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ISO45001:2018



ISO14001:2015



ISO9001:2015



HANGCHA trucks conform to the European Safety Requirements.

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AUTHORIZED DEALER

# XE SERIES

ELECTRIC FORKLIFT TRUCK WITH LITHIUM POWER

With capacity of 1,500 to 4,000kg

**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

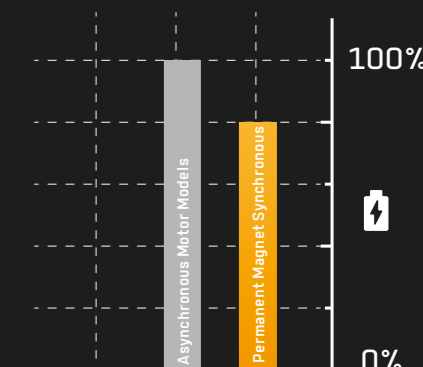
- An efficient high-torque motor together with a high speed ratio gearbox significantly improves the travel speed, gradeability and lifting speed;
- The air-cooled fan built in the travel and lifting motors allow better heat dissipation and more thorough performance realization;
- Oil pump reducers are 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;



## 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





### 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

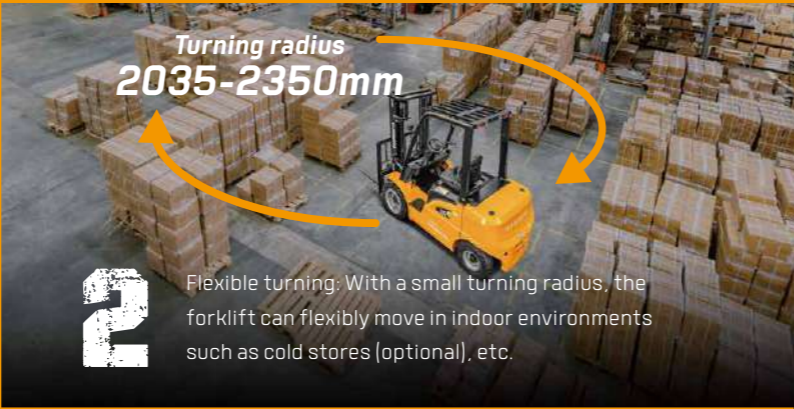
Ergonomically designed forklift enables a wide view



## ADAPTABILITY TO DIFFERENT SCENARIOS



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



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



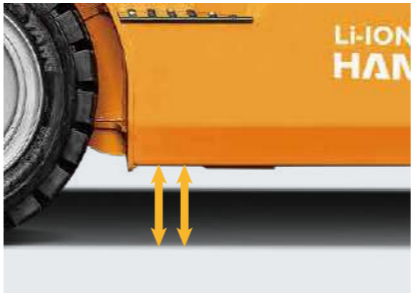
**3** Adaptability to cold weather: For the standard configuration, the battery is equipped with an electric heating module to ensure normal operation in cold weather.



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

### 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



MOBILE SOLUTION PROVIDING A MOBILE APPLICATION

### 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



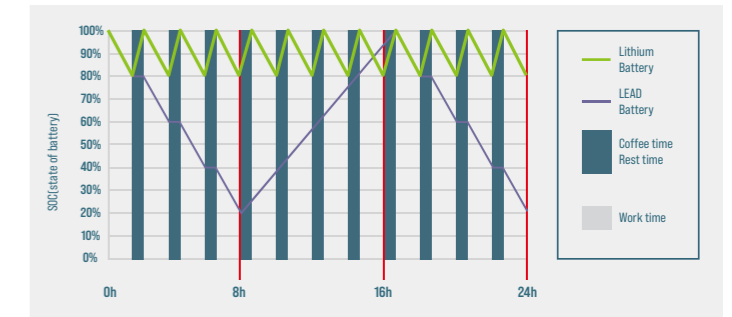
Li  
Lithium

POWER THE POSSIBILITIES  
RELIABLE LITHIUM-ION TECHNOLOGY

## FEATURES & BENEFITS THE HANGCHA DIFFERENCE

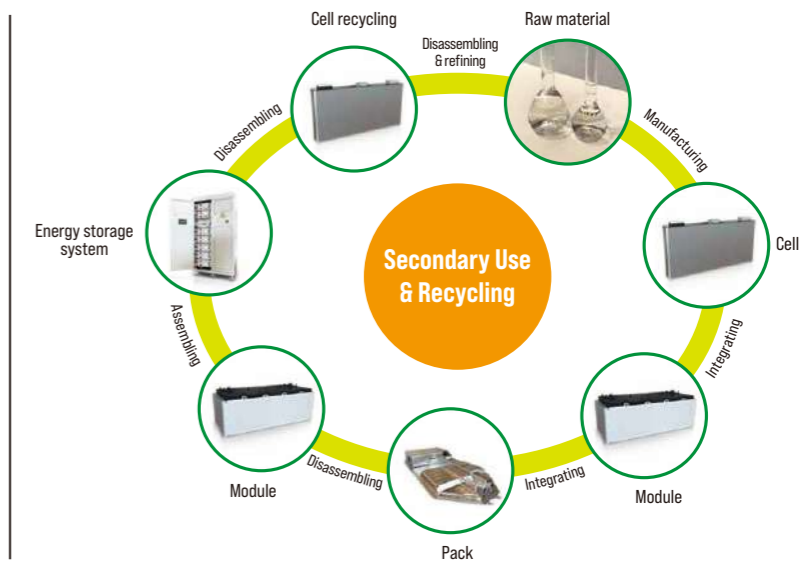
### Efficiency

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.



## LITHIUM BATTERY ADVANTAGES



#### Long service life

4000 full charging cycles with at least 80% 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.

### QUESTION 1

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

Charging temperature: 0°C - 65°C  
Discharge temperature: -30°C - 65°C  
Storage environment temperature: -30°C - 60°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 monitor 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

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.

## HANGCHA WARRANTY SERVICE

**6 YEARS WARRANTY**



Charger model:

**SLC-80100**  
**SLC-80200**

Output voltage range (V):

80V charger: 40Vdc - 100Vdc

Output current range (A):

100A charger: 5A - 100A(SLC-80100)

200A charger: 5A - 200A(SLC-80200)

### EVE Battery Capacity

| Capacity(Ah) | 1.5-mini2.0t 80V | 2.0-2.5t 80V |    | 3.0-3.8t 80V |    | mini4.0t 80V |
|--------------|------------------|--------------|----|--------------|----|--------------|
|              |                  | H            | H2 | H            | 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 |    | mini4.0t 80V |
|--------------|------------------|--------------|----|--------------|----|--------------|
|              |                  | H            | H2 | H            | 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°C                                     |          | ○       |
| 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                    | ●        |         |
| Potentionmeter 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              |          | ○       |
| 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   | ●        |         |
| 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                           | ●        |         |
| Oil pump reducer                                     | ●        |         |
| Silent gear pump                                     | ●        |         |
| DC-DC converter                                      | ●        |         |
| Pedal pad  | ●        |         |
| Traction pin   | ●        |         |
| Integral stamped side panel and hood                 | ●        |         |