

**HELI**

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**HELI**

# CPD 20/25/30/35

GB2LI-H / GB2LI-M / GB3LI-S / GB3LI-M



**LION 2-3.5 t**

G2 Series Lithium-ion Battery  
Forklift Truck

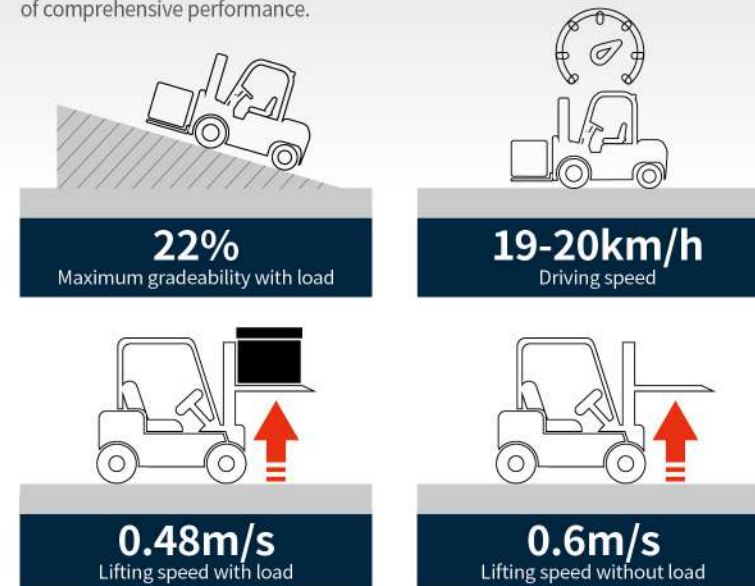
**HELI**

Fearless of Any Rough Application,  
**HELI New Series Lithium Forklift,**  
Your Best Choice



## Powerful Performance, High Efficiency

Customers can freely choose from the 3 different configurations: S, M, H. Especially M and H configurations are comparable with internal combustion trucks in terms of comprehensive performance.



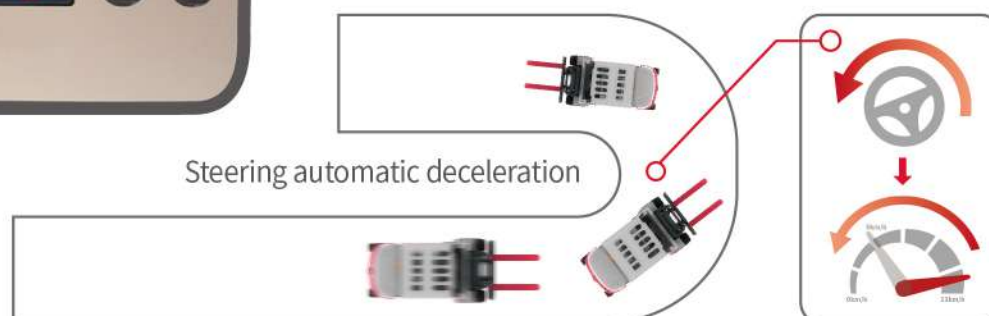
Note: the data displayed are all based on the model CPD30-GB2LI-H, and data for other trucks are shown in the table of technical parameters.

## Smart and Safe, Ease In All Aspects

- Steering deceleration: Auto steering deceleration reduces the risk of turning over;
- Steering started by steering wheel: the steering wheel can directly start the steering function and provides the required oil quantity according to the steering wheel speed;
- Color screen instrument: Bilingual (CN/EN) options, full vehicle information at a glance;
- PES Three-speed mode: Choose multiple speed modes according to working conditions, guarantee work efficiency;
- Rear handle with horn switch for safer reversing;
- Lithium battery is automatically heated at low temperature, with excellent low temperature adaptability.



Steering automatic deceleration



- Optimized mast and pressed overhead guard for improved visibility and safety.
- Ultra-low torque steering gear and lighter steering operation reduces driving fatigue.



