HELI

# General Description of the Company

Anhui Forklift Group Corporation Ltd. (hereinafter referred as Heli) is a leading enterprise of industrial trucks in China.

Since 2016, Heli has been ranked among the top seven in the world, representing Chinese brands to forge ahead towards higher stage. (According to the "Top 20 Industrial lift truck suppliers" released by MMH.)

As the leading enterprise in China industrial truck industry, Heli has the ability and strength to participate in the global competition in a higher level, larger scale and wider field. Heli has established overseas centers in France, Thailand and the United States, which enhance the service ability in overseas market. Besides, relying on our global partners, we have established an overseas marketing and service network in more than 80 countries and regions, and Heli products are sold to more than 150 countries and regions in the world. In the next fiveyears, Heli will vigorously promote the international operation and create a global famous brand.


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* Our products are subject to improvements and changes without notice.

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HELI

# CPD15/16/ 18/20 SQ

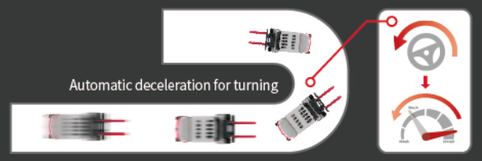
## GE1LI/GE6LI/GE2LI


LI ION **1.5-2 t**

G3 series Three-wheel Lithium Battery Forklift Truck (Double Drive)

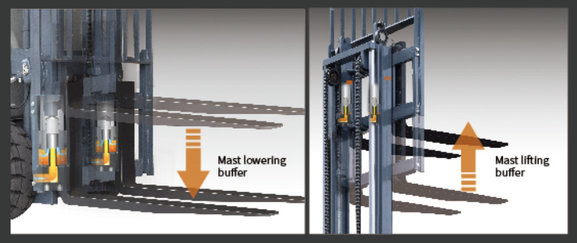
## Intelligent security protection

**Intelligent stabilization system:** it can automatically adjust the tilt angle and speed of the mast 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;
**Lithium battery which heats itself automatically at low temperatures has excellent low temperature adaptability.**







