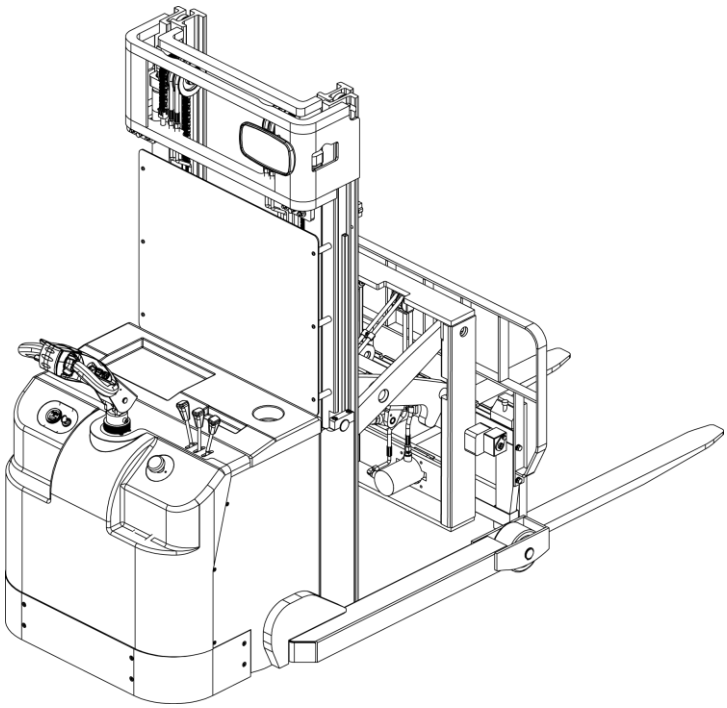
EKKO
Material Handling Equipment

# SPECIFICATION

Electric Reach Stacker

ER15L/ER15



# Introduction

In order to meet the needs of the national environmental protection request, To reduce industrial pollution and improve productivity, we design and produce new series of ER type(15 model ) Electric reach stacker, on the basis of absorption of the advantages of domestic & overseas Electric reach stacker ,they are especially suitable for cargo loading and unloading, handling, stacking, etc for food, bank, light textile, station, port, logistics and other enterprises. And it can apply widely if inter-grate with different fixture

The Electric reach stacker adopt wild-field lifting system ,EPS system , new AC controller .It is equipped high-quality Motors, Battery and high-power pumping stations .Therefor it is Superior performance ,Convenient operation .With Good view, Flexible steering ,Reliable braking ,Good power, Low noise, No pollution and Attractive appearance .

This manual describes the technical parameters of the Counterbalanced Electric Forklift , working principle and operation, maintenance, and other aspects. It can help operators use the Counterbalanced Electric Forklift more reasonable, make its maximum effect.

**It is hoped that Operator strictly abide the regulations and the precautions in this manual when using the machine, Carefully use them so that your Forklift can be in the best working condition for long period of time to maximize it's effectiveness. And create better economic benefits.**

# The Statement

Our company production model ER type(15 Model) Electric reach stacker is a special motor vehicle used in Factory ,Tourist attractions ,Amusement places which is specified by “special equipment safety supervision regulations”

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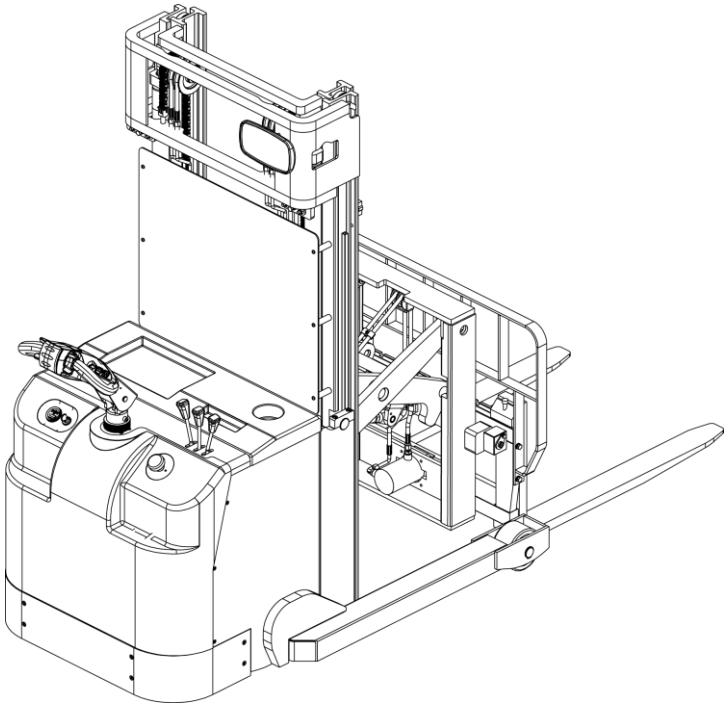
# 1.General Introduction



ER type (15 Model)Electric reach stacker adapts battery as the power source ,uses the AC motor as the power to drive the device through the gear transmission. The lifting and tilting of the fork is driven by the DC motor and Hydraulic drive to push the cylinder to lift the cargo, Moving forward & backward ,Tilting forward & backward .Because the device is using Power to travelling & lifting ,therefor it is Low effort, High efficiency, Stable cargo operation. Simple operation, Safe and reliable .Low noise & No pollution

The biggest advantage for Electric Scissor Reach Stacker is that it can lifting and transporting goods .and the goods can be move forward & backward by scissor during stacking goods . It overcome the inconvenience caused by fixed leg . At the same time, compared with the same type of counterbalanced forklift, It has small size and flexible operation, it is especially suitable for working in narrow passages.

The device is suitable for Stacking & Handling cargo on firm ,flat floors

The service environment：

a. Altitude does not exceed 47 inch；

b. Indoor room temperature at +5℃ to +40℃ ；

c. When environment temperature at +40℃,the relative humidity can’ t over 50%,at low temperature ,allow bigger relative humidity

d. Firm, Flat ground 。

e. It is forbidden to use this car in corrosive environment such as flammable and explosive or acid base.

## 2、Proper use

Please using the Counterbalanced electric forklift according to this specification.

The Stacker described in this manual is a self-controlled series of Stand on Electric Reach Stacker .With Multi-way valve control forklift lifting ,Forward backward tilting (The side shift can be increased according to customer requirements)etc function.

Improper use can cause personal injury or machine damage. Operators or operating companies need to ensure proper using, Make sure that the truck is operated only by personnel who are trained and authorized to use the truck.

The Truck needs to be used on a firm ,flat ,intact surface and suitable surface ,The truck is designed for indoor use at room temperature from+5° C to +40° C

Use under light load without using permanent barriers or pits ,It is forbidden to operate on the slope .During Operation ,The goods must be placed approximately at the center of the truck’s load center

Lifting or Carrying people is strictly prohibited ,If carried goods .The goods must fall on the lifting point 。

It is prohibited to use this truck on lifting or loading ramps。

The rated capacity is marked on the capacity label or nameplate. And the operator must pay attention to the warming signs and safety instructions

Operating lighting must be at lest 50LUX

Modification

Any modification that may affect the truck rated capacity, stability, or safety operations must be approved in advance by the Truck’s original manufacturer or Its authorized Manufacturer or its successor. This includes the effects of changes such as Braking ,steering ,Visibility and the addition of removable accessories.

After the manufacturer or its successor approves the modification or change ,The capacity name plate ,Label, identification marks, operation and maintenance manual must be changed accordingly

**Truck damage caused by not following Instruction will lose its warranty !**

# 3.Introduce of the product

3.1Product overview .

