

## 955LE Remote Control Floor Grinder



**Manual V 1.1**

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## **1. Introduction**

### **1.1 Summary**

Xingyi grinders are designed for use on concrete surfaces. They may be used for grinding, polishing, coating removal and surface preparation. These machine are for professional use only.

### **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 missing information. Xingyi reserves the right to change the instructions in this manual without prior notice. This manual is protected by copyright law and cannot 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 grinding machine
- (2) 1copy of machine user manual
- (3) 1set of Velcro adapters
- (4) 1pcs connector (to match the machine's plug)
- (5) 1pcs dust shroud
- (6) 2pcs main electric cabinet key
- (7) 1 set of quick connectors for dust hose

### **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 to the carrier immediately. Check that the delivery matches the order. If there are any discrepancies, contact your supplier.

### 1.5 Machine name plate



1. Model

4. Serial number

2. Motor size (kw)

5. Input voltage

3. Full load amps

6. Weight

### 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 damaged by condensation or moisture. The size and weight of the grinder are given in the technical data of this Manual.

### 1.7 Warranty items

This warranty covers only manufacturing defects. Xingyi does not assume damage in 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 contact Xingyi Machine USA or your local retailer.

## **2. Safety**

### **2.1 Overview**

This manual details safe operating practices. 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 recommended by Xingyi. 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 understand the safety rule that any unauthorized person cannot 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, protective hearing protection. Do not wear loose clothes or anything that can get caught in the grinding heads.

#### **Note:**

1. It is strictly prohibited to carry out operations, especially on a slope or grade, when the battery voltage is less than 20%, to avoid causing personal injury.
2. To use machine on a slope, the battery must be more than 40%, the wheel pins must be locked, and the AC input voltage is not less than the rated machine voltage.
3. Never operate the machine on a slope that exceeds 25%.
4. This machine is only used for floor grinding, polishing, and coating removal.
5. Read and understand the safety guidelines for this machine.
6. Operation of this machine only requires one person. Keep children or other persons away.
7. Do not lend or rent the machine without the instruction manual.
8. Always wear personal safety equipment during operation.
9. Random modification of the machine is not allowed. Only Xingyi accessories can be used for maintenance and adjustment.
10. Do not operate the machine in wet conditions.
11. Ensure there are no explosive or flammable materials near the machine during operation.

### **2.2 Operation safety**

1. The dust shroud should be installed on the machine for safety. Make sure that the machine is connected to dust extractor recommended by Xingyi.
2. The machine should be connected to an appropriate electrical outlet. Only use the power cables that can withstand the machines voltage and amperage.

3. Do not adjust the handle during machine operation. Only when the machine is stopped and the emergency stop switch has been pressed, then the handle may be adjusted.
4. The handle has different functions when it is in different positions. Please read the manual for more information.
5. Ensure the machine has stopped operating and the emergency stop button is pressed when changing abrasives or accessories. If necessary, disconnect the power plug.
6. Please note that the emergency stop switch can only be pressed or rotated. Upward pull is prohibited as it will damage the switch.
7. Before operation, check the working surface and remove any protrusions in the floor to prevent machine plates and pads from possible damage.
8. When the equipment is plugged into the power supply, it is necessary to determine that the operating voltage and frequency of the equipment are consistent with the input voltage and frequency, and that there is no phase deficiency in the input power supply.
9. Install appropriate abrasives. Improper abrasives may cause personal injury or damage to the floor.
10. After installing the abrasives, keep the grinding plates in contact with the ground directly, adjust handlebar to the "working position", so that the operator can operate the machine easily.
11. When machine inverter turns to overload protection, it means there is something wrong with the machine (cable is too small or voltage is unstable), please reference the recommend cable sizes.
12. Do not tilt the machine while still running, if the polishing pads may fly off, causing injury to the operator or people nearby.

### **2.3 Electrical safety**

1. All circuit repairs can only be carried out by qualified personnel.
2. Note: After the machine is stopped, the line is still energized. Disconnect all power before servicing the machine.
3. The purpose of installing an inverter in the machine is to 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, you may only replace the defective parts with the accessories provided by the manufacturer.
5. Never modify the parts or lines inside the inverter yourself.
8. When the cables is energized or loaded, do not connect or disconnect the wires.
9. Using a damaged power cord may result in electric shock. Do not use a damaged power cord.
6. Cables should be kept away from hot surfaces.

