

**HELI**

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**HELI**

# CPD 30/35/38

K2B11LI-H

K2C11LI-S



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**ION 3-3.8 t**  
K2 Series Lithium Battery Forklift Truck

HELI

It is time to replace your oil-powered trucks.

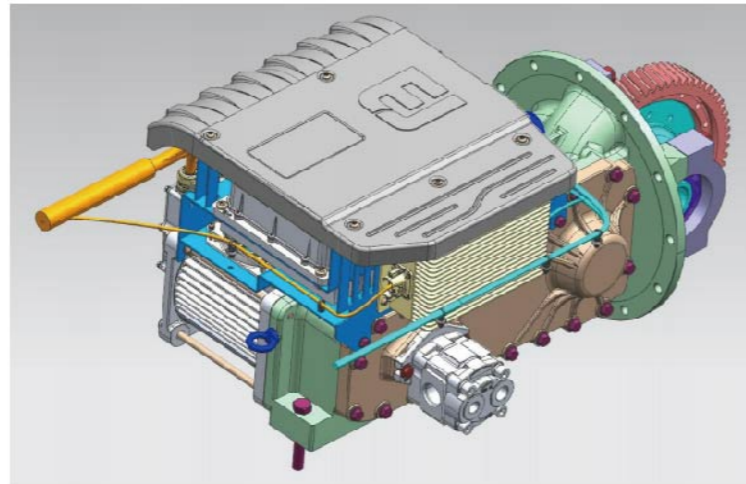
Based on the platform of internal counterbalance forklift truck and integrated with electric drive, the truck is powerful and high efficient.



## Integrated Solution, Powerful And Efficient



- The voltage is increased from 80V of traditional lithium battery powered truck to 153.6V. The overall energy efficiency is significantly improved by increasing of the motor power and reducing of the current of motor and controller.
- Permanent magnet synchronous motor for electric vehicle which has lighter mass compared with the same energy three-phase asynchronous motor is adopted and the comprehensive efficiency is significantly improved by 20%.
- Superior comprehensive performance and significantly improved operation efficiency, which is superior to fuel truck.



Parameters on power	Heli K2 series lithium battery	Competitor
Max. gradeability (loaded/unloaded)	22%/25%	15%-20%
Travelling speed (loaded/unloaded)	20/20km/h	15-20km/h
Lifting speed (loaded/unloaded)	430/550mm/s	430/470mm/s

Note: the displayed data is for CPD35-k2b11LI-H model, and other data are shown in the technical parameter table.

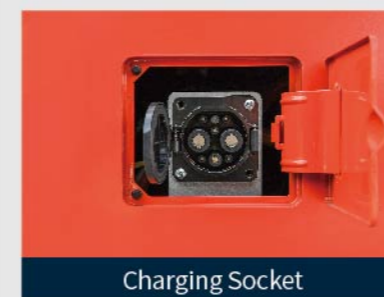
## Integrated water cooling and heat dissipation system makes it more suitable for high-intensity working conditions.

- Integrated fan and water tank makes truck high efficiency and energy saving;
- The electric control of the motor is cooled in real time to minimize the shutdown caused by overheating of controller and motor;
- Hydraulic oil heat dissipation is equipped as standard to ensure the service life of hydraulic components and seals.



## The design in designs is more humanized and safer.

- Standard configuration of small diameter steering wheel with handle ball makes steering operation more comfortable;
- The seat is spacious and comfortable and there is more spacious leg space as internal combustion model because of the adoption of the internal combustion truck platform;
- Wide view mast taking from internal combustion models offers wider working field of vision and safer operation;
- USB power setting of instrument panel makes mobile phone charging more convenient;
- MSD maintenance switch realizes power cut off by one key and makes truck safe and reliable;
- The national standard charging socket makes it more convenient to charge at any time.



Note: page 3-4 is based on data and configuration of K2B11LI-H model. For more model details, please consult the sales person.