USB power supply design is more thoughtful

## Optimized Ergonomic Design, Better Driving Comfort



Large boarding space and foot operation space for more comfortable operation



New type of ratchet hand brake reduces operating force by 17%.

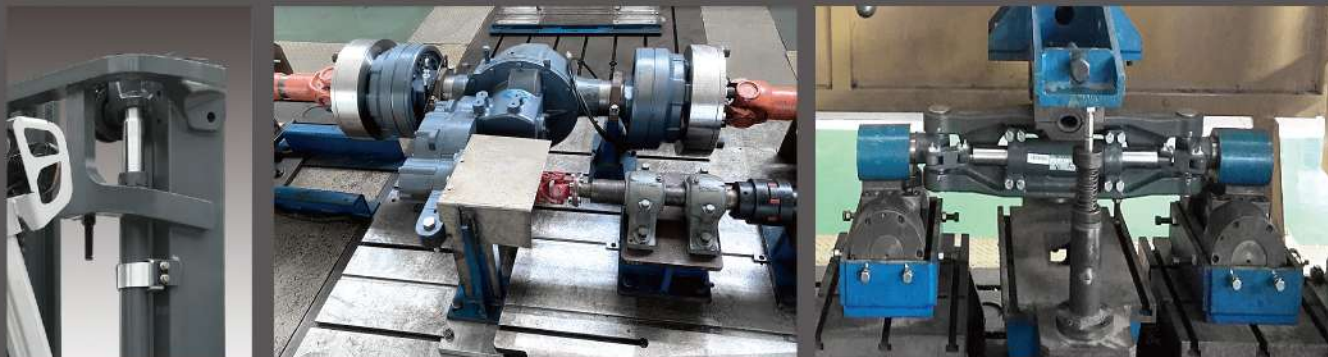
Brake fluid within reach, easy to check and refill



IC truck type control valve stem, better fit to the driver's habits

## High Quality & High Reliability

The integrated cast drive axle and reinforced cast steering axle have been proven in the market and are mature and reliable. The mast force optimization design improves the overall performance and effectively ensures the operation safety.



## Centralized Checkpoints, Easy Maintenance

The electrical design is concentrated on the top of lithium battery, and the maintenance points are centralized, which is convenient for inspection and maintenance.



## Tested in Rough Operating Environment



IPX4 waterproof: the vehicle is powered on to simulate a 15min short-time 5000L rainstorm test, and the vehicle can continue to run without failures.



After 10mins wading test, the vehicle has no failure. (Water depth 200mm)

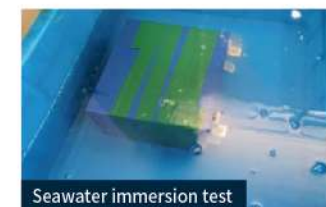


The whole vehicle can be operated alternately in -20°C cold storage for 6 hours and parked in the cold storage for 12 hours without any failure and can continue to work.



The truck passed simulation experiment of bumpy road.

