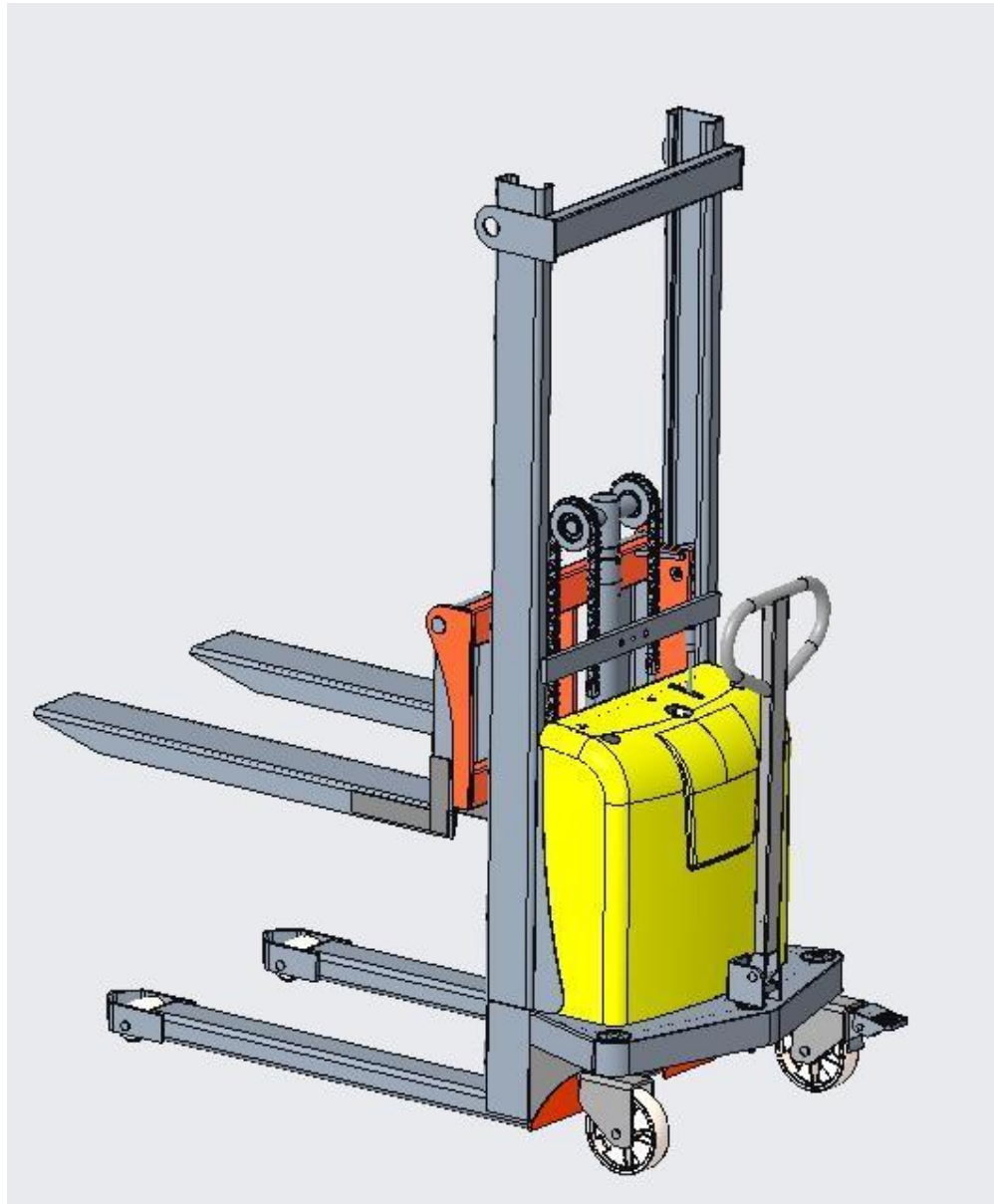


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## CTD SERIES SEMI-ELECTRIC STACKER



### **INSTRUCTION:**

NOTE: OWNER AND OPERATOR MUST READ AND UNDERSTAND THIS OPERATING INSTRUCTIONS BEFORE USE THIS STACKER.

