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## X Series 3-Wheel Electric Forklift with Lithium-ion Technology

with capacities of 1,000 to 1,700lbs

**Making Material Handling Easier**  
SINCE 1956



# X Series 3-Wheel Electric Forklift with Lithium-ion Technology

Hangcha's X Series 3-Wheel Electric Forklifts with lithium-ion technology are a new series of highly efficient, light load capacity, electric counterbalanced forklifts. These were designed with a new structure that represents a breakthrough over the traditional design concept. With a new compact structure, small turning radius, and being a lightweight design, the X series forklift is perfect for use in narrow operation applications. These uses include handling material between floors, to and from elevators, and inside warehouses, supermarkets, or workshops.



## Appearance

/ The breakthrough design of the truck allows it to be small and flexible while still having the rugged durability that Hangcha forklifts are known for. The exterior of the forklift is powder coated in a durable green finish that designates the forklift is powered by our lithium-ion technology. The eye-catching smooth body lines meet narrow application design with the X Series 3-Wheel Electric Lithium-ion Forklift.

## Stability

- / The forklift was designed around our lithium-ion technology. This means that the lithium iron phosphate battery and counterweight were placed in specific locations in the chassis to ensure a low center of gravity and good stability.
- / The forklift has good turning stability thanks to using two rubber wheels to steer.
- / The front wheels are equipped with patterned rubber tires to improve stability and be less prone to slip in water, sand, slopes, and cold storage.

## Energy Saving and Highly Efficient

- / The dual front drive motors provide power, high driving speed, high gradability, and high operating efficiency.
- / The Electric Power Steering system only works when turning, so that energy consumption can be reduced significantly.
- / The built-in charger improves efficiency and provides convenience.
- / The truck is equipped with energy-saving and durable LED lights.

## Comfort

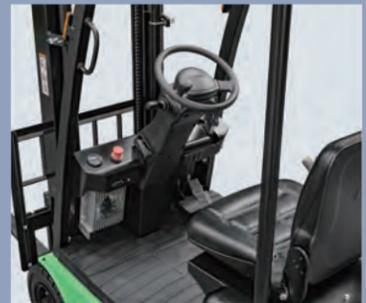
- / Excellent ergonomic design and large operation space provide the operator with more comfort and satisfy the operator's needs during long-term and high-intensity operations.
- / The Electric Power Steering system and steering force can be adjusted with software. This makes steering easier and reduces fatigue for the operator.
- / Both the steering wheel column and the seat are adjustable to help the operator find their most comfortable driving position.
- / The multi-way valve is positioned close to the operator to increase comfort and reduce fatigue when operating for long periods of time.

## Safety

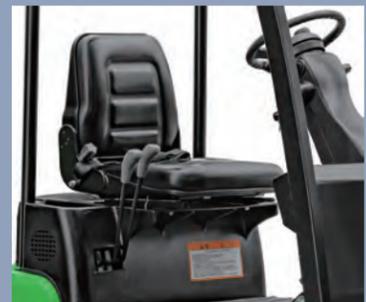
- / The optimized design of the wide view mast and low dashboard enables a wider field of vision. This minimizes blindspots to increase operational safety.
- / The emergency cut-off switch and the electronic and hydraulic overload protection systems comply with American safety regulations.
- / The optional OPS system greatly improves operational safety.



