



HIGH TECH GRINDING

»XINGYI

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Manual of HTG-680RC Floor Grinder

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1. Introduction

1.1 Summary

Xingyi machines are used to handle the floor surface. The scope of use of the machine depends on the choice of the tool. In addition to the use and general functions, this manual describes information on the use, repair and maintenance of the grinder. You can contact your local retailer for further information.

1.2 Responsibility

We make every effort to make this manual as complete and accurate as possible, and we are not responsible for any errors or loss of information. Xingyi reserves the right to change the instructions in this manual without prior notice.

This manual is protected by copyright law and can not be reproduced or used in any part without the express written consent of Xingyi.

1.3 Accessories

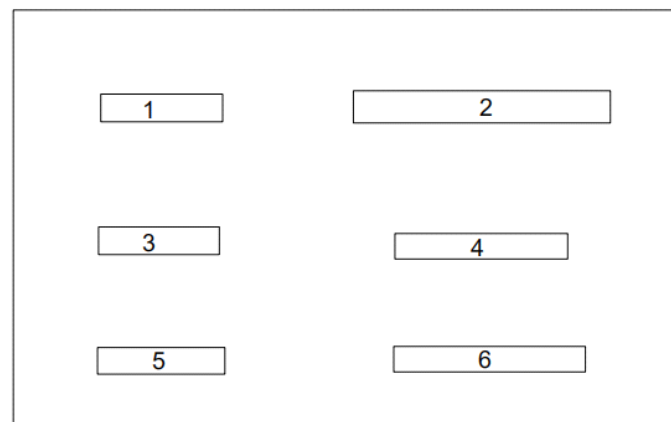
Below accessories are included with the grinder. Contact your supplier if anything is missing.

- (1) 1 set of grinding machine
- (2) 1 copy of machine using manual
- (3) 1 pcs of socket
- (4) 1 pcs of dust skirt
- (5) 1 set of remote control box(Includes remote control, charger, battery, strap)
- (6) 1 pcs of key of remote control box
- (7) 12pcs of 4" velcro-iron accessories (another 12 are installed on the machine chassis)
- (8) 1pcs of lead-acid battery charger

1.4 Package acceptance

Check carefully to see if the package or the grinder has been damaged during delivery. If there is any sign of damage, contact your supplier and report it. Check that the delivery matches the order. If there are any discrepancies, contact your supplier.

1.5 Machine name plate



1.Model

2.Manufacturing date

3.Power

4.Voltage

5.Weight

6.Rotating speed

1.6 Handling and storage

The grinding machine should be stored in a dry place at room temperature when not in use. Otherwise it may be condensed and cold damaged. The size and weight of the grinder are given in the technical data of the Manual.

1.7 Warranty items

This warranty covers only manufacturing defects. Xingyi does not assume damage in the transport, unpacking or operation. The manufacturer is not responsible for any damage or defects caused by improper use, corrosion or use of specifications beyond the noted specifications. The manufacturer shall not be responsible for any indirect damage or expense under any circumstances. For complete information on the manufacturer's warranty period, please refer to the current warranty terms of Xingyi. Local retailer may has special warranty terms. If you have any uncertainty about the warranty terms, please contact with your retailer.

2. Safety Instructions

2.1 Overview

This manual records the key information for machine safety operation. Read the manual carefully before your first operation.

Non-standard operation, modification or maintenance without training may cause losses, machine problems or injury. You are allowed to operate the machine after training. All maintenance must be done by qualified professional technician. Any machine parts that need to be changed must be provided by XINGYI.

XINGYI machines only can be used in the way of XINGYI recommended. And they only can be used for commercial purposes. Anyone who uses a machine should know its function, the location of the emergency stop. The operator should have to ensure the safety rules that the unauthorized person can not be stationed at work area when the machine starts.

The operator should be equipped with professional personal protective equipment when you are at work: safety goggles, protective gloves, safety shoes, breathing masks, protective earmuffs, etc. Do not wear loose clothes or anything that can grasp things such as scarves, bracelets, rings and so on.

Note:

1. When working on the slopes, please check the battery power should be more than 40% and the clutch pin is locked.

2. If the machine must be work on slopes, it should be less than 20 degrees, the company is not responsible for any accident caused by the operation when the slope is greater than 20 degrees.

3. This machine is only used for floor grinding, polishing.

4. Please read and understand the safety guide totally. Different models have different accessories and operation instructions.

5. It only needs one person to operate this machine. Keep children and irrelevant person away. "one person one machine".

6. Operator who is in poor physical state or without training is not allowed to operate the machine. The operator and the repairman must be physically strong and able to withstand the weight of the whole machine

and the working intensity of the motor.

7. Do not lend or rent the machine without instruction manual.

8. Helmet, safety shoes, the headset, non-moist goggles and masks are necessary when operating the machine.

9. Keep body, jewelry or loose clothing away from moving machine parts. If not, may cause bodily injury.

10. Random modification of the machine is not allowed. Only XINGYI accessories can be used for maintenance and modification.

11. Do not operate the machine in rainy or foggy days.

12. Ensure no explosive and flammable materials and steam nearby when operate machine. Do not operate machine near the place with fuel, grain dust, solvents, dilution agent or other flammable items.

2.2 Electrical safety guidance

1. All circuit repairs can only be operated by professionals;

2. Note: after the machine is stopped that the cables are still powered, so cut off all power before servicing the machine;

3. The machine is equipped with an overload protection device and will automatically jump off when the machine is overloaded, prohibiting the machine from running; (re-adjust this overload button in case of safety)

4. Continue using the machine under overload conditions will cause other losses and the machine may not working properly. The manufacturer does not give warranty;

5. The purpose of installing the inverter in the machine is to speed and protect the user and the machine. It is forbidden to modify or adjust the inverter and modify the inverter parameters without the manufacturer's consent. If the unit fails, it is only allowed to replace the defective parts with the accessories provided by the manufacturer; (Other changes caused by changing, adjusting or modifying the inverter parameters without the manufacturer's consent, and the machine is not working properly, the manufacturer does not afford warranty)

6. Never modify the parts or circuits inside the inverter by yourself;

7. Do not operate the machine when the distribution box is not closed;

8. If the machine current is overloaded, we should pay special attention;

9. When the cables are energized or loaded, do not connect or disconnect the wires;

10. Using a damaged power cord may result in electric shock. Do not use a damaged power cord;

11. Wires should be kept away from hot floor surfaces;

12. The dryness of all electrical parts of the machine should be maintained and the machine should be stored in a dry place;

13. After the power is turned off and the panel indicator light is still on, it indicates that there is still high voltage inside the inverter, which is very dangerous. Do not touch the uninsulated electrical machine parts;

14. The machine motor and the frequency conversion box are prohibited from entering the water; (the other damage caused by the water inflow then the machine is not working properly, the manufacturer does not afford the warranty)

15. The machine must be connected to the qualified wire and voltage, specifications are noted by the manufacturer. (The label on machine indicates the power supply specifications)

3. Machine Description

3.1 Overview

The HTG-680RC is used to grind (rough grind, fine grind and polish) concrete, natural stone and terrazzo floors or other materials specified in this manual or recommended by XINGYI. It can be used in a variety of applications from rough grinding to fine polishing. This machine is expected to be used in commercial applications such as hotels, schools, hospitals, factories, offices and other places.

The HTG-680RC is equipped with a radio control, which allows remote control of the movement of the machine at a certain distance, it is feasible to complete setup changes and operations with a few buttons; the digital display on the panel allows the operator to adjust and monitor system information easily, making it easier for users to operate. It comes with a 3.5-inch digital color display.

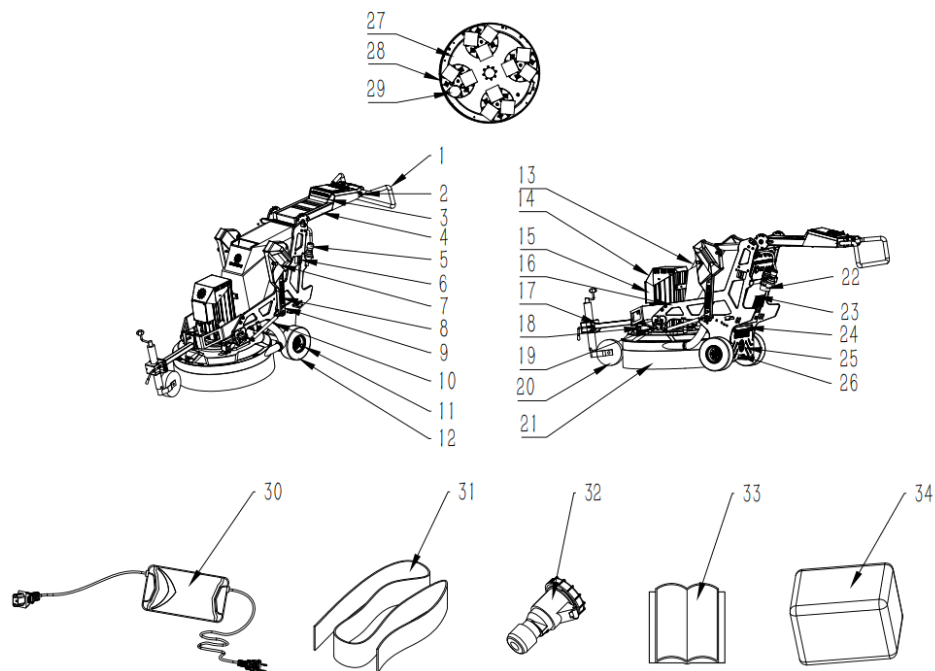
Equipped with water tank, the machine can not only dry grinding but also wet grinding.

The swing lever and handle can be set in many different tilted positions. When the machine is manually operated, you can choose the most suitable position.

When dry grinding, to prevent dust from being exposed to air, posing a threat to the health of the operator and nearby people, make sure that the vacuum cleaner is connected to the grinder (preferably equipped with a vacuum cleaner manufactured by Xingyi). Due to inhalation of dust is harmful in the course of operation, even there is a vacuum cleaner protective mask is also necessary to protect health.

The machine can use different Xingyi abrasive. Due to the different ground materials, the abrasive discs used in grinding are also different.

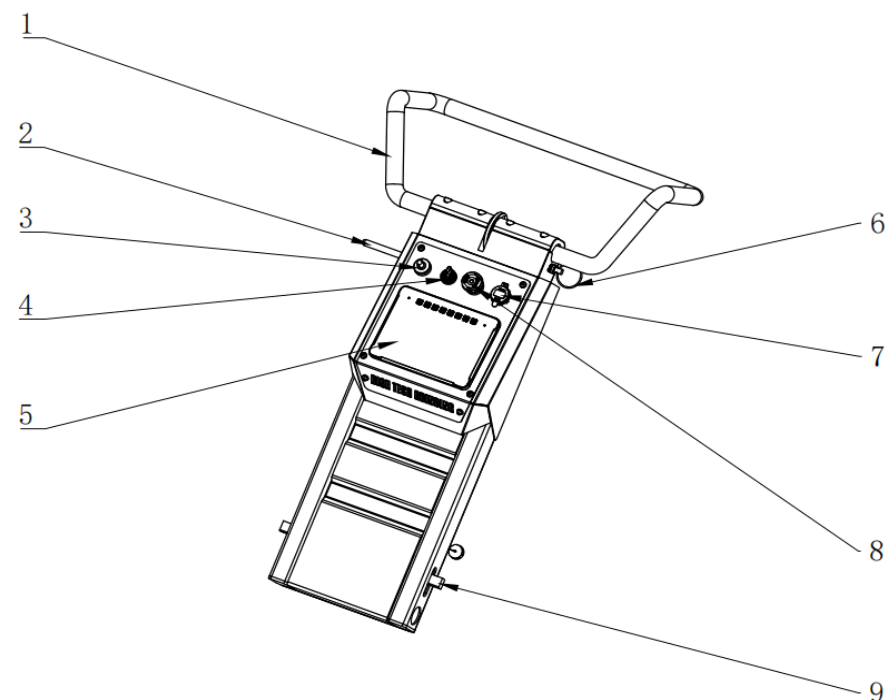
3.2 Parts description



- | | |
|---|-----------------------------|
| 1. Handle | 18. Spotlight |
| 2. Swing lever bolt | 19. engaging lug |
| 3. Swing lever panel | 20. Jack wheel |
| 4. Welded swing lever | 21. Gearbox cover |
| 5. 4-pin plug | 22. camlock |
| 6. Middle seat for additional weight | 23. Inverter box |
| 7. Reset index pin | 24. Strip spotlights |
| 8. Additional weight iron | 25. Reducer |
| 9. Additional weight iron decorative plates | 26. Driving motor |
| 10. Gas spring | 27. Gearbox |
| 11. Self-locking indexing pin | 28. Disc assembly |
| 12. drive wheels | 29. Velcro-iron accessories |
| 13. Water tank | 30. Charger |
| 14. Motor decoration | 31. Dust skirt |
| 15. Motor | 32. Socket |
| 16. machine rack | 33. Manual |
| 17. Front guide wheel assembly | 34. Remote control box |

3.3 Swing lever assembly

3.3.1 Overview



1.Operation handle: Where people put their hands when operating the machine.

2.Swing part adjusting handle: use the handle to adjust the angle of the swing part, and there will be a corresponding position in the corresponding working state.

3.Potentiometer: It is mainly used to adjust the rotation speed of motor.

4.3-gear knob: it has three gears,the motor rotates forward on the left gear, does not rotate at the middle gear and rotates reversely on the right gear.

