
CTD Series

Semi-electric stacker

Operation Manual



Foreword

The present original operating instructions are designed to provide sufficient instruction for the safe operation and maintenance of the stacker. Please be sure to read this operator manual carefully if you are operator or are in charge of the stacker, before you operate and service the stacker. Only in this way can you protect yourself and make the stacker play a role as much as possible.

Our stackers are subject to ongoing development, so maybe there are some differences between your product and the description in this manual. And the operator manual details will be different because of customer's special requirements.

If you have any questions ,please keep in touch with the sales department or let the dealer know.

Notes:

1. This manual is used for operation and maintenance , the detail parameters, size and specifications in context are only for reference , the real parameters will depend on sale files.
2. Manual pictures for reference only, the real car shall prevail, and shall not affect the manual use.
3. Manual pictures only sign for one of the models in this series models.

Catalog

1.Stacker Description	3
1.1 Application	3
1.2 Stacker Assemblies	4
1.3Dashboard	5
2.Performance data for standard stackers	6
3.Safety Guidelines	7
4.Battery Maintenance & Charging	8
4.1 Safety regulations for handling acid batteries	8
4.2 Charging the battery	9
4.3Battery maintenance	9
5.Stacker Maintenance	9
5.1 Operational safety and environmental protection	9
5.2 Maintenance Safety Regulations	10
5.3 Decommissioning the stacker	11
5.4 Safety checks to be performed	11
5.5Final de-commissioning, disposal	12
6.Troubleshooting	12

