



# X Series Diesel Counterbalanced Forklift Trucks

with capacities of 12,000kg



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ISO45001  
ISO45001:2018



ISO14001  
ISO14001:2015



ISO9001  
ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

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*The World of Hangcha*



# X Series

## DIESEL COUNTERBALANCED FORKLIFT TRUCKS

The X series is the new series of internal combustion counterbalance forklift truck developed by Hangcha independently, adopting the advanced technologies based on the original products. Through the comprehensive upgrading of appearance molding, energy conservation, environmental protection, comfort, security and reliability, it will become the forklift truck which can meet your overall demands.

### Strong appearance and visual impact

The appearance of full vehicle is developed under the cooperation with professional industrial design company by adopting the appearance design methods of brand-new concept. The streamlined surface modeling design brings smooth lines, elegant appearance, vigorous and steady surface as well as the outstanding inherence, possessing the powerful visual impact.

The appearance of full vehicle is exquisite and concise, which adopting the newly designed parts with opening mould at large area, the appearance of full vehicle will be more humanized.

### Innovation design



The new designed mast increase forward visibility 15%



Fuel consumption ↓ 10% (Common rail engine)



Grade-speed ability ↑ 15%



Legroom ↑ 15%



Exhaust emission ↓ 35% (Common rail engine)



Better cold starting performance (Common rail engine)



High pressure common rail electronic-controlled engine provide lower failure rate (Common rail engine)



Aluminous plate-fin radiator provides stronger structure



Water temp ↓ 10 C, oil temp ↓ 10%





# Energy conservation and environmental protection

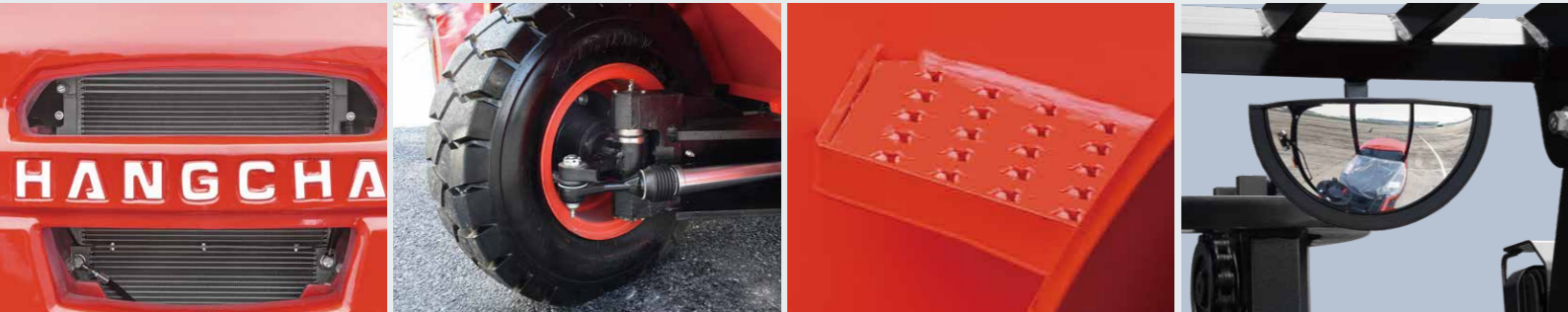


The whole truck adopts LED lights as shiner and new-type panoramic retroreflector to ensure energy conservation and power saving as well as greatly improve the performance and service life of luminaires at the same time.

The full vehicles all adopt the environmental protection material to reduce environmental hazards.



# Fully improved reliability and security



The radiator adopts aluminous plate-fin radiator with better performance and higher structural strength. Impendent oil radiator, optimized oil and water heat dissipation channel and double ventilation holes on counterweight can greatly improve cooling efficiency and reliability of overloaded operation and ensure reliable operation of the engine.

Overhead guard adopts special-shaped steel tube, which can reinforce the strength and improve sealing of the cab.

Roller bearing on the steering axle king pin adopts large size tapered roller bearing (TRB), larger steering cylinder and bumper block assemblies on the top, which can prolong the service life of bearing and highly improve the reliability of steering axle.

