

**CPCD 200-460**

**G2 Series  
Balance Weight Type Forklift**

**HELI合力**

**CPCD 200-460**

**G2 Series  
Balance Weight Type Forklift**



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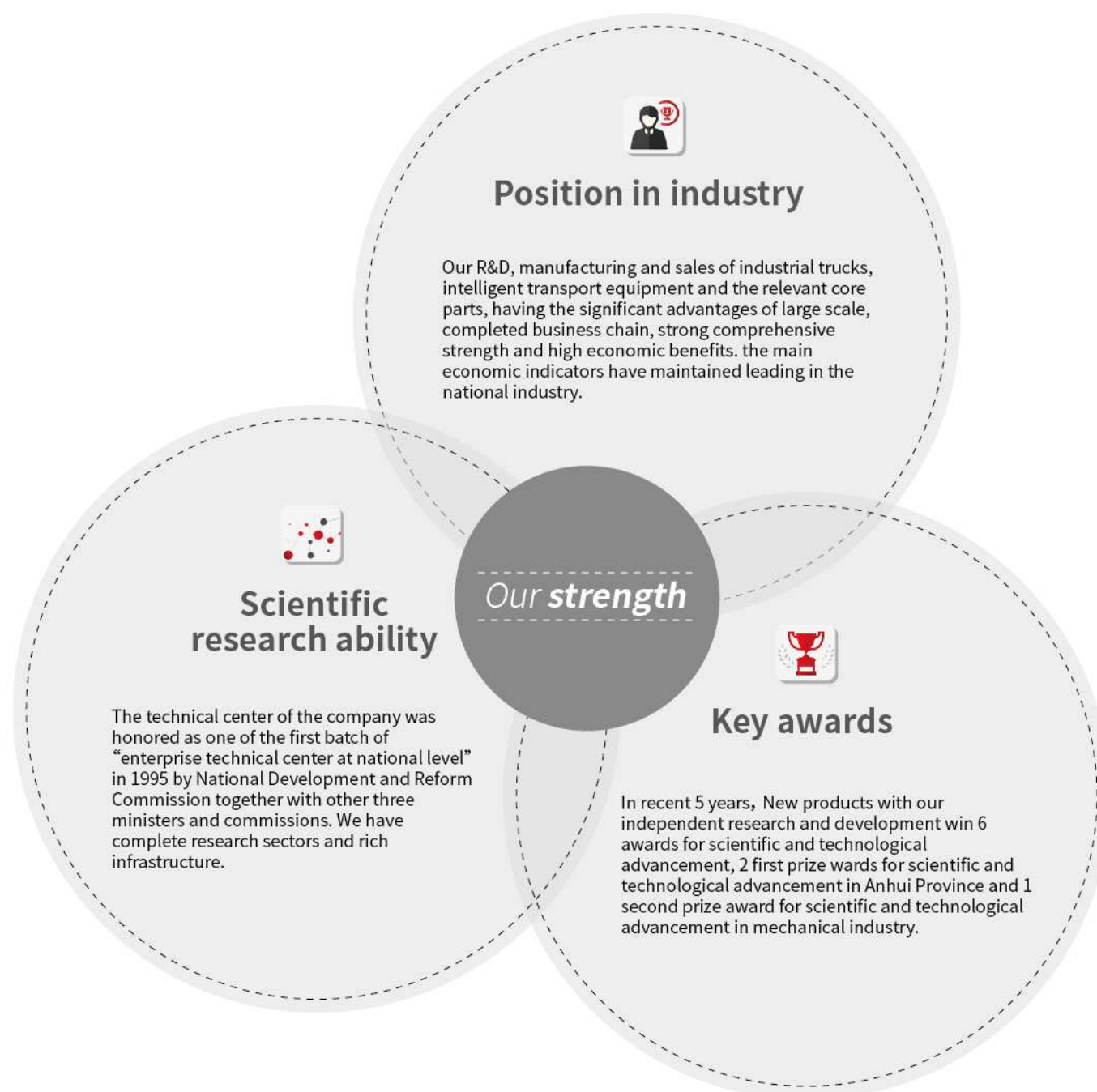
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■ [www.heliforklift.net](http://www.heliforklift.net)

# Our Strength

Anhui Heli Co. Ltd. , a core holding subsidiary of the forklift group, was listed in Shanghai Stock Exchange in 1996 and it is registered capital is 616.8 million. It is presently an industrial vehicle research and development, manufacturing and export base in China with large scale, complete product line and industrial chain and strong overall strength.



**HELI**

## HELI around the world

HELI ranked top 10 among the world industrial truck sector in 2006 and top 8 from 2011. HELI has autonomous sales network and sound service system with 24 provincial sales network and more than 400 second level dealers in domestic and in overseas, HELI sets up sales network in more than 80 countries and regions and our products sell to 150 countries and regions over the world In the next five years, Heli will vigorously promote the international operation and create a global famous brand.

