A Series Pallet Truck

with capacity of 4,000 to 6,000kg

LI-ION TECHNOLOGY

INNOVATIVE **LITHIUM-ION**

EMCOL Bulldog

ISO14001
ISO14001:2015

ISO9001
ISO9001:2015

BULLDOG trucks conform to the European Safety Requirements.

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A SERIES LITHIUM BATTERY PALLET TRUCK

The A series lithium battery 4-6t pallet truck can be used for handling large and heavy cargoes in mold factories, motor factories, PV and other industries. The compact size and strong bearing capacity allow it to handle heavy cargoes in narrow passages.

Exterior

A large number of steel plate stamping and molding processes are used to enable a robust and durable product.

The series A pallet stacker adopts a professional industrial design of exterior. The vehicle has a smooth vivid profile and a fully ergonomic design, following the exterior design trend.

REVOLUTIONARY PERFORMANCE

The hydraulic pump station, switches, connectors and other key parts are all products of internationally renowned brands.

More innovation to revolutionize your work

AC walking motor featuring excellent acceleration performance, good climbing performance, low heat generation, no carbon brush and maintenance-free operation.

CATL lithium battery

CATL lithium battery as standard configuration to greatly improve work efficiency due to its rapid charging and plug-and-play feature.

CANBUS structure

The CANBUS structure makes the whole vehicle communication faster and more reliable.

CURTIS AC control system

The CURTIS AC control system performs accurate, stable and more efficient control.

Flexible turning

Several speed gears to make operation more convenient and flexible.

TACKLE THE JOB IN TOTAL COMFORT

The operating panel is designed with a USB charging port and a slot for placing a mobile phone so that the operator can conveniently charge the phone at any time.

The optimized design of the body structure enables the forklift to have an excellent operating view and to access the pallet more easily.

The battery box cover is designed with an air spring to allow the cover to be opened more easily.

It is designed to be compact with large round corners to improve suitability for narrow-space operation and with a wedge-shape chassis to provide higher passing ability

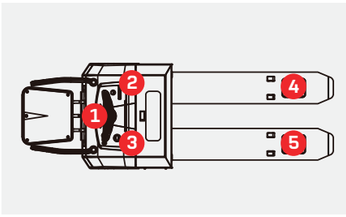
The floating drive suspension system allows the vehicle to run more stably and the operator to operate more comfortably.

Designed with shock-absorbing function, the pedal can greatly improve the ride comfort and alleviate the operator's fatigue due to long-time driving.

SOLID-MOUNTED STRENGTH

- The new drive boost design can effectively ensure the driving wheel load to prevent slippage.
- With a low noise and low vibration hydraulic power unit to enable stable and reliable lifting and descending.
- The battery is reliably fixed and the battery cover is supported by soft materials, so that the vibration and noise generated during the operation of the vehicle are reduced.
- The non-contact proximity switch has a long life and can work reliably.
- With an electronic lifting limit switch to avoid overflow from the hydraulic power unit, save more energy and protect the motor of the power unit.

The unique floating suspension system enable the driving wheel to contact the ground all the time. The booster cylinder equipped can adjust the road holding of the driving wheel along with the lifted loads to prevent slippage and ensure good stability of the forklift.



With the five-point low center of gravity design and a high-strength steel frame structure, the vehicle frame has a large residual load capacity and a long service life.

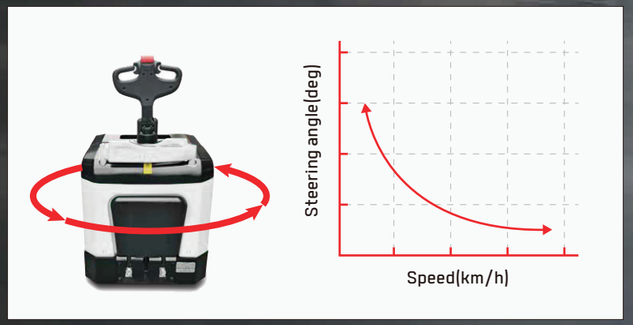
All wires and cables connected with a water-proof plug and connector, providing reliable protection and significantly improves the reliability of the electrical system.

Different optional prongs and prong lengths are applicable to handling of various pallets.

The stamped fork with higher strength and impact resistance, and guided fork prongs, further improve operation efficiency.

SAFETY FROM EVERY ANGLE

With the dual protection by the electronic lifting limit and a smart controller that are provided for the standard configuration, the impact caused by lifting to the top can be avoided, the operating motor can be effectively protected and the safety of the goods can be ensured.



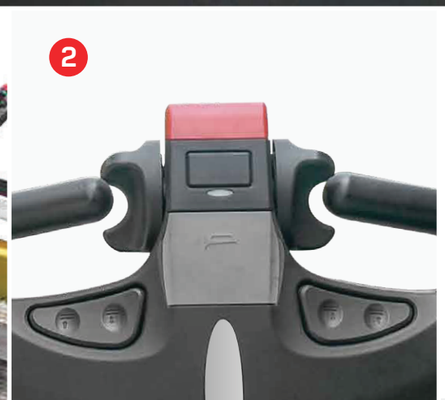
A standard feature of automatic speed decrease along with the steering angle increase is provided.