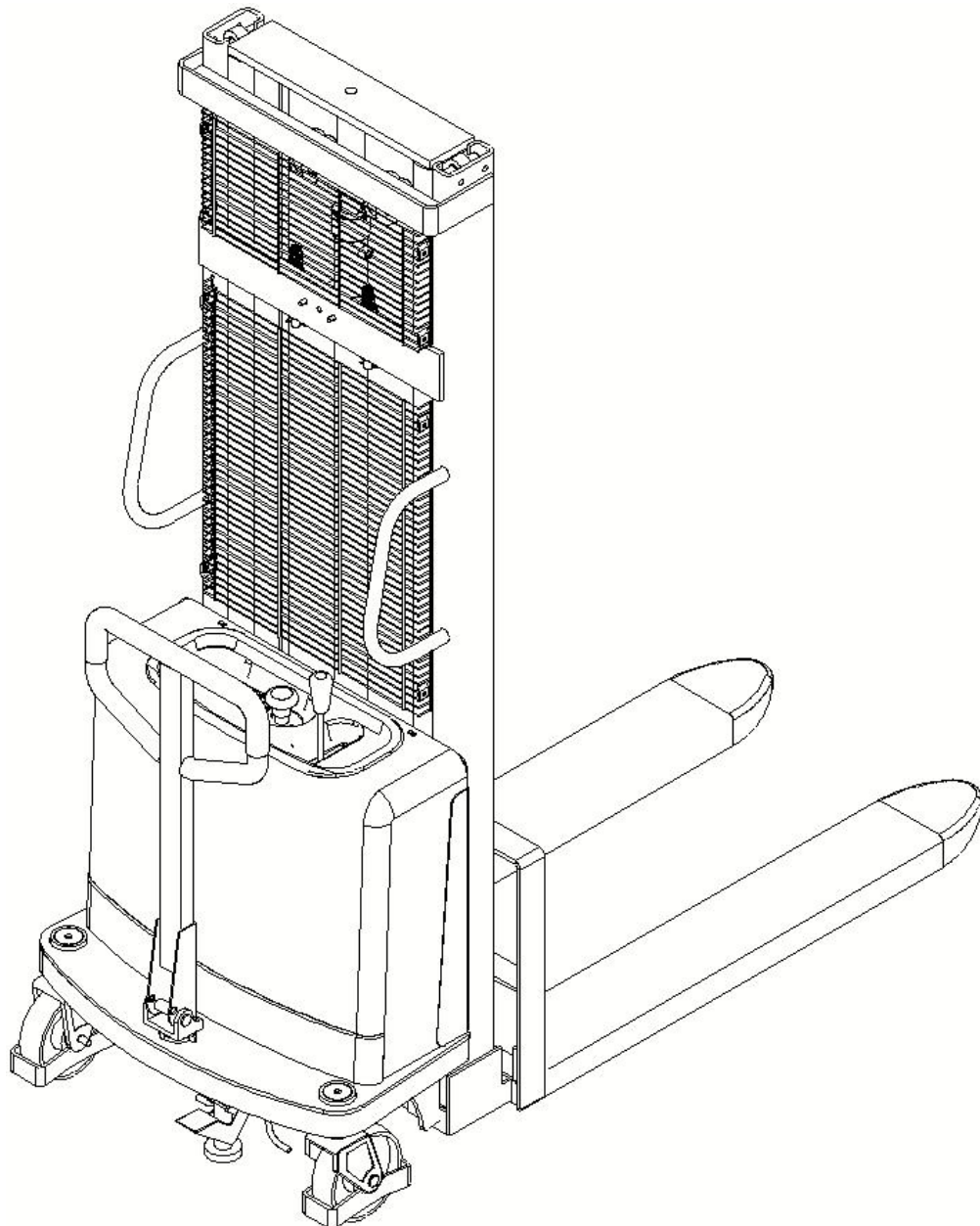
1. Stacker Description

1.1 Application

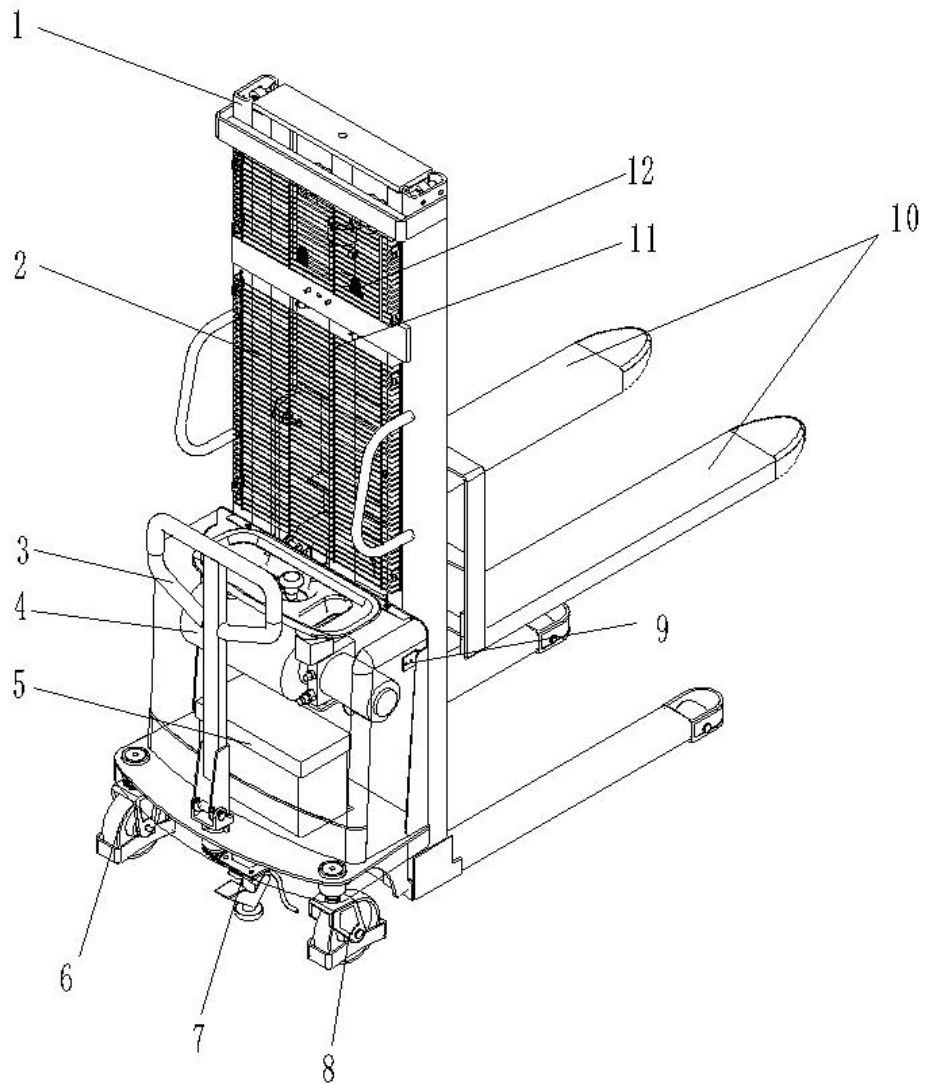
The stacker is designed for use on horizontal floors to lift and transport palletised goods. Open bottom pallets or roll cages can be lifted.

