

HELI
LIFTING THE FUTURE

4-5t
H3 Series Internal Combustion
Counterbalanced Forklift Truck (Euro Stage V)

STAGE V



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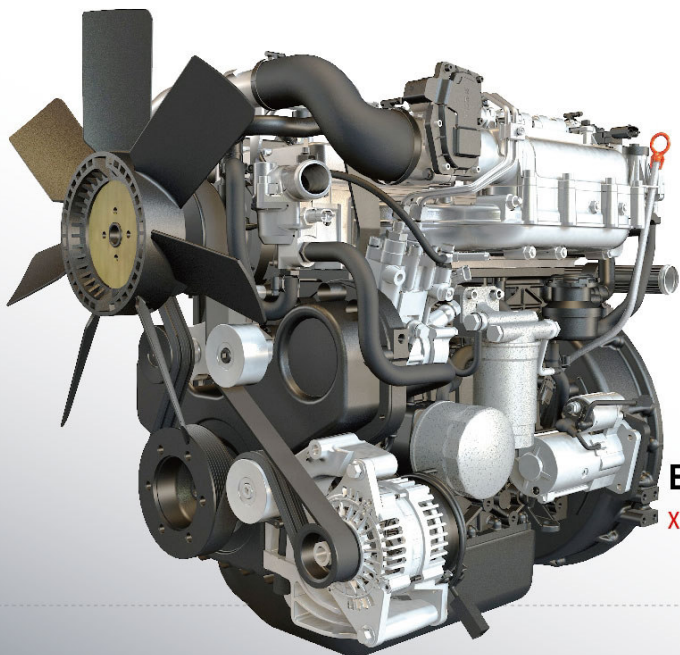
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HIGH QUALITY PRODUCT

H3 series is proudly launched adhering to the principle of repaying the society with high quality product and vision of being century-old enterprise. To HELI, the H3 series is the culmination and milestone in pursuit of mastery in the development and manufacture of forklift over the years.

Elaborately built H3 series will provide you high level driving experience with environment friendliness, outstanding comfort, safety and reliability, easy maintenance and excellent working efficiency.



Engine Model:

XINCHAI 4E30YG52



The whole machine adopts the engine conforming to the Euro stage V environmental protection standard;

- The engine adopt XINCHAI 4E30YG52 Euro 5 electronic high pressure common rail engine, using three catalytic tail gas treatment technology.

Note: DOC — Diesel Oxidation Catalyst. DPF — Diesel Particulate Filters

Safety and reliability

HELI keeps improving truck safety and reliability to ensure the safety of people, machine and goods.



Improved cooling performance

- The hot air reflow isolating device, aluminum plate-fin type radiator, 60mm backward muffler and optimized thermal dissipation duct improve cooling ability and ensure engine work reliability to meet the requirements of working under harsh and high temperature environment better.
- The hydraulic system adopts high efficiency and low loss technology, comprehensively optimizes the hydraulic piping system and sealing form, and further reduces the pressure loss, hydraulic oil temperature and sealing reliability in the hydraulic system.

Driver restraint warning system

- The vehicle is equipped with driver's safety belt restraint warning system, which makes driving safer.

Key parts

- The optimal design of key parts like frame, mast and overhead guard improve the whole truck's safety and reliability.

Fully-closed panel-mounted cab

- Fully-closed panel-mounted cab with high strength ensures the safety of people and machine fully.

Casting axle

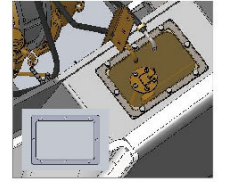
- The key rotation parts are protected from water and dust to extend their maintenance period. With the using of casting axle, the bearing load carrying ability is improved and the truck structure is simple and reliable. The service life is prolonged.



■ ratchet parking brake



■ automobile type oil adding cap structure



■ double-lip elastic sealing gasket

Enhanced Operator Presence System with comprehensive security upgrade

■ Walking on site induction safety system

When the machine is running, the operator will suddenly leave the correct operating position without releasing the accelerator pedal, and the power will be cut off to protect the safety of running.

■ LHS (Load Handling System) on site induction safety system and reset control system

When the operator leaves or returns to the correct operating position without loosening the LHS control device, the operation brought by the LHS operation will be suspended and will not occur automatically, so as to protect the LHS operation safety.

■ LHS (Load Handling System) static control system

When the LHS control device is operated and the engine is started, the operation brought by LHS control will not happen automatically after the engine is started. Only when the LHS control device is reset and then operated can the operation continue.

