# 3-3.5 ton AC ELECTRIC FORKLIFT

9 SERIES

HELI

Heli UK • Unit 10 • Hewitts Ind Est • Elmbridge Road
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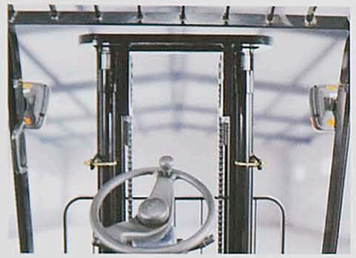
AC ELECTRIC FORKLIFT **3-3.5 ton**

HELI

## Newly designed wide-view mast



The newly designed wide-view mast enlarges operators' view effectively and lessens the blind area to provide a clearer vision.

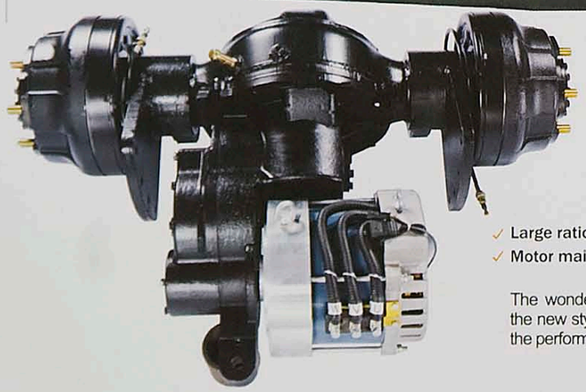
**7%**
THE MAST VIEW INCREASES

## Excellent steering system

The Steering system with new technologies not only provides a smoother swerve and faster positioning & steering, but also effectively lowers down the noise.

- ✓ New integrated load-sensing steering
- ✓ Power Steering
- ✓ New low-noise gear pump with differential tooth technology

## AC drive motor



- ✓ Large ratio gearbox
- ✓ Maintain more efficient
- ✓ Motor maintenance
- ✓ Renewable energy technologies

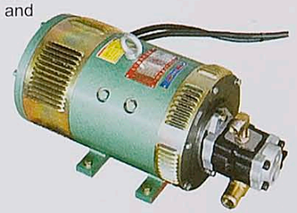
The wonderful combination of high-power AC motor and the new style gearbox by indepen-dent R&D fully enhance the performance of acceleration, driving and grade ability.

**50 %**
GRADIENT PERFORMANCE INCREASES

**25 %**
THE MAXIMUM TRAVEL SPEED INCREASES

## High efficiency loading/unloading performance

The innovative design and configuration of hydraulic system improve the working efficiency largely and provide a very efficient loading/unloading.



**20%**
THE MAXIMUM UNLOADED LIFTING SPEED INCREASES

**12%**
THE MAXIMUM LOADED LIFTING SPEED INCREASES

- ✓ New low-speed & high-torque lifting motor
- ✓ MOSFET lifting controller
- ✓ New dynamic load sensing technology in hydraulic system
- ✓ Optional AC lifting system greatly enhances the loading/unloading performance.

## Enough operation space

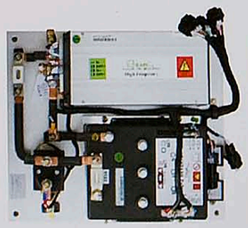
The new optimization layout widens the operator space for ensuring more comfortable and convenient operation.

**12 %**
THE OPERATING SPACE INCREASES

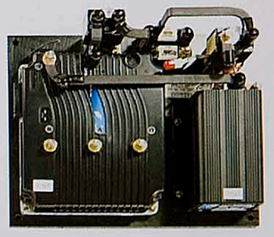
## More intelligent performance

The truck equipped with more intelligence functions not only ensures the safety performance, but also improves the efficiency and reduces energy consumption.

- ✓ Standard CAN BUS
- ✓ Self-braking on ramp
- ✓ Preventing abnormity operating
- ✓ AC traction controller
- ✓ Emergency power shut-down
- ✓ Electric controller self-protecting
- ✓ Presence of driver sensing system
- ✓ Speed selection function (normal/cutback)



