



HELI

CPD 40/50

GB2Li/GB3Li/A2DLIG3
GD3Li-600/GD2Li-600



LIION **4-5 t**

G3 series Lithium Battery Powered
Counterbalanced Forklift Truck



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4-5 t

G3 series Lithium Battery Powered Counterbalanced Forklift Truck

Perfect Combination of Aesthetics and Functional Design.
New generation with characteristics of smart, safe, high efficiency, energy saving and environment friendly.

Maintenance Free

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

High Reliability

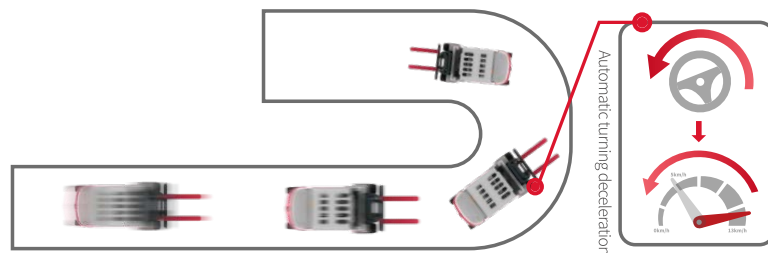
- High IP Protection Level of Vehicle.
- Maintenance-free integrated axle which is mature and has been tested by market is used on the truck.
- Oil-cooled wet disc type brake is free from maintenance. Maintenance-free AC motors are used for driving and pump motors.
- World famous controller is used.
- Large smart instrument can monitor the truck state overallly and it is safe and reliable.

Long Service Life

- 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, over 75% capacity reserved.

High Safety

- Tail-free structure reduces the center of gravity and improves lateral stability.
- High strength and integrated type welded overhead guard improves safety.
- Side-pulling battery changing way is standard configuration and improves battery changing efficiency.
- Middle-positioned battery reduces the center of gravity and improves stability.
- High positioned rotation point of rear axle improves lateral stability of the truck.
- Automatic deceleration when steering improves working safety.
- Mast lifting buffering improves operation 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.
- ENEROC lithium battery PACK with low temperature pre-heating system.

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.

Improved man-machine comfort

- Mast lifting and falling buffering makes operation safe and comfortable.
- The truck has lower pedal height and larger egress and ingress space.
- Suspension seat and wide view mast improve driving experience.
- Optimal battery layout and design of counterbalance improve the rear view.
- Lower layout of tilting cylinder improves the space for legs.

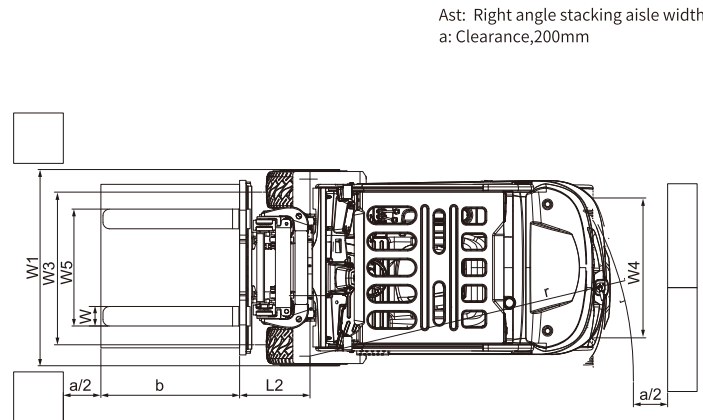
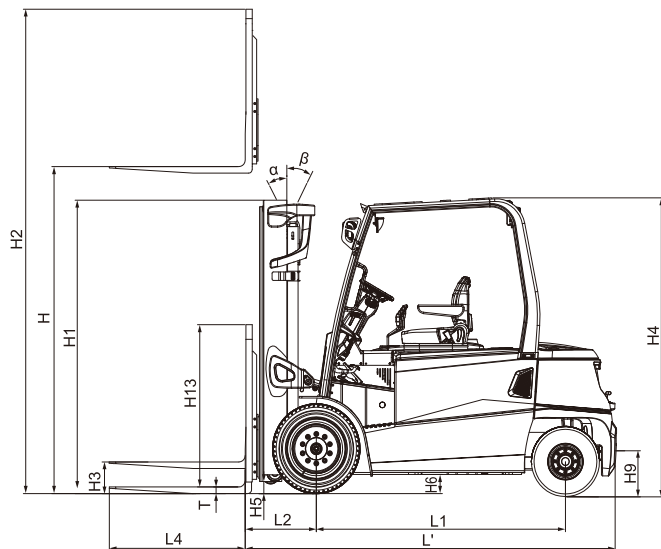
The convenience of maintenance is improved

