



*Easy Lift, Easy Life!*

MA7 series four-pivot lithium battery forklifts are a new generation of products developed by SINOLIFT. The design concept is to inherit the appearance of "M" series products while improving the performance of the products, expanding the optional battery capacity, optimizing the internal structure, and adopting a series of mature components, which can meet the requirements of more complex and high-intensity work.

- Faster travel and lift speeds to ensure peak performance.
- Energy consumption efficiency that translates into more run time per battery charge.
- Closed loop speed control system that maintains consistent operating speeds whether truck is loaded or not.
- Easily programmable performance selection that optimizes productivity while conserving energy.
- Enhanced driver awareness of all operating and performance characteristics of the machine to enable ongoing productive operation throughout the shift.
- Reduced operating costs achieved by the elimination of motor brushes, commutators, directional & hydraulic contactors which reduces maintenance and increases uptime.



## SHANGHAI SINOLIFT MECHANICAL AND ELECTRICAL EQUIPMENT CO.,LTD.

Address: No. 2471 Dachuan Road, Nanhui Industry Park, Pudong New District, Shanghai, 201399,P.R.China

Tel: 0086-21-68014500 or 0086-21-58003681

Fax: 0086-21-68014262

Website: [www.sinolift.com](http://www.sinolift.com) [www.sinolifttruck.com](http://www.sinolifttruck.com)

Wechat: sinoliftdeng

Whatsapp & Mobile: 0086 138 1757 2420



# Sinolift – For material handling

SINOLIFT's MA7 series lithium battery with Innovative, reliable lithium-ion technology provide better experience, higher efficiency and more energy-saving. Rapid charging and opportunity charging ensure continuous availability of trucks. Lightweight design, flexible, high level of energy efficiency, maintenance-free, long service life.



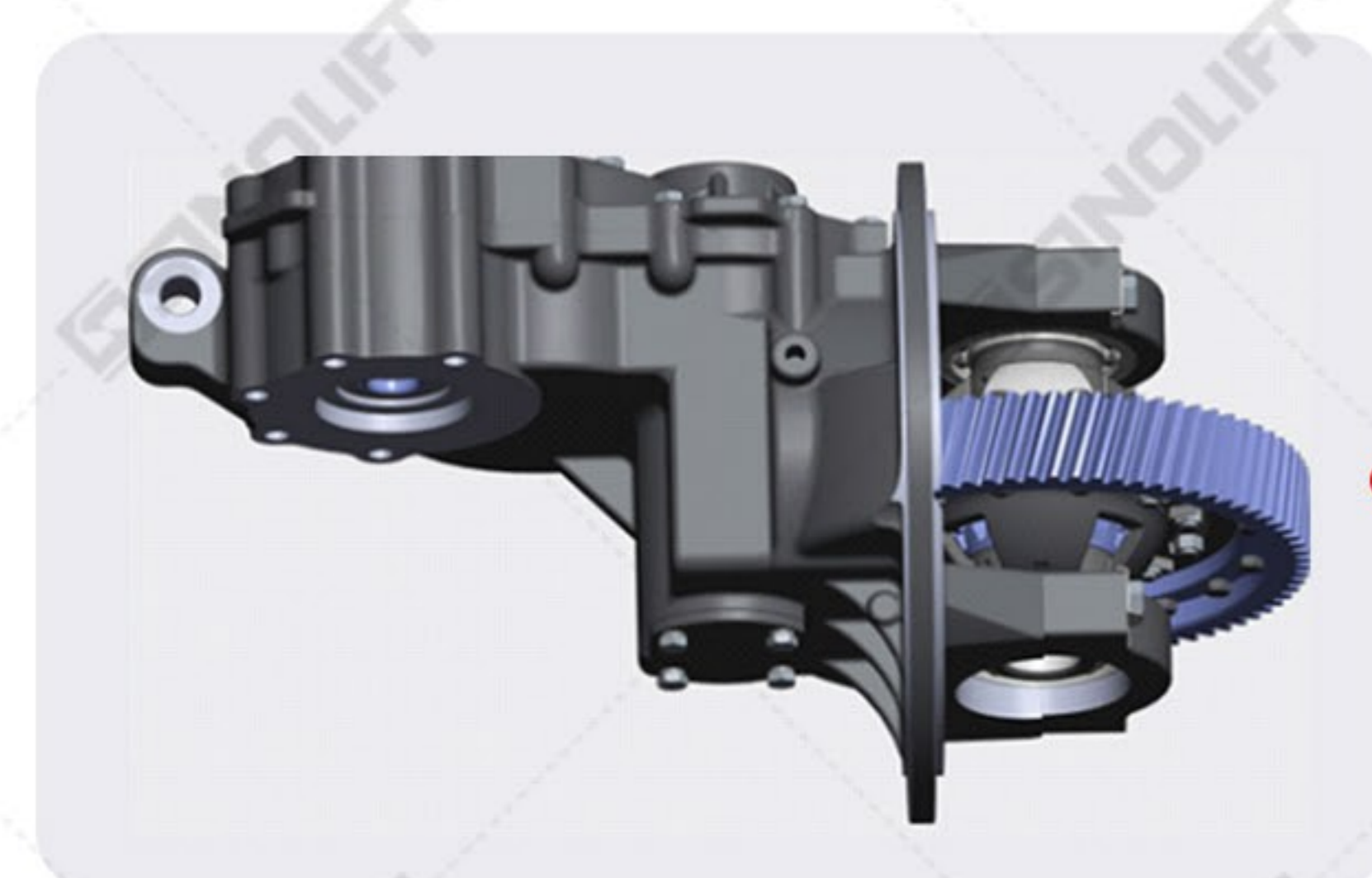
### Advancement MOSFET

The high-frequency MOSFET integrated controller ensures smooth and accurate driving and lifting control, and has excellent speed regulation performance, good performance of electronic control matching the motor, functions of regenerative braking, reverse braking and anti-sliding on ramps, etc. and high safety and reliability.



