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# OPERATION MANUAL



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**POWERED STAIR CLIMBER**

**CT075/CT105**

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# EC DECLARATION OF CONFORMITY FOR MACHINERY

The company XSTO CO.,LTD. herewith declares that the products of the powered stair climbers are conform to the current regulations of the European Union, EC Guidelines 2006/42/EC. This declaration becomes void if the

climbers have been altered without the consent of XSTO CO.,LTD



Description of the machine: Powered Stair Climber Type:

Signature of the manufacturer: XSTO CO.,LTD.



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# 1 Symbols and safety instructions

**WARNING-----Can lead to serious injuries and fatalities**



**CAUTION-----Can lead to light injuries**



**NOTICE-----Can lead to material or premises damage**

- Before initial operation, read the user manual and take note of the warning and safety instructions.
- Before initial operation, check the electronic functions, the safety brakes and the position of the climbing wheels
- Before initial operation, store the rated load at least one hour in a nonfreezing environment
- Take note of the technical data as the lifting capacity cannot be exceeded
- Stair climber operator should be trained. The person should be physical and experienced to handle it.
- Wear non-slip footwear and always operate with both hands. Practice operating without a load and at a low speed to start with.

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- For transportation of cargo, not people. Ensure loads are secured with attached Safety strap.
  - Never put your hand under the toe plate or touch rotating or moving parts.
  - Do not use it in rain, wet condition, snow or ice.
  - Do not use it if the wheels broken.
  - Do not use it on escalators or moving belts.
  - If the drive elements blocked, turn off the machine immediately.
  - Turn off machine when transporting to different locations.
  - Keep the plug-in elements dry. Protect the battery and charging cable by avoiding car oil, grease, thinners and sharp items otherwise they will be damaged.
  - Do not use a high-pressure cleaning. Store it in dry condition.

Repairs can only be done by certified and experienced engineer. Outer factors like sun light may increase the machine surface temperature, Keep it away from ignition source.

- It may interfere with other electronic devices' sensitive electromagnetic fields (e.g. anti-theft systems in department stores).
- Only the accessories provided by XSTO can be used.

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## 2 Description

### 2.1 The features



1: switch button 2: up and down switch 3: battery 4: climbing crawler  
5: walking wheel 6: aluminum alloy handle

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7: high and low speed switch 8: aluminum alloy body

9: aluminum alloy loading plate 10: aluminum alloy loading plate

## 2.2 Technical data

This user manual is for CT075/CT105 only.

## 2.3 Application fields

CT075/CT105 is a kind of light Powered stair climber which can use in the following fields: Logistics, express delivery, office, household and so on.

## 2.4 Technical parameters

| Type           | CT075                                         | CT105                                         |
|----------------|-----------------------------------------------|-----------------------------------------------|
| Size(mm)       | Height: 1000-1400<br>Width: 500<br>Depth: 215 | Height: 1000-1400<br>Width: 500<br>Depth: 215 |
| Weight<br>(Kg) | Main unit: 18.5<br>Charger: 0.3               | Main unit: 18.5<br>Charger: 0.3               |

