



**ZHEJIANG HANGCHA IMP. & EXP. CO., LTD.**

**Factory site:** No. 88, Donghuan Rd., Lin'an Economic Development Zone, Zhejiang, China (311305)

Tel: +86-571-88926735 88926755  
Fax: +86-571-88132890 88926789

sales@hcforklift.com  
www.hcforklift.com



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ISO14001  
ISO14001:2004



ISO9001  
ISO9001:2008



HANGCHA trucks conform to the European Safety Requirements.

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## X Series Diesel / Gasoline / LPG Counterbalanced Forklift Trucks

with capacities of 1,500 to 3,800kg

*The World of Hangcha*



# X Series

Diesel / Gasoline / LPG  
Counterbalanced  
Forklift Trucks



## Innovation design

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

### Strong appearance and visual impact

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



The new designed mast increase forward visibility 15%



Noise ↓ 3dB



Legroom ↑ 30%



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



Floating structure decrease the vibration by 10%



Exhaust emission ↓ 35% (Common rail engine)



Grade-speed ability ↑ 10% (Common rail engine)



Aluminous plate-fin radiator provides stronger structure



Prolong the service life of steering axle 20%



Fuel consumption ↓ 10% (Common rail engine)



Better cold starting performance (Common rail engine)



Water temp ↓ 10 C, oil temp ↓ 10%

## Energy conservation and Environmental friendly



The high pressure common rail electronic-controlled engine which adopts high pressure multiple injections technology to ensure the strong power take-off, lower emission and better cold starting performance; saving the 10% of energy consumption.



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 truck all adopt the environmental friendly material to reduce environmental hazards.

## Maintenance

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



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

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



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

## Fully improved reliability And security



1. The radiator adopts aluminous plate-fin radiator with better performance and higher structural strength independent 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.

2. 2.0~3.8t 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.

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

4. Optimized hydraulic breather structure and integrated with return oil filter can prolong the service life of hydraulic pressure system.



# Comfort

Option of the most advanced full floating structure in the world can minimize the vibration of full truck and support more superior buffer, micro-motion and starting functions at the same time. With several imported engines, they can constitute more perfect engine-transmission system.

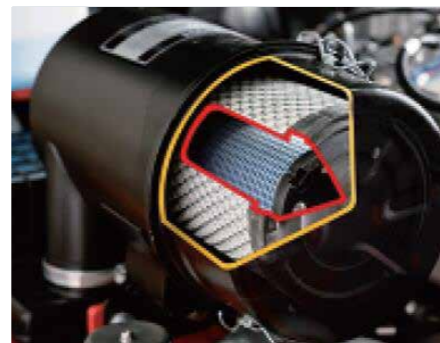
*Reduce the caster angle of instrument stand and adopt the integral hood to greatly increase the space underfoot; The orthodrome of overhead guard fore leg will expand the driving space;*



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 cabin will greatly increase the forward visibility; The rear visibility will also be greatly improved through the optimization design of counterweight.



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.



Optimized air intake and exhaust system, high-capacity exhaust silencer and high-effect intake muffler will reduce the noise of full truck by 3dB and reduce the vibration by 20%.



## Intelligentized management system (option)

*Reserved plug of extending function of Intelligent module is on the wire bundles that makes truck management more convenient and rapid.*

## Standard Specification

- / Cover of tilt cylinder
- / Traction device
- / LED working light
- / Hydraulic oil filter
- / Electric Flameout
- / Seat with belt
- / Skidproof pedal
- / Air filter
- / Hydraulic oil dipstick
- / Mast speed limiting valve
- / Full hydraulic power steering
- / Wide view duplex mast
- / Standard forks
- / Waterproof cover on the guard
- / Standard overhead guard
- / Rear combination LED light
- / Panoramic rearview mirror
- / Filf folder
- / Adjustable steering column
- / Pre-heating indicator
- / Engine fuel pressure warning
- / Neutral switch
- / Engine hood spring
- / Dipstick
- / Pneumatic tyres
- / Standard load backrest
- / Horn
- / Fuel gauge
- / LCD display
- / Cable parking brake
- / Tilt cylinder self-locking valve
- / Fork carriage mounting class II(III)
- / Timer
- / Load safety valve
- / Charging indicator
- / Water temperature gauge
- / Toolbox
- / Reversing buzzer
- / Return oil filter
- / Hand grip
- / Integrated controller
- / Oil-water separator
- / Engine fault warning
- / Rubber pedal
- / 2nd hydraulic function
- / Transmission oil temperature warning
- / Dynamic load sensing system (for desel engine)

