CPCD 200- 460

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190929 FOKELI Print

HELI

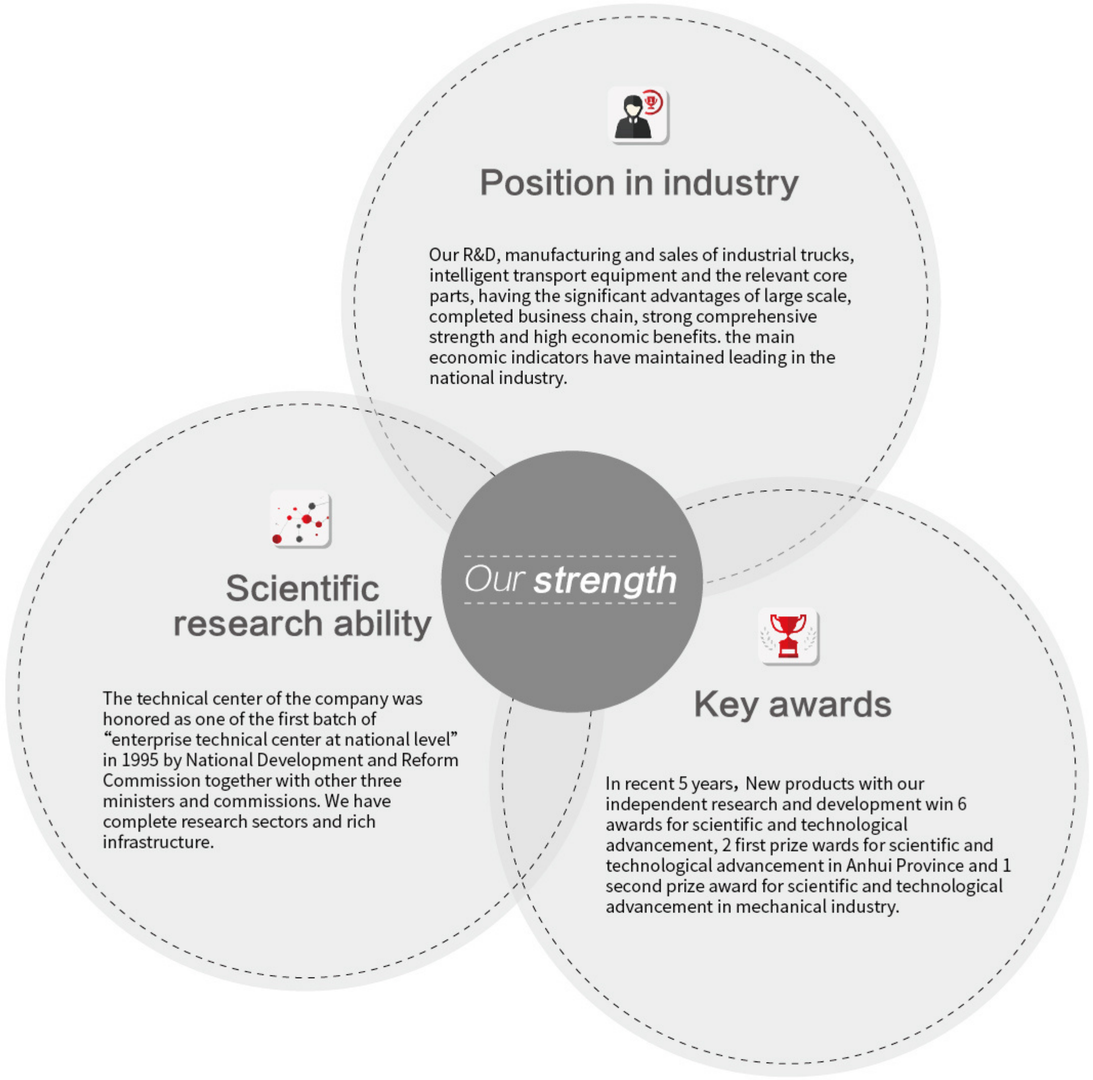
CPCD 200-460

G Series Balance Weight Type Forklift

■ 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.

