HELI合力

8-15 t

G2系列锂电池牵引车

G2 Series lithium battery tractor



www.carretillashelli.com

G2 系列/ SERIES 8-15 t



整车简介
Brief Introduction

G2系列8-15吨锂电池牵引车是合力倾力打造的新一代环保型牵引车辆，整车造型独特，按照人机工程学的原理从美学的角度去融合和升华设计形态，来满足驾驶员乘坐、操作空间、方便性及环保等一系列舒适性方面的要求。

该车型以锂电池组提供动力，采用交流控制系统进行无级调速的电动牵引车。整机高效节能，具有可靠性好，操作舒适，动力强劲等特点。

As the newly designed environmentally friendly tractor machines, HELI G2 series 8-15T Four Fulcrum lithium battery tractor has the unique profiling, ergonomically and aesthetic philosophy combination for operator comfort and ease of use, maintenance convenience.

This machine is powered by Lithium battery, with AC control system to supply the stepless accelerating, high efficiency, reliable quality, comfortable operation, and strong power.

合力锂电池牵引车的优越性，更突出地体现在生命周期内使用成本上。与铅酸蓄电池牵引车相比，锂电池牵引车适合多班次场合，隐形成本低，整体运营成本更经济。

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

绿色环保 Environment Friendliness

- 零排放
- 低噪音
- 不含重金属
- 无滴漏腐蚀
- 无酸雾挥发

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

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

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℃

高安全 High Safety

- 根据工业车辆特点，实现锂电池材料、电芯类型、PACK工艺以及系统电源管理的整车安全防护设计
- “多节点安全闭环保护” 实现车辆多状态实时闭环保护
- 充电“锁扣确认”功能，有效避免“热插拔”操作
- “全系统紧急断电”功能，达到车辆控制系统和BMS电源迅速切断，安全有效

- 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
- “ Lock affirming” function during charging avoiding “hot connecting and disconnecting” operation effectively
- “Whole system emergency button” to disconnect the truck control system and bms power quickly ensuring truck safety

整车特点 Vehicle characteristics

- 进口交流控制系统，CAN总线控制技术，多重保护，安全可靠；
- 减速和制动能量回收技术，提高车辆行驶里程；
- 配置紧急断电开关，实现电气回路迅速切断；
- 控制系统具有过压、欠压、过流、短路、缺相等自保护；
- 人机交互式组合仪表，实现运行参数调整、开机工作时间记录、锂电池电量监测、行驶速度显示、故障代码显示等功能；
- 整车布置紧凑，简约风格设计，美观大方；
- 转向系统采用横置油缸液压动力转向技术，满足不同用户及使用场合的需求，实现转向灵活、轻便；
- 转弯半径小，直角通过能力优良；
- 专用驱动桥。传动比大，具有良好的动力性和经济性，同时具有较大的离地间隙，保证本车具有良好的通过性。驱动桥结构便于拆装和调整，具有良好的维修性；
- 轮边液压制动、停车机械制动、交流电机电制动三套独立的制动系统，保证整车运行安全可靠。

- Imported AC control system, can bus control technology, multiple protection, safe and reliable.
- Deceleration and braking energy recovery technology, Increase vehicle mileage.
- Configure emergency power-off switch, Realize rapid cut-off of electrical circuit.
- The control system has self-protection of overvoltage, undervoltage, overcurrent, short circuit and short circuit.
- Realize the adjustment of operating parameters, Startup working time record,Man machine interactive combination instrument, Battery power monitoring, Travel speed display,fault code display etc. function.
- Compact vehicle layout, Simple style design, Beautiful and generous.
- The steering system adopts transverse oil cylinder, Hydraulic power steering technology, Meet the needs of different users and occasions.Small turning radius, Excellent right angle Trafficability.
- Special drive axle.Large transmission ratio, good power and economy, good power and economy, and has a large ground clearance, Ensure that the vehicle has good trafficability.
- The drive axle structure is convenient for disassembly and adjustment, Good maintainability.
- Wheel side hydraulic braking, Parking mechanical braking, AC electromechanical brakingThree independent braking systems, Ensure the safe and reliable operation of the whole vehicle.

转向系统 Steering system

- 本车采用全液压横置油缸转向桥实现前轮转向，该转向系统具有效率高，操作轻便，使用寿命长，转向灵活轻便等特点。
- With fully-hydraulic Transverse cylinder power steering , easily steering, and long working life.

更加优越的智能化设计 Superior intellectualized design

- 更多智能化设计的装备与功能使整车更加卓越高效，这不仅保护驾驶者和整车安全，还提高工作效率，降低了能耗。
- Superior intellectualized designs not only ensure operator and truck safety but also improve working efficiency, reduce energy consumption.



操纵系统 Operating system

- 合理的制动踏板、加速踏板的角度及位置，轻巧的踏板力，充分满足人机工程要求
- 采用可调式方向盘，方向盘的位置可前后调节，以适应不同体形驾驶员操纵的要求
- 具有良好的冷态制动效能，产生足够的制动力，使行车制动和驻车制动性能符合强制性标准的要求

- Comfortable brake/accelerating pedal position with light stepping strength, fully meeting ergonomically demands.
- With front-rear adjustable steering wheel to satisfy different height drivers.
- With excellent cold-brake efficiency, enough brake force, fully meet the parking and driving brake standard.

