

HELI 合力

HELI | AVERTEC
MALAYSIA

4-5 t

G3系列锂电池平衡重式叉车

G3 series Lithium Battery Powered
Counterbalanced Forklift Truck



美学与功能设计的完美结合

智能、安全、高效、节能环保的全新一代产品

Perfect Combination of Aesthetics and Functional Design

New generation with characteristics of smart, safe, high efficiency, energy saving and environment friendly

可靠性高 High Reliability

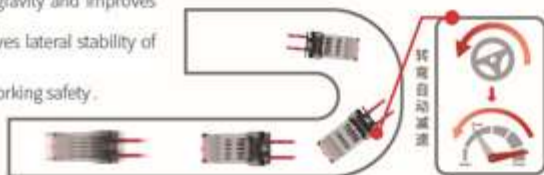
- 整车IP防护等级高
- 采用免维护集成电机，产品成熟可靠，久经市场考验；
- 采用油冷盘式湿式制动，免维护
- 行驶及泵电机均采用免维护交流电机；
- 采用国际著名品牌电控，智能优越；
- 采用大屏智能仪表，全面监控整车状态，安全可靠。

- 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.

安全性高 High Safety

- 采用无尾架车体结构，整车重心低，横向稳定性高；
- 高强度整体式焊接保护顶架，提升作业安全系数；
- 标配蓄电池侧门，使蓄电池更换更加安全高效；
- 电池中置，整车重心低，稳定性高；
- 后桥旋转点前置，提升整车横向稳定性
- 转弯自动减速功能，提升车辆转弯作业安全性；
- 门架上缓冲功能，提升作业安全性。

- 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.
- Fast lifting buffering improves operation safety.



免维护 Maintenance Free

- 无需补液、防尘
- 免日常维护
- 免人工保养
- Unnecessary of fluid adding and dust proofing
- Daily maintenance free
- Manual maintenance free

使用寿命长 Long Service Life

- 循环使用4000次容量保持75%以上
- 同等应用场合，寿命远超铅酸电池
- 高性能锂电总成5年或一万小时超长质保
- 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

高效节能 High Efficiency and Energy Saving

- 2-3小时充电可满足6-8小时作业使用
- 高能量密度，自放电率1%/月以下，充放电性能优越
- 95%能量转换率，能源转换更高效
- 可随时充电，操作简单，对电池寿命无任何影响
- 电池无需更换，节省成本
- 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

人机舒适性提升 Improved man-machine comfort

- 门架上、下缓冲功能，操作更安全、舒适
- 优化设计，提供较低的踏板高度及更大的上车空间
- 悬浮座椅及宽视野门架，提升驾驶体验；
- 优化蓄电池布置方式及平衡重设计，提升后视野范围；
- 倾斜缸下沉，提升腿部空间。
- Fast 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.

适合高低温工作

Suitable for working in both high and low environment

- 在-25℃至55℃之间高低温工作环境，锂电池较铅酸均具有良好的性能
- Lithium battery is better than lead-acid battery when working between -25℃ and 55℃

充电机技术 Charger technology



- 高效
大于95%充电效率,符合节能减排要求。
- 快速
最快2小时可完成100%全充电。
- 兼容
48V/80V兼容,满足不同电压等级需求。
- 安全
内置防反保护,具备失效自隔离功能;
完善的故障自检测提示,方便客户维护。
- 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
- Compatibility
48 v / 80 v compatibility meeting the demand of different voltage levels
- Safety
Built-in mis-connecting protection offering self isolating function under fault;
Perfect fault self checking alarm facilitating users maintenance.

可靠的专用仪表 Reliable special designed instrument



- 电池灯
Battery indicator
- 故障警示灯
fault indicator
- 控制器温度高警示灯
warning of high temperature of controller
- 上移键
Up
- 下移键
Down
- 减少键
Left
- 增加键
Right
- 确认键
Enter
- 取消键
escape
- 安全带灯
safety belt indicator
- 手刹灯
Hand brake indicator
- 座椅灯
Seat indicator

(ZAPI萨牌)

可靠的专用仪表将整车运行状态、故障检测等重要信息完整地显示出来,使操作者更直观、方便地了解车辆状态。

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.