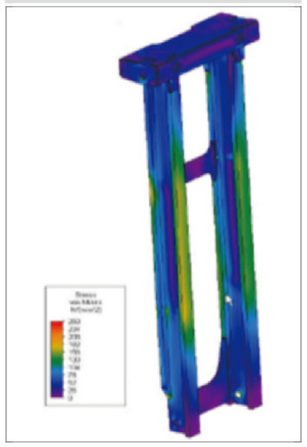
Heavy machine manufacturing base

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

Mast CAE analysis

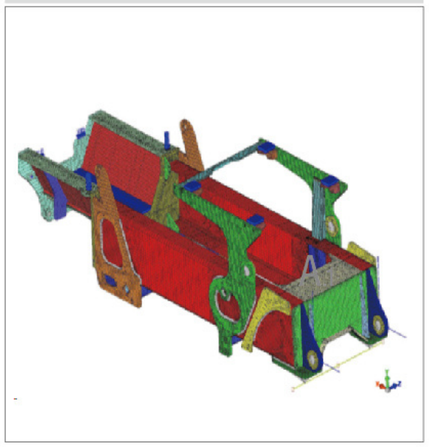


Application of high strength plate

Bend and forming parts largely improving strength and rigidity

Special mould ensuring accurate control on dimensions

Box-type anti-twist frame CAE analysis



A.2 Easy and high efficient daily inspection

▸ **Cab electric tilting system (Tilting cab type forklift standard)**

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.

▸ **Tilting cab or thermocline cab**

Tilting cab can be tilt rightward up to 60°automatically or manually;
Thermocline structure can lift cab by 500mm and it is easy for maintenance.

▸ **Engine hood with large opening angle or sliding engine hood**

Open type engine hood provides large maintenance space.

▸ **Easy liquid adding and check**

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

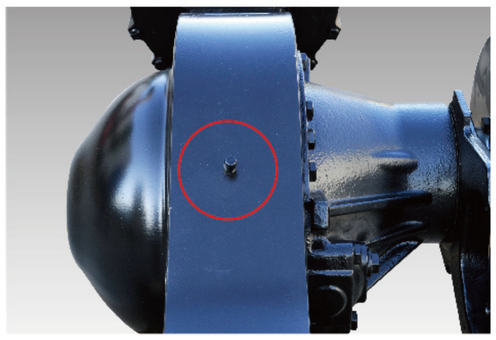
▸ **Easy air cleaner filter replacement**

A3 Improved protection performance

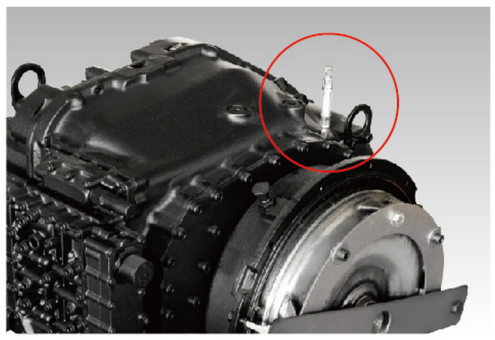
- Oil cylinder protection sleeve
- Electric tilting button with high dust-proof and water-proof degree
- Front axle dust proof vent
- Transmission box dust proof vent