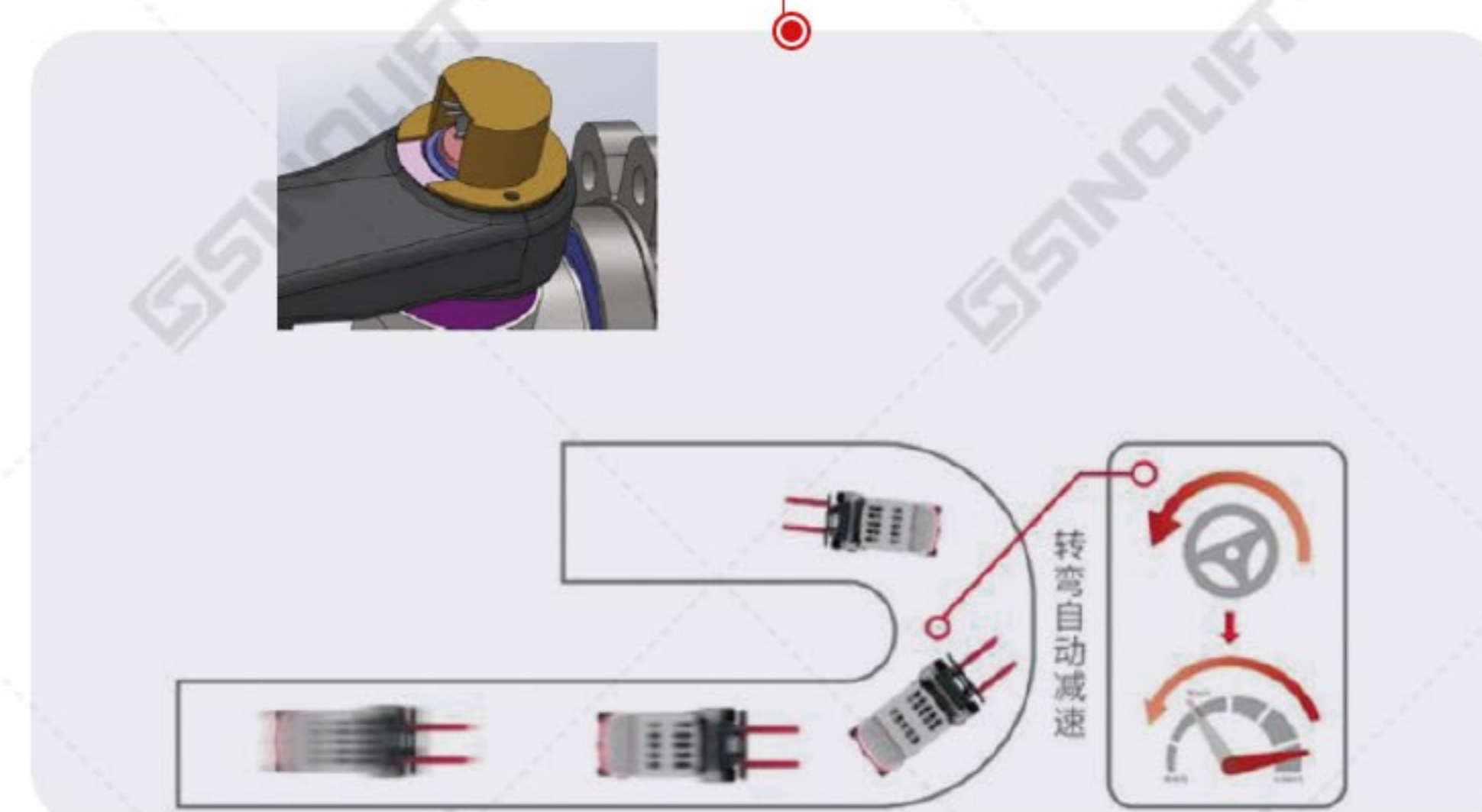
### Rain exposure test

The forklift's protection level reaches IP54. The wiring is neat and aesthetically pleasing, with no unnecessary bends, and has a higher conductivity efficiency. The wiring is made of high-durability and high-temperature-resistant materials to meet the requirements of rainy-day operations.



### High-efficiency transmission

It adopts a 38-speed transmission with large gear ratios, direct drive of the motor, resulting in low energy loss, high output power, enhanced driving speed and climbing ability, and more efficient operation.



### Turning intelligent speed limit

The vehicle automatically limits its speed when turning, and returns to normal driving speed after the turn. This ensures the safety of both people and vehicles when making a turn, and effectively prevents vehicle rollover accidents.



### Intelligent controller + LCD display

Monitor the power battery, motor, electrical components, etc. via the CAN bus. In case of leakage, short circuit, under-voltage and other faults, restrict the vehicle's related actions. Display the fault alarm through the screen, ensuring safe and reliable driving and riding. S/P/E 3-level speed adjustment, making driving and riding more intelligent.



### Standard configure LED lights

The forklift is equipped with standard LED lights, providing brighter, wider and more energy-efficient illumination, making night operations safer; the dual design of the middle-wide rearview mirror and reverse alarm ensures safer operation.



### Intelligent access system

It adopts two-level startup methods of power-on electric lock + PIN code or card swiping to prevent unauthorized personnel from making mistakes and causing safety accidents. It complies with the national TSG81 safety regulations requirements.



### New enhanced wide-view mast

The mast is widened, increasing the driver's field of vision by 20%. Customized special-shaped steel is used, making the structure more sturdy and with greater load-bearing capacity. It ensures safe and reliable operation.