- 龟速灯
Low speed
- 空挡灯
Neutral indicator
- 电池灯
Battery indicator
- 左移键
Left
- 上移键
Up
- 右移键
Right
- 下移键
Down
- 取消键
Back
- 确认键
Enter
- 手刹灯
Hand brake light
- 座椅灯
Seat indicator
- 提升锁止灯
Lifting lock indicator

(INMOTION英摩森)

标准配置 standard configuration

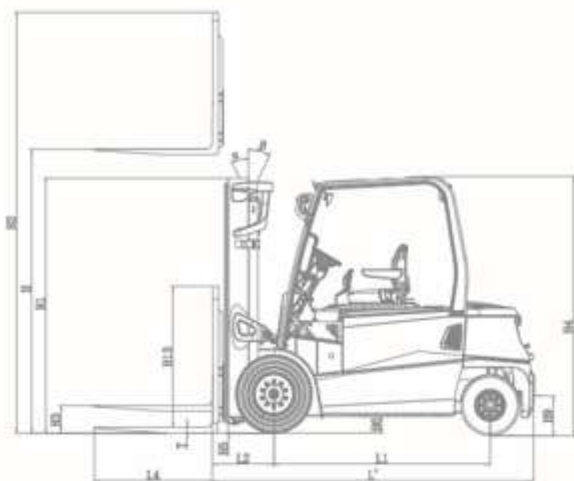
宽视野基本型门架	Wide view standard mast
标准货叉	Standard fork
III级货叉架	Class III standard carrier
挡货架	Backrest
两片多路阀	Two-spoils valve
锂电池	Lithium battery
全悬浮座椅	Full suspension seat
护顶架	Overhead guard
超弹性实心胎	Solid tyres
牵引销	Traction pin
LED信号灯、闪烁式警示灯	LED signal light, LED warning light(flashing)
USB接口	USB interface
转弯自动减速	Automatic steering slow down device
彩屏仪表 (INMOTION)	Colour screen instrument (INMOTION)
GRAPHIC仪表 (ZAPI)	GRAPHIC Display(ZAPI)

选用装置 Optional device

驾驶室	Cab
挡风	Windshield
无痕实心胎	Coloring tyres(white/green)
警示灯(旋转和蜂鸣)	LED warning lights(rotating /buzzer)
后工作灯	Rear work light
用户指定颜色	Customer color
侧移器	Side shifter
其他属具	Other attachments

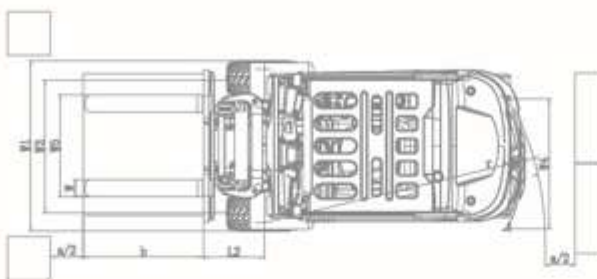
制造商和技术参数 Manufacturer's Data and Design Characteristics