■ Non-parking security alarm system

When the forklift is not powered off and the driver is not using the parking brake, an audible warning is used to alert the driver.



Easy maintenance

Easy maintenance which is good for maintaining the optimal condition of key parts and completed truck and ensures safety and work efficiency is the necessary character of a good product.

Large engine hood opening angle

- Engine hood lock integrated on the hood is convenient for opening and close during maintenance.
- The gas spring has optimized arrangement, improved load carrying ability, opening angle, prolonged gas spring service life and improved opening comfort. 80° engine hood opening angle offers wide operation space for check and maintenance.



■ compositional radiator heat flow baffle



■ parking brake

DPF (Diesel Particulate Filters) automatic regeneration

- Euro 5 diesel-powered model is equipped with DPF automatic regeneration function, and the instrument is equipped with DPF blocking quantity display function (equipped with diesel vehicle), which is convenient for maintenance; When running the automatic regeneration program, the engine provides 100% power output. The DPF regeneration program can be interrupted at any time. DPF cleaning interval increased from 3000 hours to 6000 hours.

Low after-sales maintenance cost

- Equipped with Euro V diesel, liquefied gas, dual fuel power configuration to meet the needs of different users.
- Based on the same platform of a variety of fuel (diesel / liquefied gas) configuration scheme, the main parts of the general, low after-sales maintenance cost is low.



■ mast pipeline

Excellent working efficiency

With high efficiency, the truck perfectly guarantees the material handling work at port, dock, and railway station. It can meet the requirements for various kinds of complicated work conditions.

Quick responding steering wheel

- With 100% pivot steering and returning, the truck has good maneuverability in narrow space.
- The truck has small turning radius, easy steering, good gradeability and flexible maneuverability.



Needs of low-temperature areas

- The prototype was tested at -25°C in the cold storage laboratory to meet the demand for use at this temperature.

Diesel products with large capacity batteries

- Euro V diesel-powered models use large capacity batteries, vehicle start, electricity is more secure.

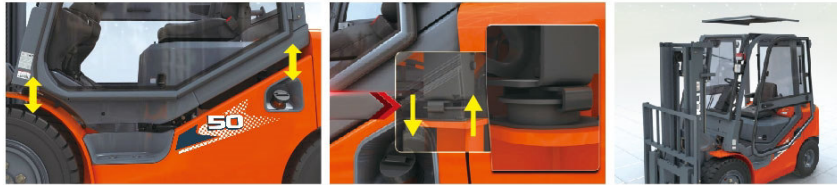


Environment-friendliness

Clean and environment-friendly power meeting international emission standard is assembled on the H3 series to reduce harmful emissions and be environment-friendly. Meanwhile, H3 series effectively reduce truck vibration and noise.

Suspension cab

- Cushion connection between the frame and cab and wholly suspension cab absorb whole truck's vibration effectively. Fully-closed panel-mounted cab isolates the noise.



- suspension cab
- damping support of the suspension cab
- panel-mounted cab

Mast lowering buffering device

- It reduces shock and vibration to the mast and avoids crash noise caused by goods falling to the ground.



- lowering buffering device



Outstanding comfort

Ergonomic designs, optimized operating device structure and layout improve driving experience and ensure long hours of efficient operation.

Enlarged operating space

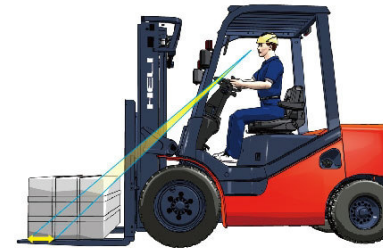
- Tilting cylinder located below the floor board, 30mm widened low anti-skidded step and 45% enlarged operation space at foot provide comfort entry, exit and operation.
- 80mm heightened overhead guard and large arc shape of the overhead guard's front leg enlarge operating space and reduce operating fatigue.



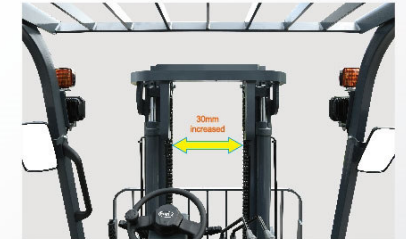
- hidden tilting cylinder
- comfortable space
- comfortable space

Outstanding visibility

- With three-stage free lift mast, front view width is increased by 30mm; with 15mm lowered instrument panel, the visibility of fork and goods is increased by 20mm. CAE optimized counter weight structure improve rear view.



- visibility at the fork tip and goods 20mm increased



- front view 30mm enlarged

LED combined instrument

- With the clear displaying and right installment of the instrument, the operator can know the truck information in time.