### Ergonomic operation cabin

The operation space has been redesigned to be significantly larger, increasing by 50% compared to traditional forklifts. The ride and driving experience is more comfortable. The low-torque steering gear and small-diameter adjustable steering wheel provide a more effortless steering. The perforated anti-slip board and welded large handlebar ensure safer climbing.



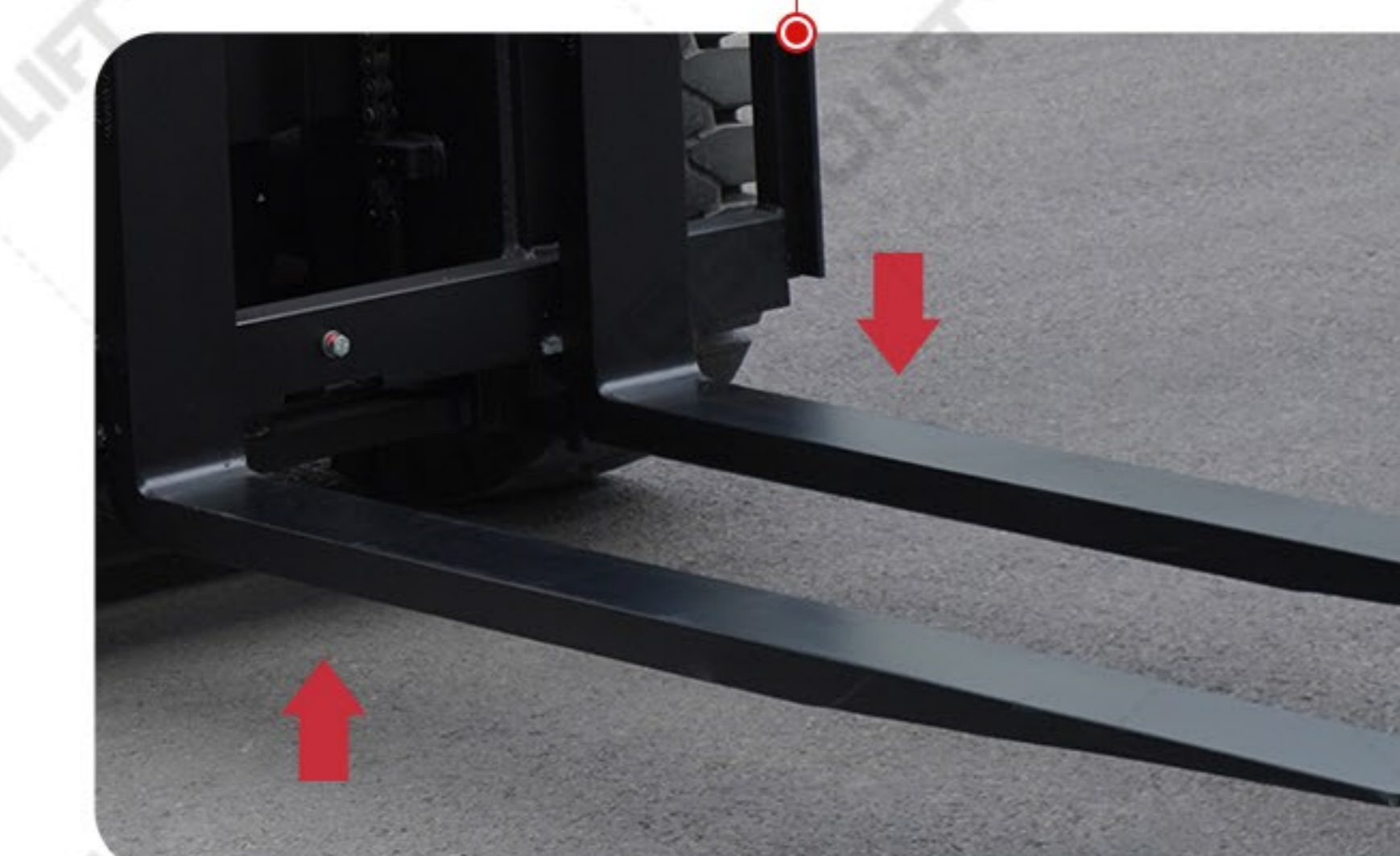
### Power LEP system

It adopts mature lithium iron phosphate battery cell modules (LiFe PO), with charging and discharging efficiency above 90%. It can be charged quickly within 1.5 to 2 hours. It can be charged on demand and is highly efficient and reliable. It has an extremely long lifespan of 5 years or 10,000 hours, with a capacity retention rate greater than 80%. It is equipped with leakage protection function, responds in milliseconds, and is safer to use.