## Brand concept

With being world top 5 as the short-term goal, HELI is committed to be a world advanced and over-lasting enterprise. Centennial HELI is our definition in thought and world top 5 is our quantized goal. HELI people work steadily and keep forging ahead to make our enterprise bigger and stronger. HELI has gone to a fast developing time since the new century. In 2006, HELI ranked world top 10. Now, we make our decision to be world top 5 which is not only a heritage of our glorious history but also our never-ending hard effort.

## Heavy machine manufacturing base

Based on HELI strong scientific research platform and manufacturing ability, HELI research and develop, produce and sale heavy trucks, reach stacker and empty container handler with completed series and various types to provide customers with special material handling solutions.

Heavy truck: 12t-18t, 20-25t, 28-32t, 35t, 38-40t, 42-46t

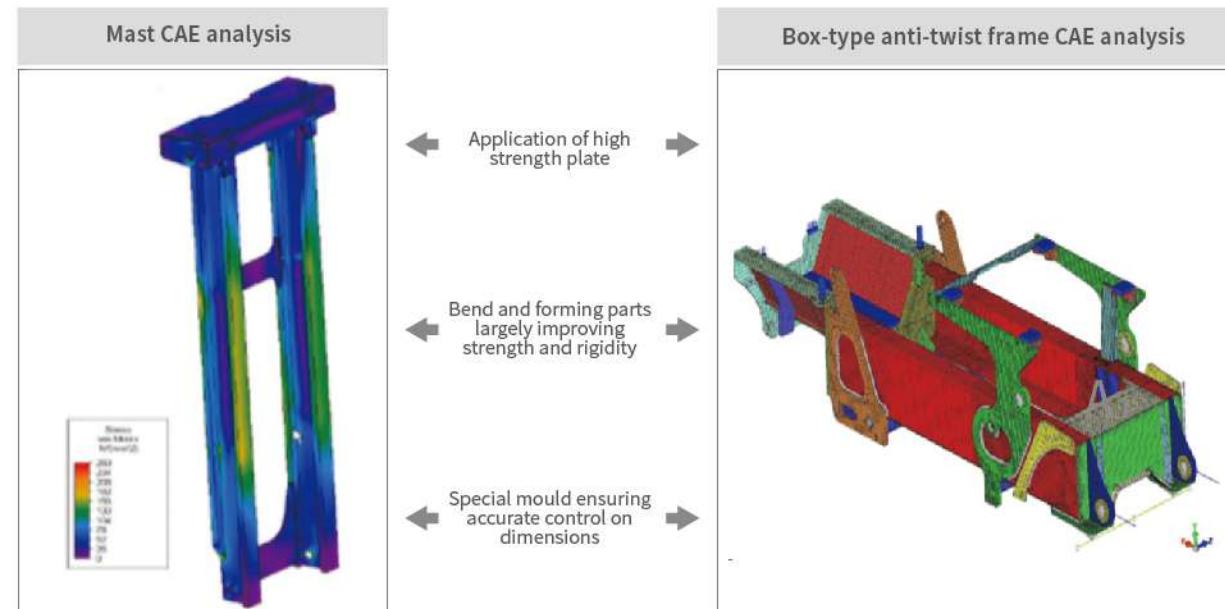
Reach stacker: standard type reach stacker, heavy type reach stacker

Container handler :2-3 layer, 5-6 layer, 7-8 layer



## A. Enduring and durable

### A.1 Durable structure design



### A.2 Easy and high efficient daily inspection

#### ► Tilting cab

Automatic tilting system facilitates interior maintenance; Hydraulic drives tilting cylinder with electric assistance making cab tilt 60° right ward which makes maintenance easy.

#### ► Engine hood with large opening angle

Open type engine hood which can be open through two self-lock spring ensures easy and high efficient maintenance.



#### ► Removable cab

The position of the removable cab can be adjusted front and rear, with a wide field of vision and easy maintenance.

#### ► Sliding Engine Hood

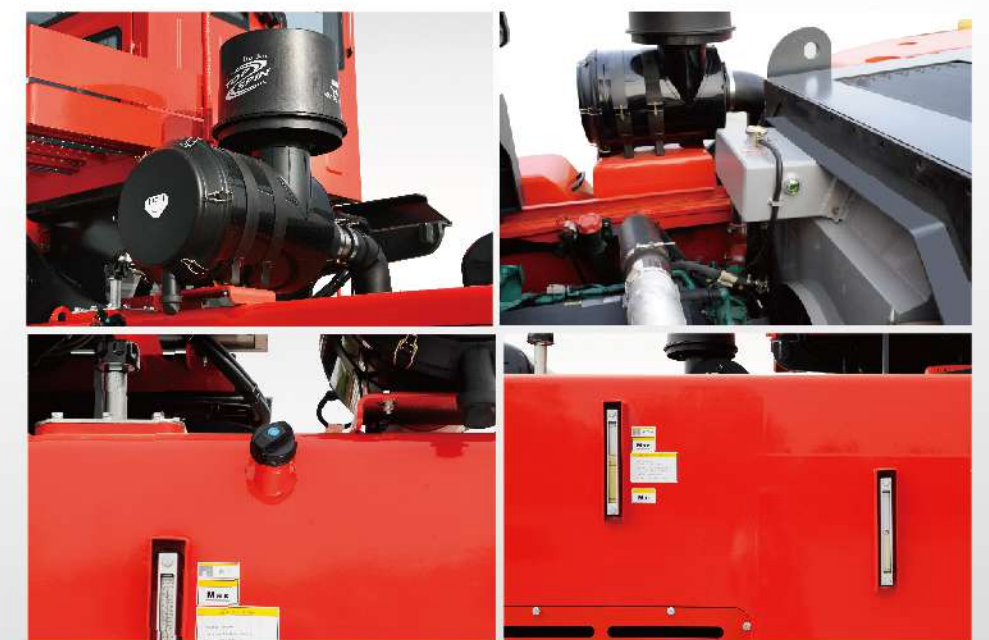
Sliding engine hood for maximum maintenance space.

