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Forklift" App



ISO45001:2018



ISO14001:2015



ISO9001:2015



HANGCHA trucks conform
to the European Safety
Requirements.

X SERIES

TOW TRACTOR

With capacity of 500 to 6,000 kg

X SERIES TOW TRACTOR

Powered by cutting-edge AC drive control technology, the X Series delivers outstanding performance, operator comfort, and rock-solid safety while keeping running and maintenance costs low. It is the ideal high-efficiency solution for transporting materials across different zones in workshops, assembly lines, and large-scale factories.

RUGGED ON THE OUTSIDE

Exterior

Streamlined large-radius curved surface-sleek, modern styling.

Stability

Battery sunk deep into the chassis base for a low center of gravity and superior stability.



RELIABILITY & SAFETY

- Emergency-disconnect switch as standard-meets European safety standards.
- High-efficiency AC powertrain with comprehensive protection functions extends service life and reliability.
- Linear cornering speed reduction ensures smooth, safe turning.



SERVICEABILITY

- Maintenance-free brushless AC motor slashes operating costs.
- Detachable rear cover simplifies controller diagnostics and maintenance.
- Side-slide battery allows fast, tool-free battery servicing.
- Highly integrated electrical layout groups all major components for quick access.



Premium-grade contactors, motor controllers, power plugs, and emergency-disconnect switch.



High-strength design for frame, drive axle, and steering axle to handle heavy loads.

ADVANCED TECHNOLOGY

48V
VOLTAGE
WITH
PERMANENT MAGNET
SYNCHRONOUS DRIVE MOTOR

- Electromagnetic parking brake replaces traditional hand brake-intelligent, maintenance-free parking.
- Full-elastic axle suspension guarantees operator comfort.
- New-generation AC control system provides precise, efficient performance and longer run time per charge.
- Stand-on models feature Electronic Power Steering (EPS) for effortless maneuvering.



Large-screen LCD with built-in fault self-diagnostics remains clearly visible in harsh environments.



All-LED lighting package including dynamic-flow front turn signals.



COMFORTABLE EXPERIENCE

- Full-elastic suspension on both front and rear axles minimizes vibration and maximizes ride comfort.
- Low, wide open step for effortless entry/exit.
- All pedals, gauges, steering wheel, and switches are ergonomically positioned for fatigue-free, intuitive operation.
- Standard side-extraction battery enables quick, single-person battery swaps-perfect for continuous-duty applications.
- Optional fully enclosed cab for all-weather operation.



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.



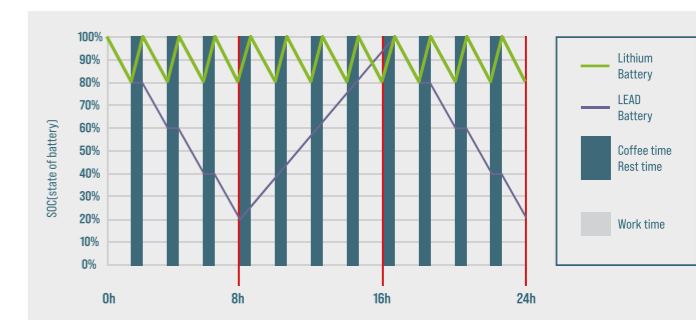
Opportunity charging

Full performance during several shifts thanks to effective interim charging.

FEATURES & BENEFITS THE HANGCHA DIFFERENCE

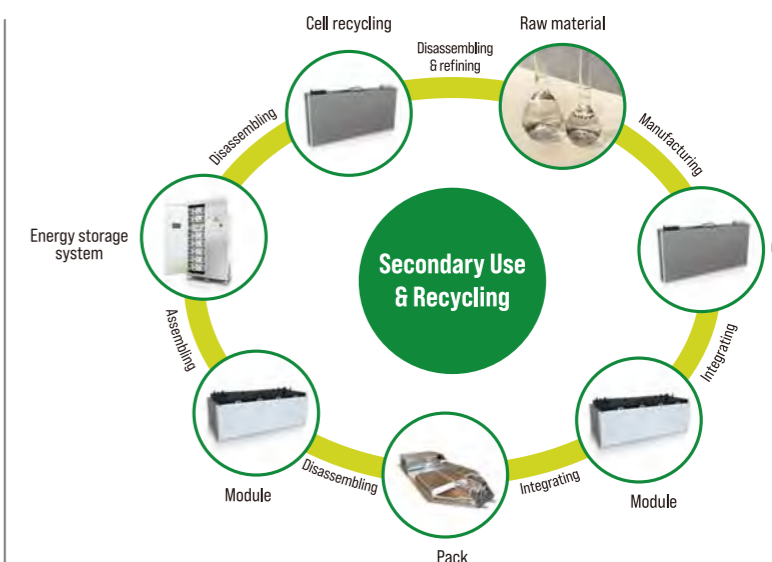
Efficiency

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 monitor the cells at all times. 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

Features

Truck	Standard	Options
AC traction motor	●	
AC traction controller	●	
Traction device	●	
Electronic Power Steering (EPS) system (for stand-on type tractor)	●	
Big capacity battery		○
Solid tyre		○
Suspension seat		○
Electronic Power Steering (EPS) system (for seated type tractor)		○
Decoupling hook-equipped traction pin		○
Cab		
Storage box	●	
Belt	●	
Maintenance		
Battery side roll out	●	
Controls and instruments		
Inching switch	●	
Multi-function instrument	●	
Emergency power-off switch	●	
Lights		
LED headlights (high-beam / low-beam)	●	
LED tail light	●	
Blue light		○
Safety		
Automatic deceleration at turns	●	
Electrical Park Brake (EPB) system	●	
Horn	●	
Safety pedal (for seating driving type tractor)	●	
Alarm light		○
Fire extinguisher		○
Acoustic and optical alarm		○
Reversing voice buzzer		○
Other		
Fully-enclosed cabin		○
Semi-closed cabin		○
FIMS		○

Note: When ordering a cab, EPS is also recommended.

