 (mm)	2055 (2090)	2059 (2094)
	4.8	Seat height	h_7 (mm)	1020	1020
	4.12	Coupling height	h_{10} (mm)	360	360
	4.19	Overall length	l_1 (mm)	3054	3169
	4.20	Length to face of forks	l_2 (mm)	1986	2099
	4.21	Width	b_1(mm)	1059	1122
	4.22	Fork dimensions	s*e*l (mm)	35 x 100 x 1070	40 x 100 x 1070
	4.23	Fork carriage DIN 15173, class / form A, B		II A	II A
	4.24	Fork carriage width	b_3 (mm)	940	940
	4.31	Ground clearance minimum, laden	m_1 (mm)	85	85
	4.32	Ground clearance centre of wheelbase	m_2 (mm)	84	87
	4.33	Stacking aisle for pallets (l6 · b12) 1000 x 1200 across	Ast (mm)	3303	3415
	4.34	Stacking aisle for pallets (l6 · b12) 800 x 1200 along	Ast (mm)	3427	3539
	4.35	Turning radius	Wa (mm)	1627	1735
Performance	5.1	Travel speed laden/unladen	Km/h	15 / 15	15 / 15
	5.2	Lift speed laden/unladen	m/s	0,40 / 0,50	0,28 / 0,49
	5.3	Lowering speed laden/unladen	m/s	0,57 / 0,52	0,57 / 0,52
	5.6	max. drawbar pull laden/unladen (S2 5 Min.) *2	N	7279 / 16363	7328 / 16058
	5.8	max. gradeability laden/unladen (S2 5 Min.) *2	%	22 / 27	20 / 25
	5.10	Service brake		wet-disc brake	wet-disc brake
Drive line	6.1	Drive motor rating (S2 60 Min.)	kW	2 x 4,4	2 x 4,4
	6.2	Lift motor rating S3 15 %	kW	15,2	15,2
	6.3	Battery acc. to DIN43531/35/36 A,B,C, no		DIN43531A	DIN43531A
	6.4	Battery voltage, nominal capacity K5	V/Ah	48 / 460 (500)	48 / 575 (625)
	6.4.1	Battery voltage, nominal capacity Li-Ion	V/Ah	48 / 460	48 / 460
	6.5	Battery weight (min.)	kg	708	856
Misc.	8.1	Type of control		AC / Inverter	AC / Inverter
	8.2	Operating pressure for attachments	bar	max. 140	max. 140
	8.3	Sound level, driver's ear DIN/EN 12053	dB (A)	72	72

*1 Further lift heights see upright table

*2 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. The specifications apply under normal operating conditions. All values given may vary + 5 % and - 10 % due the motor and system tolerances and represent nominal values obtained under typical operating conditions. CLARK reserves the right to change products and specifications without prior notice.

PRODUCT DESCRIPTION

With the CLARK SE16/20 electric forklift trucks with 48 V technology, you can move your loads safely and efficiently with extremely low operating costs. CLARK electric forklift trucks are therefore in demand wherever it is important to deliver top performance reliably and cost-effectively day after day with an intuitive operating concept. Even with lithium-ion power for intensive use and multi-shift operation.

Lithium-Ion-Technology

Thanks to fast charging times, the SE16/20 electric forklift trucks with lithium-ion battery (Li-Ion) can be used almost without interruption. Take advantage of the optional fully integrated Li-ion battery. The CLARK lithium-ion battery with 48 volts and either 280 or 460 Ah can be used for both wheelbases (battery compartments). The charger with 48 volts, 160 A requires a power connection (CEE 16A plug). The battery management system (BMS) has a safety cut-out and thus ensures safe use of the battery. Possible error codes of the BMS are shown on the vehicle display.

Driver‘s seat

The operator enjoys a high level of leg and headroom in this vehicle class. Various adjustable comfort seats with air or mechanical suspension are also available for the vehicles. The driver can easily reach his workplace via the low step. A grab handle on the front rail of the entry side makes it easier to get on and off. A non-slip floor covering in the footwell ensures surefootedness. The tiltable steering column and an adjustable driver‘s seat enable adaptation to different driver sizes. The pedals are automotive-compliant. The hydraulic levers can be operated intuitively and are positioned within easy reach. The operating data is clearly displayed on the TFT colour display. Three individually programmable operating modes can be selected (Eco, Normal and Power) as well as an additional creep speed function. This means that the driving behaviour can be optimally adapted to the respective work situation. Useful storage compartments as well as the easily accessible handbrake and emergency stop switch round off this successful driver‘s workplace.

Motor, drive and control unit

The SE series accelerates quickly thanks to two traction motors in the parallel front drive, each with an output of 4.4 kW and 48 V three-phase technology. The AC motors used are wear-free and very robust. The operating costs are therefore very low. The temperature of the motors and the control unit are monitored. The motor power is automatically reduced to protect all components in the event of excessive temperatures. The ZAPI DUAL-AC control unit is installed in the counterweight for protection. The control unit is easily accessible and equipped with modern CAN bus technology.

Braking system

The SE series has three independent brake systems. There is an electric brake, a service brake and a parking brake. A maintenance-free, wet multi-disc brake is fitted as standard as a service brake and parking brake. The wet multi-disc brakes are encapsulated and therefore reliably protected against dust, moisture and aggressive media. With electric braking, energy is fed back into the battery during each braking process (regenerative braking). This process saves energy costs and extends the journey time per battery charge. A ramp function is installed as standard. This enables controlled operation of the vehicle on sloping terrain and safe handling on loading ramps, as unintentional acceleration or rolling back is prevented.