■ 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

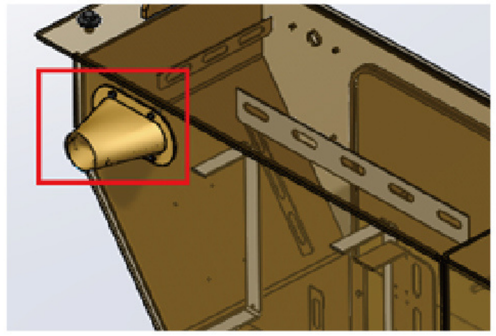


■ Front axle dust proof vent



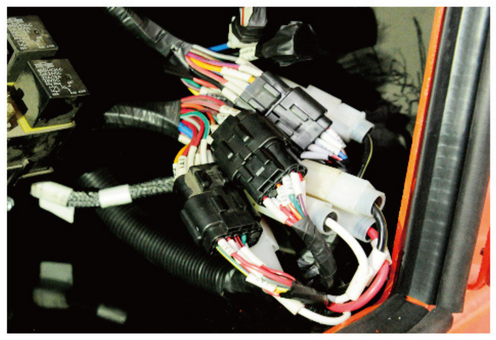
■ Transmission box dust proof vent

- 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

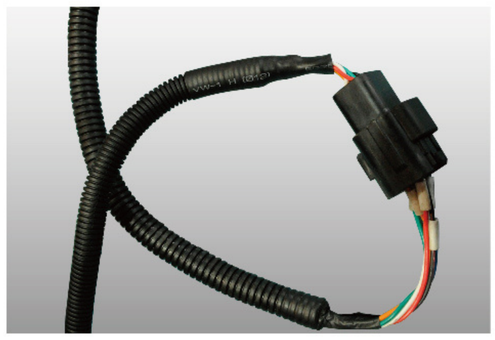


■ Dust-proof sleeve for electric cabinet

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



■ Dust-proof waterproof connectors: protective class IP65



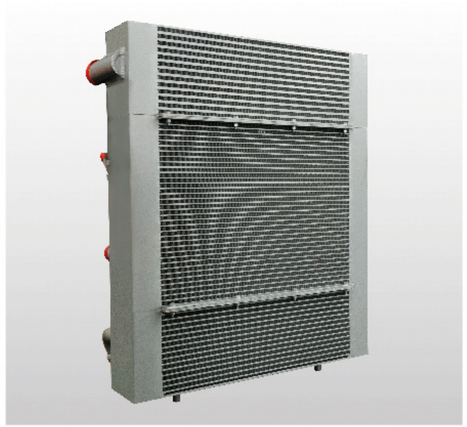
■ Harness meets German standard and its temperature resistance ability is largely improved（-40℃-105℃）

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**
  Good matching ability, stable working, large cooling power

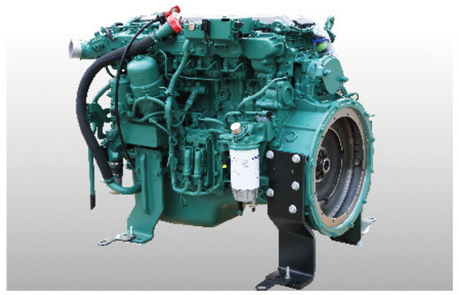


- **High strength aluminum radiator**
  High strength fin type structure will not deform or crack easily.
  Exterior injection molding treatment---anti-corrosion and oxidation resistance

B. ENERGY-SAVING

B.1 High efficient matching, forceful power

- VOLVO engine, ZF or DANA transmission box are assembled on the truck.



B.2 Hydraulic dynamic load variable control system(35-46t) or constant displacement system (20-32t)

- 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, reliablesystem 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.

- Counter weight no air channel design
  Rear counter weight has no air channel and counter weight use ratio is increased and thus truck service weight is reduced.

- **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-skid aluminous pedal has good anti-skid 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

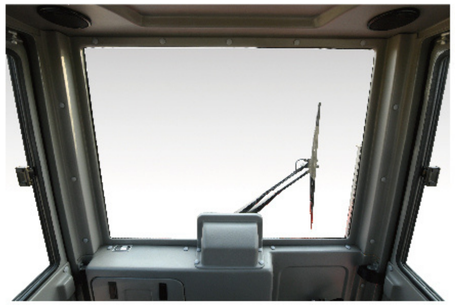
C.3 Superior view

▸ **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.

