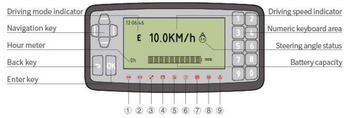
HELI

Reliable special designed instrument

Charger technology

- High Efficiency
  Charging efficiency higher than 95% meeting the requirements of energy saving and emissions reduction
- Speediness
  100% charging realized in 2 hours at the soonest
- Safety
  Built-in mis-connecting protection offering self isolating function under fault;
  Perfect fault self checking alarm facilitating users maintenance .



① DC type pump controller fault indicator
② Turtle indicator
③ Fault alarm light
④ Low electric quantity indicator
⑤ Lifting lock indicator
⑥ Seat indicator
⑦ Parking brake indicator
⑧ Neutral indicator
⑨ Warning light

Inmotion Display

Standard configuration

wide view basic mast
standard fork
II (II) stage fork arm carrier
backrest
control valve
battery
standard seat
overhead guard
overhead guard rain cover
liquid crystal combined instrument
pneumatic tyre
traction pin
driver' s tool
LED Lamp
Horn alert function on rear handle

Optional device

string rod
driver' s cab
lifting hock
cargo boom
tip-over fork
back view mirror
side shifting
paper roll clamp
warning light (Flashing, totating , buzzing)
solid tyre
rear working light
steel protection net
multipurpose drum clamp
load stabilizer
widen fork arm carrier
lengthening fork
load pusher
lengthening fork extension
rotating flat clamp
widen tyre protection device
auxiliary hydraulic valve component
tilting/steering cylinder jacket
coloring tyre
wide view two/three stage full free mast
customer made color
Turn automatic deceleration function
Battery lifting sling
HELI smart fleet management system

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* Our products are subject to improvements and changes without notice.

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HELI

1-2.5 t LI ION

H3 series Lithium Battery Powered Counterbalanced Forklift Truck

www.heliforklift.net

H3 SERIES 1-2.5 t

Environment Friendliness

- Zero emission
- Low noise
- Free of heavy metals
- No corrosion
- No acid mist volatilization

'enance Free

- Unnecessary of fluid adding and dust proofing
- Daily maintenance free
- Manual maintenance free

Long Service Life

- Over 75% capacity reserved after 4000 shifts operation
- Longer service life than lead-acid battery in equal working condition
- 5 years or ten thousand hours quality guarantee for high performance lithium battery assembly

High Efficiency and Energy Saving

- 2-3 hours charging meet 6-8 hours working demand
- High-energy density, self discharging rate lower than 1% per month
- 95% energy conversion rate,superior charging and discharging performance
- Flexible to charge, easy to operate, no impact on battery life
- Unnecessary to change battery, cost saving & operation safety

High Safety

- According to the characteristics of industrial vehicles, it achieves safety protection design which includes lithium battery materials, battery core type, PACK technique and system power management
- "Multiple node safety closed circuit protection" realizing truck real time closed circuit protection in variable conditions
  "Whole system emergency button" to disconnect the truck control system and bms power quickly ensuring truck safety

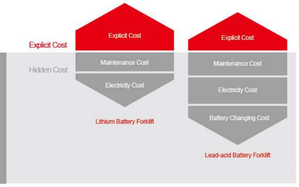
Suitable for working in both high and low environment

- Lithium battery is better than lead-acid battery when working between -25°C and 55°C

HELI smart fleet management system (optional)

- Vehicle positioning
- Remote diagnosis
- Remote monitoring
- Maintenance reminder
- Battery management
- Statistical form
- Vehicle management
- Identification recognition (optional)
- Weight management (optional)
- Collision management (optional)

The superiority of HELI lithium battery forklift truck is embodied in the use-cost within product lifecycle. Compared with lead-acid battery forklift truck, lithium battery forklift truck is more convenient for multiple working shifts. It has lower implicit cost and more economical total running cost.

