

# CPD60/70/85/100

## GB2D/GB2DLI



**HELI**



**6-10 t**

**Li-ION**  
G3 Series Electric Battery  
Forklift Truck



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# Compatible in system, Special in style

----- It is rather to achieve mutual achievement  
than give an ostentatious display of ability.



## Compatible

Lithium battery and lead acid battery are optional as you like.

## Integrated

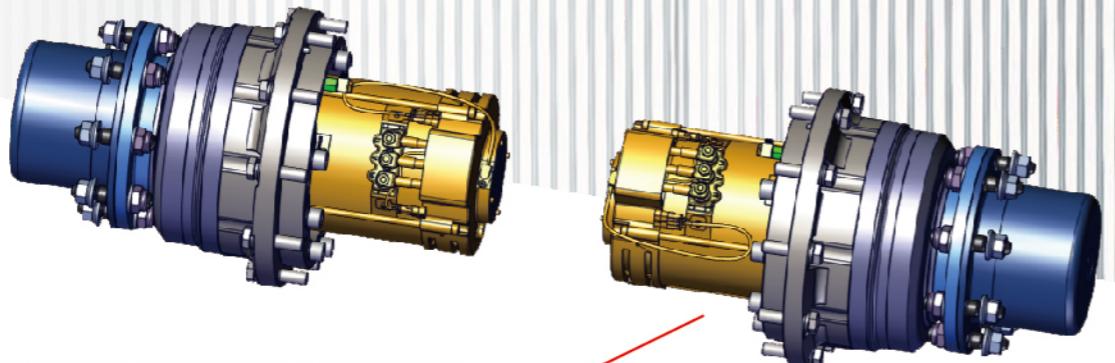
Combine the humanization design advantages of both internal combustion forklift truck and electric truck.



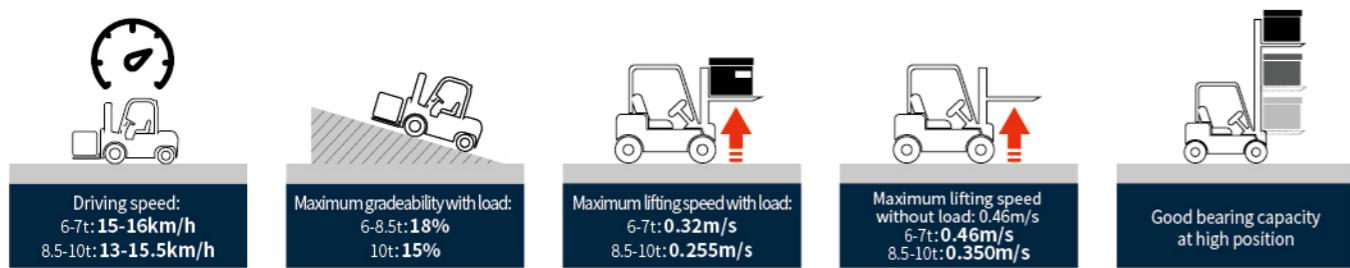
The truck is a continuation of HELI family style and creates a new concept of electric forklift through easy exchange between lead acid battery power and lithium battery power

## Efficient and Energy saving

- Powerful dual drive, superior gradeability.



Dual drive power, imported motor and imported wheel reducer, while providing strong power, further improve the safety and stability of the truck.



- Double gun charging, fast and efficient.

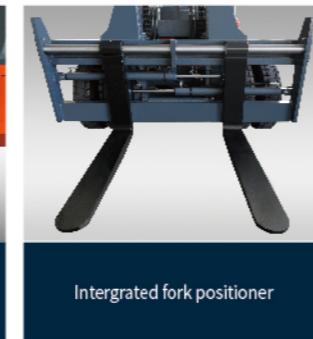
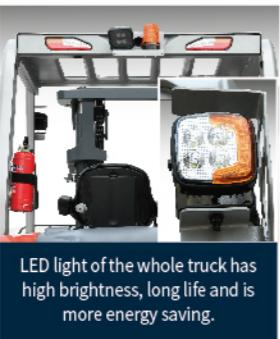
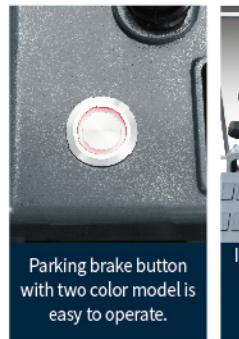


Lithium battery forklift truck is equipped with double gun charging as standard, which greatly reduces the charging time. Lithium batteries have high-density capability and can be used and charged at any time to realize efficient and continuous operation all day long.