#### ► Easy liquid adding and check

Cooling liquid adding and check, engine oil adding and check and hydraulic oil level check become easier.



#### ► Easy air cleaner filter replacement





### A.3 Improved protection performance

- Oil cylinder protection sleeve
- Electric tilting button with high dust-proof and water-proof degree
- Front axle dust proof vent
- Transmission box dust proof vent



- Oil cylinder protection sleeve(optional): it is used to protect cylinder damaged from foreign matters



- Electric tilting button with high dust-proof and water-proof degree: protecting degree:IP67

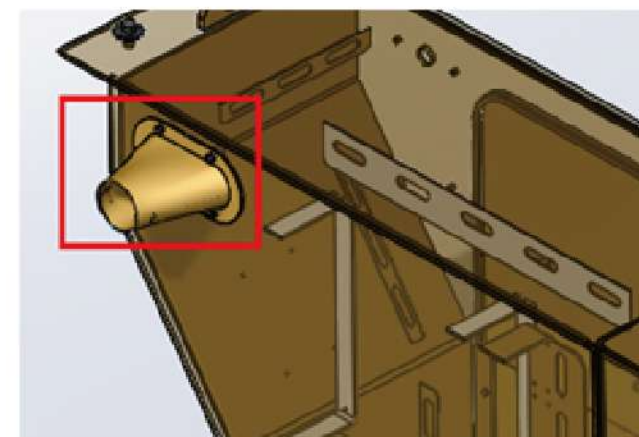


- Front axle dust proof vent



- Transmission box dust proof vent

- Dust-proof sleeve for electric cabinet
- Steel wire winded hoses are used and safety level is improved greatly.
- Dust-proof waterproof connectors
- Harness meets German standard



- Dust-proof sleeve for electric cabinet



- Steel wire winded hoses are used and safety level is improved greatly.



- Dust-proof waterproof connectors: protective class IP65



- Harness meets German standard and its temperature resistance ability is largely improved (-40°C-105°C)



#### A.4 Improved cooling efficiency

Optimal designed channel  
HELI special cooling medium  
Engine original fan



- **Optimal designed channel**  
Optimal designed radiator and channel make cooling system have small resistance, avoid air flowing back effectively and improve cooling efficiency.



- **Engine original fan (38-46t)**  
Good matching ability, stable working, large cooling power



- **High strength aluminum radiator**  
High strength fin type structure will not deform or crack easily.  
Exterior injection molding treatment---anti-corrosion and oxidation resistance

## B. ENERGY-SAVING

### B.1 High efficient matching, forceful power

- VOLVO engine, meeting EU Stage V/T4F/China Stage IV,ZF or DANA transmission box are assembled on the truck.



### B.2 Hydraulic dynamic load variable control system

- It can adjust oil pump displacement automatically according to operator habit and load condition to achieve high precision flow control and energy saving.  
Constant displacement system has simple structure, mature technology, reliable system and low cost.

### B.3 Light type design

- ▶ Rear counter weight has no air channel and counter weight use ratio is 5% increased and thus truck service weight is reduced.
- ▶ Light type design optimizes structure and the truck is lighter and more stable.

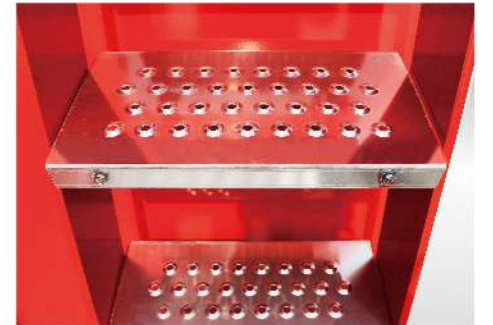


- ▶ **Light type design**  
Application of high strength material  
Years of data accumulation and accurate CAE analysis  
Constant structure optimization

## C. COMFORTABLE AND CONVENIENT

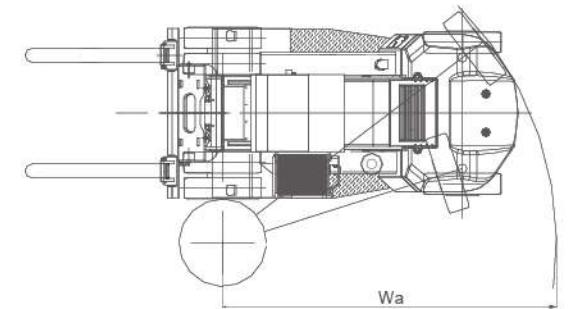
### C.1 Easy get on-off

- ▶ **Anti-skid pedal**  
Anti-slip aluminum pedals, with good rust and corrosion resistance, provide excellent anti-slip performance for entering and exiting the cab performance.  
Auxiliary handrail  
Solid and durable
- ▶ **Large getting on off pedal and handrail**  
Open type steps make easy and safe get on-off.