## Full LCD digital high-definition instrument with more comprehensive functions.

- 4.3-inch high-definition LCD instrument makes the whole truck monitoring more convenient;
- The instrument interface comprehensively displays the basic information such as speed, electric quantity, service time and fault code, which is safe and efficient;
- The instrument is set with option button, and the auxiliary page can display the detailed information such as current, voltage, motor speed and motor electric control temperature. At the same time, the test options such as fan and electronic water pump are set to facilitate after-sales maintenance and inspection.



## Reliable quality, safe and worry free

- Integrated casting drive axle and reinforced casting steering axle have been proven by the market and are mature and reliable;
- The mast and truck body of K2 series trucks have stronger bearing capacity, higher stability and safety;
- The test of main parts shall be fully verified to ensure reliability and safety.



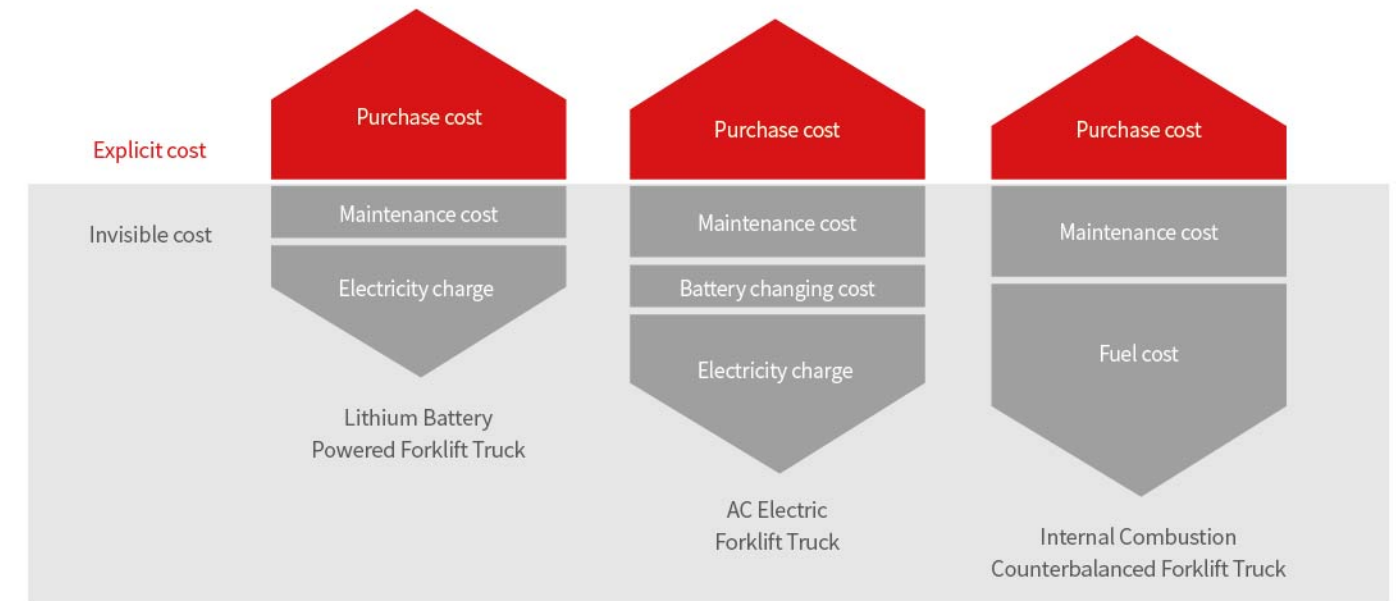
## Operating Cost Comparison: Lithium battery forklift VS. Lead-acid battery forklift VS. IC forklift

The advantages of HELI lithium battery forklift trucks are more prominent in the life cycle cost.