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### 1. Preface

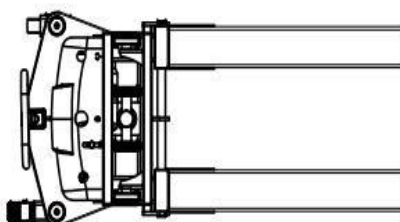
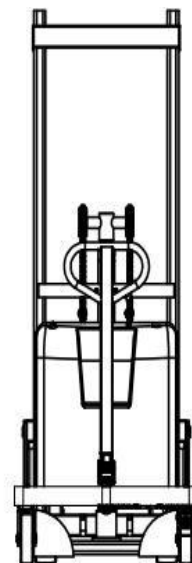
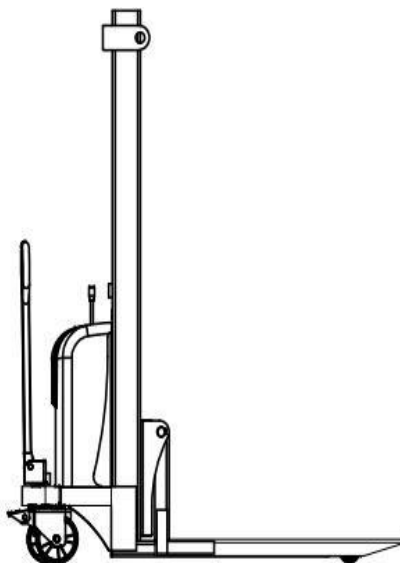
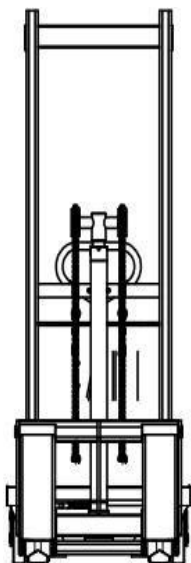
CTD semi-electric series stacker is a kind of lifting and loading equipment developed by our company by introducing and absorbing foreign advanced technology. This series of products use the battery as the energy source, the hydraulic integrated pump station as the power, the handle operation, the hydraulic lift, and the charging device attached to the vehicle. It has the advantages of compact structure, small size, simple operation, no pollution to the environment, convenient use and maintenance, etc. It is widely used for cargo stacking in warehouses, docks, machinery, textile, chemical, medical, food and other industries. It is a new and practical ideal tool.

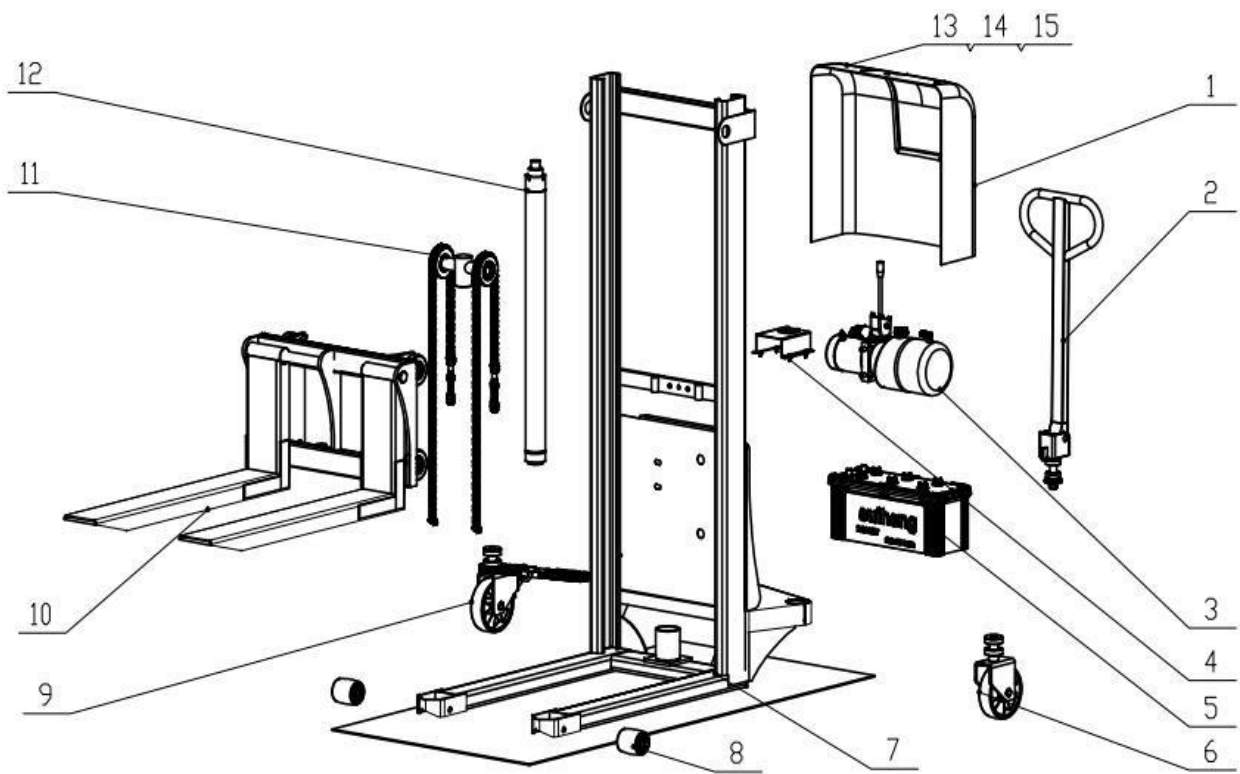
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2.