5.Display screen: Display some parameters, such as voltage, current, motor speed. The touch screen to adjust some basic parameters of machine according to user requirements, from which you can monitor the grinding parameters and fault prompts of machine.

6.Handle adjusting bolt: pull out the bolt and the handle can be rotated

freely to the proper position to operate the device.

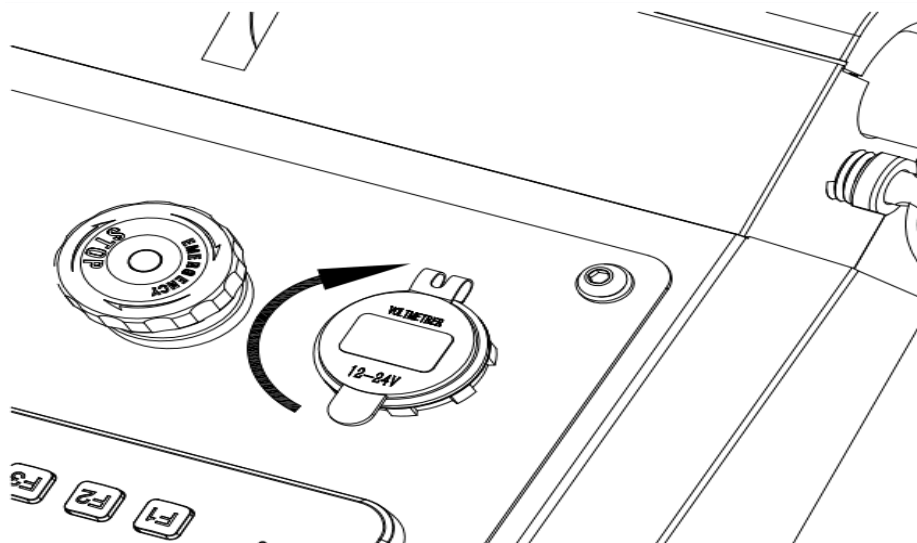
7.USB interface : used to charge.

8.Emergency stop switch: When the device is in a dangerous state or needs to stop working, press the emergency stop switch to cut off the power and stop the operation of the device to achieve the protection of personal and equipment safety.

9.Swing lever lock lever: adjust the swing lever position.

3.3.2 USB interface

There is a device on the control panel. Turning up the the cover , we can see a USB interface, which can be used to charge mobile phone or other device.



Notes:

Be sure to cover the lid when it is not charging. To prevent dust from entering, plugging or damaging the USB interface, do not expose the USB outside.

Note: The voltage will be displayed on the lid

3.3.3 Display screen

(1) Overview

The screen can be operated by pressing buttons.

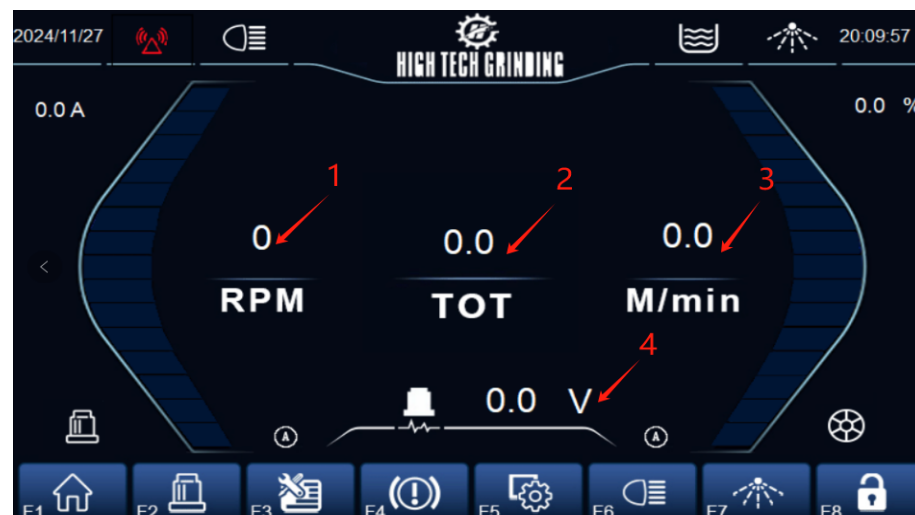
The text displayed in this instruction is described in Chinese, the language can be selected in the product.

(2) Display interface

In manual mode, all keys can be operated:

Press F1 and the screen will display (as shown below).

1. The speed of the grinding disc drive motor.
2. Working hours.
3. Walking speed.
4. Voltage.



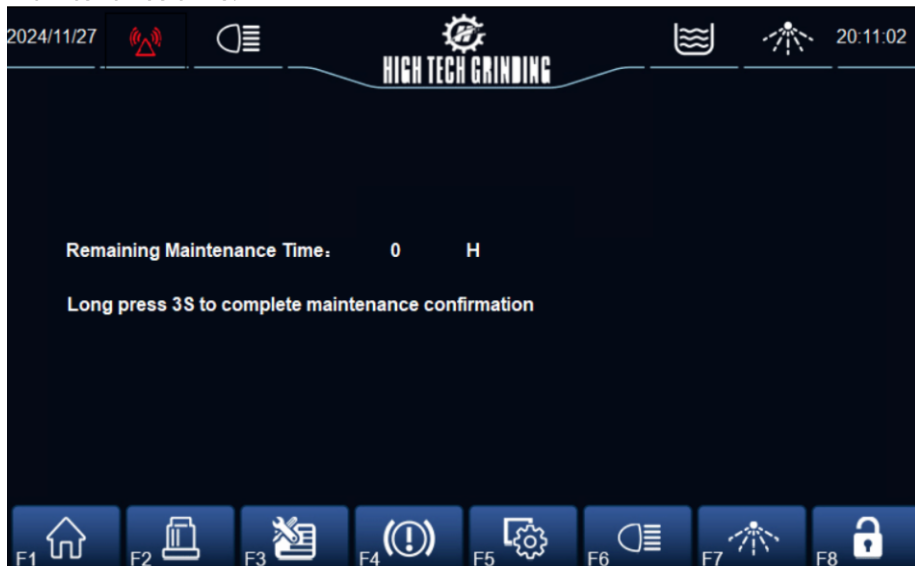
Press F2 and the screen will display (as shown below)

- 1.Technical parameters of grinding motor (voltage, current, temperature, speed, fault code).
- 2.Technical parameters of left-travel motor (voltage, torque, temperature, speed, fault code).
- 3.Technical parameters of right walking motor (voltage, torque, temperature, speed, fault code).



Press F3 and the screen will display (as shown below)

Press F3 to display the remaining maintenance time. After the maintenance is completed, press and hold the F3 for 3 seconds to reset the maintenance time.



Press F4, the screen will display (as shown below), if there is a failure during the operation, the details of failure will be displayed on it.



Press F5 and the screen will display (as shown below)

1. language selection (0 Chinese, 1 English, 2 Korean,,,,,).
2. Brightness (adjusted with numbers).
3. Maintenance count coefficient (displayed in 100%).
4. System time.
5. left shift.
- 6.right shift.
- 7.plus (click to add).



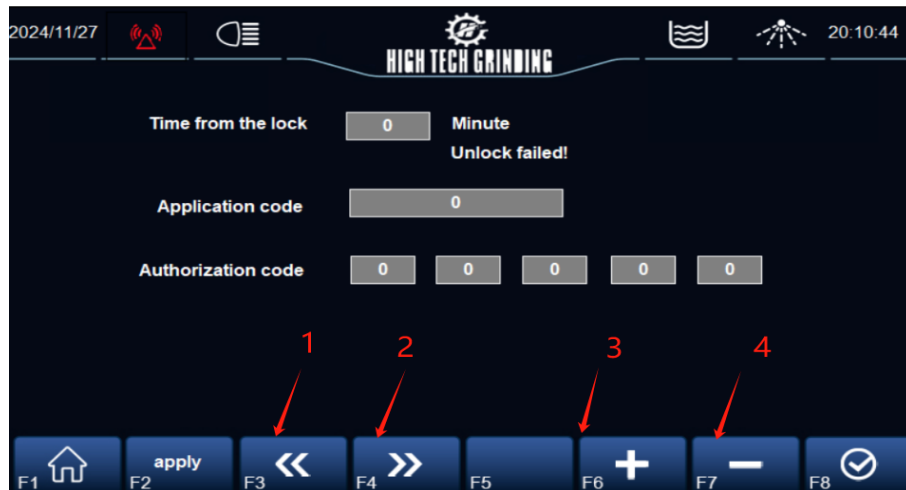
F6 is used to control LED lights/spotlights.

F7 is used to control the front spray.

Press F8 and the screen will display (as shown below).

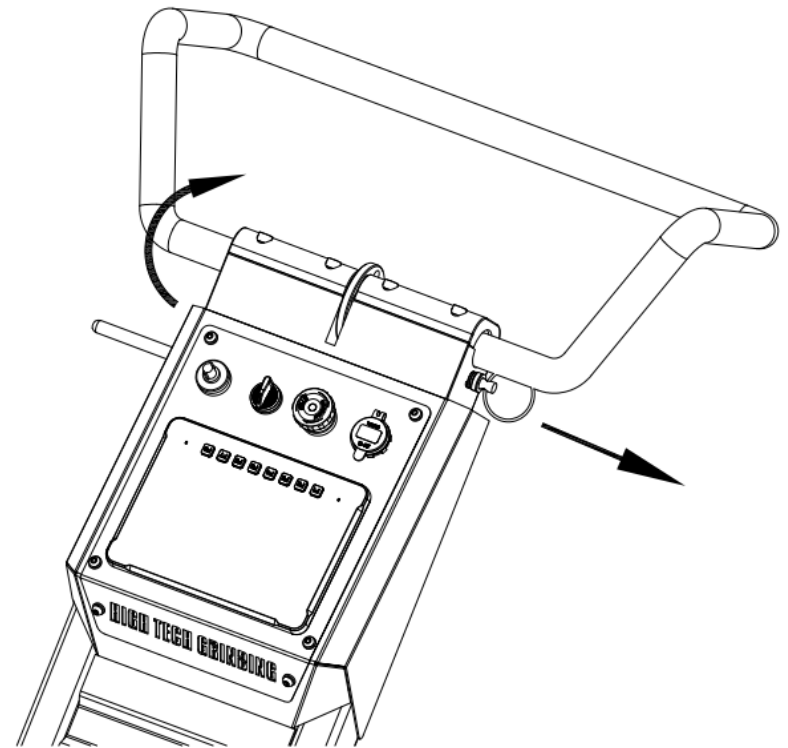
When the device is locked, press F8 to send the application code that appears to our company, and our company will send the authorization code to the customer. After the customer enters the authorization code, the device will work normally again.

1. left shift.
2. right shift.
3. plus (click to add).
4. minus (click to subtract).



3.3.4 Handle

The handle adjusting bolt can be positioned at different round hole, so as to adjust the position of handle to meet different needs of users. Hold the handle with one hand, pull out the adjusting bolt with the other hand, then release the adjusting bolt when it is rotated to proper position.

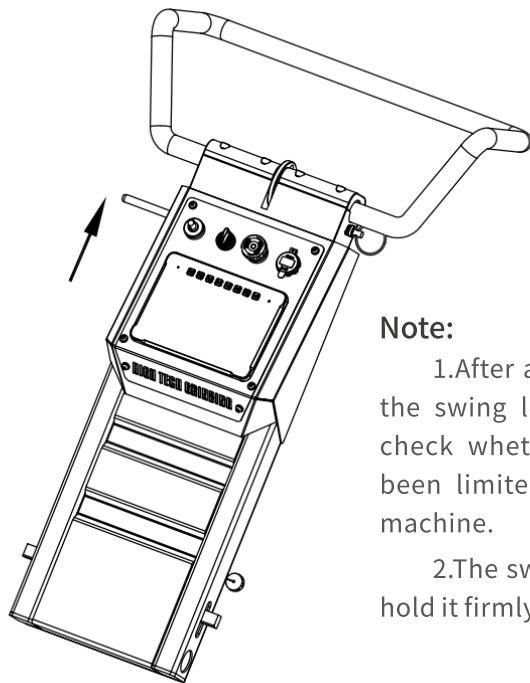


Note:

1. When plugging out the pin, sometimes it will be caught, and the pin can be pulled out by shaking the support wheel.
2. When the handle adjustment bolt is automatically reset, the hole may not be aligned, just rotate up and down
3. When adjusting the position of the handle, please check whether the handle adjustment pin has been automatically reset before operating the machine.

3.3.5 The angle adjustment of swing lever

Use the swing lever position adjusting handle to adjust the position of swing lever to realize conversion of the machine placement mode in different states. Hold the handle tightly with one hand to support the swing lever, turn the other hand counterclockwise and press down the adjustment handle, rotate according to the hole location on sector plate, and release the adjusting handle when it reaches required position.