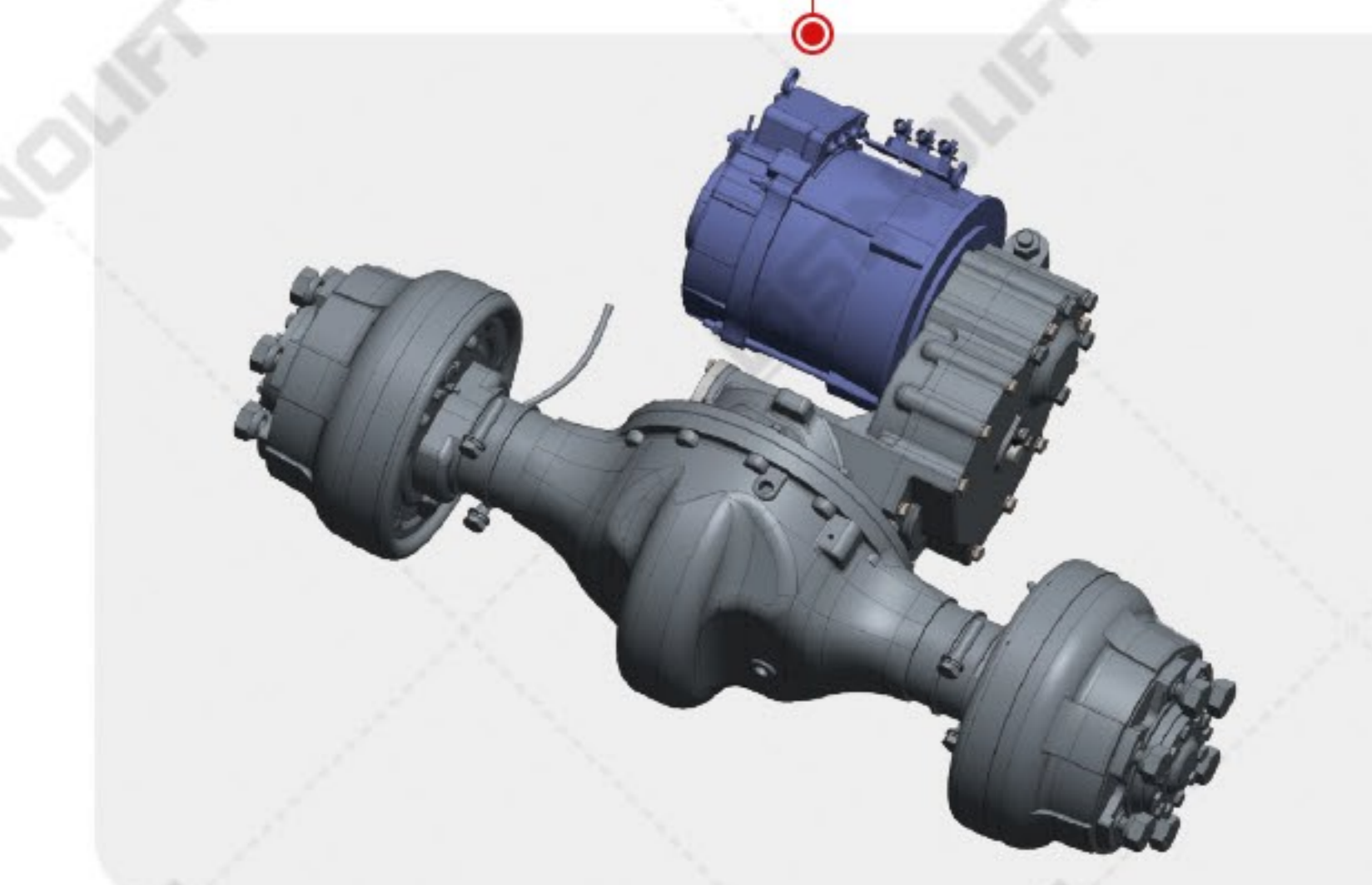
### Seat power-off protection

The luxurious surround seat with excellent shock absorption performance provides a more comfortable ride. The seat has a sensing function and automatically powers off when the driver gets out, cutting off the functions of lowering the frame and moving, making driving and riding safer.



### Soft landing

The intelligent sensing enables soft landing. When the fork is 100 - 60mm away from the ground, the descending will automatically slow down, so that the goods and pallet will not hit the ground and the goods and ground can be protected effectively.