Vehicle

picture





1	The cover	9	Right rear wheel assembly
2	Handle steering assembly	10	Lifting frame assembly
3	Hydraulic system	11	Sprocket assembly
4	The charger	12	Cylinder assembly
5	Storage battery	13	Emergency stop switch assembly
6	Left rear wheel assembly	14	The electricity meter
7	Frame components	15	The indicator light
8	Front wheel assembly		

3.

### Main specifications

#### Sheet-01

OVERVIEW							
1.01	Model	Unit	CTD-B1.5T	CTD-B1.5T-II	CTD-B1.5T-II	CTD-B1.5T-II	CTD-B1.5T-II
1.02	Max. load capacity	kg	1500	1500	1500	1500	1500
1.03	Max. lifting height	mm	1600	2000	2500	3000	3500
1.04	Max. load at Max. lifting height	kg	1500	1500	1350	1215	1092
1.05	Min. height of fork	mm	90	90	90	90	90
1.06	Load center	mm	550	550	550	550	550
1.07	Turning radius	mm	1295	1295	1295	1295	1295
1.08	Operation Type		Pedestrian	Pedestrian	Pedestrian	Pedestrian	Pedestrian
1.09	Lifting Power		Battery	Battery	Battery	Battery	Battery
1.10	Travelling Power		Manual	Manual	Manual	Manual	Manual
1.11	Mast Type		1 stage mast	2 stage mast	2 stage mast	2 stage mast	2 stage mast
1.12	Net Weight	kg	300	341	360	378	439
DIMENSIONS							
2.01	Overall Length	mm	1840	1840	1840	1840	1840
2.02	Overall Width	mm	780	780	780	780	820
2.03	Overall Height,mast lowered	mm	2060	1550	1800	2050	2300
2.04	Overall Height,mast extended	mm	2060	2530	3030	3530	4030
2.05	Mast Dimensions(W*H*T)	mm					
2.06	Handle Height above ground	mm	1160	1160	1160	1160	1160
2.07	Handle Length	mm	85	85	85	85	85
2.08	Width of fork carriage	mm	715	715	715	715	815
2.09	Forks Type	mm	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
2.10	Fork Dimensions(L*W*H)	mm	1150*150*60	1150*150*60	1150*150*60	1150*150*60	1150*150*60
2.11	Forks Outside Width	mm	320-680	320-680	320-680	320-680	320-780
2.12	Leg Dimensions(L*W*H)	mm	980	980	980	980	980
2.13	Forks inside Width	mm	427/643	427/643	427/643	427/643	527/743
2.14	Min. height of leg above ground	mm	80	80	80	80	80
2.15	Fork Cover Leg above ground	mm	90	90	90	90	90
2.16	Min.ground clearance	mm	22	22	22	22	22
TYRES							

3.01	Wheel type		Nylon/PU	Nylon/PU	Nylon/PU	Nylon/PU	Nylon/PU
3.02	Axle center to fork face	mm	292	292	292	292	292
3.03	Wheel base	mm	1251	1251	1251	1251	1251
3.04	Tread,drive	mm	680	680	680	680	680
3.05	Tread,load	mm	550	550	550	550	650
3.06	Wheels number drive/load		2/2pcs	2/2pcs	2/2pcs	2/2pcs	2/2pcs
3.07	Tyre size,drive	mm	Φ180*50	Φ180*50	Φ180*50	Φ180*50	Φ180*50
3.08	Tyre size,load	mm	Φ80x70	Φ80x70	Φ80x70	Φ80x70	Φ80x90

