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Forklift" App



ISO45001:2018



ISO14001:2015



ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

AUTHORIZED DEALER



# XE SERIES

ELECTRIC FORKLIFT TRUCK WITH  
LITHIUM POWER

With capacity of 1,500 to 3,800kg



**XE**  
SERIES





**XE**  
SERIES

# TAKE ON THE BIG JOBS.

Following the family design of electric forklifts, they are provided with some key parts compatible with internal combustion forklifts, and optimized mainly on the overall performance, ergonomics, reliability, maintenance, outdoor operation ability and load capacity in a bid to meet customers' use scenarios of internal combustion forklifts. The enhanced model is capable of meeting the application demand of users in heavy-duty working conditions.

## STYLISH EXTERIOR

- Following the family exterior design of XH and XC lithium battery forklifts;
- Boasting smooth and powerful contour lines, and simple and elegant vehicle body, and presenting both fashion and steadiness as a whole.

## ENERGY-SAVING AND EFFICIENT

- An efficient high-torque motor together with a high speed ratio gearbox significantly improves the travel speed, gradeability and lifting speed;
- The air-cooled fan built in the travel and lifting motors allow better heat dissipation and more thorough performance realization;
- Oil pump reducers are introduced in the oil pump devices for the first time, enabling the lifting motor to work in a more efficient and more energy-saving manner;



**25%**  
MAX. GRADEABILITY  
(unladen)



**18 Km/h**  
TRAVEL SPEED  
(unladen)



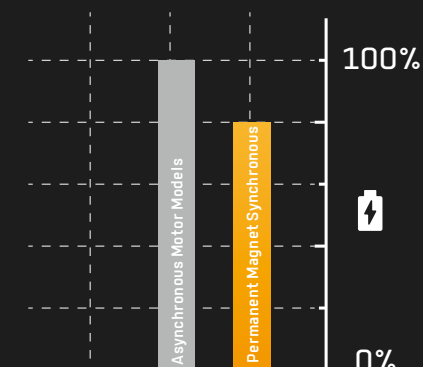
**500 mm/s**  
LIFT SPEED  
(unladen)



TAKE  
**ADVANTAGE**  
OF **MORE POWER**

With the **80V dual permanent magnet synchronous motor system** with higher power density, as well the highly fitted speed reducer, motors and electrical control, under the same operating conditions, compared with the traditional asynchronous motor model, the energy consumption is reduced by 15%-20%.

**15-20%**  
ENERGY SAVING





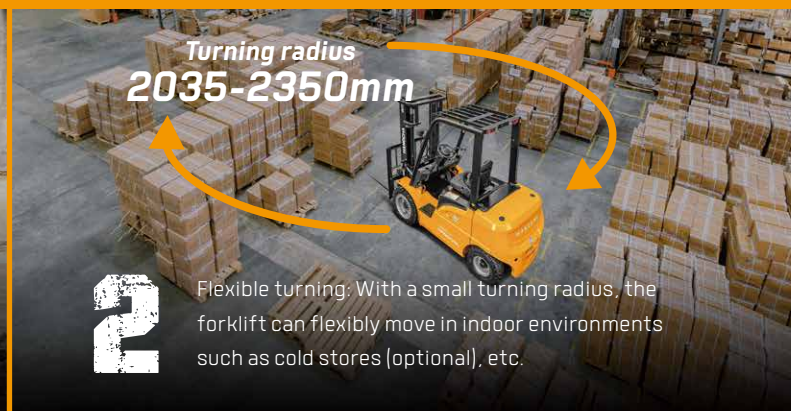


## ADAPTABILITY TO DIFFERENT SCENARIOS



1

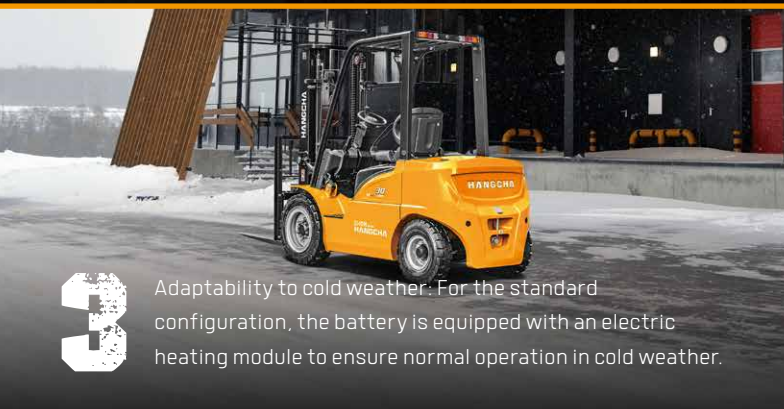
Smooth driving: Increased distance from the ground enables the forklift to adapt to rugged roads outdoors.



