

HELI

# CPD15/18/20/25 /30/35/38

A3LiH4-M A7LiH4-S A7XLiH4-S



HELI



**1.5-3.8 t** **LiION**

H4 series Lithium-ion Battery  
Forklift Truck



# Lead & Lithium Are Ready To Go.

- / People oriented design concept
- / Inheritance family design concept
- / Seek breakthrough in a appearance
- / Showing dynamic charm in design details

## Comfort and energy saving

01-02

The user experience is fully considered, and the superior operating space design provides high driving comfort.

## Stable and Reliable

03-04

CAE analysis, component bench test and whole truck strength testing are used to ensure reliability.

## Intelligent security

05

Intelligent control and protection improve the safety of drivers.

## Convenient maintenance

06

More convenient maintenance operation improves the maintenance efficiency of after-sales services.

# Comfort and energy saving

The user experience is fully considered, and the superior operating space design provides high driving comfort.

Wide view mast design, wide front view

The big handle and the super spacious cab design are suitable for people of different heights.

Steering wheel start steering (optional)

P, E, S three speed regulation

- P — Powerful
  - E — Economics
  - S — Energy saving
- Multi gear performance mode can be freely selected according to actual working conditions.



The whole truck is equipped with LED lighting system as standard, with high brightness, long service life and more energy saving

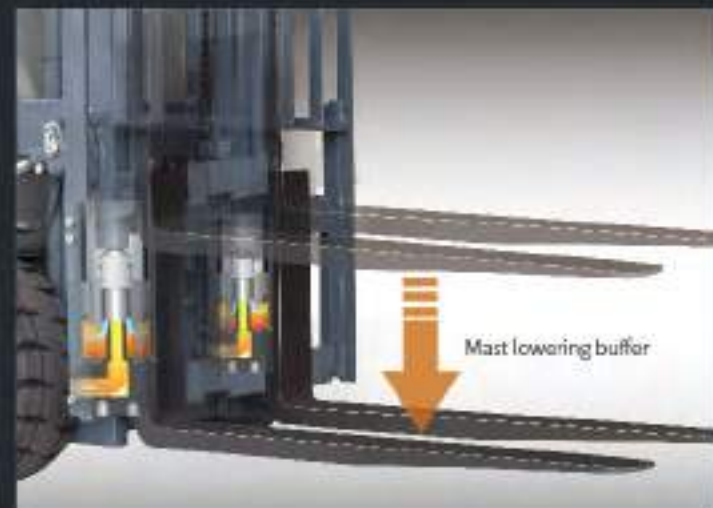
Reversing horn handle (s optional, M standard)



Semi enclosed shock-absorbing seat offers high comfort.



Electric special pattern tyre has low driving damping.



Mast lowering buffer



Gentry lifting buffer (optional)

Right set operating valve stem offers good operation comfort.

Intelligent color screen instrument offers more friendly human-computer interaction.



Graphical interface design / Chinese fault display / integrated handheld unit function / optional integrated vehicle networking function



Full package design of instrument panel; Water cupholder, mobile phone storage space, USB interface (optional for S, standard for M)

# Stable and Reliable

CAE analysis, component bench test and whole truck strengthening test are used to ensure reliability.

## Reliable components



**Steering axle:**  
Cast axle body, tapered roller bearing



**Drive axle:**  
integral brake drum, integral cast axle housing, half shaft oil seal design, high-precision gear with large coincidence



**Mast:**  
Borrowing the main components of mature mast of internal combustion forklift truck

Sheet metal stamping side cover

All metal anti-skid pedal



## Good lateral stability of the whole truck and guaranteed safety during operation



High rotation point steering axle



Middle and sink layout of the battery

## Good heat dissipation



Side mounted welded oil tank



## Test verification



**Rain test**

Simulate the operation under 15min rainstorm, reach IP64 protection grade, and meet the needs of outdoor operation.



**Cold storage test**

The whole truck can run continuously after 6 hours of alternating operation in the -20℃ cold storage and 12 hours of parking in the cold storage.