## Optional Mast

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

## Options

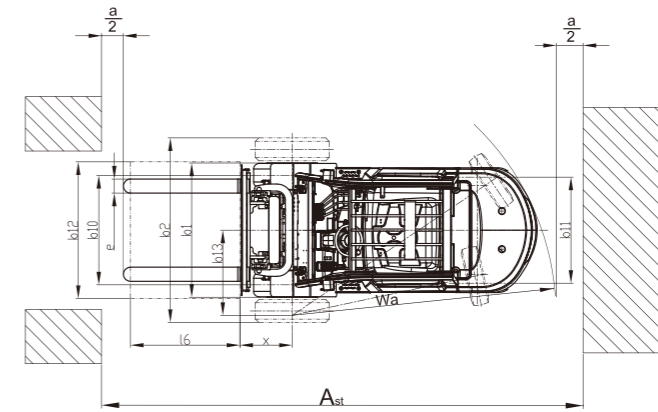
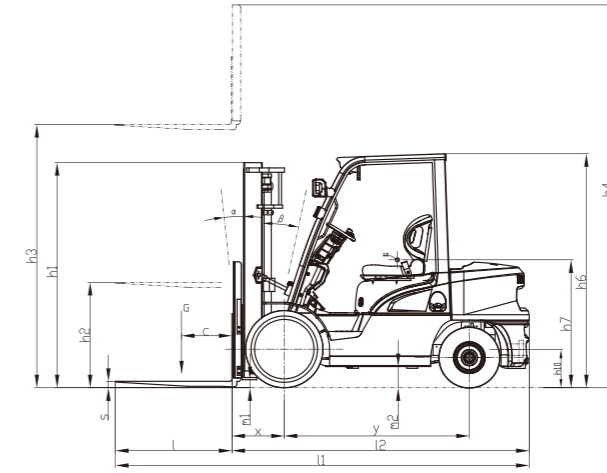
- / Dual driving wheel
- / Cabin
- / High-positioned exhaust system
- / Customer painting
- / Cabin heater
- / LED rear working light
- / Hood lock
- / Double heat insulating pad and leather cover
- / Net cover of radiator
- / Solid tyre
- / Non-mark tyre (white/green)
- / Middle-positioned exhaust system
- / Sparkle arrester
- / Suspension seat
- / Purified exhaust system
- / Fuel tank lock
- / Speed meter
- / Auxilliary hydraulic valve
- / Extinguisher
- / Reversing assist grip with horn button
- / Counter weight net
- / Height of overhead guard
- / Dual air filter
- / Milometer
- / Speed limiter (Electronic-Controlled engine)
- / Emergency switch
- / Fan protector
- / Over-speed alarm
- / Warning light
- / OPS system

## Optional Attachments

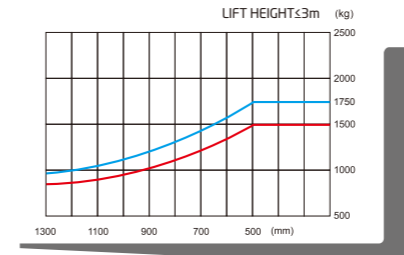
- / Paper roll clamp
- / Rotating bale clamp
- / Load stabilizer
- / Multi-drum clamp
- / Bale clamp
- / Drum clamp
- / Dumping clamp
- / Crane arm
- / String pole
- / Weigher system
- / Sideshifter
- / Rotating forks
- / Fork extensioner
- / Load release device
- / Carton clamp
- / Push-pull device
- / Bucket
- / Hook
- / Lengthened fork