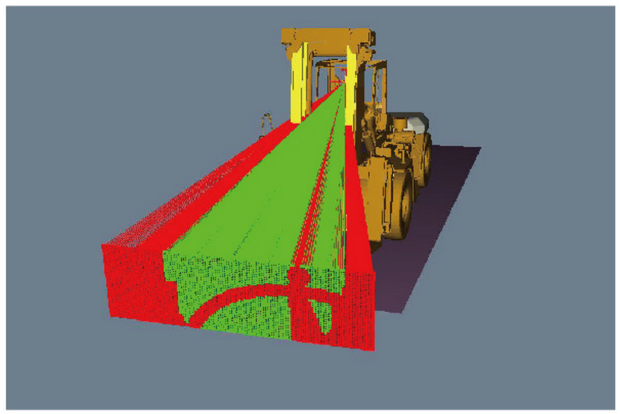
▸ **Glass for left and right side window**
4 pieces of glass is used on left and right door to ensure 360°view.

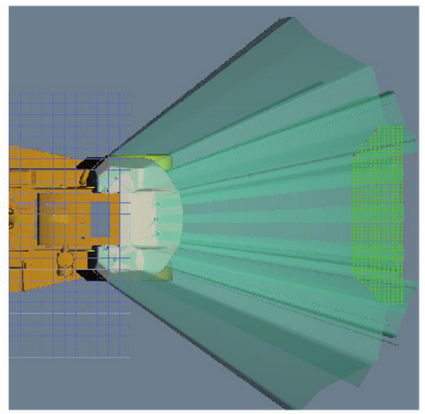
▸ **Superior rear view**
Large glass is used at the rear end of cab.



▸ **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

Ergonomic	Ergonomic	Fully suspension seat, moveable dashboard, easy to reach operation
Panoramic	Wide view	360° view
Exclusive	Dedicated space	The truck has 20% enlarged driving space and reduced noise through multiple technologies. USB, radio, printer and air conditioner are optional to meet your needs.

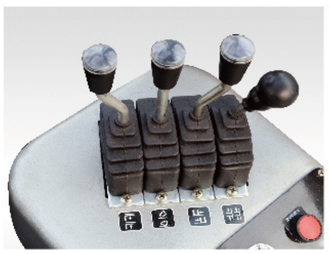
- **Fully suspension seat**
  Adjustable damping shock reducing design not only bears your weight but also provides steady driving experience.
- **Weighting system(optional)**
  Weight can be measured accurately through checking hydraulic pressure.

- **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.

