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ISO14001  
ISO14001:2015



ISO9001  
ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.



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# XF2 Series IC Counterbalanced Trucks

with capacity of 1,500 to 3,500kg

**STAGE V**  
CERTIFIED



*The World of Hangcha*  
SINCE 1956



# FOR HIGH PERFORMANCE DURING WORKING



## Appearance

A vivid and sturdy exterior inheriting the classic design, embodying innovative ideas, and bringing a strong high-tech impact.



## Safe

/ The vehicle has a low center of gravity design and optimized operating vision. (small counterweight design, backward tilting counterweight design, optimized triplex mast design).

/ DPS system is provided for the standard configuration and optionally an adjustable speed limit range of several segments is provided.



## Mast

Can be easily installed with J-hooks through a simple process.





***MORE VISION  
MORE CONTROL  
MORE GUARANTEE***

**All-round visibility**

Optimized design provides outstanding visibility in all directions.

# COMFORTABLE

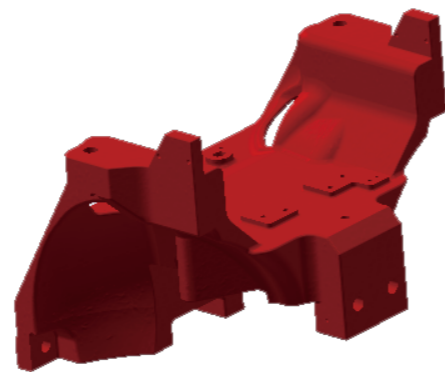
- / The fully-suspended gearbox, fully-suspended overhead guard, and fully-suspended seat realize three-stage vibration reduction to reduce vibration of the vehicle.
- / Noise control: Special sound-absorbing cotton is attached to certain parts and so on to decrease the vehicle's noise.
- / Optimized ergonomic design, enlarged cab space, an optional new-generation fingertip operating system.



The fully-suspended gearbox



Fully-suspended overhead guard



Cast steering axle mounts

## Truck Construction

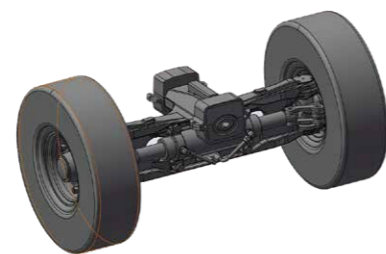
With the novel designed cast steering axle mounts, the center of gravity is lowered, and the vehicle's noise radiation is reduced. An integrated fully-suspended overhead guard is provided for the standard configuration, and customers can choose cab. Large plate stamping and molding processes and automatic welding technology are used to enable a stylish exterior.

## Control system

- / Breaking through the limitation of the traditional steering axle structure, the newly developed cast open steering axle has the maximum internal turning angle increased from 77° to 82°, it can help customers work in narrow space.
- / With the cast open steering axle, the oil cylinder can be replaced easily, and the vehicle has a low center of gravity and good stability.
- / The steering axle is installed with pads, which effectively improve the operation comfort and reliability.
- / Parking brake: A central brake requiring less operating force.



An optional pedal parking brake

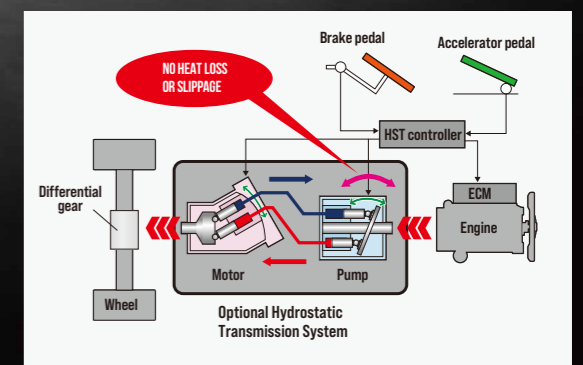


Cast steering axle



## Optional hydrostatic transmission system

- / In this system, the engine drives a hydraulic pump and the pressure is transferred to a hydraulic motor mounted on the drive axle, then the motor outputs traction to the drive wheels via a gear reducer and a differential.
- / As this system has no clutch to be used by the hydraulic transmission forklift truck, it does not cause heat loss and wear from inching operation, minimizing transmission losses and reducing fuel consumption.
- / The hydrostatic drive system will automatically brake when the accelerator is released, leading to less wear and tear on the brake and tyres, and longer service life.
- / Equipped with the adjustable speed setting and turning deceleration function, driving safety can be ensured from all aspects.
- / Three operating modes [E, N, S] are freely selectable, providing simple and precise control and allowing optimal working efficiency in a wide range of operating conditions.