# X Series Diesel / Gasoline / LPG Counterbalanced Forklift Trucks

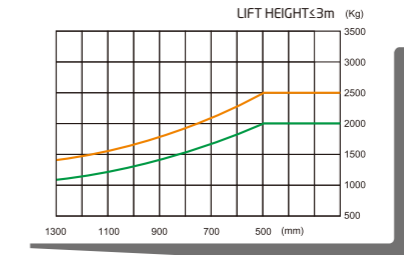
		HANGCHA GROUP CO.,LTD.								
Distinguishing mark	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.							
	1.2	Manufacturer's type designation	CPCD15-XRW32F	CPCD18-XRW32F	CPCD20-XRW56F	CPCD25-XRW56F	CPCD30-XRW56F	CPCD35-XRW56F	CPCD38-XRW56F	
Weight	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	Seated	Seated	Seated	Seated	
Tyres, chassis	1.5	Rated capacity/rated load	Q (kg)	1500	1750	2000	2500	3000	3500	3800
	1.6	Load centre distance	c (mm)	500	500	500	500	500	500	500
Dimensions	1.8	Load distance, centre of drive axle to fork	x (mm)	405	410	460	460	475	480	480
	1.9	Wheelbase	y (mm)	1475	1475	1650	1650	1700	1700	1700
Performance data	2.1	Service Weight	kg	2720	2880	3450	3850	4380	4750	4950
	2.2	Axle loading, laden front/rear	kg	3720/500	4110/520	4750/700	5540/810	6450/930	7200/1050	7650/1100
Combustion-engine	2.3	Axle loading, unladen front/rear	kg	1300/1420	1290/1590	1600/1850	1560/2290	1700/2680	1700/3050	1650/3300
	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Addition data	3.2	Tyre size, front		6.5-10-10PR	6.5-10-10PR	7.00-12-12PR	7.00-12-12PR	28*9-15-14PR	28*9-15-14PR	28*9-15-14PR
	3.3	Tyre size, rear		5.00-8-10PR	5.00-8-10PR	6.00-9-10PR	6.00-9-10PR	6.50-10-10PR	6.50-10-10PR	6.50-10-10PR
Performance data	3.5	Wheels, number front / rear (x = driven wheels)		2*/2	2*/2	2*/2	2*/2	2*/2	2*/2	2*/2
	3.6	Tread, front	b10 (mm)	900	900	965	965	1005	1005	1005
Combustion-engine	3.7	Tread, rear	b11 (mm)	920	920	973	973	975	975	975
	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	6/12	6/12	6/12	6/12	6/12	6/12	6/12
Performance data	4.2	Height, mast lowered	h1 (mm)	1995	1995	1999	1999	2054	2169	2169
	4.3	Free lift	h2 (mm)	155	155	160	160	165	170	170
Performance data	4.4	Lift	h3 (mm)	3000	3000	3000	3000	3000	3000	3000
	4.5	Height, mast extended	h4 (mm)	3955	3955	4045	4045	4140	4140	4140
Performance data	4.7	Height of overhead guard (cabin)	h6 (mm)	2120(2200)	2120(2200)	2120(2200)	2120(2200)	2150(2230)	2150(2230)	2150(2230)
	4.8	Seat height relating to SIP	h7 (mm)	1145	1145	1145	1145	1175	1175	1175
Performance data	4.1.2	Coupling height	h10 (mm)	310	310	320	320	350	350	350
	4.1.9	Overall length	l1 (mm)	3205	3240	3615	3680	3770	3850	3880
Performance data	4.2.0	Length to face of forks	l2 (mm)	2285	2320	2545	2610	2700	2780	2810
	4.2.1	Overall width	b1/b2(mm)	1090/1485	1090/1485	1155/1595	1155/1595	1225/1725	1225/1725	1225/1725
Performance data	4.2.2	Fork dimensions	s/e/l (mm)	35*100*920	35*100*920	40*122*1070	40*122*1070	45*122*1070	50*122*1070	50*122*1070
	4.2.3	Fork carriage DIN 15 173 --- ISO 2328, class/type A,B		Class A	Class A	Class A	Class A	Class A	Class A	Class A
Performance data	4.2.4	Fork-carriage width	b3 (mm)	1000	1000	1038	1038	1100	1100	1100
	4.2.5	Distance between fork-arms	b5 (mm)	226-970	226-970	252-1020	252-1020	272-1082	272-1082	272-1082
Performance data	4.3.1	Ground clearance, laden, below mast	m1 (mm)	115	115	105	105	130	130	130
	4.3.2	Ground clearance, centre of wheelbase	m2 (mm)	145	145	150	150	170	170	170
Performance data	4.3.4.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3640	3670	3930	3990	4075	4120	4160
	4.3.4.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3840	3870	4130	4190	4275	4320	4360
Performance data	4.3.5	Turning radius	Wa (mm)	2035	2060	2270	2330	2400	2440	2480
	4.3.6	Minimum pivoting point distance	b13 (mm)	600	600	780	780	810	810	810
Performance data	5.1	Travel speed, laden/unladen	km/h	18/19	18/19	16.5/17.5	16.5/17.5	17.5/18.6	17.5/18.6	17.5/18.6
	5.2	Lift speed, laden/unladen	m/s	0.58/0.62	0.58/0.62	0.62/0.62	0.62/0.62	0.49/0.53	0.43/0.48	0.43/0.48
Performance data	5.3	Lowering speed, laden/unladen	m/s	0.45/0.50	0.45/0.50	0.45/0.50	0.45/0.50	0.45/0.50	0.35/0.40	0.35/0.40
	5.5	Drawbar pull, laden/unladen	N	14600/10500	14600/10500	19800/12500	19800/12500	20800/14500	20800/14500	20800/14000
Performance data	5.7	Gradeability, laden/unladen	%	20/20	20/20	20/20	20/20	18/20	15/20	15/20
	5.1.0	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Performance data		Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
	7.1	Engine manufacturer/type		YANMAR/4TNE92	YANMAR/4TNE92	YANMAR/4TNV94L-BXPHZ	YANMAR/4TNV94L-BXPHZ	YANMAR/4TNV94L-BXPHZ	YANMAR/4TNV94L-BXPHZ	YANMAR/4TNV94L-BXPHZ
Performance data	7.2	Engine power	kw	31.2	31.2	34.6	34.6	34.6	34.6	34.6
	7.3	Rated speed	r/min	2450	2450	2400	2400	2400	2400	2400
Performance data	7.4	Number of cylinders/displacement	(-) / (cm <sup>3</sup> )	4/2659	4/2659	4/3054	4/3054	4/3054	4/3054	4/3054
	7.9	Vehicle electrical system voltage	V	12	12	12	12	12	12	12
Performance data	7.1.0	Battery voltage/nominal capacity	V/Ah	12/90	12/90	12/90	12/90	12/90	12/90	12/90
		Rated torque	N·m/r/min	136/1600	136/1600	191.5-208.5/1500	191.5-208.5/1500	191.5-208.5/1500	191.5-208.5/1500	191.5-208.5/1500
Performance data		Transmissions Manufacturer		F (CHINA)	F (CHINA)	F (CHINA)	F (CHINA)	F (CHINA)	F (CHINA)	
		Transmissions Type		Powershift	Powershift	Powershift	Powershift	Powershift	Powershift	
Performance data		Stage FWD/RVS		1/1	1/1	1/1	1/1	1/1	1/1	
	10.1	Operating pressure for attachments	bar	145	145	175	175	175	175	175
Performance data	10.2	Oil volume for attachments	l/min	40	40	60	60	60	60	60
	10.3	Hydraulic Tank - capacity (drain & refill)	liter	50	50	65	65	65	65	65
Performance data	10.4	Fuel tank capacity	liter	50	50	65	65	65	65	65
	10.7	Sound pressure level at the driver's seat	dB (A)	85	85	85	85	85	85	85