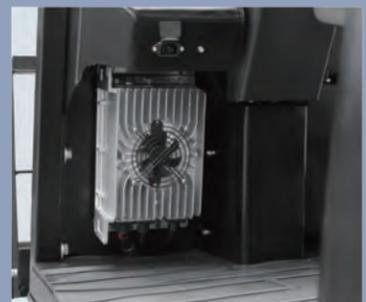
Wide View Mast



Large and Comfortable Operator Compartment



Easy to Operate Multi-Way Valve



Built-in Charger



Lithium Iron Phosphate Battery Pack

## Advancement

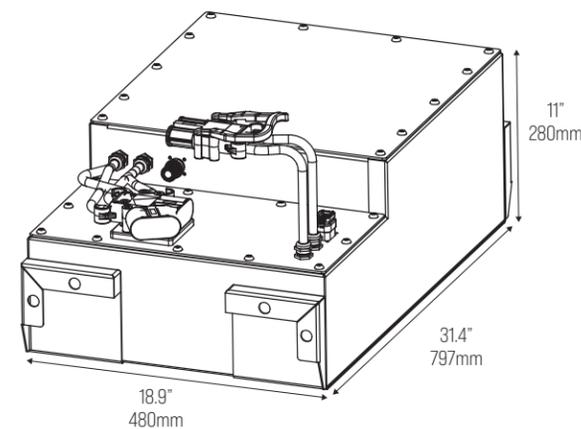
- / The maintenance-free AC motors feature precise speed control and temperature monitoring.
- / The highly efficient MOSFET integrated control system provides accurate control of traveling, fork movement, and adjustment of the AC motor's performance. The forklift also has regenerative braking, reverse braking, and will also not roll back on a ramp thanks to the controller. The controller provides a safer, more reliable, and efficient operational experience.
- / The LED instrument display accurately displays information in harsh environments.



## CATL Lithium Iron Phosphate Battery Packs

Integrated Battery Management System (BMS) continually monitors energy management and ensures reliable operation. HANGCHA provides these Lithium Iron Phosphate (LiFePO4) battery packs with a 5 year or 10,000 hour warranty. See warranty certificate for specific warranty information on the Lithium Iron Phosphate battery packs.

Battery Options			
Battery Capacity (V/Ah) (kW·h)	1,000lb Load Capacity	1,350lb Load Capacity	1,700lb Load Capacity
24V/125Ah 3.00kW·h	●	—	—
24V/240Ah 5.76kW·h	—	●	●
24V/300Ah 7.2kW·h	—	○	○
<b>Standard Battery= ●    Optional Battery= ○    N/A= —</b>			



## Standard Specification

- / Solid Pneumatic Tires
- / Anti-Slip Rubber Floor Mat
- / Dual Multi-Way Valve
- / Low Noise Gear Pump
- / 98.4" Limited Free Lift 2 Stage Mast
- / 30.3" Fork Length
- / Adjustable Steering Wheel Column
- / Rearview Mirror
- / Emergency Cut Off Switch
- / Color Instrument Display
- / Front LED Headlight
- / Rear Combination LED Light
- / Built-In Charger
- / Horn and Back Up Alarm
- / Strobe Light

## Options

- / Non-Marking Solid Tires
- / Triple Multi-Way valve
- / 78.7-177.2" Limited Free Lift 2 Stage Mast
- / 78.7-157.5" Full Free Lift 2 Stage Mast
- / 137.8-177.2" Full Free Lift 3 Stage Mast
- / Widened Fork Carriage and Load Backrest
- / Integral Sideshifter
- / Wide Range of Attachments
- / Various Dimensions of Forks
- / Various Dimensions of Foldable Forks
- / Cold Storage
- / Left and Right Mirrors
- / Rear LED Working Light
- / Blue Light
- / Battery Charger
- / Operator Presense System