2

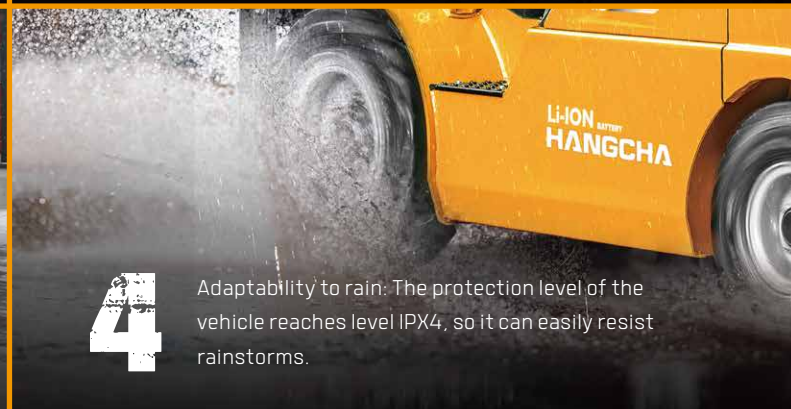
Turning radius  
2035-2350mm

Flexible turning: With a small turning radius, the forklift can flexibly move in indoor environments such as cold stores (optional), etc.



3

Adaptability to cold weather: For the standard configuration, the battery is equipped with an electric heating module to ensure normal operation in cold weather.



4

Adaptability to rain: The protection level of the vehicle reaches level IPX4, so it can easily resist rainstorms.

## COMFORTABLE EXPERIENCE

- With the advantages of lithium battery forklifts, this ergonomically designed forklift enables a wide view and a large operation space.
- The optional electronic handbrake allows more comfortable driving experience.
- The color-screen instruments are designed to have clear and intuitive graphic interfaces.



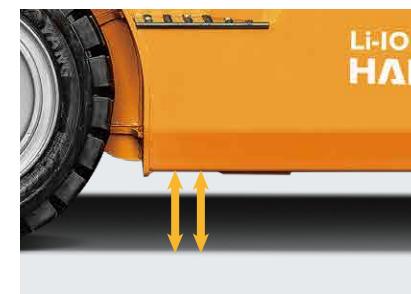
Color-screen instruments



Ergonomically designed forklift enables a wide view

## RELIABLE AND DURABLE

- The enhanced drive axle and gearbox with the mast, steering axles with tapered roller bearing (for the heavy-duty model) and big tires for internal combustion forklifts can meet the demand of application in heavy-duty working conditions;
- Low center of gravity and high load margin are designed for more stable working;
- Verified in accordance with double standards of electric forklifts and internal combustion forklifts, with the enhanced test strength higher than that for the internal combustion standard, this forklift is reliable and durable.



Ground clearance increased



## KEEP AN EYE ON EVERYTHING

Hangcha FIMS is a system that provides you with real-time information about forklift truck and driver. Whether you have dozens or hundreds of forklift trucks across multiple sites, you can get access to collecting, monitoring and evaluating all the fleet data at anytime and anywhere.

## » Features

- Access Control
- GPS Tracking
- Remote Monitoring
- Maintenance Reminder
- Vehicle Management
- Vibration Monitoring
- Pre-shift Check (Optional)
- Shift Management (Optional)
- OpenAPI (Optional)



# LITHIUM POWERED

## EMPOWER YOURSELF WITH THE BEST



Li  
Lithium

POWER THE POSSIBILITIES  
RELIABLE LITHIUM-ION TECHNOLOGY

## LITHIUM BATTERY ADVANTAGES



### Long service life

4000 full charging cycles with at least 75% residual capacity.



### Return on investment

Add flexibility to your operation, cost-saving in the long term, increased efficiencies.



### Maintenance free

No topping up of water or checking acid levels.



### High energy density

The high energy density of the Li-Ion battery ensures long working times and increases the high availability.



### Cold area application

Li-Ion batteries maintain high performance at temperatures below freezing.



### High safety and reliability

Intelligent battery management monitoring every important function, no emission of battery gasses.