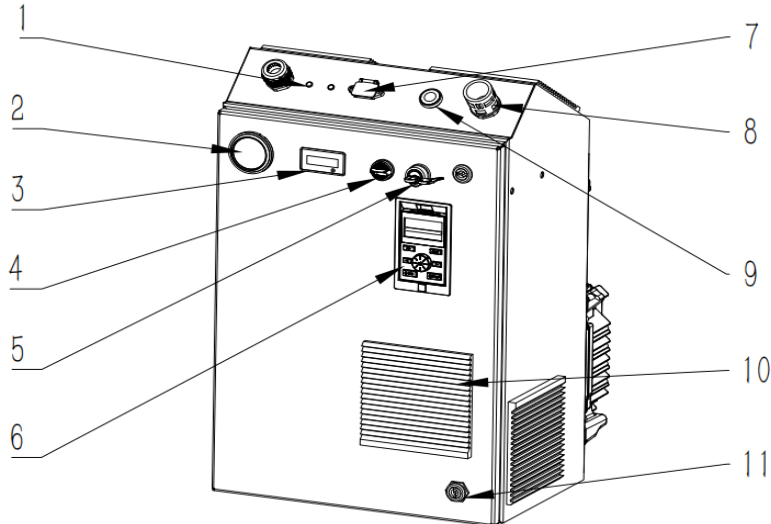


Note:

1.After adjusting the position of the swing lever, it is necessary to check whether the swing rod has been limited before operating the machine.

2.The swing rod is heavy, please hold it firmly!

3.4 Main electric cabinet



1.Indicator light: Remote control status indicator.

2.Timer: shows the total running time of the device.

3.Battery indicator: Mainly shows how much battery power is stored in the machine.

4.Two-gear knob:remote and manual switching

5.Key switch: start the DC power supply;

6.Inverter external keypad: adjust parameters;

7.Reserve battery charging port: The reserve battery can be powered by specified charger.

8.Corrugated pipe connector:used to connect wire.

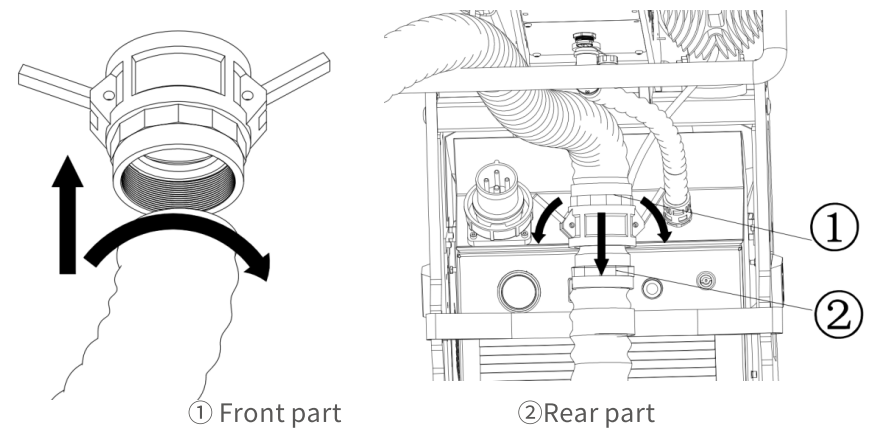
9.Charging indicator light the battery level is displayed when charging.

10.Fan filter: prevent the internal temperature of the inverter box from being too high

11.Main electric cabinet key lock: used to lock the electric cabinet.

3.5 Camlock

Camlock consists of front and rear part(As follows),the front part is usually assembled with the vacuum nozzle of the grinder (screw the front part into the vacuum tube connection and screw it tightly), the rear part is matched with the vacuum tube (Screw the copper wire suction tube into the back and tighten).

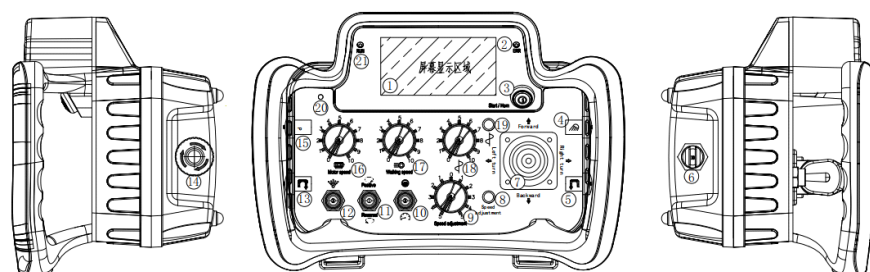
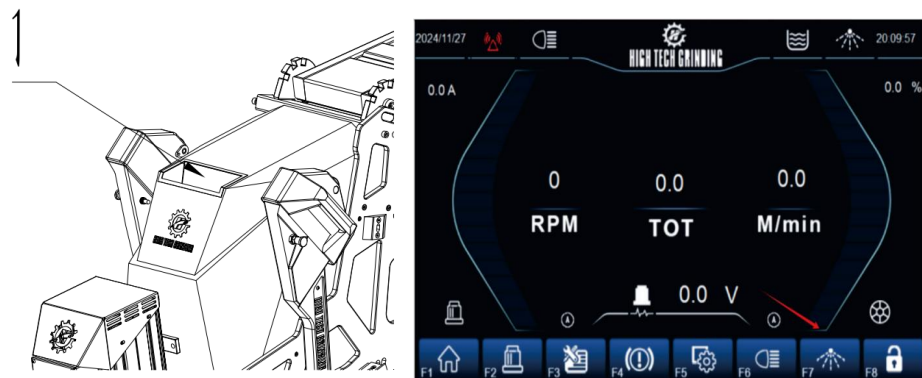


3.6 Water tank

There is a water inlet in front of the water tank. The heat dissipation openings on both sides of the water tank make the heat dissipation of the inverter box of the equipment faster, and can extend the service life of the

electrical appliances inside the inverter box.

In the manual water grinding , press the front spray switch in the display (F7)(as shown in Figure 1) to spray water in front of the machine; Rotary the water switch , and the machine chassis will spray water for water grinding(as shown in Figure 2).



①Water inlet ② (No. 12 on the remote control) Front spray switch

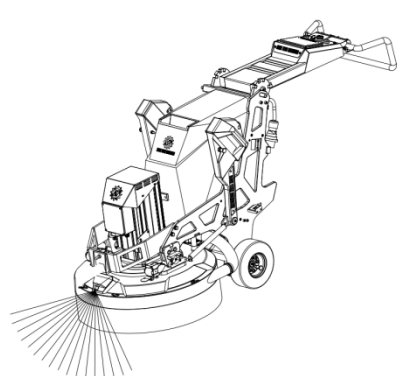


Figure 1

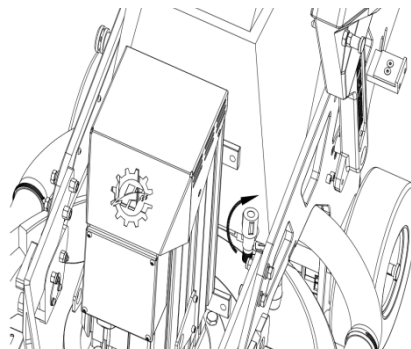
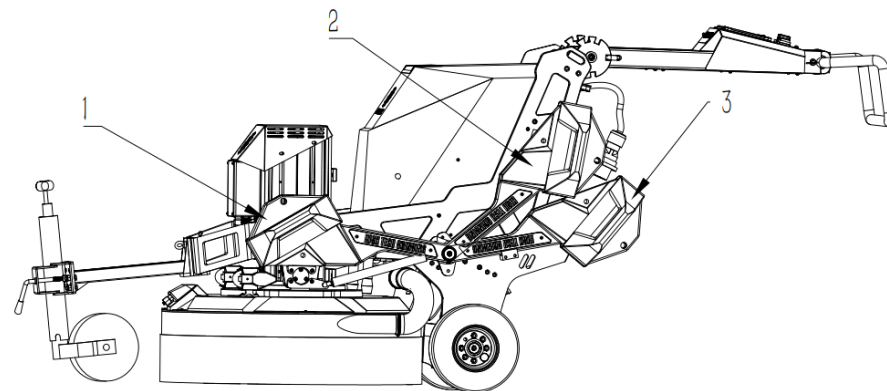


Figure 2

3.7 Additional weight iron

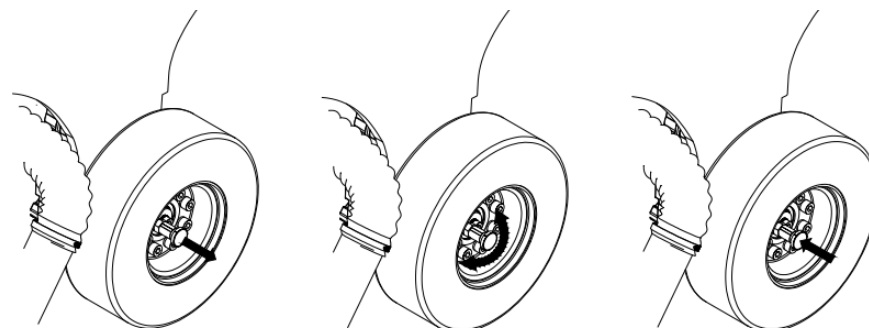
There are three positions for the additional weight iron: transporting, tilting, and working position. The adjustment and limit of the extra weight is mainly achieved by spring pin and limiting device on frame.



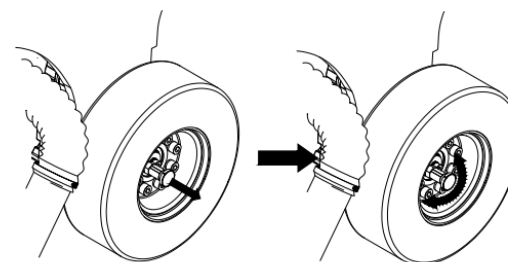
①Working position ② Transporting position ③Tilting position

3.8 Self-locking indexing pin

Lock the self-locking indexing pin : rotate the pin 90 degrees, then pushes it inward.



Unlock the self-locking indexing pin: pull out the pin, and rotate the pin 90 degrees.



Note:

1.The self-locking indexing pin may be stuck sometimes when you try to pull out, shake the machine in this case.

2.Rotate the self-locking indexing pin to proper position when grinding. Be sure to limit the pin before working. If the self-locking indexing pin does not automatically bounce back, it will bounce back automatically when the wheel is moving on ground.

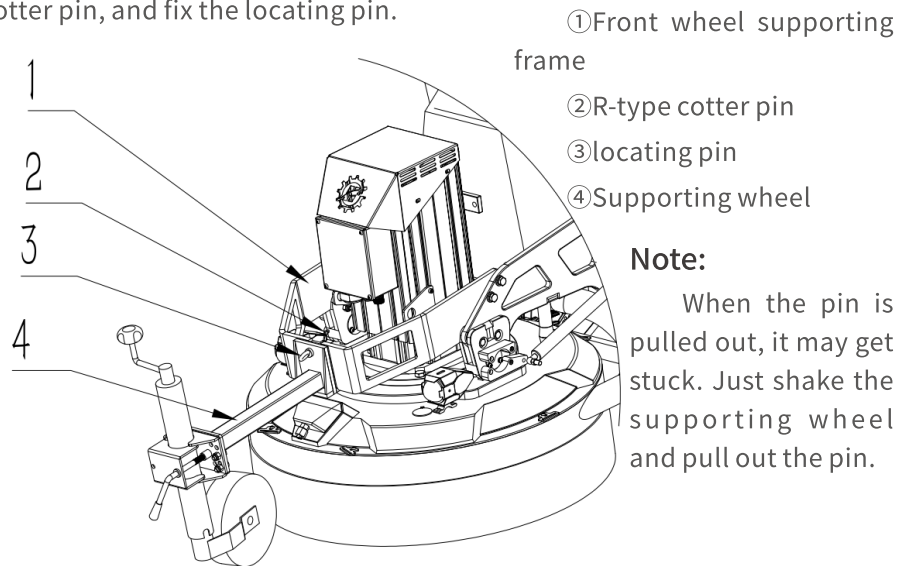
3.9 Supporting wheel

1.Disassembly of supporting wheel

Assembled the supporting wheel before walking transportation, which can make the steering of grinder smoother. During transporting, sometimes it is necessary to move the machine forward and backward, so it will be more convenient and labor-saving to install the supporting wheel to achieve the movement of grinder. Remove or invert it when grinding.

Remove the supporting wheel: press the emergency stop switch, unplug the power plug, unravel the R-shaped split pin, remove the locating pin outward, and move down to take out the supporting wheel,

Install the supporting wheel: press the emergency stop switch, unplug the power plug, align the support wheel with the pin hole on front wheel support frame, then insert the wheel into the positioning, insert the R-type cotter pin, and fix the locating pin.



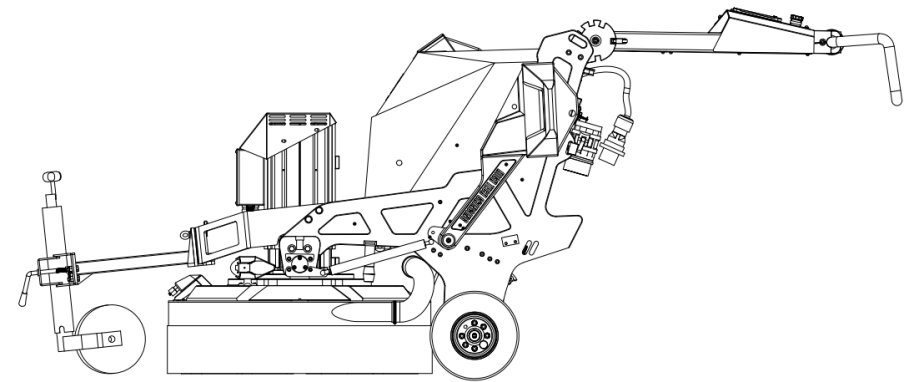
2.The lifting and lowering of supporting wheel

The support wheel can be lowered by rotating the handle of the support wheel and raise the grinding device from the working area.