#### Battery

4.01	Battery	V/Ah	12/85	12/85	12/85	12/85	12/85
4.02	Battery continues working time	H	4	4	4	4	4
4.03	Battery weight	kg	24	24	24	24	24
4.04	Charger	Input 100-265Vac 50/60Hz output 12V/15A					
4.05	Lifting motor	kw	12V/1.6KW	12V/1.6KW	12V/1.6KW	12V/1.6KW	12V/1.6KW

#### PERFORMANCE

5.01	Lifting speed ,with/without load	mm/s	67/182	67/182	67/182	67/182	67/182
5.02	Lowering speed ,with/without load	mm/s	Manual adjustment				
5.03	Service brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical

#### Sheet 02

#### OVERVIEW

1.01	Model	Unit	CTD-B2T	CTD-B2T-II	CTD-B2T-II	CTD-B2T-II	CTD-B2T-II
1.02	Max. load capacity	kg	2000	2000	2000	2000	2000
1.03	Max. lifting height	mm	1600	2000	2500	3000	3500
1.04	Max. load at Max. lifting height	kg	2000	2000	1600	1440	1250
1.05	Min. height of fork	mm	90	90	90	90	90
1.06	Load center	mm	550	550	550	550	550
1.07	Turning radius	mm	1295	1295	1295	1295	1295
1.08	Operation Type		Pedestrian	Pedestrian	Pedestrian	Pedestrian	Pedestrian
1.09	Lifting Power		Battery	Battery	Battery	Battery	Battery
1.10	Travelling Power		Manual	Manual	Manual	Manual	Manual
1.11	Mast Type		1 stage mast	2 stage mast	2 stage mast	2 stage mast	2 stage mast
1.12	Net Weight	kg	310	352	373	421	449

#### DIMENSIONS

2.01	Overall Length	mm	1840	1840	1840	1840	1840
2.02	Overall Width	mm	780	780	780	780	820
2.03	Overall Height,mast lowered	mm	2060	1550	1800	2050	2300
2.04	Overall Height,mast extended	mm	2060	2530	3030	3530	4030
2.05	Mast Dimensions(W*H*T)	mm					
2.06	Handle Height above ground	mm	1160	1160	1160	1160	1160
2.07	Handle Length	mm	85	85	85	85	85
2.08	Width of fork carriage	mm	715	715	715	715	815
2.09	Forks Type	mm	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
2.10	Fork Dimensions(L*W*H)	mm	1150*150*60	1150*150*60	1150*150*60	1150*150*60	1150*150*60
2.11	Forks Outside Width	mm	320-680	320-680	320-680	320-680	320-780
2.12	Leg Length	mm	980	980	980	980	980
2.13	Forks inside Width	mm	397/643	397/643	397/643	397/643	497/743
2.14	Min. height of leg above ground	mm	80	80	80	80	80
2.15	Fork Cover Leg above ground	mm	90	90	90	90	90
2.16	Min.ground clearance	mm	22	22	22	22	22

#### **TYRES**

3.01	Wheel type		Nylon/PU	Nylon/PU	Nylon/PU	Nylon/PU	Nylon/PU
3.02	Axle center to fork face	mm	292	292	292	292	292
3.03	Wheel base	mm	1251	1251	1251	1251	1251
3.04	Tread,drive	mm	680	680	680	680	680
3.05	Tread,load	mm	520	520	520	520	620
3.06	Wheels number drive/load		2/2pcs	2/2pcs	2/2pcs	2/2pcs	2/2pcs
3.07	Tyre size,drive	mm	Φ180*50	Φ180*50	Φ180*50	Φ180*50	Φ180*50
3.08	Tyre size,load	mm	Φ80x90	Φ80x90	Φ80x90	Φ80x90	Φ80x90

#### **BATTERY**

4.01	Battery	V/Ah	12/85	12/85	12/85	12/85	12/85
4.02	Battery continues working time	H	4	4	4	4	4
4.03	Battery weight	kg	24	24	24	24	24
4.04	Charger	Input 100-265Vac 50/60Hz output 12V/15A					
4.05	Lifting motor	kw	12V/1.6KW	12V/1.6KW	12V/1.6KW	12V/1.6KW	12V/1.6KW