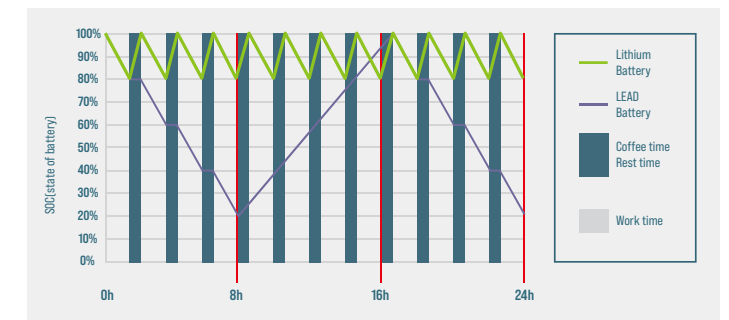
### Opportunity charging

Full performance during several shifts thanks to effective interim charging.

## FEATURES & BENEFITS THE HANGCHA DIFFERENCE

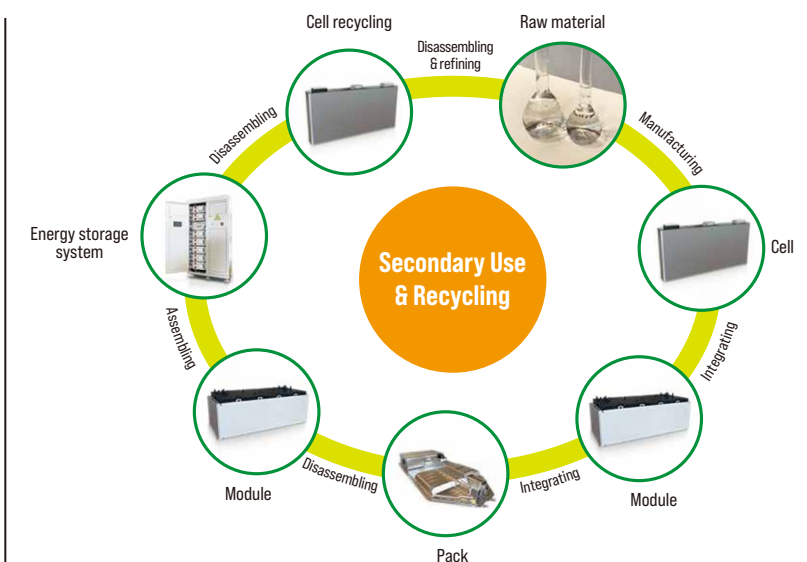
### Efficiency

By quick opportunity charging any downtime, such as a lunch break, can be efficiently used and the battery is recharged in a very short period of time. Interim charging does not affect the battery service life.



### Safety

- / Intelligent battery management monitoring every important function.
- / Higher user safety, thanks to acid-free use.
- / User friendly due to avoided battery change.
- / No emission of battery gasses.



#### QUESTION 1

Q: What are the characteristics of lithium batteries, especially when used in high and low temperature environments?

Charging temperature: -30 °C - 65 °C  
Discharge temperature: -30 °C - 65 °C  
Storage environment temperature: -30 °C - 65 °C

After the truck key switch is closed, the instrument battery condition needs to be checked:

1. Confirm that there is no battery system alarm message on the instrument panel.
2. Please check the remaining power before use. It is recommended to use the SOC between 50% and 100%.
3. If the SOC is lower than 20%, it is not recommended to continue using it. Please charge it as soon as possible.

#### QUESTION 2

Q: What is the charging time and usage time calculation of forklift lithium battery?

1. Available power of lithium battery (kWh) = rated voltage \* rated power \* 90% (To avoid over-discharge damaging the battery, the forklift is equipped with low power protection [less than 10%]).
  2. Charging time (h) = rated capacity of lithium battery (Ah) \* 90% \* charger output current (A).
  3. The power consumed for charging (kWh) = the available power of the lithium battery \* 93% (the charging efficiency of the charger is calculated as 93%).
  4. Usage time (h) = available power of lithium battery \* energy consumption data.
- For specific energy consumption values, please refer to the technical table on the sharing platform.

#### QUESTION 3

Q: How does Hangcha BMS work to ensure the safety of the lithium battery?

HANGCHA BMS (battery management system) can monitors the cells at all time. As a result, hangcha lithium power is the reliable solution.



#### Battery Safety Management:

- Overcharge/over discharge protection
- Overcurrent/over-temperature/low-temperature protection
- Multi-level fault diagnosis protection
- Double fault monitoring



#### Battery Parameter Detection:

- Battery voltage detection and analysis
- Battery current detection and analysis
- Battery temperature detection and analysis



#### Equilibrium Management:

- Equalization based on voltage mode
- Equalization based on time mode
- Equalization based on battery cell SOC
- Active/passive equalization optional



#### Other Features:

- Low cost, low power consumption
- Historical data record
- Flexible cascade expansion
- CRC data validation

# LI-ION BATTERIES AND CHARGERS

## IT'S FASTER AND EASIER WITH HANGCHA

Innovative, reliable lithium-ion technology (Lithium Iron-Phosphate), which are developed jointly by HANGCHA and CATL. Battery cells and modules are from CATL, with reliable quality, exclusively for HANGCHA.



