JSB EQUIPMENT

16ton-20ton

High voltage lithium battery
Electric counterbalanced forklift

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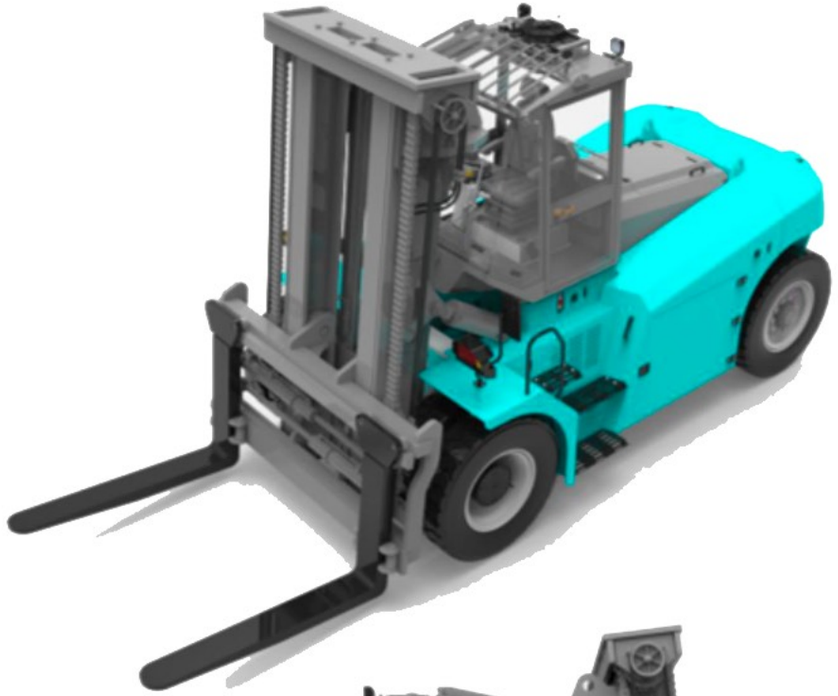

16-20ton High voltage lithium battery Electric counterbalanced forklift

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JSB brand 16t-20t high-voltage lithium-ion forklifts are equipped with original high-performance lithium iron phosphate batteries from CATL, and are equipped with safety devices such as battery liquid cooling, intelligent fire extinguishing system, and active heating as standard. It can be used worry-free between -30℃~60℃, with fast charging capability, the vehicle can work continuously for 8 hours after 2 hours of charging. The vehicle adopts 608V high-voltage electrical platform, high-voltage permanent magnet synchronous drive motor + imported dual-wheel drive. Equipped with a vehicle intelligent thermal management system, which integrates battery temperature management, motor electronic control temperature management, and cab air conditioning, it eliminates the risk of vehicle thermal runaway, significantly reduces vehicle energy consumption, and improves battery life. The hydraulic system adopts a load-sensitive variable pump control system, which automatically adjusts the displacement of the oil pump according to the load, realizes high-precision flow control, and has significant energy saving and consumption reduction effects. The mast control adopts the electronic control technology of single handle centralized control, which can precisely control the gantry and forks, with high joint action efficiency and easy operation.

Basic configuration information:

1. Battery: CATL 608V/346Ah (210kWh);
2. Controller: 600V high voltage platform liquid cooling controller;
3. Power system: high-voltage permanent magnet synchronous liquid-cooled motor, imported dual-wheel drive;
5. Oil pump motor: high-voltage permanent magnet synchronous liquid-cooled dual motors;
6. Hydraulic system: Balmag electronically controlled multi-way valve, imported Mazucci gear pump, all-electric centralized control hydraulic handle;
7. Tires: 12.00-24-24PR for the front wheel, 12.00-20-20PR for the rear wheel. (Solid tires can be configured)

16-20ton High voltage lithium battery Electric counterbalanced forklift——Technical Parameters