特性 Character				HELI		
1.01 制造商 Manufacturer						
1.02 型号 Model				CPD40	CPD45	CPD60
1.03 配置号 Configuration number				GB2U/GB3U	GB2U/GB3U	GB2U/GB3U
1.04 额定起重量 Rated capacity	Q	kg		4000	4500	5000
1.05 载荷中心距 Load center distance	c	mm		500	500	500
1.06 动力方式 Power mode				锂电池 lithium battery	锂电池 lithium battery	锂电池 lithium battery
1.07 驾驶方式 Driving mode				乘坐式 seated	乘坐式 seated	乘坐式 seated
1.08 轴距 Wheel base	L1	mm		1960	1960	1960
轮胎 Tyre						
2.01 轮胎类型 Tyre type				实心胎 solid tyre	实心胎 solid tyre	实心胎 solid tyre
2.02 车轮数量 (前/后) Wheel number (front/rear)				2/2	2/2	2/2
2.03 前轮距 Front wheel base	W3	mm		1120	1120	1189
2.04 后轮距 Rear wheel base	W4	mm		1070	1070	1070
2.05 轮胎, 前 Tyre (front)				250-15	250-15	28×12.5-15
2.06 轮胎, 后 Tyre (rear)				21X8-9	21X8-9	21X8-9
尺寸 Size						
3.01 前悬距 Front overhang	L2	mm		560	560	560
3.02 门架倾角, 前/后 Mast tilt angle, front/rear	α/β	°		6/8	6/8	6/8
3.03 门架回缩时高度 Height with mast retraction	H1	mm		2240	2240	2230
3.04 自由起升高度 Free lifting height	H3	mm		150	150	150
3.05 最大起升高度 Max.lifting height	H	mm		3000	3000	3000
3.06 作业时最大高度 Max.height under working condition	H2	mm		4235	4235	4225
3.07 护顶架高度 Overhead guard height	H4	mm		2275	2275	2270
3.08 货叉尺寸 厚×宽×长 Fork size; thickness×width×length	T×W×L4	mm		50×150×1070	50×150×1070	50×150×1070
3.09 货叉架, DIN标准 Fork arm carrier, DIN standard				3A	3A	3A
3.10 车体长度 (不含货叉) Truck body length (fork excluded)	L ₁	mm		2920	2920	2920
3.11 车体宽度 Truck body width	W1	mm		1350	1350	1500
3.12 转弯半径 Turning radius	r	mm		2580	2580	2580
3.13 门架离地间隙 Clearance between mast and ground	H5	mm		140	140	130
3.14 轴距中心离地间隙 (满载) Clearance between wheel base center and ground (loaded)	H6	mm		145	145	135
3.15 直角堆垛通道宽度 (托盘1000×1000mm, 间隙200mm) Right angle stacking aisle width (pallet1000×1000mm, clearance 200mm)	As1	mm		4340	4340	4340
3.16 直角堆垛通道宽度 (托盘1200×1200mm, 间隙200mm) Right angle stacking aisle width (pallet1200×1200mm, clearance 200mm)	As1	mm		4540	4540	4540
性能 Performance						
4.01 行驶速度, 满/空载 Travelling speed; loaded/unloaded		km/h		13/14	13/14	13/14
4.02 起升速度, 满/空载 Lifting speed; loaded/unloaded		mm/s		310/450	280/450	260/450
4.03 下降速度, 满/空载 Lowering speed; loaded/unloaded		mm/s		500/450	500/450	500/450
4.04 最大爬坡能力 (满载) Gradeability (loaded)		%		16/27	15/26	14/25
4.05 最大牵引力 (满载) Max.traction force (loaded)		N		21000	21000	21000
4.06 加速时间 (10米) 满/空载 Acceleration time (10m) loaded/unloaded		s		6.58/6.25	6.70/6.19	6.82/6.14
重量 Weight						
5.01 总重 (包含/不包含蓄电池) Total weight(with/without battery)		kg		6670/6085	6835/6150	7210/6525
5.02 桥负载; 空载, 前/后 axle load:unloaded front/rear		kg		3195/3505	3215/3620	3345/3865
5.03 桥负载; 满载, 前/后 axle load:loaded front/rear		kg		9415/1310	10200/1135	11210/1035
电池 Battery						
6.01 蓄电池电压/容量 Battery voltage/capacity		V/Ah		80/500	80/600	80/600
6.02 蓄电池重量 Battery weight		kg		585	685	685
电机和控制器 Motor and controller						
7.01 驱动电机功率(S2-60min) Drive motor power(S2-60min)		kW		20	20	20
7.02 起升电机功率(S3-15%) Lifting motor power(S3-15%)		kW		26.5	26.5	26.5
7.03 转向电机功率(S3-15%) Steering motor power(S3-15%)		kW		2.5	2.5	2.5
7.04 驱动电机控制方式 Drive motor controlling mode				MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC
7.05 起升电机控制方式 Lifting motor controlling mode				MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC
7.06 转向电机控制方式 Steering motor controlling mode				MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC	MOS管/交流MOSFET/AC
其它 Others						
8.01 行车制动/停车制动 Service brake/parking brake				液力/机械hydraulic/mechanical	液力/机械hydraulic/mechanical	液力/机械hydraulic/mechanical
8.02 液压系统工作压力 Hydraulic system working pressure		Mpa		20	20	21.5
8.03 控制器型号 Type of drive control				伊顿/英摩森ZAP/MOTION	伊顿/英摩森ZAP/MOTION	伊顿/英摩森ZAP/MOTION