7. The dryness of all electrical equipment should be maintained, and the machine should be kept in a dry place.
8. The machine motor, and the frequency inverter must be kept dry at all times.
9. The machine must be connected to qualified wire and voltage; specifications are noted by the manufacturer. (The machine plate indicates the power supply specifications).

### **3. Machine Description**

#### **3.1 Overview**

955LE is used to handle various types of concrete surfaces. For grinding, polishing, and surface prep on concrete, natural stone and terrazzo. Always use the corresponding abrasive or the abrasives recommended by Xingyi.

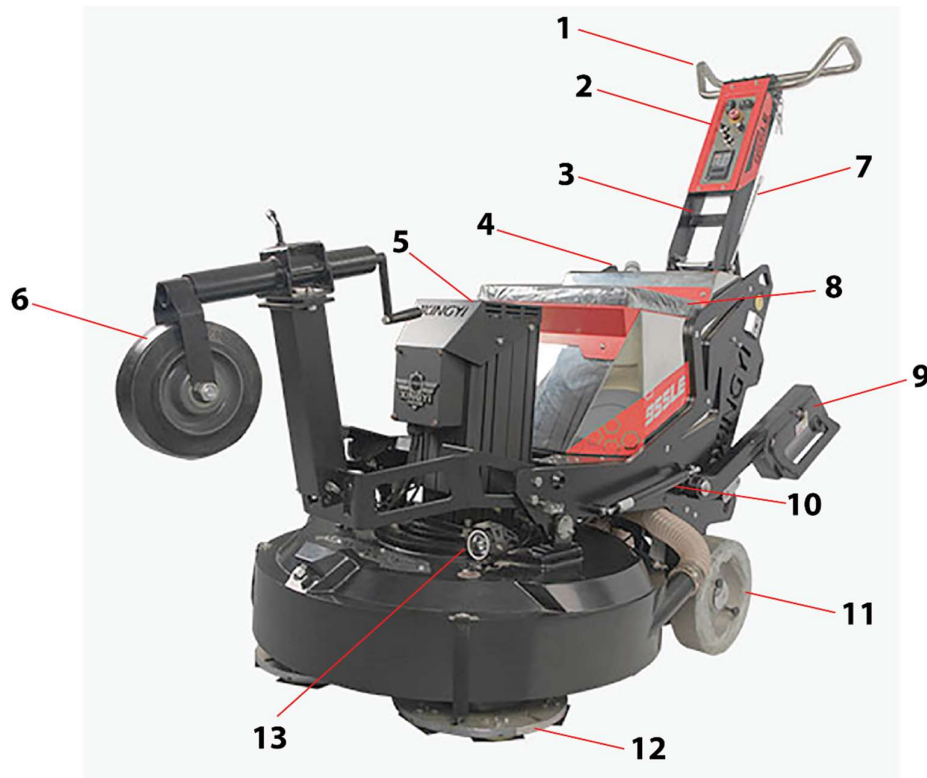
955LE is a remote-controlled grinding machine and can be used for dry or wet grinding. The machine is equipped with a battery transport system that enables the operator to mobilize the machine without the need to manually push the grinder. This function makes it easy to move the grinder from a trailer or truck into a building without the need for a power connection.

The handle on the machine is fully adjustable from transport to operating positions, making it comfortable for the operator to run the machine. For remote control operation the handle can be moved to a higher position to avoid walls or other obstacles.

During dry grinding a dust extractor can be connected to the grinder to prevent exposure to dust, keeping the operator and the work area safe. In the USA, the OSHA Silica rule requires that the machine is always connected to a dust extractor recommended by the manufacturer, for the 955 LE that vacuum is the IVC-45L or equivalent.