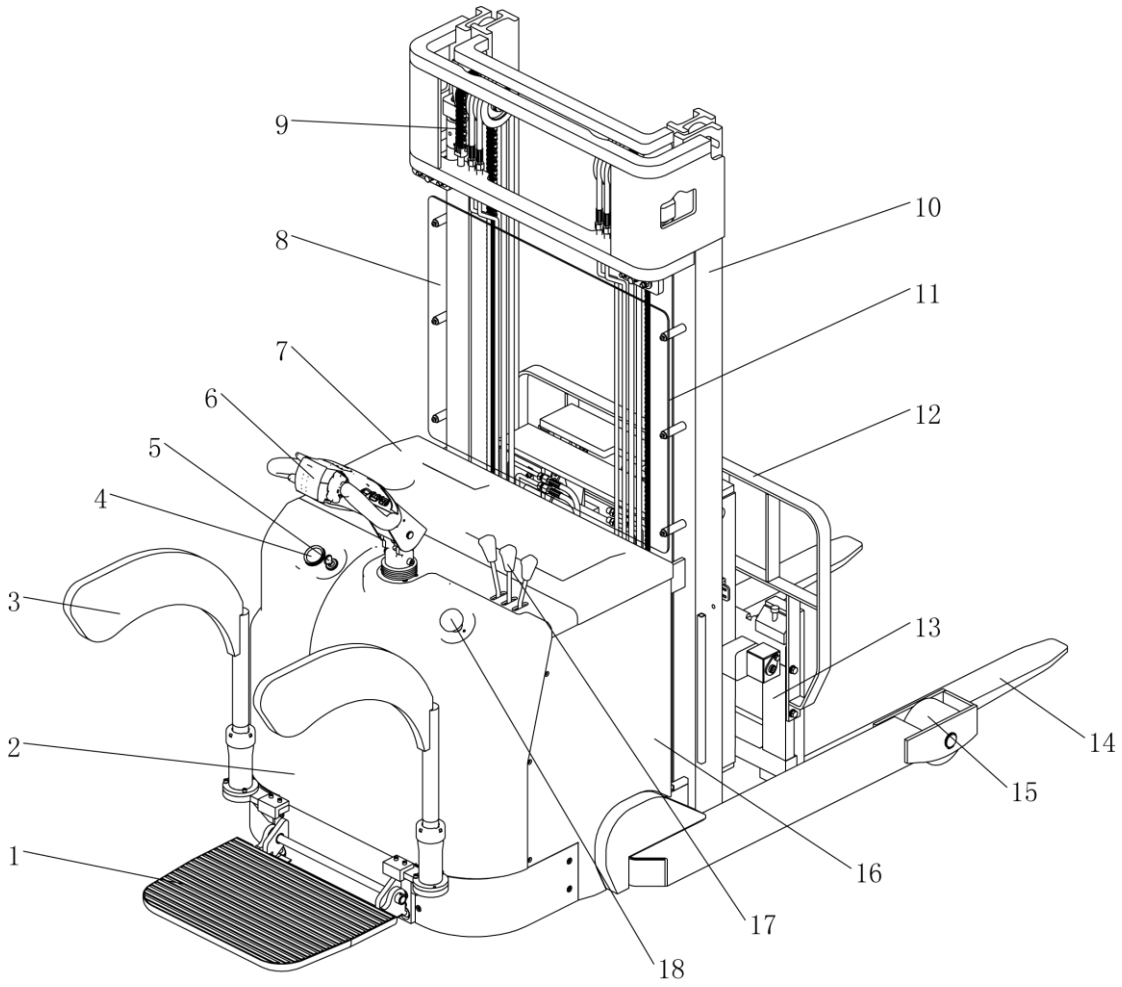



Figure 1 Subject classification

1.Pedal assembly 2.Cover 3.Protection arm assembly

4.Electricity meter 5.Key switch 6.Handle assembly

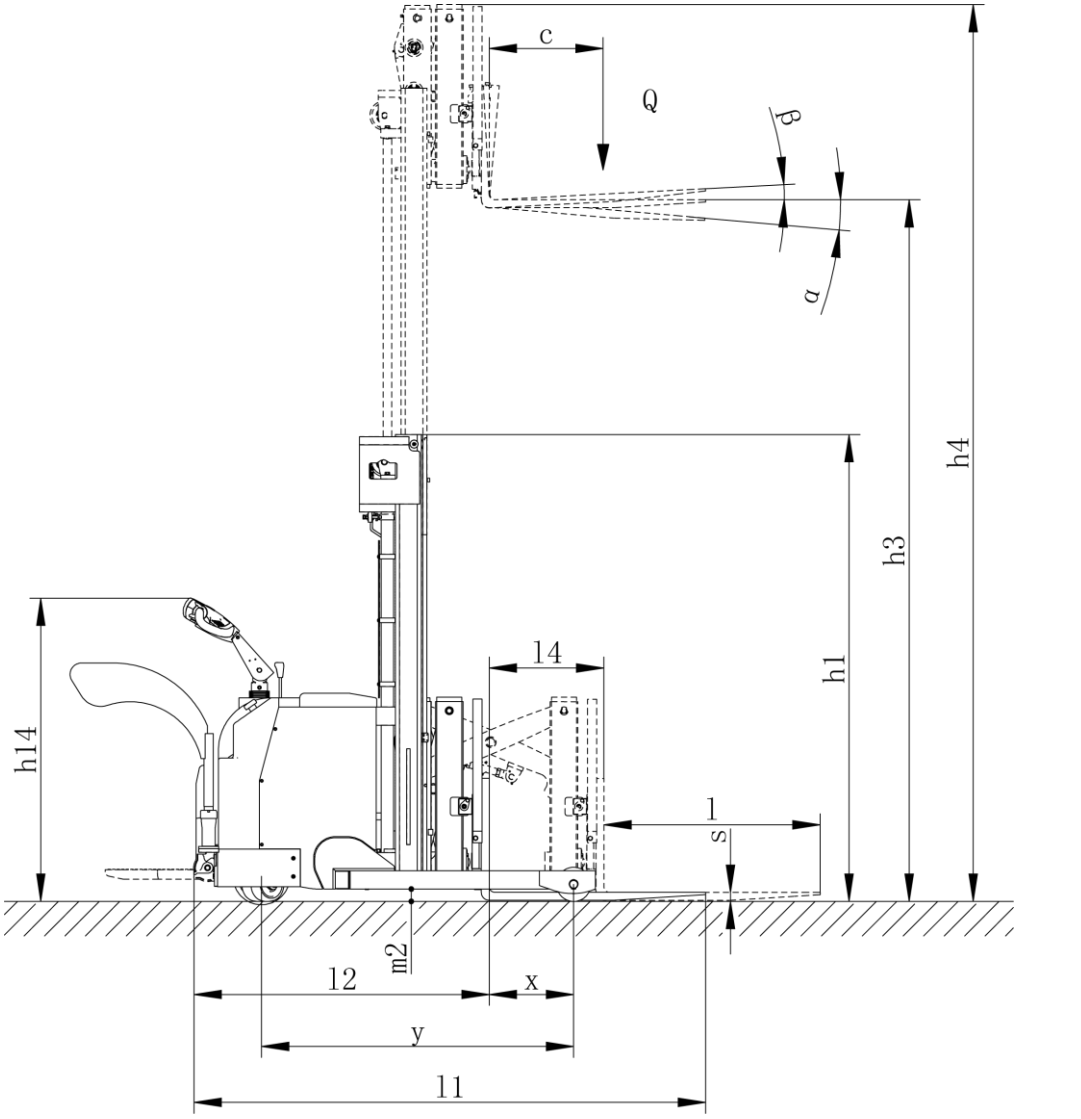
7.Battery cover 8.Protective barrier 9.Chain