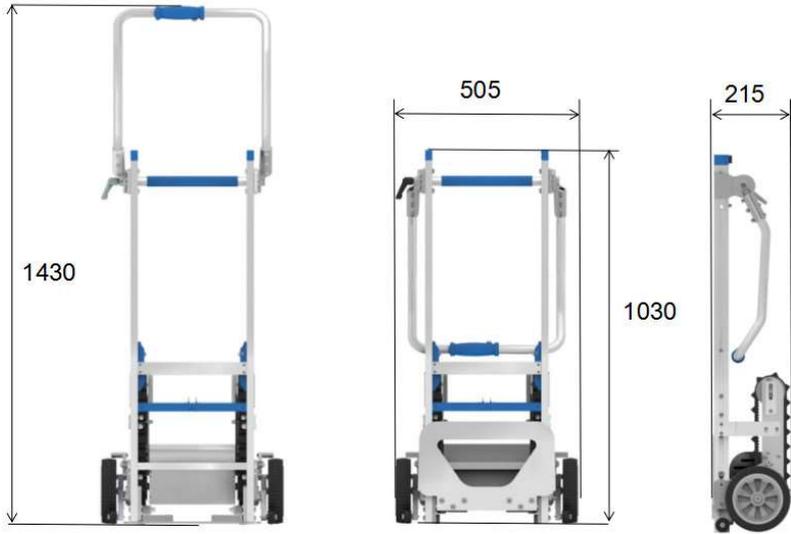
|                                            |                                    |                                   |
|--------------------------------------------|------------------------------------|-----------------------------------|
|                                            | Battery:3.2                        | Battery:3.2                       |
| Capacity<br>(Kg)                           | Rated: 75                          | Rated: 105                        |
| Climbing speed<br>(steps/min)              | Slow: 35 Fast: 50                  | Slow: 25 Fast: 35                 |
| Step count on<br>one charge                | 80-100 floors<br>(1600-2000 steps) | 60-80 floors (1200-1600<br>steps) |
| Step height<br>limitation(mm)              | <210                               | <210                              |
| Step width<br>limitation(mm)               | >250                               | >250                              |
| Batteries                                  | 48V/10Ah (Lithium battery)         | 48V/10Ah (Lithium<br>battery)     |
| Direct current<br>motor                    | 48V300W                            | 48V300W                           |
| Noise level<br>(1 m out from<br>actuator ) | <70dB                              | <70dB                             |

|                                          |                                                |                                                |
|------------------------------------------|------------------------------------------------|------------------------------------------------|
| Storing/operating temperature of device  | -10°C - +40°C / 0°C - +40°C<br>(With no icing) | -10°C - +40°C / 0°C - +40°C<br>(With no icing) |
| Storing/operating temperature of battery | -5°C - +35°C / 0°C - +40°C                     | -5°C - +35°C / 0°C - +40°C                     |
| Serial number                            | On body name plate                             | On body name plate                             |
| Protection Level                         | IP54                                           | IP54                                           |

Note: all the following products are recommended to be used below 1000m altitude, and the environmental humidity is required to be within the range of 45%-85% (no coagulated snow).

Note: Product processing error leads to different weight of each product,  $\pm 0.5$ kg of each.

## 2.5 Dimensions (mm)



Units: mm

## 2.6 Standard Supply Accessories



|           |              |              |                |
|-----------|--------------|--------------|----------------|
| ①         | ②            | ③            | ④              |
| Main unit | Safety strap | Battery Pack | Normal charger |

## 2.7 Optional Accessories

|                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |
| ①<br>Battery Pack                                                                 | ②<br>Normal charger                                                               |

## 3 Initial Operation



**CAUTION**----- Before initial operation, please ensure the machine is operated in an environment higher than 0 °C



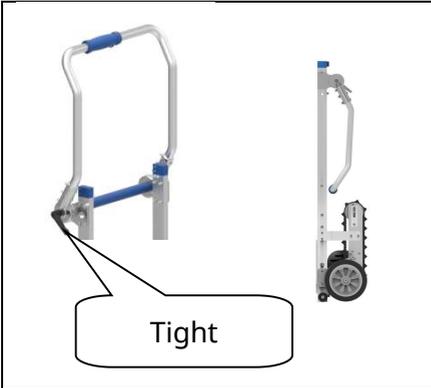
**CAUTION**-----The machine is light and easy to be push down, During operation, the machine should be controlled by hand or simply fixed.

### 3.1 Foldable Loading plate



The unfold position is the working position of the loading plate.

### 3.2 Adjustable handrail



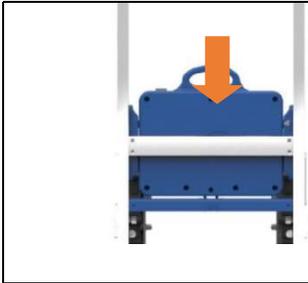
Use the tight handle to adjust the angle of handrail. After adjusting the handrail to a proper angle, tighten the handle.