Along with adopting a low height for the step, it has also been made wider, facilitating frequency entry and exit.

# Easy maintenance



Newly-developed LCD instrument has more comprehensive functions and more stable performance and entirely displays the full vehicle running state, trouble diagnosis and other important information, which can make the operator more intuitively and conveniently have a better knowledge of vehicle state and make the maintenance conveniently.

The enlarged opening angle of hood and increase of left and right hood side plates can provide you with convenient and rapid maintenance mode.

Adoption of new generation integrated electric box makes maintenance and repair convenient, layout becomes more reasonable and with better water-proof performance.

Integral locking pin structure on the baseboard can be opened without tool, which is convenient for daily repair and maintenance.

# Comfort

Reduce the caster angle of instrument stand and adopt the integral hood to greatly increase the space underfoot;

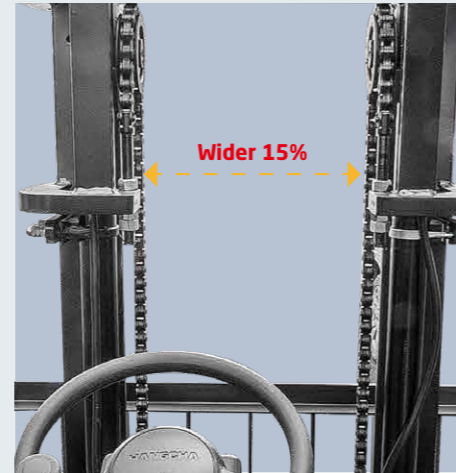
The orthodrome of overhead guard fore leg will expand the driving space;



Optimized air intake and exhaust system of full vehicle, high-capacity exhaust silencer will reduce the noise of full vehicle and reduce the vibration.



The design of steering wheel of small diameter and electro-hydraulic reversing as well as the car-type double-handle combination switch will greatly improve the driving comfort.



Adopt the new-type of box iron. Increase the inside width of inner mast and the spacing between lifting cylinders. The lowering of instruments in the driving cab will greatly increase the forward visibility; The rear visibility will also be greatly improved through the optimization design of counterweight.



# Bosch High Pressure Common Rail Technology

Engine equipped with Bosch high pressure common rail electronic control, adopting high pressure multiple injection technology, strong power output, lower smoke emission, better cold start performance, and energy saving by 10%.

# Standard Specification

- / Caliper disc brake
- / Working light
- / Hydraulic oil filter
- / Electric Flameout
- / Seat with belt
- / Skidproof pedal
- / Air filter
- / Hydraulic oil dipstick
- / Traction device
- / Mast speed limiting valve
- / Full hydraulic power steering
- / Wide view duplex mast
- / Standard forks
- / Standard overhead guard
- / Rear combination LED light
- / panoramic rearview mirror
- / Adjustable steering column
- / Pre-heating indicator
- / Engine fuel pressure warning
- / Neutral switch
- / Engine hood spring
- / Dipstick
- / Cover of tilt cylinder
- / Horn
- / Fuel gauge
- / LCD display
- / High-positioned intake system
- / High-positioned exhaust system
- / Cable parking brake
- / Tilt cylinder self-locking valve
- / Timer
- / Port type gearbox
- / Charging indicator
- / Water temperature gauge
- / Air filter alarm lamp
- / Reversing buzzer
- / Hand grip
- / Integrated controller
- / Oil-water separator
- / Multiplex hydraulic valve
- / Wider fork carriage
- / Emergency switch
- / Fork positioner

# Optional Mast

- / Duplex wide view full free mast
- / Trilex wide view full free mast
- / Special duplex wide view mast
- / Special forks

# Options

- / Cabin
- / Intelligentized management system
- / Customer painting
- / Cabin heater
- / LED rear working light
- / Hood lock
- / Solid tyre
- / Middle-positioned exhaust system
- / Sparkle arrester
- / Suspension seat
- / Fuel tank lock
- / Extinguisher
- / Dual air filter
- / Toolbox
- / Warning light