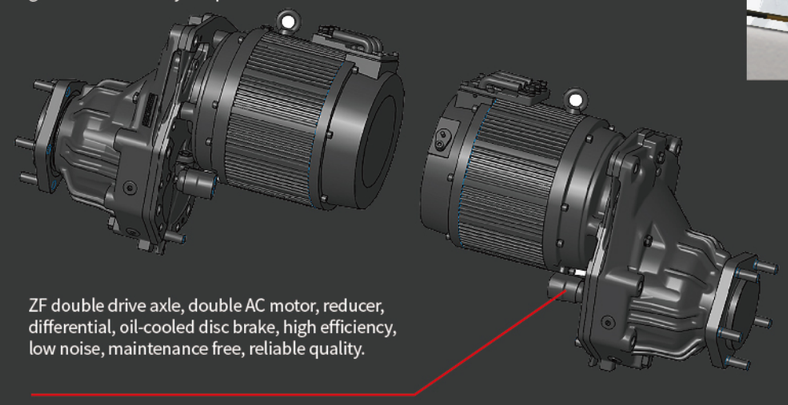






## Reliable ruality, Easy maintenance

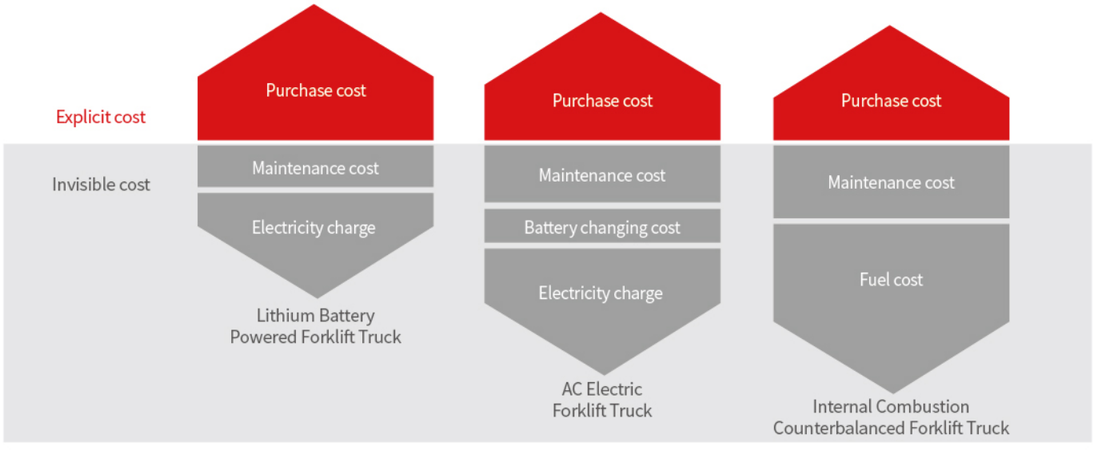
The whole vehicle works alternately in the -20°C cold storage and is parked in the cold storage for 12 hours.
The whole vehicle is trouble-free and can run sustainably.
The reinforced casting steering axle is mature and reliable. The optimal design of the mast can improve the overall performance and effectively guarantee the safety of operation.

ZF double drive axle, double AC motor, reducer, differential, oil-cooled disc brake, high efficiency, low noise, maintenance free, reliable quality.