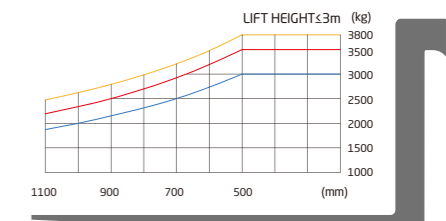
$$A_{st} = L_6 + X + W_a + a \quad a = 200\text{mm}$$



1.5/1.8t



2.0/2.5t



3.0~3.8t

## Optional Engine / Transmission

Engine	Engine manufacturer/type		YANMAR/4TNE92	XINCHAI/4D27XG30	ISUZU/C240NKFC	YANMAR/4TNV94L-BXPHZ	XINCHAI/4D32XG30	XINCHAI/C490BPG	CUMMINS/QSF2.8t3NA49	YANMAR/4TNE98	mitsubishi/S4S-DPEU2	ISUZU/GK-4JG2NKFC-01	GCT/K21	GCT/K25
		Manufacturer's type designation		W32	G71	W10	W56	G72	G2	W43	W33	W55	W73	W21
Transmission	Drive		Diesel	Diesel		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Gasoline Gasoline/LPG	Gasoline Gasoline/LPG
	Emission STD		StageIIIA	/	StageIIIA	StageIIIA	/	/	StageIIIA	StageIIIA	StageIIIA	StageIIIA	StageIIIA	
Rated capacity/rated load	Engine power		kw/r/min	31.2/2450	35/2500	35.4/2400	45/2500	45/2650	36/2500	42.1/2300	35.3/2250	35.0/2450	31.2/2250	37.4/2300
	Rated torque		N·m/r/min	136/1600	140/1500-1800	139.9/1800	191.5-208.5/1500	200/1500-1800	160/1800-2000	186/1500	188.3/1700	177/1700	170/1700	143.7/1600
Transmission	Number of cylinders/displacement		ml	4/2659	4/2670	4/2369	4/3054	4/2670	4/2800	4/3319	4/3331	4/3059	4/2064	4/2488
	Powershift	CHINA		X	✓	✓	X	✓	✓	X	X	✓	✓	✓
F(CHINA)		F	✓	✓	✓	✓	✓	X	✓	✓	✓	X	✓	
	OKAMURA(JAPAN)	B	✓	X	✓	✓	X	X	✓	✓	✓	X	✓	
Rated capacity/rated load		Q (kg)	1500-1750	1500-1750	1500-3000	2000-3800	2000-3800	2000-3800	2000-3800	2000-3800	2000-3800	2000-3800	1500-1750	2000-3800