ZAPI CONTROLLER



CURTIS CONTROLLER

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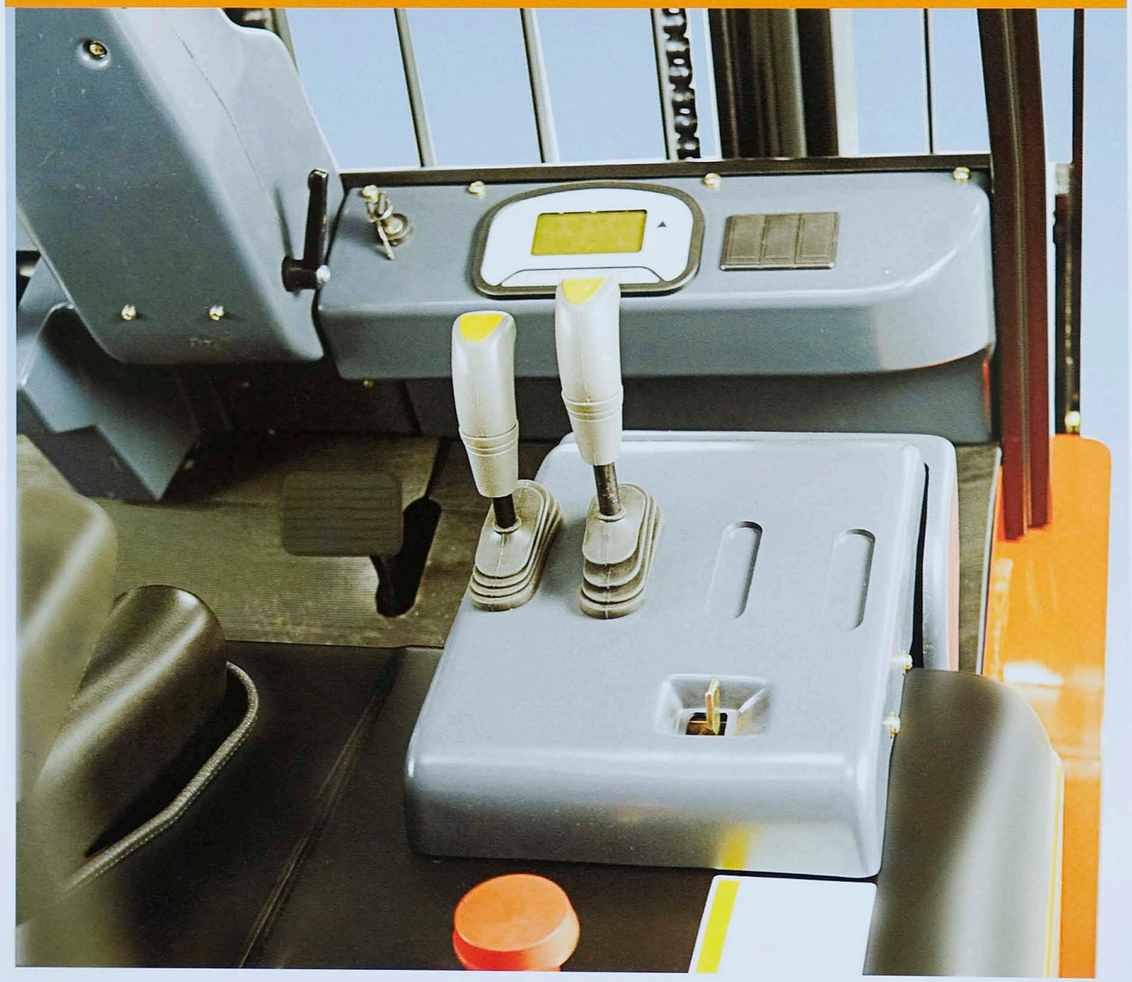
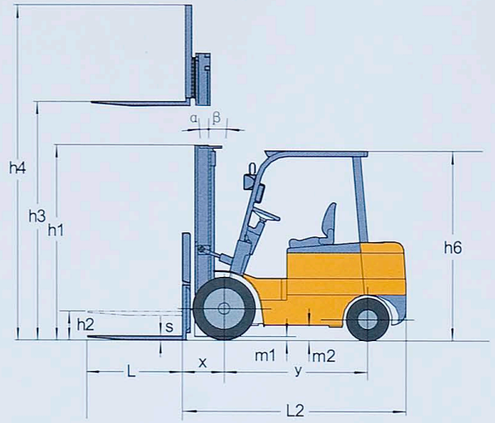
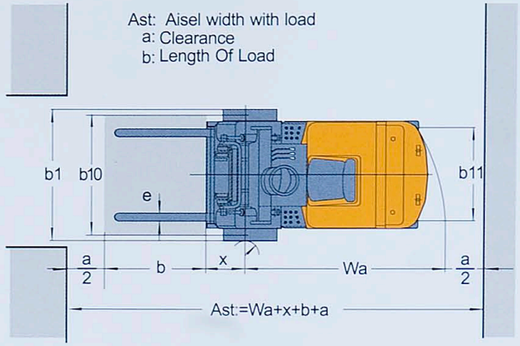
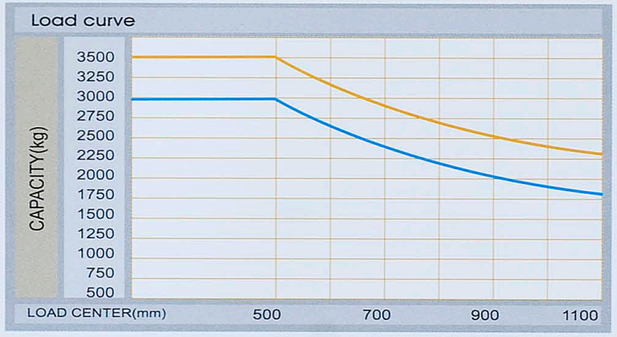