## **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.




**HELI smart fleet management system (domestic basic edition)**

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

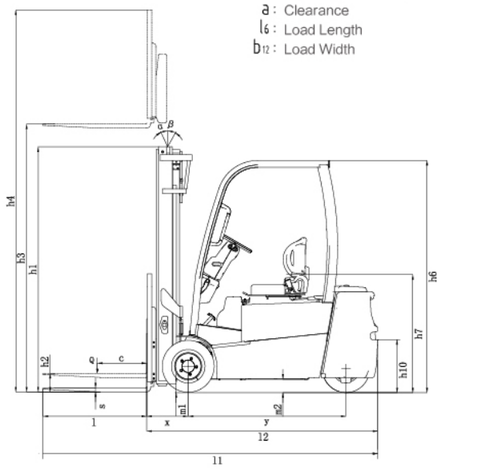
# CPD15/16/18/20SQ
GE1LI/GE6LI/GE2LI

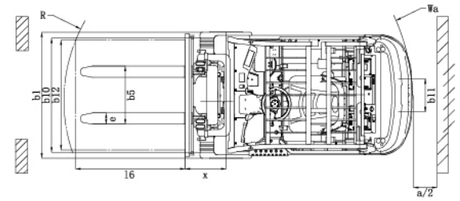
## Manufacturer and Technical Data

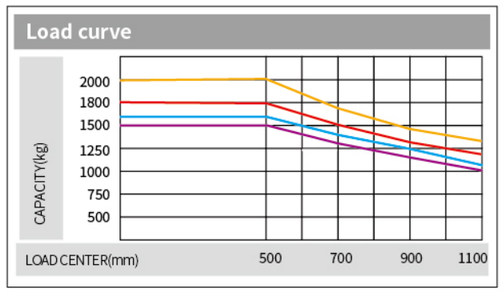
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Characteristics** | | | | | | |
| 1.01 | **Manufacturer** | | | HELI | | | |
| 1.02 | **Model** | | | CPD15SQ | CPD16SQ | CPD18SQ | CPD20SQ |
| 1.03 | **Configuration number** | | | GE1LI/GE6LI/GE2LI | GE1LI/GE6LI/GE2LI | GE1LI/GE6LI/GE2LI | GE1LI/GE6LI/GE2LI |
| 1.04 | **Rated capacity** | Q | kg | 1500 | 1600 | 1800 | 2000 |
| 1.05 | **Load center distance** | c | mm | 500 | | | |
| 1.06 | **Power mode** | | | Lithium Battery | | | |
| 1.07 | **Driving mode** | | | Seated | | | |
| 1.08 | **Load distance, center of drive axle to fork** | x | mm | 367 | 367 | 367 | 372 |
| 1.09 | **Wheelbase** | y | mm | 1292 | 1292 | 1400 | 1400 |
| | **Weight** | | | | | | |
| 2.01 | **Total weight (with/without battery)** | | kg | 2900/2620 | 2935/2655 | 3225/2945 | 3330/3050 |
| 2.02 | **Axle load (laden,front/rear)** | | kg | 3915/485 | 4035/500 | 4462/563 | 4738/545 |
| 2.03 | **Axle load (unladen,front/rear)** | | kg | 1319/1581 | 1335/1600 | 1496/1728 | 1545/1788 |
| | **Tyres** | | | | | | |
| 3.01 | **Tyre type** | | | SE | | | |
| 3.02 | **Tyre size,front** | | | 18X7-8 | 18X7-8 | 200/50-10 | 200/50-10 |
| 3.03 | **Tyre size,rear** | | | 140/55-9 | 140/55-9 | 16X6-8 | 16X6-8 |
| 3.04 | **Wheels,number front/rear (x=driven wheels)** | | | 2x/2 | 2x/2 | 2x/2 | 2x/2 |
| 3.05 | **Tread, front** | $b_{10}$ | mm | 920 | 920 | 928 | 928 |
| 3.06 | **Tread, rear** | $b_{11}$ | mm | 198 | 198 | 248 | 248 |
| | **Dimensions** | | | | | | |
| 4.01 | **Mast tilt angle (forward/backward)** | α/β | ° | 5/7 | 5/7 | 5/7 | 5/7 |
| 4.02 | **Height (mast lowered)** | $h_1$ | mm | 2175 | 2175 | 2175 | 2175 |
| 4.03 | **Free lifting height** | $h_2$ | mm | 90 | 90 | 90 | 90 |
| 4.04 | **Lifting height (standard)** | $h_3$ | mm | 3300 | 3300 | 3300 | 3300 |
| 4.05 | **Max. height,extended** | $h_4$ | mm | 4039 | 4039 | 4039 | 4039 |
| 4.06 | **Height of overhead guard** | $h_6$ | mm | 2040 | 2040 | 2040 | 2040 |
| 4.07 | **Height of seat** | $h_7$ | mm | 1047 | 1047 | 1064 | 1064 |
| 4.08 | **Towing coupling height** | $h_{10}$ | mm | 375 | 375 | 375 | 375 |
| 4.09 | **Overall length (with fork)** | $l_1$ | mm | 2850 | 2850 | 2970 | 2970 |
| 4.10 | **Overall length (without fork)** | $l_2$ | mm | 1930 | 1930 | 2055 | 2055 |
| 4.11 | **Overall width** | $b_1$ | mm | 1060/1076 | 1060/1076 | 1060/1120 | 1060/1120 |
| 4.12 | **Fork carriage,DIN standard** | | | 2A | 2A | 2A | 2A |
| 4.13 | **Fork size:thickness x width x length** | s/e/l | mm | 35/100/920 | 35/100/920 | 35/100/920 | 40/122/920 |
| 4.14 | **Distance between fork-arms, Max./Min.** | $b_5$ | mm | 960/200 | 960/200 | 960/200 | 960/200 |
| 4.15 | **Ground clearance (laden,between mast)** | $m_1$ | mm | 90 | 90 | 90 | 90 |
| 4.16 | **Ground clearance (center of wheelbase)** | $m_2$ | mm | 100 | 100 | 100 | 100 |
| 4.17 | **Right angle stacker aisle width for pallet 1000 x1200mm crossways** | $A_{st}$ | mm | 3120 | 3120 | 3245 | 3250 |
| 4.18 | **Right angle stacker aisle width for pallet 800 x1200mm lengthways** | $A_{st}$ | mm | 3320 | 3320 | 3445 | 3450 |
| 4.19 | **Min. outside turning radius** | $W_a$ | mm | 1545 | 1545 | 1675 | 1675 |
| | **Performance Data** | | | | | | |
| 5.01 | **Travel speed (laden/unladen)** | | km/h | 16/17 | 16/17 | 16/16 | 16/16 |
| 5.02 | **Lift speed (laden/unladen)** | | m/s | 0.45/0.65 | 0.45/0.65 | 0.41/0.6 | 0.4/0.6 |
| 5.03 | **Lowering speed (laden/unladen)** | | m/s | 0.58/0.5 | 0.58/0.5 | 0.58/0.5 | 0.58/0.5 |
| 5.04 | **Max.drawbar pull (laden/unladen)** | | N | 12000/8750 | 12000/8750 | 14200/11000 | 14200/11000 |
| 5.05 | **Max.gradeability (laden/unladen)** | | % | 22/30 | 22/30 | 22/30 | 22/30 |
| 5.06 | **Acceleration time(10 m)(laden/unladen)** | | s | 5.4/5 | 5.4/5 | 5.4/5 | 5.4/5 |
| | **Battery** | | | | | | |
| 6.01 | **Battery voltage/Capacity** | | V/Ah | 80/202 | 80/202 | 80/202 | 80/202 |
| 6.02 | **Battery weight (Min./Max.)** | | kg | 260/320 | 260/320 | 260/320 | 260/320 |
| | **Motor and controller** | | | | | | |
| 7.01 | **Driving motor powering (S2-60min)** | | kW | 5.5x2 | 5.5x2 | 5.5x2 | 5.5x2 |
| 7.02 | **Lifting motor powering (S3-15%)** | | kW | 14 | 14 | 14 | 14 |
| 7.03 | **Driving motor controlling mode** | | | MOSFET/AC | | | |
| 7.04 | **Lifting motor controlling mode** | | | MOSFET/AC | | | |
| | **Addition data** | | | | | | |
| 8.01 | **Service brake/Parking brake** | | | Hydraulic/Hydraulic(automatic parking) | | | |
| 8.02 | **Operating pressure for attachments** | | Mpa | 17.5 | 17.5 | 17.5 | 17.5 |