**Vehicle vibration test**

The vibration frequency of the whole truck is tested to optimize and improve the operating comfort.



**Reliability endurance test**

800 hour strengthening of the whole truck (including climbing, win, bumpy road, etc.)

## Intelligent security

Intelligent control and protection  
improve the safety of drivers.

- Dual core controller
- OPS protection  
(standard driving OPS / optional hydraulic OPS)
- Hydraulic burst protection,  
forward tilting self-locking  
protection
- Electrical multiple protection  
(short circuit protection, overheat protection,  
low power protection, sequence protection)
- Parking safety reminder
- Reminder through slow  
sliding on ramp
- Turning automatic  
deceleration (optional)

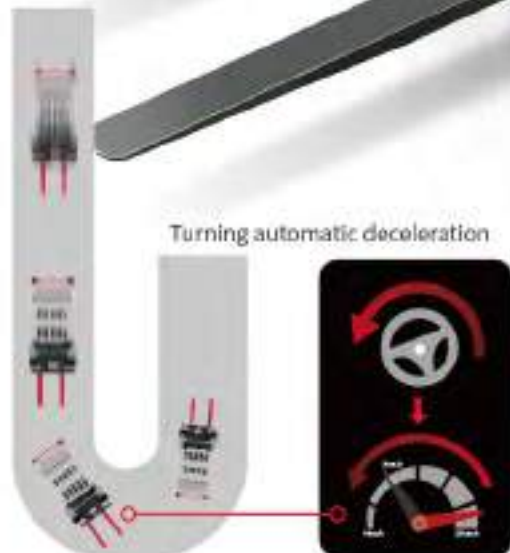


- Flexible battery charging mode (can be charged with the truck or replaced)
- Pump, pump motor, controller and other main electrical components are located on the counterweight, which is convenient for maintenance.
- Friendly interface



## Convenient maintenance

More convenient maintenance operation  
improves the maintenance efficiency of  
after-sale services.