10.Mast frame assembly 11.Lift cylinder 12.Protective barrier

13.Carriage assembly 14.Forged fork 15.Front wheel

16.Main frame welding 17.Operating rod 18.Emergency stop switch

## 3.2**Product Schematic diagram &** Parameter



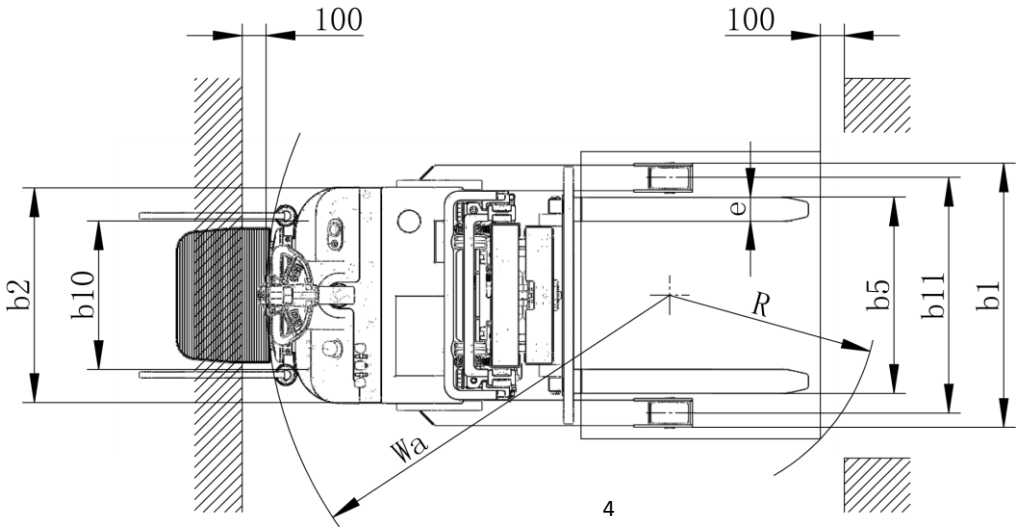



Figure 2 Technical Parameters

Table 2 Main technical parameters of the standard version

| | | | | |
|---|---|---|---|---|
| Characteristics | Model | | ER15L | ER15 |
| | Power | | electric | electric |
| | Operator type | | Seated-on | Seated-on |
| | Load capacity | Q (lb) | 3300 | 3300 |
| | Load center | c (in) | 24 | 24 |
| | Wheelbase | y (in) | 53.94 | 53.94 |
| Weights | Service weight(include | lb | 4555 | 4800 |
| Wheels/Tires | Wheels type | | PU | PU |
| | Driving wheel size | Φ×w(in) | Φ9.8×2.9 | Φ9.8×2.9 |
| | Bearing wheel size | Φ×w(in) | Φ5.9×3.2 | Φ5.9×3.2 |
| | Balance wheel size | Φ×w(in) | Φ5.8×2.3 | Φ5.8×2.3 |
| | Wheels, number from/rear(x=driven) | | 1，4/2 | 1，4/2 |
| | Front wheelbase | b10 (in) | 24.4 | 24.4 |
| | Rear wheelbase | b11 (in) | 38.7 | 38.7 |
| Dimensions | Mast tilt Forward/backward | α / β （°） | 3/5 | 3/5 |
| | Lowered mast height | h1 (in) | 90.5 | 86.6 |
| | Free lift height | h2 (in) | 0 | 53 |
| | Lift height | h3(in) | 138 | 177 |
| | Extended mast height | h4 (in) | 174 | 215.7 |
| | Lower fork height | h13 (in) | 1.6 | 1.6 |
| | Overall length | l1 (in) | 94（45.3） | 94（45.3） |
| | Body length | l2 (in) | 64.96 | 64.96 |
| | Overall width | b1/ b2(in) | 45.3 | 45.3 |
| | Fork size | s/e/l (in) | 1.4/3.9/45.3 | 1.4/3.9/45.3 |
| | Outer side fork width | b5 (in) | 7.9-25.59 | 7.9-25.59 |
| | Reach distance | l4(in) | 19.7 | 19.7 |
| | Ground clearance ,centre of | m2 (in) | 2.2 | 2.2 |
| | Aisle width for pallets 1000*1200 crossways | Ast (in) | 106.3 | 106.3 |
| | Aisle width for pallets 800*1200 lengthways | Ast (in) | 108.7 | 108.7 |
| | Turning radius | Wa (in) | 62.8 | 62.8 |
| Performance | Travel speed, Laden/unladen | (km/h) | 5.2/5.5 | 5.2/5.5 |

| | | | | |
|---|---|---|---|---|
| | Lifting speed Laden/unladen | (mm/s) | 110/180 | 110/180 |
| | Lowering speed Laden/unladen | (mm/s) | 140/150 | 140/150 |
| | Reach speed Laden/unladen | (mm/s) | 150/160 | 150/160 |
| | Max Climbing ability ,laden/unladen | (%) | 4/8 | 4/8 |
| | Service brake | | Electromagnetic | Electromagnetic |
| Drive | Driving motor | (kW) | 2.5 | 2.5 |
| | Lifting Motor | (kW) | 3 | 3 |
| | Battery Voltage/Capacity | (V/Ah) | 24/350 | 24/350 |
| | Battery weight（±5%） | (kg) | 240 | 240 |
| Others | Type of drive unit | | CURTIS AC | CURTIS AC |
| | Sound pressure level at the | (dB(A)) | ＜70 | ＜70 |

## 3.3Safety device and warning label description

A. warning label

B. It is forbidden to stand between the mast and the frame

C. It is forbidden to stand on /off the fork

D. Four kinds of mis operations are prohibited

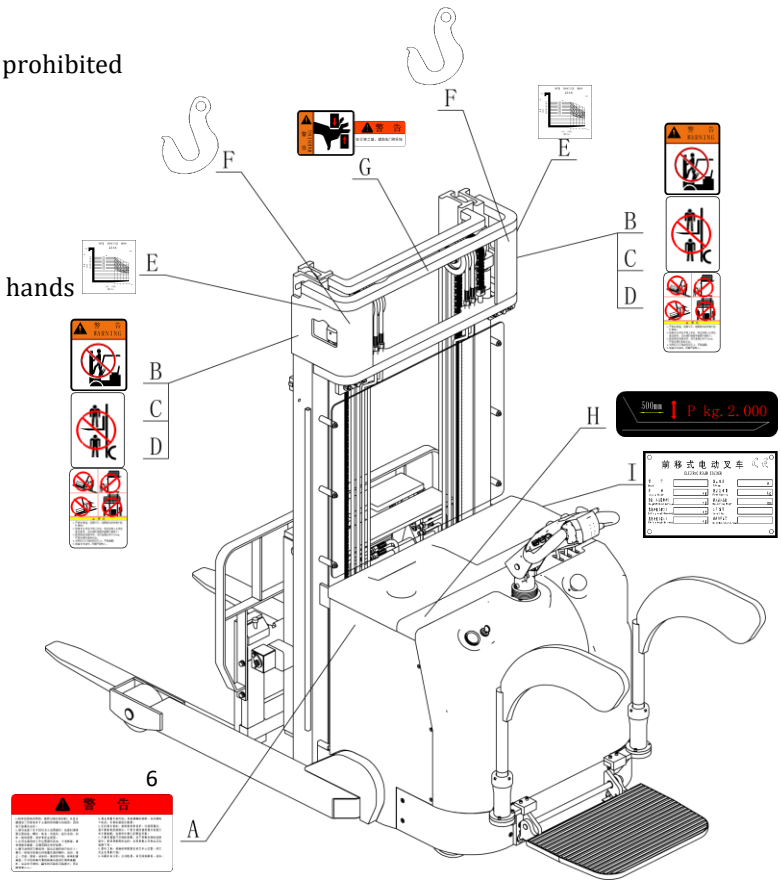
E. Loading capacity graph

F. Lifting position

G. Warning be careful to pinch your hands

H. Loading capacity label

I. Nameplate



3.4Nameplate


Figue4 Nameplate

# 4.Safety Caution

**<u>Please don't</u>**

- **When travel outdoor, The stacking operation makes the lifting height of the cargo higher than the lifting point**
- **Place the foot or hand under or into the lifting mechanism**
- **Allow Non-Operators to stand in front of or behind the truck during moving or lifting / lowering**
- **Overload**
- **Put your foot on the front of the wheel may cause injury**
- **When lifting person,they may fall and cause serious injury**
- **Push and pull cargo**
- **Use the car on the slope**
- **Use the car without Shielding panel**
- **Side load or tail load , The cargo must be evenly distributed on the fork**
- **Use this car to load unstable ,unbalanced cargo**
- **Use this car without the manufacturer's written consent**

- **The uplifted cargo will become unstable because of wind .Don't lift the cargo in windy condition**

Observing different ground condition during driving .The cargo may fall down or the car may lose control ,Please check the loading situation frequently, If the cargo becomes unstable .Stop the operation of the truck immediately . When the cargo slide or slide off the truck, Stop the car by pressing emergency stop switch .Please refer to Chapter 6 for any Forklift Trouble .Maintain according to regular inspection. The forklift is not waterproof, Please use it in dry environment. Continuous operation for a long time may damage the power box ,please stop operating when Hydraulic oil temperature is too high .