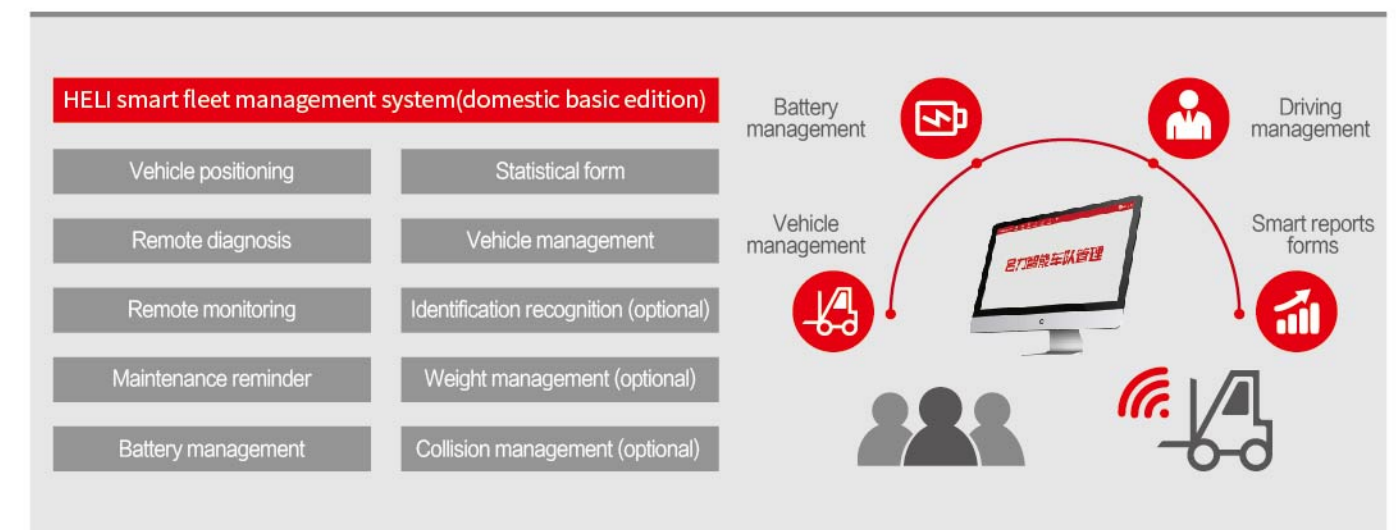
Compared with internal combustion forklift truck, lithium battery forklift truck has the advantages of no noise, no pollution, small vibration and simple operation.

Compared with the lead-acid battery forklift truck, lithium battery forklift has the characteristics of fast charging and charging at any time, which is more suitable for multi shift operation.

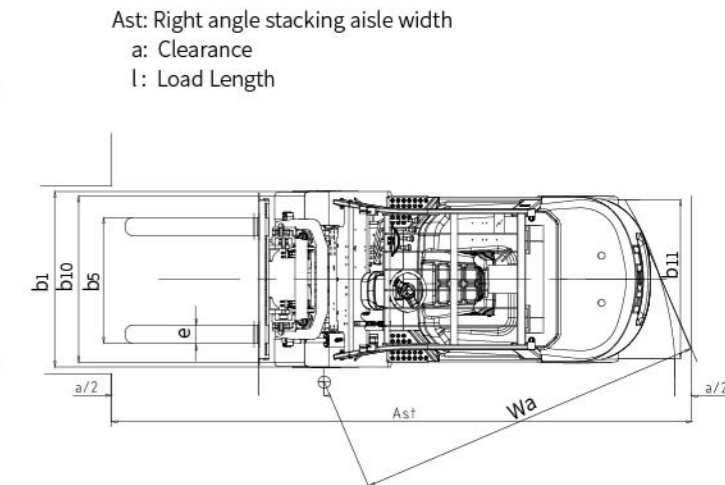
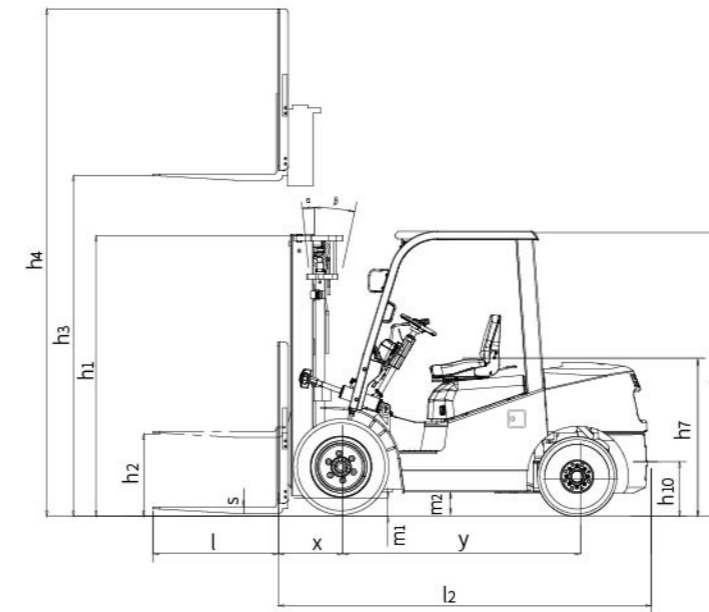
Besides, HELI lithium battery forklift is maintenance free, high power conversion efficiency, and economical overall operation cost.