Note:For configuration number, 1 : CURTIS Controller;2:ZAPI Controller;6 : HELI TECHNOLOGY Controller.

Ast : Right angle stacking aisle width
a : Clearance
l6 : Load Length
b12 : Load Width




CPD15SQ CPD16SQ CPD18SQ CPD20SQ

**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.

## WIDE VIEW MAST

| Mast model | Max lifting height mm | Load capacity (load center 500mm) | | | | Mast overall height (fork to the ground) | Service weight | | | | mast tilting angle (°) α/β |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5t | 1.6t | 1.8t | 2.0t | 1.5-2t | 1.5t | 1.6t | 1.8t | 2.0t | |
| M200 | 2000 | 1500 | 1600 | 1800 | 2000 | 1525 | 2828 | 2863 | 3144 | 3249 | 5/7 |
| M250 | 2500 | 1500 | 1600 | 1800 | 2000 | 1775 | 2855 | 2890 | 3181 | 3286 | 5/7 |
| M300 | 3000 | 1500 | 1600 | 1800 | 2000 | 2025 | 2884 | 2909 | 3209 | 3314 | 5/7 |
| M330 | 3300 | 1500 | 1600 | 1800 | 2000 | 2175 | 2900 | 2935 | 3225 | 3330 | 5/7 |
| M350 | 3500 | 1500 | 1600 | 1750 | 2000 | 2275 | 2911 | 2936 | 3236 | 3341 | 5/7 |
| M370 | 3700 | 1500 | 1600 | 1750 | 2000 | 2375 | 2922 | 2947 | 3247 | 3352 | 5/7 |
| M400 | 4000 | 1500 | 1600 | 1750 | 1950 | 2575 | 2965 | 2990 | 3290 | 3395 | 3/5 |
| M425 | 4250 | 1500 | 1600 | 1750 | 1900 | 2700 | 3007 | 3033 | 3333 | 3438 | 3/5 |
| M450 | 4500 | 1400 | 1500 | 1700 | 1850 | 2825 | 3023 | 3048 | 3348 | 3453 | 3/5 |
| M500 | 5000 | 1300 | 1400 | 1600 | 1700 | 3075 | 3054 | 3079 | 3379 | 3484 | 3/5 |
| M550 | 5500 | 1100 | 1200 | 1400 | 1400 | 3375 | 3112 | 3137 | 3437 | 3542 | 3/3 |
| M600 | 6000 | 800 | 900 | 1000 | 1100 | 3625 | 3143 | 3168 | 3468 | 3573 | 3/3 |