### C.2 Smaller turning radius

- ▶ Compact frame design  
Optimized steering angle





## C.3 Superior view



- **Superior front view**  
Front glass with large arc is used and front view field angle is 10° increased.



- **Superior top view**  
Large glass is used on the top of cab.

- **Glass for left and right side window**  
4 pieces of glass is used on left and right door to ensure 360° view.



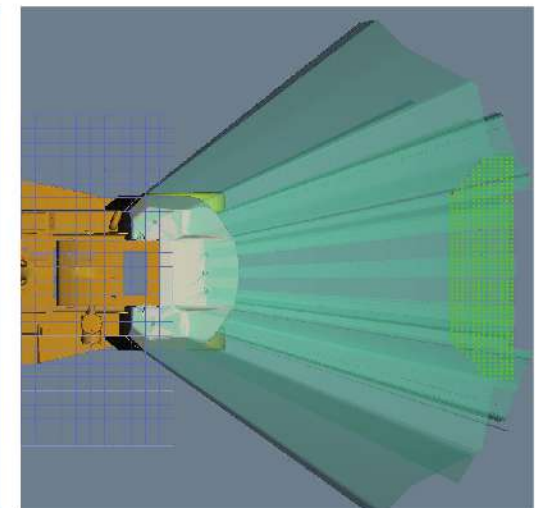
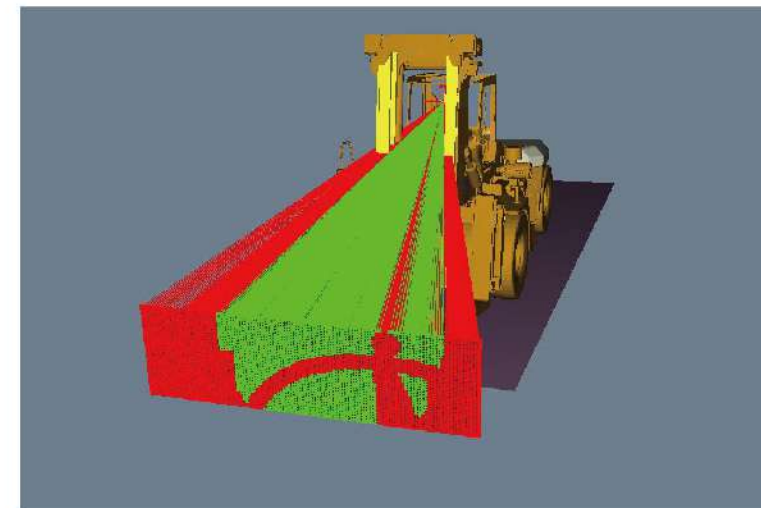
- **Superior rear view**  
Large glass is used at the rear end of cab.



- **Rear vision system**  
Truck real time rear view can be displayed when backward.



- **Front view check**  
**Rear view check**

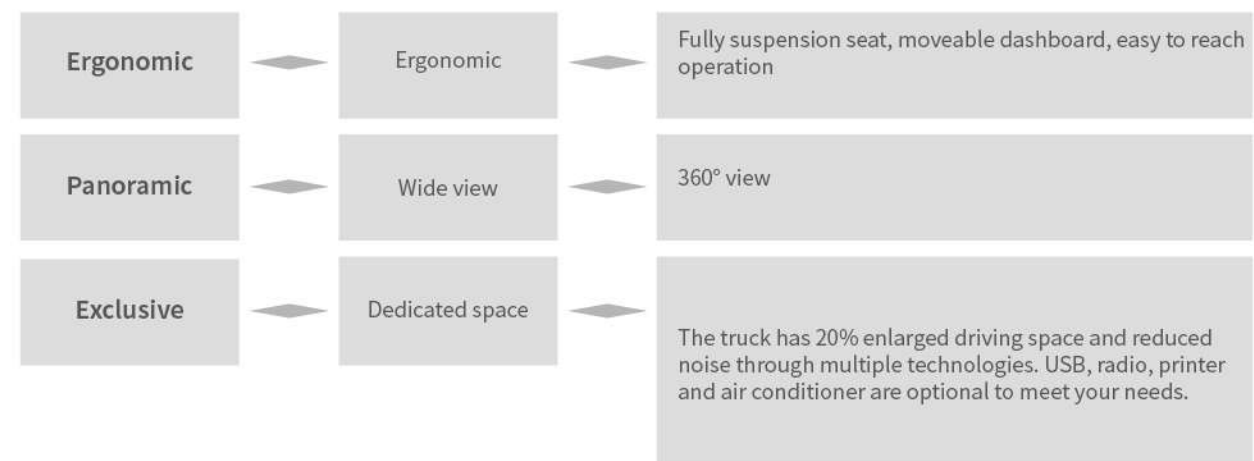






#### C.4 More comfort driving experience

Special cab with 360° view



##### ► Fully suspension seat

Adjustable damping shock reducing design not only bears your weight but also provides steady driving experience.