For convenient transportation Handrail can be totally folded down.

### 3.3 Battery Pack

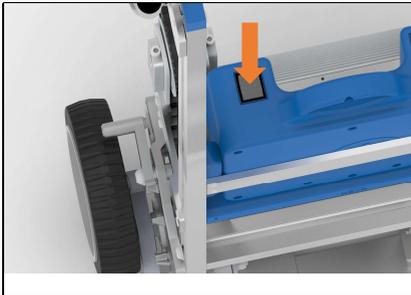


NOTE-----Keep the plug-in dry and clean!



Install the battery pack downwards. After inserting the battery, the machine have power automatically.

### 3.4 Turning on the stair climber



Turning on the main button.  
The LED lights will light up.

### 3.5 Climbing status and flat ground status

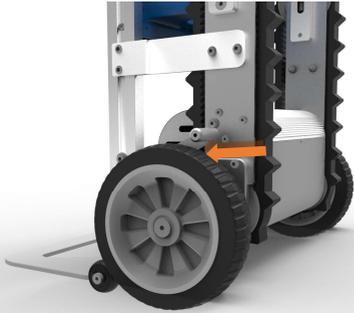
switching



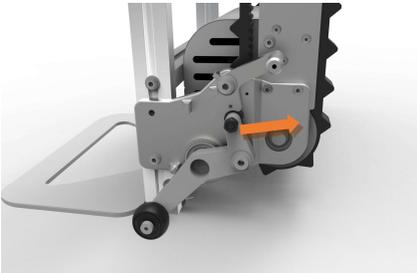
**CAUTION**-----The machine is light and easy to push. In operation, control the machine by hand or simply fix the machine before proceeding!

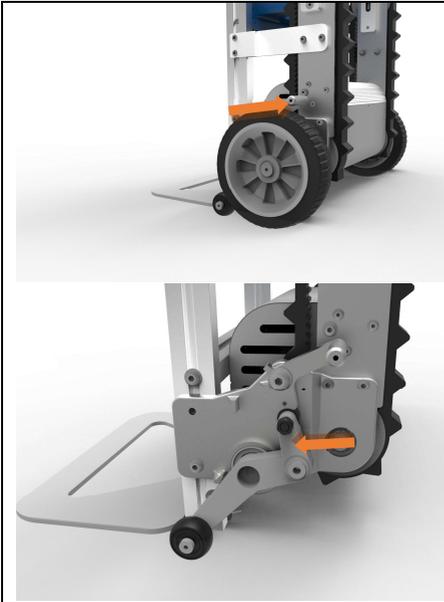


**CAUTION**-----Improper handling can be pinched by the machine.



When the climbing machine is dragging on the ground, kick the switch to the direction of the loading board with your foot until the arc clamp is detached, so that the walking wheel can turn freely.





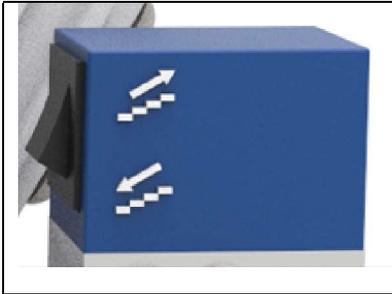
When the stair climbing machine is in the stair climbing state, hold the machine with one hand to ensure that the stair climbing machine is in the vertical state, and kick the switch to the direction of the track with your foot to combine the circular clamping groove with the supporting bearing of the walking wheel

### 3.6 Two-speed climbing mode



- is low speed,
- = is high speed

### 3.7 Upstair and downstair switch



Switch up and down the building as shown.

### 3.8 Check battery capacity



1. Press the device start switch, the remaining battery will be displayed on the left side of the battery

## 4 Operation



**WARNING**-----Only trained personnel can operate this machine!



**WARNING**-----You must practice when empty load during practice and you must adjust to a low speed!



WARNING-----Please use two hands to operate!



WARNING--Note:Motor 65% working time[Continuons Operating Hours/(Continuons Operating Hours+Continuous rest hours) $\leq$ 65%],Rated load of 70% or above,the maximum continuous running time is less than 25 minutes.Rated load of less then 70%,the maximum continuous running time is less than 60 minutes.