## WIDE VIEW FULL FREE 2-STAGE MAST

| Mast model | Max lifting height mm | Load capacity (load center 500mm) | | | | Mast overall height (fork to the ground) | Free lifting height (with backrest) | Service weight | | | | Mast tilting angle (°) α/β |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5t | 1.6t | 1.8t | 2.0t | 1.5-2t | 1.5-2t | 1.5t | 1.6t | 1.8t | 2.0t | |
| ZM200 | 2000 | 1500 | 1600 | 1800 | 2000 | 1525 | 510 | 2855 | 2890 | 3182 | 3235 | 5/7 |
| ZM250 | 2500 | 1500 | 1600 | 1800 | 2000 | 1775 | 760 | 2884 | 2919 | 3209 | 3264 | 5/7 |
| ZM300 | 3000 | 1500 | 1600 | 1800 | 2000 | 2025 | 1010 | 2912 | 2937 | 3237 | 3292 | 5/7 |
| ZM330 | 3300 | 1500 | 1600 | 1800 | 2000 | 2175 | 1160 | 2930 | 2965 | 3255 | 3300 | 5/7 |
| ZM350 | 3500 | 1500 | 1600 | 1750 | 2000 | 2275 | 1260 | 2941 | 2966 | 3266 | 3321 | 5/7 |
| ZM370 | 3700 | 1500 | 1600 | 1750 | 2000 | 2375 | 1360 | 2955 | 2980 | 3280 | 3355 | 5/7 |
| ZM400 | 4000 | 1500 | 1600 | 1750 | 1950 | 2575 | 1560 | 3000 | 3025 | 3325 | 3380 | 3/5 |

## WIDE VIEW FULL FREE 3-STAGE MAST

| Mast model | Max lifting height mm | Load capacity (load center 500mm) | | | | Mast overall height (fork to the ground) | Free lifting height (with backrest) | Service weight | | | | Mast tilting angle (°) α/β |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.5t | 1.6t | 1.8t | 2.0t | 1.5-2t | 1.5-2t | 1.5t | 1.6t | 1.8t | 2.0t | |
| ZSM360 | 3600 | 1500 | 1600 | 1750 | 2000 | 1790 | 781 | 3044 | 3079 | 3369 | 3524 | 3/5 |
| ZSM400 | 4000 | 1500 | 1600 | 1750 | 2000 | 1925 | 916 | 3069 | 3104 | 3394 | 3549 | 3/5 |
| ZSM435 | 4350 | 1400 | 1500 | 1700 | 1900 | 2040 | 1031 | 3097 | 3132 | 3422 | 3577 | 3/5 |
| ZSM450 | 4500 | 1400 | 1500 | 1700 | 1850 | 2090 | 1081 | 3108 | 3143 | 3433 | 3588 | 3/5 |
| ZSM470 | 4700 | 1350 | 1450 | 1650 | 1750 | 2160 | 1151 | 3124 | 3159 | 3446 | 3601 | 3/5 |
| ZSM480 | 4800 | 1350 | 1450 | 1650 | 1750 | 2190 | 1181 | 3129 | 3164 | 3451 | 3606 | 3/5 |
| ZSM500 | 5000 | 1200 | 1300 | 1600 | 1700 | 2290 | 1281 | 3151 | 3186 | 3473 | 3628 | 3/5 |
| ZSM540 | 5400 | 1050 | 1150 | 1250 | 1400 | 2425 | 1416 | 3207 | 3242 | 3529 | 3684 | 3/3 |
| ZSM600 | 6000 | 800 | 900 | 1000 | 1100 | 2640 | 1631 | 3247 | 3282 | 3569 | 3724 | 3/3 |
| ZSM650 | 6500 | 700 | 800 | 900 | 1000 | 2830 | 1821 | 3289 | 3324 | 3611 | 3766 | 3/3 |