- **The operator should put on safety shoes when operating the forklift**
- **The car is suitable for indoor use in temperature from +5° C to 40° C**
- **Operating lighting must be at least 50LUX**
- **Don□t use the car on the slope**
- **In order to prevent sudden movement of the car when the car is not operated (such as caused by others),turn off the car power and remove the key when not operating**

# 5.Test run,Transportation,Outage

## 5.1Test run

Table 3 Test data

| | |
|---|---|
| Model | ER15 |
| Packing weight（lbs） | 5269 |
| Lifting height（inch） | 118 |
| Size（inch） | 88*44*80 |

After receiving our new forklift or when it needs to be retest please with process with following steps before (the first )operation of the forklift :

- Check if all parts are included .and there is no damage
- Battery installation and charging (refer to Chapter 9)
- Carry out daily inspection and machine function inspection

## 5.2Lifting & Transportation

Remove the cargo during transportation ,Lowered the fork to the lowest position And according to Figure 5 Safety fixed the car with special lifting equipment

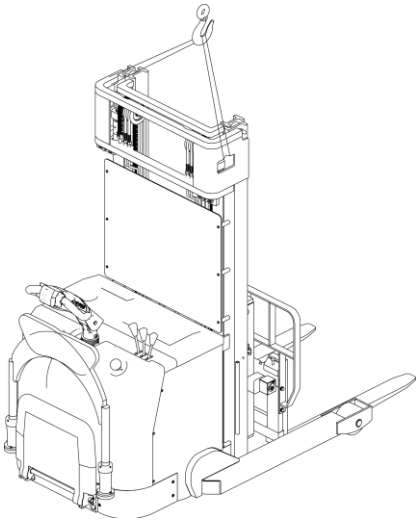


Fig 5 Lifting point

**Lifting**

**Use Special Crane and lifting equipment**

**Don't stand under shaking cargo**

**Don't enter the dangerous area when rising**

Parking the truck safely， and bind the truck as figure 5 Shows

Lifting the truck to the destination ,Before Moving lifting equipment please safety Fixed the car ,

The rope point can referred to figure 6

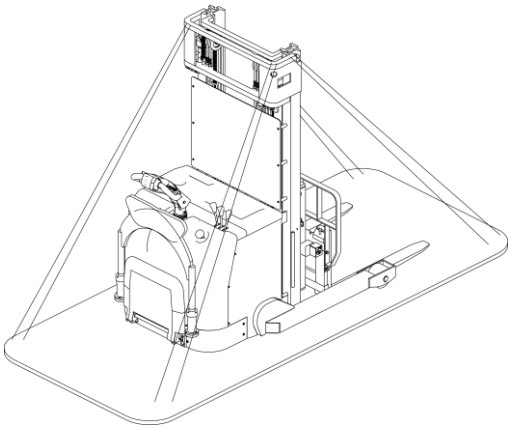


Fig 6 Fixed point

**Transportation**

**The Truck should be firmly fixed on the truck during transportation**

Lowered fork and parking the truck safety

As figure 6 shows Use the special binding belt to fix the tow big ribs of the car .And fixed other side on the carrier

## 5.3Outage

When Storage remove the cargo and lowered the fork to lowest position. Grease all lubrication points mentioned in this manual (check regularly)to prevent rust and dust. Remove the battery and check the truck to ensure no extrusion during storage.

When the car finally out of service ,send the car to designated recycling company .According to regulations ,Oil, Batteries and electronic components must be recycled .

# 6.Routine Inspection

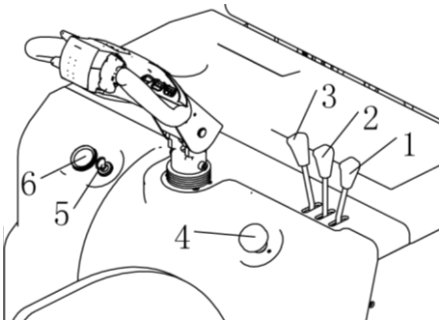
This Chapter Describes check the car before using

Routine inspection can effectively find out the defect or error of this car, The following points should be checked before operation.

## Remove the cargo ,Lowered the fork. Please don't use the car if there is any Problem.

- Check for scratches ,Deformation .or Cracks
- Check if the cylinder leaks of oil
- check running condition of the car
- Check if the chain or roller damage or corrosion
- Check if the wheels can move smoothly
- Press the emergency stop button to check the emergency brake function
- Move the multi-way valve operating handle to check the lifting function, tilt function and forward movement function of the forklift
- Check the Buzzer
- Check if the display is showing properly
- Check if the handle switch work normally
- Check that all bolts and nuts are tightened
- Check the function of Key switch
- Check speed limit switch
- Visually Check for any damaged tube or wires
- If the car with Protective barrier .Check for damage and correct installation.

# 7. The Schematic diagram of Operating Mechanism



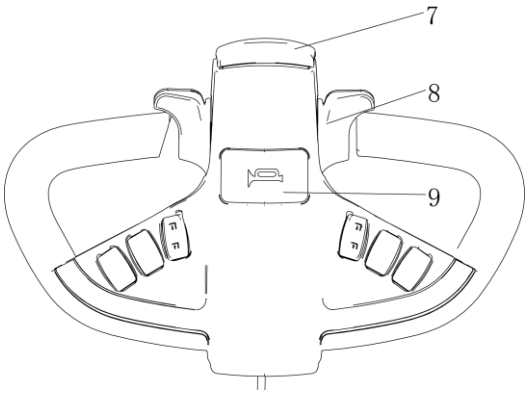




Figure7 Operating console

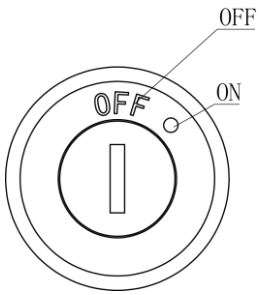



Fig 8 Key Switch

# 8.Operating specification

**Please follow the warning and safety instructions before operating the car (see as chapter 4)**

**Please Ensure that cargo or other equipment will not lead to poor visibility before operating the car**

Ensure cargo level and stable placed .And conduct daily inspection .Insert the key into the key Switch(Figure 7.5),Turn the key clockwise to “ON” position. Before finally inserting the key switch (Figure 8 ),The emergency stop switch(Figure 7.4) must be carefully pulled up.

Press the horn button(as figure7 .9)to start the buzzer

## 8.1Parking

**Pls Don’t Park on the ramp**

The car is equipped with an electromagnetic error protection Parking and Parking brake

Please always lower the forks completely and drive the car to a safe area.Turn the key counterclockwise to the OFF position and pull out the key

## 8.2Loading capacity Graph

The loading capacity Graph shows a given load center c [mm]

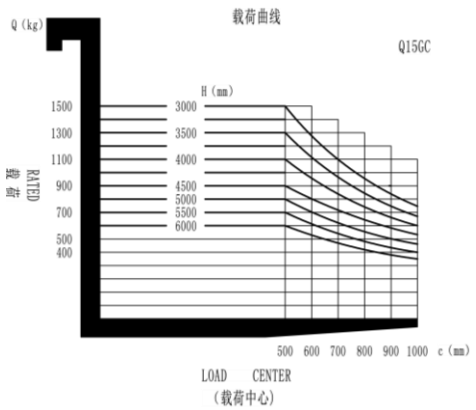



Fig 9 loading capacity graph

and a car with horizontal load ,the maximum load capacity Q [kg]

In the corresponding lifting height of the truck H [mm],The white

markings on the frame indicate the range of lift that can be achieved.

For example, a cargo's center of gravity distance c is 600mm, the

maximum lifting height H is 6000mm, and the maximum load capacity

Q is 500kg.

## 8.3Lifting up

**Pls don’t overload, The related capacity is 1500KG .Only increase the load capacity allowed by the load capacity graph**

Please lower the fork completely on the leg during driving .Then press lift up button(Figure 7.3)until reach your desired height .

## 8.4Lifting down

If the fork is on the shelf when lifting down, Remove the carefully with the pallet rack or move the car off the shelf separately ,Then press lift down key(Figure7.3) Lower the cargo until the fork left the pallet rack .then carefully drive the car away from the cargo

## 8.5Fork move forward /backward

Push the lever forward (Figure 7.2) and the fork move t forward.

Pull back on the lever (Figure 7.2) and the fork move backwards.