Battery Capacity(Standard)  
**80V/150-460Ah**  
Battery weight:150-310kg

# HANGCHA WARRANTY SERVICE

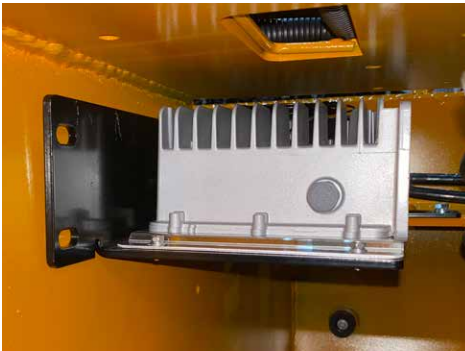
Integrated Battery Management System (BMS) continually monitors energy management and ensures reliable operation. HANGCHA provides Li-Ion battery (LiFePO4) with **6 years** or **12000 hours** warranty.



### External charger



### On-board charger



The on-board charger features adaptive single-phase or three-phase capability, widely compatible with various grid standards to flexibly meet diverse customer requirements.

### EVE Battery Capacity

Capacity(Ah)	1.5-mini2.0t 80V	2.0-2.5t 80V		3.0-3.8t 80V	
	HA	HA	H2	HA	H2
150	●	/	/	/	/
230	○	●	/	●	/
304	○	○	●	○	/
460	/	○	○	○	●
560	/	/	/	○	○
608	/	/	/	/	○

Note: ● Standard ; ○ Optional

### CATL Battery Capacity

Capacity(Ah)	1.5-mini2.0t 80V	2.0-2.5t 80V		3.0-3.8t 80V	
	HA	HA	H2	HA	H2
228	○	/	/	/	/
302	○	○	○	○	/
456	/	○	○	○	○
604	/	/	/	○	○

Note: ● Standard ; ○ Optional

Features

Color	Standard	Options
Yellow-black	●	
Other customized color		○
Particular market		
CE Standard		○
Cold storage environment		
-30℃		○
Mast		
Standard duplex mast	●	
Configuration Table of the Mast		○
Fork and attachment		
Standard fork	●	
Fork arm carrier	●	
Load backrest	●	
Non-standard series fork		○
Various attachments		○
Tires		
Pneumatic tire (single)	●	
Pneumatic tire (dual)		○
Solid tire (single)		○
Solid tire (dual)		○
Multiway valve		
Double multi-way valve	●	
Potionmeter for lift	●	
3rd vavle		○
4th vavle		○
5th vavle (2.0-3.8t)		○
Tiller		
Lifting and tilting level	●	
Fingertip system		○
Battery		
Standard lithium battery	●	
Large-capacity lithium battery		○
Quick-change lithium battery		○
On-board charger		○
Light		
LED head lamp	●	
Turn signal lamp	●	
LED rear combination lamp	●	
Common alarm lamp		○
Acoustic and optical alarm lamp		○
LED rear lamp		○
Blue light		○
Straight projection lamp		○
Horn		
Electric horn	●	
Reverse buzzer	●	
Right rear armrest with horn button		○
Smart module		
FIMS[Fleet intelligent management system]		○

Features

Safety configuration	Standard	Options
Emergency power-off switch	●	
Fuse box	●	
Soft landing (Only for the wide view duplex mast)	●	
Reversing radar		○
OPS system		○
Fire extinguisher		○
Ascending buffering		○
Parking brake		
Mechanical handbrake	●	
EPB[Electric Parking Brake]		○
Instrument rack space		
Smart color-screen instrument (speed mode selection)	●	
Combination switch	●	
Cigarette lighter		○
USB port		○
Electronic code lock (start by swiping a card)		○
Driving space		
Standard overhead guard	●	
Central rear view mirror	●	
Front windshield		○
PVC ceiling		○
Cab		○
Electric fan		○
Left and right rear view mirrors		○
Seat		
Standard seat	●	
Fully-suspended seat		○
Semi-suspended seat		○
Other standard configuration		
Drive and lifting controllers	●	
Driving and lifting motors	●	
Silent gear pumper	●	
DC-DC converter	●	
Pedal pad	●	
Traction pin	●	
Integral stamped side panel and hood	●	