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ISO45001:2018



ISO14001:2015



ISO9001:2015



HANGCHA trucks conform
to the European Safety
Requirements.



A SERIES

STAND-ON MAN-DOWN TURRET TRUCK

With capacity of 1,000 to 1,500kg

A SERIES STAND-ON MAN-DOWN TURRET TRUCK

A series stand-on man-down turret truck is a new product special for narrow aisles developed by Hangcha. With advanced 48V permanent-magnet brushless electric attachment head, this stacker features advanced performance, comfortable operation, safety and reliability, and low cost of use and maintenance. The light weight of the whole stacker and the four-pivot structure for the chassis allow smaller equivalent load of floors, higher space availability of your warehouses, being an ideal tool to improve the capacity of your warehouses.

DRIVING POSITION



The new design of the mast structure enables the stacker to have an excellent operating view and to access the pallet more easily.



A new layout provides a larger operating space. The low platform enables the operator to get on and off the stacker more conveniently.



- Designed with shock-absorbing function, the stand-on pedal can greatly improve the driving comfort and alleviate the driver's fatigue due to long-time driving.
- The newly-designed molded broad backrest is soft and comfortable, reducing operator's fatigue.



The thumb switch and the cross handle make the operation light and comfortable.



MORE PROTECTION

The optimized suspension mechanism with a four-bar linkage makes the drive wheel and auxiliary wheel bear forces in an associative manner and reduces slippage of the drive wheel. The mechanical disc brake and regenerative braking system make the stacker's drive safer and more reliable.



SAFETY

- The turning deceleration function provided for the standard configuration makes the turning deceleration of the stacker smoother and safer.
- For the standard configuration, an in-place switch is provided for the driver to judge whether he/she is in the correct operating position. When not in the correct position, driving and hydraulic operations are prohibited.
- A brake interlock switch is provided. When the brake is released, the switch is triggered and driving is prohibited, except for hydraulic operations.



The adoption of mature mechanical disc brake allows emergency stop and parking, highly reliable.



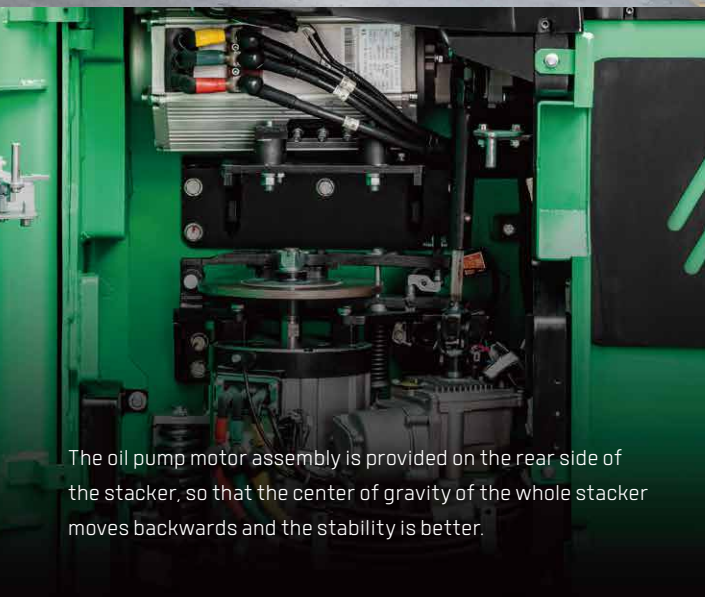
With Curtis full AC controller, CAN communication is allowed, achieving both safety and reliability.

RELIABILITY

- Relying on electric power-assisted steering, the steering is easy and the operation is adapted to road conditions. Even if the power steering system fails, the stacker still has the steering function, safe and reliable;
- The lithium battery with CATL core is adopted to realize high safety;

The solenoid valve and gear pump can obtain better hydraulic efficiency and faster lifting speed;



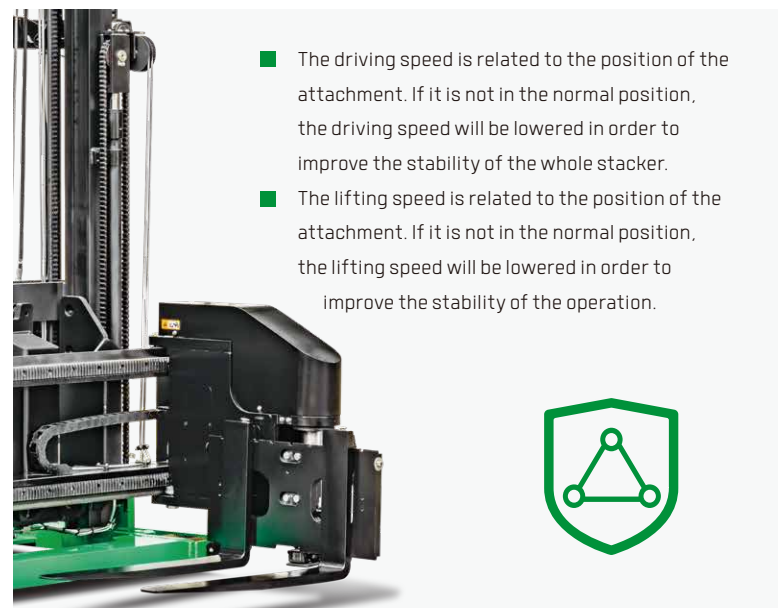
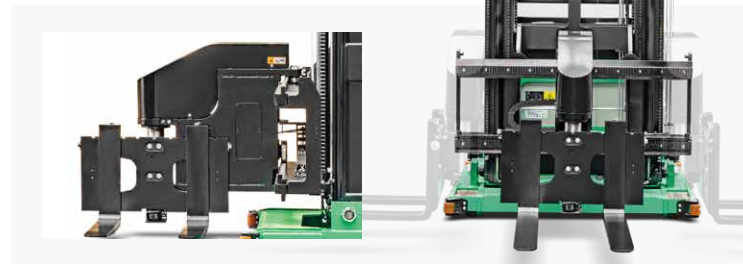


The oil pump motor assembly is provided on the rear side of the stacker, so that the center of gravity of the whole stacker moves backwards and the stability is better.