## Lithium Battery Advantages



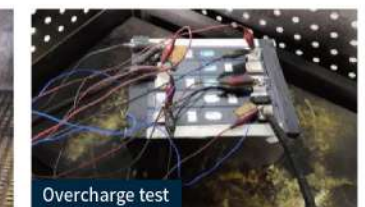
Seawater immersion test



Extrusion test



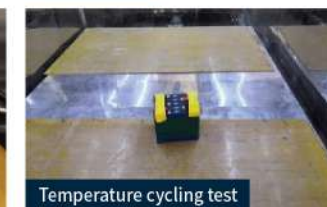
Heating test



Overcharge test



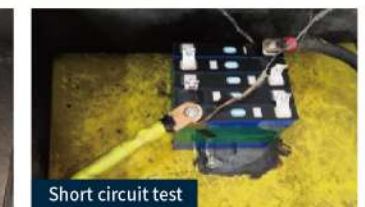
Temperature cycling test



Temperature cycling test



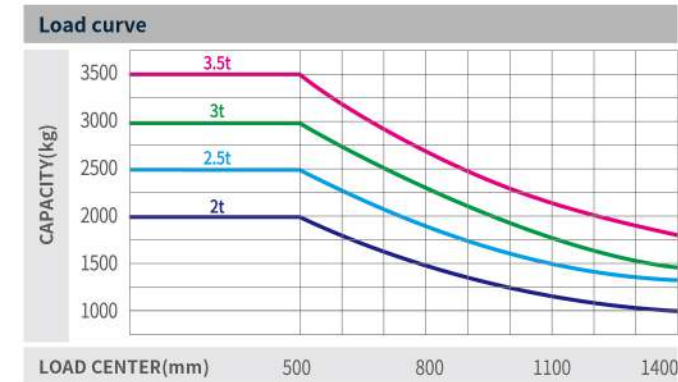
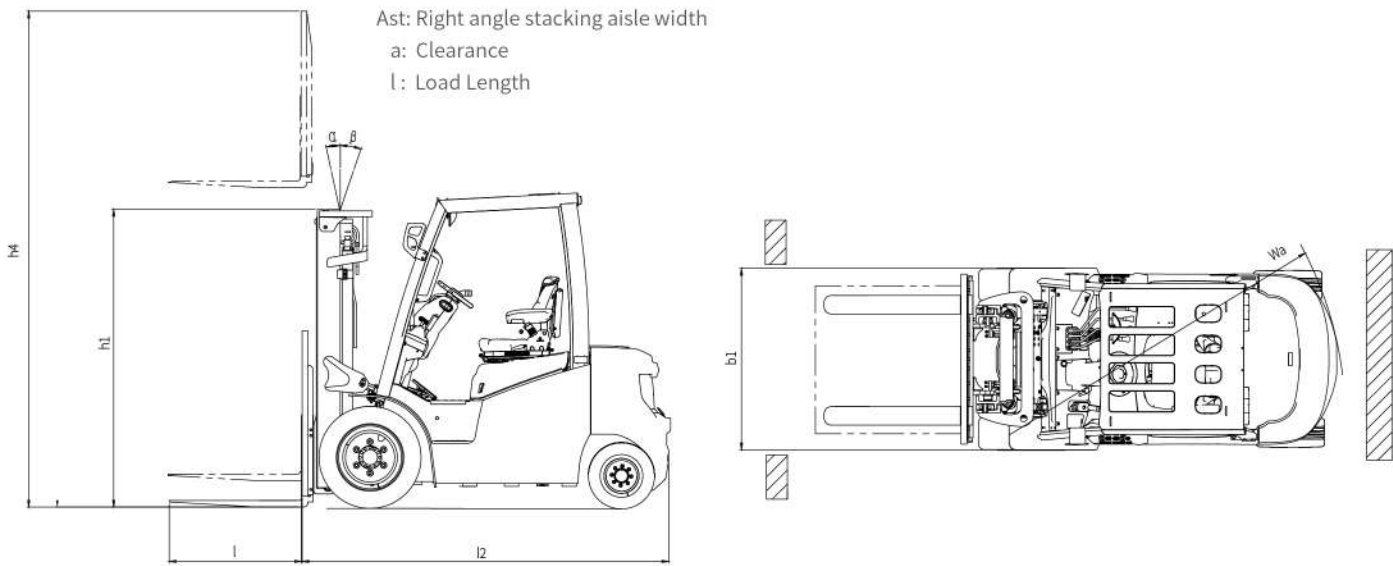
Drop test



Short circuit test

- The truck selects mature and economical square iron phosphate lithium battery core and module used by large numbers of commercial vehicles;
- The module adopts aluminum alloy plate frame, which is firm, light in weight and has good heat dissipation effect;
- Fast charging: fast charging makes truck gapless operation possible, and it can be filled in 2 hours;
- High efficiency and safety: The charging and discharging efficiency is up to 98%, and temperature of thermal runaway is over 600 °C;
- Low temperature adaptability: Standard configuration of heating function ensures normal operation of low temperature environment;
- Long service life: The normal charging and discharging cycles reaches to 4000, and capacity retention rate is more than 78%;
- Maintenance free: the battery does not need manual maintenance and does not need to add distilled water electrolyte;
- Green and clean: no pollution and zero emission.