## Smart fleet management system

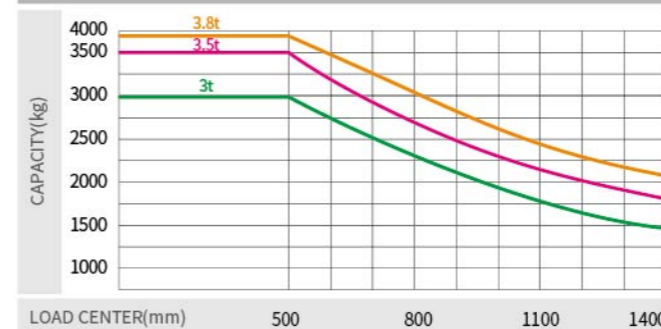


Manufacturer and Technical Data								
Characteristics								
1.01	Manufacturer			<b>HELI</b>				
1.02	Model		CPD30	CPD35	CPD38	CPD30	CPD35	
1.03	Configuration number		K2B11LI-H			K2C11LI-S		
1.04	Rated capacity	Q	kg	3000	3500	3800	3000	3500
1.05	Load center distance	c	mm	500			500	
1.06	Power mode			Lithium battery			Lithium battery	
1.07	Driving mode			Sit-on type			Sit-on type	
1.08	Front overhang	x	mm	478	484	484	478	484
1.09	Wheelbase	y	mm	1750			1750	
Weight								
2.01	Total weight		kg	4340	4700	4870	4190	4550
2.02	Axle load (laden,front/rear)		kg	6545/830	7405/872	7755/890	6335/798	7195/840
2.03	Axle load (unladen,front/rear)		kg	1795/2560	1835/2880	1820/3060	1720/2480	1760/2800
Tyres								
3.01	Tyre type			Pneumatic tyre			Pneumatic tyre	
3.02	Tyre size,front			28x9-15-14PR			28 x 9-15-14PR	
3.03	Tyre size,rear			6.5-10-10PR			6.5-10-10PR	
3.04	Wheels,number front/rear (x=driven wheels)			2X/2			2X/2	
3.05	Tread, front	b10	mm	1000			1000	
3.06	Tread, rear	b11	mm	970			970	
Dimensions								
4.01	Mast tilt angle (forward/backward)	$\alpha/\beta$	°	6/12			6/12	
4.02	Height (mast lowered)	h1	mm	2070	2120	2180	2070	2120
4.03	Free lifting height	h2	mm	155	160	160	155	160
4.04	Lifting height (standard)	h3	mm	3000			3000	
4.05	Max. height,extended (with backrest)	h4	mm	4217			4217	
4.06	Height of overhead guard	h6	mm	2140			2140	
4.07	Seat height relating to SIP (to ground)	h7	mm	1256			1256	
4.08	Towing coupling height	h10	mm	310			310	
4.09	Overall length (with fork)	l1	mm	3814	3820	3870	3814	3820
4.10	Overall length (without fork)	l2	mm	2744	2750	2800	2744	2750
4.11	Overall width	b1	mm	1225			1225	
4.12	Fork size:thickness x width x length	s/e/l	mm	45x125x1070			45x125x1070	
4.13	Fork carriage,according to ISO2328			2A			2A	
4.14	Distance across fork-arms, Max./Min.	b5	mm	1060/250			1060/250	
4.15	Ground clearance (laden,between mast)	m1	mm	135			135	
4.16	Ground clearance (center of wheelbase)	m2	mm	155			155	
4.17	Right angle stacking aisle width for pallet 1000 x 1200mm crossways	Ast	mm	4078	4084	4094	4078	4084
4.18	Right angle stacking aisle width for pallet 800 x 1200mm lengthways	Ast	mm	4278	4284	4294	4278	4284