## 8.6Fork titling forward /backward

Push the tilt lever forward (Figure 7.1) and the fork tilt forward.

Pull the tilt lever back (Figure 7.1) and the fork tilt backwards.

## 8.7Traveling

**Only drive on the slope when the cargo are facing up**

**Don’t drive on the slope in excess the specified specifications .**

**Only can driving when the fork falls to the lifting point (<300mm)**

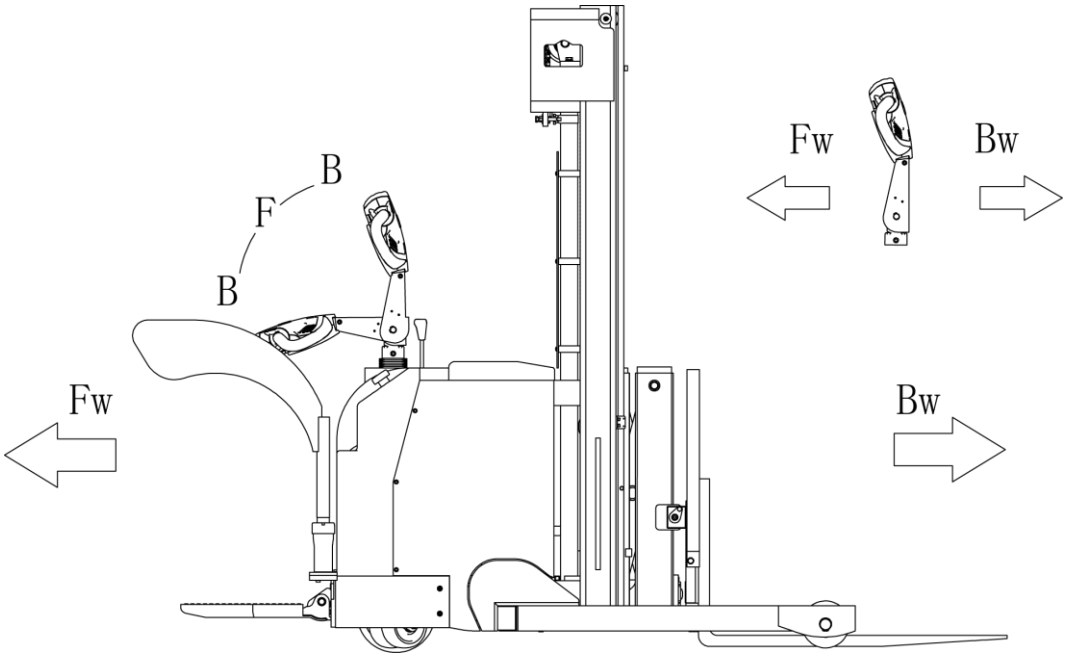



Figure 10 Operating

Turn the inserted key to the “open “position(Figure 8),Then pull up the emergency stop switch (Figure 7.4), to start the car .Move the handle to the operating area（‘F’）。

Turn the accelerator button to the forward direction‘Fw”or backward direction‘Bw’ (Figure 10)

Control the driving speed by carefully moving the button (fig.7.8)until reach your desired speed .

If you move the accelerator button back to the middle position, the controller will slow down the truck until it stops. If the truck stops, the parking brake starts to work.

Drive the car carefully to the destination, Observe the road situation and adjust the speed with the travel switch button

## 8.8Steering

The car with EPS steering system, Be careful when operating.

Steering the car by turning the handle to the left or the right

## 8.9Braking

**Braking performance depends on road conditions and the loading conditions of car**

**The brake function can be activated in the following ways :**

- By moving the accelerator (figure 7.8) to the “0)position or release the button, Regenerative braking is activated and the car brakes until it stops .
- By moving the accelerator (figure 7.8) directly from the drive direction to the opposite direction., the car regenerates braking until it starts driving in the opposite direction

- The car brakes if the handle moves up and down to the braking zone（‘B’）.If release the handle, it will automatically moves to the upper braking zone（‘B’）and the car brakes until it stops
- Emergency reverse button(figure 7.7)prevents the operator from being squeezed. And if this button is activated ,the car slows down /or begins to travel backwards （‘Bw’）and then stops. If the handle is in the operating area and the car is not moving .consider that this button still works for this situation

## 8.10Brake structure &Brake Schematic

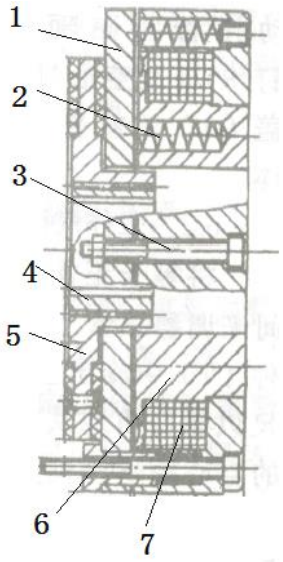


Figure 11 brake

Braking principle：as figure 11 shows including ：Brake by magnetic yoke assembly 6、Magnet exciting coil 7、Spring 2、brake disc 5、Armature 1、Geared sleeve 4、Mounting screw 3 .The brake is mounted on the end cap of the motor ,and the mounting screw is adjusted to the specified air gap value. The gear sleeve is fixed on the shaft .The external teeth cooperate with the internal teeth of the brake disc. And the torque is transmitted during operation. Then the brake disc can move axially on the gear sleeve .

When Magnet exciting coil 7 of brake is energized .the coil produces a magnetic field that caused the armature 1 draw toward the magnetic yoke assembly 6.Armature 1 detached from the brake disc 5(Release).Then the motor drive shaft with brake disc 5 start and operate normally. When Magnet exciting coil 7 is de-energized., The magnetic flux disappears .Armature 1 is released .and spring 2 process armature 1,then the friction plate on the brake disc is pressed to generate frictional force for braking purposes

## 8.11Trouble

If there is any error or the car is not operate, Stop using and press the emergency stop switch(Figure 7.4).Parking the car in safe area if possible .Turn the key counterclockwise and remove the key(figure 7.5).Notify the manager or contact your after-sales service staff immediately .Use a special towing equipment /lifting equipment to pull the truck out of the operating area if necessary .

## 8.12Emergency situations

Keep a safe distance in an emergency situation or the car is turned over. Press the emergency stop switch(Figure 7.4) and all electrical functions will stop.

# 9.Changing and Replacement for battery

- **Only Qualified personnel are allowed to repair or recharge the battery .Please be sure to follow this manual and battery manufacturer's instructions.**
- **The battery is maintenance-free battery, it is forbidden to fill.**
- **Battery recycling is subject to national regulations .Please follow these rules .**
- **When handling batteries .Don't use open flame which my cause gas explosion.**
- **Don't place flammable materials and work equipment that may generate sparks within a distance of at least 79inch around the forklift that needs to be recharged**
- **Parking the car safely before you start charging ,installing /replacing the battery**
- **Before finishing the repairing .please make sure that all cables are connected and there is no interference to the other part of car .**

For standard batteries, this model is equipped with the following lead acid battery models:

1PCS 3PZS/24V/270AH

**Only Sealed lead-acid batteries are allowed**

**The battery weight has a certain influence on car operation .Please consider the max working temperature of the battery.**

## 9..1Replacement

Park the car safely, Move the Mast forward to the appropriate distance,. Turn off the car by key(Figure8) and press the emergency stop switch(Figure 7.4) to open the battery cover ,Remove the battery connector .Then lift the battery from the top of the frame directly .Caution: If the lifting equipment is not safe. The battery may tip over .Installation is the opposite procedure of remove ,Please connect the positive terminal firstly .Otherwise the car is easy to damage

## 9.2Battery display

The discharge condition is indicated by 10 red LED display segments. The rightmost LED will only illuminate when the battery is properly charged. As the state of charge of the battery drops, the LED lights illuminate in sequence, but only one light at a time.