Note:

In the process of transportation, it would be better to remove abrasive in advance to prevent from falling and losing. If lose, manufacturer will not provide compensation..

During rotating and rising, please tighten the lock handle to supporting axle, and then adjust lifting of the support wheel. The handle rotation direction: left to loose, right to tight.

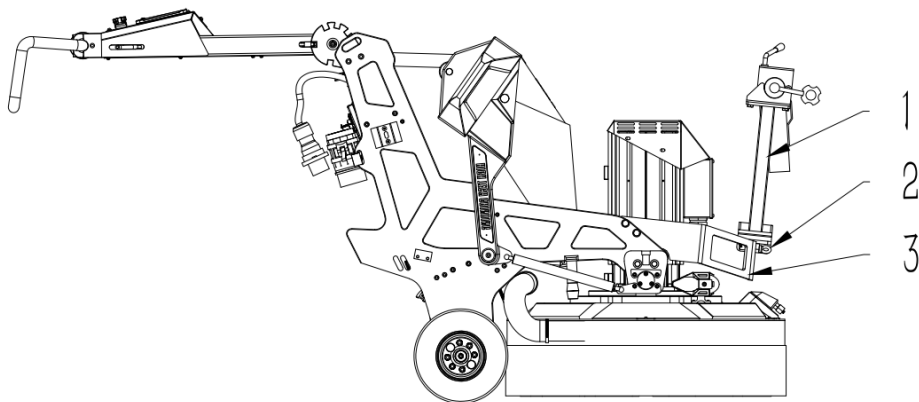


3.The flip of supporting wheel

1.Unlock the R-type cotter pin, remove the positioning pin in both sides (Part No.2)

2.Then attach the support wheel (Part No. 1) to the front wheel support frame (Part No. 3) in the direction of rotation.

3.Insert the locating pin into the r-type cotter pin and fix the locating pin.



①supporting wheel ②locating pin ③Front wheel support frame

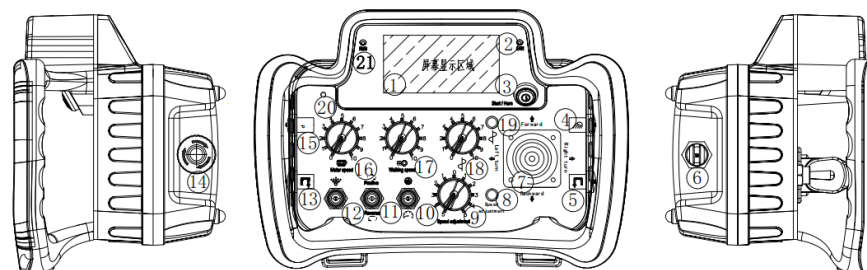
Note:

The support wheel must be lowered to the lowest position before it can be turned over.

When the plug is pulled out, it may be stuck. Just shake the support wheel and pull out the bolt.

4. Remote control device

4.1 Remote control - control panel



1.The display: mainly shows some parameters, such as voltage, current, motor speed, overload fault prompts.

2.Transmitter power indicator: When the battery voltage is low, the indicator light  is green. Please replace the battery within 20 minutes. 电量指示

3.Start button: used to start the remote control with the emergency stop switch.

4.Spotlight switch: Control the switch of the spotlight of the inverter box.

5.Turn left with one button: Press to realize the left turn of the machine.

6.Power switch: controls the power supply.

7.Direction control rocker: control the machine forward, backward, left turn, right turn.

① Push the direction rocker forward gently and the machine will walk at the speed set on the walking speed governor.

② Push the direction rocker backwards gently. The machine will walk backwards at the speed set on the walking speed governor.

③ Push hard to the left, the machine will turn left according to the minimum turning radius by the cooperating of the left and right wheels.

④ Push hard to the right, the machine will turn right according to the

minimum turning radius by the cooperating of the left and right wheels.

⑤ Slightly toggle the rocker to the left, the machine will turn left by turning the left wheel.

⑥ Slightly toggle the rocker to the right, the machine will turn right by turning the right wheel.

⑦ After the machine is turned, reset the joystick and the machine will move according to the forward or backward command set in the previous step.

⑧ machine walking speed: 0-30m / min.

8. Speed adjustment status indicator: When the speed adjustment switch starts normally, the indicator light is green.

9. Left and right wheel speed adjustment switch: Ensure that the machine performs linear grinding. When the machine is slightly offset from the straight line to the right (to the left), turning the switch to the left will reduce the speed of the left wheel and make the machine to the left (right). Offset, keep the straight path.

10. Ordinary remote control / fully automatic grinding mode switch: when you press down, the machine is in the normal remote control mode, when you pull it up, the machine is switched to the fully automatic grinding mode.

11. The motor rotating reverse rotation switch: There are three gears in the switch: the forward push is to control the motor to rotate forward, the middle one is the motor does not rotating, and the backward push is to control the motor reverse.

12. Front spray switch: control the opening and closing of the front sprinkler head of the disc cover.

13. Turn right with one button: Press once to realize the right turn of the machine

14. Emergency stop switch (located in the lower part of the fuselage): open or interrupt the use of radio control, let the machine stop working.

15. Brake switch: The drive wheel brakes instantly.

16. Motor speed adjustment switch: control the speed of the grinding disc drive motor.

17. Drive wheel speed adjustment switch: control the speed of the machine walking.

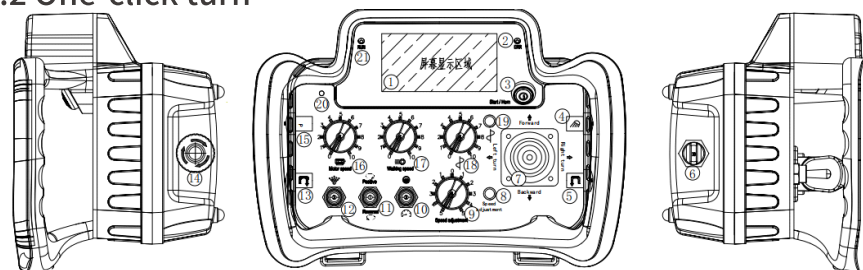
18. Offset adjustment knob.

19. Offset adjustment indicator: When the offset adjustment starts normally, the indicator light is green.

20. External antenna: used to receive control signals.

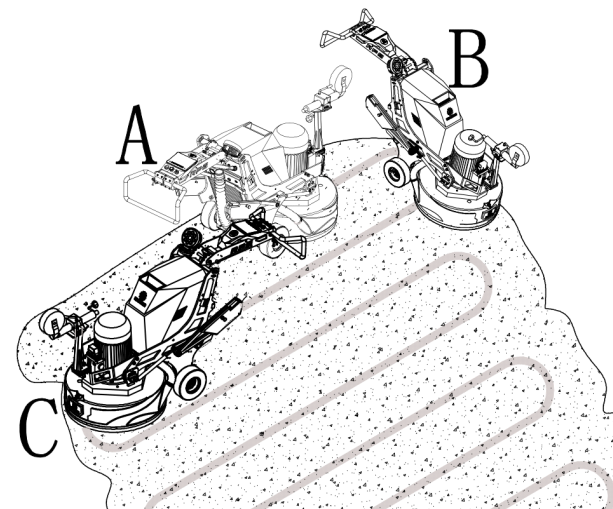
21. Running lights.

4.2 One-click turn



During grinding operation, when the A machine is linearly polished to turn, you can press the No. 13 button to turn right (or press the No. 5 button to turn left according to your own needs) to as moving as B machine. Grinding while turning, finally polishing in C machine state.

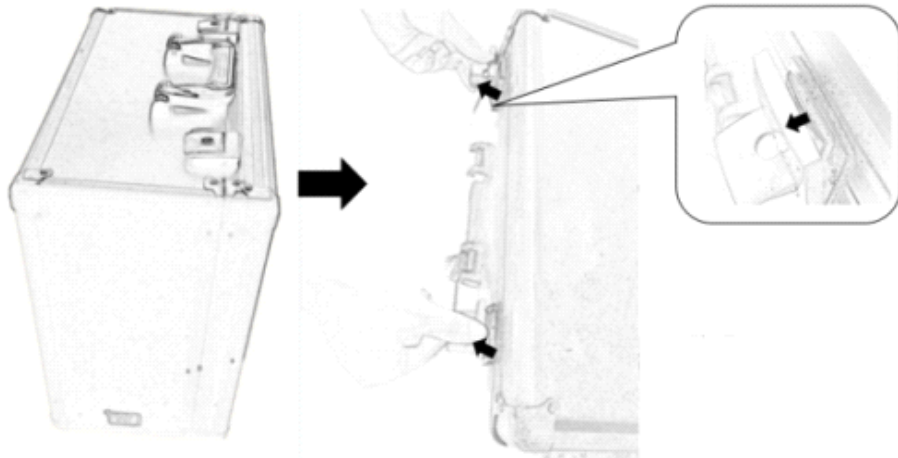
Note: The U-turn point is between the two rear wheels, 40cm of space should be reserved at the front end when making U-turn. It is not recommended for beginners to use one-button U-turn when they are close to the wall.



4.3 Remote control device box

4.3.1 Overview

The parts inside are as follows:



- 1.Remote control
- 2.Battery
- 3.Belt
- 4.Charger

4.3.2 Use of remote controller

The installation of remote control battery: Please check the Battery Percentage before installation, to avoid the Battery Percentage is not enough to affect normal use; when installation, please pay attention to the battery direction, and ensure to install battery reliable; remove the battery without using the remote control for a long time

Location of the remote control: The remote control should be placed in a safe and conspicuous position to prevent it from falling and being damaged.

Turn on the remote control: Put the fully-charged battery into the battery compartment, pull out the emergency stop switch on the remote control, long press "start", the green light is steady and the remote control is on when the green light flashes once per second.

Turn off of the remote control: Press the emergency stop switch of the remote control, the power indicator is off, and the remote control is turned off.

4.3.3 Use of the charger



Follow the signs on the charger to input the correct voltage.

Put the rechargeable battery in the charger:

The indicator light of the charger changes from steady green to steady red indicating that the charger is normal.

The charger indicator changes from steady green to flashing red, indicating the battery is over-discharged, the charger is in the trickle charge state. After a short time, the indicator light change to steady red, and the battery is in the normal charging state.

The red light flashing means the rechargeable battery is faulty and the battery needs to be replaced.

After the charge is completed, the indicator light changes from steady red to steady green.

Note:

Be sure to confirm the charger voltage.

Make sure that the rechargeable battery is fully inserted in the charger.

If the charging is not completed after more than 4 hours. Please check it if the charger or battery is in normal working or not.

4.3.4 The way how to bind remote controller belt

Take out the belt of the remote control and tie it to the lower side of the remote control (as shown in the picture). Hang the belt around your neck, and adjust the length.

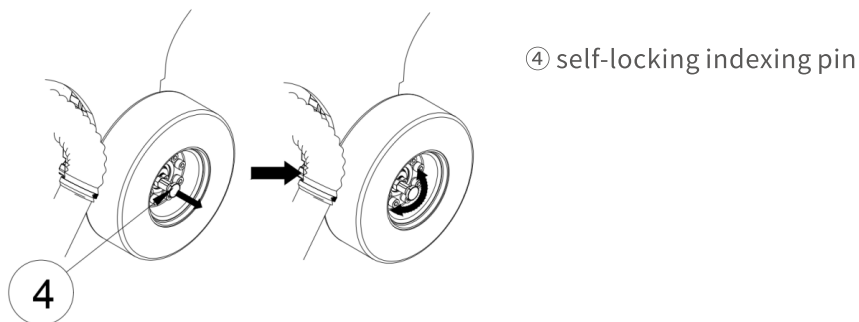


5. Transportation

The transportation of this machine is divided into two types that is manual and automatic. It can be operated without any out power during transportation, and can rely on the storage battery in the machine.

5.1 Manual transportation

1. Rotate and lower the support wheel to raise the grinding machine from working area. It is recommended that the lowest position of the grinding disc is 25mm from the ground.
2. Unlock the self-locking indexing pin: pull out the pin, and rotate the pin 90 degrees.
3. Push the machine by handle.