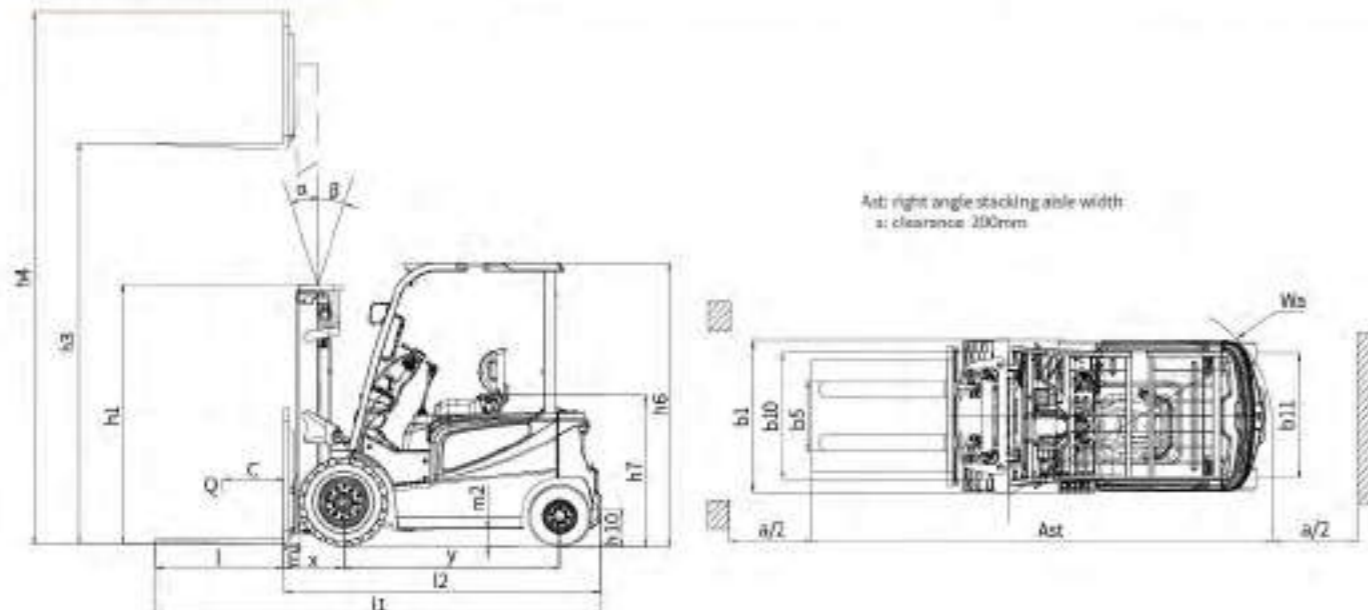


Manufacturer and Technical Data (Tabulation 1)

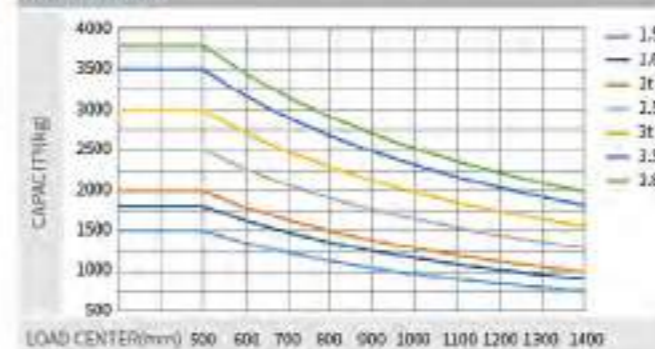
Characteristics		HELI					
1.01	Manufacturer	HELI					
1.02	Model	CPD15	CPD18	CPD15	CPD18	CPD20	
1.03	Configuration number	A3LH4-M		A7LH4-S		A7XLH4-S	
1.04	Rated capacity	1500	1800	1500	1800	2000	
1.05	Load center distance	Q	c	500			
1.06	Power mode	Lithium battery					
1.07	Driving mode	Seated					
1.08	Front overhang	x	mm	409		414	
1.09	Wheelbase	y	mm	1475		1475	
Weight							
2.01	Total weight (with/without battery)	kg	2855/2575	2970/2790	2835/2672	2950/2787	3100/2929
2.02	Axle load (laden, front/rear)	kg	3719/636	4203/567	3711/624	4196/555	4547/553
2.03	Axle load (unladen, front/rear)	kg	1294/1561	1293/1677	1287/1548	1286/1664	1308/1792
Tyres							
3.01	Tyre type	Pneumatic tyre		Pneumatic tyre			
3.02	Tyre size, front	6.50-10-10PR		6.50-10-10PR			
3.03	Tyre size, rear	16x6-8-10PR		16x6-8-10PR			
3.04	Wheels, number front/rear (x-driven wheels)	2/2		2/2			
3.05	Tread, front	b10	mm	934		934	
3.06	Tread, rear	b11	mm	920		920	
Dimensions							
4.01	Mast tilt angle (forward/backward)	α/β	°	6/8		6/8	
4.02	Height (mast lowered)	h1	mm	1995		1995	
4.03	Free lifting height	h2	mm	155		155	
4.04	Lifting height (standard)	h3	mm	3000		3000	
4.05	Max. height, extended (with backrest)	h4	mm	4014		4014	
4.06	Height of overhead guard	h6	mm	2130		2130	
4.07	Seat height relating to SIP (to ground)	h7	mm	1125		1125	
4.08	Towing coupling height	h10	mm	250		250	
4.09	Overall length (with fork)	l1	mm	3120		3125	