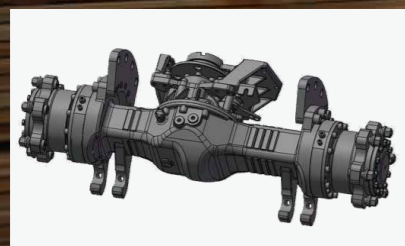


# THE POWER TO PERFORM

## Reliable

/ A wet axle is developed and used to significantly improve the reliability of the braking system and force transmission structural parts. (Wet brake, custom high-strength bolts, wheel side planetary reducer).

/ Wet brake drive axle + enhanced SHAOCHI/OKAMURA enhanced gearbox. Both the drive axle and the gearbox are expected to have a service life of far longer than 10 years, and the wet brake 10 years. Enhanced four-piece rims are used.



Wet brake drive axle

## Hydraulic

A high-pressure hydraulic system and load-sensing steering-priority-ensured multiway valves are used to improve system efficiency. A low-noise Shimadzu gear pump can improve reliability and reduce noise. All joints are 24° conic joints and each high-pressure pipe joint has a pressure measuring port, to enable better sealing and maintainability.



**E SERIES** engines and an enhanced gearbox are developed and used to significantly improve the reliability of the power train. (E series engines match the enhanced F gearbox and new Okamura gearbox).



High Power



Heat Dissipation

## Power

/ The highly cost-effective Xinchai 3E22 diesel engine meets EU V emission requirements.

/ The engine has been tested for 10000h in total for reliability validation in several rounds, the reliability has been fully verified. It is worth mentioning that the diesel engine has been tested in Jinan testing center and Bosch Wuxi test bench for 3000h. The diesel engine has excellent reliability, and is rated as Bosch off-road project 'BES' award.

/ A plate-fin heat dissipater with less air resistance is developed, which has a heat dissipation efficiency increased by 15%.



0.44%

Very low dilution ratio of engine oil, the oil dilution ratio after single regeneration is only 0.44%, much lower than the value of 20% specified in the national standard, the oil change interval of E series diesel engine up to 500h.



5,000h

DPF has a long maintenance interval. Based on excellent engine raw emission level and regeneration strategy, the ash cleaning interval up to 5000h.



DPF



E series engine

# FULLY AUTOMATED

## Electrical system

- / Streamer LED taillights are developed and used to make the vehicle more ethereal with a strong high-tech impact.
- / The new-generation high-efficiency energy-saving novel combination LED lighting system is energy-saving, while the performance and service life of the lights are significantly improved.
- / In order to improve the protection level, all key connectors and connectors are all waterproof.



Streamer LED taillights

## Intelligent

- / Interactive instruments are provided for the standard configuration, to display the operating status of the vehicle, and realize the information interaction of the vehicle.
- / An intelligent controller can realize the functions of OPS system, and flameout for idle speed time out, and can have other optional functions of speed control, speed limiting for faults, lifting at a high idle speed, automatic fork leveling, etc.