车身系统 Chassis system

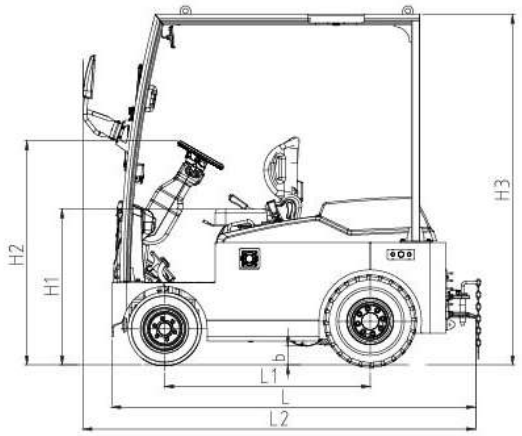
- 采用国标充电枪，方便快捷。
- 采用半包围座椅，舒适美观。

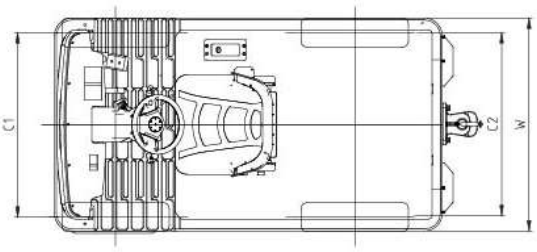
- Adopt national standard charging gun, convenient and fast.
- Adopt the semi enclosed seats, comfortable and beautiful.





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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 .

智能仪表 Smart meter



能量再生技术 RENEWABLE ENERGY TECHNOLOGIES

交流控制能量再生技术，使锂电池牵引车更节能，
锂电池单作业循环时间最大延长15%。
With AC type energy regeneration technology,
the working hour of single battery shift is 15% increased.

15%

技术参数 Technical Parameters

			单位 Unit	QYD80-A2LiG2	QYD100-A2LiG2	QYD120-A2LiG2	QYD150-A2LiG2
1	车型 Model						
2	操作方式 Driving mode			座驾式 Seated			
3	牵引能力 Tractive capacity		Q(kg)	8000	10000	12000	15000
4	额定牵引力 Rated traction		F(N)	3200	3200	4000	4000
5	最大牵引力 Maximum traction		F(N)	10000	11000	12000	13000
6	空载时前后轮负重 Front/rear tires load without load		kg	480/1240	480/1240	480/1270	650/1430
7	自重 Service weight		kg	1720	1720	1750	2080
8	轮胎 Tyre	前轮 Front tire		16x6-8-10PR			
		后轮 Rear tire		6.00-9-10PR			
9	轴距 Wheelbase		L1(mm)	1200			
10	座椅（地面）高度 Seat (ground) height		H1(mm)	900			
11	外形尺寸：长×宽×高（不含驾驶室） Truck dimension(length*width*height) Excluding cab		L×W×H(mm)	2125×1070×1330			
12	外形尺寸：长×宽×高（含驾驶室） Truck dimension(length*width*height) Including cab		L×W×H(mm)	2300×1070×2045			
13	前轮轮距 Front tread		mm	910			
14	后轮轮距 Rear tread		mm	920			
15	牵引座高度 Traction base height		mm	350/450			
16	最小离地间隙 Min.Ground clearance		b(mm)	110			
17	最小转弯半径 Min.turning radius		R(mm)	1900			
18	行驶速度（满载/空载） Driving speed (with/without load)		km/h	12/16	11/16	10/16	10/16
19	爬坡能力（空载/满载） Grade ability(with/without load)		%	6/20	5/20	5/20	5/20
20	行车制动 Driving brake			液压制动和电制动 Hydraulic brake & electric brake			
21	驻车制动 Parking brake			机械制动 Mechanical brake			
22	驱动方式 Driving mode			后轮驱动 Rear drive			
23	驱动电机功率 Drive motor power		kW	8.2（交流AC）			12（交流AC）
24	转向电机功率 Steering motor power		kW	1.35			
25	电池电压/容量 Battery voltage/capacity		V/Ah	80/202	80/202	80/202	80/271
26	行驶控制方式 Driving control mode			电子无级式 Electronic stepless mode			
27	驾驶员耳边噪音 Driver's ear noise		dB（A）	<70			
28	电控型号 Controller model			ZAPI			

标准配置 Standard configuration

智能液晶彩屏仪表 Intelligent LCD color screen	液压转向 Hydraulic steering
锂电池 Lithium battery	充气轮胎 Pneumatic
LED灯具 LED lamps	

选用装置 Optional configuration

驾驶室 Cabin	半封闭驾驶室 Semi enclosed cab
实心轮胎 Solid tire	环保实心轮胎 Environmentally friendly solid tire
LED警示灯 Led warning light	用户自选涂装 User selected coating

锂电池选项 Lithium battery options

80V/271Ah(鹏成 PENGCHENG)
80V/202Ah、80V/272Ah(和鼎HEDING)

*Las especificaciones y equipamientos están sujetos a cambios sin previo aviso.

HELI

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