4.10	Overall length (without fork)	l2	mm	2200		2205	
4.11	Overall width	b1	mm	1120		1120	
4.12	Fork size: thickness x width x length			2A		2A	
4.13	Fork carriage, according to ISO2328	s/e/l	mm	35x100x920		35x100x920	
4.14	Distance across fork-arms, Max./Min.	b5	mm	960/200		960/200	
4.15	Ground clearance (at mast)	m1	mm	100		100	
4.16	Ground clearance (center of wheelbase)	m2	mm	95		95	
4.17	Right angle stacking aisle width for pallet 1200x1200mm crossways	Ast	mm	3575		3580	
4.18	Right angle stacking aisle width for pallet 800x1200mm crossways	Ast	mm	3770		3775	
4.19	Min. outside turning radius	Ws	mm	1920		1920	
Performance data							
5.01	Travel speed (laden/unladen)	km/h	14.5/15		12/13		
5.02	Lift speed (laden/unladen)	m/s	0.320/0.440	0.290/0.440	0.290/0.400	0.270/0.400	0.260/0.400
5.03	Lowering speed (laden/unladen)	m/s	0.400/0.400		0.400/0.400		
5.04	Max. drawbar pull (laden)	N	10200/9700	10200/9800	10200/9700	10200/9800	11000/10700
5.05	Max. gradeability (laden/unladen)	%	17/21	15/26	15/23	15/22	15/25
5.06	Acceleration time (10 m) (laden/unladen)	s	5.5/5.2	5.6/5.3	6.0/5.7	6.1/5.8	5.6/5.2
Battery							
6.01	Battery voltage/Capacity	V/Ah	80/150		80/125		80/150
6.02	Battery weight	kg	180		163		180
Motor and controller							
7.01	Driving motor powering (52-60min)	kW	8		8		
7.02	Lifting motor powering (53-15%)	kW	10.6		10.6		
7.03	Driving motor controlling mode	MOSFET/AC					
7.04	Lifting motor controlling mode	MOSFET/AC					
Addition data							
8.01	Service brake/Parking brake	Hydraulic/Mechanical					
8.02	Operating pressure for attachments	Mpa	16				