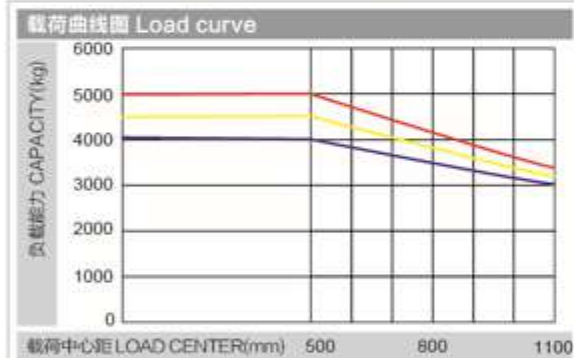


Ast: 直角堆垛通道宽度
Ast: Right angle stacking aisle width

a: 间隙,200mm.
a: Clearance,200mm



CPD40-GB2/GB3Li CPD45-GB2/GB3Li CPD50-GB2/GB3Li



注:
竖轴表示承载量,横轴表示载荷中心。载荷中心是从货叉正面计算起,标准载荷的基点是指负边长为1000毫米的立方体中心位置。当门架前倾、使用非标准货叉或装载超过正常宽度的负荷时,将会使承载量减少。通过负荷曲线图,能及时地了解标准门架在各种载荷中心时的承载能力。

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.

宽视野基本型门架WIDE VIEW MAST

门架型号 mast model	最大起升高度Max lifting height (mm)	承载能力(载荷中心为500mm) (kg) load capacity (load center 500mm)			门架全高(货叉落地) (mm) mast overall height (fork to the ground)		自由起升 free lift	整车自重 (kg) service weight			门架倾角 mast tilt angle
		CPD40	CPD45	CPD50	货叉落地(mm) mast lowered	货叉起升时 (带挡货架)(mm) fork lifted (with backrest)		CPD40	CPD45	CPD50	
M250	2500	4000	4500	5000	1980	3733	150	6615	6780	7155	6-8°
M300	3000	4000	4500	5000	2230	4233	150	6670	6835	7210	6-8°
M330	3300	4000	4500	5000	2380	4533	150	6700	6865	7240	6-8°
M350	3500	4000	4500	5000	2480	4733	150	6720	6885	7260	6-8°
M370	3700	4000	4450	4900	2580	4933	150	6745	6910	7285	6-8°
M400	4000	4000	4350	4750	2780	5233	150	6785	6950	7325	6-8°
M425	4250	4000	4250	4650	2905	5483	150	6810	6975	7350	6-8°
M450	4500	4000	4150	4500	3030	5733	150	6840	7005	7380	6-8°
M475	4750	3900	4100	4400	3155	5983	150	6865	7030	7405	6-8°
M500	5000	3800	4000	4300	3280	6233	150	6895	7060	7435	6-8°
M550	5500	3650	3800	4150	3580	6733	150	6955	7120	7495	6-5°
M600	6000	3400	3450	3850	3830	7233	150	7010	7175	7550	3-5°

注: 4-5t不带挡货架自由起升+271mm; Free lift without backrest will increase by 271mm.

