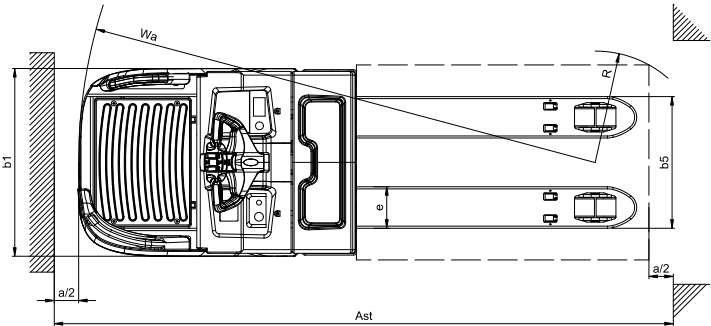
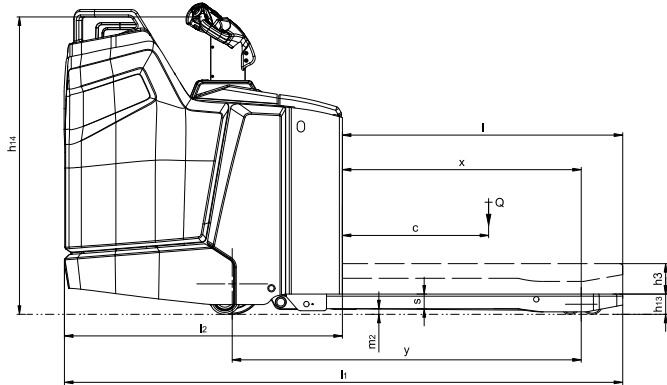


Technical data

Distinguishing mark	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.	
	1.2	Manufacturer's type designation	CBD20-XT1S-SISU	CBD30-XT1S-SISU
	1.3	Drive: electric (battery type, mains, ...), diesel, petrol, fuel gas	Electric	Electric
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	standing	standing
	1.5	Rated capacity/ rated load	2000	3000
Weight	1.6	Load centre distance	c (mm)	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	912/980
	1.9	Wheelbase	y (mm)	1364/1432
Tyres/chassis	2.1	Service weight	kg	705
	2.2	Axle loading, laden front/rear	kg	1060/1645
	2.3	Axle loading, unladen front/rear	kg	605/100
	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	PU	PU
	3.2	Tyre size, front	Ø250x80	Ø250x80
Dimensions	3.3	Tyre size, rear	Ø83x80	Ø83x80
	3.4	Additional wheels (dimensions)	Ø125x50	Ø125x50
	3.5	Wheels, number front/rear (x = driven wheels)	1x + 2/4	1x + 2/4
	3.6	Tread, front	b10 (mm)	505
	3.7	Tread, rear	b11 (mm)	370
	4.4	Lift	h3 (mm)	125
	4.9	Height drawbar in driving position min./max.	h14 (mm)	1220
	4.15	Height, lowered	h13 (mm)	85
	4.19	Overall length	l1 (mm)	2290
	4.20	Length to face of forks	l2 (mm)	1140
	4.21	Overall width	b1/b2 (mm)	770
	4.22	Fork dimensions DIN ISO 2331	s/e/l (mm)	60/170/1150
	4.25	Fork spread	bs (mm)	540
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	23
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	2490 ¹⁾
Performance data	5.1	Travel speed, laden/unladen	km/h	9.5/12.5
	5.2	Lift speed, laden/unladen	m/s	0.05/0.07
	5.3	Lowering speed, lade/unladen	m/s	0.06/0.06
	5.8	Max. gradeability, laden/unladen	%	10/16
	5.10	Service brake	Regenerative	Regenerative
Electric-engine	6.1	Drive motor rating S2 60 min	kW	2.2
	6.2	Lift motor rating at S3 15 %	kW	2.2
	6.4	Battery voltage/nominal capacity	[V]/[Ah] or kWh	48/80
	6.5	Battery weight	kg	60

Note: 1) According to VDI2198 standard+430mm. 2) According to VDI2198 standard+236mm.