D. SAFE AND EFFICIENT

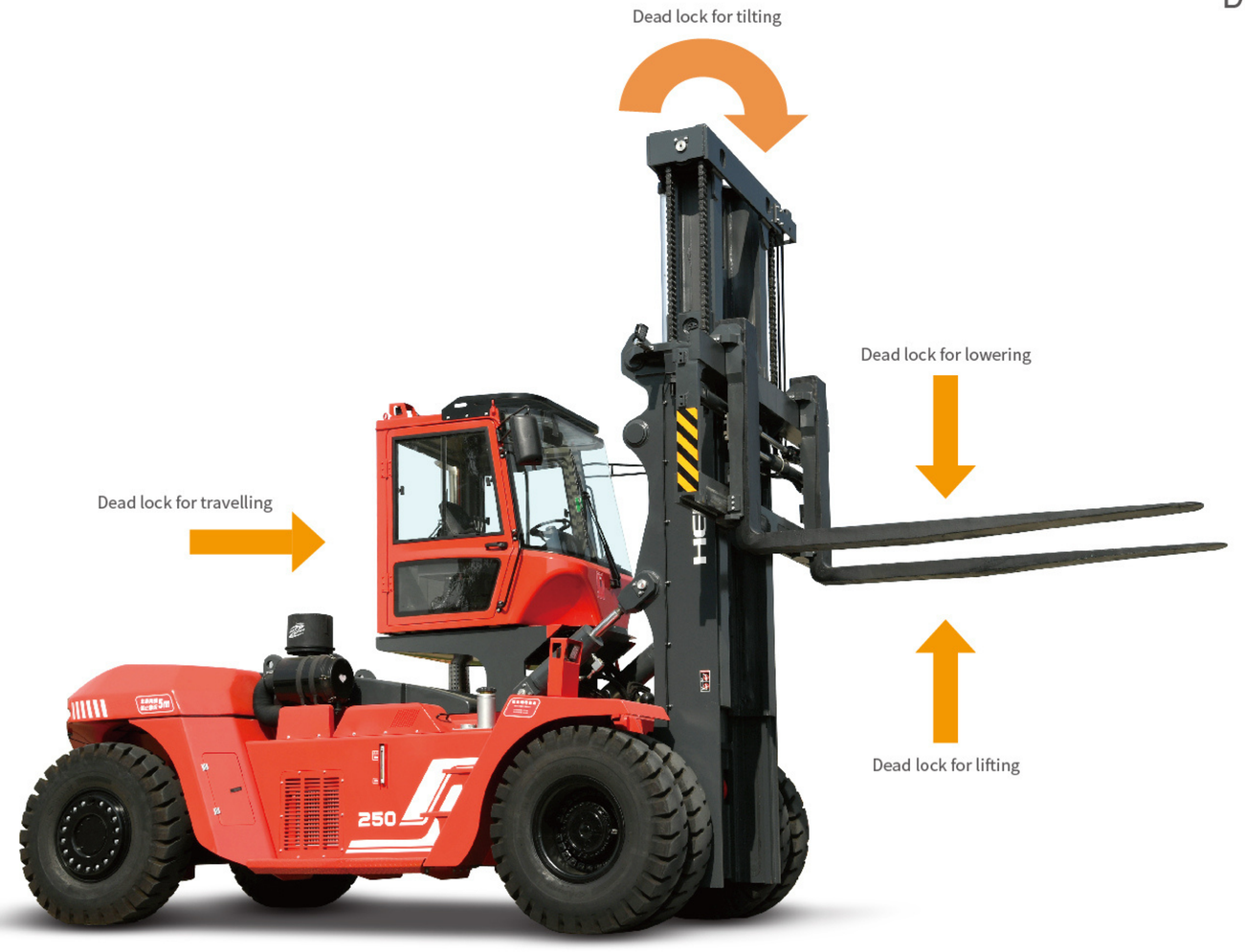
D.1 Better reliability

- **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.

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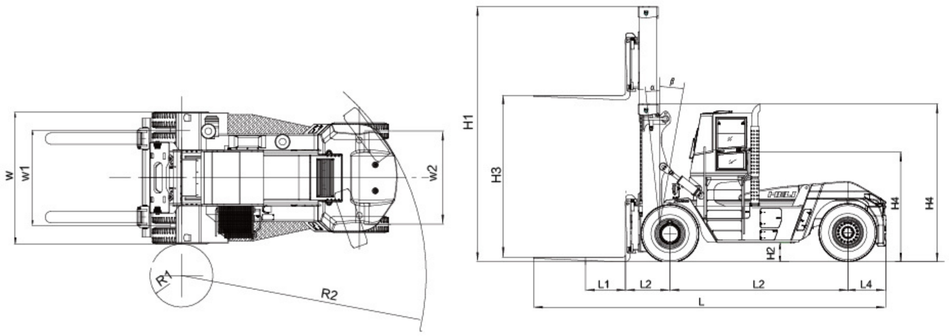
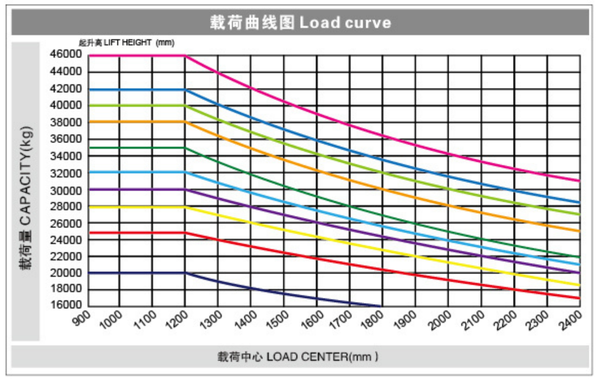
E. Technical parameter