THREE FUNCTIONS

1. Release braking
2. Reversing braking
3. Emergency braking

Protect more

1. Anti-roll back function to ensure safe operation.
2. In the event of an emergency during driving, the red brake button on the head of the joystick can be pressed to effectively brake and prevent the driver from being injured.
3. The side guard is integrally molded, which can better protect the operator.



LI-ION TECHNOLOGY

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

6 YEARS WARRANTY

EASY TO MAINTENANCE

- The AC motor has no carbon brush and is maintenance-free, which greatly saves the cost of use.
- With a rear hood that can be completely opened to expose all components and facilitate the maintenance of the vehicle.
- With all spindles equipped with lubricated sleeves and oil cups to facilitate maintenance and a long service life.

The integrated power display, timing and fault self-diagnosis meter is convenient for maintenance.

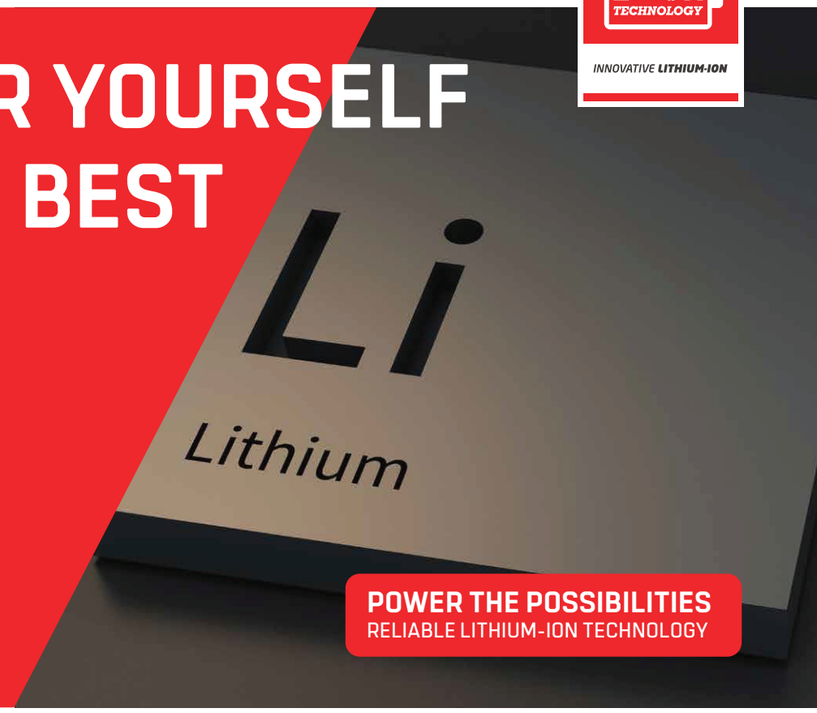
Features

Truck	Standard	Options
AC drive motor	●	
CURTIS AC controller	●	
CATL lithium battery	●	
Stand-on operation of the pedal and the side guard	●	
Double load wheels	●	
Fork length: 1300mm	●	
Fork interval: 710mm	●	
Electronic lifting limit	●	
USB charging port	●	
Electric steering	●	
A full range of prong lengths		○
A full range of prong intervals		○
Controls and instruments		
Emergency shut-off switch	●	
Color multi-function round meter	●	
CAN bus multi-function joystick	●	
Horn	●	
Smart module		○
Safety		
Beep		○
Lights		
Blue light		○
Alarm light		○

LITHIUM POWERED

LI-ION TECHNOLOGY
INNOVATIVE LITHIUM-ION

EMPOWER YOURSELF WITH THE BEST



V24 LITHIUM ION

POWER THE POSSIBILITIES
RELIABLE LITHIUM-ION TECHNOLOGY

LITHIUM BATTERY ADVANTAGES

Long service life
4000 full charging cycles with at least 80% residual capacity.

Cold area application
Li-Ion batteries maintain high performance at temperatures below freezing.

Return on investment
Add flexibility to your operation,cost-saving in the long term, increased efficiencies.

High safety and reliability
Intelligent battery management monitoring every important function, no emission of battery gasses.

Maintenance free
No topping up of water or checking acid levels.

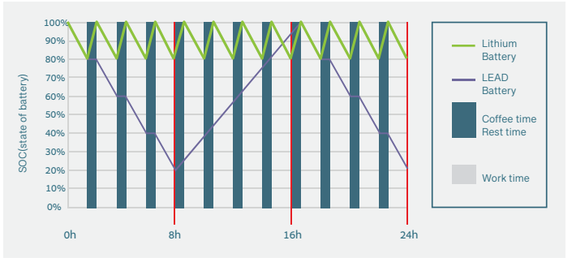
Opportunity charging
Full performance during several shifts thanks to effective interim charging.