New interactive instruments





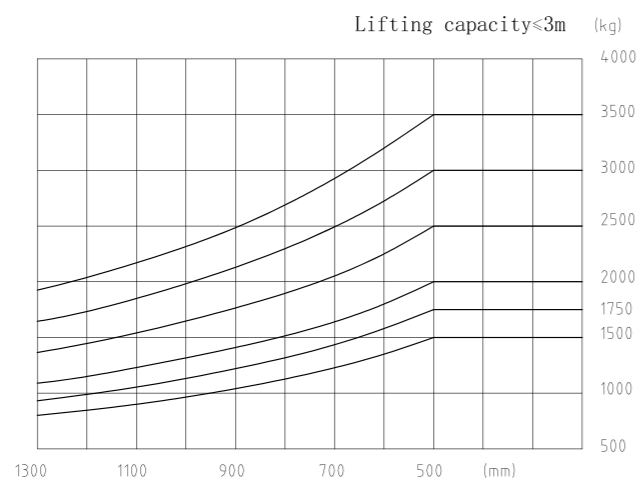
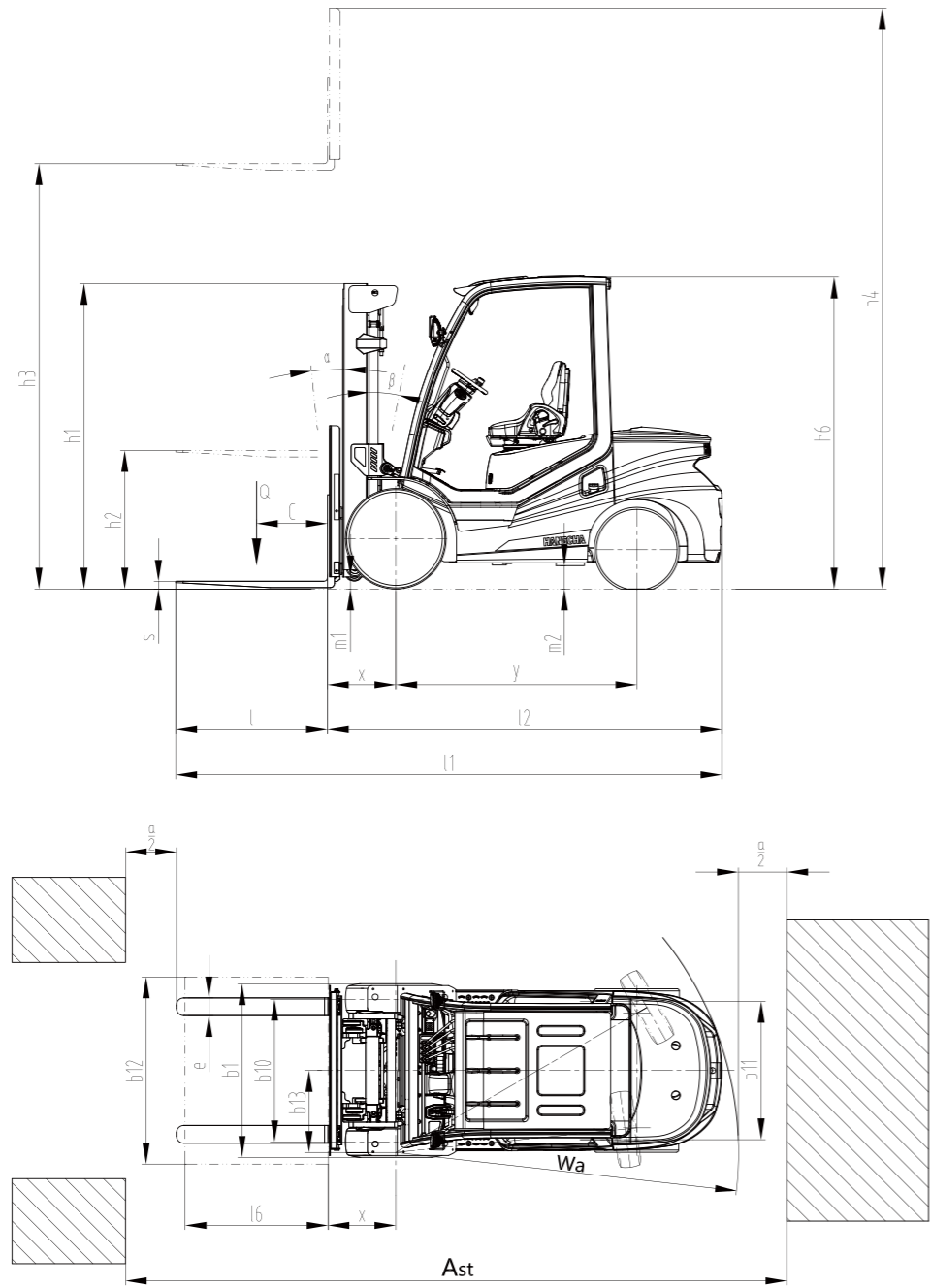




