

Reliable special designed instrument



■ The reliable special instrument gives a complete display of the vital information, like operation status, fault detection, etc. It ensures the operator predominate the vehicle status more intuitive and convenient.

Standard configuration Optional device

- AC travelling motor
- AC lifting motor
- AC steering motor
- ZAPI travelling motor controller
- ZAPI lifting motor controller
- ZAPI steering motor controller
- Electromagnetic brake
- DC/DC converter
- Low noisy gear pump
- Control valve (four throw)
- Integral sideshifter
- Standard fork
- Backrest
- Polyurethane tyre
- LED meter
- Front working light
- Warning light
- Safety belt
- Rearview mirror with wide view angle
- Blue warning light
- USB
- Handrail

- Three-stage full free lift mast
- Fork with other length
- Fork extension
- Lifting height pre-selector
- Monitoring system
- Battery charger
- Customer made color
- Battery side pulling
- HELI smart fleet management system
- Multi-function handle

HELI smart fleet management system (optional)

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



Charger technology



- > **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**
48V/80V 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.

1.2-1.6 t

**G2 series Lithium Battery
Powered Reach Truck
(Sit-Down Type)(80V)**



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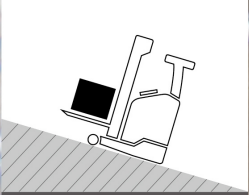
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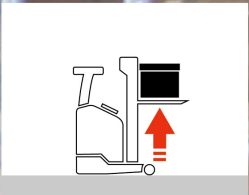
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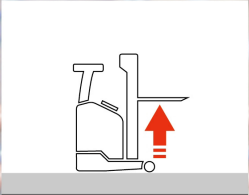
Driving speed **14km/h**



Maximum gradeability with load **10%**



Maximum lifting speed with load **0.4m/s**



Maximum lifting speed without load **0.6m/s**

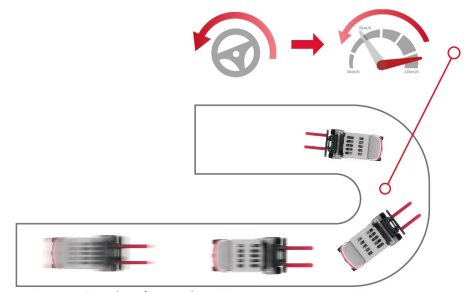
Full vehicle advantage

High performance guarantee high efficiency

- Lifting speed is increased by 10% and thus more goods can be lifted under the same conditions;
- The truck has fast driving and lifting speed, higher working efficiency;
- ZAPI Dual CPU controller conforming to the latest EU standard is equipped;
- The latest ZAPI instrument can be equipped with height preset function.
- One key to reach the set height improves operation efficiency
Small turning radius makes steering flexible and easy.

Intelligent security protection

- **Intelligent stabilization system** : it can automatically adjust the mast and the truck speed according to the lifting height and load state . Improve the high bearing capacity and vehicle stacking safety ;
- **Intelligent speed limit in different application** : multi-scenario identification and intelligent speed limit balance efficiency and safety ;
- **Intelligent limit buffering** : intelligent induction of mast lifting and lowering avoids extreme 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 ;
- **Intelligent steering deceleration** : the automatic deceleration function of the turning can reduce the risk of turning over ;



Cornering brake reduction



Advanced EPS electric powered steering

- 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.

Newly designed hydraulic system

- Newly designed hydraulic system with high working efficiency
- High power lifting motor
- MOSFET lifting speed governing electric controller
- New type low noisy gear pump
- Max. lifting speed without load 15% increased
- Max. lifting speed with load 25% increased

Easy operated thumb switch

- To control hydraulic functions.
- Clear operating units.
- Proportional solenoid offering a stable and comfort lowering action.

Ergonomic optimization

- The new design of overhead guard provides a better view.
- Standard handrails make ingress and egress more convenient.
- Larger space for getting on and legs.



Environment Friendly

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

Maintenance Free

- Unnecessary of fluid adding and dust proofing.
- Daily maintenance free.
- Manual maintenance free.

High Efficiency and Energy Saving

- 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.

High Safety

- 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.

Long Service Life

- 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.

Suitable for working in both high and low environment

- Lithium battery is better than lead-acid battery when working between -25°C and 55°C.