### Direct drive motor

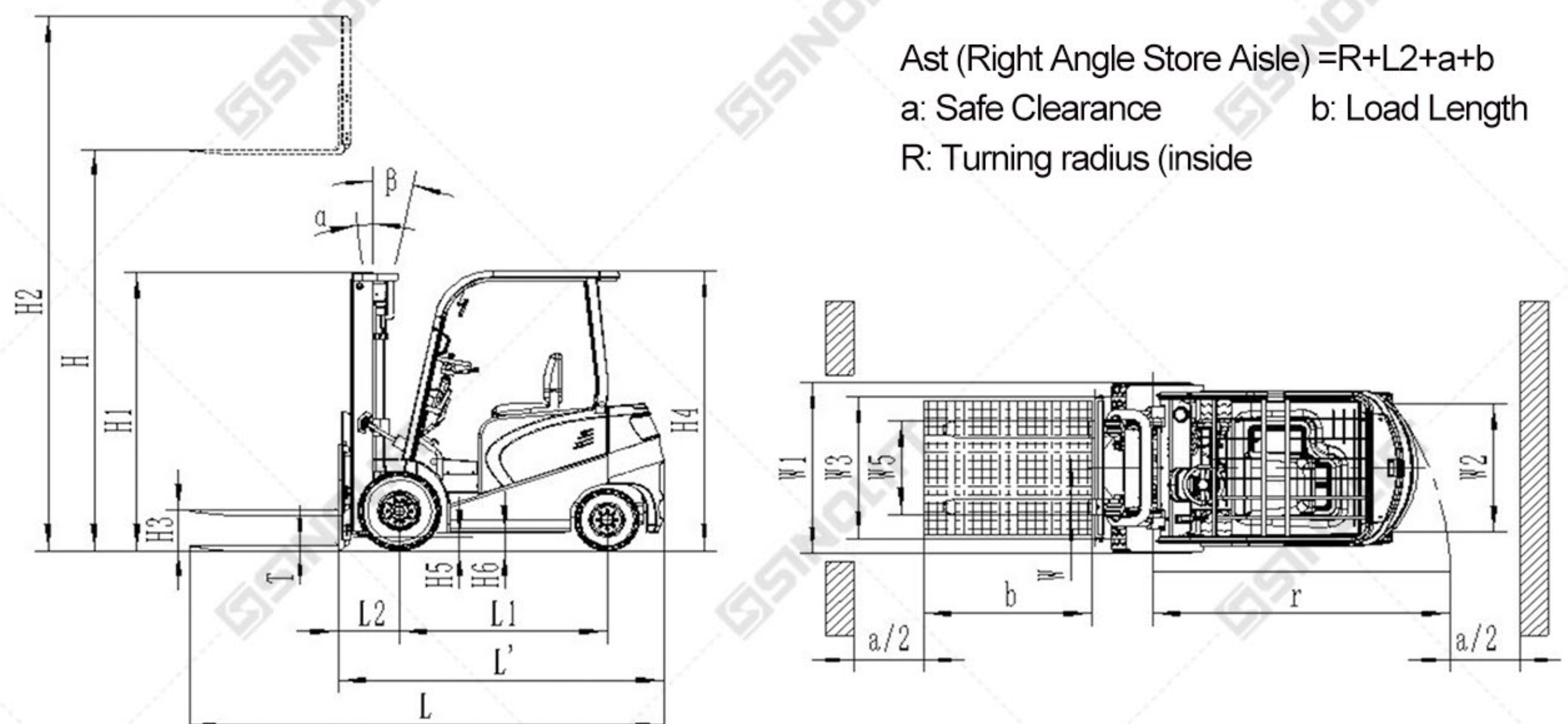
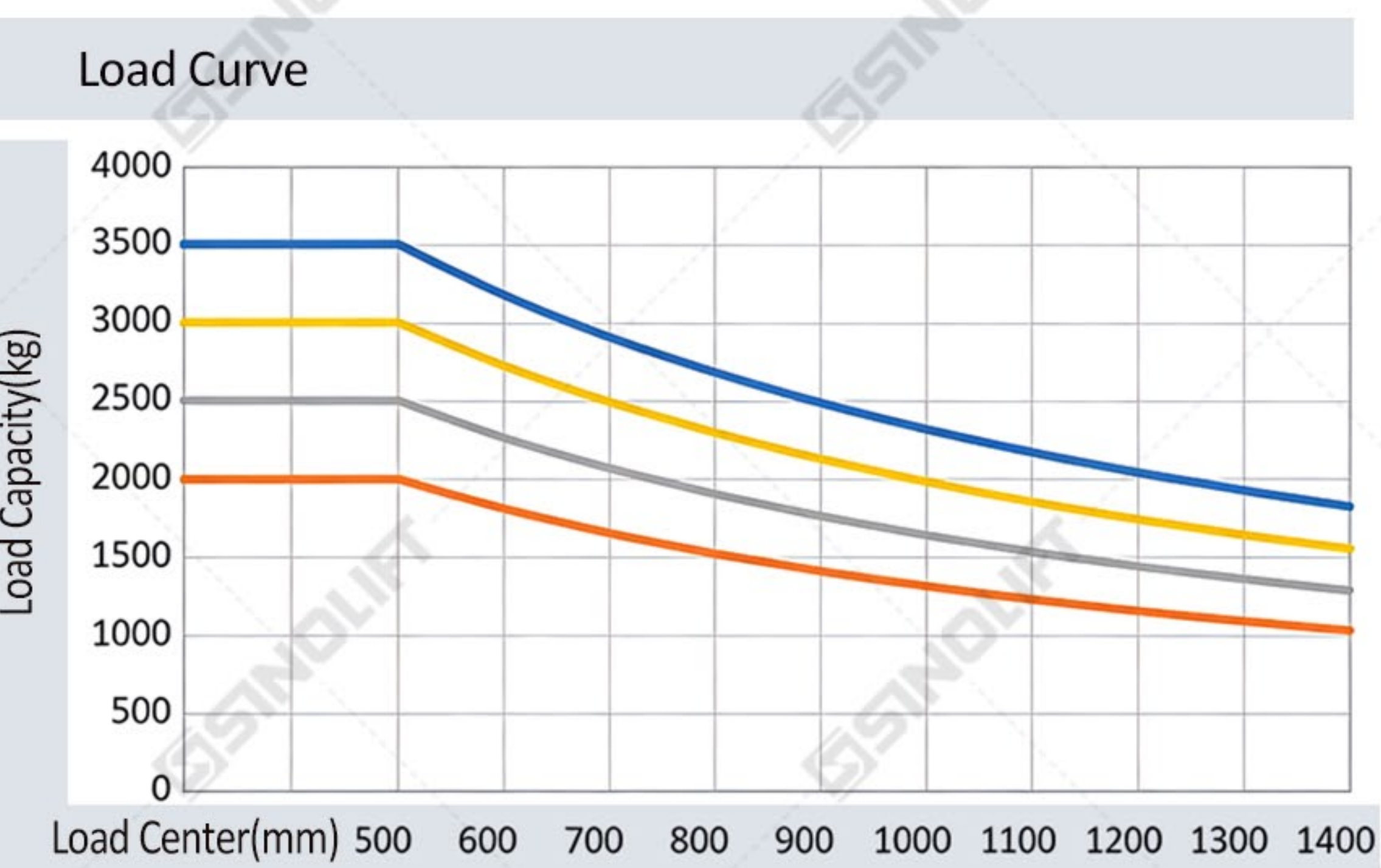
The walking motor directly converts electrical energy into mechanical energy, driving the gearbox to operate. It has low energy loss, fast starting speed, and energy utilization rate increases by over 30%. The driving and riding are efficient and reliable.