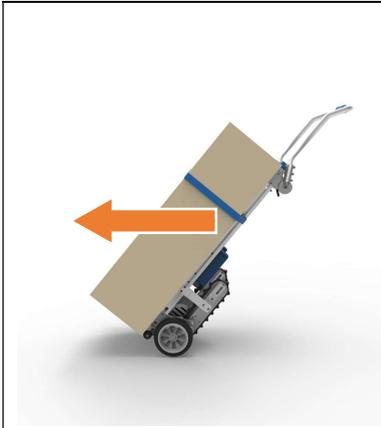
## 4.1 Loading goods

|                                                                                     |                                                                                                                                                                |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>1.Adjust the stair climber to the flat ground state, which is convenient for dragging, as shown in the figure.</p>                                          |
|  | <p>2.Insert the loading board under the cargo and keep the cargo on the loading board smoothly and without shaking. Use the safety belt Tighten the goods.</p> |

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## 4.2 Operating on the ground

|                                                                                    |                                                                                                                                                   |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>1. Adjust the stair climber to flat ground status so that the synchronous track does not touch the ground when it is pushed on the ground.</p> |
|  | <p>2. Tilt the stair climber and keep the balance.</p>                                                                                            |



3. When the stair climber is transported on the flat, let the stair climber always be in the balance.

Note: Be sure to turn off the power switch during ground operation to avoid malfunction.

### 4.3 Go up the stairs



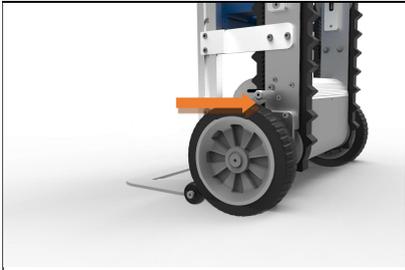
**WARNING**-----When the stair climber starts to go upstairs, the operator will feel a support force. At this time, the operating angle of the stair climber can be appropriately adjusted to maintain the balance of the center of gravity of the climber, thereby offsetting this support force!



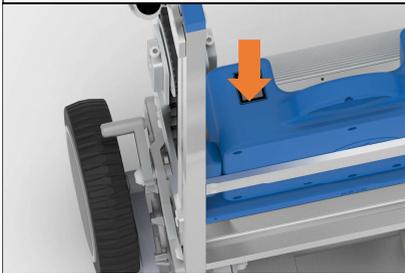
**WARNING**-----Always keep the machine balanced!



**WARNING**-----It is forbidden to be under the machine!



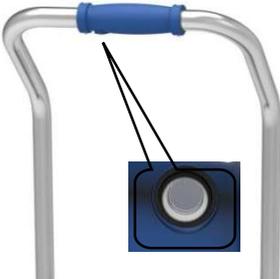
Adjust the stair climber to the of climbing state.

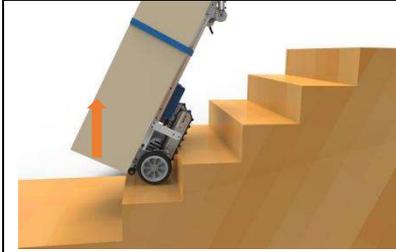


Press the battery switch



Set the "Up/down switch" to up mode.

|                                                                                    |                                                                                                                |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|   | <p>Adjust the armrests to the proper condition, Tilt the machine to Proper angle and keep balance.</p>         |
|   | <p>Pull the Stair Climber backwards. The operator hold the handrail standing 2 or 3 stairs up the machine.</p> |
|  | <p>Adjust the operating angle of the climber, press run button to start going upstairs.</p>                    |



Pull the stair climber to next step, then repeat the climbing action. Operator should hold the climber handrails during this process.