# XF2 series 1.5-3.5t forklift specification

		HANGCHA GROUP CO.,LTD.													
Distinguishing mark	1.1	Manufacturer													
	1.2	Manufacturer's type designation	CPYD15-X2H23F1/B1	CPYD18-X2H23F1/B1	CPYD20-X2H21F1/B1	CPYD25-X2H21F1/B1	CPYD30-X2H21F1/B1	CPYD35-X2H21F1/B1	CPYD15-X2H24F1/B1	CPYD18-X2H24F1/B1	CPYD20-X2H22F1/B1	CPYD25-X2H22F1/B1	CPYD30-X2H22F1/B1	CPYD35-X2H22F1/B1	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	fuel gas	fuel gas	fuel gas	fuel gas	fuel gas	fuel gas	fuel gas/petrol	fuel gas/petrol	fuel gas/petrol	fuel gas/petrol	fuel gas/petrol	fuel gas/petrol	
	1.5	Rated capacity/rated load	Q (kg)	1500	1750	2000	2500	3000	3500	1500	1750	2000	2500	3000	3500
	1.6	Load centre distance	c (mm)	500	500	500	500	500	500	500	500	500	500	500	500
	1.8	Load distance, centre of drive axle to fork	x (mm)	405	410	462.5	462.5	477.5	482.5	405	410	462.5	462.5	477.5	482.5
		Rear overhang	mm	405	430	405	480	535	600	405	430	405	480	535	600
	1.9	Wheelbase	y (mm)	1475	1475	1650	1650	1700	1700	1475	1475	1650	1650	1700	1700
Weight	2.1	Service Weight	kg	2750	2900	3455	3815	4400	4755	2750	2900	3455	3815	4400	4755
	2.2	Axle loading, laden front/rear	kg	3700/550	4110/540	4801/654	5543/772	6345/1055	7155/1100	3700/550	4110/540	4801/654	5543/772	6345/1055	7155/1100
	2.3	Axle loading, unladen front/rear	kg	1280/1470	1280/1620	1635/1820	1585/2230	1620/2780	1620/3135	1280/1470	1280/1620	1635/1820	1585/2230	1620/2780	1620/3135
Tyres, chassis	3.2	Tyre size, front		6.50-10-10 PR/2	6.50-10-10 PR/2	7.00-12-12PR/2	7.00-12-12PR/2	28×9-15-12PR/2	28×9-15-12PR/2	6.50-10-10 PR/2	6.50-10-10 PR/2	7.00-12-12PR/2	7.00-12-12PR/2	28×9-15-12PR/2	28×9-15-12PR/2
	3.3	Tyre size, rear		5.00-8-10PR/2	5.00-8-10PR/2	6.00-9-10PR/2	6.00-9-10PR/2	6.50-10-10PR/2	6.50-10-10PR/2	5.00-8-10PR/2	5.00-8-10PR/2	6.00-9-10PR/2	6.00-9-10PR/2	6.50-10-10PR/2	6.50-10-10PR/2
	3.6	Tread, front	b <sub>0</sub> (mm)	920	920	965	965	1005	1005	920	920	965	965	1005	1005
	3.7	Tread, rear	b <sub>1</sub> (mm)	940	940	973	973	975	975	940	940	973	973	975	975
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	6/11	6/11	6/11	6/11	6/11	6/11	6/11	6/11	6/11	6/11	6/11	6/11
	4.2	Height, mast lowered	h <sub>1</sub> (mm)	1995	1995	2015	2015	2040	2155	1995	1995	2015	2015	2040	2155
	4.3	Free lift	h <sub>2</sub> (mm)	155	155	140	140	145	150	155	155	140	140	145	150
	4.4	Lift	h <sub>3</sub> (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	4.5	Height, mast extended	h <sub>4</sub> (mm)	1995	1995	4046	4046	4145	4145	1995	1995	4046	4046	4145	4145
	4.7	Height of overhead guard (cabin)	h <sub>5</sub> (mm)	2155	2155	2165	2165	2180	2180	2155	2155	2165	2165	2180	2180
	4.20	Length to face of forks	l <sub>2</sub> (mm)	2285	2315	2517.5	2592.5	2712.5	2782.5	2285	2315	2517.5	2592.5	2712.5	2782.5
	4.21	Overall width	b <sub>1</sub> (mm)	1110	1110	1155	1155	1225	1225	1110	1110	1155	1155	1225	1225