4.19	Min. outside turning radius	Wa	mm	2400	2400	2410	2400	2400
Performance Data								
5.01	Travel speed (laden/unladen)		km/h	20/20	20/20	20/20	13/13	13/13
5.02	Lift speed (laden/unladen)		mm/s	500/600	430/550	430/550	320/420	270/390
5.03	Lowering speed (laden/unladen)		mm/s	400/500	450/450	450/450	450/450	450/450
5.04	Max.drawbar pull (laden/unladen)		N	20300/13300	20500/13550	21300/13950	15500/13300	15530/13690
5.05	Max.gradeability (laden/unladen)		%	22/25	22/25	20/25	15/18	15/18
5.06	Acceleration time (10m) (laden/unladen)		s	5.4/5.0	5.6/5.1	5.7/5.2	6.1/5.4	6.3/5.6
Battery								
6.01	Voltage/capacity (K5)		V/Ah	153.6/165(Optional 153.6/230) (Orders of 153.6V/230Ah is available.)			115.2/125(Optional 115.2/165,115.2/230)	
6.02	Mass (Min./Max.)		kg	255/304			150/230	
Motor and controller								
7.01	Power of driving motor (S2-60min)		kW	20			15	
7.02	Power of lifting motor (S3-15%)		kW	20			15	
7.03	Control mode of driving motor			MOS tube / AC			MOS tube / AC	
7.04	Control mode of lifting motor			MOS tube / AC			MOS tube / AC	
Addition data								
8.01	Service brake/Parking brake			Hydraulic-pedal type/mechanical-manual type			Hydraulic-pedal type/mechanical-manual type	
8.02	Operating pressure for attachments		Mpa	14-16			14-16	



Ast: Right angle stacking aisle width  
a: Clearance  
l: Load Length

**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.

**Chargers**

Charger model	APSP-150V100A-S1	APSP-150V200A-S1	D115V-50A-LI-428	D115V-100A-LI-428
Rated input voltage	Three phase four-wire system ac380v±15%	Three phase four-wire system AC380V±15%	Three phase four-wire system AC380V	Three phase four-wire system AC380V
Rated frequency	50/60HZ	50/60HZ	50/60HZ	50/60HZ
Input power	≤20KVA	≤40KVA	≤7KW	≤14KW
Protection degree	IP20	IP20	IP20	IP20
Rated output voltage	150V	150V	115V	115V
Rated output current	100A	200A	50A	100A
Rated output power	15KW	30KW	6KW	12KW
Cooling way	Forced cooling	Forced cooling	Forced cooling	Forced cooling
Working temperature	-20°C-50°C	-20°C-50°C	-20°C-50°C	-20°C-50°C
Plugs and sockets	International charging gun	International charging gun	REMA plugs	REMA plugs
Models	K2B11LI-H		K2C11LI-S	