- Electric control is arranged inside the balance weight for easy maintenance;
- Removable oil tank and bottom plate, improve maintenance convenience.



Manufacturer's Data and Design Characteristics

Character										
1.01	Manufacturer			HELI						
1.02	Model			CPD40		CPD45		CPD50		CPD50
1.03	Configuration number			GB2Li/GB3Li	A2DLIG3	GB2Li/GB3Li	A2DLIG3	GB2Li/GB3Li	A2DLIG3	GD2Li/GD3Li-600
1.04	Rated capacity	Q	kg	4000	4000	4500	4500	5000	5000	5000
1.05	Load center distance	c	mm	500						600
1.06	Power mode			Lithium battery						
1.07	Driving mode			Seated						
1.08	Wheel base	L1	mm	1960	1960	1960	1960	1960	1960	2100
Tyre										
2.01	Tyre type			Solid tyre	Solid tyre	Solid tyre	Solid tyre	Solid tyre	Solid tyre	Solid tyre
2.02	Wheel number (front/rear)			2/2	2/2	2/2	2/2	2/2	2/2	2/2
2.03	Front wheel base	W3	mm	1120	1140	1120	1140	1189	1189	1189
2.04	Rear wheel base	W4	mm	1070	1070	1070	1070	1070	1070	1070
2.04	Tyre (front)			250-15	250-15	250-15	250-15	28×12.5-15	28×12.5-15	28×12.5-15
2.05	Tyre (rear)			21X8-9	21X8-9	21X8-9	21X8-9	21X8-9	21X8-9	21X8-9
Size										
3.01	Front overhang	L2	mm	560	560	560	560	565	565	565
3.02	Mast tilt angle (front/rear)	α/β	°	8/8	8/8	8/8	8/8	8/8	8/8	8/8
3.03	Height with mast retraction	H1	mm	2240	2240	2240	2240	2230	2230	2230
3.04	Free lifting height	H3	mm	150	150	150	150	150	150	150
3.05	Max.lifting height	H	mm	3000	3000	3000	3000	3000	3000	3000
3.06	Max.height under working condition	H2	mm	4235	4235	4235	4235	4225	4225	4355
3.07	Overhead guard height	H4	mm	2275	2275	2275	2275	2270	2270	2270
3.08	Fork size: thickness×width×length	T×W×L4	mm	50×150×1070	50×150×1070	50×150×1070	50×150×1070	50×150×1070	55×150×1070	55×150×1220
3.09	Fork arm carrier, ISO 2328, class/ type A, B		mm	3A	3A	3A	3A	3A	3A	4A
3.10	Truck body length (fork excluded)	L'		2920	2920	2920	2920	2920	2920	3060
3.11	Truck body width	W1	mm	1350	1370	1350	1370	1500	1500	1500
3.12	Turning radius	r	mm	2580	2580	2580	2580	2580	2580	2695
3.13	Clearance between mast and ground	H5	mm	140	140	140	140	130	130	130
3.14	Clearance between wheel base center and ground (loaded)	H6	mm	145	145	145	145	135	135	135
3.15	Right angle stacking aisle width (pallet1000×1000mm, clearance 200mm)	Ast	mm	4340	4340	4340	4340	4340	4340	4460
3.16	Right angle stacking aisle width (pallet1200×1200mm, clearance 200mm)	Ast	mm	4540	4540	4540	4540	4540	4540	4670
Performance										
4.01	Travelling speed (loaded/unloaded)		km/h	14/15	20/20	14/15	20/20	14/15	20/20	14/15
4.02	Lifting speed (loaded/unloaded)		mm/s	310/450	360/450	280/450	340/450	260/450	320/450	260/450
4.03	Lowering speed (loaded/unloaded)		mm/s	500/450	500/450	500/450	500/450	500/450	500/450	500/450
4.04	Gradeability (loaded/unloaded)		%	17/27	20/27	16/26	20/26	15/25	18/25	15/25
4.05	Max.traction force (loaded)		N	21000	26000	21000	26000	21000	26000	21000
4.06	Acceleration time (10m)(loaded/unloaded)		s	6.58/6.25	6.58/6.25	6.70/6.19	6.70/6.19	6.82/6.14	6.82/6.14	6.82/6.14
Weight										
5.01	Total weight (with/without battery)		kg	6670/6080	6670/6080	6835/6117	6835/6117	7210/6492	7210/6492	7780/6760
5.02	Axle load (unloaded front/rear)		kg	3195/3505	3195/3505	3215/3620	3215/3620	3345/3865	3345/3865	3780/4015
5.03	Axle load (loaded front/rear)		kg	9415/1310	9415/1310	10200/1135	10200/1135	11210/1035	11210/1035	11645/1205
Battery										
6.01	Battery voltage/capacity		V/Ah	80/560	80/560	80/606	80/606	80/606	80/606	80/606
6.02	Battery weight		kg	590	590	718	718	718	718	1020
Motor and controller										
7.01	Drive motor power(S2-60min)		kW	20	2×14	20	2×14	20	2×14	20
7.02	Lifting motor power(S3-15%)		kW	26.5	25	26.5	25	26.5	25	26.5
7.03	Steering motor power(S3-15%)		kW	2.5	-	2.5	-	2.5	-	2.5
7.04	Drive motor controlling mode		Mpa	MOSFET/AC						
7.05	Lifting motor controlling mode			MOSFET/AC						
7.06	Steering motor controlling mode			MOSFET/AC						
Others										
8.01	Service brake/parking brake			Hydraulic/mechanical						
8.02	Hydraulic system working pressure			20	20	20	20	21.5	21.5	21.5
8.03	Type of drive control			ZAPI/INMOTION	ZAPI	ZAPI/INMOTION	ZAPI	ZAPI/INMOTION	ZAPI	ZAPI/INMOTION