Manufacturer and Technical Data (Tabulation 2)

Characteristics		HELI									
1.01	Manufacturer	HELI									
1.02	Model	CPD20	CPD25	CPD20	CPD25	CPD30	CPD35	CPD30	CPD35	CPD38	
1.03	Configuration number	A3LH4-M		A7LH4-S		A3LH4-M		A7LH4-S		A7LH4-S	
1.04	Rated capacity	2000	2500	2000	2500	3000	3500	3000	3500	3800	
1.05	Load center distance	Q	c	500							
1.06	Power mode	Lithium battery									
1.07	Driving mode	Seated									
1.08	Front overhang	x	mm	460		477	482	477	482	482	
1.09	Wheelbase	y	mm	1660		1750		1750		1780	
Weight											
2.01	Total weight (with/without battery)	kg	3586/3395	3925/3735	3540/3375	3980/3715	4550/4310	4860/4620	4500/4290	4810/4600	5240/5000
2.02	Axle load (laden, front/rear)	kg	4970/615	5790/635	4940/600	5760/620	6750/800	7630/730	6710/790	7590/720	8150/880
2.03	Axle load (unladen, front/rear)	kg	1750/1835	1780/2145	1720/1820	1750/2130	2050/2500	2110/2750	2010/2490	2070/2740	2220/3020
Tyres											
3.01	Tyre type	Pneumatic tyre					Front Pneumatic tyre/Rear Solid tyre				
3.02	Tyre size, front	7.00-12-14PR					28x9-15-14PR				
3.03	Tyre size, rear	18x7-8-14PR					18x7-8				
3.04	Wheels, number front/rear (x-driven wheels)	2/2					2/2				
3.05	Tread, front	b10	mm	970		1000		1080			
3.06	Tread, rear	b11	mm	960		970		970			
Dimensions											
4.01	Mast tilt angle (forward/backward)	α/β	°	6/10		6/10		6/10			
4.02	Height (mast lowered)	h1	mm	2000		2070	2120	2070	2120	2180	
4.03	Free lifting height	h2	mm	165		155		165		160	
4.04	Lifting height (standard)	h3	mm	3000		3000		3000			
4.05	Max. height, extended (with backrest)	h4	mm	4320		4217		4217			
4.06	Height of overhead guard	h6	mm	2170		2180		2185			
4.07	Seat height relating to SIP (to ground)	h7	mm	1154		1164		1164			
4.08	Towing coupling height	h10	mm	300		310		310			
4.09	Overall length (with fork)	l1	mm	3354	3504	3354	3504	3637	3642	3637	3682
4.10	Overall length (without fork)	l2	mm	2434		2567	2572	2567	2572	2612	
4.11	Overall width	b1	mm	1180		1280		1392			
4.12	Fork size: thickness x width x length			2A		3A					
4.13	Fork carriage, according to ISO2328	s/e/l	mm	40x122x920	40x122x1000	40x122x920	40x122x1070	45x125x1070	50x125x1070	50x125x1070	
4.14	Distance across fork-arms, Max./Min.	b5	mm	1030/250		1060/250		1060/250			
4.15	Ground clearance (at mast)	m1	mm	100		110		125			
4.16	Ground clearance (center of wheelbase)	m2	mm	125		135		140			
4.17	Right angle stacking aisle width for pallet 1200x1200mm crossways	Ast	mm	3753		3912	3917	3912	3917	3952	
4.18	Right angle stacking aisle width for pallet 800x1200mm crossways	Ast	mm	3953		4115	4117	4115	4117	4152	
4.19	Min. outside turning radius	Ws	mm	2140		2235		2270			
Performance data											
5.01	Travel speed (laden/unladen)	km/h	14.5/15		12/13		14.5/15		12/13		
5.02	Lift speed (laden/unladen)	m/s	0.320/0.440	0.290/0.440	0.290/0.400	0.270/0.400	0.320/0.440	0.290/0.440	0.290/0.400	0.270/0.400	
5.03	Lowering speed (laden/unladen)	m/s	0.360/0.460		0.400/0.400		0.400/0.400		0.400/0.400		
5.04	Max. drawbar pull (laden)	N	13600/13000	14000/13300	13600/13000	14000/13300	16300/15800	17000/16600	16300/16000	16900/15900	16800/16200
5.05	Max. gradeability (laden/unladen)	%	17/26	15/25	15/25	15/25	17/26	15/25	15/22	15/20	
5.06	Acceleration time (10 m) (laden/unladen)	s	5.9/5.0	6.1/5.0	6.0/5.3	6.2/5.3	5.7/5.1	6.1/5.2	5.8/5.3	6.3/5.4	6.2/5.2
Battery											
6.01	Battery voltage/Capacity	V/Ah	80/202		80/150		80/250		80/202	80/250	
6.02	Battery weight	kg	190		165		240		210	240	
Motor and controller											
7.01	Driving motor powering (52-60min)	kW	11		11		15		15		
7.02	Lifting motor powering (53-15%)	kW	12		12		16		16		
7.03	Driving motor controlling mode	MOSFET/AC									
7.04	Lifting motor controlling mode	MOSFET/AC									
Addition data											
8.01	Service brake/Parking brake	Hydraulic/Mechanical									
8.02	Operating pressure for attachments	Mpa	16								



Load curve



Note:  
The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front surface of the forks to the gravity of the standard load. The standard load means a cubic with 1000mm edge length. When mast is tilted forward, using non-standard forks or loading large goods, the load capacity will be reduced. The load capacity of standard mast at different load center can be known from this load chart.



