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ISO 14001  
ISO 14001:2015



ISO 9001  
ISO 9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

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# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

with capacity of 4,000 to 5,000kg



The World of Hangcha



# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

Independently developed by Hangcha on the basis of decades of deep understanding of electric forklifts and internal combustion forklifts, the dedicated XC series heavy-duty lithium battery forklifts are a new series of electric counterweight forklifts with a new energy vehicle voltage platform and a pioneered special structure that represents a breakthrough over the traditional design concept. Representing a redefinition of electric forklifts in terms of efficiency, power, reliability, etc., this series of electric forklift models will supersede the internal combustion forklifts.

THE *Plus*  
FOR YOUR  
BUSINESS

VOLTAGE

**309 V**

SPEED MODELS

**3**

100% CHARGE FOR

**1 Hour**

RUNTIME OF

**12 Hours**

WATER RESISTANCE

**IPX4**

PROTECTION RATE

**IP67**

## Exterior

/ With the inherited exterior design of the dedicated XC lithium battery forklift and a smooth and sturdy profile, the whole vehicle is impact, elegant, stylish, sturdy and powerful.

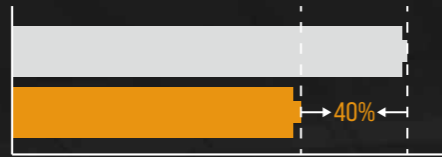


# FASTER & MORE EFFICIENCY.

Compared with low-voltage lithium battery forklifts, high-voltage lithium battery technology can save about 40% of the overall cost during the service cycle.

## 40%

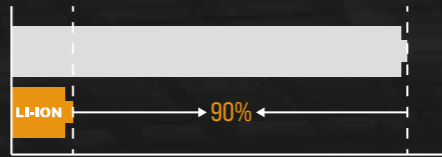
Low Voltage Lithium Battery Forklift  
Hangcha High Voltage Lithium Electric Forklift



Compared with fuel forklifts, high-voltage lithium battery technology can save about 90% of the overall cost during the service cycle.

## 90%

Fuel Forklift  
Lithium Electric Forklift



## 4000

CYCLES OF CHARGING



Under normal charging and discharging conditions, the lithium battery of Hangcha products has a capacity retention rate of more than 75% and a life span of up to 10 years after 4000 cycles of charging and discharging.

## POWER PERFORMANCE COMPARISON

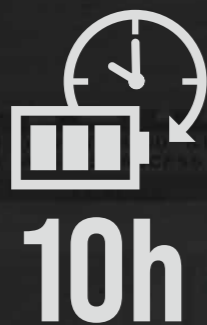
	High Voltage Lithium Electric Forklift	Fuel Forklift
Travel speed, laden/unladen	24/25km/h	20-23km/h
Lift speed, laden/unladen	480/560mm/s	380/410mm/s
Max. gradeability, S2=5min, laden/unladen	23/25%	15%-20%

Through disruptive battery and fast charging technology, the charging time is greatly shortened.

Get the battery fully charge:

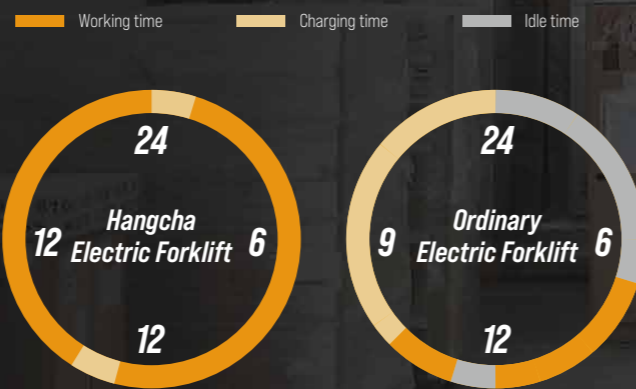


Hangcha High Voltage Electric Forklift



Electric Forklift

Fast charging makes it possible for the whole vehicle to work continuously, shortening the waiting time and greatly improving efficiency.



Charge for 1 hour, work for 6 hours

Slow charging, need spare battery, high cost, complicated management

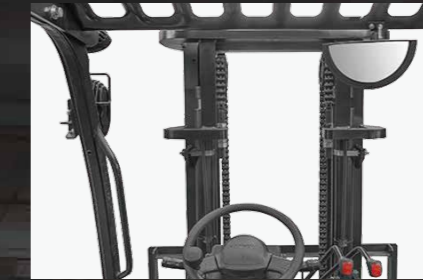
# EXCELLENT ERGONOMIC DESIGN

## Comfort

The enlarged brake pedal and appropriate regenerative braking function can effectively reduce the driver's fatigue.



The multifunctional color-screen instruments are designed to have graphical interfaces and display data clearly. Three speed gears are provided to adapt to different operating environments. The interfaces can be switched to be shown in Chinese and English to meet the needs of customers at home and abroad.



The wide-view mast with optimized design is unlikely to obstruct the operator's line of sight. The enlarged opening size of the fork carriage enables a wider view, a large operation space, and excellent ergonomic design.