## Manufacturer's Data and Design Characteristics

| | | | | |
|---|---|---|---|---|
| | **Characteristics** | | | |
| 1.01 | Manufacture's Name | | HELI | |
| 1.02 | Model Designation | | CPD30 | CPD35 |
| 1.03 | Configuration Number | | G1/G2 | G1/G2 |
| 1.04 | Load Capacity | Q (kg) | 3000 | 3500 |
| 1.05 | Load Center | c (mm) | 500 | 500 |
| 1.06 | Power Type | | Battery | Battery |
| 1.07 | Operator Type | | Seated | Seated |
| 1.08 | Wheelbase | y (mm) | 1680 | 1680 |
| | **Wheels & Tyres** | | | |
| 2.01 | Tyre Type | | Pneumatic | Superelastic |
| 2.02 | Tyres Number (Front/Rear) | | 2/2 | 2/2 |
| 2.03 | Tread(centre of tyre),front | b10 (mm) | 1055 | 1055 |
| 2.04 | Tread(centre of tyre),rear | b11 (mm) | 980 | 980 |
| 2.05 | Tyre Size, Front | | 28×9-15-12PR | 28×9-15 |
| 2.06 | Tyre Size, Rear | | 18×7-8-14PR | 18×7-8 |
| | **Dimensions** | | | |
| 3.01 | Load Distance | x (mm) | 485 | 490 |
| 3.02 | Mast Tilt Angle,F/R | α / β (°) | 6/10 | 6/10 |
| 3.03 | Height with Mast Lowered | h1(mm) | 2075 | 2180 |
| 3.04 | Free Lift | h2(mm) | 145 | 150 |
| 3.05 | Standard Lift Height | h3(mm) | 3000 | 3000 |
| 3.06 | Height with Mast Extended | h4(mm) | 4182 | 4177 |
| 3.07 | Overhead Guard Height | h6(mm) | 2215 | 2215 |
| 3.08 | Fork Size T×W×L | s/e/L(mm) | 45×125×1070 | 50×125×1070 |
| 3.09 | Fork Carriage to DIN 15173 A/B | | 2A | 2A |
| 3.10 | Length to fork face | L2(mm) | 2485 | 2550 |
| 3.11 | Overall Width | b1(mm) | 1225 | 1225 |
| 3.12 | Outside Turning Radius | Wa(mm) | 2210 | 2270 |
| 3.13 | Ground Clearance at mast ,Loaded | m1(mm) | 135 | 135 |
| 3.14 | Ground Clearance at centre of wheelbase ,Loaded | m2(mm) | 150 | 150 |
| 3.15 | Right Stack Aisle width (Pallet size 1000x1000mm，clearance:200mm) | Ast(mm) | 3895 | 3960 |
| 3.16 | Right Stack Aisle width (Pallet size 1200x1200mm，clearance:200mm) | Ast(mm) | 4095 | 4160 |
| | **Performances** | | | |
| 4.01 | Travel Speed,with/without load | km/h | 15.0/15.5 | 14.5/15.0 |
| 4.02 | Lifting Speed,with/without load | m/s | 0.28/0.45 | 0.25/0.44 |
| 4.03 | Lowering Speed | m/s | 0.5 | 0.5 |
| 4.04 | Gradient performance with load | % | 15 | 12 |
| 4.05 | Max. draw bar pull with load | N | 15600 | 17500 |
| 4.06 | Acceleration time (10 metres) W/O load | s | 5.0/4.7 | 5.2/4.9 |
| | **Weight** | | | |
| 5.01 | Total Approximate Weight(W/O battery) | kg | 4810/3230 | 5500/3920 |
| 5.02 | Axle Loading*：Unloaded,Front/Rear | kg | 2320/2490 | 2640/2860 |
| 5.03 | Axle Loading*：Loaded,Front/Rear | kg | 7055/755 | 8145/855 |
| | **Battery** | | | |
| 6.01 | Battery Voltage/rated capacity(5h) | V/Ah | 80/480 | 80/480 |
| 6.02 | battery weight | kg | 1580 | 1580 |
| 6.03 | Battery to DIN 43531/35/36/A/B/C | | 43536A | 43536A |
| | **Motor & Controller** | | | |
| 7.01 | Drive Motor - 60 Min. Rating | kW | 16.6 | 16.6 |
| 7.02 | Pump Motor - 15 Min. Rating | kW | 13 | 13 |
| 7.03 | Drive Motor Control Method | | MOSFET/AC | MOSFET/AC |
| 7.04 | Pump Motor Control Method | | MOSFET/DC | MOSFET/DC |
| 7.05 | Service Brake/Parking Brake | | Hydraulic/Mechanial | Hydraulic/Mechanial |
| 7.06 | Relief Pressure | Mpa | 21 | 21 |