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Characteristics	Model		FB160	FB180	FB200
	Rated Load Capacity	kg	16000	18000	20000
	Load center	mm	1200	900	900
	Service Weight	kg	26000	26000	27000
Chassis	Number of wheels X = drive wheels (front/rear)		4X/2		
	Front tire		12.00-24-24PR		12.00-24
	Rear tire		12.00-20-20PR		12.00-20
	Front wheel track/ tread	mm	1900		
	Rear wheel track/ tread	mm	2030		
	Wheelbase	mm	3600		
Dimension	Lifting height	mm	4000		
	Mast tilt degree	°	6/12		
	Mast lowered height	mm	3660		
	Length to the face of fork（without forks）	mm	5450		
	Overal width	mm	2610		
	Overhead guard height	mm	3558		
	Rear overhang	mm	848		
Performance	Maximum driving speed (no load/full load)	km/h	20/18	19/17	18/16
	Maximum lifting speed (no load/full load)	mm/s	350/290	300/290	290/270
	Gradeability	%	15	13	
Electric	Battery type		Lithium Iron Phosphate		
	Battery Specifications	V/Ah	608/346		
	Drive motors' power	kW	2×39		
	Lift motors' power	kW	2×49		

16-20ton High voltage lithium battery Electric counterbalanced forklift——Transmission system

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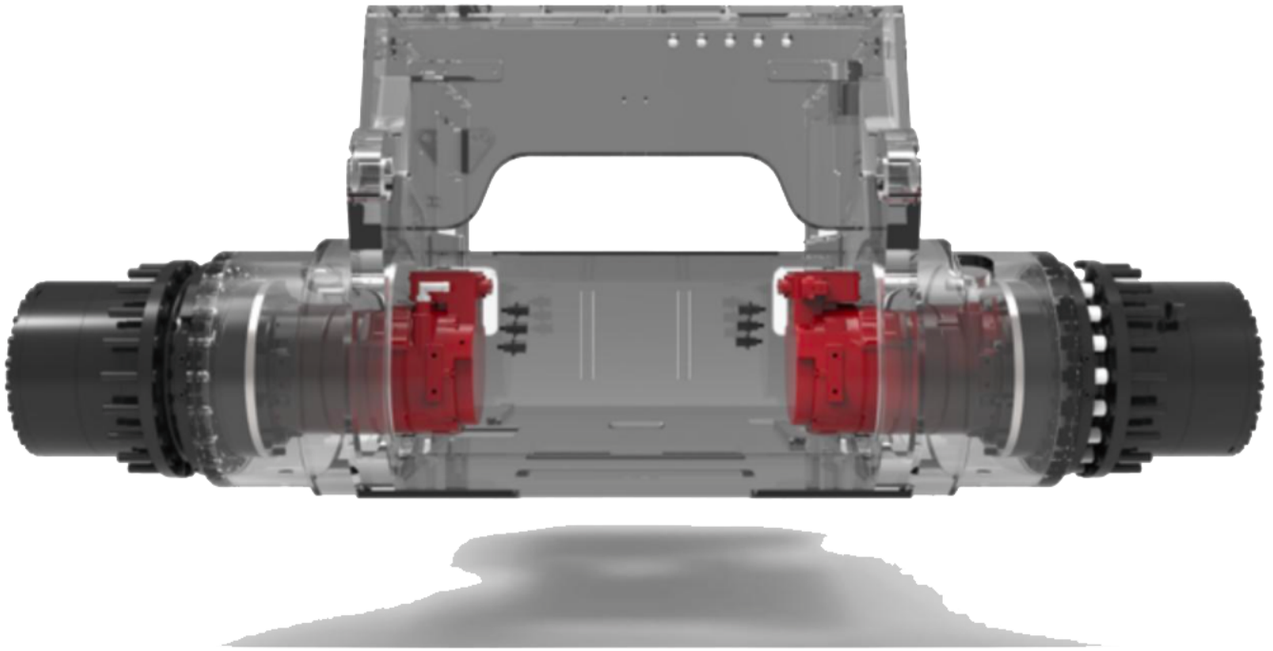
Equipped with heavy-duty, low-noise, wet brake imported axle box, stable and reliable performance, no maintenance, suitable for smelting, mining and other harsh working conditions with high intensity, large dust, frequent starting and braking;