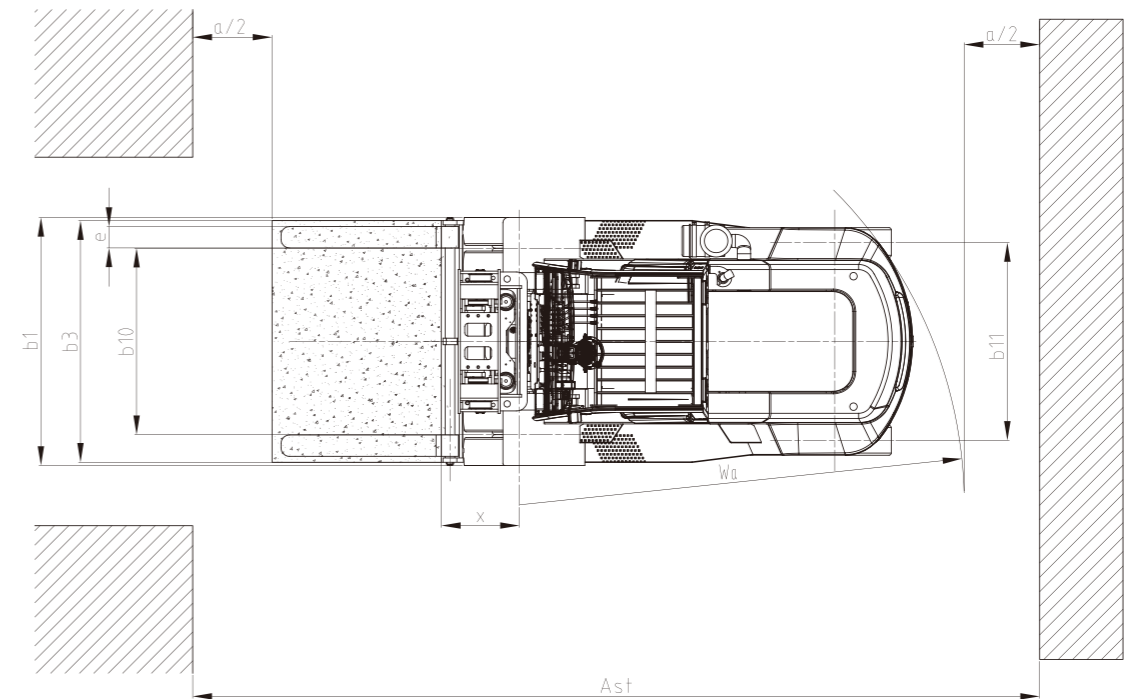
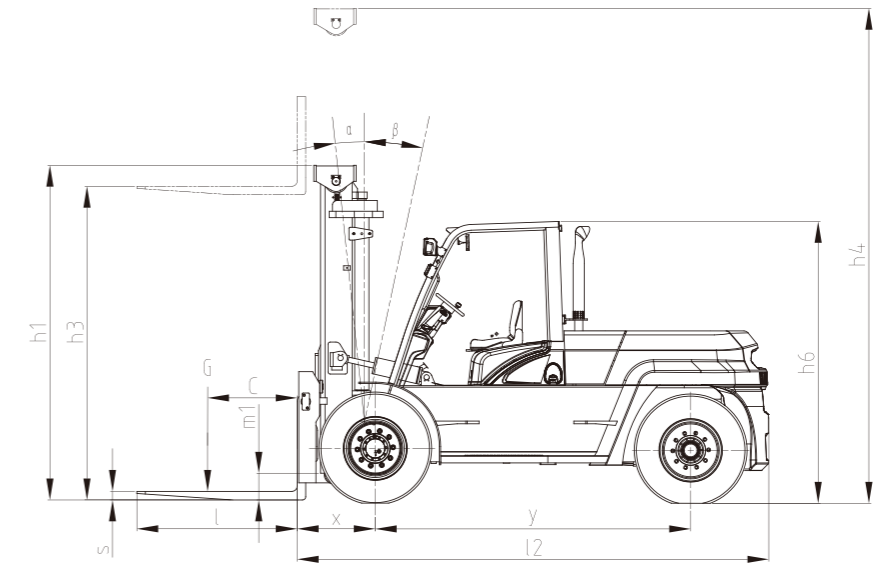
# Optional Attachments