- The second LED on the left flashes, indicating “energy reserve” (70% discharge depth)
- The leftmost 2 LED flash alternately, indicating “power is empty” (80% of the depth of discharge)

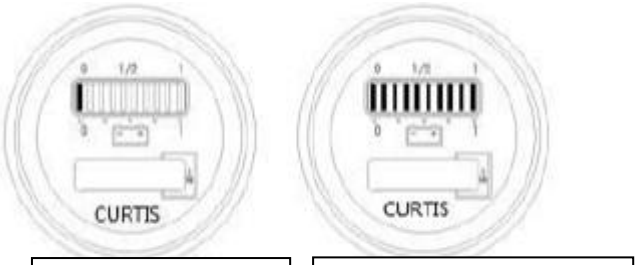



Figure12： Battery discharge

## 9.3Charging

- **Only be charged with included charger**
- **Before using the charger ,please fully understand the contents of the charger manual**
- **Ensure good ventilation in charging room**
- **Fully Charged situation can only be viewed from the display.to check this situation ,you need to interrupt the charging and start the car.**

Park the car in a safe area that provide dedicated power .Lower fork and remove the cargo. Turnoff the power of car, Open the battery cover, then connect the connector and Charger. The charger starts charging .Finishing charging .Remove the connector from the charger, Connect the connector to the car and cover the battery cover .

# 10.Maintain Introduction

- **Only Qualified and trained personnel are allowed to maintain the car .**
- **Remove the cargo from the fork and lower the fork to the lowest point before maintenance .**
- **Please use the designated binding equipment or lifting equipment in accordance with chapter 4 if it is necessary to lift the car .Before**

**operation .Place safety device(such as lifting jacks, Wedges or Wooden blocks)under the car to prevent accidental falling ,moving or sliding .**

- **Use approved and distributor 'S original accessories .**
- **Only trained maintenance technicians are allowed to adjust the pressure Valve .**

If need to replace the wheel .Please follow the above instructions. Casters must be round and free of abnormal wear .Check the key point on the maintenance list .

## 10.1Maintenance list

| Table 6 Maintain list | | Time interval(Month) | | | |
|---|---|---|---|---|---|
| | | 1 | 3 | 6 | 12 |
| No. | Hydraulic system | | | | |
| 1 | Check if there is any damaged noise and leakage for hydraulic cylinder and piston | | • | | |
| 2 | Check if there any damage and leakage for Hydraulic connector and tubing . | | • | | |
| 3 | Check hydraulic oil level and refill if necessary. | | • | | |
| 4 | Refill hydraulic oil(12 months or 1500 working | | | | • |
| | Mechanical system. | | | | |
| 5 | Check the fork for deformation and cracks | | • | | |
| 6 | Check the base for deformation and cracks | | • | | |
| 7 | Check all screws are fully fixed | | • | | |
| 8 | Check the mast & chain for corrosion. Deformation or damage ,And replace if necessary | • | | | |
| 9 | Check the gear box for noise and leakage | | • | | |
| 10 | Check the wheels for deformation and damage and replace if necessary | | • | | |
| 11 | Lubricated steering bearing | | | | • |
| 12 | Check and lubricate the pivot point | | • | | |
| 13 | Grease fitting | • | | | |
| 14 | Protect, protective plates and replace it if they are damaged | • | | | |
| | Electric system | | | | |
| 15 | Check the wires for damage | | • | | |
| 16 | Check electrical connections and terminal conditions | | • | | |
| 17 | Check the function of Emergency stop switch | | • | | |
| 18 | Check the electric motor for noise and damage | | • | | |
| 19 | Check the display | | • | | |
| 20 | Check if the fuse is used correctly and replace if necessary | | • | | |
| 21 | Detection buzzer | | • | | |
| 22 | Check the current contactor | | • | | |

| | | | | | |
|---|---|---|---|---|---|
| 23 | Check the frame for leaks (Insulation test ) | | • | | |
| 24 | Check the function and wear of the accelerator | | • | | |
| 25 | Check the electrical system of the drive motor | | • | | |
| | Braking system | | | | |
| 26 | Check the braking performance | | • | | |
| | battery | | | | |
| 27 | Check the battery voltage | | • | | |
| 28 | Clean and grease the terminal ,Check for corrosion and damage | | • | | |
| 29 | Check if battery box damage | | • | | |
| | Charger | | | | |
| 30 | Check if the main power cord is damage | | | • | |
| 31 | Check the start protection procedure during charging | | | • | |
| | Function | | | | |
| 32 | Detection buzzer | • | | | |
| 33 | Check the air gap for electromagnetic braking | • | | | |
| 34 | Check emergency braking function | • | | | |
| 35 | Detect reverse braking and regenerative braking | • | | | |
| 36 | Check steering function | • | | | |
| 37 | Check lift up & lift down function | • | | | |
| 38 | Check key switch for damage and function | • | | | |
| 39 | Check speed limit switch(lifting height >~400mm) | • | | | |
| | Comprehensive | | | | |
| 40 | Check if all labels are clear and complete | • | | | |
| 41 | Check if the shield panel and protection is not | • | | | |
| 42 | Check the caster ,to height adjust or replace it if worn | | • | | |
| 43 | Conduct a test run | • | | | |

## 10.2Lubrication point

Lubrication point according to the maintenance list .required grease specification :DIN:51825

1Drive gear

2. Forward cylinder articulated pin

3.Bearing of Front wheel

4.Fork articulated pin shaft

5.Forward rail

6.Mast

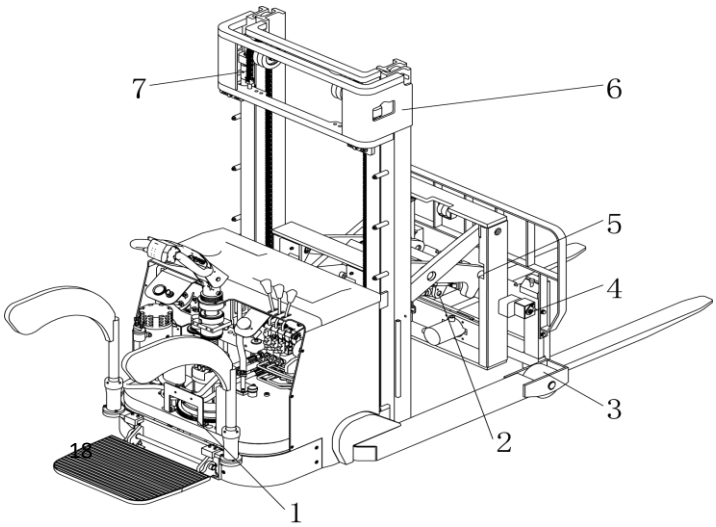



Fig13 Lubrication point

7.Chain

## 10.3Check and refill hydraulic oil

Required hydraulic oil type：

- H-LP 46, DIN 51524
- Viscosity 41.4 – 47

Waste material such as waste oil, Waste batteries or other materials must be treated and recycled in accordance with the national regulations, It should be send to the recycling company for recycling .if necessary. The oil level should not be lower than the min amount oil required to lift cargo .Add oil to filling point if necessary.

## 10.4Check the electrical fuse

Remove the cover ,The fuse is located as figure 14,

The fuse specification is shown in table 5

table 5 fuse specification

| code | Specification |
|---|---|
| FU1 | 300A |

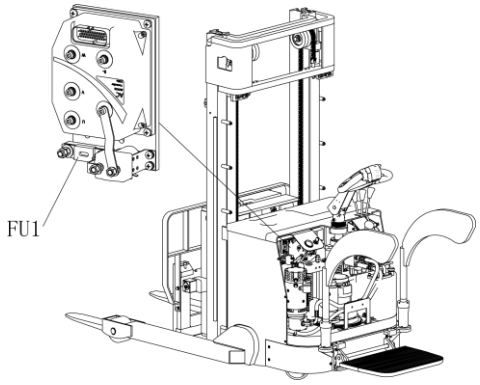



Figure 14 fuse Position

## 10.5Disassemble and re-install the Protective barrier

**Do not use the car if the protective barrier is damaged or not installed properly**

If the need to disassemble the Protective barrier ,Loosen the fixed screw and carefully remove the protective barrier ,Keep the screw in the Protective barrier .When re-installing, place the Protective barrier in the correct position and secure each screw properly. If you need to replace parts, please contact your nearest after-sales service partner.