High voltage permanent magnet synchronous drive motor + imported double wheel side drive. The high-voltage permanent magnet synchronous motor has the advantages of strong starting torque, high power density, flexible speed regulation, and strong performance; it can meet the requirements of different working conditions and reduce the driver's manipulation intensity;



16-20ton High voltage lithium battery
Electric counterbalanced forklift——Thermal management system

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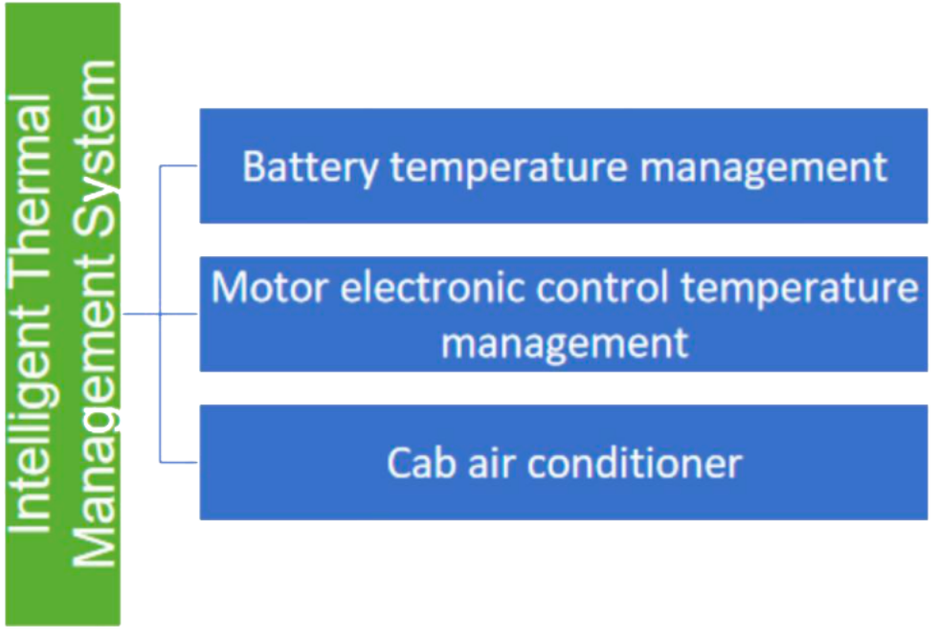
The intelligent thermal management system of the vehicle, which integrates battery temperature management, motor electronic control temperature management, and cab air conditioning, can perform effective temperature management according to the different thermal control requirements of vehicle-related components. For low temperature operating conditions, when the battery pack's self-heating cannot meet the demand, the thermal management system can actively heat up the battery pack to meet the vehicle operation requirements. Through the centralized utilization of thermal energy, the energy consumption of the whole vehicle can be significantly reduced and the battery life can be improved.



16-20ton High voltage lithium battery
Electric counterbalanced forklift——lithium battery