The capacity can be obtained from the data plate.

The capacity with respect to lift height and load center of gravity is indicated on the capacity plate.

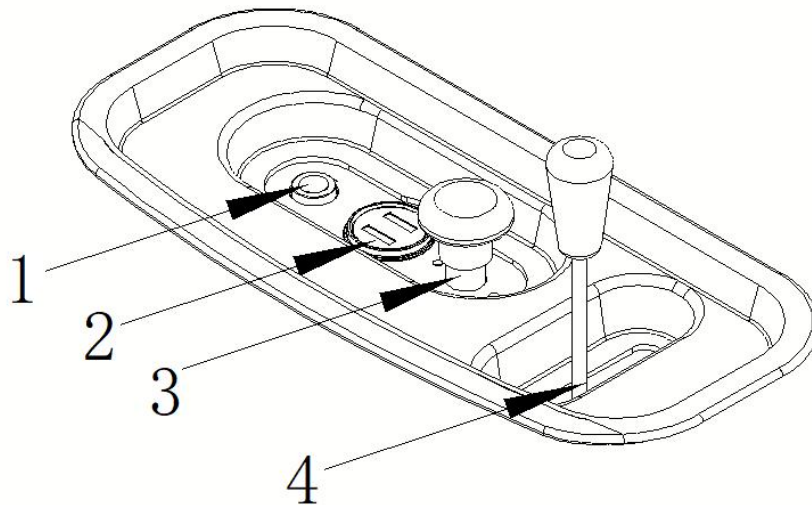


1.2 Stacker Assemblies



Item	Component	Item	Component
1	Chassis	7	Brake
2	Wire mesh	8	Balance wheel
3	Handle	9	Charging connector
4	Hydraulic Pump	10	Fork
5	Battery	11	Lift Cylinder
6	Driving wheel	12	Chain

1.3 Dashboard



Key switch(1)

Switches control current on and off. Removing the key prevents the stacker from being switched on by unauthorised personnel.

Battery discharge indicator(2)

The battery module can display the battery status, the elapsed time and the remaining battery capacity.

Emergency stop switch (3)

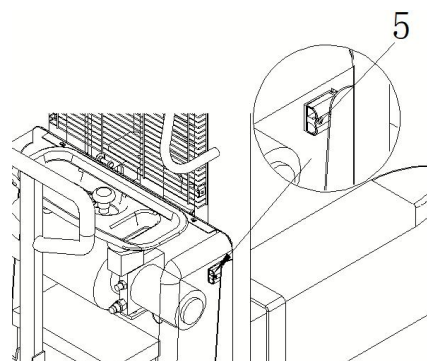
Press the emergency brake switch(2), all electrical functions are cut out and the stacker automatically brakes.

Control handle (4)

This handle(4) controls the raising or lowering of the fork carriage.