### Lithium battery options:

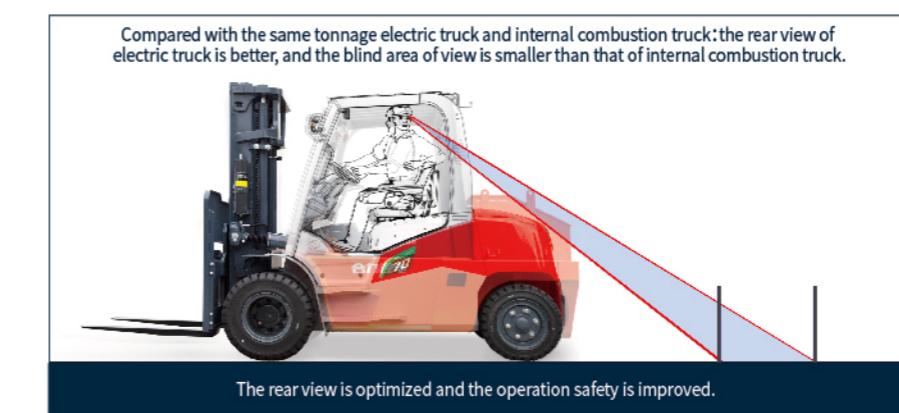
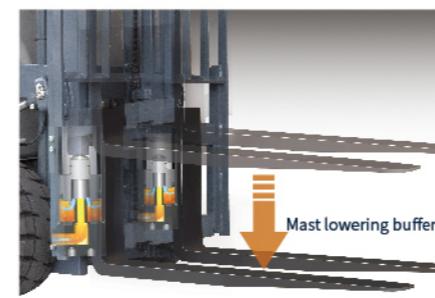
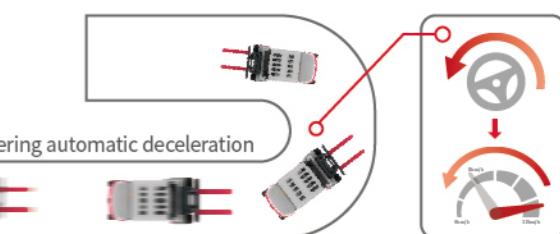
- **606Ah capacity (standard configuration):** which can be charged for 8 hours at one time, suitable for light load condition;
- **813Ah capacity:** one charge can meet 8-9 hours of operation, suitable for standard working conditions;
- **1084 Ah capacity:** one charge, suitable for 9-10 hours operation, suitable for heavy load strengthening conditions.
- **808Ah capacity (8.5-10t Lithium battery options):** one charge can meet 8-9 hours of operation, suitable for standard working conditions;

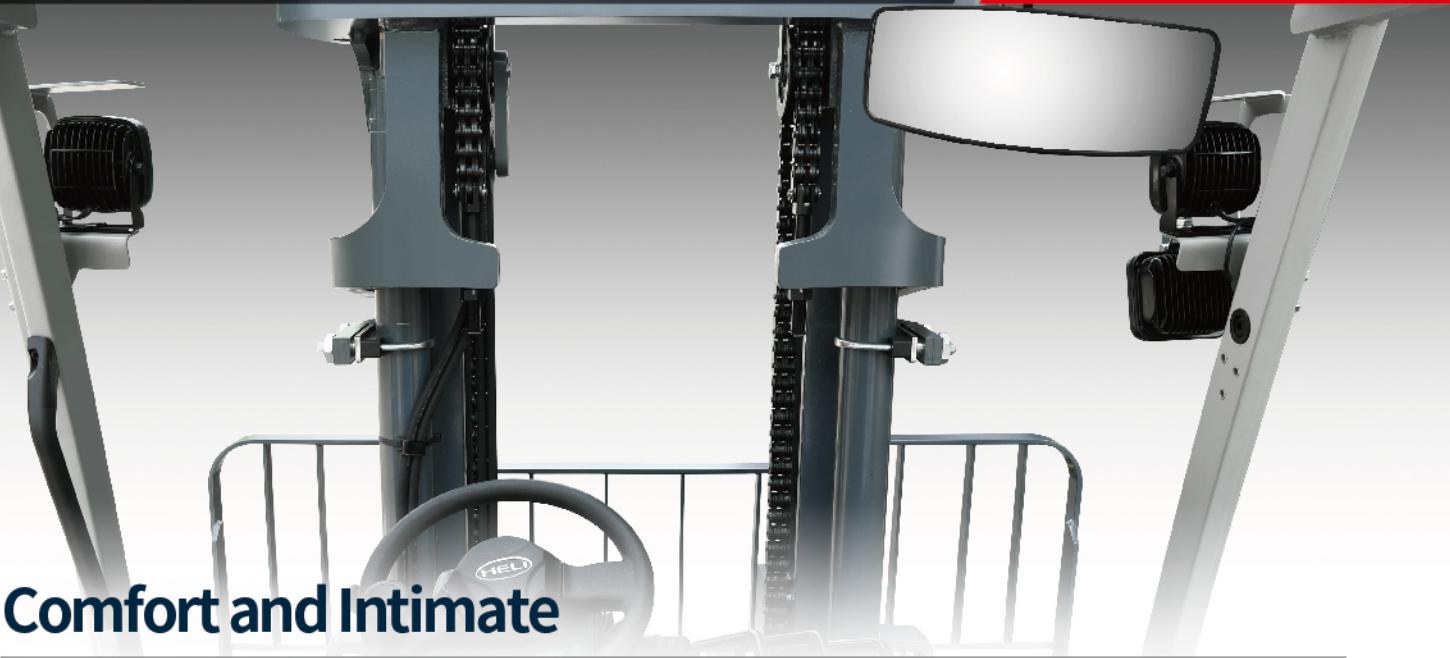
- Multi configuration, low energy consumption.