宽视野二级全自由门架WIDE VIEW FULL FREE 2-STAGE MAST

门架型号 mast model	最大起升高度Max lifting height (mm)	承载能力(载荷中心为500mm) (kg) load capacity (load center 500mm)			门架全高(货叉落地) (mm) mast overall height (fork to the ground)		自由起升 (带挡货架) free lift (with backrest)	整车自重 (kg) service weight			门架倾角 mast tilt angle
		CPD40	CPD45	CPD50	货叉落地(mm) mast lowered	货叉起升时 (带挡货架)(mm) fork lifted (with backrest)		CPD40	CPD45	CPD50	
ZM250	2500	4000	4500	5000	1980	3733	777	6710	6875	7250	6-8°
ZM261	2610	4000	4500	5000	2035	3792	832	6720	6885	7260	6-8°
ZM300	3000	4000	4500	5000	2230	4233	1027	6770	6935	7310	6-8°
ZM330	3300	4000	4500	5000	2380	4533	1177	6803	6968	7343	6-8°
ZM350	3500	4000	4500	4900	2480	4733	1277	6833	6998	7373	6-8°
ZM370	3700	4000	4400	4800	2580	4933	1377	6865	7030	7405	6-8°
ZM400	4000	4000	4300	4650	2780	5233	1577	6915	7080	7455	6-8°
ZM425	4250	4000	4200	4550	2905	5483	1702	6945	7110	7485	6-8°
ZM450	4500	3950	4100	4450	3030	5733	1827	6983	7148	7523	6-8°
ZM475	4750	3850	4050	4350	3155	5983	1952	7015	7180	7555	6-8°
ZM500	5000	3750	3950	4250	3280	6233	2077	7050	7215	7590	6-8°
ZM550	5500	3600	3750	4100	3580	6733	2377	7115	7280	7655	6-5°
ZM600	6000	3350	3400	3800	3830	7233	2627	7170	7335	7710	3-5°

注: 4-5t不带挡货架自由起升+271mm; Free lift without backrest will increase by 271mm.

宽视野三级全自由门架WIDE VIEW FULL FREE 3-STAGE MAST

门架型号 mast model	最大起升高度Max lifting height (mm)	承载能力(载荷中心为500mm) (kg) load capacity (load center 500mm)			门架全高(货叉落地) (mm) mast overall height (fork to the ground)		自由起升 (带挡货架) free lift (with backrest)	整车自重 (kg) service weight			门架倾角 mast tilt angle
		CPD40	CPD45	CPD50	货叉落地(mm) mast lowered	货叉起升时 (带挡货架)(mm) fork lifted (with backrest)		CPD40	CPD45	CPD50	
ZSM360	3600	4000	4350	4900	1930	4833	727	6915	7080	7455	6-8°
ZSM400	4000	3950	4200	4750	2070	5233	867	6965	7130	7505	6-8°
ZSM435	4350	3850	4050	4450	2180	5583	977	6995	7160	7535	6-8°
ZSM450	4500	3800	4000	4400	2230	5733	1027	7015	7180	7555	6-8°
ZSM470	4700	3700	3950	4300	2345	6033	1142	7040	7205	7580	6-8°
ZSM500	5000	3600	3850	4200	2480	6233	1277	7085	7250	7625	6-8°
ZSM540	5400	3450	3700	4050	2615	6633	1412	7215	7380	7755	6-5°
ZSM600	6000	3250	3350	3650	2850	7233	1647	7305	7470	7845	6-5°
ZSM650	6500	2650	2750	3150	3015	7733	1812	7365	7530	7905	6-5°
ZSM700	7000	2150	2250	2650	3215	8233	2012	7435	7600	7975	3-5°

注: 4-5t不带挡货架自由起升+380mm; Free lift without backrest will increase by 380mm.

合力智能车队管理系统(选配)

HELI smart fleet management system (optional)

- 车辆定位
- 远程诊断
- 远程监控
- 维保提示
- 电池管理
- 统计报表
- 车辆管理
- 身份识别(选配)
- 称重管理(选配)
- 碰撞管理(选配)
- Vehicle positioning
- Remote diagnosis
- Remote monitoring
- Maintenance reminder
- Battery management
- Statistical form
- Vehicle management
- Identification recognition (optional)
- Weight management (optional)
- Collision management (optional)

