

## Features

Truck	Standard	Options
48V Permanent Magnet Synchronous Drive Motor	●	
Hydraulic Power Unit	●	
Polyurethane Wheels	●	
Side Charging	●	
Battery Lifting/Side Shift	●	
Adjustable Steering Wheel Height/ Angle	●	
Lithium Battery 48V/80Ah (EVE)	●	
Auxiliary Wheel	●	
Dual Load Wheels	●	
Cornering Speed Reduction	●	
Standing Platform Lift (Model: CJ025-XT1-LIT)	●	
Footrest Platform Lift/Lower (Model: CJ025-XT1-LIT)	●	
Side Operation Panel	●	
Various Fork Lengths		○
Various distance between Fork-arms		○
Lithium Battery 48V/105Ah (EVE)		○
Lithium Battery 48V/125Ah (CATL)		○
48V 30A Portable Charger		○
48V 50A Portable Charger		○
Front Multifunctional Bracket		○
Backrest	●	
Multi-Layer Pedal Pad	●	
Multifunctional Steering Wheel	●	
USB Power Supply	●	
Key Switch	●	
Adjustable Height Backrest		○
No logo Handle		○
<b>Controls and instruments</b>		
Electric Steering System	●	
Permanent Magnet Synchronous Motor Controller	●	
Interactive Dashboard	●	
Electronic Lifting Limit	●	
Contactless Interlock Switch	●	
<b>Safety</b>		
Emergency Power Off Switch	●	
Horn	●	
Bumper		○
<b>Lights</b>		
Front LED Light	●	
Turn Signals	●	

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ISO 45001:2018



ISO 14001:2015



ISO 9001:2015



HANGCHA trucks conform to the European Safety Requirements.



# X SERIES

## LOW-LEVEL ORDER PICKER

With capacity of 2,500kg

# X SERIES LOW-LEVEL ORDER PICKER

The X Series low-level order picker features an advanced permanent magnet brushless drive system and a brand new 48V system platform.

*It is safe and reliable, offering comfort and efficiency with outstanding performance and low maintenance costs*, making it ideal for the selection of large items from the lower shelves in large supermarkets.

**48V**  
VOLTAGE  
WITH  
PERMANENT MAGNET  
SYNCHRONOUS DRIVE MOTOR



HANGCHA provides Li-ion battery (LiFePO4) with 6 years or 12000 hours warranty.

**6 YEARS**  
WARRANTY

## RUGGED ON THE OUTSIDE



### APPEARANCE

- **Family Design:** The vehicle has a smooth and dynamic overall line that is in line with the latest design trends.
- **Material:** Made of stamped steel plates, it is strong, robust, durable, and environmentally friendly.



### Steering Wheel:

A newly developed multifunctional steering wheel with integrated design, novel and aesthetically pleasing, making operation more convenient.



### Adjustability:

The steering wheel can be adjusted in multiple degrees of freedom to suit operators of different heights and arm lengths.



### Storage Space:

Ample storage space provides greater convenience for the operator.



## TOTAL COMFORT

- **Lifting Mechanism:** All lifting mechanisms are designed with a buffering function to effectively reduce impact and improve the operator's comfort.
- **Pedal Assembly:** The combination of a suspended structure pedal assembly and a thick multi-layer pedal pad can effectively reduce the operator's fatigue.