# 11.Trouble shooting

- If the car is still in trouble ,please follow the instruction in chapter 8

Table6 Fault analysis

| Fault | cause | Processing method |
|---|---|---|
| Cargo can’t lift up | Cargo overweight | Only lift up the max Load shown on the nameplate |
| | Battery discharge | Battery recharge |
| | Lifting fuse failed | Check and replace the lifting fuse |
| | Hydraulic oil level is too low | Check and fill the hydraulic oil |
| | Oil leak | Check the sealing of the tubing or cylinder |
| | Sensor failure | Check the sensor on the mast |
| Oil leakage due to inhalation | High oil quality | Reduce oil quality |
| Stacker can’t operate | The battery is charging | Finished charging then up plug the power plug from the power source |
| | Battery not connected | Connect battery properly |
| | The fuse failed | Check and replace the fuse |
| | Battery discharge | Battery recharge |
| | The emergency stop switch is activated | Insert and pull the knob to close emergency stop switch function |
| | The handle is in the operating area | firstly Move the handle to the braking area |
| A direction moving | Accelerator and connector damage | Check accelerator and connector |
| Move slowly | Battery discharge | Check the battery status on the display |
| | The electromagnetic brake has been activated | Check The electromagnetic brake |
| | Related handle harness unconnected or damaged | Check the handle harness and connector |

| | | |
|---|---|---|
| | Lower speed at height 400mm and sensor failed | Check speed |
| | Electrical system overheating | Stop using and cool the car |
| | Error occur in heat sensor | Check and replace the heat sensor if necessary |
| Start suddenly | Controller is damaged. | Change the controller |
| | The accelerator was not moved back to its intermediate position | Check and replace the accelerator |

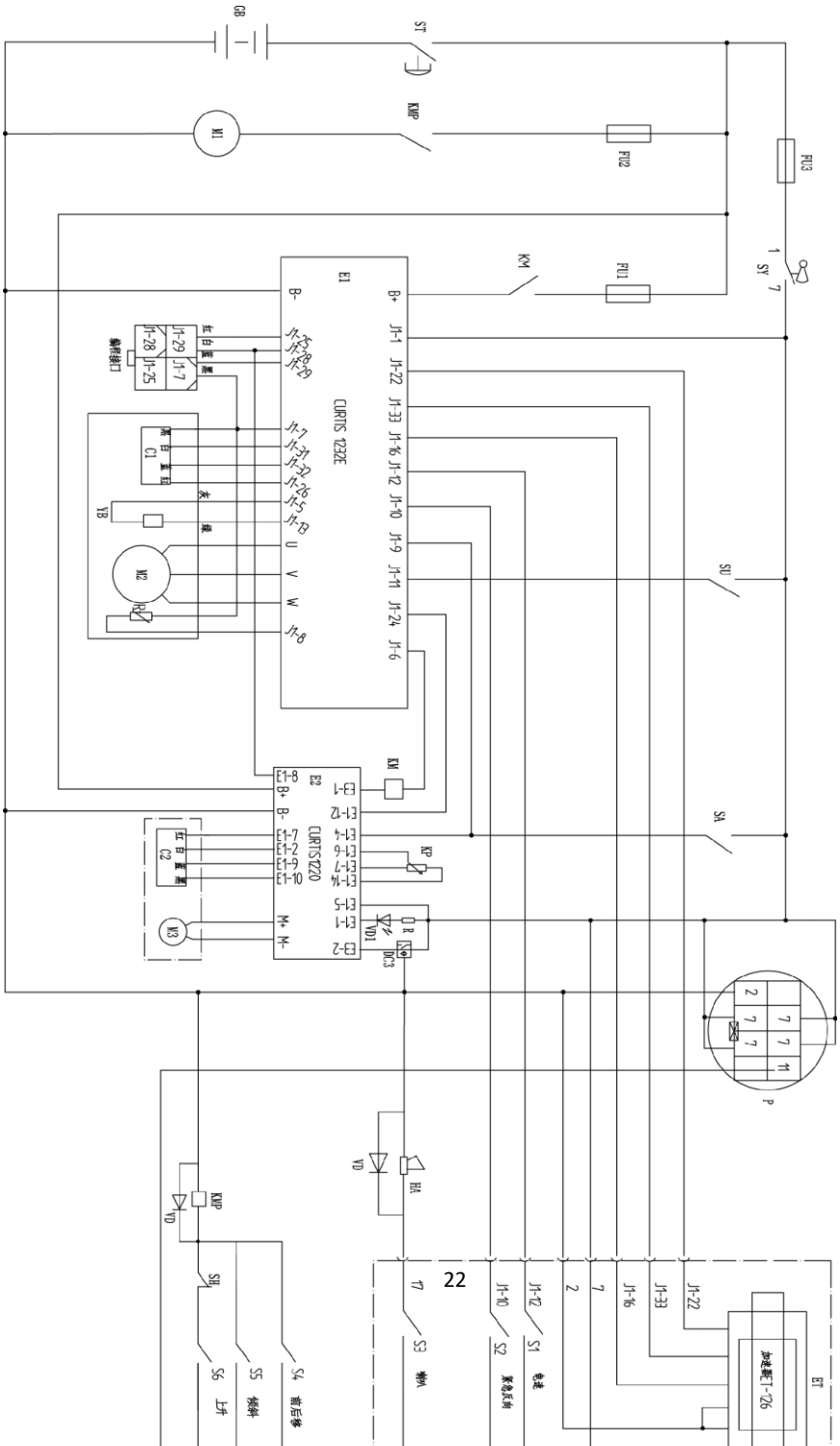
If the car brakes down and can't be operated outside the working area, Lift the car up. Place a loading device under the car and keep the car safely, Then move the car out of the aisle

# 12.After-sales service

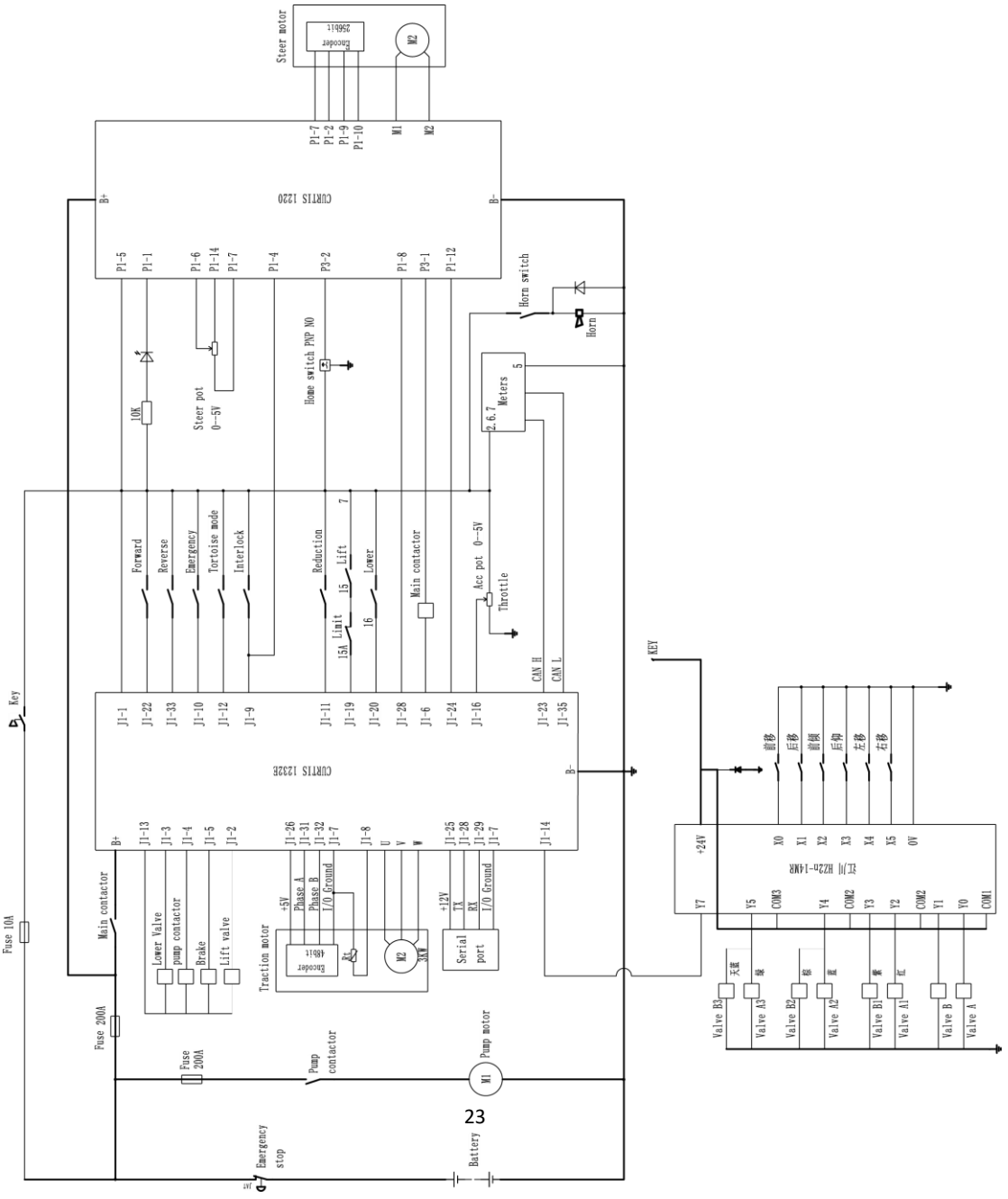
If there is a fault that cannot be eliminated by professional service personnel, please contact our after-sales service personnel in timer ,Sales line:8773236517