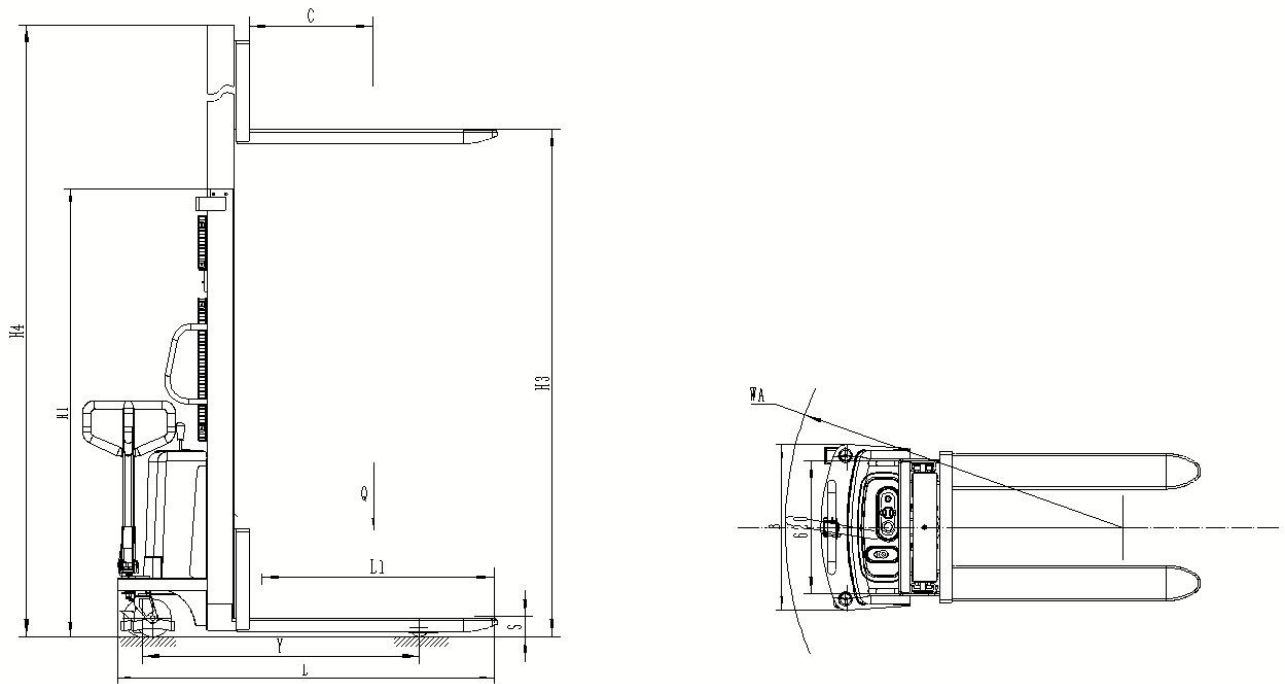
Charging connector (5)

This socket is a special socket, the plug at one end of the charger has been connected when it leaves the factory, and it can be charged by directly plugging it in.



2. Performance data and Dimensions for standard stackers

Series		SBD
Drive model		Manual
Operation mode		Walkie
Load capacity	Q(kg)	1500
Load center	C(mm)	500
Service weight	kg	420
Wheel		Rubebr
Fork lifting height	h3(mm)	1600/2000/2500/3000/3500
Overall height,lowered	h1(mm)	2080/1580/1830/2080/2350
Overall height,lifted	h4(mm)	2080/2520/3020/3520/4020
Fork height, lowered	S(mm)	≤90
Overall length	L(mm)	1877
Overall width	B(mm)	770
Fork length	L1(mm)	1150
Wheelbase	Y(mm)	1300
Outside fork width	B1(mm)	680
Inside width	B2(mm)	355
Outer turning radius	Wa(mm)	1625
Lifting speed, laden/ unladen	mm/s	143/83
Lowering speed, laden/ unladen	mm/s	97/81
Type of lifting motor		DC
power rating	Kw	1.6
Voltage	V	DC12V
rated capacity	Ah	120
Sound level at operator's ear	dB	< 70



Note:

The parameters of this model are standard model parameters, and the parameters of non-standard customized models are subject to technical drawings. The company continuously introduces new technologies, continuously optimizes existing models, and updates and improves colors, specifications, configurations, etc. without prior notice.

3. Safety Guidelines

These stackers may become hazardous if adequate maintenance is neglected. Therefore, adequate maintenance facilities, trained personnel and procedures should be provided.

Maintenance and inspection shall be performed in conformance with the following practices:

1. A scheduled planned maintenance, lubrication and inspection system should be followed.
2. Only qualified and authorized personnel shall be permitted to maintain, repair, adjust, and inspect stacker.
3. Before leaving the stacker:
 - Do not park the stacker on an incline.
 - Fully lower the load forks.
 - Press the emergency brake switch .
 - Set the key switch to the "OFF" position and remove the key.