Technical parameters													
Model	Unit	CPCD200	CPCD200 (Tip-over cab)	CPCD250	CPCD250 (Tip-over cab)	CPCD280	CPCD300	CPCD320	CPCD350	CPCD380	CPCD400	CPCD420	CPCD460
Rated load	t	20	20	25	25	28	30	32	35	38	40	42	46
The mass	kg	33200	33200	36500	36500	40000	42000	43000	46000	51600	53600	56000	58600
Maximum lifting speed (loaded/unloaded)	mm/s	280/310	280/310	280/310	280/310	280/310	280/310	280/310	240/260	280/340	280/340	240/320	240/320
Maximum speed (loaded/unloaded)	km/h	23/26	23/26	23/26	23/26	22/25	22/25	22/25	22/25	23/26	23/26	23/26	23/26
Gradeability (loaded)	%	27	27	27	27	27	27	27	27	36.6	35	30	30
Noise in the cab	dB	78	79	78	79	78	78	78	79	76	76	76	76

Size parameters													
Model	Unit	CPCD200	CPCD200 (Tip-over cab)	CPCD250	CPCD250 (Tip-over cab)	CPCD280	CPCD300	CPCD320	CPCD350	CPCD380	CPCD400	CPCD420	CPCD460
Overall length		8742	8742	8742	8742	9200	9200	9200	9200	9870	9870	10370	10370
Overall width	mm	3040	3040	3040	3040	3460	3460	3460	3460	4120	4120	4120	4120
Overall height	mm	3995	3555	3995	3555	4120	4120	4120	4120	4600	4600	4850	4850
Load center distance	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Wheelbase	mm	4250	4250	4250	4250	4650	4650	4650	4650	5000	5000	5500	5500
Front overhang	mm	1102	1102	1102	1102	1162	1162	1162	1162	1270	1270	1270	1270
Rear overhang	mm	990	990	990	990	990	990	990	990	1160	1160	1160	1160
Minimum underground clearance	mm	280	280	280	280	275	275	275	275	350	350	390	390
Seat height	mm	2793	2473	2793	2473	2850	2850	2850	2530	2590	2590	2620	2620
The turning radius	mm	775	775	775	775	824	824	824	824	936	936	936	936
Turning radius(outside)	mm	5920	5920	5920	5920	6395	6395	6395	6395	6950	6950	7518	7518
Front track	mm	2200	2200	2200	2200	2490	2490	2490	2490	3090	3090	3090	3090
Rear track	mm	2510	2510	2510	2510	2440	2440	2440	2440	2840	2840	2840	2840
Mast height (retracted/extended)	mm	3995/5995	3495/4995	3995/5995	3495/4995	4120/6120	4120/6120	4120/6120	4120/6120	4600/6600	4600/6600	4830/6830	4830/6830
Mast lifting height	mm	4000	3000	4000	3000	4000	4000	4000	4000	4000	4000	4000	4000
Mast tilting angle (forward/backward)	deg	6/10	6/10	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 × 110	2440 × 250 × 110	2440 × 250 × 110	2440 × 250 × 110	2440 × 300 × 115	2440 × 300 × 115	2440X300X115	2440X300X120	2440 × 300 × 145	2440 × 300 × 145	2440 × 300 × 145	2440 × 300 × 145
Fork adjusting range (Outside of Fork)	mm	820–2700	820–2700	820–2700	820–2700	920–2850	920–2850	920–2850	920–2850	1250–2850	1250–2850	1250–2850	1250–2850





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)	Tilt angle (F/B)	Remarks
M400	4000	3995	6°/10°	standard equipment
M450	4500	4245	6°/10°	
M500	5000	4495	6°/10°	
M550	5500	4745	6°/10°	
M600	6000	4995	6°/10°	
M650	6500	5245	6°/10°	
M700	7000	5495	6°/10°	
M750	7500	5745	6°/10°	
M800	8000	5995	6°/10°	