## 4.4 Climbing down Stairs



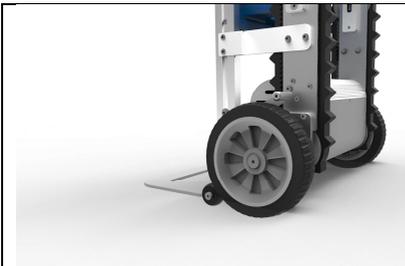
**WARNING** ----- when climbing stairs, the operator will feel an initial force. Adjust the angle of the stair climber to keep the balance of gravity to counteract the force.



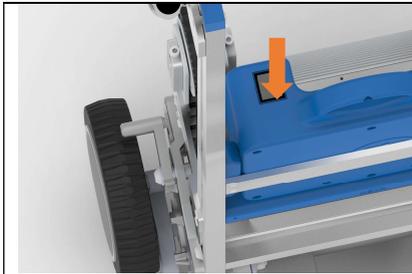
**WARNING** ----- Always keep the machine balanced .



**WARNING** ----- Do not allow people to obstruct the machine.



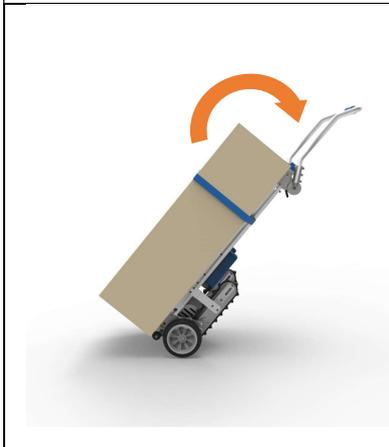
Adjust the stair climber to the of climbing state.



Press the battery button.



Set the "Up/down switch" to down mode.



Adjust the armrests to the proper condition, tilt the machine to Proper angle and keep balance.

|                                                                                   |                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Push the stair climber forward to the edge of the stair. Note that the stair climber has edge brake function and will stop automatically at the edge of the stair. When the stair climber stops automatically, press the switch to go downstairs and hold the handle tightly to keep balance.</p> |
|  | <p>Climb down the stairs and repeat the operation until the downstairs is completed</p>                                                                                                                                                                                                              |

## 4.5 Park



**CAUTION-----Be sure to turn off the power after each use.**

---

|                                                                                   |                                                                                                           |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  | <p>When the machine is parked, be sure it is vertical located on the ground, steady without swagging.</p> |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|

## 4.6 Transport



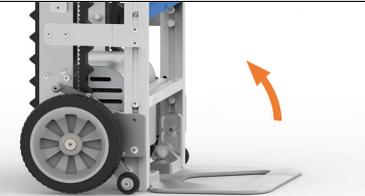
**WARNING** -----Please note the weight specifications.



**WARNING** -----During transportation in vehicles, secure the climber according to the relevant legal regulations!.



**CAUTION** ----- Please turn off the equipment when transport.

|                                                                                     |                                |
|-------------------------------------------------------------------------------------|--------------------------------|
|  | <p>Fold the loading plate.</p> |
|-------------------------------------------------------------------------------------|--------------------------------|

|                                                                                   |                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Fold the adjustable armrest.                                                                                                                             |
|  | Lie down the stair climber when transport, As shown in the left picture. please make sure to fix the stair climber if can not lie down like the picture. |

## 5. Maintenance

### 5.1 Battery Pack



**CAUTION-----Do not operate the equipment with wet hand!**



**NOTICE----- Keep the stair climber away from wet condition!**



**NOTICE----- Charge the battery pack after each use!**



**NOTICE-----** Keep the charger and charging cable away from oil;grease; aggressive cleaning agents or any destructive goods!



**NOTICE-----** Please follow the operating instruction to charge, use 2A output charger, more than 2A output charger is forbidden!

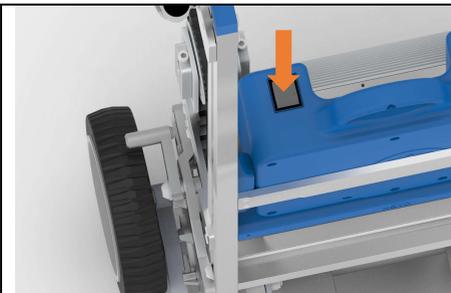


**NOTICE-----** It will drop in the battery performance and reduce the service life of the battery pack with no any electricity inside of the battery!