## Intelligent and Safe

- Intelligent automatic parking: optimized negative braking system and active parking in multiple applications are safe and easy which is safe and easy to make up omissions;
- Intelligent turning speed limit: active speed limit function, balance efficiency and safety when turning at high speed;
- Intelligent limit buffer: intelligent induction of mast lifting and lowering avoids limit impact and is safe and comfortable;
- Intelligent operation protection: a full set of OPS system can avoid misoperation and ensure safety;
- Intelligent control strategy: dual core controller is in line with the latest EU safety requirements.





## Comfort and Intimate

- The mast with large opening offers good driving vision ensuring operation comfort and safety.
- It integrates the advantages of internal combustion forklift truck platform to make the driving space more comfortable.
- Standard imported silent gear pump, greatly reduce the ear noise.



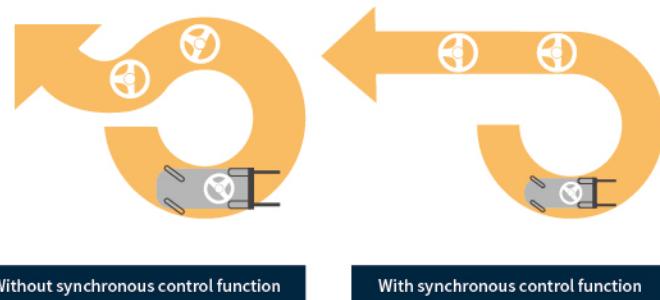
Optional configuration of intelligent safety buffer system cushion operator from effects of riding over uneven surface and it is more comfortable.

- Vibration shock reduction**  
When driving under load conditions, the impact caused by uneven surface is greatly absorbed, and the vibration is effectively reduced.

**Vibration and noise reduction**  
When driving under load condition, the impact noise caused by uneven surface is greatly reduced.

**Reduced driving fatigue**  
During the emergency stop operation during the load lowering process, the vibration and driving fatigue caused by inertia impact can be effectively reduced, and the driving safety can be improved.

- Hydraulic synchronous steering system can adjust steering wheel and wheel angle offset smartly and offers accurate steering and comfortable driving. (optional)
- Color screen display which can switch between Chinese and English, display truck speed, working time, battery power, fault code and other information.



## Stable and Reliable

- Imported drive axle and motor are stable and reliable.
- Wet negative braking is safe and reliable.
- The innovative design of mast structure improves the overall strength and stiffness.
- The structural design of the welded large oil tank greatly improves the strength of the frame and the heat dissipation of the hydraulic oil.
- The whole truck can be operated alternately in -20°C cold storage for 6 hours and parked in the cold storage for 12 hours without failure and can continue to work.
- New design of steering axle is safe and reliable.



## Convenient and Maintenance

- The layout of the cab is optimized, the battery is located directly under the engine room, and the hood opening angle is large, which facilitate daily inspection and maintenance.
- The controller is located on the counterweight, giving consideration to heat dissipation and maintenance convenience.
- The battery side changing is installed for easy changing between lead-acid battery and lithium battery as you like meet the needs of different customers and occasions.