#### **PERFORMANCE**

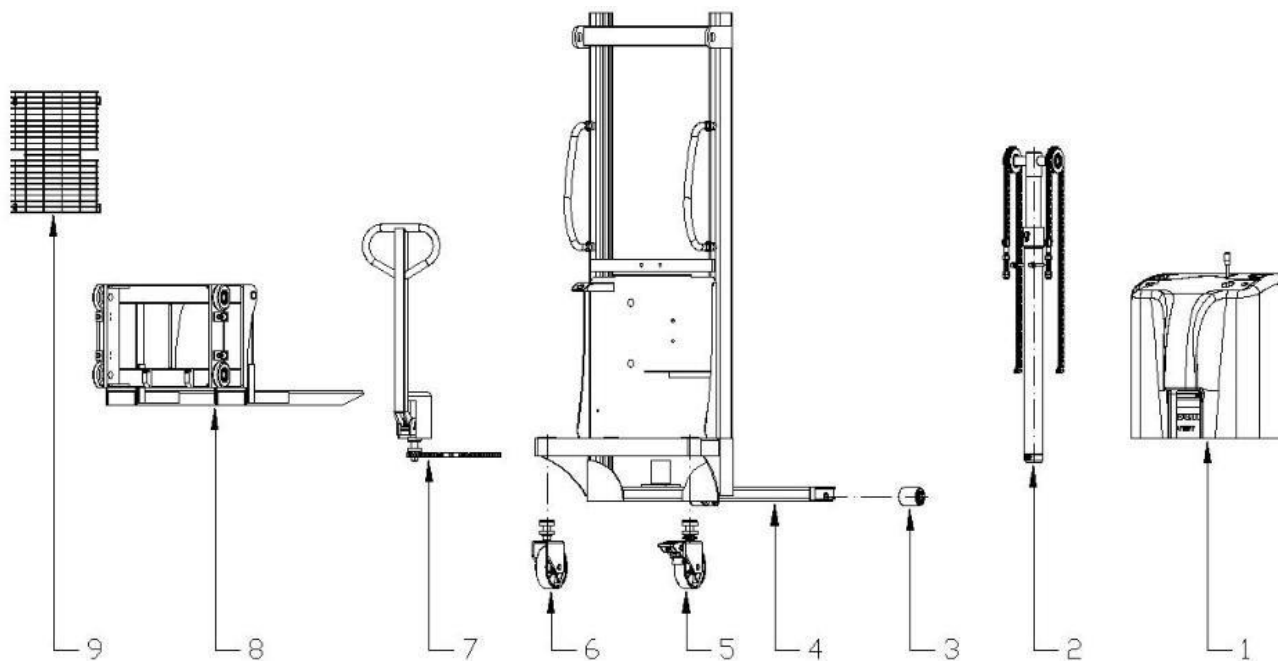
5.01	Lifting speed ,with/without load	mm/s	42/134	42/134	42/134	42/134	42/134
5.02	Lowering speed ,with/without load	mm/s	Manual adjustment				
5.03	Service brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical



4.

### Construction and operation

The stacker body is in the form of four fulcrum support of the gantry. The fork frame is a sliding rod structure. The main stress parts such as gantry and forks are made of high-quality steel by pressing and welding. Parts with high load-bearing capacity are reinforced with high-quality steel plates for durability. Each moving part is equipped with a rolling bearing pulley block. It can move up and down freely with very little resistance. When loading and unloading, the goods are handled smoothly, and the power transmission is carried out by oil cylinder + chain + rolling bearing pulley block. The overall structure is compact, the performance is reliable, the maintenance is convenient, and the turning radius is small, which can meet the requirements of stable and safe operation.