# 13. Electrical Schematic diagram

13.1Double Mast Multi-Way Valve Electrical Schematic diagram

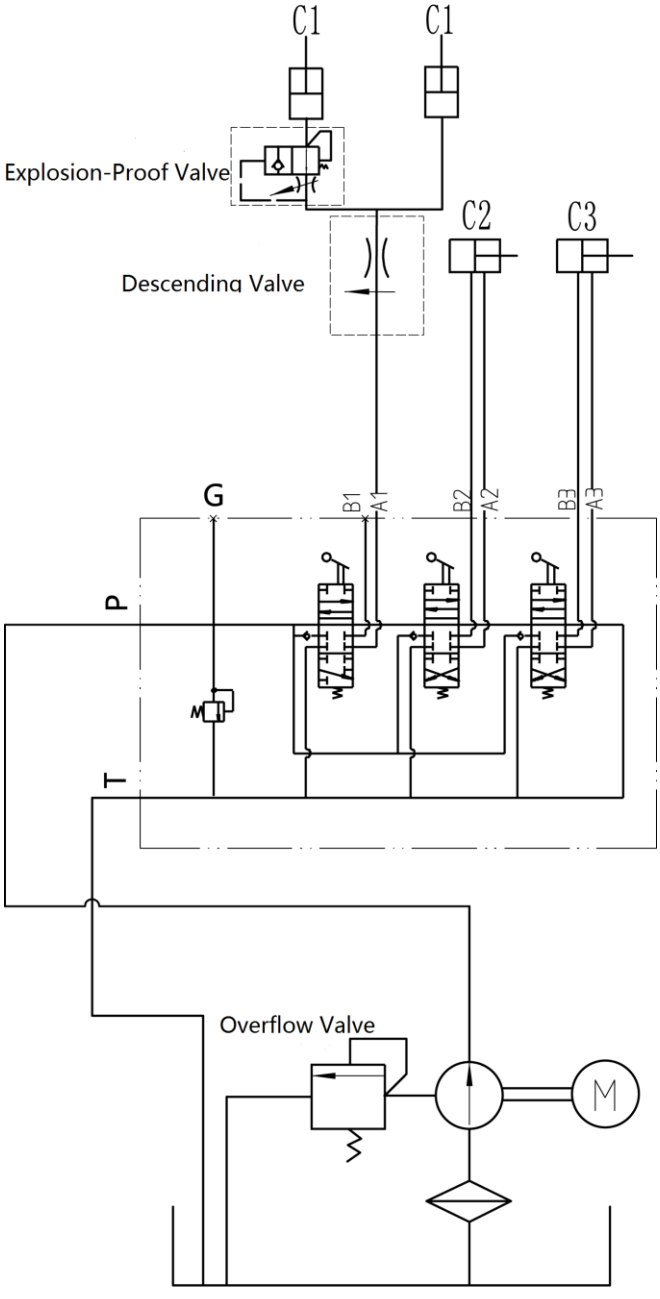


13.2Triple Mast Multi-Way Valve Electrical Schematic diagram

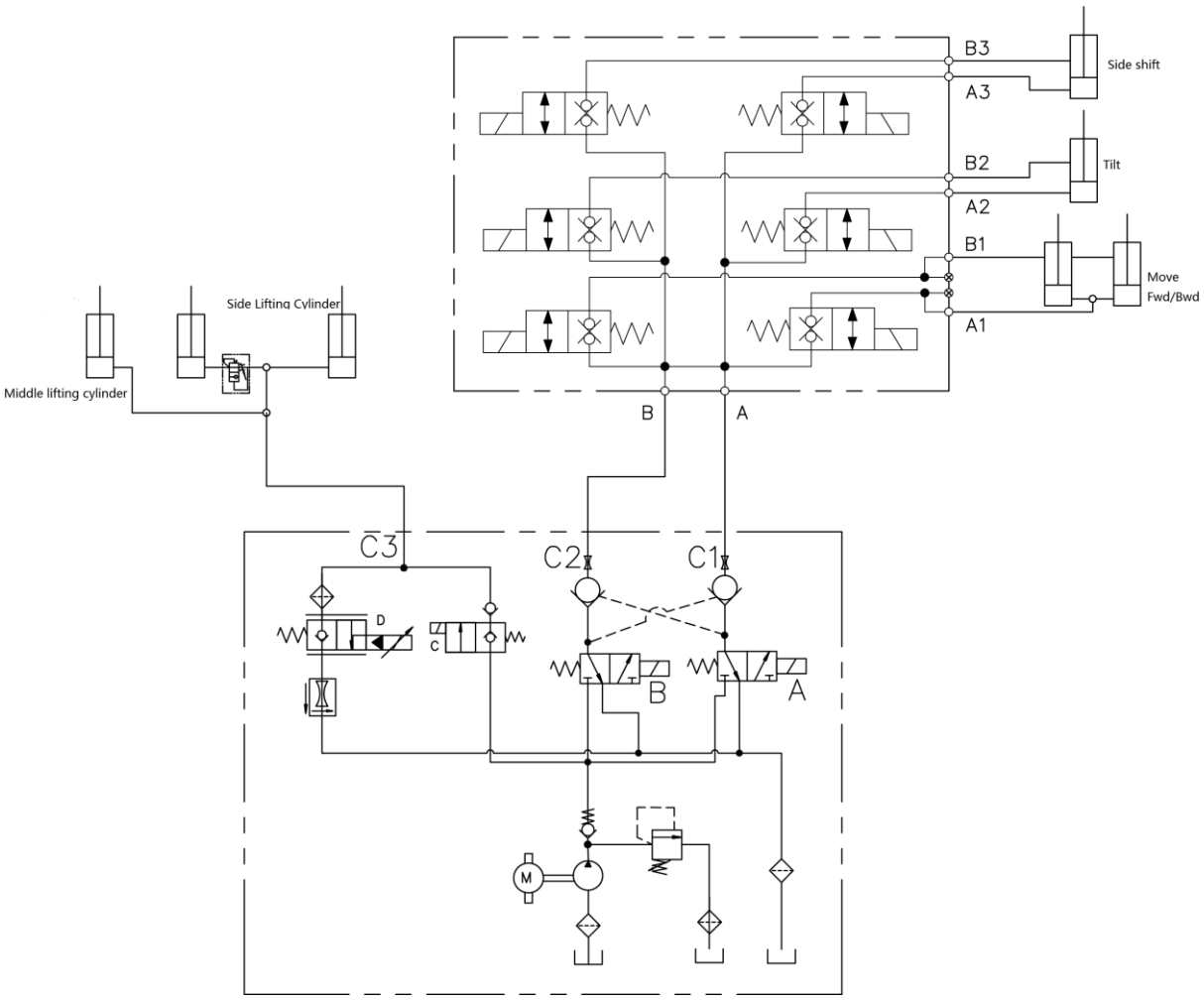


# 14.Hydraulic Schematic diagram

14.1 Double mast Hydraulic Schematic diagram



## 14.2 Triple mast Hydraulic Schematic diagram



**This manual final interpretation retained by manufacturers.**

Note: the manufacturer reserves the right of interpretation.

If have change not notice additionally!