

1.6-2.0t

LITHION

G2系列座式交流锂电池前移式叉车 G2 SERIES LITHIUM BATTERY POWERED REACH TRUCK (SIT-DOWN TYPE)

G2 series / 智能·环保 INTELLIGENT ENVIRONMENT-FRIENDLY



整车优势 FEATURES OF THE COMPLETED TRUCK



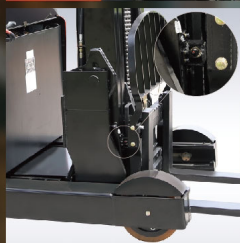
三相交流电机技术 Three phase AC type motor technology

- 行驶、提升和转向均采用三相交流电机控制
- 强大的加速性
- 变换行驶方向灵敏迅速无迟滞
- 无碳刷的免维护电机寿命更长，维护费用更低，减速时进行能量回收，操作时间更长
- Three phase AC type motor control on travelling, lifting and steering
- Good acceleration
- Fast and sensitive respond on travel direction shifting Free from maintenance motor without carbon brush having long service life and low maintenance cost
- Energy regenerating during deceleration extending operation hours



全新的液压设计 Newly designed hydraulic system

- 全新的液压设计，使液压系统的工作效率更高
- 大功率的起升电机
- MOSFET起升调速电控
- 新型叉分齿轮技术低噪音齿轮泵
- Newly designed hydraulic system with high working efficiency
- High power lifting motor
- MOSFET lifting speed governing electric controller
- New type low noisy gear pump



更加优化的智能型设计 Optimized intelligent design

- Inmotion行走电机控制器
- Inmotion起升电机控制器
- Inmotion转向电机控制器
- CAN总线技术
- 主回路控制回路同时紧急断电
- Inmotion travelling motor controller
- Inmotion lifting motor controller
- Inmotion steering motor controller
- CAN bus technology
- Emergency power off of both main circuit and control circuit
- 坡度停车制动
- 操作顺序保护
- 行驶速度控制
- 电控自保护
- 提升高度认证（选配）
- Parking brake on slope
- Operation sequence protection
- Travelling speed control
- Electric controller self protection
- Lifting height pre-selector (optional)

先进的EPS电子动力转向 Advanced EPS electric powered steering

- EPS电子动力转向，为整车提供了轻便灵活，高效静音的操作
- 转向电机控制器
- 自动对中功能
- 180度/360度两种转向模式，可实现实时切换
- 转向自动限制时速和加速度
- EPS electric powered steering offering easy, flexible, high efficient and mute operation
- Steering motor controller
- Automatic centering function
- Real-time shifting between 180° steering mode and 360° steering mode
- Automatic limit on speed and accelerated speed when steering

操作轻便的拇指开关 Easy operated thumb switch

- 拇指开关可以控制所有液压功能
- 操作部件功能明确且一目了然
- 比例电磁阀控制下降动作，平稳舒适
- To control hydraulic functions
- Clear operating units
- Proportional solenoid offering a stable and comfort lowering action

绿色环保 Environment Friendliness

- 零排放
- 低噪音
- 不含重金属
- 无腐蚀
- 无烟雾挥发
- 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

长寿命 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%以下
- 95%能量转换效率，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 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

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

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℃



显性成本
Explicit Cost

隐性成本
Hidden Cost

售价
Explicit Cost

维护费用
Maintenance Cost

电费
Electricity Cost

锂电池电动叉车
Lithium Battery Forklift

售价
Explicit Cost

维护费用
Maintenance Cost

电费
Electricity Cost

更换电池费用
Battery Changing Cost

铅酸电池电动叉车
Lead-acid Battery Forklift

合力锂电池叉车的优越性，更突出的体现在生命周期内使用成本上。与铅酸蓄电池叉车相比，锂电池叉车适合多班次场合，隐性成本低，整体运营成本更经济。

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

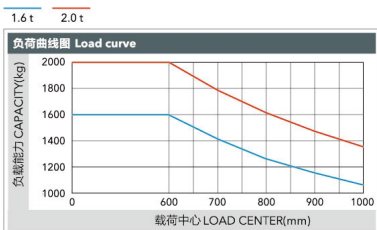
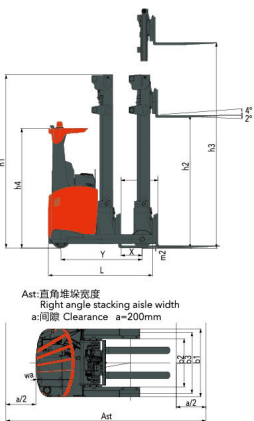
宽视野三节全自由门架 WIDE VIEW FULL FREE 3-STAGE MAST