Operating Cost Comparison:

Lithium battery forklift
VS.
Lead-acid battery forklift

Lithium battery forklift VS. Lead-acid battery forklift
The advantages of HELI lithium battery forklift trucks are more prominent in the cycle cost.
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

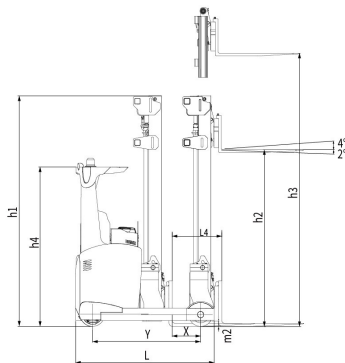
WIDE VIEW FULL FREE 3-STAGE MAST

| Mast model | Max. lifting height (mm) | Load capacity (load center 600mm)(kg) | | | Mast overall height h1 (mm) | Free lifting height (with backrest) h2 (mm) | Service weight(kg) | | | Fork tilt angle (front/rear/α/β) |
|------------|--------------------------|---------------------------------------|--------------|--------------|-----------------------------|---|--------------------|--------------|--------------|----------------------------------|
| | | CQD12-GB2SLI | CQD14-GB2SLI | CQD16-GB2SLI | | | CQD12-GB2SLI | CQD14-GB2SLI | CQD16-GB2SLI | |
| ZSM460 | 4600 | 1200 | 1400 | 1600 | 2314 | 1280 | 2914 | 3298 | 3298 | 2°/4° |
| ZSM480 | 4800 | 1200 | 1400 | 1600 | 2381 | 1340 | 2929 | 3312 | 3312 | 2°/4° |
| ZSM540 | 5400 | 1200 | 1400 | 1600 | 2581 | 1540 | 2971 | 3355 | 3355 | 2°/4° |
| ZSM570 | 5700 | 1200 | 1400 | 1550 | 2681 | 1640 | 2993 | 3376 | 3376 | 2°/4° |
| ZSM630 | 6300 | 1200 | 1400 | 1500 | 2881 | 1840 | 3037 | 3420 | 3420 | 2°/4° |
| ZSM675 | 6750 | 1050 | 1400 | 1450 | 2982 | 1940 | 3061 | 3445 | 3445 | 2°/4° |
| ZSM700 | 7000 | 950 | 1400 | 1400 | 3065 | 2030 | 3130 | 3515 | 3515 | 2°/4° |
| ZSM715 | 7150 | / | 1350 | 1350 | 3115 | 2080 | / | 3525 | 3525 | 2°/4° |
| ZSM750 | 7500 | / | 1250 | 1250 | 3232 | 2190 | / | 3551 | 3551 | 2°/4° |
| ZSM800 | 8000 | / | 1150 | 1150 | 3398 | 2360 | / | 3587 | 3587 | 2°/4° |
| ZSM850 | 8500 | / | / | 1000 | 3564 | 2530 | / | / | 3621 | 2°/4° |

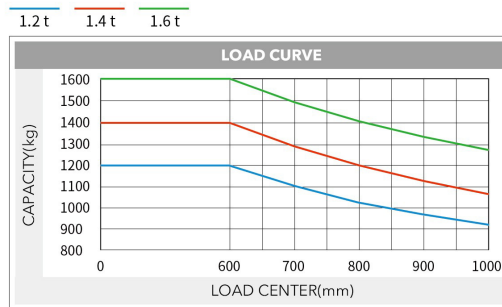
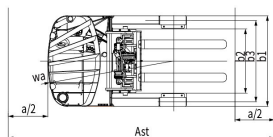
Note: The free lift height is 4600mm-6300mm when the truck is not assembled with backrest. The free lift height is 175mm increased and other height is 25mm increased.

WIDE VIEW MAST

| Mast model | Max. lifting height (mm) | Load capacity (load center 600mm)(kg) | | | Mast overall height h1 (mm) | Service weight(kg) | | | Fork tilt angle (front/rear/α/β) |
|------------|--------------------------|---------------------------------------|--------------|--------------|-----------------------------|--------------------|--------------|--------------|----------------------------------|
| | | CQD12-GB2SLI | CQD14-GB2SLI | CQD16-GB2SLI | | CQD12-GB2SLI | CQD14-GB2SLI | CQD16-GB2SLI | |
| M290 | 2900 | 1200 | 1400 | 1600 | 2200 | 2758 | 3043 | 3043 | 2°/4° |
| M320 | 3200 | 1200 | 1400 | 1600 | 2350 | 2780 | 3065 | 3065 | 2°/4° |
| M360 | 3600 | 1200 | 1400 | 1600 | 2550 | 2810 | 3095 | 3095 | 2°/4° |
| M380 | 3800 | 1200 | 1400 | 1600 | 2650 | 2824 | 3109 | 3109 | 2°/4° |
| M400 | 4000 | 1200 | 1400 | 1600 | 2750 | 2839 | 3124 | 3124 | 2°/4° |
| M420 | 4200 | 1200 | 1400 | 1600 | 2850 | 2854 | 3139 | 3139 | 2°/4° |
| M440 | 4400 | 1200 | 1400 | 1600 | 2950 | 2909 | 3194 | 3194 | 2°/4° |
| M460 | 4600 | 1200 | 1400 | 1600 | 3050 | 2924 | 3209 | 3209 | 2°/4° |
| M500 | 5000 | 1100 | 1300 | 1500 | 3250 | 2955 | 3240 | 3240 | 2°/4° |



Ast: Right angle stacking aisle width
a: Clearance a=200mm



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.