3.0t 3.5t

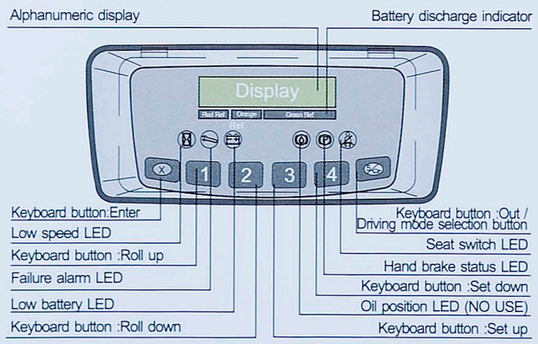
Note:
Vertical axle stands for load capacity while horizontal axle stands for load center. Load center is the distance counted from the front of the fork. The base point of the standard load is the center point of the cubic with the same 1000mm dimension in length, width and height. The load capacity should be down, if mask tilts forward, using non-standard forks or loading goods with extra width. Please notice the different load capacity between different load centers according to load chart.

## Renewable energy technologies

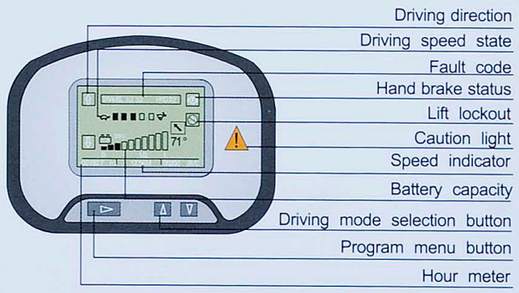
With the use of the excellent load-sensing steering system and AC controlling renewable energy technologies, the forklift is more energy-saving and the working hour of the battery is extended by 15%.

**15%**
THE PERFORMANCE OF BATTERY INCRERSES

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.




ZAPI Display




CURTIS Display

## WIDE VIEW MAST

| Mast model | Max. Fork height (mm) | Load Capacity (Load centre 500mm) (kg) | | Overall Height (mm) | | Tilt Angle (F-B) |
|---|---|---|---|---|---|---|
| | | CPD30 | CPD35 | CPD30 | CPD35 | |
| M200 | 2000 | 3000 | 3500 | 1565 | 1680 | 6/10 |
| M250 | 2500 | 3000 | 3500 | 1815 | 1930 | 6/10 |
| M300 | 3000 | 3000 | 3500 | 2075 | 2180 | 6/10 |
| M330 | 3300 | 3000 | 3500 | 2215 | 2330 | 6/10 |
| M350 | 3500 | 3000 | 3500 | 2315 | 2430 | 6/10 |
| M370 | 3700 | 3000 | 3400 | 2415 | 2530 | 6 - 6<br>*6 -10 |
| M400 | 4000 | 2950 | 3350 | 2615 | 2730 | 6 - 6<br>*6 -10 |
| M425 | 4250 | 2850 | 3250 | 2740 | 2855 | 6 - 6<br>*6 -10 |
| M450 | 4500 | 2750 | 3100 | 2865 | 2980 | 6 - 6<br>*6 -10 |
| M500 | 5000 | 2400<br>*2550 | 2650<br>*2800 | 3115 | 3230 | 6 - 6<br>*6 -6 |
| M550 | 5500 | 2250<br>*2450 | 2500<br>*2600 | 3415 | 3530 | *3 -6 |
| M600 | 6000 | 1500<br>*2200 | 1550<br>*2400 | 3665 | 3780 | *3 -6 |