3t/3.5t/3.8t Mast parameters

Mast type	Mast model	Raising height (mm)	Load capacity (load center 500mm)(kg)			Height (mast lowered)(mm)			Free lift (with backrest)(mm)			Service weight (kg)					Mast angle(B°)
			3t	3.5t	3.8t	3t	3.5t	3.8t	3t	3.5t	3.8t	3t-S	3t-M	3.5t-S	3.5t-M	3.8t-S	
2-stage standard mast	M200	2000	3000	3500	3800	2570	1620	1600	155	150	160	4404	4404	4704	4754	5134	6/10
	M250	2500	3000	3500	3800	1820	1870	1930	155	150	160	4452	4502	4757	4807	5187	6/10
	M300	3000	3000	3500	3800	2070	2120	2180	155	150	160	4500	4550	4810	4860	5240	6/10
	M330	3300	3000	3500	3800	2220	2270	2330	155	150	160	4539	4579	4841	4892	5272	6/10
	M350	3500	3000	3500	3800	2320	2370	2430	155	150	160	4548	4598	4863	4913	5293	6/10
	M370	3700	3000	3300	3800	2420	2470	2530	155	150	160	4567	4617	4884	4934	5314	6/6
	M400	4000	2650	3150	3700	2620	2670	2730	155	150	160	4647	4697	4968	5018	5398	6/6
	M425	4250	2750	3250	3800	2745	2795	2855	155	150	160	4671	4721	4994	5044	5424	6/6
	M450	4500	2850	3350	3800	2870	2920	2980	155	150	160	4695	4745	5021	5071	5451	6/6
	M500	5000	2950	3450	3800	3120	3170	3230	155	150	160	4743	4793	5074	5124	5504	6/6
2-stage full free mast	M350	3500	3000	3500	3800	3420	3470	3530	155	150	160	4841	4891	5178	5228	5608	6/6
	M600	6000	3300	3800	3800	3670	3720	3780	155	150	160	4889	4939	5231	5281	5661	6/6
	ZM200	2000	3000	3500	3800	1570	1620	1680	340	443	503	4432	4482	4728	4778	5158	6/10
	ZM250	2500	3000	3500	3800	1820	1870	1930	590	693	753	4482	4532	4781	4831	5211	6/10
	ZM300	3000	3000	3500	3800	2070	2120	2180	840	943	1003	4532	4582	4836	4886	5266	6/10
	ZM330	3300	3000	3500	3800	2220	2270	2330	960	1063	1123	4564	4614	4868	4918	5298	6/10
	ZM350	3500	3000	3500	3800	2320	2370	2430	1060	1163	1223	4584	4634	4888	4938	5318	6/10
	ZM370	3700	3000	3300	3800	2420	2470	2530	1160	1263	1323	4604	4654	4910	4960	5340	6/6
	ZM400	4000	2650	3100	3700	2620	2670	2730	1350	1493	1553	4682	4732	4990	5040	5420	6/6
	ZM425	4250	2750	3200	3800	2745	2795	2855	1515	1618	1678	4708	4758	5017	5067	5447	6/6
3-stage full free mast	ZM450	4500	2850	3300	3800	2870	2920	2980	1640	1743	1803	4736	4786	5048	5098	5478	6/6
	ZM500	5000	2950	3400	3800	3120	3170	3230	1860	1963	2023	4760	4810	5074	5124	5504	6/6
	ZM550	5500	3050	3500	3800	3420	3470	3530	2180	2293	2353	4889	4939	5206	5256	5636	6/6
	ZM600	6000	3150	3600	3800	3670	3720	3780	2440	2543	2603	4942	4992	5263	5313	5693	6/6
	ZSM300	3000	2650	3250	3800	1870	1870	1990	640	640	693	4643	4693	4921	4971	5354	6/6
	ZSM400	4000	2750	3300	3700	2020	2020	2055	790	790	843	4684	4734	4962	5012	5395	6/6
	ZSM435	4250	2850	3400	3800	2120	2120	2180	890	890	943	4713	4763	4991	5041	5424	6/6
	ZSM450	4500	2950	3500	3800	2220	2220	2290	940	940	993	4738	4788	5026	5076	5459	6/6
	ZSM470	4700	3050	3600	3800	2290	2290	2355	1000	1000	1053	4746	4796	5024	5074	5457	6/6
	ZSM480	4800	3150	3700	3800	2270	2270	2330	1040	1040	1093	4756	4806	5034	5084	5467	6/6
ZSM500	5000	3250	3800	3800	2370	2370	2430	1140	1140	1193	4783	4833	5061	5111	5494	6/6	
ZSM540	5400	3350	3900	3800	2470	2470	2555	1240	1240	1290	4813	4863	5091	5141	5524	6/6	
ZSM600	6000	3450	4000	3800	2670	2670	2780	1440	1440	1493	4917	4967	5193	5243	5628	6/6	
ZSM650	6500	3550	4100	3800	2870	2870	—	1640	1640	—	4972	5022	5250	5300	—	—	
ZSM700	7000	3650	4200	3800	3045	3045	—	1815	1815	—	5022	5072	5300	5350	—	—	