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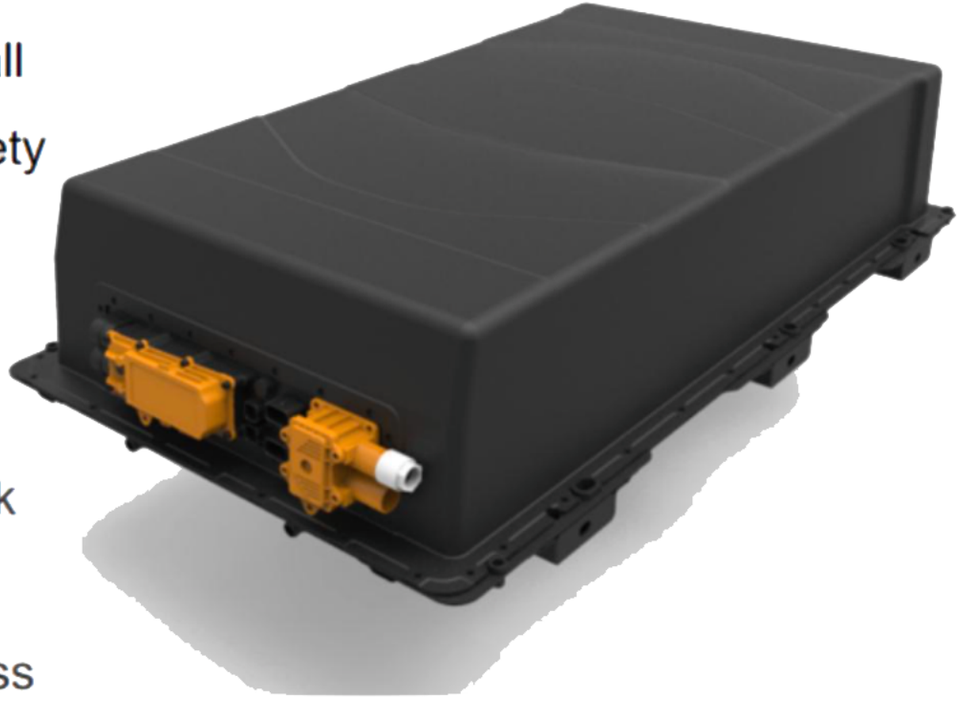
The original high-performance lithium iron phosphate battery of CATL is not a third-party pack product, and the quality is more guaranteed. The vehicle is equipped with 210kWh of electricity, and the energy density of the battery pack reaches more than 155Wh/kg. Each battery pack has undergone 273 rigorous tests and verifications, and all of them can be loaded into the vehicle after passing the standard. Safety such as battery liquid cooling, intelligent fire extinguishing system and active heating are standard device, which is safer to use. At the same time, the vehicle has a fast charging capability, and it can continue to work for 8 hours after charging for 2 hours. In addition, the battery pack has strong environmental adaptability and can be used without worry between -30°C and 60°C. The battery pack is designed with side access on both sides of the body, which can be directly replaced by a forklift, making maintenance more convenient and fast.



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Electric counterbalanced forklift——Hydraulic system

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The hydraulic system adopts a load-sensitive variable pump control system, which automatically adjusts the displacement of the oil pump according to the load, realizes high-precision flow control, and has significant energy saving and consumption reduction effects. Make the forklift lift faster, work more efficiently, and operate more flexibly. Equipped with a full hydraulic load sensing steering gear and a control loop with priority steering to ensure the vehicle's steering is more secure and reliable, and the steering is light and flexible.

The mast control adopts the electronic control technology of single handle centralized control, the mast fork control is precise, the joint action efficiency is high, and the operation is simple. The fork control has 8 swing control modes, which can control the swing fork action through buttons and switches on the integrated control handle in multiple modes, making handling faster and more efficient.

The fork moving hydraulic system (4 valves) can practice the following 8 swing fork actions:

① Two forks move to the left at the same time

② The two forks move to the right at the same time

③ The two forks move to the outside at the same time

④ The two forks move inward at the same time

⑤ The single left fork moves to the left

⑥ The single left fork moves to the right

⑦ Single right fork moves to the left

⑧ A single right fork moves to the right

electric forklift-Lithium battery

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Use lithium iron phosphate batteries. The best balance of economy, safety and performance has been achieved.

- Economical: LiFePO4 battery has good cycle performance, long life and low maintenance cost.

- Safety: LiFePO4 batteries have good thermal stability and are widely used in places with high safety requirements. The battery box is equipped with an automatic fire extinguishing device.

- Efficient: Extremely efficient charging speed.