| Manufacturer and Technical Data |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
|---------------------------------|--------------------------------------|----|------|----------------|----------------|-----------------|-----------------|----------------|----------------|----------------------|------------|----------------------|-----------------|----------------------|--------------|---------|
| Characteristics                 |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 1.01                            | Manufacturer                         |    |      | HELI           |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 1.02                            | Model                                |    |      | CPD20          | CPD25          | CPD20           | CPD25           | CPD20          | CPD25          | CPD30                | CPD35      | CPD30                | CPD35           | CPD30                | CPD35        |         |
| 1.03                            | Configuration number                 |    |      | GB2LI-H        | GB2LI-H        | GB2LI-M/GB3LI-M | GB2LI-M/GB3LI-M | GB3LI-S        | GB3LI-S        | GB2LI-H              | GB2LI-H    | GB2LI-M/GB3LI-M      | GB2LI-M/GB3LI-M | GB3LI-S              | GB3LI-S      |         |
| 1.04                            | Rated capacity                       | Q  | kg   | 2000           | 2500           | 2000            | 2500            | 2000           | 2500           | 3000                 | 3500       | 3000                 | 3500            | 3000                 | 3500         |         |
| 1.05                            | Load center distance                 | c  | mm   | 500            |                |                 |                 |                | 500            |                      |            |                      |                 |                      |              |         |
| Weight                          |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 2.01                            | Total weight (with/without battery)  |    | kg   | 3510/3290      | 3890/3670      | 3510/3290       | 3890/3670       | 3510/3290      | 3890/3670      | 4580/4230            | 5000/4650  | 4580/4230            | 5000/4650       | 4580/4230            | 5000/4650    |         |
| Tyres                           |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 3.01                            | Tyre type                            |    |      | pneumatic tyre | pneumatic tyre | pneumatic tyre  | pneumatic tyre  | pneumatic tyre | pneumatic tyre | pneumatic tyre/solid | solid tyre | pneumatic tyre/solid | solid tyre      | pneumatic tyre/solid | solid tyre   |         |
| 3.02                            | Tyre size,front                      |    |      | 7.00-12-14PR   |                |                 |                 |                | 28×9-15-14PR   |                      | 28×9-15    | 28×9-15-14PR         |                 | 28×9-15              | 28×9-15-14PR | 28×9-15 |
| 3.03                            | Tyre size,rear                       |    |      | 18×7-8-14PR    |                |                 |                 |                | 200/50-10      |                      |            |                      |                 |                      |              |         |
| Dimensions                      |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 4.01                            | Height (mast lowered)                | h1 | mm   | 2000           | 2000           | 2000            | 2000            | 2000           | 2000           | 2070                 | 2120       | 2070                 | 2120            | 2070                 | 2120         |         |
| 4.02                            | Max. height,extended (with backrest) | h4 | mm   | 4030           |                |                 |                 |                | 4217           |                      |            |                      |                 |                      |              |         |
| 4.03                            | Overall length (with fork)           | l1 | mm   | 3352           | 3502           | 3352            | 3502            | 3352           | 3502           | 3639                 | 3644       | 3639                 | 3644            | 3639                 | 3644         |         |
| 4.04                            | Overall length (without fork)        | l2 | mm   | 2432           | 2432           | 2432            | 2432            | 2432           | 2432           | 2569                 | 2574       | 2569                 | 2574            | 2569                 | 2574         |         |
| 4.05                            | Overall width                        | b1 | mm   | 1160           |                |                 |                 |                | 1225           |                      |            |                      |                 |                      |              |         |
| 4.06                            | Min. outside turning radius          | Wa | mm   | 2050           |                |                 |                 |                | 2215           |                      |            |                      |                 |                      |              |         |
| Performance Data                |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 5.01                            | Travel speed (laden/unladen)         |    | km/h | 19/20          |                | 18/19           |                 | 14/15          |                | 19/20                |            | 18/19                |                 | 14/15                |              |         |
| 5.02                            | Lift speed (laden/unladen)           |    | m/s  | 0.49/0.6       | 0.47/0.6       | 0.46/0.56       | 0.44/0.56       | 0.38/0.49      | 0.35/0.49      | 0.48/0.6             | 0.44/0.54  | 0.41/0.54            | 0.39/0.54       | 0.37/0.49            | 0.34/0.45    |         |
| Battery                         |                                      |    |      |                |                |                 |                 |                |                |                      |            |                      |                 |                      |              |         |
| 6.01                            | Battery voltage/Capacity             |    | V/Ah | 80/271         | 80/271         | 80/271          | 80/271          | 80/202         | 80/202         | 80/404               | 80/404     | 80/404               | 80/404          | 80/272               | 80/272       |         |
| 6.02                            | Battery weight                       |    | kg   | 220            | 220            | 220             | 220             | 220            | 220            | 350                  | 350        | 350                  | 350             | 350                  | 350          |         |