**Wide View Standard Mast**

Mast model	Max.lifting height (mm)	Load capacity (lode center 500mm)(kg)			Height (mast lowered)(mm)			Service weight (kg)					Mast tilt angle (°) α/β
		3t	3.5t	3.8t	3t	3.5t	3.8t	K2B11LI-H			K2C11LI-S		
								3t	3.5t	3.8t	3t	3.5t	
M200	2000	3000	3500	3800	1570	1620	1680	4240	4590	4760	4090	4440	6/12
M250	2500	3000	3500	3800	1820	1870	1930	4290	4650	4820	4140	4500	6/12
M300	3000	3000	3500	3800	2070	2120	2180	4340	4700	4870	4190	4550	6/12
M330	3300	3000	3500	3800	2220	2270	2330	4360	4730	4900	4210	4580	6/12
M350	3500	3000	3500	3800	2320	2370	2430	4380	4750	4920	4230	4600	6/12
M370	3700	3000	3500	3700	2420	2470	2530	4400	4770	4940	4250	4620	6/12
M400	4000	2900	*3200 *3500	*3600 *3800	2620	2670	2730	4480	4860	5030	4330	4710	6/12
M425	4250	2800 *3000	*3100 *3200	*3250 *3700	2745	2795	2855	4510	4880	5050	4360	4730	6/6 6/12
M450	4500	*2700 *3000	*3150 *3050	*3200 *3600	2870	2920	2980	4530	4910	5080	4380	4760	6/6 6/12
M500	5000	*2450 *2850	*2800 *2850	*2650 *3200	3120	3170	3230	4580	4960	5130	4430	4810	6/6 6/12
M550	5500	*2400	*2500	*3000	3420	3470	3530	4680	5070	5240	4530	4920	3/6 *3/6
M600	6000	*2200	*2300	*2800	3670	3720	3780	4720	5120	5290	4570	4970	3/6 *3/6

Note: (1) \* refers to the load capacity for trucks with dual tyres.  
(2) When the front wheels of 2-3.8t are dual-tyre type, the service weight is the value in the table plus 110kg.

**Full Free 2-Stage Mast**

Mast model	Max.lifting height (mm)	Load capacity (lode center 500mm)(kg)			Height (mast lowered) (mm)			Free lift height (with backrest) (mm)			Service weight (kg)					Mast tilt angle (°) α/β
		3t	3.5t	3.8t	3t	3.5t	3.8t	3t	3.5t	3.8t	K2B11LI-H			K2C11LI-S		
											3t	3.5t	3.8t	3t	3.5t	
ZM200	2000	3000	3500	3800	1570	1620	1680	340	443	503	4260	4610	4780	4110	4460	6/12
ZM250	2500	3000	3500	3800	1820	1870	1930	590	693	753	4310	4660	4830	4160	4510	6/12
ZM300	3000	3000	3500	3800	2070	2120	2180	840	943	1003	4360	4720	4890	4210	4570	6/12
ZM330	3300	3000	3500	3800	2220	2270	2330	990	1093	1153	4390	4750	4920	4230	4600	6/12
ZM350	3500	3000	3500	3800	2320	2370	2430	1090	1193	1253	4410	4770	4940	4250	4620	6/12
ZM370	3700	3000	3500	3700	2420	2470	2530	1190	1293	1353	4430	4790	4960	4270	4640	6/12
ZM400	4000	2950	*3250 *3500	*3600 *3800	2620	2670	2730	1390	1493	1553	4510	4870	5040	4350	4720	6/12
ZM425	4250	*2850 *3000	*3200 *3200	*3250 *3700	2745	2795	2855	1515	1618	1678	4540	4900	5070	4280	4750	6/6 6/12
ZM450	4500	*2750 *3000	*3100 *3050	*3200 *3600	2870	2920	2980	1640	1743	1803	4560	4930	5100	4300	4780	6/6 6/12
ZM500	5000	*2450 *2850	*2650 *2850	*2650 *3200	3120	3170	3230	1890	1993	2053	4620	4990	5160	4360	4840	6/6 6/12
ZM550	5500	*2450	*2500	*3000	3420	3470	3530	2190	2293	2353	4720	5090	5260	4460	4940	6/6 *6/6
ZM600	6000	*2200	*2300	*2800	3670	3720	3780	2440	2543	2603	4770	5140	5310	4510	4990	6/6 *6/6

Note: (1) \* refers to the load capacity for trucks with dual tyres.  
(2) When the front wheels of 2-3.8t are dual-tyre type, the service weight is the value in the table plus 110kg.