4. Before starting to operate stacker:

- Be in operating position
- Place directional control in neutral
- Before operating stacker, check functions of lift systems, directional control, speed control, steering, warning devices and brakes.

5. Avoid fire hazards and have fire protection equipment present. Do not use open flame to check level, or for leakage of electrolyte and fluids or oil. Do not use open pans of fuel or flammable cleaning fluids for cleaning parts.

6. Brakes, steering mechanisms, control mechanisms, guards and safety devices shall be inspected regularly and maintained in legible condition.

7. Capacity, operation and maintenance instruction plates or decals shall be maintained in legible condition.

8. All parts of lift mechanisms shall be inspected to maintain them in safe operating condition.

9. All hydraulic systems shall be regularly inspected and maintained in conformance with good practice. Cylinders, valves and other similar parts shall be checked to assure that "drift" has not developed to the extent that it would create a hazard.

10. Stacker shall be kept in a clean condition to minimize fire hazards facilitate detection of loose or defective parts.

11. Modifications and additions which affect capacity and safe stacker operation shall not be performed by the customer or user without manufacturer's prior written approval. Capacity, operation and maintenance plates or decals shall be changed accordingly.

4. Battery Maintenance & Charging

4.1 Safety regulations for handling acid batteries

Park the stacker securely before carrying out any work on the batteries.

Maintenance personnel

Batteries may only be charged, serviced or replaced by trained personnel. The present operator manual and the manufacturer's instructions concerning batteries and charging stations must be observed when carrying out the work.

Fire protection

- Smoking and naked flames must be avoided when working with batteries.
- Wherever a stacker is parked for charging there shall be no inflammable material or operating fluids capable of creating sparks within 2 meters around the stacker.
- The area must be well ventilated.
- Fire protection equipment must be provided.

Protection against electric shock

- Battery has high voltage and energy.
- Do not bring short circuit.
- Do not approach tools to the two poles of the battery, which can cause the sparkle.

4.2 Charging the battery

Safety regulations for Charging the battery

- To charge the battery, the stacker must be parked in a closed and properly ventilated room.
- Do not place any metal objects on the battery.
- Before charging, check all cables and plug connections for visible signs of damage.
- Before start and finish charging to make sure power is turn OFF.
- It is essential to follow the safety regulations of the battery and charging station manufacturers.

4.3 Battery maintenance

Do not overuse battery

- If you use up the energy of battery till the forklift immovability, you will shorten its working hours.
- Shower for battery appears need for charge, please charge it quickly.

Battery maintenance

The battery cell covers must be kept dry and clean. The terminals and cable shoes must be clean, secure and have a light coating of dielectric grease. Batteries with non insulated terminals must be covered with a non slip insulation mat.

Battery storage

If batteries are taken out of service for a lengthy period they should be stored in the fully charged condition in a dry, frost-free room. To ensure the battery is always ready

for use a choice of charging methods can be made:

- a monthly equalizing charge as in point 4.2

5. Stacker Maintenance

5.1 Operational safety and environmental protection

- The servicing and inspection operations contained in this chapter must be performed in accordance with the intervals indicated in the servicing checklists.
- Any modification to the stacker assemblies, in particular the safety mechanisms, is

prohibited. The operational speeds of the stacker must not be changed under any circumstances.

- Only original spare parts have been certified by our quality assurance department. To ensure safe and reliable operation of the stacker, use only the manufacturer's spare parts. Used parts, oils and fuels must be disposed of in accordance with the relevant environmental protection regulations. For oil changes, contact the manufacturer's specialist department.
- Upon completion of inspection and servicing, carry out the activities listed in the "Recommissioning" section.

5.2 Maintenance Safety Regulations

Maintenance personnel

Stackers must only be serviced and maintained by the manufacturer's trained personnel.

The manufacturer's service department has field technicians specially trained for these tasks. We therefore recommend a maintenance contract with the manufacturer's local service center.

Lifting and jacking up

When a stacker is to be lifted, the lifting gear must only be secured to the points specially provided for this purpose.

When jacking up the stacker, take appropriate measures to prevent the stacker from slipping or tipping over (e.g. wedges, wooden blocks).