Burger Hub- und Transportmittel GmbH
Distribution Deutschland

Junostraße 30 | 35745 Herborn-Burg

Telefon: +49 2772 9657-0

E-Mail: kontakt@bhtgmbh.de

www.bhtgmbh.de
www.hangcha-gabelstapler.de



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X SERIES
RIDER PALLET TRUCK

with capacity of 2,000 to 3,000kg

X SERIES

RIDER PALLET TRUCK

X series rider pallet truck are a new generation of products newly developed by Hangcha for warehousing and logistics applications. Using the advanced permanent magnet brushless drive technology and equipped with a new 48V system, the products have advanced performance, comfortable, safe and reliable operations and low use and maintenance costs, and are ideal tools for loading, unloading and handling palletized goods in warehouses, supermarkets, workshops and homes.



RUGGED ON THE OUTSIDE

- The X series rider pallet truck adopts a professional industrial design of exterior and a series family design. The truck has a smooth vivid profile and a fully ergonomic design, following the latest exterior design trend.
- Made of high-strength steel plates that are molded by stamping, the vehicle exterior is robust, durable and high-grade, and meets environmental protection requirements.

REVOLUTIONARY PERFORMANCE

- Regenerative brake and slope anti-slide function are offered by this truck.
- With high power drive motor, provides fast travel speed and good gradeability.
- The permanent magnet synchronous drive system has excellent performance and low energy consumption. The 48V power supply system has less heat generated.

CBD20-XT1S-SISU



9.5 km/h

Travel speed(2.0t laden)



10%

Gradeability(2.0t laden)

48V
V O L T A G E

WITH
PERMANENT MAGNET
SYNCHRONOUS DRIVE MOTOR



With the VCU control, the truck can be controlled accurately, stably and more efficiently.



The electric steering feature enables easier and more flexible operation.



The standing driving pedal with shock-absorbing design significantly improves standing driving comfort and reduces long-time driving fatigue.



The novelly developed tiller is compact and stylish.



Optimized designing structure to offer a good visibility and easy entrance of the pallet.

COMFORTABLE EXPERIENCE

- Displayed turtle speed function applied to move slowly and helps to stack goods in narrow spaces.
- The compact body and big rounded design provide an ideal operation in limited space, and the wedge designed chassis greatly increases the passing ability.
- Customer can choose different width of outside fork and length of forks to fit variable pallet.
- The new torsion bar - equipped additional wheel system enables the truck to drive stably.

MORE PROTECT

RELIABILITY

- Optimized mast which is stable, reliable and subject to a small force.
- The stamped fork with higher strength and impact resistance, and guided fork prongs, further improve operation efficiency.
- Using non-contact proximity switch, it can provides long life and reliable operation.
- Water-proof plugs and connectors applied to provide a reliable protection to electric system.
- The hydraulic power unit applied to provide low noise, low vibration, smooth lifting and landing reliable operation.

(Option)Lithium battery with the on-board charger(48V,20A)



With the low center of gravity design and a high-strength steel frame structure, the frame has a large residual load capacity.

The integral metal rear hood can withstand external impact.



SAFETY

- With three braking types: releasing brake, reversing brake and emergency brake, the driving safety has been ensured.
- The applied slope anti-slip function ensures the safety of the operation.
- Turning speed is automatically reduced when steering.
- The emergency button on the tiller head can effectively avoid the harm to the driver.
- Lifting limitation switch to offer protection to the loads from damaging.

Applicable slope anti-slip function



Decrease speed when turning



Emergency Button



Foot detection sensor trucks slows down or stops if operator's foot is detected outside of the platform contours (Option)



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

6 YEARS WARRANTY



MAINTENANCE

- Permanent magnet synchronous motor need no maintenance.
- The fault information can be checked directly via the interactive instruments instead of the manual.
- Rear cover can be completely open, operator can see all the components, so the maintenance is very convenient.
- All shafts installed lubricated shaft sleeve and oil cup, provide convenient maintenance and long service life.