1. Electrical control unit

2. Lifting parts of oil cylinder

3. Front wheel parts

4. The leg and frame

5. Right rear wheel parts

6. Left rear wheel component

7. Steering parts

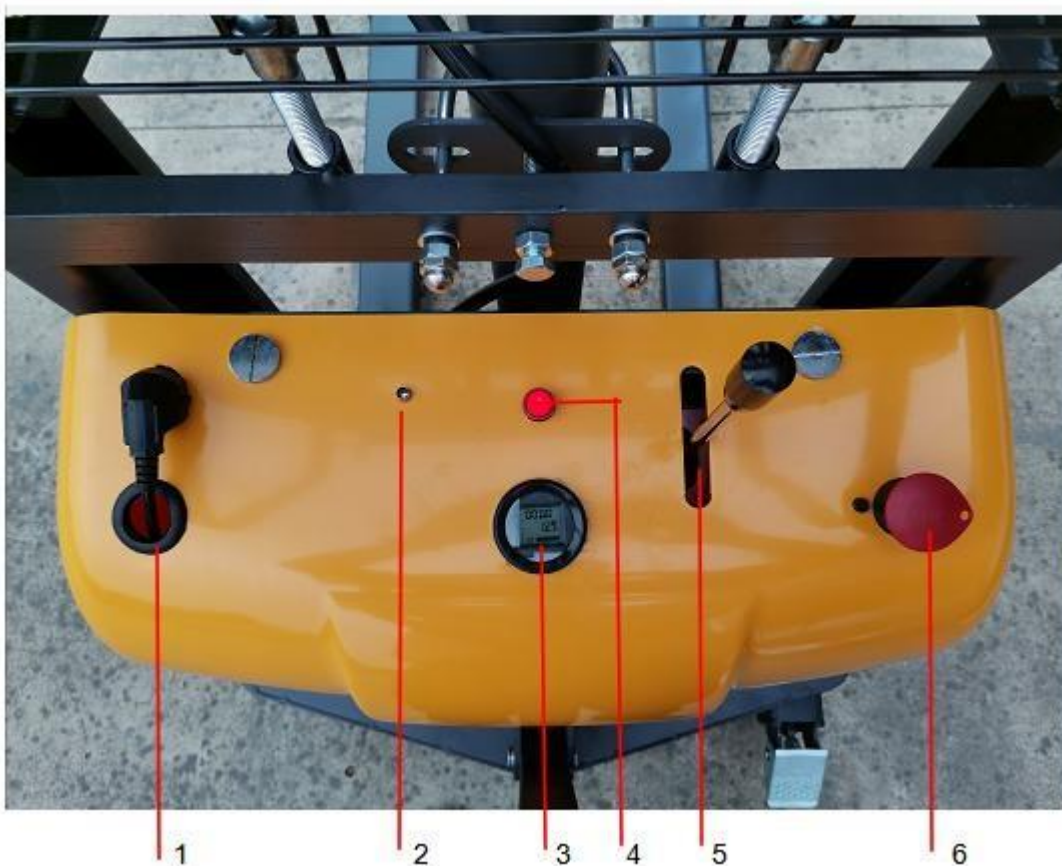
8. Hoisting and cargo fork parts

9. Defend Net

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## 5.Operation and precautions

1. Turn on the power switch (Big red light will turn on)and operate the handle to load and unload goods. Push the handle forward to lift the goods; Pull back the handle to lower the goods. When the handle is released, the control handle will automatically reset to the static state. During heavy load descent, the joystick must be pulled back slowly, otherwise the descent speed will be too fast due to pulling, and accidents or damage to goods will occur.
2. When moving the goods, please lower the goods to the ground at a height of about 120mm, pull it, but do not push it directly
3. When the electricity meter shows that the battery is 30% left(one space left), please charge. Pay attention to small LED lights.The red light is always on when charging, and the green light is always on when it is fully charged. If the yellow light flashes, there is a fault, please check the charger or battery.