# X Series 3-Wheel Electric Lithium-ion Forklift Specification

Distinguishing Marks	HANGCHA GROUP CO.,LTD.				
	1.1	Manufacturer (abbreviation)	FBT06Li	FBT08Li	FBT10Li
1.2	HCFA Model Designation	CPDS06-X-I	CPDS08-X-I	CPDS10-X-I	
1.3	Manufacturers Type Designation	Electric	Electric	Electric	
1.4	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric	Electric	Electric	
1.5	Operator Type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	
1.6	Load Capacity/rated load	1000(460)	1350(620)	1700(775)	
1.7	Load Centre Distance	24(600)	24(600)	24(600)	
1.8	Load Distance, centre of drive axle to fork	10.8(275)	11.4(290)	11.4(290)	
1.9	Wheelbase	35.2(895)	45.2(1150)	45.2(1150)	
2.1	Service Weight	3042(1380)	3417(1550)	3770(1710)	
2.2	Axle Loading, laden front/rear	/	/	/	
2.3	Axle Loading, unladen front/rear	<	/	/	
3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane	Solid Pneumatic	Solid Pneumatic	Solid Pneumatic	
3.2	Tire Size, front	4.00-8	4.00-8	4.00-8	
3.3	Tire Size, rear	3.50-5	3.50-5	3.50-5	
3.4	Wheels, number front rear (x = driven wheels)	2x/2	2x/2	2x/2	
3.5	Tread, front	28(713)	31(788)	31(788)	
3.6	Tread, rear	10.2(260)	13.7(350)	13.7(350)	
4.1	Tilt of Mast/fork carriage forward/backward	(°)	4/8	5/10	
4.2	Height, mast lowered	in (mm)	69(1755)	69(1755)	69(1755)
4.3	Free Lift	in (mm)	3.9(100)	3.9(100)	3.9(100)
4.4	Lift	in (mm)	98.4(2500)	98.4(2500)	98.4(2500)
4.5	Height, mast extended	in (mm)	129.9(3300)	129.9(3300)	129.9(3300)
4.6	Height of Higher Overhead Guard(cabin)	in (mm)	76(1930)	76(1930)	76(1930)
4.7	Seat Height Relating to SIP/stand height	in (mm)	38.5(980)	38.5(980)	38.5(980)
4.8	Coupling Height	in (mm)	/	/	/
4.9	Overall Length	in (mm)	84.5(2148)	95(2415)	95(2415)
4.10	Length to Face of Forks	in (mm)	54.2(1378)	64.7(1645)	64.7(1645)
4.11	Overall Width	in (mm)	33(840)	35.4(900)	35.4(900)
4.12	Fork Dimensions ISO 2331	in (mm)	11/31/30.3(30/80/770)	11/31/30.3(30/80/770)	11/31/30.3(30/80/770)
4.13	Fork Carriage ISO 2328, class/type A,B		ISO2328 1A	ISO2328 1A	ISO2328 1A
4.14	Fork Carriage Width	in (mm)	30.7(780)	33.8(860)	33.8(860)
4.15	Distance Between Fork Arms	in (mm)	6.3/30.7(160/780)	6.3/30.7(160/780)	6.3/30.7(160/780)
4.16	Ground Clearance, laden, below mast	in (mm)	2.9(75)	2.9(75)	2.9(75)
4.17	Ground Clearance, centre of wheelbase	in (mm)	2.9(75)	2.9(75)	2.9(75)
4.18	Aisle Width for Pallets 39" x 47" Crossways	in (mm)	106.1(2695)	116.3(2955)	116.3(2955)
4.19	Aisle Width for Pallets 31" x 47" Lengthways	in (mm)	114(2895)	124.2(3155)	124.2(3155)
4.20	Turning Radius	in (mm)	48(1220)	57.6(1465)	57.6(1465)
4.21	Internal Turning Radius	in (mm)	/	/	/
5.1	Travel Speed, laden/unladen	mph (km/h)	5.6/6.2(9/10)	6.2/7.4(10/12)	6.2/7.4(10/12)
5.2	Lift Speed, laden/unladen	fpm (mm/s)	41.3/63(210/320)	49.2/72.8(250/370)	47.2/72.8(240/370)
5.3	Lowering Speed, laden/unladen	fpm (mm/s)	80.7(410)	80.7(410)	80.7(410)
5.4	Drawbar Pull, laden/unladen	lbf (N)	/	/	/
5.5	Max. Drawbar Pull, laden/unladen	lbf (N)	765/810(3400/3600)	990/1035(4400/4600)	990/1035(4400/4600)
5.6	Gradeability, laden/unladen	%	/	/	/
5.7	Max. Gradeability, laden/unladen	%	12/13	12/13	12/13
5.8	Acceleration Time, laden/unladen (0-394")	s	/	/	/
5.9	Service Brake		Hydraulic	Hydraulic	Hydraulic
5.10	Parking Brake		Mechanical	Mechanical	Mechanical
6.1	Drive Motor Rating S2 60 min	HP (kW)	2(1.5)	4(3)	4(3)
6.2	Lift Motor Rating at S3 15%	HP (kW)	3.3(2.5)	5.3(4)	5.3(4)
6.3	Battery acc. to DIN 43 531/35/36 A,B,C, no		no	no	no
6.4	Battery Voltage, nominal capacity K5	V/Ah	24/125	24/240	24/240
6.5	Battery Weight	lb (kg)	99(45)	209(95)	209(95)
6.6	Battery Dimensions	in (mm)	/	/	/
6.7	Energy Consumption acc. to VDI cycle	kWh/h	/	/	/
8.1	Manufacturer of Controler		INMOTION	INMOTION	INMOTION
8.2	Operating Pressure for Attachments	psi (bar)	/	/	/
8.3	Oil Volume for Attachments	l/min	/	/	/
8.4	Sound Level at the Drivers Ear according to EN / DIN 12 053	(A)	67	67	67
8.5	Towing Coupling, type DIN 15170		/	/	/