**SINOLIFT**

Characteristic	1.1	Manufacturer Brand		SINOLIFT				
	1.2	Model		CPD20MA7Li	CPD25MA7Li	CPD30MA7Li	CPD35MA7Li	
1.3	Power Type			Electric	Electric	Electric	Electric	
1.4	Operation Type			Seated	Seated	Seated	Seated	
1.5	Rated Capacity	Q	kg	2000	2500	3000	3500	
1.6	Load Centre	c	mm	500	500	500	500	
1.7	Front Overhang	L2	mm	445	445	475	490	
1.8	Wheelbase	L1	mm	1620	1620	1750	1750	
Size	2.1	Mast Tilt Angle	$\alpha/\beta$	$^{\circ}$	6/12	6/12	6/10	6/10
	2.2	Mast Lowered Height	H1	mm	2050	2050	2080	2080
	2.3	Free Lift Height	H3	mm	120	120	150	150
	2.4	Standard Mast Lift Height	H	mm	3000	3000	3000	3000
	2.5	Mast Extended Height	H2	mm	4045	4045	4150	4150
	2.6	Overhead Guard Height	H4	mm	2120	2120	2150	2150
	2.7	Distance from Botoom to Seat		mm	1070	1070	1070	1070
	2.8	Traction Bolt Height		mm	300	300	300	300
	2.9	Overall Length (include forks)	L	mm	3555	3555	3740	3760
	2.10	Length to Face of Fork	L'	mm	2485	2485	2670	2690
	2.11	Overall Width	W1	mm	1175	1175	1235	1235
	2.12	Fork Size	TxWxL4	mm	40/100/1070	40/122/1070	45/125/1070	50/125/1070
	2.13	Fork Type			ISO2328 2A	ISO2328 2A	ISO2328 3A	ISO2328 3A
	2.14	Fork Carriage Outline Width		mm	1038	1038	1100	1100
	2.15	Fork carriage spread width	W5	mm	225-972	247-995	250-1090	250-1090
	2.16	Ground Clearance Under Mast Laden	H5	mm	100	100	110	110
	2.17	Ground Clearance at Center of the Wheelbase	H6	mm	125	125	135	135
	2.18	Min. Right Angle Stacking Aisle Width (Pallet 1000x1000)	Ast	mm	3895	3895	4125	4140
	2.19	Min. Right Angle Stacking Aisle Width (Pallet 1200x1200)	Ast	mm	4095	4095	4325	4340
	2.20	Turing Radius	r	mm	2250	2250	2450	2450
Weight	3.1	Service Weight		kg	3300	3600	4300	4650
	3.2	Front Axle Rated Load Capacity with laden		kg	4720	5430	6640	7415
	3.3	Rear Axle Rated Load with Laden		kg	580	670	660	735
	3.4	Rated Load Capacity with unladen		kg	1290	1400	2020	2185
	3.5	Rear Axle Rated Load with unladen		kg	2010	2160	2280	2465
Tyre & Chassis	4.1	Tyre Type			Pneumatic	Pneumatic	Pneumatic	Pneumatic
	4.2	Tyre Size (Front)			7.00-12NHS-12PR	7.00-12NHS-12PR	28x9-15-14PR	28x9-15-14PR
	4.3	Tyre Size (Rear)			6.00-9-10PR	6.00-9-10PR	6.50-10-10PR	6.50-10-10PR
	4.4	Wheel Number (x=Drive Wheel)			2x/2	2x/2	2x/2	2x/2
	4.5	Front Tread		mm	970	970	1000	1000
	4.6	Rear Thread		mm	980	980	980	980
Performance	5.1	Max. Travel Speed (Laden/Unladen)		km/h	15/15	15/15	15/15	15/15
	5.2	Lifting Speed (Laden/Unladen)		mm/s	330/360	310/360	340/420	320/210
	5.3	Lowering Speed (Laden/Unladen)		mm/s	400/340	420/340	400/360	420/360
	5.4	Max. Gradeability (Laden/Unladen)		%	15/20	15/20	15/20	15/20
	5.5	Service Brake Type			Hydraulic	Hydraulic	Hydraulic	Hydraulic
	5.6	Parking Brake Type			Mechanical	Mechanical	Mechanical	Mechanical
Power & Transmission	6.1	Drive Motor Rating S2 60min		kW	16	16	16.6	16.6
	6.2	Lifting Motor Rating at S315%		kW	18	18	22.6	13/13.5
	6.3	Battery Voltag/Capacicty K5		V/Ah	76.8/202	76.8/202	76.8/280	76.8/280
	6.4	Battery Weight		kg	216	216	259	259
	6.5	Maximum Allowable Battery Size		mm	964x580x675	964x580x675	675x780x964	675x780x964
Other	7.1	Controller Brand			HAITIAN	HAITIAN	HAITIAN	HAITIAN
	7.2	Controller Model			E0080581	E0080581	E0080599	E0080599
	7.3	Attachment Pressure		bar	140	140	140	140
	7.4	Attachment Oil Volume		L/min	65	65	65	65
	7.5	Hydraulic oil tank volume		L	35	35	>=35	>=35
	7.6	Sound Level at Driver's Ear According to EN 12 053		dB	72	72	72	72

Note: "CPD" means full electric counter-balanced Forklift, "20/25" means rated load capacity 2T / 2.5T, "M" is serial code, "A" is equipped with full AC system, "7" is generation code, "Li" is equipped with lithium-ion battery, "S" means battery can be roll side out.



Note: The vertical axis represents the load capacity, and the horizontal axis represents the load center. The load center is calculated from the front of the fork. The reference point for the standard load is the center position of a cube with a load length of 1000 mm. When the mast is inclined forward, using non-standard forks, or loading loads wider than the normal width, the load capacity will decrease. Through the load curve diagram, one can promptly understand the load capacity of various load centers.