Features

Truck	Standard	Options
48V permanent magnet synchronous drive motor	●	
Hydraulic power unit	●	
PU wheel	●	
1150mm fork length	●	
540mm outside fork width	●	
The ground clearance height of fork is 85mm	●	
Electronic lifting limitation	●	
Multi-function tiller	●	
48V/80Ah lithium battery [EVE]	●	
Additional wheels	●	
Dual load wheels	●	
USB plug	●	
Different length of forks		○
Different width of outside fork		○
Single load wheel		○
Key switch		○
48V/105Ah lithium battery [EVE]		○
48V/125Ah lithium battery [CATL]		○
Lithium battery(48V/80Ah,EVE) with the on-board charger(48V,20A)		○
Lithium battery(48V/105Ah,EVE) with the on-board charger(48V,20A)		○
Controls and instruments		
Electric steering	●	
Systech controller	●	
Interactive meter	●	
Non contact interlock switch	●	
Safety		
Emergency disconnect switch	●	
Horn	●	
PIN code access	●	
Turning deceleration	●	

LITHIUM POWERED

EMPOWER YOURSELF WITH THE BEST



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.



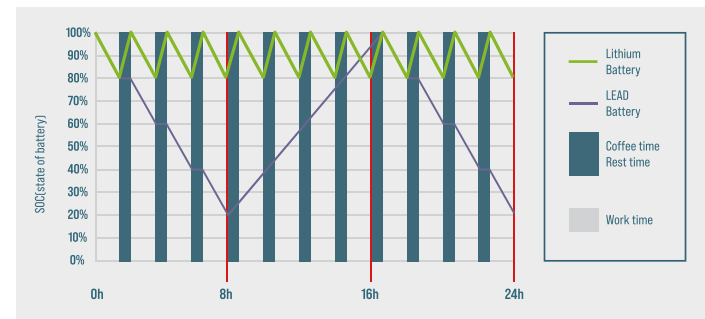
Opportunity charging

Full performance during several shifts thanks to effective interim charging.

FEATURES & BENEFITS THE HANGCHA DIFFERENCE

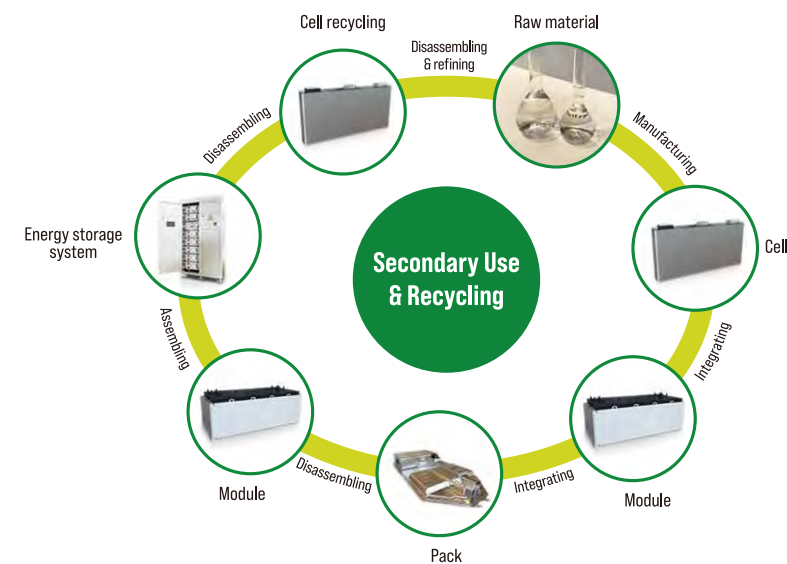
Efficiency

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