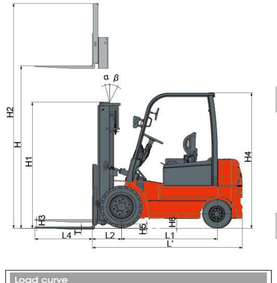


H3 SERIES 1-2.5 t

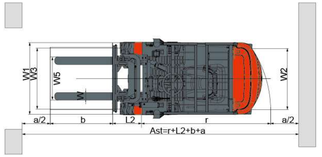
Manufacturer's Data and Design Characteristics

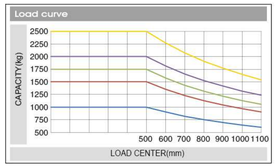
	Character							
1.01	Manufacturer			HELI				
1.02	Model			CPD10	CPD15	CPD18	CPD20	CPD25
1.03	Configuration number			HB3Li	HB3Li	HB3Li	HB3Li	HB3Li
1.04	Rated capacity	Q	kg	1000	1500	1750	2000	2500
1.05	Load center distance	c	mm	500				
1.06	Power mode			Lithium battery				
1.07	Driving mode			Seated				
1.08	Wheel base	L1	mm	1280			1535	
	Tyre							
2.01	Tyre type			Pneumatic tyre				
2.02	Wheel number(front/rear)			2/2				
2.03	front wheel base	W3	mm	890	890	920	960	960
2.04	Rear wheel base	W2	mm	920	920	920	950	950
2.05	Tyre (front)			6.5-10-10PR	6.5-10-10PR	6.5-10-10PR	7.0-12-14PR	7.0-12-14PR
2.06	tyre(rear)			16X6-8-10PR	16X6-8-10PR	16X6-8-10PR	18×7-8-14PR	18×7-8-14PR
	size							
3.01	Front overhang	L2	mm	410	410	410	465	465
3.02	Mast tilt angle , front/rear	α/β	deg	6/12	6/12	6/12	6/12	6/12
3.03	Height with mast retraction	H1	mm	1995	1995	1995	2000	2000
3.04	Free lifting height	H3	mm	155	155	155	155	155
3.05	Max. Lifting height	H	mm	3000	3000	3000	3000	3000
3.06	Max. Height under working condition	H2	mm	4040	4040	4040	4042	4042
3.07	Overhead guard height	H4	mm	2130	2130	2130	2150	2150
3.08	Fork size:thickness×width×length	T×W×L4	mm	32X100X770	35X100X920	35X100X920	40×122×920	40×122×1070
3.09	Fork arm carrier, din standard			2A	2A	2A	2A	2A
3.10	Truck body length (fork excluded)	L'	mm	2065	2065	2095	2400	2420
3.11	truck body width	W1	mm	1086	1086	1086	1160	1160
3.12	Turning radius	r	mm	1770	1770	1795	2065	2065
3.13	Clearance between mast and ground,loaded/unloaded	H5	mm	95/115	95/115	95/115	95/115	90/115
3.14	Clearance between wheel base center and ground,loaded/unloaded	H6	mm	110/110	110/110	110/110	125/135	125/135
3.15	Right angle stacking aisle width (Pallet1000x1000mm，clearance 200mm)	Ast	mm	3380	3380	3405	3730	3800
3.16	right angle stacking aisle width (Pallet1200x1200mm，clearance 200mm)	Ast	mm	3580	3580	3605	3930	3930
3.17	lateral fork adjustment (outside of forks)max./min.	W5	mm	950/200	950/200	950/200	1030/244	1030/244
	Performance							
4.01	Travelling speed: loaded/unloaded		km/h	14/15	14/15	14/15	14/15	14/15
4.02	Lifting speed: loaded/unloaded		mm/s	350/490	340/490	330/490	350/480	340/480
4.03	Lowering speed：loaded/unloaded		mm/s	410/490	410/490	410/490	410/490	410/490
4.04	Gradeability (loaded)		%	18	17	15	16	15
4.05	Max. Traction force (loaded)		N	7800	8600	9500	12300	12800
4.06	Acceleration time (10m) loaded/unloaded		s	4.6/4.4	4.8/4.6	5.0/4.8	5.0/4.8	5.2/5.0
	Weight							
5.01	Total weight (with /without battery)		kg	2490/2230	2800/2540	2970/2710	3570/3220	3950/3600
5.02	axle load：unloaded，front/rear		kg	1145/1345	1140/1660	1100/1870	1660/1910	1670/2280
5.03	Axle load：loaded，front/rear		kg	2850/640	3710/590	4090/630	4920/650	5740/710
	Battery							
6.01	Battery voltage/capacity		V/Ah	80/271			80/271	
6.02	Battery weight		kg	250			280	
	Motor and controller							
7.01	Drive motor power(s2-60 minutes)		kW	8			11	
7.02	lifting motor power(s3-15%)		kW	10			12	
7.03	Drive motor controlling mode			MOSFET/AC				
7.04	Lifting motor controlling mode			MOSFET/AC				
	Others							
8.01	Service brake/parking brake			Hydraulic/mechanical				
8.02	Hydraulic system working pressure		Mpa	14.5		17.5	17.5	
8.03	Type of drive control			INMOTION				