# 1,000lb Mast Specification

Type	Model	Lift Height	Lowered Height	Extended Height		Free Lift Height		Front Overhang	Tilt Range		Capacity (Mast vertical to ground)	
				With Backrest	Without Backrest	With Backrest	Without Backrest		Forward	Backward	Load Capacity at 24 in (600mm)	
Limited Free Lift 2 Stage Mast	S05M200	78.7(2000)	59.3(1505)	110.2(2800)	97.4(2475)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M250	98.4(2500)	69.1(1755)	129.9(3300)	117.1(2975)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M270	106.3(2700)	73(1855)	137.8(3500)	125(3175)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M300	118.1(3000)	78.9(2005)	149.6(3800)	136.8(3475)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M330	129.9(3300)	84.8(2155)	161.4(4100)	148.6(3775)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M350	137.8(3500)	88.8(2255)	169.3(4300)	156.5(3975)	3.9(100)	3.9(100)	10.8(275)	4	8	1000(460)	
	S05M370	145.7(3700)	92.7(2355)	177.2(4500)	164.4(4175)	3.9(100)	3.9(100)	10.8(275)	4	4	925(425)	
	S05M400	157.5(4000)	102.6(2605)	189(4800)	179.9(4570)	3.9(100)	3.9(100)	10.8(275)	4	4	840(385)	
	S05M430	169.3(4300)	109.6(2785)	200.8(5100)	192.9(4900)	3.9(100)	3.9(100)	10.8(275)	4	4	755(345)	
	S05M450	177.2(4500)	114.4(2905)	208.7(5300)	201.6(5200)	3.9(100)	3.9(100)	10.8(275)	4	4	670(310)	
Full Free Lift 2 Stage Mast	S05U200	78.7(2000)	59.3(1505)	110.2(2800)	98.2(2495)	27.8(705)	39.8(1010)	10.8(275)	4	8	1000(460)	
	S05U250	98.4(2500)	69.1(1755)	129.9(3300)	117.9(2995)	37.6(955)	49.6(1260)	10.8(275)	4	8	1000(460)	
	S05U270	106.3(2700)	73(1855)	137.8(3500)	125.8(3195)	41.5(1055)	53.5(1360)	10.8(275)	4	8	1000(460)	
	S05U300	118.1(3000)	78.9(2005)	149.6(3800)	137.6(3495)	49.4(1255)	59.4(1510)	10.8(275)	4	8	1000(460)	
	S05U330	129.9(3300)	84.8(2155)	161.4(4100)	149.4(3795)	53.3(1355)	65.4(1660)	10.8(275)	4	8	1000(460)	
	S05U350	137.8(3500)	88.8(2255)	169.3(4300)	157.3(3995)	57.3(1455)	69.3(1760)	10.8(275)	4	8	840(385)	
	S05U370	145.7(3700)	92.7(2355)	177.2(4500)	165.2(4195)	61.2(1555)	73.2(1860)	10.8(275)	4	4	755(345)	
	S05U400	157.5(4000)	102.6(2605)	189(4800)	178.9(4545)	69.1(1755)	79.1(2010)	10.8(275)	4	4	590(270)	
	S05U430	169.3(4300)	109.6(2785)	200.8(5100)	192.9(4900)	73.0(1950)	85.0(2210)	10.8(275)	4	4	510(235)	
	S05U450	177.2(4500)	114.4(2905)	208.7(5300)	201.6(5200)	76.9(2095)	88.9(2465)	10.8(275)	4	4	425(195)	
Full Free Lift 3 Stage Mast	S05N200	78.7(2000)	59.3(1505)	110.2(2800)	97.4(2475)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N250	98.4(2500)	69.1(1755)	129.9(3300)	117.1(2975)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N270	106.3(2700)	73(1855)	137.8(3500)	125(3175)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N300	118.1(3000)	78.9(2005)	149.6(3800)	136.8(3475)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N330	129.9(3300)	84.8(2155)	161.4(4100)	148.6(3775)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N350	137.8(3500)	88.8(2255)	169.3(4300)	156.5(3975)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S05N370	145.7(3700)	92.7(2355)	177.2(4500)	164.4(4175)	3.9(100)	3.9(100)	11.4(290)	4	8	1270(580)	1520(700)
	S05N400	157.5(4000)	102.6(2605)	189(4800)	179.9(4570)	3.9(100)	3.9(100)	11.4(290)	4	8	1185(540)	1435(660)
	S05N430	169.3(4300)	109.6(2785)	200.8(5100)	192.9(4900)	3.9(100)	3.9(100)	11.4(290)	4	8	1100(500)	1350(620)
	S05N450	177.2(4500)	114.4(2905)	208.7(5300)	201.6(5200)	3.9(100)	3.9(100)	11.4(290)	4	8	1015(465)	1180(540)