### HELI smart fleet management system(domestic basic edition)

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

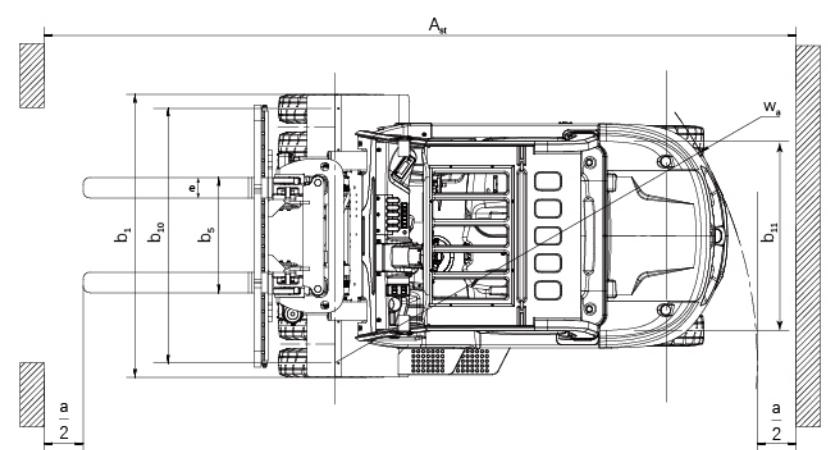
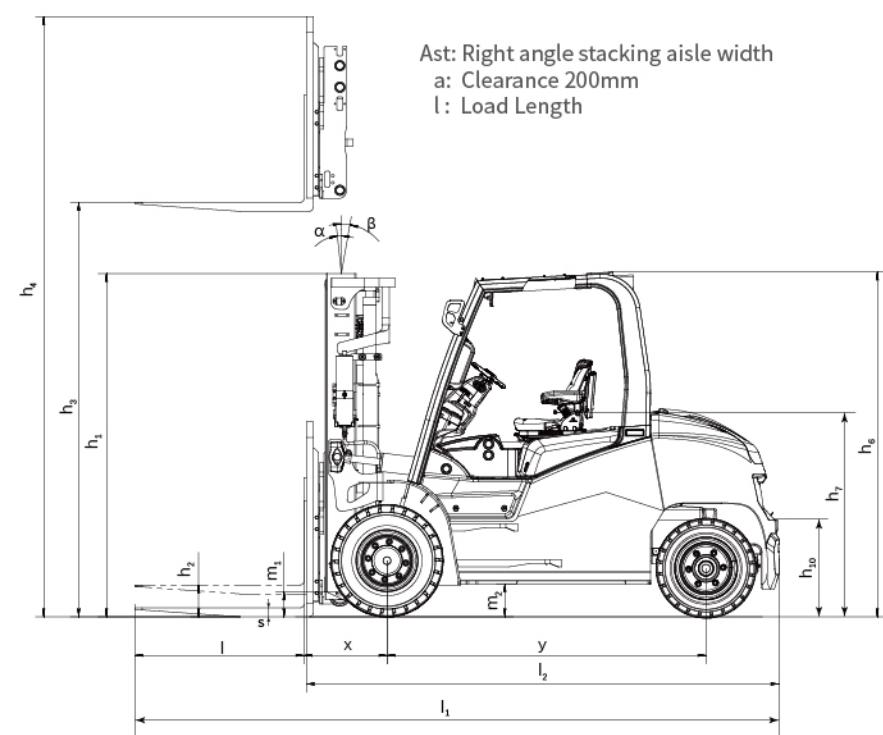


