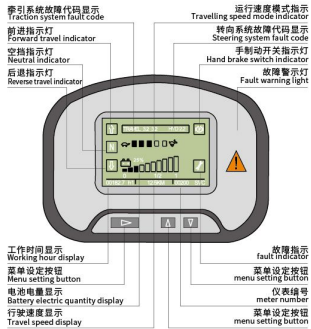


▶▶ 充电机技术 Charger technology



- ▶ 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.

▶▶ CURTIS ENGAGE IV 交互式多功能液晶仪表



- 可靠的专业仪表将整车运行状态、故障检测等重要信息完整的显示出来, 使操作者更直观、方便地了解车辆状态。
Truck working condition can be known directly and easily through reliable meter displaying important information such as truck working condition, fault and so on.



能量再生技术 RENEWABLE ENERGY TECHNOLOGIES

交流控制能量再生技术, 使电动牵引车更节能, 蓄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

项目 Item	单位 Unit		
1 车型 Model		QYD200-J1Li	QYD250-J1Li
2 驾驶方式 Driving mode		座驾式 Seated	
3 额定牵引质量 Rated towing weight	kg	20000	25000
4 自重 Service weight	kg	3490	3770
5 额定牵引力 Rated traction force	N	5000	5000
6 最大牵引力 Max. traction force	N	16000	16000
7 行驶速度 (满载/空载) Travelling speed (unloaded/loaded)	km/h		
8 爬坡能力 (满载/空载) Gradeability (unloaded/loaded)	%	4/20	4/20
9 外形尺寸; 长*宽*高 Overall dimension: LxWxH	mm	3245x1300x1820	
10 轴距 Wheelbase	mm	1715	
11 轮胎 Tread	mm	前 Front	1120
	mm	后 Rear	1090
12 最小转弯半径 Min. steering radius	mm	3250	
13 最小离地间隙 Min. ground clearance	mm	110	
14 前悬 Front overhang	mm	920	
15 后悬 Rear overhang	mm	510	
16 牵引钩离地高度 Traction hook height	mm	350/450	
17 轮胎 Tyre	mm	前 Front	6.00-9-10PR
	mm	后 Rear	7.00-12-12PR
18 行车制动 Service brake	液压制动和电制动/Hydraulic brake & electric brake		
19 驻车制动 Parking brake	机械制动 Mechanical brake		
20 驱动方式 Driving type	后轮驱动 Rear drive		
21 驱动电机功率 Driving motor power	kW	20(AC)	
22 转向电机功率 Steering motor power	kW	1.35 (DC)	
23 电池电压/容量 Battery voltage/capacity	V/Ah	80/542	80/606
24 电池重量 Battery weight	kg	565	615
25 行驶控制方式 Driving control mode	电子无级式 Electronic stepless mode		
26 驾驶员耳边噪音 Operator's ear noise	dB	<70	

标准配置 Standard configuration 选用配置 Optional configuration 锂电池选项 Lithium battery options

全封闭驾驶室 Enclosed cab	前牵引灯 Front traction base	荧光警示灯 Emergency power	80V/500Ah (中越 CNSG HONG SIFANG)(QYD200-J1Li)
充气胎 Pneumatic tyre	实心胎 Solid tire	自选涂装 Customized painting	80V/600Ah (中越 CNSG HONG SIFANG)(QYD250-J1Li)
液晶仪表 Liquid crystal meter	紧急断电开关 Emergency power		
司机工具 Driver's tool	旋转式警示灯 Rotating warning light		
牵引销 Pin	牵引底座 Front traction base		
四轮制动 Four wheel braking	无级或实心胎 Solid tire		



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20-25t
G系列锂电池牵引车
G series lithium battery tractor



整车简介 Brief introduction

G 系列20-25吨锂电牵引车是合力打造的一款新能源环保型牵引车，整车造型新颖，性能可靠，是区域物流领域的重要设备，主要用于机场、铁路、邮政、制造业、医药、烟草、物流等系统。

该车型系四轮驱动，以锂电池组提供动力，前轮转向，后轮驱动；整车采用进口交流电控装置进行无极调速，具有高效节能、低噪音、操作简单、转向轻便灵活等特点。

G series 20-25t lithium battery tractor which has popular appearance and reliable performance is a new generation of environment friendly tractor designed by HELI. It is a kind of important equipment in regional logistics field and it is mainly used in airport, railway, postal service, manufacturing industry, medicine, tobacco, logistics and other industry.

The four-wheel truck is powered by lithium battery. The steering wheel is front wheel and the drive wheel is rear wheel. Imported controller with stepless speed regulation is assembled on the truck. The truck has high energy efficiency, low noise, easy operation and the flexible steering.

锂电池优势 Lithium battery advantages

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，形成低成本，整体运营成本经济。

The superiority of HELI lithium battery tractor 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
- 无汞害效应
- 无酸雾挥发
- Zero emission
- Low noise
- Free of heavy metals
- No corrosion
- No acid mist volatilization

免维护 Maintenance Free

- 无需补水、防尘
- 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3年成一万小时超长质保
- Over 75% capacity reserved after 4000 shifts operation
- Longer service life than lead-acid battery in equal working condition
- 5 year 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℃

高效节能 High Efficiency and Energy Saving

- 2小时充电满足6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%能量转化率，能源转换更高效
- 可随时充电，操作简便，对电池寿命无任何影响
- 电池无需更换，节省成本

- 2 hours charging meet 6 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

驱动系统 Drive system

- 驱动桥采用进口意大利CARRARO（卡拉罗）交流电桥（含交流电机，湿式多盘制动器、减速器及差速器）；QYD200/250-JE2型采用HELI自制的驱动桥和变速箱；
- CARRARO drive axle (AC motor, wet type multi disc brake, reductor and differential are included), imported from Italy, is assembled on the tractor.

电气系统 Electric system

- 采用了目前最先进的进口交流变频器，CAN总线通讯，闭环控制方式，具有高效率、低发热和高安全性，驱动电路简单、斩波频率高，保证本系统电流平稳、减少电机和电瓶发热，大大提高整车的可靠性；
- 性能优良的数字仪表实现运行时间累积计时、蓄电池电量监测、行驶速度显示、故障代码显示等功能。
- The most advanced imported AC type chopper, CAN bus communication and closed-loop control mode offer the truck high efficiency, low heat, high safety, simple drive electric circuit, high chopper frequency. And the stable system current is ensured, the heat generated by motor and battery is reduced and reliability is greatly improved.
- Working hour, battery electric quantity, travelling speed and fault code are shown through excellent meters.



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智能，这不仅保护驾驶员和整车安全，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.



转向系统 Steering system

- 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、操纵轻便、使用寿命长等特点，使转向灵活、轻便
- With fully hydraulic powered horizontal cylinder steering axle, the steering is flexible and easy. The steering system has high efficiency, easy operation and long service life.

动力制动系统 Brake system

- 采用全液压动力制动技术，制动轻便、可靠
- Fully hydraulic powered brake technology offers easy and reliable brake.

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符合国家标准性能标准
- 装有点动按钮保护装置，能实现车辆的前进、后退蠕动，安全、准确地完成牵引车与拖车的连接
- Proper angle and position of braking pedal and acceleration pedal and slight pedal force fully satisfy ergonomic requirements.
- Adjustable steering wheel fits different operator's size.
- With good brake effect in cold condition and enough brake force, national mandatory performance standards in service brake and parking brake are satisfied.
- With inching button, safe and precise connection between the tractor and trailer is ensured through inching forward or backward.