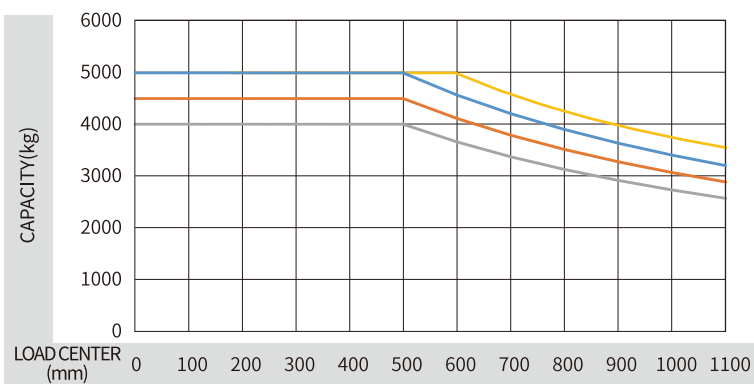


Lithium battery, charger

Lithium battery brand	ENEROC(CATL)			HELI(LISHEN)		EIKTO	
Voltage/Capacity	80V/604Ah	80V/684Ah (dual charging ports)	80V/750Ah (dual charging ports)	80V/560Ah	80V/606Ah	80V/540Ah	80V/700Ah (dual charging ports)
CPD40	○	○	○	●	○	○	○
CPD45/CPD50	—	○	○	—	●	—	○
CPD50-GD3Li-600	Standard:HEDING 80V606Ah,optional:HEDING 80V808Ah(dual charging ports)						
Low temperature preheating of lithium battery PACK	●			●		●	
Charger	D80V200ALi-123, D80V200ALi-423, D80V-400A-Li-124 (dual charger)						