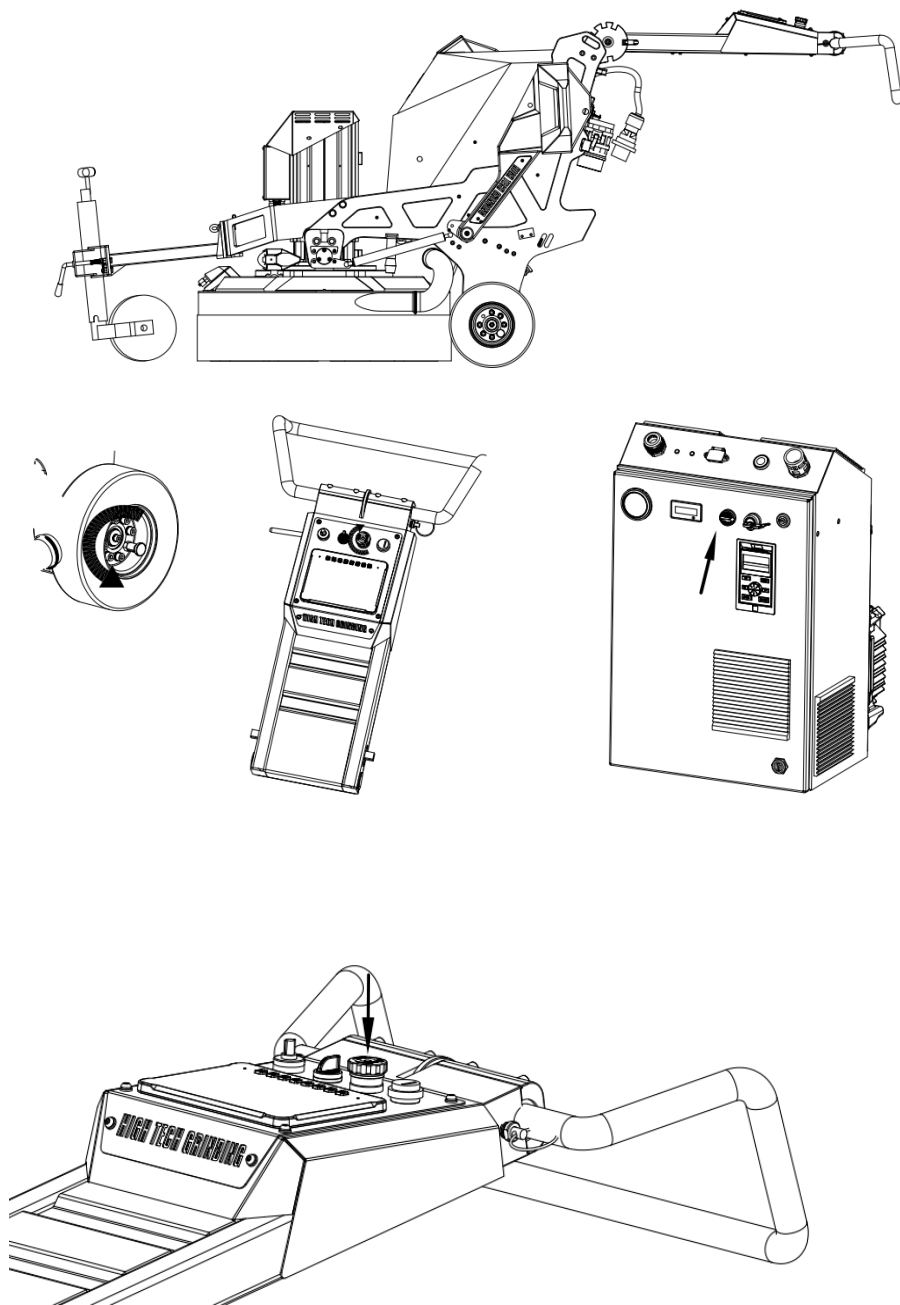
Note:

1. When the self-locking indexing pin is pulled out, it may get stuck. Just shake the machine and pull out the pin.
2. Pay attention to your own safety when lifting the machine, be sure to do no more than you can.
3. Take out the grinding pads to prevent it drops and lost before transport, resulting in unnecessary losses.
4. When using manual push mode, the self-locking indexing pin must be unlocked.
5. Using hand-push way when self-locking indexing pin is in the locked state, will result in the drive motor damage!
6. When rotating the support wheel, remember do not to rotate to the highest position, to prevent the support wheel off lead and the final hole is not aligned well.
7. Rotating the support wheel, it is necessary to always pay attention to the height of the grinding disc from the ground, which can not be too low to prevent the disc shaking lead to collision with the ground, damage the disc; it is recommended that the disc minimum position is 25mm from the ground.

5.2 Remote control transportation

Rotating supporting wheel handle can lower the support wheel to raise grinding device from the working area, it is recommended that the lowest position of the grinding disc is 25mm from the ground;

1. Lock the self-locking indexing pin : rotate the pin 90 degrees, then pushes it inward;
2. Reset the emergency stop on the swing lever control panel;
3. Press the power button on the electric control box (green button);
4. Select the remote control mode by turning remote/manual mode switch on the machine display;
5. Control the walking speed and directions of machine by remote control device.



Note:

1.The emergency stop switch should be screwed or pressed, and cannot be pulled. The manufacturer does not compensate for any loss caused by improper operation.

2.Take out the grinding pads to prevent it drops and lost before transport, resulting in unnecessary losses.

3.Pay attention to the power of the remote control device and the reserve battery during operation. When using the self-contained battery, the walking speed should not be higher than

4.During the operation, the direction control switch on the remote control device can be easily dialed.

5.Be extremely careful when polishing or transport on slopes (up to 17° slope).

6.If it is a steep slope, make sure to use a winch. Do not stand behind the machine.

7.When the remote control device indicates that the battery is low (when the red light on the electrical control box is on), avoid moving the machine up the slope.

8. When moving down the slope that the machine should be driven slowly in the reverse direction.

9. When moving up the slope, drive the machine slowly.

10. When rotating the support wheel, do not to rotate to the highest position to prevent the support wheel from falling off and the hole position is not aligned properly.

11. When rotating the support wheel is always pay attention to the height of the grinding disc from the ground and not too low. When it is too low that the grinding disc will cause collision with the ground and damage the grinding disc.

5.3 Transportation and storage

- Be extremely careful when moving a machine in manual mode or on a ramp. Even small tilts can create large forces that can't hold the machine by hand.

- The machine should not be lifted by the handles, motors, frames or other parts of the machine. Please transport the machine securely on the pallet/slide.

- Never attempt to lift the machine if it is not possible to use mechanical means such as a crane or forklift.

- If the machine is not parked on a pallet or bracket, do not use a forklift truck to lift below the planetary grinding head. Such behaviour may cause irreparable damage to the machine's discs and other internal components.

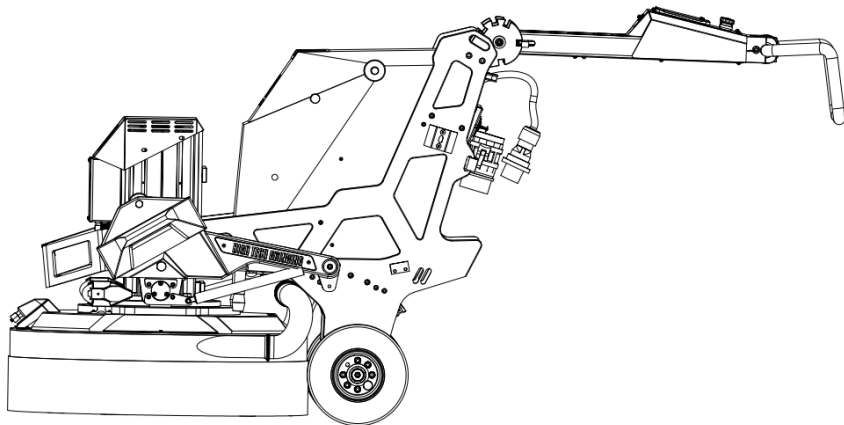
- During transportation, please fix the machine firmly to avoid damage or accidents.

- The machine should be covered during transportation, especially in rain and snow.

5.4 Machine location description

5.4.1 Machine working position

During grinding, adjust the additional weight iron, swing lever and handle to working position. Then, pull the self-locking indexing pin out and flip up or remove supporting wheel.



5.4.2 Machine package position

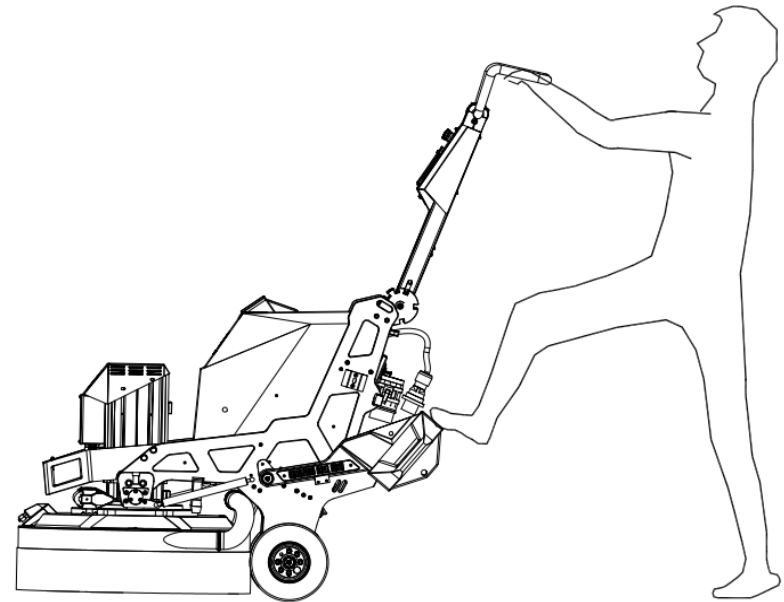
Adjust the position of the swing lever, foot pedal and handle to the packaging position.

The minimum package size is as follows and the machine can be packaged according to the specific size.

5.4.3 Machine lift up position

Adjusting the bolt of the extra weight so that the extra weight is in tilted position, and adjust the handle, pedal and swing lever position to the lifting position. (Recommended best lift up position)

Hold the handle with both hands and place one foot on the additional weight to force the machine down.



To put the machine down, you need to hold the handles tightly with both hands. Place feet on the handle of the extra weight iron lifter, balance the machine with your own gravity, and slowly lower it to protect the grinding head. When you put down the machine, pay attention to your own strength, and do your best to ensure the safety of the machine and the person. XINGYI company does not assume any responsibility for machine damage and personal injury caused by improper operation.

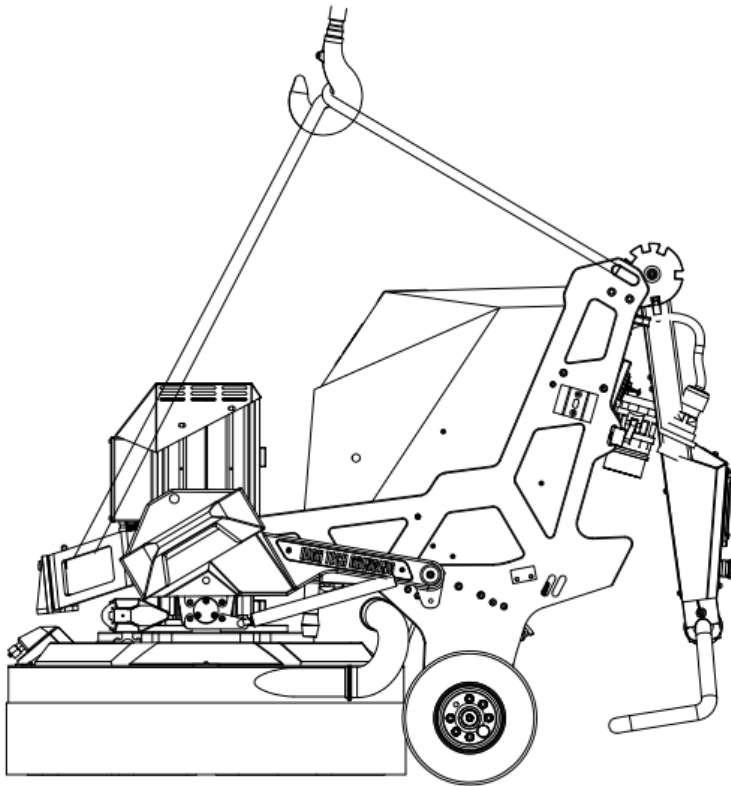
Note:

After lifting up the machine, remember to stand next to the grinding head, slightly press the grinding head to see if the machine is stable for personal safety.

The support wheels can be turned over or removed.

5.4.4 Lift the machine

Tie the lifting strap tightly to both the two lugs, one is next to the motor and the other one next to the anti-dust tape .(Note: you need to use two ropes that can withstand 500 kg to bind the machine).

**Note**

1. When lifting the machine, it may cause personal injury or damage to the machine and surrounding objects. Make sure that no one is present in the danger zone during the lift.

2. After the rope is fixed to the lifting hole, you should also check whether it is firmly fixed.

3. The two ropes need to be diagonally connected to the lifting mouth.

5.4.5 Notes

1. Improper operation may lead to the grinding machine overturned and damaged, even endanger personal safety.

2. When the handle adjustment pin is pulled out, it may get stuck. Just shake the handle and pull out the pin.

3. During adjustment, it is necessary to confirm the reset of the locking device before operating the machine.

4. Be careful when the grinder is adjusted to the position of transportation or packaging and there is a risk of crushing injury.

5. Dust inhalation is harmful. Please bring a professional mask during operation to ensure physical safety.

6. In the process of lifting and downing the machine, we must pay special attention to our own safety and avoid damage to the machine.

6. Machine Operation

6.1 Overview

The following part mainly describes the grinder in different positions when the mode is switched to manual operation, the main operation of the grinder and how to install the grinding abrasive.