**Manufacturer and Technical Data (1)**

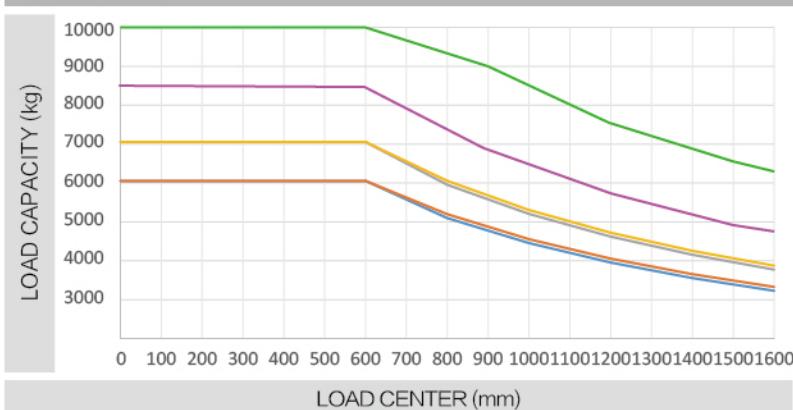
Characteristics						
<b>1.01</b>	<b>Manufacturer</b>					<b>HELI</b>
<b>1.02</b>	<b>Model</b>					CPD60 CPD60 CPD70 CPD70
<b>1.03</b>	<b>Configuration number</b>					GB2D GB2DLi GB2D GB2DLi
<b>1.04</b>	<b>Rated capacity</b>					Q kg 6000 6000 7000 7000
<b>1.05</b>	<b>Load center distance</b>					c mm 600 600 600 600
<b>1.06</b>	<b>Power mode</b>					Electric Electric Electric Electric
<b>1.07</b>	<b>Driving mode</b>					Seated Seated Seated Seated
<b>1.08</b>	<b>Front overhang</b>					x mm 600 600 605 605
<b>1.09</b>	<b>Wheelbase</b>					y mm 2305 2305 2305 2305
<b>Weight</b>						
<b>2.01</b>	<b>Total weight (with/without battery)</b>					kg 10580/7950 9720/9170 11030/8680 10330/9780
<b>2.02</b>	<b>Axle load (laden,front/rear)</b>					kg 16350/1130 15280/1340 16280/1750 15730/2000
<b>2.03</b>	<b>Axle load (unladen,front/rear)</b>					kg 5730/4850 4750/4970 5730/5300 4880/5450
<b>Tyres</b>						
<b>3.01</b>	<b>Tyre type</b>					Solid tyre Solid tyre Solid tyre Solid tyre Solid tyre
<b>3.02</b>	<b>Tyre size,front</b>					8.25-15 8.25-15 8.25-15 8.25-15 8.25-15
<b>3.03</b>	<b>Tyre size,rear</b>					250-15 250-15 250-15 250-15 250-15
<b>3.04</b>	<b>Wheels,number front/rear (x=driven wheels)</b>					4/x2 4/x2 4/x2 4/x2 4/x2
<b>3.05</b>	<b>Tread, front</b>					b10 mm 1567 1567 1567 1567 1567
<b>3.06</b>	<b>Tread, rear</b>					b11 mm 1370 1370 1370 1370 1370
<b>Dimensions</b>						
<b>4.01</b>	<b>Mast tilt angle (forward/backward)</b>					a/β ° 6/10 6/10 6/10 6/10 6/10
<b>4.02</b>	<b>Height (mast lowered)</b>					h1 mm 2480 2480 2480 2480 2480
<b>4.03</b>	<b>Free lifting height</b>					h2 mm 160 160 165 165 165
<b>4.04</b>	<b>Lifting height (standard)</b>					h3 mm 3000 3000 3000 3000 3000
<b>4.05</b>	<b>Max. height,extended (with backrest)</b>					h4 mm 4460 4460 4460 4460 4460
<b>4.06</b>	<b>Height of overhead guard</b>					h6 mm 2500 2500 2491 2491 2491
<b>4.07</b>	<b>Seat height relating to SIP (to ground)</b>					h7 mm 1460 1460 1460 1460 1460
<b>4.08</b>	<b>Towing coupling height</b>					h10 mm 470 470 470 470 470
<b>4.09</b>	<b>Overall length (with fork)</b>					l1 mm 4657 4657 4662 4662 4662
<b>4.10</b>	<b>Overall length (without fork)</b>					l2 mm 3437 3437 3442 3442 3442
<b>4.11</b>	<b>Overall width</b>					b1 mm 2045 2045 2045 2045 2045
<b>4.12</b>	<b>Fork size:thickness x width x length</b>					s/e/l mm 60x150x1220 60x150x1220 65x150x1220 65x150x1220
<b>4.13</b>	<b>Fork carriage,according to ISO2328</b>					
<b>4.14</b>	<b>Distance across fork-arms, Max./Min.</b>					b5 mm 1845/300 1845/300 1845/300 1845/300 1845/300
<b>4.15</b>	<b>Distance across fork-arms, Max./Min.</b>					m1 mm 160 160 160 160 160
<b>4.16</b>	<b>Ground clearance (center of wheelbase)</b>					m2 mm 239 239 229 229 229
<b>4.17</b>	<b>Right angle stacking aisle width for pallet 1000x1200mm crossways</b>					Ast mm 4845 4845 4850 4850 4850
<b>4.18</b>	<b>Right angle stacking aisle width for pallet 800x1200mm lengthways</b>					Ast mm 5045 5045 5050 5050 5050
<b>4.19</b>	<b>Min. outside turning radius</b>					Wa mm 3050 3050 3050 3050 3050
<b>Performance Data</b>						
<b>5.01</b>	<b>Travel speed (laden/unladen)</b>					km/h 15/16 15/16 15/16 15/16 15/16
<b>5.02</b>	<b>Lift speed (laden/unladen)</b>					m/s 0.35/0.46 0.35/0.46 0.32/0.46 0.32/0.46
<b>5.03</b>	<b>Lowering speed (laden/unladen)</b>					m/s 0.46/0.45 0.46/0.45 0.48/0.45 0.48/0.45
<b>5.04</b>	<b>Max.drawbar pull (laden/unladen)</b>					N 35000 35000 37000 37000
<b>5.05</b>	<b>Max.gradeability (laden)</b>					% 19 19 18 18
<b>5.06</b>	<b>Acceleration time(10 m)(laden/unladen)</b>					s 4.9/5.5 4.9/5.5 4.9/5.5 4.9/5.5
<b>Battery</b>						
<b>6.01</b>	<b>Battery voltage/Capacity</b>					V/Ah 80/840 80/606 80/960 80/606
<b>6.02</b>	<b>Battery weight (Min./Max.)</b>					kg 2150 600 2350 600
<b>6.03</b>	<b>Battery,according to DIN</b>					DIN 43536A - DIN 43536A -
<b>Motor and controller</b>						
<b>7.01</b>	<b>Driving motor powering (S2-60min)</b>					kW 2x17.1 2x17.1 2x17.1 2x17.1
<b>7.02</b>	<b>Lifting motor powering (S3-15%)</b>					kW 2x26.5 2x26.5 2x26.5 2x26.5
<b>7.03</b>	<b>Driving motor controlling mode</b>					MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC
<b>7.04</b>	<b>Lifting motor controlling mode</b>					MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC
<b>Addition data</b>						
<b>8.01</b>	<b>Service brake/Parking brake</b>					Hydraulic Hydraulic Hydraulic Hydraulic
<b>8.02</b>	<b>Operating pressure for attachments</b>					Mpa 14 14 14 14