You may only work underneath a raised load handler if it is supported by a sufficiently strong chain.

Cleaning

Do not use flammable liquids to clean the stacker.

Prior to cleaning, all safety measures required to prevent sparking (e.g. through short circuits) must be taken. For battery-operated stackers, the battery connector must be removed.

Only weak suction or compressed air and non-conductive antistatic brushes may be used for cleaning electric or electronic assemblies.

If the stacker is to be cleaned with a water jet or a high-pressure cleaner, all electrical and electronic components must be carefully covered beforehand as moisture can cause malfunctions.

Do not clean with pressurised water.

After cleaning the stacker, carry out the activities detailed in the "Recommissioning" section.

Electrical System

Only suitably trained personnel may operate on the stacker's electrical system.

Before working on the electrical system, take all precautionary measures to avoid –

electric shocks.

For battery-operated stackers, also de-energise the stacker by removing the battery connector.

Welding

To avoid damaging electric or electronic components, remove these from the stacker before performing welding operations.

Settings

When repairing or replacing electric or electronic components or assemblies, always note the stacker-specific settings.

Tyres

The quality of tyres affects the stability and performance of the stacker. When replacing factory fitted tyres only used original manufacturer's spare parts, as otherwise the data plate specifications will not be kept.

When changing wheels and tyres, ensure that the stacker does not slew (e.g. when replacing wheels always left and right simultaneously).

5.3 Decommissioning the stacker

If the stacker is to be decommissioned for more than two months, e.g. For operational reasons, it must be parked in a frost-free and dry location and all necessary measures must be taken before, during and after decommissioning as described.

On decommissioning the stacker must be jacked up so that all the wheels are clear of the ground. This is the only way of ensuring that the wheels and wheel bearings are not damaged.

If the stacker is to be out of service for more than 6 months, further measures must be taken in consultation with the manufacturer's service department.

5.4 Safety checks to be performed

Carry out a safety check in accordance with national regulations. We have a special safety department with trained personnel to carry out such checks. The stacker must be inspected at least annually (refer to national regulations) or after any unusual event by a qualified inspector. The inspector shall assess the condition of the stacker from purely a safety viewpoint, without regard to operational or economic circumstances. The inspector shall be sufficiently instructed and experienced to be able to assess the condition of the stacker and the effectiveness of the safety mechanisms based on the technical regulations and principles governing the inspection of stackers.

A thorough test of the stacker must be undertaken with regard to its technical condition from a safety aspect. The stacker must also be examined for damage caused by possible improper use. A test report shall be provided. The test results must be kept for at least the next 2 inspections.

5.5 Final de-commissioning, disposal

Final, proper decommissioning or disposal of the stacker must be performed in accordance with the regulations of the country of application. In particular, regulations governing the disposal of batteries, fuels and electronic and electrical systems must be observed.

6. Troubleshooting

This chapter is designed to help the user identify and rectify basic faults or the results of incorrect operation. When locating a fault, proceed in the order shown in the table.

Fault	Possible cause	Action
Fork can't be lifted	<ul style="list-style-type: none">• Hydraulic oil level too low• Excessive load	<ul style="list-style-type: none">• Check the hydraulic oil level• Note maximum capacity (see data plate)
Pump can't work	<ul style="list-style-type: none">• The emergency switch was not turned on• The battery voltage is too low• The power cord connector is loose• Component damaged	<ul style="list-style-type: none">• Turn on the emergency switch• Battery charging• Tighten the connector• Replace with new components
Hydraulic oil leak	<ul style="list-style-type: none">• Cylinder element damaged	<ul style="list-style-type: none">• Replace with new components
Fork lowered automatically	<ul style="list-style-type: none">• Impure hydraulic oil prevents the release valve from closing tightly• Cylinder element damaged	<ul style="list-style-type: none">• Change hydraulic oil• Replace with new components
Battery can't be charged	<ul style="list-style-type: none">• Battery damaged• Charging connector is loose	<ul style="list-style-type: none">• Replace• Tighten

If the fault cannot be rectified after carrying out the remedial procedure, notify the manufacturer's service department, as any further troubleshooting can only be performed by specially trained and qualified service personnel.