Rear assist handle (optional)

- The assist grip with a horn enhances comfort by offering easy horn operation while travelling in reverse.

Manufacturers Data and Design Characteristics

Character		HELI		
1.01	manufacturer			
1.02	model	CPCD40/CP(Q)YD40	CPCD45/CP(Q)YD4	CPCD50/CP(Q)YD50
1.03	rated capacity	4000	4500	5000
1.04	load center	mm	500	500
1.05	operation mode	type	Seat-type	
Size				
2.01	Max.lifting height	H	3000	
2.02	Mast overall height(fork to the ground and mast be vertical)	H1	mm	2275
2.03	Max.fork lifting height(with backrest)	H2	mm	4250
2.04	Free lift height	H3	mm	150
2.05	Overall height(overhead guard)	H4	mm	2350
2.06	Min.ground clearance(at the mast)	H5	mm	175
2.07	Distance from the surface of the seat to the overhead guard	H6	mm	1020
2.08	Traction pin height	H9	mm	380
2.09	Backrest height(calculated from the surface of the fork)	H13	mm	1250
2.10	Overall length(with fork/without fork)	(L/L')	mm	4310/3240
2.11	Wheel base	L1	mm	2100
2.12	Front overhang	L2	mm	560
2.13	Rear overhang	L3	mm	580
2.14	Overall width	W1	mm	1510
2.15	Tread (front/rear)	(W3/W2)	mm	1230/1190
2.16	Fork adjustable range(the external of the fork)(Max./Min.)	W5	mm	1330/300
2.17	Min.turning radius(exterior)	r	mm	2860
2.18	Min.turning radius(interior)	r'	mm	215
2.19	Min.right angle aisle width	Ra	mm	2820
2.20	Min.right angle stacking aisle width	Ast	mm	4760
2.21	Mast tilting angle (front/rear)	α/β	deg	6°/12°
2.22	Fork size	L4×W×T	mm	1070×150×50
Weight				
3.01	Total weight	kg	6320	6620
Wheel and tyre				
4.01	Wheel number x = drive wheel (front/rear)		2X/2	
4.02	tyre type(front/rear)		Pneumatic tyre	
4.03	Tyre size(front/rear)		8.25-15-14PR/7.00-12-12PR	300-15-18PR/7.00-12-12PR
4.04	Service brake		Hydraulic-Foot Pedal	
4.05	Parking brake		Mechanical-Hand Lever	

Performance		CPCD40-XC11H		
Model		CPCD40-XC11H	CPCD45-XC11H	CPCD50-XC11H
Max.drawbar pull (Loaded/Unloaded)	kN	34/24	34/24	34/24
Max.Gradeability (Loaded/Unloaded)	%	31/20	29/20	29/24
Max.traveling speed (Loaded/Unloaded)	Km/h	23/25		
Lifting Speed (Loaded/Unloaded)	mm/s	470/510		
Lowing Speed (Loaded/Unloaded)	mm/s	450/450		

Drive and transmission control device		XINCHAI 4E30YG52		
Engine mode		XINCHAI 4E30YG52		
Engine rated power	KW/rpm	55.8/2200		
Engine rated torque	Nm/rpm	320/1200-1600		
Engine cylinder number-bore x stroke		4-94×107		
piston displacement	L	2.97		
Engine type		diesel		
Engine Emissions		EUstage V		
Battery(Voltage/Capacity)	V/Ah	12/80		
Engine fuel tank capacity	L	90		
Transmission box shifting gears(front/rear type)	type	2-1Power Shift T/M		

WIDE VIEW MAST

Mast Model	Max lifting height (mm)	Load capacity (load center 500mm) Kg			Overall Height (fork to the ground) (mm)	Free lift height (With Backrest) (mm)	Mast Tilting angle (°)α/β	Service Weight(unload)Kg		
		CPCD40	CPCD45	CPCD50				CPCD40	CPCD45	CPCD50
M260	2600	4000	4500	5000	2075	150	6°/12°	6290	6590	6890
M270	2700	4000	4500	5000	2125	150	6°/12°	6300	6600	6900
M300	3000	4000	4500	5000	2275	150	6°/12°	6320	6620	6920
M330	3300	4000	4500	5000	2425	150	6°/12°	6340	6640	6940
M350	3500	4000	4500	5000	2525	150	6°/12°	6360	6660	6960
M370	3700	4000	4500	5000	2625	150	6°/12°	6370	6670	6970
M375	3750	4000	4500	5000	2650	150	6°/12°	6380	6680	6980
M400	4000	4000	4500	5000	2825	150	6°/6°	6390	6690	6990
M425	4250	3800 *4000	4300 *4500	4700 *5000	2950	150	6°/6°	6450	6750	7050
M450	4500	3700 *4000	4200 *4500	4500 *5000	3075	150	6°/6°	6460	6760	7060
M475	4750	3500 *3700	4000 *4200	4250 *4600	3200	150	6°/6°	6480	6780	7080
M500	5000	3200 *3400	3600 *4000	4000 *4200	3325	150	6°/6°	6500	6800	7100
M550	5500	2900 *3200	3200 *4000	3600 *3800	3575	150	3°/6°	6510	6810	7110
M600	6000	2600 *2900	3000 *3200	3300 *3600	3825	150	3°/6°	6530	6830	7130