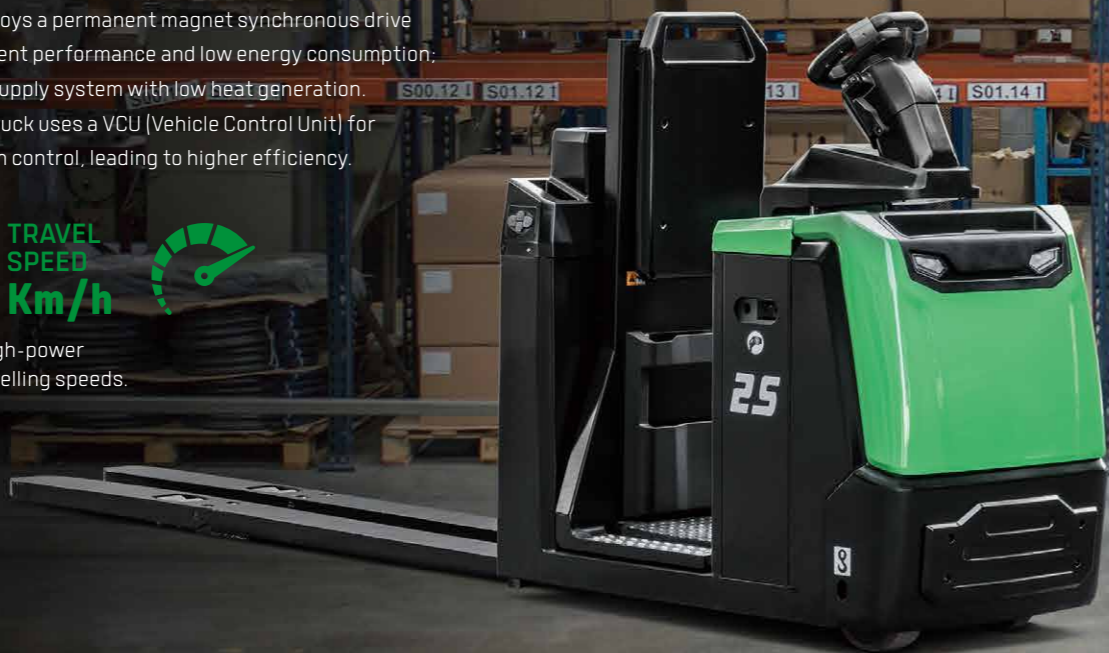
# REVOLUTIONARY PERFORMANCE

- **Control System:** Side control and walking mode functions effectively improve work efficiency.
- **Drive System:** Employs a permanent magnet synchronous drive system with excellent performance and low energy consumption; a new 48V power supply system with low heat generation.
- **Control Unit:** The truck uses a VCU (Vehicle Control Unit) for precise and smooth control, leading to higher efficiency.

**9.5** TRAVEL SPEED  
Km/h



Equipped with a high-power motor for high travelling speeds.



**Working Modes:**  
The dashboard offers multiple working modes to meet the needs of different working conditions.



**Lifting Function:**  
Comes with a footrest platform that can be lifted, facilitating picking at higher locations.



**Charging System:**  
It features a side charging design, with battery pack that can be lifted and removed from the side, making it convenient and quick.

## RELIABILITY

- **Frame:** The truck frame is made of high-strength steel plates, ensuring a long service life.
- **Connectors:** The entire truck uses waterproof connectors, and all electrical wires and cables are well protected, greatly improving the reliability of the electrical system.