##### ► Weighting system(optional)

Weight can be measured accurately through checking hydraulic pressure.



##### ► Backward radar

Six probes ensure driving safety.  
Monitor is achieved through reasonable distributed 6 points.  
Larger monitoring range





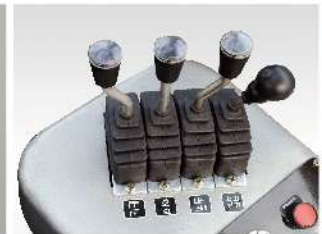
- **Truck working monitoring and condition display meter**  
Ergonomic optimized layout makes reading and operation easy.



- **Pedal optimized layout**  
Optimized pedal reduces fatigue during long time working.



- **Adjustable steering wheel**  
Steering wheel can be adjusted according to operator habit and easy and flexible steering largely reduces your work.



- **Flexible control knob**  
Accurate, safe and effective control can be achieved through small operation force.



- **Aviation integrated handle**  
Aviation integrated handle, with small operation force and high precision and safety.

## D. SAFE AND EFFICIENT

### D.1 Better reliability

- **Smaller front overhang**  
Retroposition of center of gravity  
More compact mast structure
- **Retroposition of center of gravity**  
Retroposition of power system  
Retroposition of cooling sytem  
No air channel on the balance weight





## D.2 OPS

### ► OPS for the whole truck

Truck power will be cut automatically and the truck can not be operated when operator is away from seat.

### ► OPS system for mast

The mast is locked and can not be operated when operator is away from seat.



## D.3 Wet type drive axle

### ► Maintenance free

Specially designed structure and brake principle provides anti-dust and anti-water function and saves your maintenance cost.

### ► Safe and reliable brake

Working requirements such as Long time, high duty, short distance or frequent brake can be satisfied.

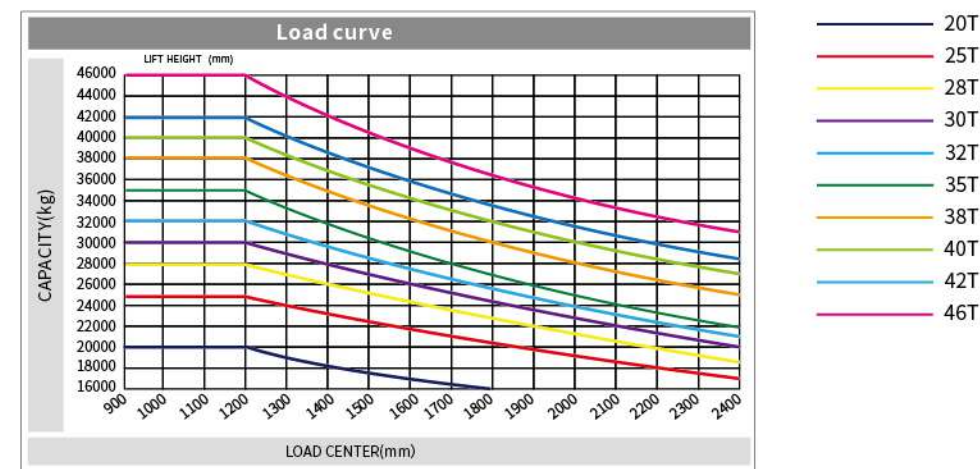
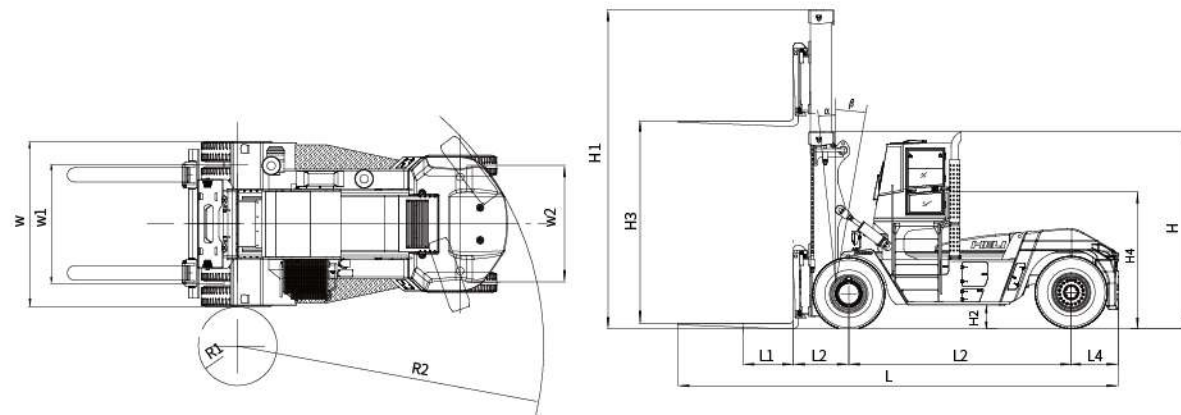