Notes: ●standard, ○optional, — non-configurable

Load curve



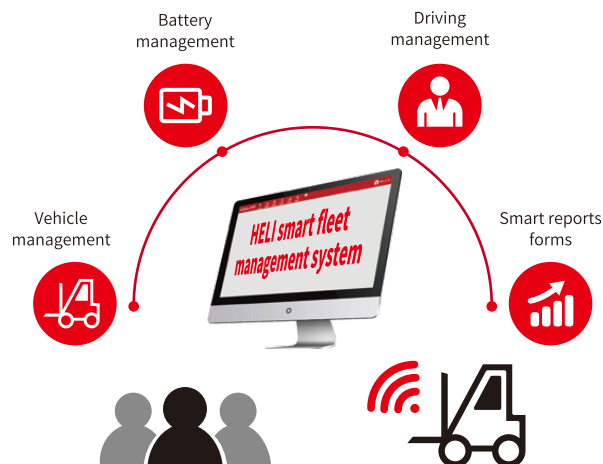
— CPD40-GB2Li/GB3Li
— CPD45-GB2Li/GB3Li
— CPD50-GB2Li/GB3Li
— CPD50-GD2Li/GB3Li-600

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.



HELI smart fleet management system

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



Reliable special designed instrument



- Reliable special meter display the whole truck's working condition, fault detect and other important information completely which make the operator master the whole truck condition directly and conveniently.

Standard configuration	Optional device	
Standard mast	Mast with other lifting height	Pneumatic tyre
Standard fork	Full free lift mast	
Class III standard carrier	Side shifter(hook-on)	
Two-spools valve	Other attachments	
Lithium battery	Fork with other length	
Full suspension seat	No marking tyre	
Overhead guard	Cab	
Solid tyres	Left and right rearview mirror	
Traction pin	Rear work light	
LED signal light, LED warning light(flashing)	Fire extinguisher	
USB interface	Rotating warning light, voice buzzer	
Automatic steering slow down device	Blue warning light	
Colour screen instrument (INMOTION)	80V/810Ah, 80V/900Ah lithium battery	
GRAPHIC Display(ZAPI)	HELI smart fleet management syste	

WIDE VIEW MAST

Mast model	lifting height (mm)	load capacity (load center 500mm)				mast overall height (mm)		free lift (mm)	service weight (kg)				mast tilt angle (°) α/β
		load center 500 (mm)			load center 600 (mm)	mast lowered	fork lifted (with backrest)		load center500 (mm)			front/rear	
		CPD40	CPD45	CPD50	CPD50-GD2Li/ GD3Li-600				CPD40	CPD45	CPD50-GB		CPD50-GD2Li/ GD3Li-600
M250	2500	4000	4500	5000	5000	1980	3733	150	6615	6780	7155	7458	8-8°
M300	3000	4000	4500	5000	5000	2230	4233	150	6670	6835	7210	7513	8-8°
M330	3300	4000	4500	5000	5000	2380	4533	150	6700	6865	7240	7545	8-8°
M350	3500	4000	4500	5000	5000	2480	4733	150	6720	6885	7260	7566	8-8°
M370	3700	4000	4450	4900	5000	2580	4933	150	6745	6910	7285	7588	8-8°
M400	4000	4000	4350	4750	5000	2780	5233	150	6785	6950	7325	7691	8-8°
M425	4250	4000	4250	4650	5000	2905	5483	150	6810	6975	7350	7718	8-8°
M450	4500	4000	4150	4500	4910	3030	5733	150	6840	7005	7380	7745	8-8°
M475	4750	3900	4100	4400	4830	3155	5983	150	6865	7030	7405	7773	8-8°
M500	5000	3800	4000	4300	4750	3280	6233	150	6895	7060	7435	7800	8-8°
M550	5500	3650	3800	4150	4580	3580	6733	150	6955	7120	7495	7925	6-5°
M600	6000	3400	3450	3850	4330	3830	7233	150	7010	7175	7550	7978	6-5°