Note: (1) *stands for the rated capacity when the front tire is double-tire;
(2) When the front tire of the 8000-10000lbs truck is double tire,the service weight of the truck is the weight in the table plus 300lbs.

WIDE VIEW FULL FREE 2-STAGE MAST

Mast Model	Max lifting height (mm)	Load capacity (load center 500mm) Kg			Overall Height (fork to the ground) (mm)	Free lift height (With Backrest) (mm)	Mast Tilting angle (°)α/β	Service Weight(unload)Kg		
		CPCD40	CPCD45	CPCD50				CPCD40	CPCD45	CPCD50
ZM261	2610	4000	4500	5000	2110	530	6°/12°	6615	6815	7075
ZM271	2710	4000	4500	5000	2160	580	6°/12°	6640	6840	7100
ZM300	3000	4000	4500	5000	2305	725	6°/12°	6690	6890	7150
ZM330	3300	4000	4500	5000	2455	875	6°/12°	6705	6905	7165
ZM350	3500	4000	4500	5000	2555	975	6°/12°	6715	6915	7175
ZM375	3750	4000	4500	5000	2680	1100	6°/12°	6730	6930	7190
ZM400	4000	4000	4500	5000	2805	1225	6°/6°	6745	6945	7205
ZM450	4500	3700 *4000	4200 *4500	4500 *5000	3055	1475	6°/6°	6770	6970	7230
ZM500	5000	3200 *3400	3600 *4000	4000 *4200	3305	1725	6°/6°	6805	7005	7265
ZM550	5500	2900 *3200	3200 *4000	3600 *3800	3555	1975	3°/6°	6830	7030	7290
ZM600	6000	2600 *2900	3000 *3200	3300 *3600	3805	2225	3°/6°	6855	7055	7315

Note: (1) *stands for the rated capacity when the front tire is double-tire;
(2) When the front tire of the 8000-10000lbs truck is double tire,the service weight of the truck is the weight in the table plus 300lbs;
(3) The free lifting height (without backrest) of the 8000-10000lbs truck is the height (without backrest) in the table plus 325mm.

WIDE VIEW FULL FREE 3-STAGE MAST

Mast Model	Max lifting height (mm)	Load capacity (load center 500mm) Kg			Overall Height (fork to the ground) (mm)	Free lift height (With Backrest) (mm)	Mast Tilting angle (°)α/β	Service Weight(unload)Kg		
		CPCD40	CPCD45	CPCD50				CPCD40	CPCD45	CPCD50
ZSM392	3920	3840 *4000	4350 *4500	4800 *5000	2250	650	6°/6°	6880	7080	7340
ZSM435	4350	3500 *3800	4100 *4300	4400 *4800	2395	795	6°/6°	6900	7100	7360
ZSM450	4500	3350 *3500	4000 *4200	4300 *4600	2445	845	6°/6°	6920	7120	7380
ZSM470	4700	3250 *3400	3800 *4000	4050 *4200	2515	955	6°/6°	6940	7140	7400
ZSM480	4800	3150 *3300	3700 *3900	3950 *4100	2545	990	6°/6°	6950	7150	7410
ZSM500	5000	3050 *3200	3400 *3700	3800 *4000	2645	1040	6°/6°	6970	7170	7430
ZSM540	5400	2800 *3000	3100 *3400	3500 *3600	2760	1165	6°/6°	7010	7210	7470
ZSM600	6000	2400 *2500	2800 *3000	3150 *3400	3010	1405	3°/6°	7090	7290	7550

Note: (1) *stands for the rated capacity when the front tire is double-tire;
(2) When the front tire of the 8000-10000lbs truck is double tire,the service weight of the truck is the weight in the table plus 300lbs;
(3) The free lifting height (without backrest) of the 8000-10000lbs truck is the height (without backrest) in the table plus 325mm.