**Manufacturer and Technical Data (2)**

Characteristics						
<b>1.01</b>	<b>Manufacturer</b>					<b>HELI</b>
<b>1.02</b>	<b>Model</b>					CPD85 CPD85 CPD100 CPD100
<b>1.03</b>	<b>Configuration number</b>					GB2D GB2DLI GB2D GB2DLI
<b>1.04</b>	<b>Rated capacity</b>					Q kg 8500 8500 10000 10000
<b>1.05</b>	<b>Load center distance</b>					c mm 600 600 600 600
<b>1.06</b>	<b>Power mode</b>					Electric Electric Electric Electric
<b>1.07</b>	<b>Driving mode</b>					Seated Seated Seated Seated
<b>1.08</b>	<b>Front overhang</b>					x mm 650 650 660 660
<b>1.09</b>	<b>Wheelbase</b>					y mm 2400 2400 2580 2580
<b>Weight</b>						
<b>2.01</b>	<b>Total weight (with/without battery)</b>					kg 13952/11664 12660/12300 14780/12490 14060/13260
<b>2.02</b>	<b>Axle load (laden,front/rear)</b>					



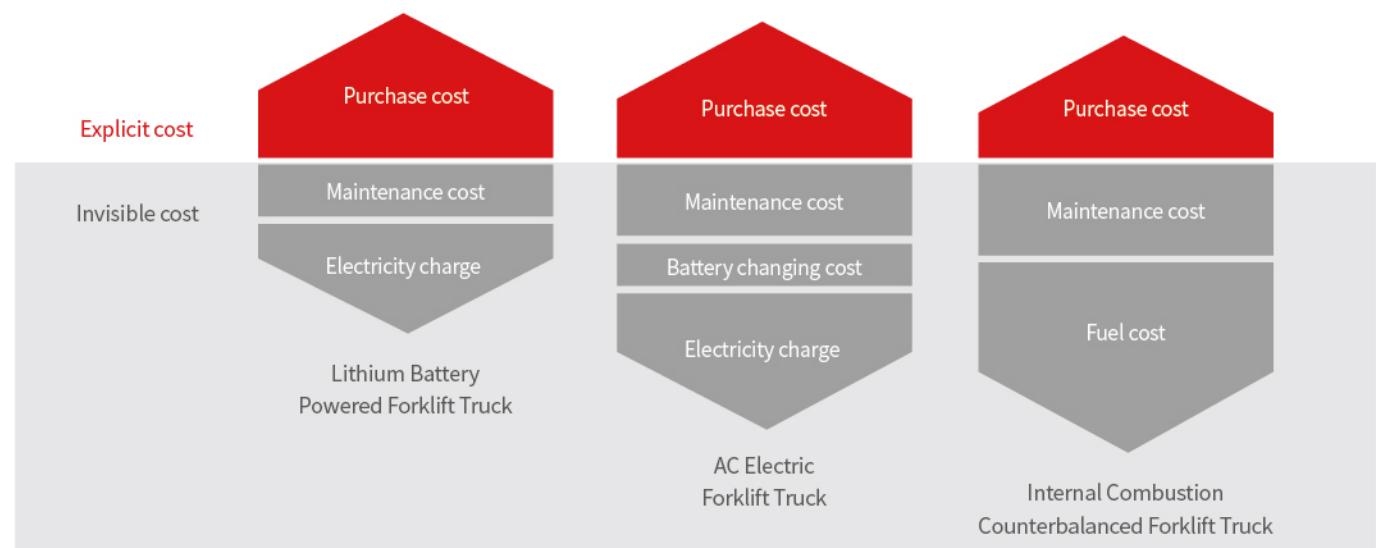
#### Load curve



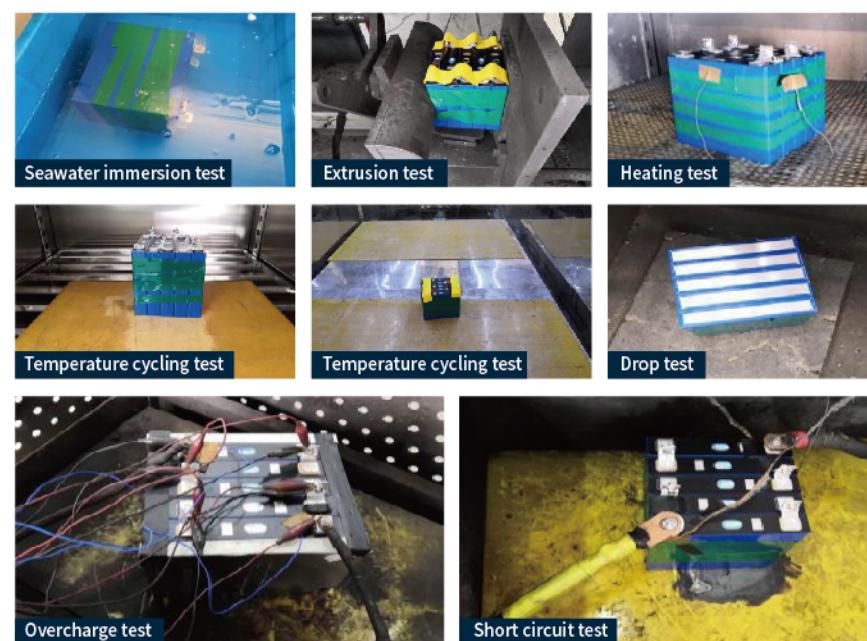
**Note:** The vertical axis stands for load capacity and the horizontal axis stands for load center which is calculated from the front surface of the forks to the gravity of the standard load. the standard load means a cubic with 1000mm edge length. When mast is tilted forward, using non-standard forks 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.

## 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.



#### Lithium Battery Advantages



- ✓ The truck selects mature and economical square iron phosphate lithium battery core and module used by large numbers of commercial vehicles;
- ✓ The module adopts aluminum alloy plate frame, which is firm, light in weight and has good heat dissipation effect;
- ✓ Fast charging: fast charging makes truck gapless operation possible, and it can be filled in 2 hours;
- ✓ High efficiency and safety: The charging and discharging efficiency is up to 98%, and temperature of thermal runaway is over 600 °C;