# Mast Size of 2-3.5T MA7 Series Counterbalanced Electric Forklift

## 2-Stage Wide View Duplex Mast

Mast Model	Lifting Height	Mast Height												Free Lift Height								Mast Tilt Angle		Rated Load Capacity			
		Retracted Mast Height				Height, with Mast Extended								With Backrest				Without Backrest				Forward/Backward		Load Center 500mm			
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2/2.5t	3/3.5t	2t	2.5t	3t	3.5t
		H1				H2				H3				α/β		Q											
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	kg	kg	
2M250	2500	1790	1790	1830	1880	3540	3540	3650	3650	3110	3110	3160	3160	120	120	145	150	120	120	145	150	6°/12°	6°/10°	2000	2500	3000	3500
2M270	2700	1890	1890	1930	1980	3740	3740	3850	3850	3310	3310	3360	3360	120	120	145	150	120	120	145	150	6°/12°	6°/10°	2000	2500	3000	3500
2M300	3000	2040	2040	2080	2130	4040	4040	4150	4150	3610	3610	3660	3660	120	120	145	150	120	120	145	150	6°/12°	6°/10°	2000	2500	3000	3500
2M330	3300	2190	2190	2230	2280	4340	4340	4450	4450	3910	3910	3960	3960	120	120	145	150	120	120	145	150	6°/12°	6°/10°	2000	2500	3000	3500
2M350	3500	2290	2290	2330	2430	4540	4540	4650	4650	4110	4110	4160	4160	120	120	145	150	120	120	145	150	6°/12°	6°/10°	2000	2500	3000	3500
2M400	4000	2590	2590	2630	2680	5040	5040	5150	5150	4610	4610	4660	4660	120	120	145	150	120	120	145	150	6°/12°	6°/6°	1900	2300	2850	3200
2M430	4300	2740	2740	2780	2830	5340	5340	5450	5450	4910	4910	4960	4960	120	120	145	150	120	120	145	150	6°/6°	6°/6°	1800	2100	2700	3000
2M450	4500	2840	2840	2880	2930	5540	5540	5650	5650	5110	5110	5160	5160	120	120	145	150	120	120	145	150	6°/6°	6°/6°	1700	2000	2500	2700
2M500	5000	3090	3090	3130	3180	6040	6040	6150	6150	5610	5610	5660	5660	120	120	145	150	120	120	145	150	6°/6°	6°/6°	1200	1450	2100	2300
2M550	5500	3390	3390	3430	3480	6540	6540	6650	6650	6110	6110	6160	6160	120	120	145	150	120	120	145	150	3°/6°	3°/6°	1050	1350	1600	1800
2M600	6000	3640	3640	3680	3730	7040	7040	7150	7150	6610	6610	6660	6660	120	120	145	150	120	120	145	150	3°/6°	3°/6°	700	900	1150	1300

note: ① With built-in side shift, the lifting capacity is reduced by 100kg; With external side shift, the lifting capacity is reduced by 200kg

## 2-Stage Full Free Lift Mast

Mast Model	Lifting Height	Mast Height												Free Lift Height								Mast Tilt Angle		Rated Load Capacity			
		Retracted Mast Height				Height, with Mast Extended								With Backrest				Without Backrest				Forward/Backward		Load Center 500mm			
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2/2.5t	3/3.5t	2t	2.5t	3t	3.5t
		H1				H2				H3				α/β		Q											
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	kg	kg	
2FFM200	2000	1495	1495	1625	1625	3005	3005	3175	3175	2670	2670	2775	2775	530	530	485	490	865	865	885	890	6°/12°	6°/12°	2000	2500	3000	3500
2FFM225	2250	1620	1620	1750	1750	3255	3255	3425	3425	2920	2920	3025	3025	655	655	610	615	990	990	1010	1015	6°/12°	6°/12°	2000	2500	3000	3500
2FFM250	2500	1745	1745	1875	1875	3505	3505	3675	3675	3170	3170	3275	3275	780	780	735	740	1115	1115	1135	1140	6°/12°	6°/12°	2000	2500	3000	3500
2FFM270	2700	1845	1845	1975	1975	3705	3705	3875	3875	3370	3370	3475	3475	880	880	835	840	1215	1215	1235	1240	6°/12°	6°/12°	2000	2500	3000	3500
2FFM300	3000	2005	2005	2070	2125	4035	4035	4230	4230	3695	3695	3725	3725	1030	1030	985	990	1365	1365	1385	1390	6°/12°	6°/12°	2000	2500	3000	3500
2FFM330	3300	2145	2145	2275	2275	4310	4310	4475	4475	3975	3975	4075	4075	1180	1180	1135	1140	1515	1515	1535	1540	6°/12°	6°/12°	2000	2500	3000	3500
2FFM350	3500	2245	2245	2375	2375	4505	4505	4675	4675	4170	4170	4275	4275	1280	1280	1235	1240	1615	1615	1635	1640	6°/12°	6°/12°	2000	2500	3000	3500
2FFM370	3700	2345	2345	2475	2475	4705	4705	4875	4875	4370	4370	4475	4475	1380	1380	1335	1340	1715	1715	1735	1740	6°/12°	6°/12°	2000	2500	3000	3500
2FFM400	4000	2545	2545	2675	2675	5005	5005	5175	5175	4670	4670	4775	4775	1580	1580	1535	1540	1915	1915	1935	1940	6°/12°	6°/12°	2000	2500	3000	3200 *3500

note: ① With built-in side shift, the lifting capacity is reduced by 100kg; With external side shift, the lifting capacity is reduced by 200kg; ② \* Indicates the rated load capacity for the front wheels with dual tires.