CPCD280-350 Wide view mast

Mast name	Max.fork Height (mm)	Overall height (mm)	Tilt angle (F/B)	Remarks
M400	4000	4120	6°/10°	standard equipment
M450	4500	4370	6°/10°	
M500	5000	4620	6°/10°	
M550	5500	4870	6°/10°	
M600	6000	5120	6°/10°	
M650	6500	5370	6°/10°	
M700	7000	5620	6°/10°	
M750	7500	5870	6°/10°	
M800	8000	6120	6°/10°	

CPCD380-400 Wide view mast

Mast name	Max.fork Height (mm)	Overall height (mm)	Tilt angle (F/B)	Remarks
M400	4000	4600	6°/10°	standard equipment
M450	4500	4850	6°/10°	
M500	5000	5100	6°/10°	
M550	5500	5350	6°/10°	
M600	6000	5600	6°/10°	
M650	6500	5850	6°/10°	
M700	7000	6100	6°/10°	
M750	7500	6350	6°/10°	
M800	8000	6600	6°/10°	

CPCD420-460 Wide view mast

Mast name	Max.fork Height (mm)	Overall height (mm)	Tilt angle (F/B)	Remarks
M400	4000	4830	6°/10°	standard equipment
M450	4500	5080	6°/10°	
M500	5000	5330	6°/10°	
M550	5500	5580	6°/10°	
M600	6000	5830	6°/10°	
M650	6500	6080	6°/10°	
M700	7000	6330	6°/10°	
M750	7500	6580	6°/10°	
M800	8000	6830	6°/10°	

Note: Duplex full free mast is optional

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F. Configurations

Vehicle configuration															
Forklift truck model		CPCD200 −VZ2−12III	CPCD200 −VD1−12III	CPCD250 −VZ2−12III	CPCD250 −VD1−12III	CPCD280 −VZ2−12III	CPCD300 −VZ2−12III	CPCD320 −VZ2−12III	CPCD350 −VZ1−12III(IV)	CPCD380 −VD2−12III	CPCD400 −VD2−12III	CPCD420 −CD−12III	CPCD420 −VD2−12III	CPCD460 −CD−12III	CPCD460 −VD2−12III
Engine	Brand	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	VOLVO	CUMMINS	VOLVO	CUMMINS	VOLVO
	Model	TAD851VE	TAD851VE	TAD851VE	TAD851VE	TAD851VE	TAD851VE	TAD851VE	TAD851(871)VE	TAD1151VE	TAD1151VE	QSM11	TAD1151VE	QSM11	TAD1151VE
	Rated output (kW/RPM)	185/2200	185/2200	185/2200	185/2200	185/2200	185/2200	185/2200	185/2200	265/2100	265/2100	254/1800	265/2100	254/1800	265/2100
	Peak torque (Nm/RPM)	1160/1350	1160/1350	1160/1350	1160/1350	1160/1350	1160/1350	1160/1350	1160/1350	1785/1316	1785/1316	1708/1400	1785/1316	1708/1400	1785/1316
	Emission standards	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III(IV)	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III	EU Stage III
Transmission	model	ZF3WG211	DANA32000	ZF3WG211	DANA32000	ZF3WG211	ZF3WG211	ZF3WG211	ZF3WG211	DANA36000	DANA36000	DANA TE27	DANA TE27	DANA TE27	DANA TE27
Drive axle	model	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler	Kessler
Tire	size	14.00−24	14.00−24	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	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	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Solid tyre	○	○	○	○	／	／	／	／	／	／	／	／	／	／
	Solid tyre (front), pneumatic tyre (rear)	○	○	○	○	／	／	／	／	／	／	／	／	／	／
	Pneumatic tyre (front), solid tyre (rear)	○	○	○	○	／	／	／	／	／	／	／	／	／	／
Cab	Thermocline 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)