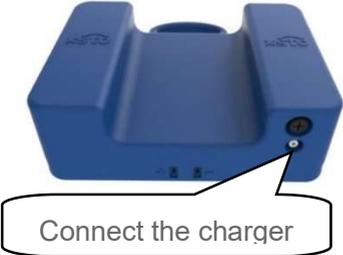


**NOTICE-----** Please keep the plug dry!

New battery will reach the best situation after several charging!



Turn off the main switch.

|                                                                                    |                                                              |
|------------------------------------------------------------------------------------|--------------------------------------------------------------|
|   | <p>Pull out the battery pack upward.</p>                     |
|   | <p>Connect the charger</p>                                   |
|  | <p>Please follow the charger instructions when charging.</p> |

## 5.2 Exchange the fuse

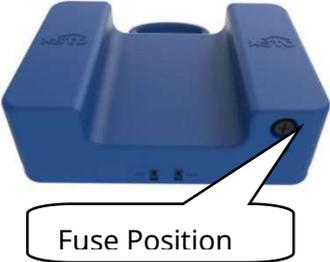
 **NOTICE-----** Before exchanging the fuses, please disconnect the charger or car charging cable!



**CAUTION-----Never mend or bridge defect fuses!**



**CAUTION-----Please replace the fuse that suitable for XSTO corresponding models!**

|                                                                                                        |                                                                                      |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  <p>Fuse Position</p> | <p>Remove the fuse cap and the old fuse, Insert the new fuse and put on the cap.</p> |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|

### 5.3 Check stair climbing synchronous track



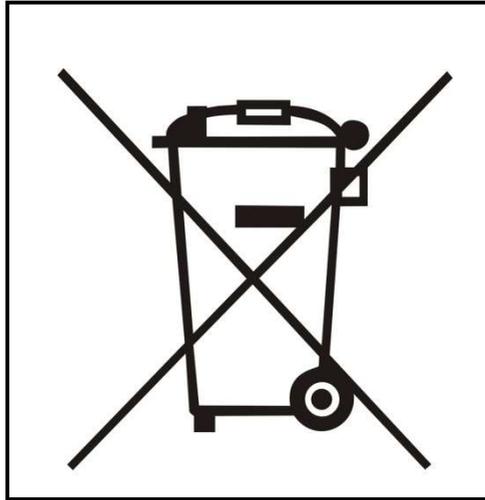
**CAUTION-----Check for the wear of the stair climbing synchronous track regularly, if you find the stair climbing synchronous track damaged or heavy wear, please contact the authorized professional person or the manufacturer!**

|                                                                                     |                                                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|  | <p>Check the stair climbing synchronous track, be noted of the wear limit.</p> |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|

---

## 5.4 Recycling

The powered stair climber is product of long durability. However, if your machine is old and has reached the end of its lifespan you may return its components to XSTO or the distributor of XSTO to be recycled.



## 6 Malfunction and Troubleshooting

| Problem | Check and Solution |
|---------|--------------------|
|---------|--------------------|

|                                                                      |                                                                                                                                                                                                                                |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The climber machine can't start or can't go up or down stairs</p> | <p>check the battery pack. If it shows low power (&lt;20%), please charge.If the above situation is turned out. Please contact the supplier.</p>                                                                               |
| <p>The battery can't be recharged</p>                                | <p>Please contact the supplier.</p>                                                                                                                                                                                            |
| <p>Failure of high and low speed switching control</p>               | <p>Check whether the power is connected. then remove and check the speed switch. If the switch connection is working. the speed switch is mostly broken. replace it. If the problem remains, please contact your supplier.</p> |

## 7 Accessories and method of use

### 7.1 Battery

|                                                                                     |                                                                                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
|  | <p>One more spare battery recommended.</p> <p>CAUTION: please use 4A output charger, over 4A output charger is forbidden.</p> |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|





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