1. Power cable for charging

2. Small LED lights

3. Electricity meter

4. Big LED lights

5. The handle

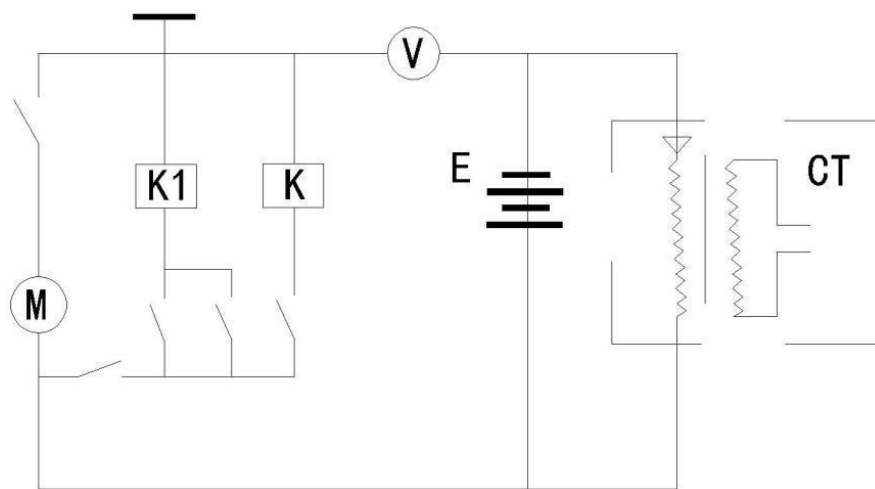
6. Power switch



7.

### Electricity system

The power system mainly provides power source for cargo lifting. Safe and reliable, easy to use. The system is composed of charger battery (1 \* 12V \* 120ah) - motor (DC12V / 1.6kw). During operation, the battery provides power source. During charging, disconnect the key switch SB2, and then plug the charger power line into the 220V / 50Hz AC line.



E. Battery

SB1 micro switch

M. oil pump motor

SB2 Key switch

CT. One way two pole plug

SB3 control button

T. Charger

SB4 control button

V. Pressure gauge

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8.

### **Battery of maintenance**

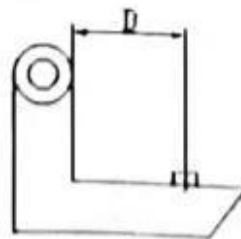
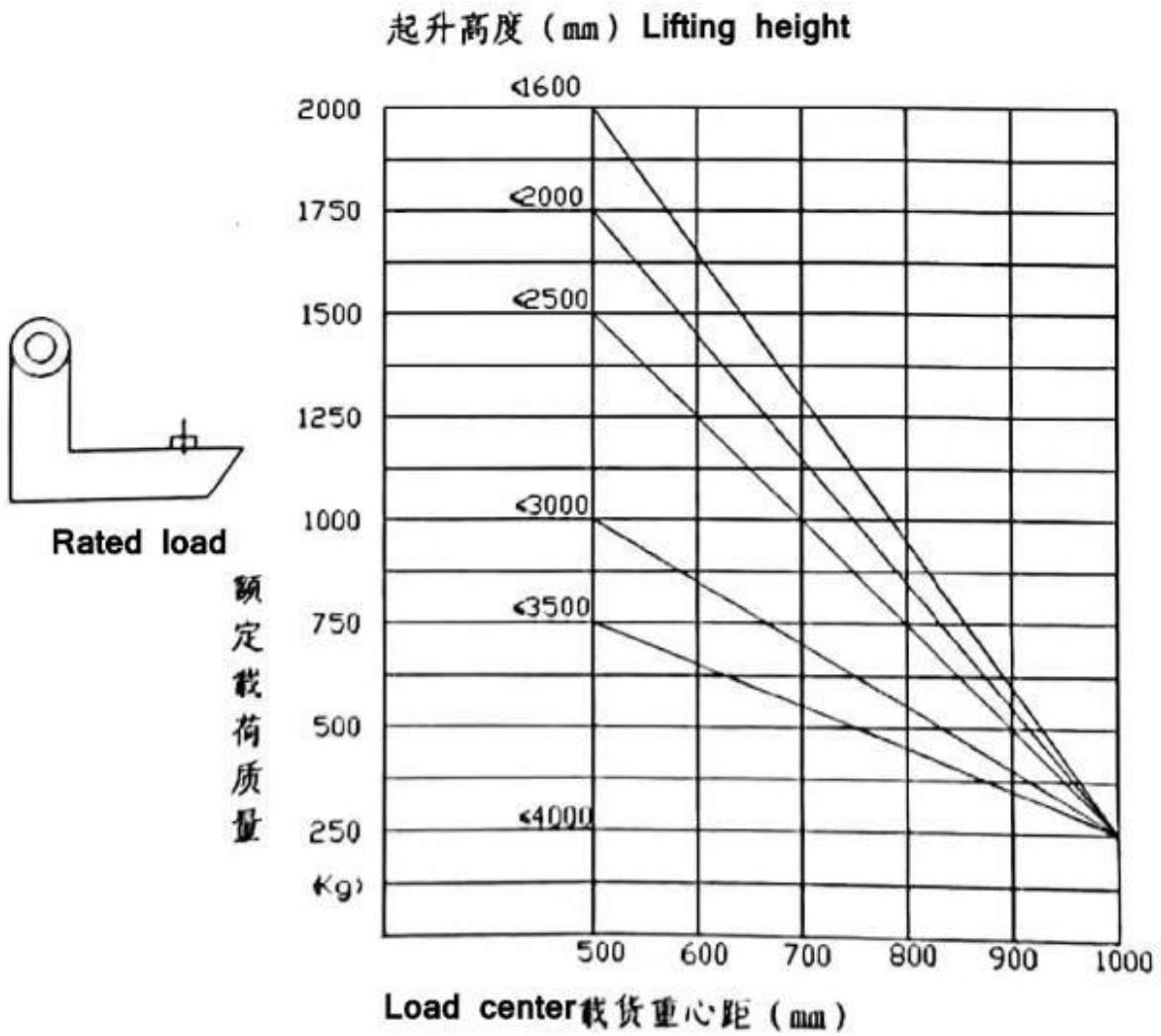
1. Before installing the battery, please read the operation manual for correct grounding and protection. During installation, please do not tilt or collide the battery to prevent electrolyte leakage and damage to the battery.
2. After the battery is firmly installed, connect the positive and negative electrodes correctly to prevent loosening and short circuit, and keep the battery clean.
3. The charging voltage of the battery shall be strictly limited to 13.8v-14.2v. Too high or too low will damage the battery.
4. The battery shall be kept away from fireworks and high temperature, ventilated and dry, and it is not allowed to charge in a sealed container.
5. Do not touch the battery with a conductor. Clean the battery with a warm cloth instead of a cloth.
6. If the battery is not used for a long time, it shall be used after charging.
7. When replacing the battery, select the battery with the same specification and model.
8. When in use, the battery capacity shall not be less than 1 / 4.
9. Please do not discard the used battery casually, which is clean and environmentally friendly.