Manufacturer and technical parameters

| Character | | | |
|--|-------|--------------|-------------------------------|
| 1.01 Manufacturer | | HELI | |
| 1.02 Model | | CQD12 | CQD14 CQD16 |
| 1.03 Configuration number | | GB2SLi | GB2SLi GB2SZLi |
| 1.04 Load capacity | | 1200 | 1400 1600 |
| 1.05 load center distance | Q | | 600 |
| 1.06 Power mode | C | | Lithium Battery |
| 1.07 Driving mode | | | Seated |
| 1.08 Wheel base | Y | 1385 | 1450 |
| Tyre | | | |
| 2.01 Tyre type | | | Polyurethane |
| 2.02 Number of wheels, driving wheel/bearing wheel (x=driving wheel) | | | 1x/2 |
| 2.03 Track width (bearing wheels) | b3 | 986 | 1012 |
| 2.04 Size of bearing wheel | | φ250x95 | φ285x100 |
| 2.05 Size of driving wheel | | φ343x114 | φ343x114 |
| Size | | | |
| 3.01 Lifting height of standard mast | h3 | | 4600 |
| 3.02 Free lift | h2 | | 1280 |
| 3.03 Mast height, lowered | h1 | | 2314 |
| 3.04 Fork size:thickness X width X length | s/e/l | | 40x122x1150 |
| 3.05 Fork adjusting width | | | 244-644 |
| 3.06 Fork tilt angle (front/rear) | | | 2°/4° |
| 3.07 Fork sideshifting | | | ±55 |
| 3.08 Truck body length (fork excluded) | L | 1760 | 1847 |
| 3.09 Truck body width | b1 | | 1120 |
| 3.10 Distance between support arms | b2 | 880 | 785 |
| 3.11 Reach distance | l4 | 509 | 539 |
| 3.12 Height of overhead guard (cab) | h4 | | 2215 |
| 3.13 Ground clearance, below mast | m2 | | 75 |
| 3.14 Turning radius | Wa | 1625 | 1689 |
| 3.15 Load distance, centre of support arm wheel to face of forks | x | 313 | 330 |
| 3.16 Aisle width with pallet 1200 x 1200 across forks | Ast | 2891 | 2946 |
| 3.17 Aisle width with pallet 1000 x 1200 across forks | Ast | 2733 | 2788 |
| Performance | | | |
| 4.01 Travelling speed: with/without load | | | 14/14 |
| 4.02 Lifting speed: with/without load | | | 0.45/0.7 |
| 4.03 Lowering speed: with/without load | | | 0.5/0.5 |
| 4.04 Reach speed, with/without load | | | 0.11/0.11 |
| 4.05 Maximum climbing ability, with/without load | | | 10/15 |
| Weight | | | |
| 5.01 Total weight (with battery) | kg | 2914 | 3298 |
| 5.02 Axle load, fork outreached, without load, front/rear | kg | 1267/1647 | 1615/1683 1615/1683 |
| 5.03 Axle load, fork retracted, without load, front/rear | kg | 1763/1151 | 2015/1283 2015/1283 |
| 5.04 Axle load, fork outreached, with load, front/rear | kg | 601/3513 | 698/4200 670/4028 |
| 5.05 Axle load, fork retracted, with load, front/rear | kg | 1526/2588 | 1798/3100 1726/2972 |
| Battery | | | |
| 6.01 Battery voltage/capacity | V/Ah | | 80/150 |
| 6.02 Battery weight | kg | 590 | 710 |
| 6.03 Battery box dimension | mm | 1035x295x784 | 1035x352x784 |
| Motor and controller | | | |
| 7.01 Drive motor power (S2-60min) | | | 7 |
| 7.02 Lifting motor power (S3-15%) | | | 12.5 |
| 7.03 Steering motor power (S3-50%) | | | 0.4 |
| 7.04 Transmission box | | | HELI special transmission box |
| 7.05 Service brake | | | Electromagnetic brake |
| 7.06 Hydraulic system working pressure | | | 17.5 |

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