- / Paper roll clamp
- / Load stabilizer
- / Side shifting fork positioner
- / Bale clamp
- / Steel pipes Hinge Fork
- / Dumping clamp
- / Crane arm
- / String pole
- / Sideshifter
- / Rotating forks
- / Fork extensioner
- / Tyre handler
- / Block clamp
- / Bucket



## X Series Diesel Counterbalanced Forklift Trucks

Distinguishing mark	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.		
	1.2	Manufacturer's type designation	CPCD120-XRG57		
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Diesel		
	1.4	Rated capacity/rated load	Q (kg)	12000	
	1.5	Load centre distance	c (mm)	600	
	1.6	Load distance, centre of drive axle to fork	x (mm)	736	
	1.8	Wheelbase	y (mm)	2950	
	Weight	2.1	Service Weight	kg	14950
2.2		Axle loading, laden front/rear	kg	24670/2280	
2.3		Axle loading, unladen front/rear	kg	7065/7885	
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	Pneumatic		
	3.2	Tyre size, front	10.00-20-18PR		
	3.3	Tyre size, rear	10.00-20-18PR		
	3.6	Tread, front	b10 (mm)	1744	
	3.7	Tread, rear	b11 (mm)	1850	
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	6/12	
	4.2	Height, mast lowered	h1 (mm)	3130	
	4.3	Free lift	h2 (mm)	/	
	4.4	Lift	h3 (mm)	3000	
	4.5	Height, mast extended	h4 (mm)	4645	
	4.7	Height of overhead guard (cabin)	h6 (mm)	2603	
	4.20	Length to face of forks	l2 (mm)	4400	
	4.21	Overall width	b1 (mm)	2356	
	4.22	Fork dimensions	s/e/l (mm)	80×200×1500	
	4.24	Fork-carriage width	b3 (mm)	520/2150	
	4.31	Ground clearance, laden, below mast	m1 (mm)	250	
	4.34	Aisle width	Ast (mm)	6620	
	4.35	Turning radius	Wa (mm)	4180	
	Performance data	5.1	Travel speed, laden/unladen	km/h	27/30
		5.2	Lift speed, laden/unladen	m/s	0.39/0.43
5.3		Lowering speed, laden/unladen	m/s	0.50/0.40	
5.5		Drawbar pull, laden/unladen	N	100000/60000	
5.7		Gradeability, laden/unladen	%	28/20	
Combustion-engine	7.1	Engine manufacturer/type	YC6J160-T300		
	7.2	Engine power according to DIN ISO 1585	kw/r/min	118/2200	
	7.4	Number of cylinders/displacement	(-)/(cm <sup>3</sup> )	6/6494	
		Rated torque	Nm/r/min	650/1400-1700	
		Transmissions Type	Powershift		
		Stage FWD/RVS	2/2		
Addition data	10.1	Operating pressure for attachments	Mpa	15	
	10.4	Fuel tank capacity	liter	200	



## 12t X series mast:(Pneumatic)

Type	Model	Max. fork height	Overall height		Tilt Range	Capacity	
			Lowered	Extended			
Duplex mast		mm	mm	mm	F/R	LC @600mm	
					( <sup>o</sup> )	12t	
						kg	
		XR120M250	2500	2880	4145	6/12	12000
		XR120M270	2700	2980	4345	6/12	12000
		XR120M300	3000	3130	4645	6/12	12000
		XR120M330	3300	3280	4945	6/12	12000
		XR120M360	3600	3430	5245	6/12	12000
		XR120M400	4000	3630	5645	6/12	12000
		XR120M430	4300	3830	5980	6/6	12000
		XR120M450	4500	3930	6180	6/6	12000
		XR120M480	4800	4080	6480	6/6	12000
		XR120M500	5000	4180	6680	6/6	12000
		XR120M550	5500	4480	7230	3/6	10000
		XR120M600	6000	4730	7730	3/6	9000
	XR120M650	6500	5030	8280	3/6	8000	