# 1,350/1,700lb Mast Specification

Type	Model	Lift Height	Lowered Height	Extended Height		Free Lift Height		Front Overhang	Tilt Range		Capacity (Mast vertical to ground)	
				With Backrest	Without Backrest	With Backrest	Without Backrest		Forward	Backward	1,350lbs	1,700lbs
Limited Free Lift 2 Stage Mast	S09M200	78.7(2000)	59.3(1505)	110.2(2800)	97.4(2475)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M250	98.4(2500)	69.1(1755)	129.9(3300)	117.1(2975)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M270	106.3(2700)	73(1855)	137.8(3500)	125(3175)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M300	118.1(3000)	78.9(2005)	149.6(3800)	136.8(3475)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M330	129.9(3300)	84.8(2155)	161.4(4100)	148.6(3775)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M350	137.8(3500)	88.8(2255)	169.3(4300)	156.5(3975)	3.9(100)	3.9(100)	11.4(290)	5	10	1350(620)	1700(775)
	S09M370	145.7(3700)	92.7(2355)	177.2(4500)	164.4(4175)	3.9(100)	3.9(100)	11.4(290)	4	8	1270(580)	1520(700)
	S09M400	157.5(4000)	102.6(2605)	189(4800)	179.9(4570)	3.9(100)	3.9(100)	11.4(290)	4	8	1185(540)	1435(660)
	S09M430	169.3(4300)	109.6(2785)	200.8(5100)	192.9(4900)	3.9(100)	3.9(100)	11.4(290)	4	8	1100(500)	1350(620)
	S09M450	177.2(4500)	114.4(2905)	208.7(5300)	201.6(5200)	3.9(100)	3.9(100)	11.4(290)	4	8	1015(465)	1180(540)
Full Free Lift 2 Stage Mast	S09U200	78.7(2000)	59.3(1505)	110.2(2800)	98.2(2495)	27.8(705)	39.8(1010)	11.4(290)	5	10	1350(620)	1700(775)
	S09U250	98.4(2500)	69.1(1755)	129.9(3300)	117.9(2995)	37.6(955)	49.6(1260)	11.4(290)	5	10	1350(620)	1700(775)
	S09U270	106.3(2700)	73(1855)	137.8(3500)	125.8(3195)	41.5(1055)	53.5(1360)	11.4(290)	5	10	1350(620)	1700(775)
	S09U300	118.1(3000)	78.9(2005)	149.6(3800)	137.6(3495)	49.4(1255)	59.4(1510)	11.4(290)	5	10	1350(620)	1700(775)
	S09U330	129.9(3300)	84.8(2155)	161.4(4100)	149.4(3795)	53.3(1355)	65.4(1660)	11.4(290)	5	10	1350(620)	1700(775)
	S09U350	137.8(3500)	88.8(2255)	169.3(4300)	157.3(3995)	57.3(1455)	69.3(1760)	11.4(				