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# XE SERIES ELECTRIC FORKLIFT TRUCK WITH LITHIUM POWER

While inheriting the family design of electric forklifts, some key parts are universal with internal combustion trucks. The whole truck has been optimized in terms of performance, ergonomics, reliability, maintenance, outdoor working ability, and load capacity to meet the needs of customers for internal combustion forklift usage scenarios.







The XE series of 6-10 ton lithium battery forklifts are developed based on the advantages of Hangcha's "lithium battery special structure" and "permanent magnet synchronous technology".

#### **ENVIRONMENTALLY FRIENDLY**

- The hydraulic lifting system uses dual-pump confluence technology, combined with a powerful system, resulting in an overall improvement in performance.
- The leading "permanent magnet synchronous system" effectively reduces energy consumption and enhances endurance.

#### **ENERGY EFFICIENT**

- The charging port features a door-within-door design, with standard quick-change batteries, making both charging and battery changing convenient.
- Lithium batteries come standard with dual-gun fast charging ports, paired with dual-gun chargers for efficient energy replenishment.







more suitable for outdoor operations.

Designed for high load capacity, minimizing the risk of rear tipping and ensuring more stable operation.



The truck features IPX4 protection rating, and the lithium battery is equipped with electric heating module to ensure normal operation in cold or rainy weather.

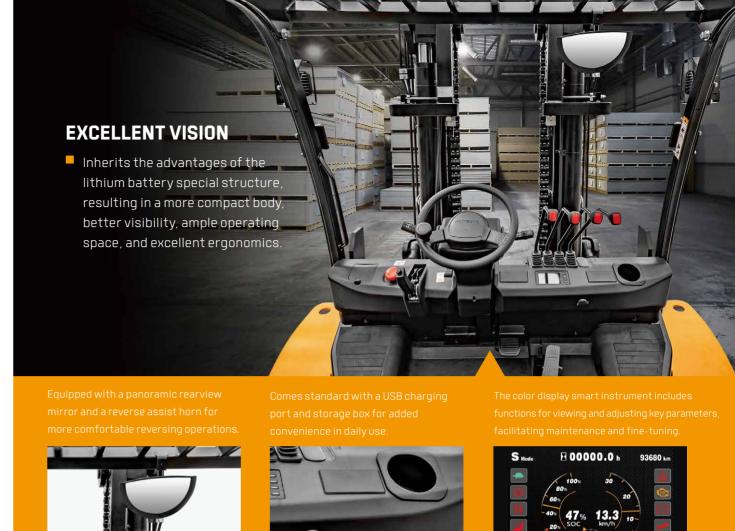




- Equipped with two independent cooling air ducts to ensure long-lasting, efficient performance.
- Standard features include turning deceleration, which reduces the turning radius for greater maneuverability and stability during operation.







## **EASY MAINTENANCE**

The counterweight cover can be removed without tools, paired with a large-angle hood for clear visibility of maintenance components.



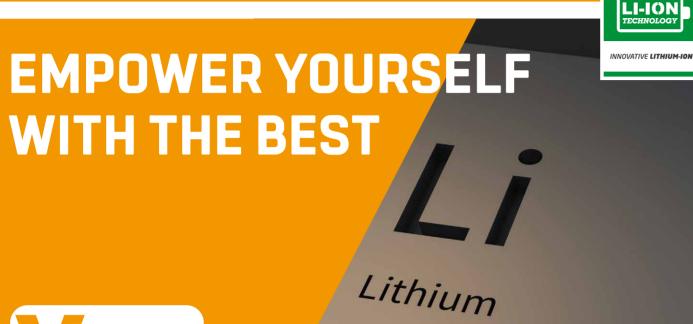
## Optional battery list

	Capacity(Ah)	6.0-7.0t	8.0-10t
	560	•	/
EVE	690	0	•
	920	0	0
	1216	/	0
	536	0	/
CATL	684	0	0
CAIL	906	0	0
	1208	/	0

Note:  $\bullet$  Battery;  $\bigcirc$  Battery Opt; / Not available



# LITHIUM POWERED





**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.



The high energy density of the Li-lon battery ensures long



#### Cold area application

Li-lon batteries maintain high performance at temperatures



#### 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.



### High energy density

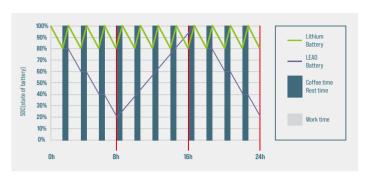
working times and increases the high availability.



## **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.





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

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

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.



#### 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  $\div\,93\%$  (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.



#### O: 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



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

## **Features**

Color	Standard	Option
Yellow-black	•	
Other customized color		0
Particular market		
CE Standard		0
Neutral label		0
Cold storage environment		
-30°C		
		0
Mast		
Duplex mast	•	
Tilt cylinder cover	•	
See the mast specification Tilt cylinder boot		0
		0
Fork and attachment		
Standard fork	•	
Fork arm carrier	•	
Load backrest Other fork length	•	_
Other attachments		0
Tires		- O
Pneumatic tire (dual)	•	
Solid tire (dual) White no marked solid tire (dual)		0
		0
Multiway valve		
2nd load-sensing valve(6-7t)	•	
4th load-sensing valve[8-10t]	•	
Potentionmeter for lift  3rd load-sensing valve(6-7t)	•	0
4th load-sensing valve(6-7t)		0
5th load-sensing valve(6-10t)		0
Tiller		
Lifting and tilting level	•	
Fingertip system		0
Battery		0
	•	
Quick change lithium battery (GB standard dual plug) Lithium battery side roll out	•	
Quick change big capacity lithium battery (GB standard dual plug)		0
		U
LED combination head lamp		
LED combination head lamp	•	
Warning light		0
Acoustic and optical alarm lamp		0
LED rear lamp		0
Blue/red light(F/R/FGR)		0
Blue/red light Three-Way Linear Projector Light		0
Horn		
Electric horn	•	
Reverse buzzer	•	
Right rear armrest with horn button	•	
Forward buzzer		0
Smart module		
FIMS(Fleet intelligent management system)		0

## **Features**

Safety configuration	Standard	Option
Turning deceleration	•	
Emergency power-off switch	•	
Fuse box	•	
Soft landing	•	
Reversing radar		0
Reversing camera		0
Front /front and rear driving recorder		0
OPS system		0
Fire extinguisher		0
Ascending buffering		0
Bele alarm		0
Overspeed alarm/Speed limit[adjustable]		0
Common key		0
Instrument rack space		
Smart color-screen instrument (speed mode selection)	•	
Combination switch	•	
USB port	•	
Storage box	•	
Cigarette lighter		0
Pin code (start by swiping a card)		0
Fingerprint lock		0
Driving space		
Standard overhead guard	•	
Central rear view mirror	•	
PVC ceiling		0
Elevated/Lowered overhead guard		0
F/R windshield (with/without windshield wiper)		0
Cab		0
Fan		0
Air conditioner		0
Heater		0
Left and right rear view mirrors		0
Seat		
Standard seat	•	
Fully-suspended seat		0
Semi-suspended seat		0
Other standard configuration		
Traction controller(*1),pump controller(*2)	•	
Traction motor(x1),pump motor(x2)	•	
Silent gear pump (*2)	•	
Filling valve+accumulator	•	
Oil return filter	•	
Foot pedal pad	•	
Pin	•	
Stamping side panel and hood	•	