## WIDE VIEW FULL FREE 2-STAGE MAST

| Mast model | Max. fork height (mm) | Load Capacity (Load centre 500mm) (kg) | | Overall Height (mm) | | Free lift (With STD backrest) (mm) | | Tilt Angle (F-B) |
|---|---|---|---|---|---|---|---|---|
| | | CPD30 | CPD35 | CPD30 | CPD35 | CPD30 | CPD35 | |
| ZM200 | 2000 | 3000 | 3500 | 1570 | 1680 | 344 | 500 | 6/10 |
| ZM250 | 2500 | 3000 | 3500 | 1820 | 1930 | 594 | 750 | 6/10 |
| ZM300 | 3000 | 3000 | 3500 | 2070 | 2180 | 844 | 1000 | 6/10 |
| ZM330 | 3300 | 3000 | 3500 | 2220 | 2330 | 994 | 1150 | 6/10 |
| Zm350 | 3500 | 3000 | 3500 | 2320 | 2430 | 1094 | 1250 | 6/10 |
| ZM370 | 3700 | 3000 | 3400 | 2420 | 2530 | 1194 | 1350 | 6 - 6<br>*6 -10 |
| ZM400 | 4000 | 2950 | 3350 | 2620 | 2730 | 1394 | 1550 | 6 - 6<br>*6 -10 |
| ZM425 | 4250 | 2850 | 3250 | 2745 | 2855 | 1519 | 1675 | 6 - 6<br>*6 -10 |
| ZM450 | 4500 | 2750 | 3100 | 2870 | 2980 | 1644 | 1800 | 6 - 6<br>*6 -10 |
| ZM500 | 5000 | 2400<br>*2550 | 2650<br>*2800 | 3120 | 3230 | 1894 | 2050 | 6 - 6<br>*6 -6 |
| ZM550 | 5500 | 2250<br>*2450 | 2500<br>*2600 | 3420 | 3530 | 2194 | 2350 | *3 -6 |
| ZM600 | 6000 | 1500<br>*2200 | 1550<br>*2400 | 3670 | 3780 | 2444 | 2600 | *3 -6 |

## WIDE VIEW FULL FREE 3-STAGE MAST

| Mast model | Max. Fork height (mm) | Load Capacity (Load centre 500mm) (kg) | | Overall Height (mm) | | Free lift (With STD backrest) (mm) | | Tilt Angle (F-B) |
|---|---|---|---|---|---|---|---|---|
| | | CPD30 | CPD35 | CPD30 | CPD35 | CPD30 | CPD35 | |
| ZSM360 | 3600 | 3000 | 3400 | 1946 | 1946 | 670 | 670 | 6/6 |
| ZSM400 | 4000 | 2900 | 3250 | 2065 | 2065 | 795 | 795 | 6/6 |
| ZSM435 | 4350 | 2750 | 3150 | 2190 | 2190 | 920 | 920 | 6/6 |
| ZSM450 | 4500 | 2700 | 3000 | 2240 | 2240 | 970 | 970 | 6/6 |
| ZSM480 | 4800 | 2600 | 2800 | 2340 | 2340 | 1070 | 1070 | 6/6 |
| ZSM500 | 5000 | 2400<br>*2500 | 2650 | 2440 | 2440 | 1170 | 1170 | 6/6 |
| ZSM540 | 5400 | 2250<br>*2450 | 2500 | 2565 | 2565 | 1295 | 1295 | 3/6 |
| ZSM600 | 6000 | 1550<br>*2150 | 1550<br>*2300 | 2790 | 2790 | 1520 | 1520 | 3/6 |

NOTE : (1)* Rated capacity with front dual tires ;
(2)CPD30:The free height of full free 2-stage mast without backrest increase 490mm ;
(3)CPD35:The free height of full free 2-stage mast without backrest increase 412mm ;
(4)The free lift height of full free 3-stage mast without backrest increase 520mm.

HELI

# 9 SERIES

## 3-3.5 ton AC ELECTRIC FORKLIFT

### STANDARD EQUIPMENT

- Wide view mast
- Standard fork
- II (III) fork carriage
- Backrest
- Two-spool control valve
- Battery group
- Standard seat
- Overhead guard
- Overhead guard raincoat
- LCD combined display
- Pneumatic tyres
- Traction bar
- Attached tools

### OPTIONS

- Boom
- Cab
- Load hook
- String bar
- Hinged fork
- Back view mirror
- Side shifter
- Paper roll clamp
- Alarm lamp
- Solid tyre
- Rear work lights
- Protective fences
- Multi function barrel clamp
- Load stabilizer
- Widened fork carriage
- Lengthened fork
- Load pusher
- Fork sleeve
- Rotating flat clamp
- Dual-tyres protector
- Accessory hydraulic component
- Tilt/Steering cylinder protection sleeve
- Colored tyre(white/green)
- Wide view double/triplex full free mast
- User-specified color

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