**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.

| Lithium battery                            |                              |           |           |           |                          |           |           |           |
|--------------------------------------------|------------------------------|-----------|-----------|-----------|--------------------------|-----------|-----------|-----------|
| Lithium battery brand                      | Pengcheng (CATL module/Core) |           |           |           | Heli(LISHEN module/Core) |           |           |           |
| Voltage/Capacity                           | 80V/202Ah                    | 80V/271Ah | 80V/404Ah | 80V/542Ah | 80V/202Ah                | 80V/272Ah | 80V/404Ah | 80V/544Ah |
| 2-2.5t S model                             | —                            | —         | —         | —         | ●                        | ○         | ○         | —         |
| 2-2.5t M model                             | —                            | ●         | ○         | —         | —                        | ○         | ○         | —         |
| 2-2.5t H model                             | —                            | ●         | ○         | —         | —                        | ○         | ○         | —         |
| 3-3.5t S model                             | —                            | —         | —         | —         | —                        | ●         | ○         | —         |
| 3-3.5t M model                             | —                            | —         | ●         | ○         | —                        | —         | ○         | ○         |
| 3-3.5t H model                             | —                            | —         | ●         | ○         | —                        | —         | ○         | ○         |
| Lithium battery heating in low temperature | ●                            |           |           |           |                          |           |           |           |

NOTE: “●” standard ; “○” optional ; “—” not applicable

| Color Options (the color of truck body can be customized) |   |   |   |
|-----------------------------------------------------------|---|---|---|
| Model                                                     | H | M | S |
| Standard Configuration                                    |   |   |   |