	4.22	Fork dimensions	s/e/l (mm)	920×100×35	920×100×35	1070×122×40	1070×122×40	1070×122×45	1070×122×50	920×100×35	920×100×35	1070×122×40	1070×122×40	1070×122×45	1070×122×50
	4.31	Ground clearance, laden, below mast	m <sub>1</sub> (mm)	115	115	115	115	130	130	115	115	115	115	130	130
	4.32	Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	150	150	150	150	165	165	150	150	150	150	165	165
	4.33	Aisle width for pallets 1000 x 1200 crossways	A <sub>1</sub> (mm)	3595	3620	3822.5	3892.5	4027.5	4097.5	3595	3620	3822.5	3892.5	4027.5	4097.5
	4.34	Aisle width for pallets 800 x 1200 lengthways	A <sub>2</sub> (mm)	3795	3820	4022.5	4092.5	4227.5	4297.5	3795	3820	4022.5	4092.5	4227.5	4297.5
4.35	Turning radius	W <sub>2</sub> (mm)	1990	2010	2160	2230	2350	2415	1990	2010	2160	2230	2350	2415	
Performance data	5.1	Travel speed, laden/unladen	km/h	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20	20.5/20
	5.2	Lift speed, laden/unladen	m/s	0.65/0.68	0.65/0.68	0.62/0.66	0.62/0.66	0.58/0.62	0.46/0.5	0.65/0.68	0.65/0.68	0.62/0.66	0.62/0.66	0.58/0.62	0.46/0.5
	5.3	Lowering speed, laden/unladen	m/s	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45
	5.5	Drawbar pull, laden/unladen	N	15600/	15600/	18300/	18300/	19300/	19300/	15600/	15600/	18300/	18300/	19300/	19300/
	5.7	Gradeability, laden/unladen*	%	24	22	23	20	20	15	24	22	23	20	20	15
Combustion-engine	7.1	Engine manufacturer/type	GCT GK21 LPG	GCT GK21 LPG	GCT GK25 LPG	GCT GK25 LPG	GCT GK25 LPG	GCT GK25 LPG	GCT GK21 DUAL	GCT GK21 DUAL	GCT GK25 DUAL	GCT GK25 DUAL	GCT GK25 DUAL	GCT GK25 DUAL	
		Emission STD	CARB SIP LSI-1/ EPA Tier2/ EU StageV												
	7.2	Engine power according to DIN ISO 1585	kw	43	43	47	47	47	47	43/40	43/40	47/44.5	47/44.5	47/44.5	47/44.5
	7.3	Rated speed	min	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700
	7.4	Number of cylinders/displacement	(-)/(cm <sup>3</sup> )	4/2065	4/2065	4/2488	4/2488	4/2488	4/2488	4/2065	4/2065	4/2488	4/2488	4/2488	4/2488
	7.10	Battery voltage/nominal capacity	V/Ah	12/90	12/90	12/90	12/90	12/90	12/90	12/90	12/90	12/90	12/90	12/90	12/90
		Rated torque	N·m/r/min	161/1800	161/1800	190/1600	190/1600	190/1600	190/1600	(161/1800)/(153/1800)	(161/1800)/(153/1800)	(190/1600)/(175/1600)	(190/1600)/(175/1600)	(190/1600)/(175/1600)	(190/1600)/(175/1600)
		Bore × stroke	mm	89×83	89×83	89×100	89×100	89×100	89×100	89×83	89×83	89×100	89×100	89×100	89×100
		Transmissions Manufacturer		CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA	CHINA/OKAMURA
		Transmissions Type		Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift	Power shift
	Stage FWD/RVS		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
Addition data	10.1	Operating pressure for attachments	bar	160	160	160	160	160	160	160	160	160	160	160	
	10.4	Fuel tank capacity	liter	NA	NA	NA	NA	NA	NA	50	50	58	58	60	60

Note: \*With suspension seat or cabin  
\*As a calculated value



1.5-3.5t Load center distance