# COMMITTED TO IMPROVING

## Advancement

- / Both the drive and operating systems are vehicle-grade permanent magnet synchronization systems, equipped with a high-speed ratio gearbox with a driving speed, upslope degree and acceleration performance rival that of internal combustion vehicles, and the environmental performance better than that of internal combustion vehicles.
- / The vehicle uses an overall controller, and the drive system and operating system are assembled with motors electronically controlled, to form a highly independent light, efficient, and intelligent drive system.
- / The vehicle's 309V high-voltage platform is equipped with a long-lasting large-capacity lithium battery, which is powerful, efficient and energy-saving, adopts a super-fast charging technology that enables a short charging time, and is compatible with the automobile charging pile to enable more convenient charging.
- / A water-cooling system with a good heat dissipation effect is used on a new energy forklift for the first time, so that the forklift can absolutely carry out long-time and high-intensity operations as internal combustion forklifts.



## Safety

- / The cover of the vehicle is designed to be sealed to the water resistance level of IPX4. All the motor, electronic controls and high-voltage components reach the dust and water resistance level of IP67, a high protection level adequate to withstand harsh operating environments and ensure safety and reliability.
- / The electrical system is equipped with high-voltage interlocks, and insulation detection, insulation monitoring and vehicle-grade safety means. The MSD maintenance switch enables one-click power-down and safer maintenance.
- / The standard configuration provides electronic control functions for buffering the fork's descending and ascending to better protect goods.
- / The optional descending lock function can disable the descending function when the driver leaves the seat and enable high safety.
- / The handbrake can be optionally equipped with an alarm buzzer to prompt the driver to pull up the handbrake before leaving the vehicle.

## Maintainability

- / Equipped with a lock, the hood designed to be back-flipped open to and facilitate charging, liquid replenishment and maintenance.
- / The water tank lid can be removed quickly and easily without a tool to enable a large operating area for cleaning and maintenance.



## Standard Specification

- / Multi-function color-screen combination instrument
- / Large integral rubber pedal pads
- / LED combination headlights, LED rear combination three-color taillights
- / Standard duplex mast, fork, fork carriage and load backrest
- / Stamped iron hood, stamped iron side plates
- / Stamped stainless steel boarding step
- / The gas spring of the hood with a touch-proof mechanism
- / Handbrake with a touch-proof mechanism
- / Integrated fuse box
- / Charging muzzle meeting national standards
- / Reverse buzzer
- / Lithium battery pack
- / Lithium battery pack with low temperature electric heating systems
- / Maintenance-free 12V lead-acid battery
- / Two-in-one permanent magnet AC traction motor controller
- / Two-in-one permanent magnet AC oil pump motor controller
- / Two-in-one DC-DC power supply
- / VCU controller
- / MSD maintenance switch
- / Emergency power off switch
- / Mileage display, operating time display
- / Load sensing steering system
- / Turning deceleration function
- / Fork descending buffering
- / SPE power selection
- / Electronic water pump
- / Electronic fan
- / Heat dissipater
- / Expansion tank
- / Double multi-way valve
- / Silent gear pump
- / Toolbox, folder
- / Traction pin
- / Hangcha cloud intelligent management system

## Optional battery list

Capacity(Ah)	4.0-5.0t 309V
173V	●
228V	○

Note: ● Standard battery capacity; ○ Optional battery capacity;

## Options

- / Solid tire
- / Left and right rear-view mirrors
- / Reversing video
- / Front/rear blue lights
- / Rear operation lights
- / Dedicated lithium battery charger (Titan or Schneider)
- / Cold storage vehicle
- / Reverse armrest (with a horn button)
- / OPS seat sensing function
- / Triple multi-way valve
- / Quadruple multi-way valve
- / Quintuple multi-way valve
- / Widened / heightened load backrest
- / Widened fork carriage
- / Forks of other lengths
- / Free duplex mast
- / Free triplex mast
- / Built-in side shifter
- / Accessories for other specifications
- / Grammer MSG531 suspended seat
- / Start with a PIN code or by swiping a card
- / Coloring solid environmentally friendly seamless tire
- / Integrated fingertip control system including ergonomic armrests