**Full Free 3-Stage Mast**

Mast model	Max.lifting height (mm)	Load capacity (lode center 500mm)(kg)			Height (mast lowered) (mm)			Free lift height (with backrest) (mm)			Service weight (kg)					Mast tilt angle (°) α/β
		3t	3.5t	3.8t	3t	3.5t	3.8t	3t	3.5t	3.8t	K2B11LI-H			K2C11LI-S		
											3t	3.5t	3.8t	3t	3.5t	
ZSM360	3600	2900	3250	3500	1870	1870	1930	640	640	700	4480	4810	4980	4330	4660	6/6
ZSM400	4000	2900	3250	3300	2020	2020	2055	790	790	825	4520	4850	5020	4370	4700	6/6
ZSM435	4355	*2850 *2900	*3000 *3050	*3200 *3600	2120	2120	2180	890	890	950	4550	4880	5050	4400	4730	6/6 6/6
ZSM450	4500	*2800 *2850	*2900 *2950	*3150 *3600	2170	2170	2230	940	940	1000	4560	4890	5060	4410	4740	6/6 6/6
ZSM470	4700	*2750 *2800	*2800 *2900	*2900 *3200	2230	2230	2295	1000	1000	1065	4580	4910	5080	4430	4760	6/6 6/6
ZSM480	4800	*2650 *2800	*2700 *2900	*2850 *3200	2270	2270	2330	1040	1040	1100	4590	4920	5090	4440	4770	6/6 6/6
ZSM500	5000	*2500 *2750	*2600 *2850	*2600 *3150	2370	2370	2430	1140	1140	1200	4620	4950	5120	4470	4800	6/6 6/6
ZSM540	5400	*2200 *2650	*2350 *2700	*2350 *2850	2470	2470	2555	1240	1240	1325	4650	4980	5150	4500	4830	3/6 *3/6
ZSM600	6000	*2100	*2250	*2600	2670	2670	2780	1440	1440	1550	4750	5080	5250	4600	4930	3/6 *3/6

Note: (1) \* refers to the load capacity for trucks with dual tyres.  
(2) When the front wheels of 2-3.8t are dual-tyre type, the service weight is the value in the table plus 110kg.

**Option table**

Safety	Steering deceleration	○
	Rear handle with horn for truck reversing	○
	Overspeed alarm (5km/h)	○
	Overspeed alarm(8km/h)	○
	Overspeed alarm (10km/h)	○
	Speed limit ((no ultimate limit type)	○
	OPS(travelling+lifting+tilting+attachment)(lowering is not included)	●
	Full set of OPS	○
	Safety switch for seat belt	●
	Hydraulic valve overload protection device	○
	Dry powder extinguisher (0.5kg)	○
	Dry powder extinguisher (2kg)	○
	Backward buzzer	●
	Reversing speaker (Chinese)	○
	Electronic upper buffering	○
Comfort	Wide- angle central rear view mirror	●
	Rearview mirror on two sides+ Center wide angle rearview mirror	○
	Reverse radar (4 probes)	○
	Reversing image (1 camera + 4 probes)	○
	Semi-enclosure seat	●
	Full suspension seat	○
	1 USB interface (5V/1A)	●
	Super low torque steering unit	○
	Mechanical control valve	●
	Fan	○
Cab/Windshields	Panel mounted cab ( with fan and wiper)	○
	Heater	○
	Rear mounted air conditioner only for cooling	○
	Front windshield (with wiper/no blow can)	○
	Rear windshield	○
Lings	Top windshield (without fan)	○
	LED rear working lamp (one)	○
	Rear LED red/blue spot lamp	○
	Left, right and rear blue bar	○
	Fixed type LED flicker warning lamp	○
Others	Fixed type LED rotating warning lamp	●
	Fixed type LED rotating buzzer warning lamp	○
	Sleeve for steering cylinder	○
	Sleeves for steering cylinder and tilting cylinder	○
	FICS standard type (domestic)	○

Note: “●” standard ; “○” optional ;