Note:

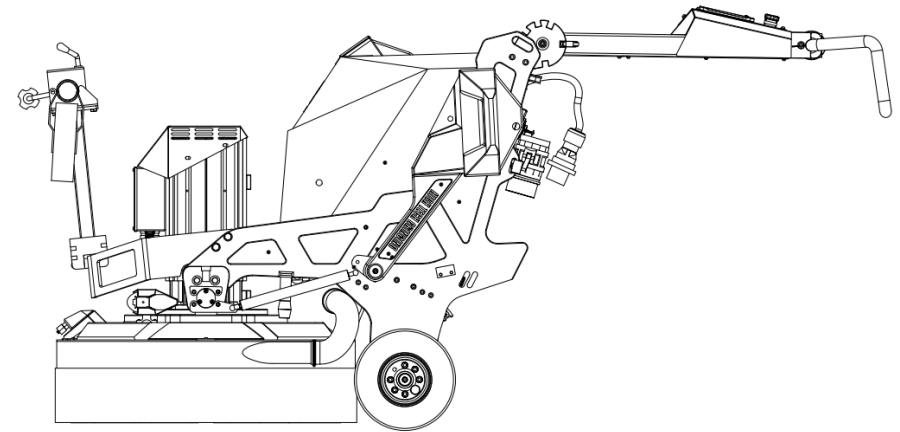
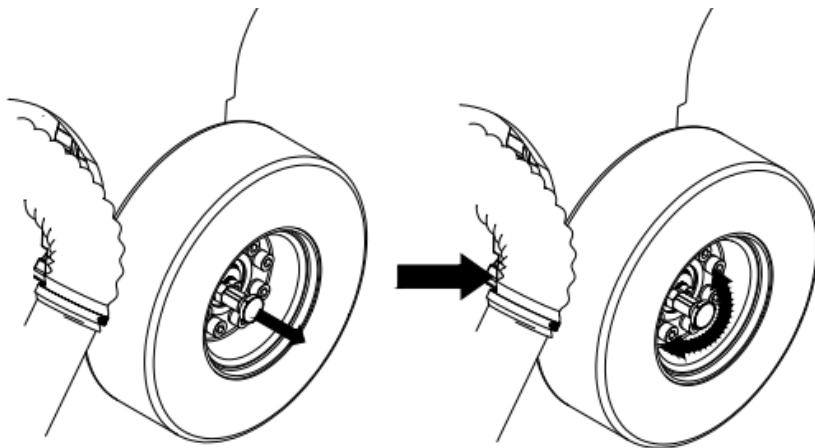
1. Grinders can only be used or repaired by personnel who have received the necessary theoretical and practical training and have carefully read the user manual.

2. Wear protective equipment such as protective gloves, protective masks, overalls, helmets, insulated shoes, etc. when operating the grinder.

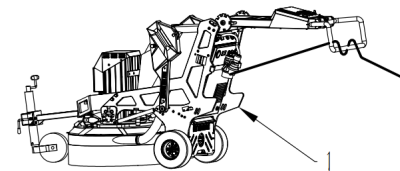
6.2 Start and stop the grinder

6.2.1 Manual mode operation

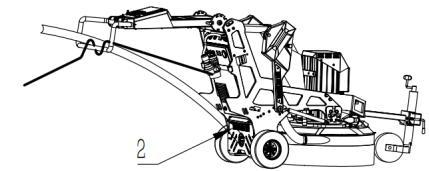
Unlock the self-locking indexing pin, then adjust additional weight, swing rod and handle to corresponding working position, flips up support wheel device, fixed it with clutch pin and R-pin, or remove it (as shown below).



Plug in the power cord (ensure that the emergency stop is pressed down and the switches are reset); if the machine using for dry grinding, connect the vacuum cleaner (Vacuum cleaner is equipped with a camlock, so it can quickly connect to the vacuum cleaner); if the machine using for wet grinding, it's necessary to fill the water tank with water.

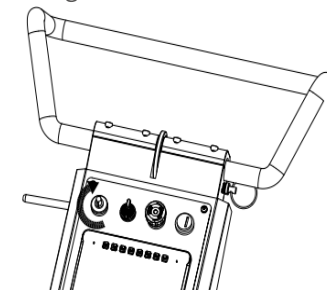
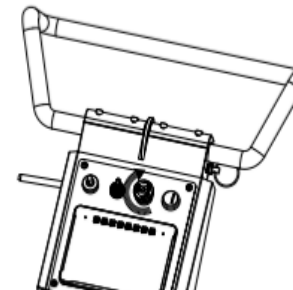


①Wet grinding

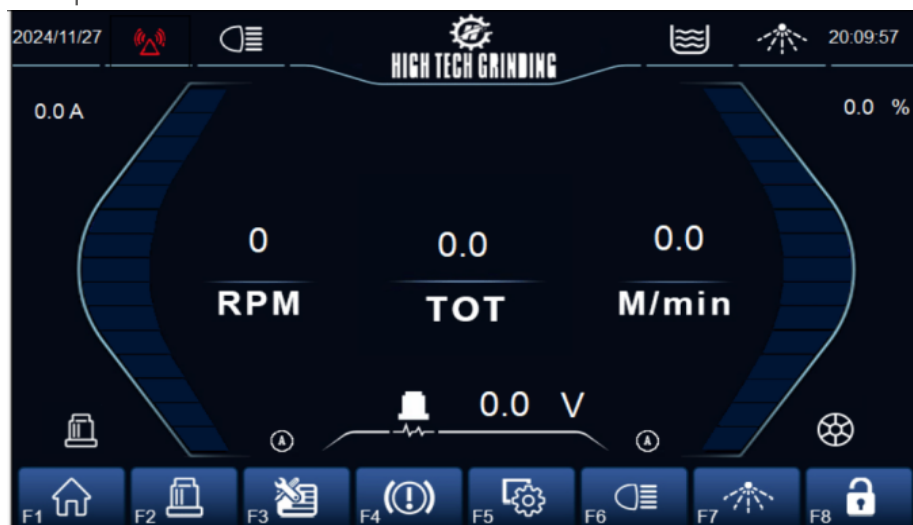


②Dry grinding

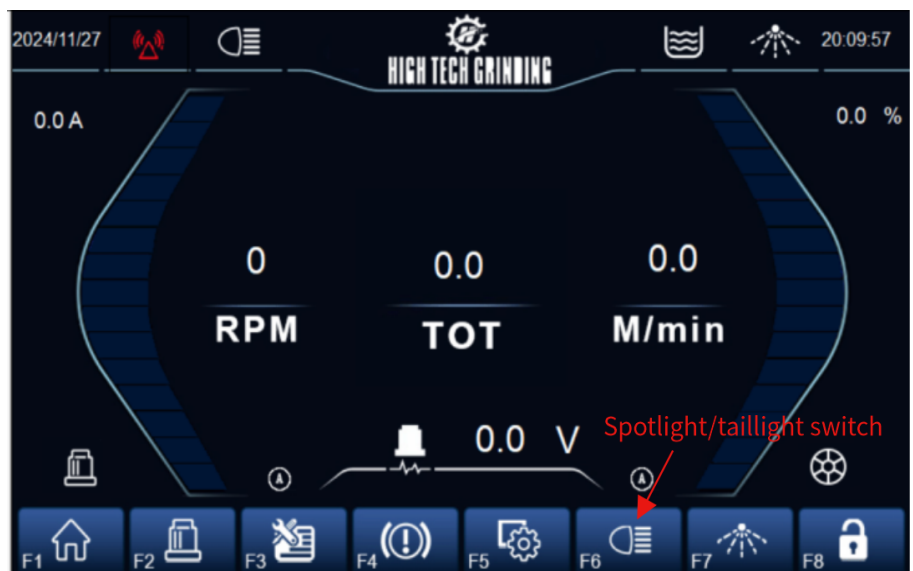
Rotate to turn on the emergency stop switch, press the remote/manual mode switch on the panel, switch it to manual mode, rotate the emergency stop switch, and then rotate the reverse switch, rotate the speed regulator to adjust the rotation speed of the motor, so that the machine can be started to grind.



During wet grinding, press the corresponding water switch on display as required.

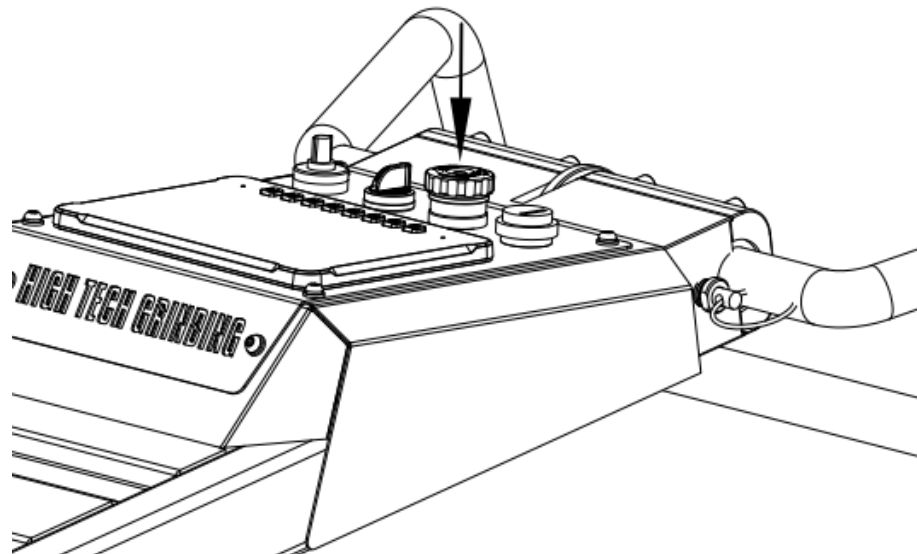


If the machine is operated in a weak light environment, press the spotlight switch and the headlight switch on the display according to your needs.



Stop grinder:

Press the emergency stop switch and unplug power to stop the machine (remember to reset the speed regulator).



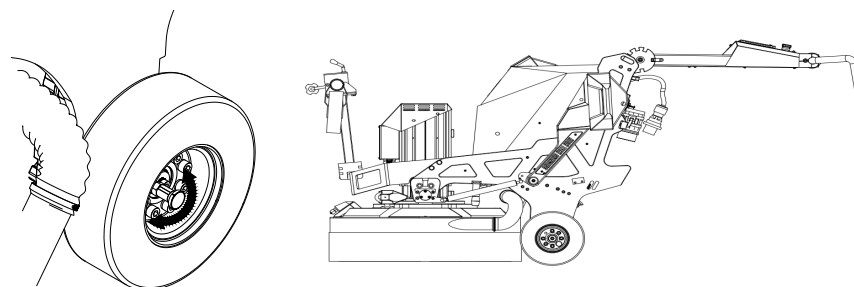
Note:

When stopping the machine, it is recommended to unplug the power supply for safety reasons.

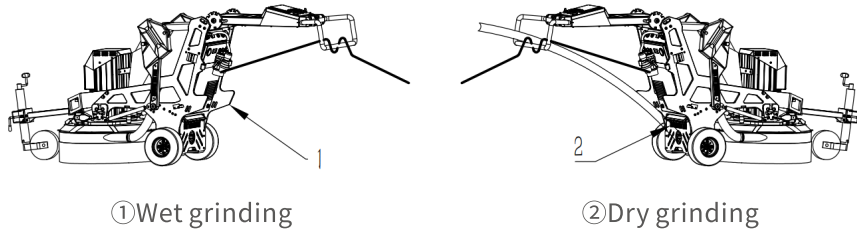
The emergency stop switch can only be rotated and pressed down according to the direction shows on its top, and cannot be pulled up.

6.2.2 Remote mode operation

Lock the self-locking indexing pin , adjust swing lever, handle and additional weight iron to the corresponding working position, place the supporting wheel device in the lowest position and invert it or disassemble it (as shown in the figure below).



Plug in the power cable(ensure that the emergency stop is pressed down and the switches are reset); if the machine using for dry grinding, connect the vacuum cleaner (Vacuum cleaner is equipped with a camlock, so it can quickly connect to the vacuum cleaner); if the machine using for wet grinding, it's necessary to fill the water tank with water.



Take out the remote control and hang it around your waist.

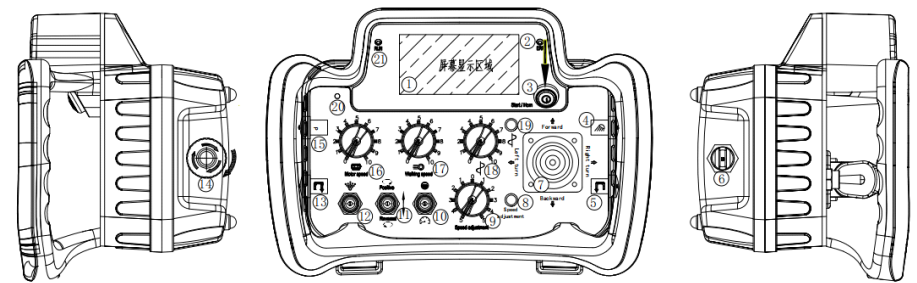
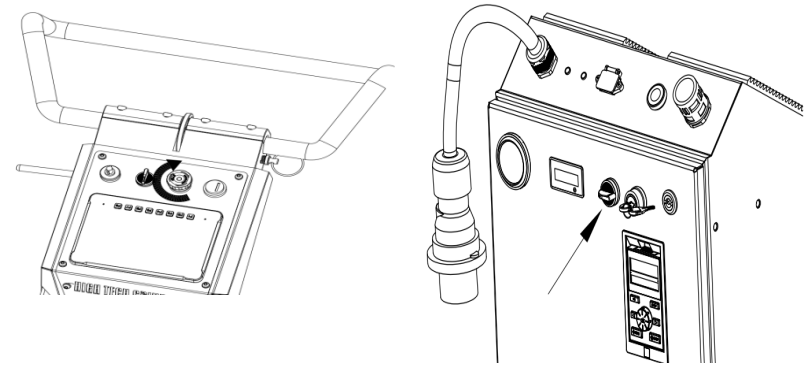


Rotate to turn on the emergency stop switch, wait for the panel display on the swing lever, press the remote/manual mode switch on the panel to switch it to the remote control mode (if the icon is lit, it indicates that the machine has switched to the remote control mode).