# XH Series 4.0-5.0t High-voltage Lithium Battery Forklift Specification

Distinguishing mark	HANGCHA GROUP CO.,LTD.						
	1.1	Manufacturer		CPD40-XHY2G	CPD45-XHY2G	CPD50-XHY2G	CPD50-XHY2G
1.2	Manufacturers type designation		CPD40-XHY2G	CPD45-XHY2G	CPD50-XHY2G	CPD50-XHY2G	CPD50-XHY2G
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric	Electric	Electric	Electric	Electric
1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated	Seated	Seated	Seated
1.5	Load capacity/rated load	Q (kg)	4000	4500	5000	5000	5000
1.6	Load centre distance	c (mm)	500	500	500	600	600
1.8	Load distance, centre of drive axle to fork	x (mm)	545	550	555	585	585
1.9	Wheelbase	y (mm)	2000	2000	2000	2000	2000
2.1	Service Weight	kg	6150	6350	6750	7100	7100
2.2	Axle loading, laden front/rear	kg	8995/1155	9645/1205	10390/1350	10710/1390	10710/1390
2.3	Axle loading, unladen front/rear	kg	2585/3565	2670/3680	2870/3880	3020/4080	3020/4080
3.1	Tyres: solid rubber, super elastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
3.2	Tyre size, front		8.25-15-14PR	300-15-18PR	300-15-18PR	300-15-18PR	300-15-18PR
3.3	Tyre size, rear		7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR	7.00-12-12PR
3.5	Wheels, number front rear (x = driven wheels)		2x/2	2x/2	2x/2	2x/2	2x/2
3.6	Tread, front	b10 (mm)	1160	1190	1190	1190	1190
3.7	Tread, rear	b11 (mm)	1130	1130	1130	1130	1130
4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	6/12	6/12	6/12	6/12	6/12
4.2	Height, mast lowered	h1 (mm)	2245	2245	2245	2495	2495
4.3	Free lift	h2 (mm)	160	160	160	160	160
4.4	Lift	h3 (mm)	3000	3000	3000	3000	3000
4.5	Height, mast extended	h4 (mm)	4170	4170	4170	4400	4400
4.7	Height of overhead guard STD.	h6 (mm)	2300	2300	2300	2300	2300
4.8	Seat height/stand height	h7 (mm)	1280	1280	1280	1280	1280
4.12	Coupling height	h10 (mm)	660	660	660	660	660
4.19	Overall length	l (mm)	4035	4040	4090	4255	4255
4.20	Length to face of forks	l2 (mm)	2965	2970	3020	3050	3050
4.21	Overall width	b1 (mm)	1420	1490	1490	1490	1490
4.22	Fork dimensions	s/e/l (mm)	50/150/1070	50/150/1070	55/150/1070	60/150/1220	60/150/1220
4.23	Fork carriage DIN 15 173 --- ISO 2328, class/type A,B		ISO2328 3A	ISO2328 3A	ISO2328 4A	ISO2328 4A	ISO2328 4A
4.24	Fork-carriage width	b3 (mm)	1250	1250	1250	1250	1250
4.25	Distance between fork-arms	b5 (mm)	310-1200	310-1200	310-1200	310-1200	310-1200
4.31	Ground clearance, laden, below mast	m1 (mm)	170	170	170	170	170
4.32	Ground clearance, centre of wheelbase	m2 (mm)	200	200	200	200	200
4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	4435	4435	4485	4485	4485
4.34.2	Aisle width for pallets 800 x 1200 Lengthways	Ast (mm)	4235	4235	4285	4285	4285
4.35	Turning radius	Wa (mm)	2650	2650	2700	2700	2700
4.36	Internal turning radius	b13 (mm)	750	750	750	750	750
5.1	Travel speed, laden/unladen	km/h	24/25	24/25	24/25	24/25	24/25
5.2	Lift speed, laden/unladen	m/s	0.480/0.560	0.480/0.560	0.460/0.520	0.460/0.520	0.460/0.520
5.3	Lowering speed, laden/unladen	m/s	0.410/0.420	0.410/0.420	0.410/0.420	0.410/0.420	0.410/0.420
5.5	Drawbar pull, laden/unladen	N	28000/30000	29000/31000	30000/33000	31000/35000	31000/35000
5.6	Max. Drawbar pull, laden/unladen	N	30000	31000	33000	35000	35000
5.7	Gradeability, laden/unladen	%	23/25	23/25	23/25	23/25	23/25
5.9	Acceleration time, laden/unladen (0-10m)	s	4.8/4.7	4.9/4.8	4.9/4.8	5.0/4.9	5.0/4.9
5.10	Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
5.11	Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
6.1	Drive motor rating S2 60 min	kW	30AC	30AC	30AC	30AC	30AC
6.2	Lift motor rating at S3 15%	kW	35AC	35AC	35AC	35AC	35AC
6.3	Battery voltage, Std.	V/Ah	309/173	309/173	309/173	309/173	309/173
	Battery voltage, Opt.	V/Ah	309/228	309/228	309/228	309/228	309/228
6.5	Min. battery weight	kg	500	500	500	500	500
	Max. battery weight	kg	650	650	650	650	650
8.1	Type of drive control		MOSFET/AC	MOSFET/AC	MOSFET/AC	MOSFET/AC	MOSFET/AC
9.1	Manufacturer		Enpower	Enpower	Enpower	Enpower	Enpower
10.1	Operating pressure for attachments	bar	185	185	185	185	185
10.2	Oil volume for attachments	l/min	36	36	36	36	36
10.3	Hydraulic Tank - capacity (drain & refill)	liter	42L	42L	42L	42L	42L
10.7	Sound level at the driver's ear according to EN / DIN 12 053	dB (A)	72	72	72	72	72
10.8	Towing coupling, type DIN		Φ35 Pin	Φ35 Pin	Φ35 Pin	Φ35 Pin	Φ35 Pin