### 3.2 Machine parts



1. Handle
2. Control panel
3. Main handle
4. Water tank
5. Motor
6. Transport wheel
7. Handle adjustment lever
8. Operator seat
9. Weight kit
10. Weight kit gas shock
11. Wheel
12. Grinding discs
13. LED lights

### 3.3 Main Control Panel

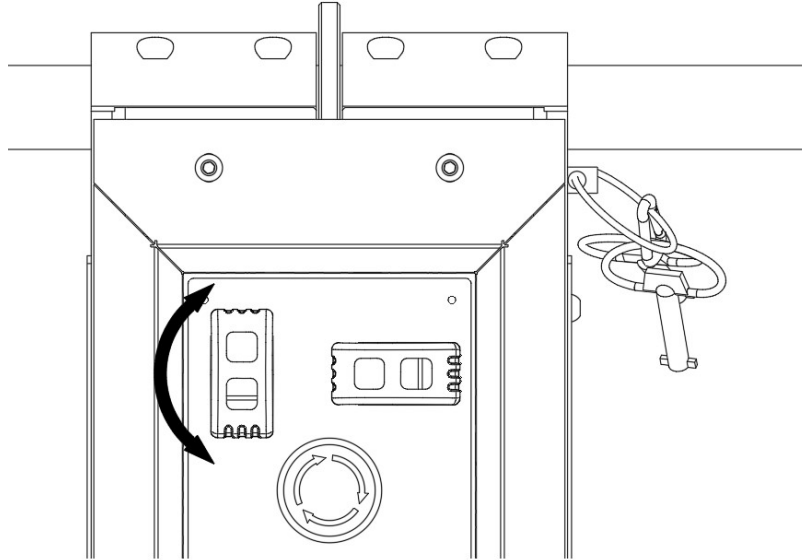


1. Forward/backward switch
2. Emergency stop switch
3. Motor RPM control
4. Motor direction switch
5. Display screen: displays parameters, voltage, current, motor speed and fault codes
6. Left/right direction switch
7. Travel speed control

#### 3.3.2 Forward/backward switch

The forward/backward switch is used to control the forward or backward movement of the equipment. It frees the user from the need to manually pull or push the device to make the machine move forward/backward, making the machine easy to mobilize.

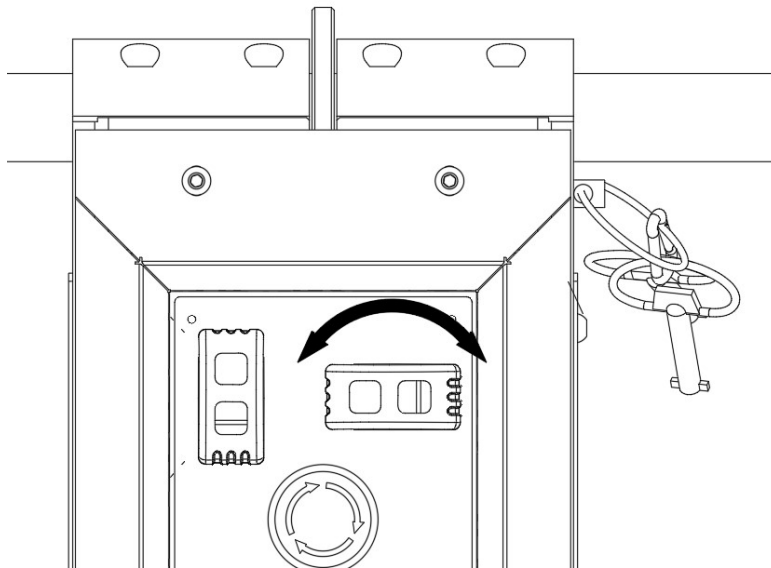
The forward/reverse switch has three positions. One is the forward position, the neutral position and the reverse position. Each position corresponds to the directional movement of the machine.