MOVE LIKE YOU MEAN IT

STABILITY

- In the new mast structure, the side roller structure is improved to meet the lateral requirements of the three-way stacker.



- The driving speed is related to the position of the attachment. If it is not in the normal position, the driving speed will be lowered in order to improve the stability of the whole stacker.
- The lifting speed is related to the position of the attachment. If it is not in the normal position, the lifting speed will be lowered in order to improve the stability of the operation.



After the mast is lifted to a certain height, the driving speed and the shaking of the mast are reduced, making the stacker safer.



48V
VOLTAGE
WITH
PERMANENT MAGNET
SYNCHRONOUS DRIVE MOTOR

MAINTAINABILITY

- The electric attachment uses a permanent-magnet synchronous motor, thus free maintenance.
- With the 48V permanent-magnet synchronous electric power-assisted steering system, a permanent-magnet motor is used, relieving you from maintenance.
- With a hood that can be completely opened to expose all components and facilitate the maintenance of the vehicle.



The side movable battery is equipped for standard configuration, which are convenient for battery replacement and repair.

ENERGY SAVING AND HIGH EFFICIENCY

- The standard 48V permanent-magnet synchronous electric power-assisted steering system features, compared with 24V, lower current and energy consumption, and higher efficiency.
- The standard permanent-magnet synchronous electric attachment head features low noise, high efficiency and low energy consumption.
- The LED headlights and alarm lights for the standard configuration boast high brightness and low energy consumption.



With the wired camera, the trouble of replacing the battery in a wireless camera is avoided.



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

6 YEARS
WARRANTY

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.



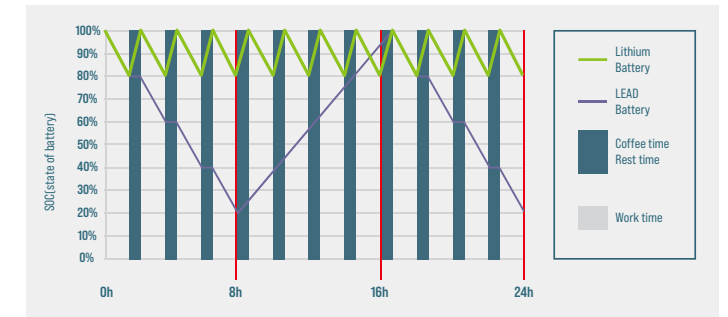
Opportunity charging

Full performance during several shifts thanks to effective interim charging.

FEATURES & BENEFITS THE HANGCHA DIFFERENCE

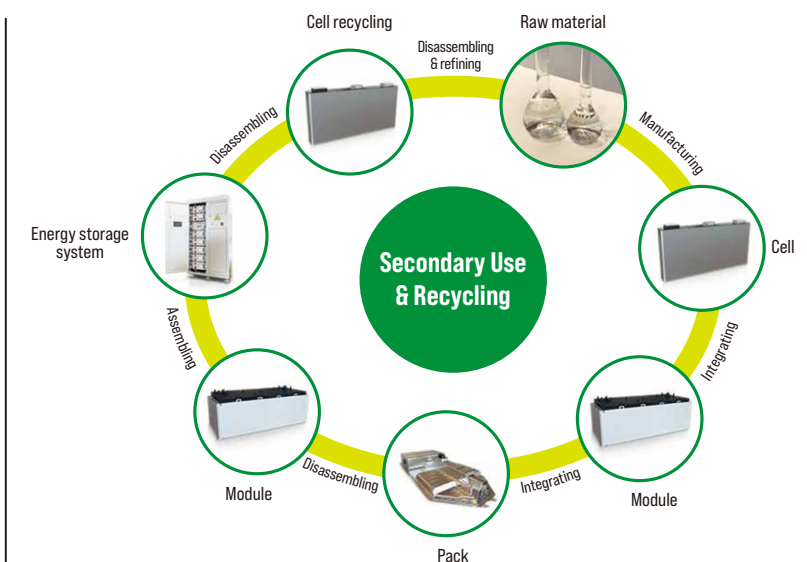
Efficiency

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

Features

Truck	Standard	Options
48V permanent-magnet synchronous electric attachment head	●	
48V permanent-magnet synchronous electric power-assisted steering	●	
Fork descending buffering (cylinder buffering)	●	
Rubber driving wheel	●	
Polyurethane (load wheel + auxiliary wheel)	●	
Lithium battery	●	
Ascending buffering	●	
Solenoid valve	●	
Removed from the side of battery	●	
Height selection		○
Cold storage vehicle		○
Lithium battery 48V/456Ah (CATL)		○
USB plug	●	
Reflective mirror		○
Controls and instruments		
Altimeter		○
Cigarette lighter		○
Code lock and card swiping		○
Card reader (independent card reader)		○
Fingerprint lock (independent fingerprint lock)		○
Interactive instruments	●	
AC driving + AC lifting	●	
Automatic turning deceleration	●	
One-click fork linkage and one-click centering		○
Safety		
Emergency shut-off switch	●	
Regenerative braking (reversing, neutral, braking)	●	
In-place switch (people sensing)	●	
Horn	●	
Camera	●	
Reverse buzzer	●	
Reverse voice buzzer		○
Fire extinguisher		○
Lights		
Alarm light	●	
Blue lights, straight projection lights		○
Acoustic and optical alarm light		○