## E. Technical parameter

| Technical parameters                    |      |         |         |         |         |         |         |         |         |         |         |
|-----------------------------------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Model                                   | Unit | CPCD200 | CPCD250 | CPCD280 | CPCD300 | CPCD320 | CPCD350 | CPCD380 | CPCD400 | CPCD420 | CPCD460 |
| Rated load                              | kg   | 20000   | 25000   | 28000   | 30000   | 32000   | 35000   | 38000   | 40000   | 42000   | 46000   |
| The mass                                | kg   | 33600   | 36900   | 39000   | 41000   | 43000   | 46000   | 49700   | 51250   | 54600   | 56600   |
| Maximum lifting speed (loaded/unloaded) | mm/s | 270/310 | 270/310 | 250/300 | 250/300 | 250/300 | 230/245 | 240/320 | 240/320 | 240/320 | 240/320 |
| Maximum speed (loaded/unloaded)         | km/h | 22/24   | 22/24   | 22/24   | 22/24   | 22/24   | 22/24   | 23/26   | 23/26   | 23/26   | 23/26   |
| Gradeability (loaded)(2km/h)            | %    | 20      | 20      | 20      | 20      | 20      | 20      | 20      | 20      | 20      | 20      |

| Size parameters                         |      |      |              |              |              |              |              |              |              |              |              |              |
|-----------------------------------------|------|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Model                                   |      | Unit | CPCD200      | CPCD250      | CPCD280      | CPCD300      | CPCD320      | CPCD350      | CPCD380      | CPCD400      | CPCD420      | CPCD460      |
| Overall length                          | L    |      | 8742         | 8742         | 9202         | 9202         | 9202         | 9202         | 10370        | 10370        | 10370        | 10370        |
| Overall width                           | W    | mm   | 3040         | 3040         | 3460         | 3460         | 3460         | 3460         | 4120         | 4120         | 4120         | 4120         |
| Overall height                          | H    | mm   | 3995         | 3995         | 4120         | 4120         | 4120         | 4120         | 4600         | 4600         | 4830         | 4830         |
| Load center distance                    | L1   | mm   | 1200         | 1200         | 1200         | 1200         | 1200         | 1200         | 1200         | 1200         | 1200         | 1200         |
| Wheelbase                               | L2   | mm   | 4250         | 4250         | 4650         | 4650         | 4650         | 4650         | 5500         | 5500         | 5500         | 5500         |
| Front overhang                          | L3   | mm   | 1102         | 1102         | 1162         | 1162         | 1162         | 1162         | 1270         | 1270         | 1270         | 1270         |
| Rear overhang                           | L4   | mm   | 990          | 990          | 990          | 990          | 990          | 990          | 1160         | 1160         | 1160         | 1160         |
| Minimum underground clearance           | H2   | mm   | 280          | 280          | 275          | 275          | 275          | 275          | 350          | 350          | 350          | 350          |
| Seat height                             | H4   | mm   | 2590         | 2590         | 2590         | 2590         | 2590         | 2590         | 2620         | 2620         | 2620         | 2620         |
| The turning radius                      | R1   | mm   | 775          | 775          | 824          | 824          | 824          | 824          | 936          | 936          | 936          | 936          |
| Turning radius(outside)                 | R2   | mm   | 5920         | 5920         | 6395         | 6395         | 6395         | 6395         | 7518         | 7518         | 7518         | 7518         |
| Front track                             | W1   | mm   | 2200         | 2200         | 2490         | 2490         | 2490         | 2490         | 3090         | 3090         | 3090         | 3090         |
| Rear track                              | W2   | mm   | 2510         | 2510         | 2440         | 2440         | 2440         | 2440         | 2840         | 2840         | 2840         | 2840         |
| Mast height (retracted/extended)        | H/H1 | mm   | 3995/5995    | 3995/5995    | 4120/6120    | 4120/6120    | 4120/6120    | 4120/6120    | 4600/6600    | 4600/6600    | 4830/6830    | 4830/6830    |
| Mast lifting height                     | H3   | mm   | 4000         | 4000         | 4000         | 4000         | 4000         | 4000         | 4000         | 4000         | 4000         | 4000         |
| Mast tilting angle (forward/backward)   | α/β  | deg  | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         | 6/10         |
| Fork dimension (length*width*thickness) |      | mm   | 2440×250×112 | 2440×250×112 | 2440×300×115 | 2440×300×115 | 2440X300X115 | 2440X300X120 | 2440×300×135 | 2440×300×135 | 2440×300×145 | 2440×300×145 |
| Fork adjusting range (Outside of Fork)  |      | mm   | 820-2700     | 820-2700     | 920-2850     | 920-2850     | 920-2850     | 920-2850     | 950-2850     | 950-2850     | 950-2850     | 950-2850     |





Note:

Load center is measured from the fork front. A standard load center point refers to the center of a cubic of side length of 2400mm. When gantry tilts forward, the bearing capacity will reduce in case of use of non-standard fork or loading a load exceeding the normal width,. Load curve tells you bearing capacity of various load centers in time.