## LITHIUM BATTERY CHARGER

| Lithium battery brand | HELI | | CATL | | EIKTO |
|---|---|---|---|---|---|
| Voltage/Capacity | 80V/202 | 80V/271 | 80V/202 | 80V/271 | 80V/271 |
| CPD15/16/18/20SQ | ● | ○ | ○ | ○ | ○ |
| Low temperature heating of lithium battery | ● | | | | |
| Charger | D80V200ALi-123 D80V200ALi-423 | | | | |

Note: ● standard ○ optional — non-configurable

## Optional

| | | |
|---|---|---|
| Security class | Steering automatic deceleration | ● |
| | Reversing handle with horn button | ● |
| | OPS system(Excluding descent) | ● |
| | Complete OPS system | ○ |
| | Seat belt switch | ● |
| | Multi way valve overload | ● |
| | Fire extingguisher | ○ |
| | Backward buzzer | ● |
| | Reversing Chinese language horn | ○ |
| | Electronic upper buffer | ● |
| | Rearview mirror with angle in the middle | ● |
| | Left and right rear mirror | ○ |
| | Tilt speed limit | ● |
| | Active stabilization(Lifting height 4m and above ) | ● |
| Comfort class | Standard seat | ● |
| | Fully suspended seat | ○ |
| | USB power | ● |
| | Mechanical valve | ● |
| | Solenoid valve (proportional valve + thumb switch) | - |
| | Fan | ○ |
| | Color screen instrument | ● |
| | Heater | |
| | Performance mode control | ● |
| | Steering wheel with operation ball | ● |
| | Steering wheel without operation ball | ○ |
| Non standard overhead guard | The height of overhead guard is increased by 50mm | ○ |
| | Overhead guard with protective net | ○ |
| Cab/windshield glass | Cab | ○ |
| | Fit the front windshield | ○ |
| | Equipped with rear windshield | ○ |
| | Equipped with top rain glass | ○ |
| Light class | No rear work lights or rear blue lights | ● |
| | LED rear work light | ○ |
| | LED rear blue light (without switch control) | ○ |
| | led rear work light and led rear blue light (without switch control) | ○ |
| | LED flickering warning light | ● |
| | LED rotary warning light | ○ |
| | Led rotary buzzer warning light | ○ |
| Other | HEDING lithium battery | ● |
| | ENEROC lithium battery | ○ |
| | EIKTO lithium battery | ○ |
| | Solid tire | ● |
| | Traceless tyre | ○ |
| | Single tire (front wheel) | ● |
| | Double tire (front wheel) | - |
| | Metric thread | ● |
| | American thread | ○ |
| | Sleev for Tilting cylinder | ○ |
| | Tilting cylinder,sleev for steering cylinder | ○ |
| | HELI package | ● |
| | Neutral package | ○ |
| | Chinese sticker | ● |
| | English sticker | ○ |
| | Custom-made sticker | ○ |
| | HELI smart fleet management system(standard version) | ○ |

Note: ● standard ○ optional — non-configurable