NOTE：1.Detailed information about battery, please contact our salesmen or engineer.



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





CPD10 CPD15 CPD18 CPD20 CPD25

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.

WIDE VIEW MAST

Mast model	Max. lifting height mm	Load capacity (load center 500mm)(kg)					Mast overall height (fork to the ground)(mm)		Service weight(kg)					Mast tilt angle (°) α/β
		1t	1.5t	1.8t	2t	2.5t	1–1.8t	2–2.5t	1t	1.5t	1.8t	2t	2.5t	
M200	2000	1000	1500	1750	2000	2500	1495	1500	2425	2735	2905	3480	3860	6/12
M250	2500	1000	1500	1750	2000	2500	1745	1750	2455	2765	2935	3525	3905	6/12
M300	3000	1000	1500	1750	2000	2500	1995	2000	2490	2800	2970	3570	3950	6/12
M330	3300	1000	1500	1750	2000	2500	2145	2150	2510	2820	2990	3595	3975	6/12
M350	3500	1000	1500	1750	2000	2500	2245	2250	2520	2830	3000	3615	3995	6/12
M370	3700	1000	1500	1750	2000	2500	2345	2350	2535	2845	3015	3630	4010	6/6
M400	4000	1000	1500	1700	2000	2450	2545	2550	2585	2895	3065	3690	4070	6/6
M425	4250	1000	1400	1650 *1750	1850	2250	2670	2675	2600	2910	3080	3715	4095	6/6 *6/12
M450	4500	950	1350	1550 *1700	1800	2150	2795	2800	2615	2925	3095	3740	4120	6/6 *6/12
M500	5000	930	1000 *1250	1000 *1600	1600 *1700	1600 *2000	3045	3050	2650	2960	3130	3785	4165	6/6 *6/6
M550	5500	900	800 *1050	750 *1300	1500 *1600	1500 *1900	3345	3350	2710	3020	3190	3860	4240	3/6 *3/6
M600	6000	550 *800	500 *950	400 *1200	950 *1500	950 *1800	3595	3600	2740	3050	3220	3910	4290	3/6 *3/6

NOTE：（1）* refers to rated capacity with double tires.

WIDE VIEW FULL FREE 2–STAGE MAST

Mast model	Max. lifting height mm	Load capacity (load center 500mm)(kg)					Mast overall height (fork to the ground)(mm)		Free lifting height (with backrest)(mm)		Service weight(kg)					Mast tilt angle (°) α/β
		1t	1.5t	1.8t	2t	2.5t	1–1.8t	2–2.5t	1–1.8t	2–2.5t	1t	1.5t	1.8t	2t	2.5t	
ZM200	2000	1000	1500	1750	2000	2500	1495	1500	485	495	2470	2780	2950	3490	3870	6/12
ZM250	2500	1000	1500	1750	2000	2500	1745	1750	735	745	2500	2810	2980	3535	3915	6/12
ZM300	3000	1000	1500	1750	2000	2500	1995	2000	985	840	2535	2845	3015	3585	3965	6/12
ZM330	3300	1000	1500	1750	2000	2500	2145	2150	1135	990	2560	2870	3040	3605	3985	6/12
ZM350	3500	1000	1500	1750	2000	2500	2245	2250	1235	1090	2570	2880	3050	3635	4015	6/12
ZM370	3700	1000	1500	1750	2000	2450	2345	2350	1335	1205	2585	2895	3065	3650	4030	6/6
ZM400	4000	1000	1500	1750	2000	2400	2545	2550	1535	1390	2635	2945	3115	3715	4095	6/6
ZM425	4250	1000	1400	1650 *1750	1850	2250	2670	2675	1660	1515	2650	2960	3130	3740	4120	6/6 *6/12
ZM450	4500	950	1350	1550 *1700	1800	2150	2795	2800	1785	1640	2670	2980	3150	3765	4145	6/6 *6/12
ZM500	5000	930	1000 *1250	1000 *1600	1600 *1700	1600 *2000	3045	3050	2035	1910	2705	3015	3185	3810	4190	6/6 *6/6
ZM550	5500	900	850 *1050	800 *1350	1500 *1600	1500 *1900	3345	3350	2335	2190	2765	3075	3245	3895	4275	3/6 *3/6
ZM600	6000	600 *850	500 *950	450 *1250	950 *1500	950 *1800	3595	3600	2585	2440	2800	3110	3280	3945	4325	3/6 *3/6