#### CPCD200-250 Wide view mast

| Mast name | Max.fork Height (mm) | Overall height (mm) | Max.mast height(mm) | Tilt angle( $\alpha/\beta$ )(°) | Remarks            |
|-----------|----------------------|---------------------|---------------------|---------------------------------|--------------------|
| M400      | 4000                 | 3995                | 5995                | 6/10                            | Standard equipment |
| M450      | 4500                 | 4245                | 6495                | 6/10                            |                    |
| M500      | 5000                 | 4495                | 6995                | 6/10                            |                    |
| M550      | 5500                 | 4745                | 7495                | 6/10                            |                    |
| M600      | 6000                 | 4995                | 7995                | 6/10                            |                    |
| M650      | 6500                 | 5245                | 8495                | 6/10                            |                    |
| M700      | 7000                 | 5495                | 8995                | 6/10                            |                    |
| M750      | 7500                 | 5745                | 9495                | 6/10                            |                    |
| M800      | 8000                 | 5995                | 9995                | 6/10                            |                    |

#### CPCD280-350 Wide view mast

| Mast name | Max.fork Height (mm) | Overall height (mm) | Max.mast height(mm) | Tilt angle( $\alpha/\beta$ )(°) | Remarks            |
|-----------|----------------------|---------------------|---------------------|---------------------------------|--------------------|
| M400      | 4000                 | 4120                | 6120                | 6/10                            | Standard equipment |
| M450      | 4500                 | 4370                | 6620                | 6/10                            |                    |
| M500      | 5000                 | 4620                | 7120                | 6/10                            |                    |
| M550      | 5500                 | 4870                | 7620                | 6/10                            |                    |
| M600      | 6000                 | 5120                | 8120                | 6/10                            |                    |
| M650      | 6500                 | 5370                | 8620                | 6/10                            |                    |
| M700      | 7000                 | 5620                | 9120                | 6/10                            |                    |
| M750      | 7500                 | 5870                | 9620                | 6/10                            |                    |
| M800      | 8000                 | 6120                | 10120               | 6/10                            |                    |

#### CPCD380-400 Wide view mast

| Mast name | Max.fork Height (mm) | Overall height (mm) | Max.mast height(mm) | Tilt angle( $\alpha/\beta$ )(°) | Remarks            |
|-----------|----------------------|---------------------|---------------------|---------------------------------|--------------------|
| M400      | 4000                 | 4600                | 6535                | 6/10                            | Standard equipment |
| M450      | 4500                 | 4850                | 7035                | 6/10                            |                    |
| M500      | 5000                 | 5100                | 7535                | 6/10                            |                    |
| M550      | 5500                 | 5350                | 8035                | 6/10                            |                    |
| M600      | 6000                 | 5600                | 8535                | 6/10                            |                    |
| M650      | 6500                 | 5850                | 9035                | 6/10                            |                    |
| M700      | 7000                 | 6100                | 9535                | 6/10                            |                    |
| M750      | 7500                 | 6350                | 10035               | 6/10                            |                    |
| M800      | 8000                 | 6600                | 10535               | 6/10                            |                    |

#### CPCD420-460 Wide view mast

| Mast name | Max.fork Height (mm) | Overall height (mm) | Max.mast height(mm) | Tilt angle( $\alpha/\beta$ )(°) | Remarks            |
|-----------|----------------------|---------------------|---------------------|---------------------------------|--------------------|
| M400      | 4000                 | 4830                | 6830                | 6/10                            | Standard equipment |
| M450      | 4500                 | 5080                | 7330                | 6/10                            |                    |
| M500      | 5000                 | 5330                | 7830                | 6/10                            |                    |
| M550      | 5500                 | 5580                | 8330                | 6/10                            |                    |
| M600      | 6000                 | 5830                | 8830                | 6/10                            |                    |
| M650      | 6500                 | 6080                | 9330                | 6/10                            |                    |
| M700      | 7000                 | 6330                | 9830                | 6/10                            |                    |
| M750      | 7500                 | 6580                | 10330               | 6/10                            |                    |
| M800      | 8000                 | 6830                | 10830               | 6/10                            |                    |

Note: Duplex full free mast is optional.

- Our products are constantly updated and improved. Parameters and design are subject to change without prior notice.
- The configuration and color of the products in figures may be different from the actual delivered model. Please in kind prevails.