WIDE VIEW FULL FREE 2-STAGE MAST

Mast model	lifting height (mm)	load capacity (load center 500mm)			mast overall height (mm)		free lift (with backrest) (mm)	service weight (kg)			mast tilt angle (°) α/β
		CPD40	CPD45	CPD50	mast lowered	fork lifted (with backrest)		CPD40	CPD45	CPD50	front/rear
ZM250	2500	4000	4500	5000	1980	3733	777	6710	6875	7250	8-8°
ZM261	2610	4000	4500	5000	2035	3792	832	6720	6885	7260	8-8°
ZM300	3000	4000	4500	5000	2230	4233	1027	6770	6935	7310	8-8°
ZM330	3300	4000	4500	5000	2380	4533	1177	6803	6968	7343	8-8°
ZM350	3500	4000	4500	4900	2480	4733	1277	6833	6998	7373	8-8°
ZM370	3700	4000	4400	4800	2580	4933	1377	6865	7030	7405	8-8°
ZM400	4000	4000	4300	4650	2780	5233	1577	6915	7080	7455	8-8°
ZM425	4250	4000	4200	4550	2905	5483	1702	6945	7110	7485	8-8°
ZM450	4500	3950	4100	4450	3030	5733	1827	6983	7148	7523	8-8°
ZM475	4750	3850	4050	4350	3155	5983	1952	7015	7180	7555	8-8°
ZM500	5000	3750	3950	4250	3280	6233	2077	7050	7215	7590	8-8°
ZM550	5500	3600	3750	4100	3580	6733	2377	7115	7280	7655	6-5°
ZM600	6000	3350	3400	3800	3830	7233	2627	7170	7335	7710	6-5°

NOTE: 4-5t(load center 500mm) free lift without backrest will increase by +271mm;
5t(load center 600mm) free lift without backrest will increase by +395mm.

WIDE VIEW FULL FREE 3-STAGE MAST

Mast model	lifting height (mm)	load capacity (kg)				mast overall height (mm)		free lift (mm)	service weight (kg)				mast tilt angle (°) α/β
		load center 500 (mm)			load center 600 (mm)	mast lowered	fork lifted (with backrest)		load center500 (mm)			load center 600 (mm)	
		CPD40	CPD45	CPD50	CPD50-GD2Li/ GD3Li-600				CPD40	CPD45	CPD50-GB	CPD50-GD2Li/ GD3Li-600	前/后
ZSM360	3600	4000	4350	4900	5000	1930	4833	727	6915	7080	7455	7854	8-8°
ZSM400	4000	3950	4200	4750	5000	2070	5233	867	6965	7130	7505	7904	8-8°
ZSM435	4350	3850	4050	4450	4900	2180	5583	977	6995	7160	7535	7934	8-8°
ZSM450	4500	3800	4000	4400	4800	2230	5733	1027	7015	7180	7555	7954	8-8°
ZSM470	4700	3700	3950	4300	4750	2345	6033	1142	7040	7205	7580	7974	8-8°
ZSM500	5000	3600	3850	4200	4650	2480	6233	1277	7085	7250	7625	8024	8-8°
ZSM550	5500	3450	3700	4050	4550	2615	6633	1412	7215	7380	7755	8054	6-5°
ZSM600	6000	3250	3350	3650	4300	2850	7233	1647	7305	7470	7845	8244	6-5°
ZSM650	6500	2650	2750	3150	3850	3015	7733	1812	7365	7530	7905	8304	6-5°
ZSM700	7000	2150	2250	2650	3300	3215	8233	2012	7435	7600	7975	8374	6-5°

NOTE: 4-5t(load center 500mm) free lift without backrest will increase by +310mm;
5t(load center 600mm) free lift without backrest will increase by +292mm.