NOTE：(1)* refers to rated capacity with double tires.
(2)1-1.8T：free lifted height 365mm increased without backrest.
(3)2-2.5T：free lifted height 290mm increased without backrest.

WIDE VIEW FULL FREE 3–STAGE MAST

Mast model	Max. lifting height mm	Load capacity (load center 500mm)(kg)					Mast overall height (fork to the ground)(mm)		Free lifting height (with backrest)(mm)		Service weight(kg)					Mast tilt angle (°) α/β
		1t	1.5t	1.8t	2t	2.5t	1–1.8t	2–2.5t	1–1.8t	2–2.5t	1t	1.5t	1.8t	2t	2.5t	
ZSM360	3600	1000	1450	1750	2000	2400	1790	1795	775	795	2585	2895	3065	3695	4075	6/6
ZSM400	4000	1000	1400	1600	1900	2300	1925	1920	910	920	2610	2920	3090	3730	4110	6/6
ZSM435	4350	950	1300	1500 *1700	1850	2200	2040	2045	1025	1045	2630	2940	3110	3765	4145	6/6 *6/6
ZSM450	4500	950	1300	1500 *1650	1750	2100	2090	2095	1075	1095	2640	2950	3120	3775	4155	6/6 *6/6
ZSM470	4700	930	1280	1450 *1600	1720	2000	2160	2160	1145	1160	2660	2970	3140	3795	4175	6/6 *6/6
ZSM480	4800	920	1250	1400 *1580	1700	1950	2190	2195	1175	1195	2670	2980	3150	3805	4185	6/6 *6/6
ZSM500	5000	900	1000 *1200	1000 *1550	1600	1600 *1900	2290	2295	1275	1295	2690	3000	3170	3835	4215	6/6 *6/6
ZSM540	5400	750 *900	750 *1100	750 *1380	1500	1500 *1800	2415	2420	1400	1420	2710	3020	3190	3875	4255	3/6 *3/6
ZSM600	6000	550 *850	500 *1000	450 *1280	950 *1450	950 *1700	2640	2645	1625	1645	2785	3095	3265	3940	4320	3/6 *3/6
ZSM650	6500	*800	*950	*1150	600 *1300	600 *1500	2840	2835	1835	1835	2820	3130	3300	3995	4375	3/3 *3/3
ZSM700	7000	*650	*700	*800	*1000	*1100	3025	3105	2020	2105	2860	3170	3340	4060	4440	*3/3

NOTE：(1)* refers to rated capacity with double tires.
(2) 1-1.8T：free lifted height 480mm increased without backrest.
(3) 1-1.8T：free lifted height 440mm increased without backrest when assembled with pulley block.
(4) 2-2.5T：free lifted height 320mm increased without backrest.
(5) 2-2.5T：free lifted height 90mm increased without backrest when assembled with pulley block.

LITHIUM BATTERY CHARGER

Model	Battery	Voltage(V)	Capacity(Ah)	Charger	
CPD10/CPD15/CPD18	Standard	80	271	Standard	D80V–200A–Li–EN
CPD20/CPD25	Standard	80	271	Standard	D80V–200A–Li–EN
	Optional	80	404	Standard	D80V–200A–Li–EN