- ✓ Low temperature adaptability: Standard configuration of heating function ensures normal operation of low temperature environment;
- ✓ Long service life: the normal charging and discharging cycles is more than 4000 times or 5 years, and capacity retention rate is more than 75%;
- ✓ Maintenance free: the battery does not need manual maintenance and does not need to add distilled water electrolyte;
- ✓ Green and clean: no pollution and zero emission.

## G3 6-7t Wide View Standard Mast

Mast model	Max.lifting height (mm)	Load capacity (lode center 600mm) (kg)				Height (mast lowered) (mm)	Free lift (with backrest) (mm)	Service weight (kg)				Mast tilt angle $\alpha/\beta(^{\circ})$
		CPD60-GB2D	CPD60-GB2DLI	CPD70-GB2D	CPD70-GB2DLI			CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI	CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI	
M220	2200	6000	6000	7000	7000	2080	165	10470	9600	10920	10210	6/10
M250	2500	6000	6000	7000	7000	2230	165	10510	9640	10960	10250	6/10
M270	2700	6000	6000	7000	7000	2330	165	10540	9670	10990	10280	6/10
M300	3000	6000	6000	7000	7000	2480	165	10580	9720	11030	10330	6/10
M330	3300	6000	6000	7000	7000	2630	165	10610	9750	11060	10360	6/10
M350	3500	6000	6000	7000	7000	2730	165	10640	9780	11090	10390	6/10
M400	4000	6000	6000	7000	7000	3030	165	10820	9960	11270	10570	6/10
M425	4250	6000	6000	7000	7000	3155	165	10850	9990	11300	10600	6/10
M450	4500	6000	6000	7000	7000	3280	165	10890	10020	11340	10630	6/10
M475	4750	6000	6000	7000	7000	3405	165	10930	10060	11380	10670	6/5
M500	5000	6000	6000	7000	7000	3530	165	10960	10090	11410	10700	6/5
M550	5500	5700	5900	6600	6800	3830	165	11140	10270	11590	10880	6/5
M600	6000	5400	5600	6400	6600	4080	165	11200	10330	11650	10940	6/5