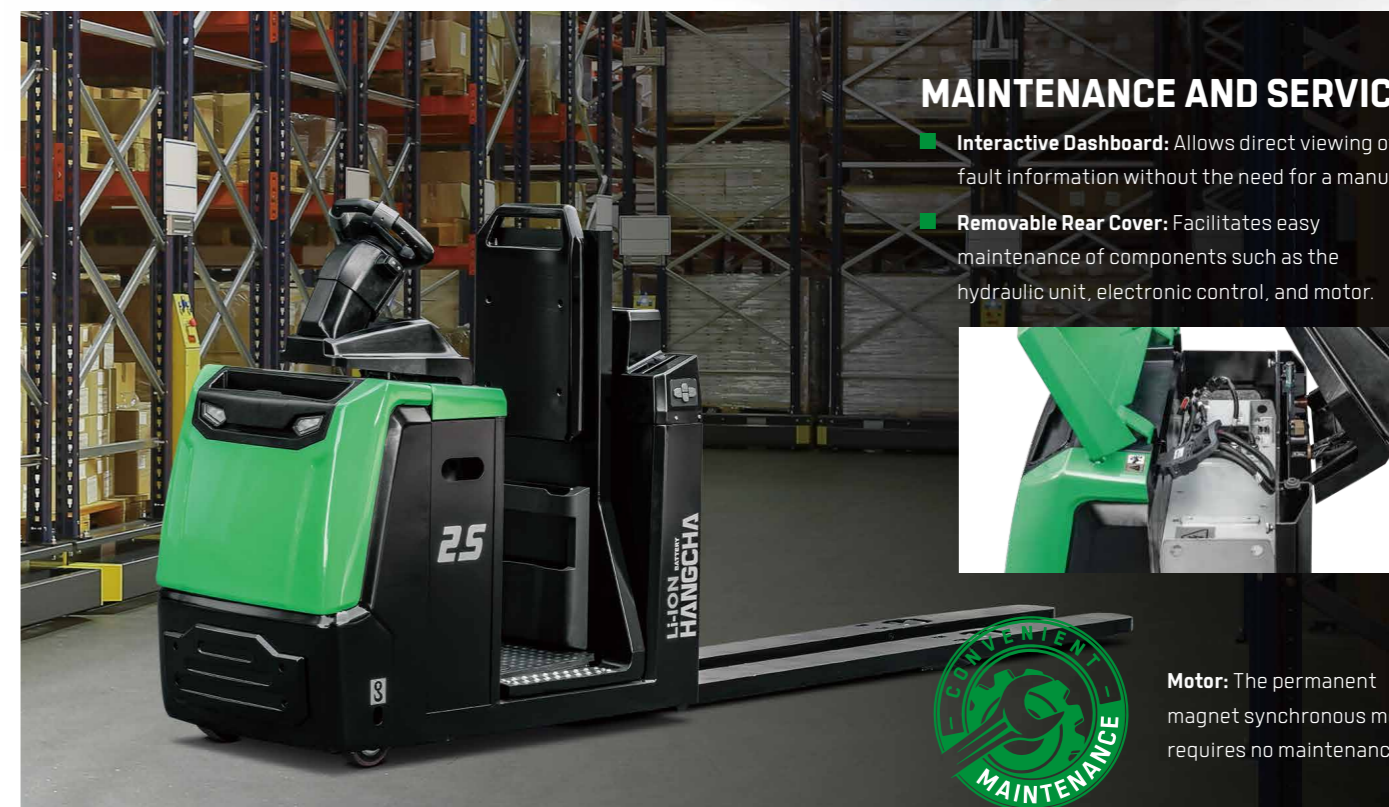


# MORE PROTECT

## SAFETY

- **Lifting Limit Protection:** Standard electronic lifting limit and intelligent limit protection from the controller prevent impact when lifting to the top, effectively protecting the working motor and the safety of the goods.
- **Anti-Rollback Feature:** The truck has a slope anti-rollback function to ensure operational safety.

**Safety Monitoring:** Multiple safety monitoring switches such as steering wheel position detection and standing pedal induction work together to effectively ensure the personal safety of the operator.



## MAINTENANCE AND SERVICE

- **Interactive Dashboard:** Allows direct viewing of fault information without the need for a manual.
- **Removable Rear Cover:** Facilitates easy maintenance of components such as the hydraulic unit, electronic control, and motor.



**Motor:** The permanent magnet synchronous motor requires no maintenance.

# 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 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.



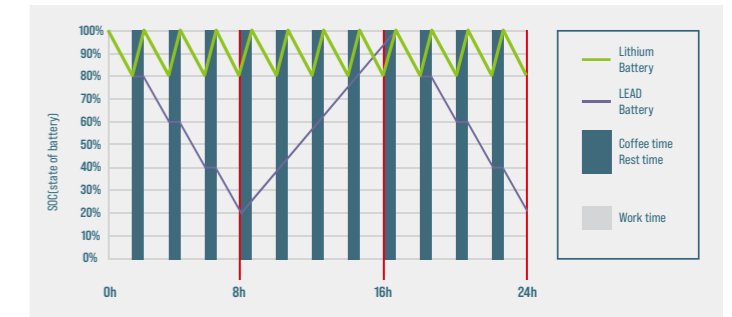
### Opportunity charging

Full performance during several shifts thanks to effective interim charging.

## FEATURES & BENEFITS THE HANGCHA DIFFERENCE

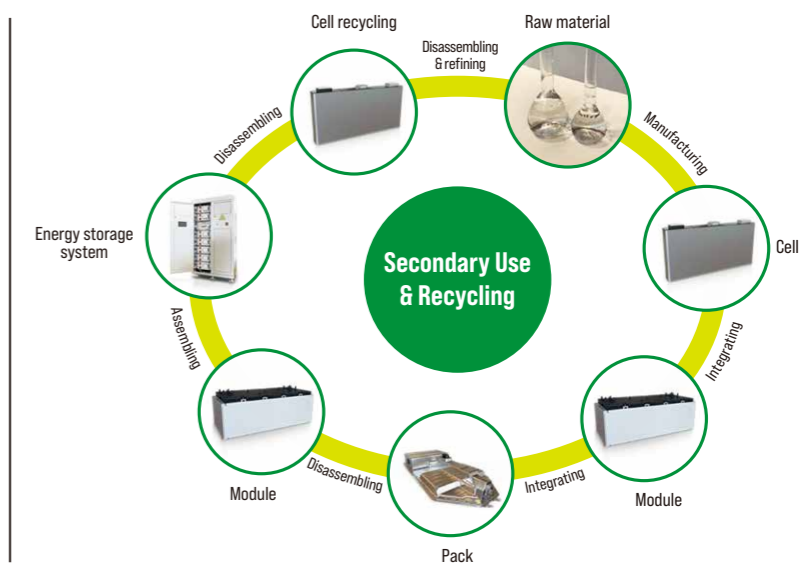
### Efficiency

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: 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 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