## 3-Stage Full Free Lift Mast

Mast Model	Lifting Height	Mast Height												Free Lift Height								Mast Tilt Angle		Rated Load Capacity			
		Retracted Mast Height				Height, with Mast Extended								With Backrest				Without Backrest				Forward/Backward		Load Center 500mm			
		2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2t	2.5t	3t	3.5t	2/2.5t	3/3.5t	2t	2.5t	3t	3.5t
		H1				H2				H3				α/β		Q											
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	kg	kg	
3FFM400	4000	1912	1912	2070	2070	5045	5045	5150	5150	4600	4600	4680	4700	944	944	960	970	1384	1384	1420	1420	6°/6°	6°/6°	1850	2250	2800	3200
3FFM450	4500	2079	2079	2235	2235	5545	5545	5650	5650	5100	5100	5180	5200	1111	1111	1125	1135	1551	1551	1585	1585	6°/6°	6°/6°	1750 *1800	2150 *2300	2350 *2650	2650 *2850
3FFM500	5000	2246	2246	2400	2400	6045	6045	6150	6150	5600	5600	5680	5700	1278	1278	1290	1300	1718	1718	1750	1750	6°/6°	6°/6°	1600 *1750	1650 *2250	2050 *2250	2250 *2450
3FFM550	5500	2463	2463	2620	2620	6545	6545	6650	6650	6100	6100	6180	6200	1445	1445	1455	1465	1885	1885	1915	1915	3°/6°	3°/6°	1050 *1200	1200 *1350	1600 *1800	1750 *1950
3FFM600	6000	2630	2630	2785	2785	7045	7045	7150	7150	6600	6600	6680	6700	1612	1612	1620	1630	2052	2052	2080	2080	3°/6°	3°/6°	700 *850	800 *950	1100 *1300	1250 *1450

note: ① With built-in side shift, the lifting capacity is reduced by 100kg; With external side shift, the lifting capacity is reduced by 200kg; ② \* Indicates the rated load capacity for the front wheels with dual tires.

## SINOLIFT Lithium-ion chargers for counterbalance trucks



The chargers supplied by SINOLIFT have an extremely stable housing construction with wall bracket for easy mounting. An LED display informs the operator about the battery's charge status. The connection to the charger is made via a charging cable, which is within easy reach on the vehicle battery.

### Intelligent Battery Management System (BMS) BMS

The battery management system in the SINOLIFT Li-Ion batteries communicates with the vehicle and the charger via a CAN bus interface. It informs the operator via display about the state of charge and the remaining runtime. In addition, the intelligent BMS ensures that the Li-Ion battery is neither deep discharged nor overcharged and thus contributes to a long battery life and efficient use of the industrial truck.

### Intermediate charging

The Li-Ion battery can be opportunity charged without any problems, for example during breaks, without loss of capacity or damage to the battery. The battery cover does not have to be opened for this. The driver can connect the plug of the charger to the side of the Li-Ion battery. After only a short time, 50 % of the charge level is available again. Lead-acid batteries lose part of their capacity when not in use, during intermediate charging or when charging is interrupted. The complete charging process for counterbalance trucks with Li-Ion batteries is completed after approx. 2 hours, whereas it takes significantly longer for vehicles with lead-acid batteries.

## Powerful performance, High efficiency

Customers can freely choose from the 3 different configurations: S, P, E. Especially P and E configurations are comparable with internal combustion trucks in terms of comprehensive performance.

			
<b>15%</b> Maximum gradeability with load	<b>15km/h</b> Driving speed	<b>0.34m/s</b> Lifting speed with load	<b>0.42m/s</b> Lifting speed without load

Note: the data displayed are all based on the model CPD30MA7Li, and data for other trucks are shown in the table of technical parameters.

## Various Attachments

Side Shift



Hinged Fork



Hinged Bucket



Rotating Fork



Push Pull



Rotating Roll Clamp



Load Stabilizer



Carton Clamp



Pallet Invert



Drum Clamp



Bale Clamp



Load Extender



Fork Positioner



All Sinolift products are strictly controlled in accordance with ISO9001 and ISO14000 standards from design and development to after-sales service. Each product has passed the in-factory load test, and the test results prove that the product quality is high-quality and reliable and meets the actual requirements of users.

## Standard Features

- Lithium packs with low temperature electric heating systems
- Battery charger
- High-power AC drive motor
- High-power AC pump motor
- Low noise gear pump
- Multi-function color screen instrument cluster
- Large integral rubber pedal pad
- LED combination headlights, LED rear combination taillights
- Stamped iron hood
- Soft landing system
- SPE power selection
- Charging muzzle meeting national standards
- Electronic cooling fan
- Emergency cut-o switch
- Reversing buzzer
- Traction pin
- Load sensing steering system
- Duplex mast
- Tilt cylinder jacket
- Multi-functions dashboard
- Full electronic controlled travelling, lifting and steering
- Sheet metal stamping made front and rear bottom plate
- Sheet metal stamping made left and right cover and battery cover
- Full hydraulic steering
- Storage box
- Soft landing system
- Standard forks
- 3m duplex wide view mast
- Center located rear view mirror
- Suspension seat with higher OHG
- Turning speed is automatically reduced when steering
- The cover below control panel are fully closed
- Central rearview mirror
- CAN bus controller
- Integrated rubber floor mat
- Full hydraulic power steering
- Low-resistance wear-resistant pneumatic tires
- Integrated stamped engine cover
- Identity recognition

## Options

- Side way battery change
- Big capacity Chinese made battery
- Cold store application
- High performance import battery
- Rear lighting system
- Suspension Seat
- Front dual tyre
- SE tyre
- Non-marking tyre
- Left and right rear view mirror
- Reversing hand grip with horn button
- Wide fork carriage
- Wide or higher load backrest
- Other dimension forks
- Duplex mast with full free lift
- Triplex mast with full free lift
- Integrated side shift
- Other attachments
- OPS
- Blue spot light
- Dashboard is relocated to overhead, no restriction of the operator's visibility
- EPB: Electronic Parking Brake
- Front windshield (with wipers)
- Fire extinguisher
- Cabin