| Wide View Standard Mast |                         |                                       |       |       |       |                            |      |      |      |                                |      |     |      |                     |      |      |      |                         |
|-------------------------|-------------------------|---------------------------------------|-------|-------|-------|----------------------------|------|------|------|--------------------------------|------|-----|------|---------------------|------|------|------|-------------------------|
| Mast model              | Max.lifting height (mm) | Load capacity (lode center 500mm)(kg) |       |       |       | Height (mast lowered) (mm) |      |      |      | Free lift (with backrest) (mm) |      |     |      | Service weight (kg) |      |      |      | Mast tilt angle α/β (°) |
|                         |                         | 2t                                    | 2.5t  | 3t    | 3.5t  | 2t                         | 2.5t | 3t   | 3.5t | 2t                             | 2.5t | 3t  | 3.5t | 2t                  | 2.5t | 3t   | 3.5t |                         |
| M200                    | 2000                    | 2000                                  | 2500  | 3000  | 3500  | 1500                       | 1500 | 1570 | 1620 | 150                            | 150  | 155 | 160  | 3420                | 3800 | 4484 | 4894 | 6-12                    |
| M250                    | 2500                    | 2000                                  | 2500  | 3000  | 3500  | 1750                       | 1750 | 1820 | 1870 | 150                            | 150  | 155 | 160  | 3465                | 3845 | 4532 | 4947 | 6-12                    |
| M300                    | 3000                    | 2000                                  | 2500  | 3000  | 3500  | 2000                       | 2000 | 2070 | 2120 | 150                            | 150  | 155 | 160  | 3510                | 3890 | 4580 | 5000 | 6-12                    |
| M330                    | 3300                    | 2000                                  | 2500  | 3000  | 3500  | 2150                       | 2150 | 2220 | 2270 | 150                            | 150  | 155 | 160  | 3537                | 3917 | 4609 | 5032 | 6-12                    |
| M350                    | 3500                    | 2000                                  | 2500  | 3000  | 3500  | 2250                       | 2250 | 2320 | 2370 | 150                            | 150  | 155 | 160  | 3555                | 3935 | 4628 | 5053 | 6-12                    |
| M370                    | 3700                    | 2000                                  | 2500  | 3000  | 3500  | 2350                       | 2350 | 2420 | 2470 | 150                            | 150  | 155 | 160  | 3573                | 3953 | 4647 | 5074 | 6/6                     |
| M400                    | 4000                    | 2000                                  | 2500  | 3000  | 3500  | 2550                       | 2550 | 2620 | 2670 | 150                            | 150  | 155 | 160  | 3650                | 4030 | 4727 | 5158 | 6/6                     |
| M425                    | 4250                    | *1950                                 | *2450 | *2850 | *3300 | 2675                       | 2675 | 2745 | 2795 | 150                            | 150  | 155 | 160  | 3673                | 4053 | 4751 | 5184 | *6/6                    |
| M450                    | 4500                    | *1900                                 | *2400 | *2750 | *3150 | 2800                       | 2800 | 2870 | 2920 | 150                            | 150  | 155 | 160  | 3695                | 4075 | 4775 | 5211 | *6/6                    |
| M500                    | 5000                    | *1800                                 | *2300 | *2600 | *2900 | 3050                       | 3050 | 3120 | 3170 | 150                            | 150  | 155 | 160  | 3740                | 4120 | 4823 | 5264 | *6/6                    |
| M550                    | 5500                    | *1400                                 | *1550 | *1850 | *2200 | 3350                       | 3350 | 3420 | 3470 | 150                            | 150  | 155 | 160  | 3835                | 4215 | 4921 | 5368 | *3/6                    |
| M600                    | 6000                    | *950                                  | *1050 | *1500 | *1650 | 3600                       | 3600 | 3670 | 3720 | 150                            | 150  | 155 | 160  | 3880                | 4260 | 4969 | 5421 | *3/6                    |

Note: (1) \* refers to the rate capacity when the front wheel of the truck is dual tyre.  
(2) When the front wheel of 2-3.5t is dual tyre, the weight is the data in the table plus 100kg;