Steering system

The steering axle is fitted with dual tyres as standard. This increases the directional stability of the vehicle. Even when the steering is fully engaged, the vehicle can be driven sensitively thanks to the parallel front-wheel drive. Depending on the steering angle, the speed and direction of rotation of the front wheels is controlled in such a way that excessive tyre wear is avoided. The control system enables the vehicle to start off smoothly and precisely, even when the steering is fully engaged. The driving speed is automatically reduced when cornering.

Hydraulics

An energy-saving, electric hydraulic pump with AC technology delivers only the volume of oil required for the action at all times. An internal gear pump is also used, which is not only particularly quiet, but also very efficient. The hydraulic tank is made of steel. This enables good heat dissipation and extends the service life. The vehicle is equipped with a return filter for the hydraulic oil. The oil is cleaned every time it returns. This prevents coarse particles from entering the oil circuit in the first place to increase the service life of all hydraulic components.

Upright

The clear-view masts are available in standard, Hilo and Triplex versions. Nested mast profiles offer high strength even under the heaviest loads. A tilt lock valve prevents the mast from leaning forwards quickly and unintentionally. The masts are equipped with CLARK mast damping. Vibrations during the transition between the individual mast steps are absorbed. A 6-roller fork carriage emphasises the durability of CLARK masts.

Additional standard equipment

Working lights, audible reversing alarm, rear combination light with brake light and reversing light white, paint finish in the bright safety colour ‘CLARK green’, driver‘s cab and mast in black, wheel rims in white Additional equipment pneumatic tyres or non-marking tyres, lateral battery change, attachments, cabs, mini-levers and much more.

Additional equipment

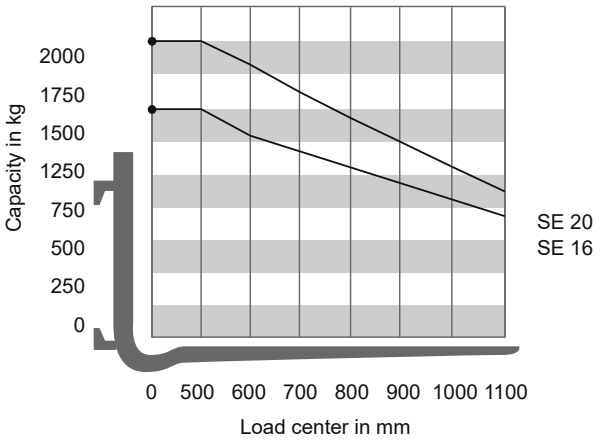
Non-marking tyres, lateral battery change, tine adjuster, driver‘s cab, integrated or mounted sideshift, hydraulic control via mini levers, hydraulic accumulators, quick-change couplings, various seats, blue LED warning lights, CLARK SafeView@360 camera system and much more.

Safety

The SE series is CE-certified and complies with all European safety standards. Contact your local CLARK dealer to find the right configuration for your needs.

GENERAL DATA

Truck Capacities 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 SE16/20

Mast type	Lift height (h3)	Mast height lowered (h1)	Mast height 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	2062	4311	3709		
	3285	2162	4511	3909		
	3639	2339	4865	4263		
	4069	2612	5295	4693		
	4365	2812	5591	4989		
	4653	3007	5879	5277		
Triplex	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

FEATURES & EQUIPMENT EXTRAS

CLARK THE FORKLIFT

	Equipment features	SE16/20
General	Two powerful, low-maintenance AC drive motors	•
	Ergonomic driver‘s seat with plenty of legroom	•
	Nested mast profiles with optimum visibility and mast damping	•
	Automatically engaging, electric parking brake	•
	Intuitive 5-inch SMART display	•
	Prepared for the use of either Li-ion batteries or lead-acid batteries	•
Operator compartment and Control panel	Weather protection, PVC or full cabin with heating	X
	Low access height of only 410 mm	•
	Step with anti-slip coating	•
	Overhead guard for drive-in racks	X
	Storage trays	•
	Storage tray with USB charging port	X
	Splash-proof display (IP65)	•
	Direction switch on the hydraulic lever	X
	Hydraulic control via mini-lever	X
	Direction switch on the mini-lever	X
	Load weight indicator	X
	Direction indicator on the display	•
	Radio/MP3 player with Bluetooth	X
Ergonomics	Power steering	•
	Adjustable driver‘s seat & backrest	•
	Various driver‘s seats with mechanical or air suspension	X

	Equipment features	SE16/20
Ergonomics	Seats with safety bars or armrests	X
	Rear grab with horn	X
	Steering wheel (adjustable)	•
	Panoramic rear-view mirror	X
Battery and charging	Version for lateral battery change via roller frame	X
	Battery changing tables with castor frame	X
	Different charging technologies	X
Performance and productivity	Fork positioner with sideshift	X
	Integrated and hook-on sideshift	X
	Adjustable performance parameters (three programmable driving profiles available)	•
	Li-ion batteries or lead-acid batteries can be replaced and retrofitted by the service technician	X
Safety	Blue LED warning lights (for both directions of travel)	X
	Seat belt control	•
	Seat belt control with sequence check	X
	Hydraulic accumulator mounted on mast	X
	Automatic reduction of travelling speed when cornering	•
	Automatic parking brake	•
	Vertical mast position (VMS-system)	X
	Rear-view camera	X
	LED-lighting	•
Maintenance	Speed limit (can be set via the service)	•
	Fault diagnosis with fault indication on the display	•

• Standard Equipment X Option

CLARK Europe GmbH

Dr.- Alfred-Herrhausen-Allee 33
D - 47228 Duisburg / Germany
Tel. +49 (0)2065 499 13-0
Fax +49 (0)2065 499 13-290

email:info-europe@clarkmheu.com
www.clarkmheu.com

Dealer:

11/2024

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