Normal remote control mode operation:

Rotate the electric control box button to switch to remote control mode, rotate to turn on the 5th emergency stop switch, press the 3rd start switch, push the No. 11 motor reverse switch forward, then the motor rotates forward (Push backwards to reverse the motor). Rotate the 18th

motor speed adjustment switch and the 19th drive wheel speed adjustment switch to adjust the motor speed and drive wheel speed respectively, and then start the machine for grinding. Use the direction control knob No. 2 to control the direction . (The specific operation is as shown below)



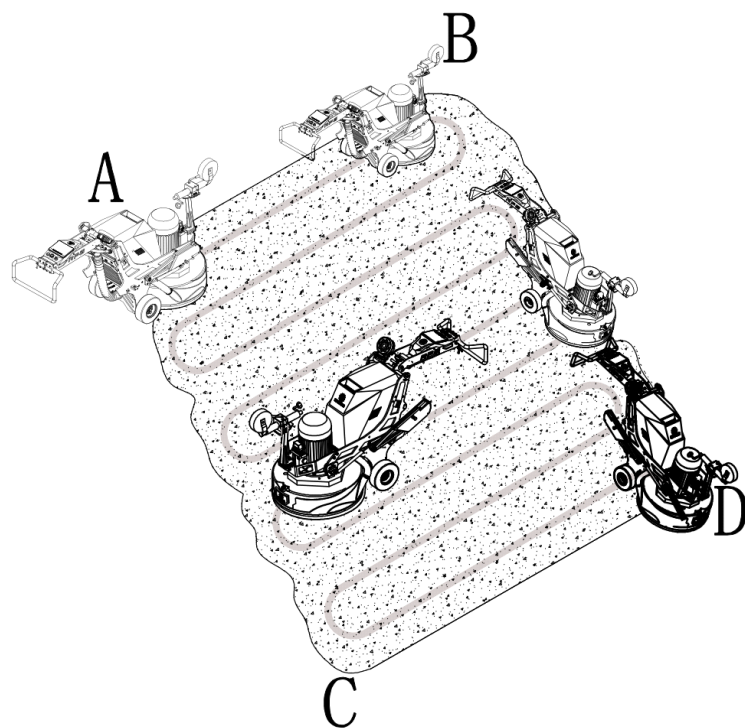
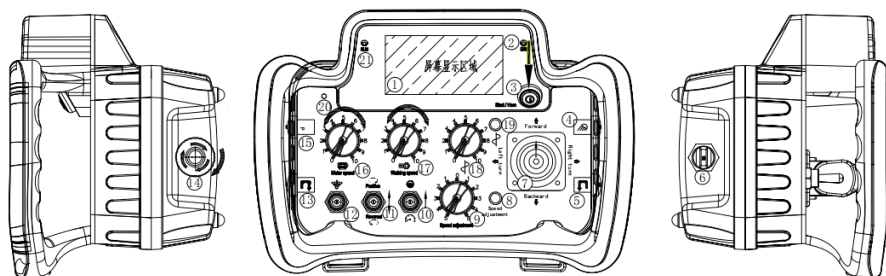
Learning and memory grinding mode:

For example, there is a zone ABCD, the machine starts grinding at point A, and end grinding work at point D .At point A, operator needs to rotate to open the 14th emergency stop switch, press the 3rd start switch, and dial the 10th remote control/learning memory grinding mode switch to switch to the learning memory grinding mode. Pushing the No. 11 motor forward/reverse switch forward, the motor will rotate forward (the motor will be reversed when pushed backwards)., Rotate the No. 16 motor speed adjustment switch and the No. 17 drive wheel speed adjustment switch to adjust the motor speed and drive wheel speed respectively. Move the No. 2 direction control handle to control the grinding direction ;When the grinder is approaching point B, press the No. 13 one-button right-turn switch, and the machine will turn right to grind. After that, the machine

will automatically grind between the AB points. Press the swing lever to stop the grinding machine when it is approaching the D point that the user wants to stop.

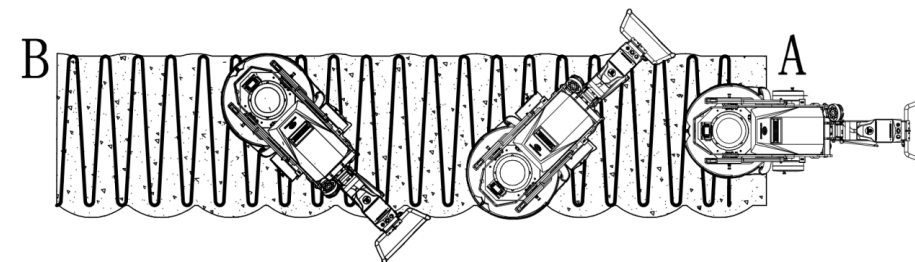
Note

Due to the different ground quality and conditions, when using the memory function, there will be a slight deviation, which requires a little manual adjustment. Reserve at least 40cm of space on both sides.



Oscillating grinding operation:

The function of oscillating grinding is mainly used to prevent the machine from forming an edge/ridge line between the passing paths by vibrating/oscillating during the grinding process.

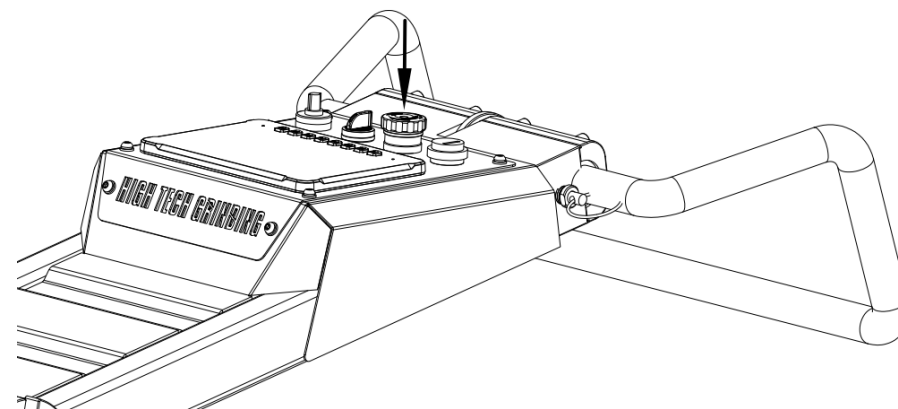


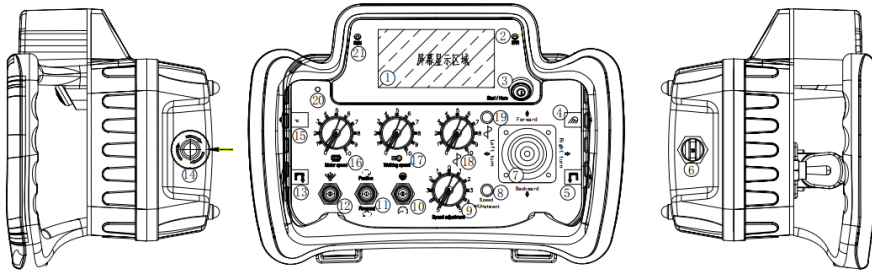
If the water grinding work is carried out, press the front spray switch (No. 12 on the remote control) and the water nozzle switch (the 13th button) when in need.

If the machine is operated in a weak light environment, press the 4th button spotlight switch and the 16th button headlight switch on the remote control according to user need).

Stop the grinder:

Press emergency stop switch on the swing lever to stop the machine. Remember to reset all the switches on the swing lever and remote control.



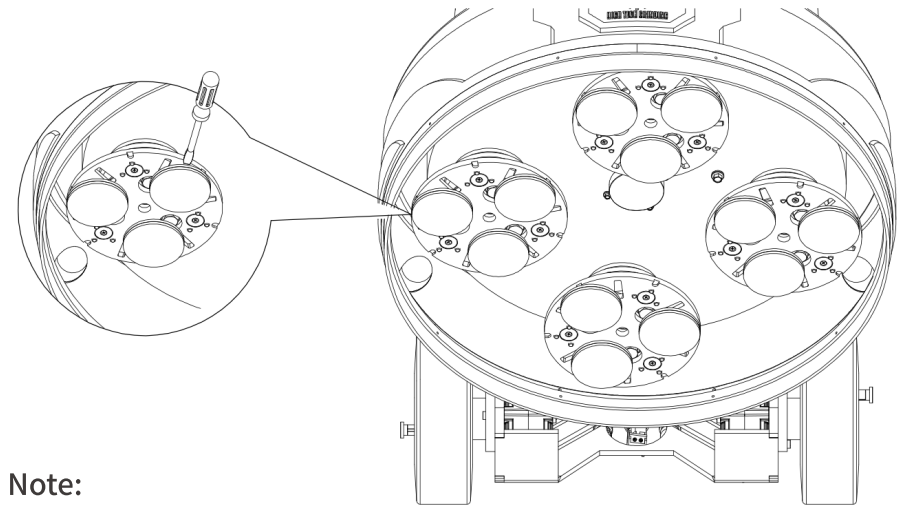


Note:

1. Before stopping the machine, please cut off all power.
2. The emergency stop switch can only be rotated and pressed according to the direction of rotation above the emergency stop switch, and cannot be pulled up.
3. When turning on the machine, pay attention to reset the switches on all the remote controls to ensure the normal use of the machine. Otherwise, the machine cannot work even the power switch has been turned on.
4. When using the remote control device, please pay attention to the signal light on the remote control. The remote control can't out the normal use range of the machine. Otherwise, it will be too far to control the machine.
5. The grinding disc drive motor must be started to run before pushing the direction rocker.
6. When the machine needs to stop working or an emergency occurs, press the emergency switch on the transmitter.

6.2.3 Replace abrasives

When replacing abrasives, adjust machine to the lifting position, then tip the machine carefully and lay the machine flat. After leveling the machine, stand next to the machine and check whether the machine is stable. Replace the abrasive with a flat-blade screwdriver and replace it with a new one.



Note:

1. Please ensure that the machine won't tip forward before replacing the abrasive;
2. After the machine has been running for a period of time, the abrasive, grinding disc and the gear box will generate high temperature. Be careful to be burn when you replace the abrasive.
3. Replace the abrasive only when the power is unplugged and the emergency stop is pressed.

6.2.4 The wire winding

During machine working process, the wire wind method is particularly important, you can greatly improve your work efficiency and improve your safety. The specific operation is as follows:

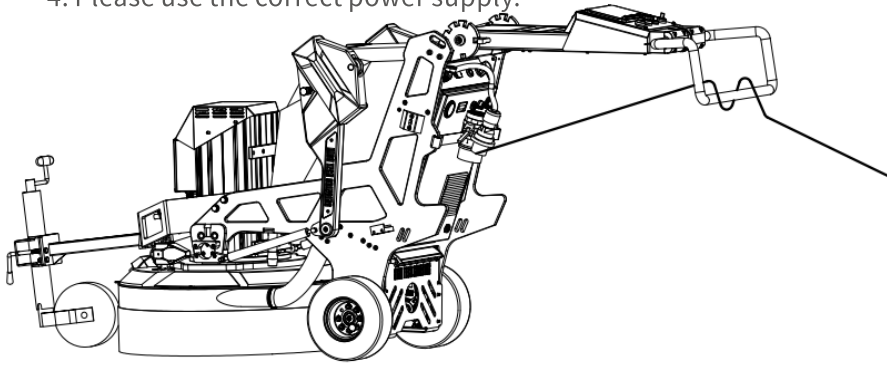
1. Plug in an external power supply.
2. Turn the power cord through the swing lever handle.
3. The power cord wrapped around the handle at least two laps.
4. Slightly hard to pull the power cord to ensure that the power cord has enough friction so that the power cord firmly fixed on the handle.

Note:

1. Make sure the power plug and socket are securely connected;
2. Please make sure the emergency stop has been pressed before plug the power supply, and the other switch has been reset;
3. Power supply line, please use (please find in Manual) wire minimum

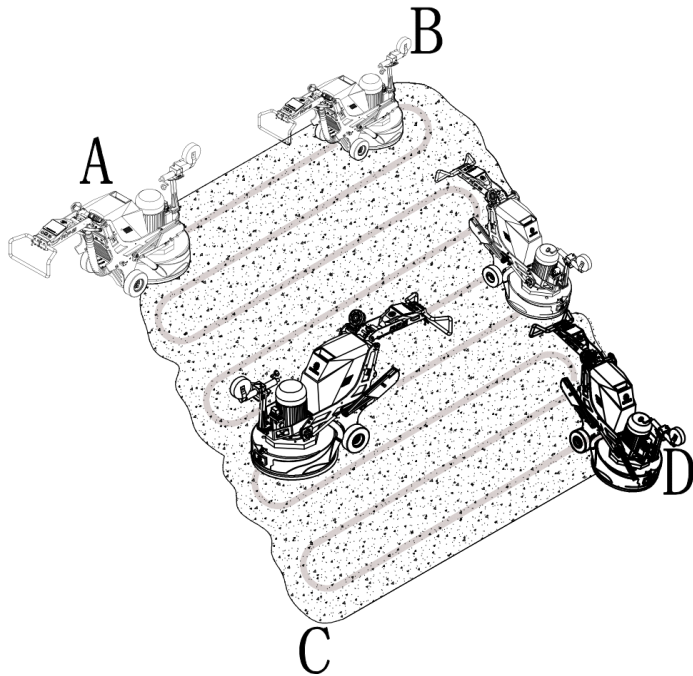
wire size;

4. Please use the correct power supply.



6.2.5 Grinding route (for reference)

When grinding the ground, it should be in accordance with the # method to grind the ground to get better effect. And according to # to grind ground, the machine grinding direction makes the wire more and more farther away, so that you can further avoid the interference of the wire to the normal work of the grinding machine.