| Wide View Full Free 2-Stage Mast |                         |                                       |       |       |       |                            |      |      |      |                                |      |      |      |                     |      |      |      |                         |
|----------------------------------|-------------------------|---------------------------------------|-------|-------|-------|----------------------------|------|------|------|--------------------------------|------|------|------|---------------------|------|------|------|-------------------------|
| Mast model                       | Max.lifting height (mm) | Load capacity (lode center 500mm)(kg) |       |       |       | Height (mast lowered) (mm) |      |      |      | Free lift (with backrest) (mm) |      |      |      | Service weight (kg) |      |      |      | Mast tilt angle α/β (°) |
|                                  |                         | 2t                                    | 2.5t  | 3t    | 3.5t  | 2t                         | 2.5t | 3t   | 3.5t | 2t                             | 2.5t | 3t   | 3.5t | 2t                  | 2.5t | 3t   | 3.5t |                         |
| ZM200                            | 2000                    | 2000                                  | 2500  | 3000  | 3500  | 1500                       | 1500 | 1570 | 1620 | 496                            | 496  | 340  | 443  | 3432                | 3812 | 4505 | 4911 | 6-12                    |
| ZM250                            | 2500                    | 2000                                  | 2500  | 3000  | 3500  | 1750                       | 1750 | 1820 | 1870 | 746                            | 746  | 590  | 693  | 3480                | 3860 | 4555 | 4964 | 6-12                    |
| ZM300                            | 3000                    | 2000                                  | 2500  | 3000  | 3500  | 2000                       | 2000 | 2070 | 2120 | 996                            | 996  | 840  | 943  | 3527                | 3907 | 4605 | 5018 | 6-12                    |
| ZM330                            | 3300                    | 2000                                  | 2500  | 3000  | 3500  | 2150                       | 2150 | 2220 | 2270 | 1146                           | 1146 | 990  | 1093 | 3557                | 3937 | 4637 | 5051 | 6-12                    |
| ZM350                            | 3500                    | 2000                                  | 2500  | 3000  | 3500  | 2250                       | 2250 | 2320 | 2370 | 1246                           | 1246 | 1090 | 1193 | 3575                | 3955 | 4657 | 5072 | 6-12                    |
| ZM370                            | 3700                    | 2000                                  | 2500  | 3000  | 3500  | 2350                       | 2350 | 2420 | 2470 | 1346                           | 1346 | 1190 | 1293 | 3595                | 3975 | 4677 | 5093 | 6/6                     |
| ZM400                            | 4000                    | 2000                                  | 2500  | 3000  | 3500  | 2550                       | 2550 | 2620 | 2670 | 1546                           | 1546 | 1390 | 1493 | 3671                | 4051 | 4755 | 5173 | 6/6                     |
| ZM425                            | 4250                    | *1950                                 | *2450 | *2850 | *3300 | 2675                       | 2675 | 2745 | 2795 | 1671                           | 1671 | 1515 | 1618 | 3695                | 4075 | 4781 | 5200 | *6/6                    |
| ZM450                            | 4500                    | *1900                                 | *2400 | *2750 | *3150 | 2800                       | 2800 | 2870 | 2920 | 1796                           | 1796 | 1640 | 1743 | 3721                | 4101 | 4809 | 5229 | *6/6                    |
| ZM500                            | 5000                    | *1800                                 | *2300 | *2600 | *2900 | 3050                       | 3050 | 3120 | 3170 | 2046                           | 2046 | 1890 | 1993 | 3772                | 4152 | 4863 | 5285 | *6/6                    |
| ZM550                            | 5500                    | *1400                                 | *1550 | *1850 | *2200 | 3350                       | 3350 | 3420 | 3470 | 2346                           | 2346 | 2190 | 2293 | 3869                | 4249 | 4962 | 5388 | *3/6                    |
| ZM600                            | 6000                    | *950                                  | *1050 | *1500 | *1650 | 3600                       | 3600 | 3670 | 3720 | 2596                           | 2596 | 2440 | 2543 | 3919                | 4299 | 5015 | 5444 | *3/6                    |

Note: (1) \* refers to the rate capacity when the front wheel of the truck is dual tyre.  
(2) When the front wheel of 2-3.5t is dual tyre, the weight is the data in the table plus 100kg;  
(3) 2-2.5t: The free lifting height is increased by 356 mm when there is no backrest;  
(4) 3T: The free lifting height is increased by 520mm when there is no backrest;  
(5) 3.5t: The free lifting height is increased by 426 mm when there is no backrest;