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) Load capacity (load center 500mm)(kg)	门架全高(mm) Mast overall height (mm)	自由起升高度(mm) Free lift height (mm)	整车自重 Service weight(kg)	货叉倾角(前/后) Fork tilt angle (front/rear)α/β
			1.6-2t	1.6-2t	COD16-GB3SLi CQD20-GB3SLi	
ZSM460	4600	1600	2000	2314	1280	3460
ZSM480	4800	1600	2000	2381	1340	3479
ZSM540	5400	1600	2000	2581	1540	3537
ZSM570	5700	1550	1900	2481	1640	3545
ZSM630	6300	1500	1900	2881	1840	3623
ZSM675	6750	1450	1800	2982	1940	3656
ZSM700	7000	1400	1700	3065	2030	3680
ZSM715	7150	1400	1700	3115	2080	3694
ZSM750	7500	1300	1700	3232	2190	3728
ZSM800	8000	1200	1500	3398	2360	3776
ZSM850	8500	1100	1300	3564	2530	3824
ZSM900	9000	900	1100	3730	2690	3871
ZSM950	9500	800	1000	3898	2860	3920
ZSM1000	10000	-	850	4064	3030	-
ZSM1050	10500	-	800	4230	3190	-
ZSM1080	10800	-	750	4330	3290	-
ZSM1100	11000	-	700	4398	3360	-
ZSM1150	11500	-	650	4564	3530	-
ZSM1200	12000	-	550	4730	3690	-
ZSM1250	12500	-	500	4898	3860	-

注:不带挡货梁时,自由起升高度为:4600至6300,自由起升高度增加175mm,其余高度增加25mm。
Note: The free lift height is 4600mm-6300mm when the truck is not assembled with backrest. The free lift height is 175mm increased and other height is 25mm increased.

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) Load capacity (load center 500mm)(kg)	门架全高(mm) Mast overall height (mm)	整车自重 Service weight(kg)	货叉倾角(前/后) Fork tilt angle (front/rear)α/β
			1.6-2t	1.6-2t	COD16-GB3SLi CQD20-GB3SLi
M290	2900	1600	2000	2200	3231
M320	3200	1600	2000	2350	3250
M360	3600	1600	2000	2550	3279
M380	3800	1600	2000	2650	3293
M400	4000	1600	2000	2750	3308
M420	4200	1600	2000	2850	3321
M440	4400	1600	2000	2950	3334
M460	4600	1600	2000	3050	3390
M500	5000	1500	1900	3250	3418



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对称起,标准载荷的基点是指负荷边长为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 lifted 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.

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

特性 Character	制造商 Manufacturer	型号 Model	配置号 Configuration number	额定承载能力 Load capacity	载荷中心距 Load center distance	动力形式 Power mode	驾驶方式 Driving mode	轮胎 Wheel base
1.01 制造厂商								
1.02 型号								
1.03 配置号								
1.04 额定承载能力								
1.05 载荷中心距								
1.06 动力形式								
1.07 驾驶方式								
1.08 轮胎								
2.01 轮胎类型								
2.02 轮胎数量,驱动轮/承载轮(x=驱动轮)								
2.03 轮胎(承载轮)								
2.04 承载轮尺寸								
2.05 驱动轮尺寸								
尺寸 Size								
3.01 标准门架起升高度								
3.02 自由起升高度								
3.03 门架落地高度								
3.04 货叉尺寸,厚度/宽度/长度								
3.05 货叉调节宽度								
3.06 货叉倾角(前/后)								
3.07 货叉侧移量								
3.08 车体长度(不含货叉)								
3.09 车体宽度								
3.10 支腿内宽								
3.11 前移距离								
3.12 护顶架高度								
3.13 最小离地间隙(门架处)								
3.14 最小转弯半径								
3.15 货叉前端面至承载轮中心距离								
3.16 直角堆垛宽度(托盘1200Lx1200W, 间距200)								
3.17 直角堆垛宽度(托盘1000Lx1200W, 间距200)								