6.2.6 Notes

During grinding, pay attention to the indicator light of remote controller, when it near to power off, battery must be changed in time, or stop grinding to charge the remote grinding machine.

During grinding, the sigh situation from the remote controller must be noticed.

During grinding, control switch of the remote controller direction just needs to be stirred softly.

During grinding, the cable needs to be noticed, in case of the cable be pressed.

When grinding, the barrier in the side must be remembered, in case of damage of the machine and human safety.

Before grinding, check the clutch is reset, if not, the machine could not move on.

7. Machine Maintenance

7.1 Overview

We recommend that the grinding machine be checked regularly to extend the service life.

Note:

During the maintenance and repair process, the power of the grinder must be disconnected.

Wear protective equipment such as safety shoes, protective gloves, protective masks, etc.

7.2 Daily inspection

7.2.1 Check switches

Turn on the screen and check the function of each button

Connect to three-phase power supply, test the control panel emergency stop, start the machine, speed regulation and other functions.

Note:

For safety reasons, it is strongly recommended to press the emergency stop switch when stopping the device, which would be safer.

7.2.2 Check the disc cover

When there is a large amount of dust, it is easy to cause dust nozzle of grinding disc cover clogged by dust, use flashlight to see if there is dust clogged, clean up if necessary.

7.2.3 Check the grinding disc

In the case of long hours of work or a large amount of dust, the grinding disc of grinding head may be stained with dust. It will lead lack of connection between grinding head and disc, which will affect grinding efficiency even lead to abrasive drop and cause accident. In view of this situation, please remember to clean up in time.

7.2.4 Long-term storage of batteries

Stored for a long time, the machine battery should be maintained and charged once every month.

Stored longer more than a month, please take the battery out of the remote control device.

7.2.5 Note

Be sure to wear protective equipment for maintenance checking such as protective gloves, protective masks, insulated shoes, etc.

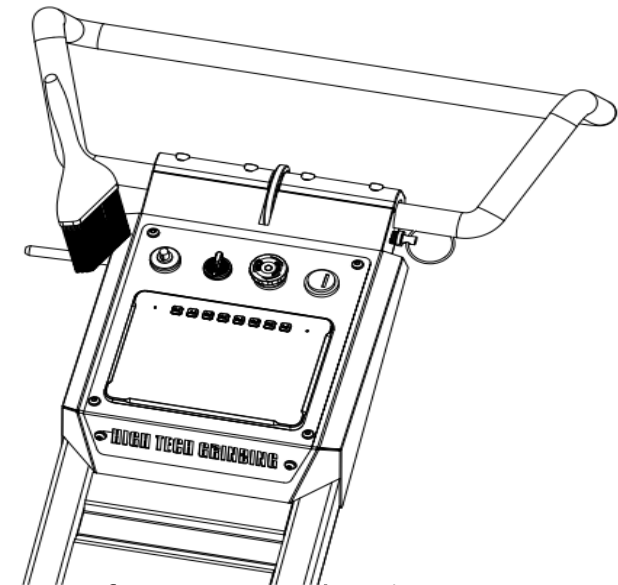
The maintenance operation must be done when the emergency stop pressed and the power unplugged.

When the machine is tilted, make sure that the machine is flat and then check the operation of the grinding disc.

7.3 Cleaning

7.3.1 Clean the switches

Grinding machine works on site for a long time, and the switch will inevitably run into the dust. For this reason, please check switch after grinding, to see whether the part is clogged by dust. Otherwise, it may cause the switch failure.



7.3.2 Maintenance of remote control equipment

Wipe the switch with a fine brush or a soft, dry cotton cloth. Do not rinse with water;

Keep the battery compartment clean;

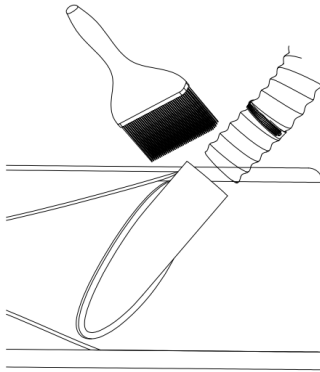
If you do not use the remote control for a long time, you need to remove the battery.

When using the rechargeable battery, please ensure that the battery is fully charged for the first time; for the long-term non use of the battery, it should be stored at room temperature and timely charged to prevent damage caused by self-discharge of the battery (It is recommended to charge up it once every month).

If you do not use the remote control for a long time, you need to remove the battery.

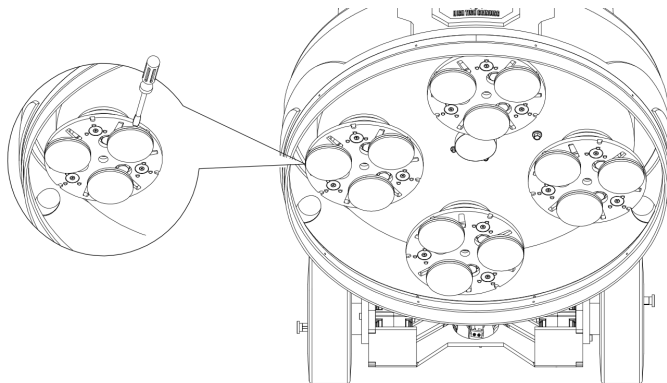
7.3.3 Clean the grinding disc cover

Remove the vacuum tube connection, illuminate the dust nozzle with a flashlight, clean the dust nozzle with brush. So that it will not clog the dust nozzle and affect dust collection efficiency.



7.3.4 Clean the grinding disc and Velcro-iron accessories

Tilt the machine and use a cross screwdriver to remove the pads, and use shovel to remove dust. If you do not clean up in time, it is possible to make the pads disconnected, and pads fly out when grinding, causing damage to the machine and threaten personal safety.



7.3.5 Note

1.Be sure to disconnect the plug from the socket before cleaning, maintenance or assembly.

2.Be sure to clean the whole grinder after each day's working. Do not use a pressure washer to clean the machine directly.

3.In order to cool the equipment effectively, the cooling air port must be kept clear and clean.

7.3.6 Check the abrasive

Turn on the screen, press F5 , can set the estimated consumption time of grinding tool (set the time according to different abrasives and experience).

This function is a countdown, when the number is close to 0, the screen will display "abrasive has been consumed, please replace abrasive" warning, please check and replace abrasive.

If the abrasive is not used up, please continue to set the usable time, and press F1 to cancel the alarm and resume work!



7.4 Battery treatment

7.4.1 Overview

The batteries in the machine and remote control are lead-acid batteries. In extremely cold conditions, the battery capacity will be reduced

and the use time will be shortened. Any changes to the battery are prohibited.

The battery must be charged at an ambient temperature between 0 °C and 40 °C. Use only the original battery and charger supplied by the manufacturer. For details, please consult with local dealer.

Waste batteries should not be treated as domestic waste! Take the waste battery to the nearest maintenance or recycling point.

7.4.2 Battery

The battery only be used in transport mode. NOT FOR GRINDING WORK!The machine must be connected to power source for grinding work.

When the machine is connected to a three-phase power supply for running, the battery is auto-charged. The display shows battery level,which can be observed at any time.

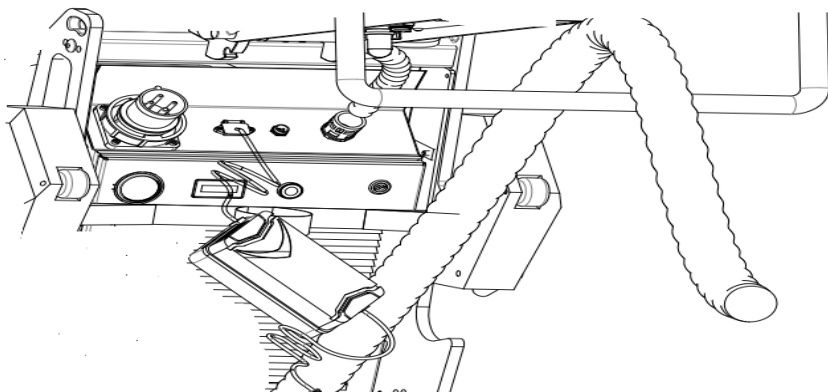
The battery needs to be charged with the charger provided by the manufacturer.The battery is a lead-acid battery.It provides 45 minutes running time,and charging time is about 8 hours.

You can reset the emergency stop switch and connect to the power supply to charge the battery when the machine is not running,

Lead-acid batteries have a service life of about 1-2 years.

Note:

When storing for a long time, the battery should be charged before plugging in the 3-phase power supply, release the emergency stop, and then press the battery starting system to charged.



7.5 Overloading

The machine is equipped with an overload protection function on the inverter. When the machine is overloaded, the overload error will be showed on the display of the control panel. In this case, it is necessary to cut off the power, reduce the load, stop the machine for 10-30 minutes (depending on the motor temperature), and then restart the machine.

7.6 Maintenance

Any repairs must be performed by Xingyi Service Center training service personnel and use original Xingyi accessories. If your machine needs repair, please contact with your retailer.

8. Frequently Asked Questions and Solutions

This chapter describes some of the possible failures and how to handle them. If you still can not resolve or have an error, please contact your nearest retailer.

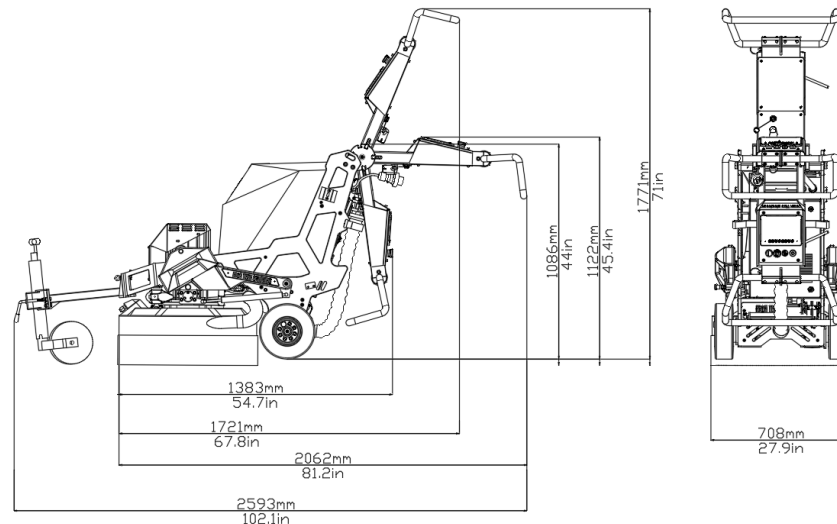
Problem	Possible reason	Solution
The machine can't run.	Emergency stop switch is pressed	Turn on the emergency stop switch
	The motor is stuck	Make sure the motor is not stuck
	Power and power cable damage	Contact a licensed electrician
	Not according to the standard operation	Refer to the operation instruction video
The machine uttered a low buzz when turn on	Motor burned down	Replace the motor
	Phase loss	Contact a licensed electrician or check if the input power has three-phase input
The machine is difficult to hold or the motor current consumption is large	There are not enough diamonds pads under the device or using wrong diamonds	Use the number of diamonds recommended by Xingyi to reduce workforce on the grinder and operator
Built-in lead-acid battery 1. Can't be charged when using three-phase power 2.Can't be charged with a dedicated charger	The three-phase supply voltage is lower than 320V	Ensure that the voltage is not lower than 320V
	Battery power is down to 0	Charge for 2 hours with a dedicated charger
	The battery is damaged, or the times of impulse electricity it has been exceeds its life.	Replace the battery
	Dedicated charger is damaged	Replace the dedicated charger
Machine beating	Diamond pads may not be properly installed or heights are different	Properly install diamonds with the same height
	The grinding disk is not flat	Adjust and install the disks

Machine forward, backward out of control	No clutch bolt or the clutch is broken	Replace the clutch with a new one
	Servo motor, servo controller failure/remote control receiver failure	Contact the factory for repair
	Check if the key between wheels and driver is broken	Check and contact the factory for repair and replace the damaged key

9. Technical Data

The table and picture show the technical data and dimensions of the grinder.

	HTG-680RC	
Motor power	11KW+2*0.4kw	
Rated voltage	3Ph 220V	3Ph 380V--415V
Rated current	39.7A	23.0A
Input hertz	50HZ/60HZ	
Inverter power	11KW/15HP	
Working width	680mm/26.77in	
Diameter of grinding disk	Φ230mm/Φ9.06in	
Grinding speed	350 ~ 1680 r/min	
Pressure(additional weight front loaded)	305Kg	
Pressure(additional weight middle loaded)	235.5Kg	
Pressure(additional weight rear loaded)	227.5Kg	
Dimension(rear position)L*W*H	1721×708×1771mm/67.8×27.9×71in	
Dimension(working position)L*W*H	2062×708×1122mm/81.2×27.9×45.4in	
Dimension(packing position)L*W*H	1382×708×1086mm/54.7×27.9×44in	
Max.Length*width*height L*W*H	2593×708×1771mm/102.1×27.9×71in	
Total weight	544.5kg	
Cable model	10mm ²	10mm ²
Storage temperature	-20 ~ +60°C / -4 ~ +140°F	
Working temperature	-10 ~ +40°C / +14 ~ +104°F	
Humidity	Below 95% (no condensation)	



10. Warranty

Xingyi does not bear the cost of machine damage caused by improper transportation, unpacking and improper use. Local distributors may be subject to specific warranty terms, please contact with your local distributor for specific warranty terms.