| Wide View Full Free 3-Stage Mast |                         |                                       |       |       |       |                            |      |      |      |                                |      |      |      |                     |      |      |      |                         |
|----------------------------------|-------------------------|---------------------------------------|-------|-------|-------|----------------------------|------|------|------|--------------------------------|------|------|------|---------------------|------|------|------|-------------------------|
| Mast model                       | Max.lifting height (mm) | Load capacity (lode center 500mm)(kg) |       |       |       | Height (mast lowered) (mm) |      |      |      | Free lift (with backrest) (mm) |      |      |      | Service weight (kg) |      |      |      | Mast tilt angle α/β (°) |
|                                  |                         | 2t                                    | 2.5t  | 3t    | 3.5t  | 2t                         | 2.5t | 3t   | 3.5t | 2t                             | 2.5t | 3t   | 3.5t | 2t                  | 2.5t | 3t   | 3.5t |                         |
| ZSM360                           | 3600                    | 2000                                  | 2500  | 3000  | 3500  | 1800                       | 1800 | 1870 | 1870 | 796                            | 796  | 640  | 690  | 3654                | 4034 | 4723 | 5109 | 6/6                     |
| ZSM400                           | 4000                    | 2000                                  | 2500  | 3000  | 3500  | 1950                       | 1950 | 2020 | 2020 | 946                            | 946  | 790  | 840  | 3695                | 4075 | 4764 | 5150 | 6/6                     |
| ZSM435                           | 4350                    | *1900                                 | *2400 | *2850 | *3300 | 2050                       | 2050 | 2120 | 2120 | 1046                           | 1046 | 890  | 940  | 3726                | 4106 | 4793 | 5179 | *6/6                    |
| ZSM450                           | 4500                    | *1850                                 | *2350 | *2750 | *3150 | 2100                       | 2100 | 2170 | 2170 | 1096                           | 1096 | 940  | 990  | 3739                | 4119 | 4808 | 5194 | *6/6                    |
| ZSM470                           | 4700                    | *1800                                 | *2300 | *2650 | *3000 | 2165                       | 2165 | 2230 | 2230 | 1161                           | 1161 | 1000 | 1050 | 3758                | 4138 | 4826 | 5212 | *6/6                    |
| ZSM480                           | 4800                    | *1800                                 | *2300 | *2600 | *2900 | 2210                       | 2210 | 2270 | 2270 | 1206                           | 1206 | 1040 | 1090 | 3771                | 4151 | 4836 | 5222 | *6/6                    |
| ZSM500                           | 5000                    | *1400                                 | *1500 | *1750 | *2050 | 2300                       | 2300 | 2370 | 2370 | 1296                           | 1296 | 1140 | 1190 | 3794                | 4174 | 4863 | 5249 | *6/6                    |
| ZSM540                           | 5400                    | *1700                                 | *2150 | *2650 | *3150 | 2400                       | 2400 | 2470 | 2470 | 1396                           | 1396 | 1240 | 1290 | 3826                | 4206 | 4893 | 5279 | *3/6                    |
| ZSM600                           | 6000                    | *1000                                 | *1100 | *1400 | *1650 | 2600                       | 2600 | 2670 | 2670 | 1596                           | 1596 | 1440 | 1490 | 3929                | 4309 | 4997 | 5383 | *3/6                    |
| ZSM650                           | 6500                    | *1450                                 | *1650 | *2000 | *2200 | 2800                       | 2800 | 2870 | 2870 | 1796                           | 1796 | 1640 | 1690 | 3985                | 4365 | 5052 | 5438 | *3/6                    |
| ZSM700                           | 7000                    | *1150                                 | *1300 | *1800 | *2000 | 2975                       | 2975 | 3045 | 3045 | 1971                           | 1971 | 1815 | 1865 | 4035                | 4415 | 5102 | 5488 | *3/3                    |
| ZSM750                           | 7500                    | *950                                  | *1050 | *1200 | *1300 | 3150                       | 3150 | 3370 | 3370 | 2146                           | 2146 | 2140 | 2190 | 4091                | 4471 | 5157 | 5543 | *3/3                    |

Note: (1) \* refers to the rate capacity when the front wheel of the truck is dual tyre.  
(2) When the front wheel of 2-3.5t is dual tyre, the weight is the data in the table plus 100kg;  
(3) 2-2.5t: The free lifting height is increased by 356 mm when there is no backrest;  
(4) 3.5t: The free lifting height is increased by 426 mm when there is no backrest;

# Operating Cost Comparison: Lithium battery forklift **vs.** Lead-acid battery forklift **vs.** IC forklift

The advantages of HELI lithium battery forklift trucks are more prominent in the life cycle cost.

Compared with internal combustion forklift truck, 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.