## F. Configurations

| Vehicle configuration    |                                           |                               |                  |                  |                  |                  |                  |                |                |                  |                  |
|--------------------------|-------------------------------------------|-------------------------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|------------------|------------------|
| Forklift truck model     |                                           | CPCD200-V1Z-12G2              | CPCD250-V1Z-12G2 | CPCD280-V1Z-12G2 | CPCD300-V1Z-12G2 | CPCD320-V1Z-12G2 | CPCD350-V1Z-12G2 | CPCD380VDG2-12 | CPCD400VDG2-12 | CPCD420-V1D-12G2 | CPCD460-V1D-12G2 |
| Engine                   | Brand                                     | VOLVO                         | VOLVO            | VOLVO            | VOLVO            | VOLVO            | VOLVO            | VOLVO          | VOLVO          | VOLVO            | VOLVO            |
|                          | Model                                     | TAD881VE                      | TAD881VE         | TAD881VE         | TAD881VE         | TAD881VE         | TAD881VE         | TAD1181VE      | TAD1181VE      | TAD1181VE        | TAD1181VE        |
|                          | Rated output (kW/RPM)                     | 185/2200                      | 185/2200         | 185/2200         | 185/2200         | 185/2200         | 185/2200         | 265/2100       | 265/2100       | 265/2100         | 265/2100         |
|                          | Peak torque (Nm/RPM)                      | 1160/1350                     | 1160/1350        | 1160/1350        | 1160/1350        | 1160/1350        | 1160/1350        | 1785/1316      | 1785/1316      | 1785/1316        | 1785/1316        |
|                          | Emission standards                        | EU Stage V/T4F/China Stage IV |                  |                  |                  |                  |                  |                |                |                  |                  |
|                          | Emission Technology Route                 | DOC+DPF+SCR                   | DOC+DPF+SCR      | DOC+DPF+SCR      | DOC+DPF+SCR      | DOC+DPF+SCR      | DOC+DPF+SCR      | DOC+DPF+SCR    | DOC+DPF+SCR    | DOC+DPF+SCR      | DOC+DPF+SCR      |
| Tank                     | Fuel tank(L)                              | 340                           | 340              | 360              | 360              | 360              | 360              | 450            | 450            | 450              | 450              |
|                          | Hydraulic oil tank(L)                     | 310                           | 310              | 320              | 320              | 320              | 320              | 460            | 460            | 460              | 460              |
|                          | Brake oil tank(L)                         | 110                           | 110              | 110              | 110              | 110              | 110              | 120            | 120            | 120              | 120              |
|                          | Urea tank (L)                             | 25                            | 25               | 25               | 25               | 25               | 25               | 45             | 45             | 45               | 45               |
| Transmission             | model                                     | ZF3WG211                      | ZF3WG211         | ZF3WG211         | ZF3WG211         | ZF3WG211         | ZF3WG211         | DANA TE27      | DANA TE27      | DANA TE27        | DANA TE27        |
| Drive axle               | model                                     | Kessler                       | Kessler          | Kessler          | Kessler          | Kessler          | Kessler          | Kessler        | Kessler        | Kessler          | Kessler          |
| Tire                     | size                                      | 14.00-24                      | 14.00-24         | 16.00-25         | 16.00-25         | 16.00-25         | 16.00-25         | 18.00-25       | 18.00-25       | 18.00-25         | 18.00-25         |
| Supporting configuration | Reversing radar                           | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
|                          | Reversing image                           | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
|                          | Weighing system                           | ○                             | ○                | ○                | ○                | ○                | ○                | ○              | ○              | ○                | ○                |
|                          | The vehicle ops                           | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
|                          | The door frame ops                        | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
| The hydraulic system     | Quantitative system                       | /                             | /                | /                | /                | /                | /                | /              | /              | /                | /                |
|                          | Variable system                           | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
| Airconditioning options  | Air conditioning                          | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
|                          | Used by air conditioning                  | ○                             | ○                | ○                | ○                | ○                | ○                | ○              | ○              | ○                | ○                |
| Tyre options             | Pneumatic tyre, Vacuum tyre               | ●                             | ●                | ●                | ●                | ●                | ●                | ●              | ●              | ●                | ●                |
|                          | Solid tyre                                | ○                             | ○                | ○                | ○                | ○                | ○                | ○              | ○              | ○                | ○                |
|                          | Solid tyre (front), pneumatic tyre (rear) | ○                             | ○                | ○                | ○                | ○                | ○                | ○              | ○              | ○                | ○                |
|                          | Pneumatic tyre (front), solid tyre (rear) | ○                             | ○                | ○                | ○                | ○                | ○                | ○              | ○              | ○                | ○                |
| Cab                      | Removable cab                             | /                             | /                | /                | /                | /                | /                | ●              | ●              | ●                | ●                |
|                          | Tilting cab                               | ●                             | ●                | ●                | ●                | ●                | ●                | /              | /              | /                | /                |

●-Standard item ○-Optional item /-Not used



## G. Configuration

### Optional attachments



- **Side shifting fork positioner (standard)**  
It has both space adjusting and side shifting functions to improving working efficiency.



- **Fork extension**  
It effectively extends fork and it is suitable for large size handling.



- **Carpet boom**  
It is suitable for roll type goods such as steel roll, wire roll and so on.



- **Crane jib**  
It is safe and high efficient to lift goods.



- **Slings**  
It is suitable for goods in bundle such as rebar, steel tube and so on.

### HELI smart fleet management system

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