High energy density
The high energy density of the Li-Ion battery ensures long working times and increases the high availability.

FEATURES & BENEFITS
THE BULLDOG DIFFERENCE

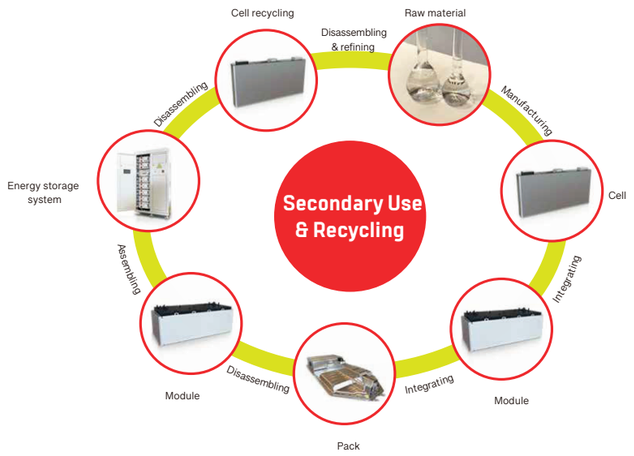
Efficiency

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℃-65℃
Discharge temperature:	-30℃-65℃
Storage environment temperature:	-30℃-60℃

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 BULLDOG BMS work to ensure the safety of the lithium battery?

BULLDOG BMS (battery management system) can monitors the cells at all time. As a result, BULLDOG 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

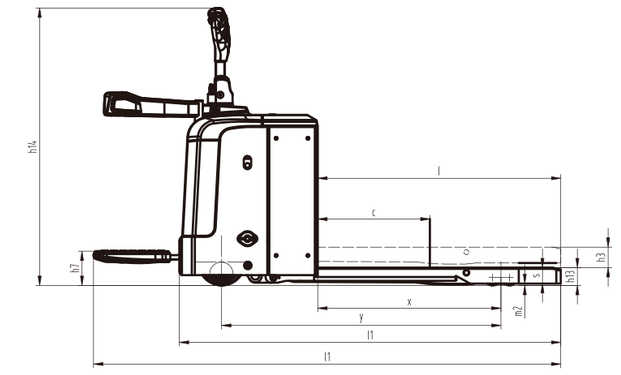
Equilibrium Management:
Equalization based on voltage mode
Equalization based on time mode
Equalization based on battery cell SOC
Active/passive equalization optional

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

Technical data

Distinguishing mark	1.1	Manufacturer		BULLDOG GROUP CO.,LTD.	
	1.2	Manufacturer's type designation		CBD40-AC2S-I	CBD60-AC2S-I
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Standing	Standing
	1.5	Rated capacity/rated load	Q (kg)	4000	6000
	1.6	Load centre distance	c (mm)	600	600
	1.9	Wheelbase	y (mm)	1445[1]	1445[1]
Weight	2.1	Service Weight	kg	1050	1100
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		PU	PU
	3.2	Tyre size, front		Φ250x100	Φ250x100
	3.3	Tyre size, rear		Φ82.5-114	Φ90-143
	3.4	Additional wheel (dimensions)		Φ125x50	Φ125-50
	3.5	Wheels, number front / rear (x = driven wheels)		1x+4/4	1x+4/4
	3.6	Tread, front	b10 (mm)	590	590
	3.7	Tread, rear	b11 (mm)	455	455
Dimensions	4.4	Lift	h3 (mm)	110	110
	4.15	Fork height,lowered	h13 (mm)	83	95
	4.19	Overall length	l1 (mm)	2040	2040
		Overall length(unfold the pedal)	l1 (mm)	2499	2499
	4.21	Overall width	b1(mm)	850	850
	4.22	Fork dimensions ISO 2331	s/e/l (mm)	73/230/1300	85/255/1300
	4.25	Distance between fork-arms	b5 (mm)	685	710
	4.32	Ground clearance,center of wheelbase	m2 (mm)	10	10
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	2461[2]	2461[2]
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	2375[2]	2375[2]
	4.35	Turning radius	Wa (mm)	1692[3]	1692[3]
Performance data	5.1	Travel speed,laden/unladen	km/h	5.0/5.0	5.0/5.0
	5.2	Lift speed,laden/unladen	m/s	0.030/0.040	0.030/0.040
	5.3	Lowering speed,laden/unladen	m/s	0.020/0.020	0.020/0.020
	5.8	Max.Gradeability,laden/unladen	%	4/10	4/10
Electric-engine	6.1	Drive motor rating S2 60 min	kW	3	3
	6.2	Lift motor rating at S3 15%	kW	3	3
	6.4	Battery voltage,rated capacity	V/Ah	24/250	24/250
		Battery voltage,rated capacity,Optional	V/Ah	/	/
	8.1	Type of drive control		AC	AC
	9.1	Manufacturer		CURTIS	CURTIS

Note: 1). When fork lowered,+49mm 2). When fork lowered,+25mm 3). When fork lowered,+48mm



h14=1484mm