性能 Performance	速度 Speed	重量 Weight	蓄电池 Battery	电机及控制 Motor and controller	转向控制 Steering control	制动控制 Braking control	安全系统 Safety system
4.01 行驶速度, 满负载	Travelling speed, with/without load	11/12	12/14				
4.02 起升速度, 满负载	Lifting speed, with/without load	0.34/0.53	0.35/0.55				
4.03 下降速度, 满负载	Lowering speed, with/without load	0.5/0.5	0.5/0.5				
4.04 前移速度, 满负载	Reach speed, with/without load	0.11/0.11	0.11/0.11				
4.05 最大爬坡能力, 满负载	Maximum climbing ability, with/without load	10/15	10/15				
5.01 整车自重(含蓄电池)	Total weight (with battery)	3460	3650				
5.02 空载桥负荷, 驱动轮/承载轮(货叉前移)	Axle load, fork outreached, without load, front/rear	1570/1880	1690/1950				
5.03 空载桥负荷, 驱动轮/承载轮(货叉后移)	Axle load, fork retracted, without load, front/rear	2165/1270	2285/1360				
5.04 满载桥负荷, 驱动轮/承载轮(货叉前移)	Axle load, fork outreached, with load, front/rear	610/4445	580/5065				
5.05 满载桥负荷, 驱动轮/承载轮(货叉后移)	Axle load, fork retracted, with load, front/rear	1920/3140	1980/3650				
6.01 蓄电池电压/额定容量	Battery voltage/capacity	V/Ah	48/320(标配) 48/400(选配) 48/500(标配)				
6.02 蓄电池重量	Battery weight	kg	430				
6.03 蓄电池箱体尺寸	Battery box dimension	mm	1220x298x790				
7.01 驱动电机功率(S2-60min)	Drive motor power(S2-60min)	kW	6				
7.02 起升电机功率(S3-15%)	Lifting motor power(S3-15%)	kW	11				
7.03 转向电机功率(S3-50%)	Steering motor power(S3-50%)	kW	0.4				
7.04 驱动控制方式	Type of driving control		MOSFET/AC				
7.05 起升控制方式	Type of lifting control		MOSFET/AC				
7.06 转向控制方式	Type of Steering control		MOSFET/AC				
7.07 变速箱	Transmission box		合力专用变速箱 Heli special transmission box				
7.08 行车制动	Service brake		电磁制动 Electromagnetic brake				
7.09 液压系统工作压力	Hydraulic system working pressure	Mpa	17.5				

注:蓄电池具体品牌及其容量大小,请咨询销售或技术人员。

NOTE: *Detailed information about battery, please contact our salesmen or engineer.

HELI

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, 具备失电自锁离功能。
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.

标准配置 Standard configuration

AC行走电机	AC travelling motor
AC起升电机	AC lifting motor
AC转向电机	AC steering motor
Inmotion行走电机控制器	Inmotion travelling motor controller
Inmotion起升电机控制器	Inmotion lifting motor controller
Inmotion转向电机控制器	Inmotion steering motor controller
电磁制动	Electromagnetic brake
DC/DC转换器	DC/DC converter
低噪声齿轮泵	Low noisy gear pump
四片阀	Control valve (four throw)
4600mm三节全自由门架	4600mm three stage full free lift mast
整体式侧移器	Integral sideshifter
标准货叉	Standard fork
挡货架	Backrest
聚氨酯轮胎	Polyurethane tyre
LED液晶仪表	LED meter
前工作灯	Front working light
警示灯	Warning light

选用装置 Optional device

其他高度三节全自由门架	Three-stage full free lift mast (other lifting height)
其他长度货叉	fork with other length
货叉套	Fork extension
起升高度限位	Lifting height pre-selector
监控系统	Monitoring system
锂电池充电机	Battery charger
颜色用户需求	Customer made color

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