## G3 8.5-10t Wide View Standard Mast

Mast model	Max.lifting height (mm)	Load capacity (lode center 600mm) (kg)				Height (mast lowered) (mm)	Service weight (kg)				Mast tilt angle $\alpha/\beta(^{\circ})$
		CPD85	CPD100	CPD85	CPD100		CPD85-GB2D	CPD85-GB2DLI	CPD100-GB2D	CPD100-GB2DLI	
M250	2500	8500	10000	2450	2700	13272	11979	14659	13941	6/9	
M270	2700	8500	10000	2550	2800	13327	12034	14699	13981	6/9	
M300	3000	8500	10000	2700	2950	13952	12659	14780	14062	6/9	
M330	3300	8500	10000	2800	3100	14053	12760	14828	14110	6/9	
M350	3500	8500	10000	2950	3200	14198	12905	14873	14155	6/9	
M375	3750	8500	10000	3075	3325	14318	13025	14923	14205	6/9	
M400	4000	8500	10000	3250	3500	14493	13200	15063	14345	6/9	
M425	4250	8500	10000	3375	3625	14648	13355	15118	14400	6/9	
M450	4500	8500	10000	3500	3750	14768	13475	15168	14450	6/9	
M475	4750	8200	10000	3625	3875	14913	13620	15225	14507	6/6	
M500	5000	8200	10000	3750	4000	15028	13735	15280	14562	6/6	
M550	5500	7850	9000	4050	4300	15350	14057	15581	14863	6/6	
M600	6000	7400	8000	4300	4550	15553	14260	15631	14913	6/6	

## G3 6-7t Wide View Full Free 2-Stage Mast

Mast model	Max.lifting height (mm)	Load capacity (lode center 600mm) (kg)				Height (mast lowered) (mm)	Free lift (with backrest) (mm)	Service weight (kg)				Mast tilt angle $\alpha/\beta(^{\circ})$
		CPD60-GB2D	CPD60-GB2DLI	CPD70-GB2D	CPD70-GB2DLI			CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI	CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI	
ZM220	2200	6000	6000	7000	7000	2060	710	10570	9700	11050	10340	6/10
ZM250	2500	6000	6000	7000	7000	2210	860	10615	9745	11095	10385	6/10
ZM270	2700	6000	6000	7000	7000	2310	960	10650	9780	11130	10420	6/10
ZM300	3000	6000	6000	7000	7000	2460	1110	10695	9835	11175	10475	6/10
ZM330	3300	6000	6000	7000	7000	2610	1260	10730	9870	11210	10510	6/10
ZM350	3500	6000	6000	7000	7000	2710	1360	10765	9905	11245	10545	6/10
ZM400	4000	6000	6000	7000	7000	3010	1660	10950	10090	11430	10730	6/10
ZM425	4250	6000	6000	7000	7000	3135	1785	10985	10125	11465	10765	6/10
ZM450	4500	6000	6000	7000	7000	3260	1910	11030	10160	11510	10800	6/10
ZM475	4750	6000	6000	7000	7000	3385	2035	11075	10205	11555	10845	6/5
ZM500	5000	6000	6000	7000	7000	3510	2160	11110	10240	11590	10880	6/5
ZM550	5500	5700	5900	6600	6800	3810	2460	11295	10425	11775	11065	6/5
ZM600	6000	5400	5600	6400	6600	4060	2710	11360	10490	11840	11130	6/5

注: 不带货架自由起升高度6t: +340mm, 7t: +180mm

## G3 8.5-10t Wide View Full Free 3-Stage Mast

Mast model	Max.lifting height (mm)	Load capacity (lode center 600mm) (kg)				Height (mast lowered) (mm)	Free lift (with backrest) (mm)	Service weight (kg)				Mast tilt angle  $\alpha/\beta(^{\circ})$
CPD60-GB2D	CPD60-GB2DLI	CPD70-GB2D	CPD70-GB2DLI	CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI	CPD60-GB2D/GB2DLI	CPD70-GB2D/GB2DLI</th					