Note: \* indicates the rated load capacity of the front wheel with twin tyres; When the front wheels of 3.5-3.8t are twin tyres (pneumatic tyres) and twin tyres (solid tyres), the service weight is increased by 140kg and 200kg respectively according to the table data; When the front wheels of 3.8t are twin tyres (pneumatic tyres) and twin tyres (solid tyres), the service weight is increased by 100kg and 251kg respectively according to the table data.  
 2-stage full free mast: 2: When there is a backrest, the free lifting height increases by 407mm; 3.5-3.8t: When there is no backrest, the free lifting height increases by 407mm.  
 3-stage full free mast: 3: When there is no backrest, the free lifting height increases by 407mm; 2.5-3.8t: When there is no backrest, the free lifting height increases by 407mm.

Optional item

Optional item	Model	S
Basic items	Pneumatic tyre*	●
	Solid tyre	○
	Single tyre (front wheel)	●
	Twin tyre (front wheel)**	○
	Two piece valve	●
	Three or four piece valve	○
	Basic type: 3M lifting height mast	●
	Other type and other height series mast***	○
	Standard series fork	●
	Non standard series forks and attachments	○
	Standard exterior color (blue grey + Hell red)	●
	Other exterior colors (customized)	○
	Turning speed limit	○
	Reversing armrest with horn switch	○
	Overspeed 5km / h alarm	○
Overspeed 8km / h alarm	○	
Overspeed 10km / h alarm	○	
Safety items	Travelling + lifting + tilting + equipped with OPS function (without lowering)	●
	Full set of OPS functions	○
	Seat belt switch	○
	Multi way valve overload	●
	Dry powder fire extinguisher (0.5kg)	○
	Dry powder fire extinguisher (2kg)	○
	Carbon dioxide fire extinguisher (2kg)	○
	Reversing buzzer	●
	Reversing Chinese speaker	○
	No universal key	●
	With universal key	○
	Electronic lifting upper buffer	○
	Central wide-angle rearview mirror	●
	Both side rear-view mirrors + center wide-angle rear-view mirror	○
	Reversing radar (4 probes)	○
Comfort items	Reversing image (1 Camera + 4 radar probes)	○
	Semi enclosed seat	●
	Fully suspended seat	○
	Instrument panel with 1 USB interface (5V / 1A)	○
	Steering wheel starts steering	○
	Synchronous steering	○
	Steering wheel with handle ball	●
	Steering wheel without handle ball	○
	Electric fan	○
	panel mounted cab (including fan + wiper)	○
	Heater	○
	Single cooling air conditioner	○
	Single cooling air conditioner + heater	○
	Front windshield (including wiper)	○
	Rear windshield	○
Non standard overhead guard	Top windshield (excluding fan)	○
	50mm increased of overhead guard height	○
	50mm reduced of overhead guard height	○
	Overhead guard (with protective net)	○
	LED rear work light (1)	○
Lights	Rear LED red / Blue spotlight (1)	○
	Rear and lateral red / blue bar lights	○
	Fixed LED flashing warning light	○
	Fixed LED rotary warning lamp	○
	Fixed LED rotary buzzer warning light	○
Others	Metric thread	●
	Tilt cylinder jacket	○
	Steering cylinder jacket	○
	REMA 320 charging port	●
	Onboard charger	○
FICS standard type (for China)	○	

Note: ●Standard ; ○Optional ;  
 Some non-standard options need to be customized. Please consult local sales personnel or product development technicians before purchasing.  
 \*3.8t rear wheel is equipped with solid tyre as standard.  
 \*\*The small 2t truck is not equipped with twin tyres.  
 \*\*\*There are restrictions on the type and height of small 2t and 3.8t mast. See the table of mast parameters for details.