### **9. Guide to safety operation**

1. The vehicle must be operated by professionals.
2. The vehicle must be maintained in good working condition and operated in a flat workplace.
3. The sign or warning sign shall not be removed or blurred and unrecognizable.
4. Personnel are not allowed to stand on or under the fork.
5. It is forbidden to use under excessive and partial load.
6. All wiring and parts shall not be disassembled or replaced. If they need to be repaired, they must be carried out by professional technicians.
7. In order to avoid accidents, this product needs regular maintenance.

10.

### Load drawing



## 11. Fault analysis and solution

problem	Cause analysis	Exclusion method
1. The lifting height of the fork fails to meet the requirements or does not descend after lifting.	<ol style="list-style-type: none"> <li>1. The directional control valve loses control.</li> <li>2. Insufficient hydraulic oil.</li> <li>3. Objects are deformed and moving parts are seriously damaged due to eccentric load or overload.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the directional control valve.</li> <li>2. Fill filtered hydraulic oil to 4 / 5 of the oil tank.</li> <li>3. Repair the object to make it rotate flexibly, and add lubricating oil to the moving parts.</li> </ol>
2. The power unit does not work.	<ol style="list-style-type: none"> <li>1. Poor contact or short circuit of wire terminal.</li> <li>2. Excessive battery discharge.</li> <li>3. The power unit is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the circuit and replace the damaged and invalid control elements.</li> <li>2. Charge the battery</li> <li>3. Replace the power unit.</li> </ol>
3. The hydraulic cylinder does not work (or does not carry).	<ol style="list-style-type: none"> <li>1. Power unit failure.</li> <li>2. The working pressure of power unit and directional control valve is adjusted too low.</li> <li>3. Oil pipe is wrongly connected.</li> <li>4. The directional control valve loses control and has large internal leakage.</li> <li>5. There is a lot of air in the hydraulic cylinder.</li> <li>6. The seal is damaged.</li> <li>7. Oil leakage of hydraulic cylinder welding and oil joint.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the power unit.</li> <li>2. Adjust the pressure according to the specified load.</li> <li>3. Correct the oil pipe connection mode.</li> <li>4. Replace the control valve.</li> <li>5. loosening bleed valve or hydraulic oil has no foam outflow.</li> <li>6. Replace the seal.</li> <li>7. Repair welding, refasten or replace sealant.</li> </ol>

If the above instructions are unclear or cannot be solved by yourself, please notify the supplier or call the company for inquiry.