### 3.3.3 Left/right turn switch

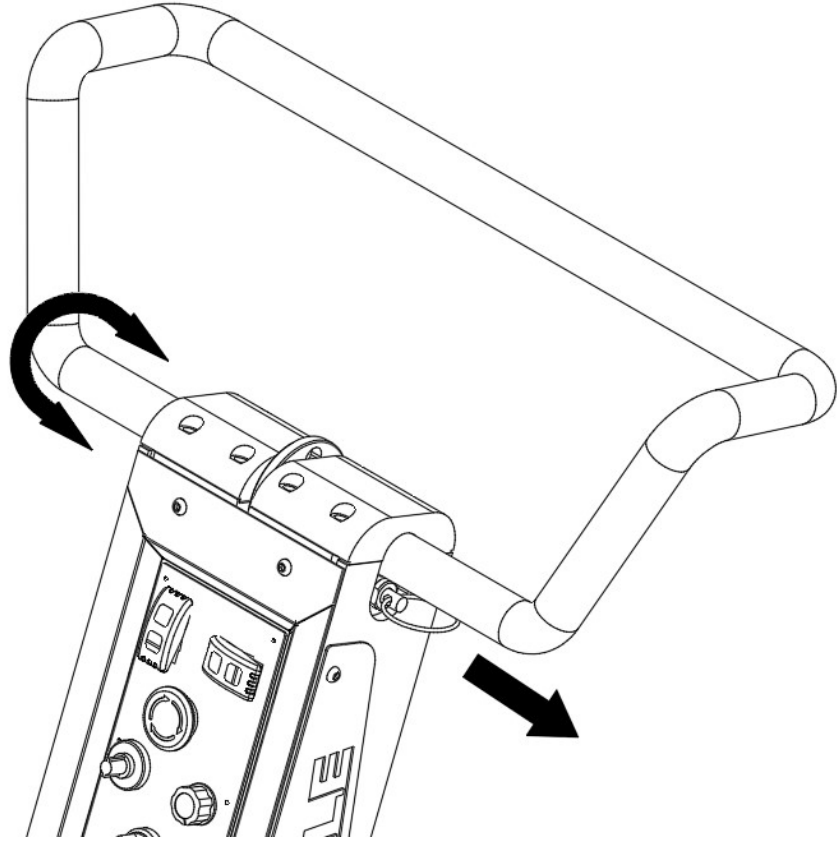
The left/right turn switch is used to control the left/right turn of the equipment during transport. It frees the user from the need to manually pull or push the device to make the device turn left/right.

The left/right turn switch has 3 positions. A left position, a right position and a neutral position. Each position corresponds to the directional movement of the machine during transport.



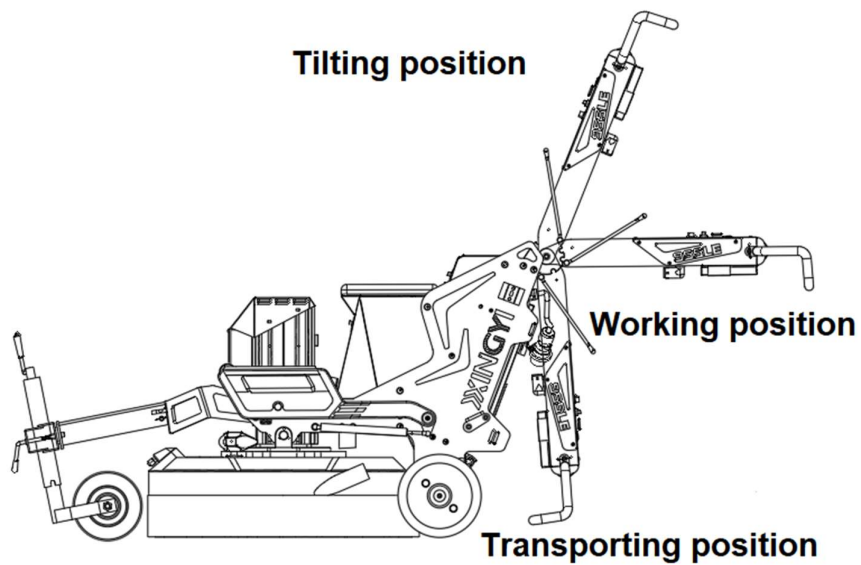
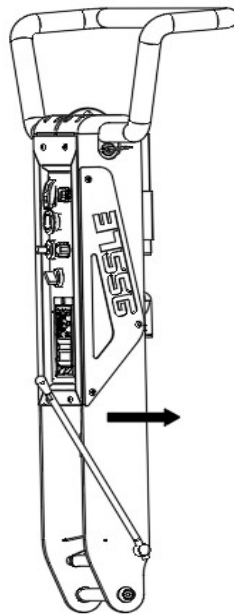
### 3.3.4 Handle adjustment

The handle adjusting pin can be used to change the position of the handle for operator convenience. Simply pull the pin out and adjust the handle position, release the pin to lock the handle in the new position.



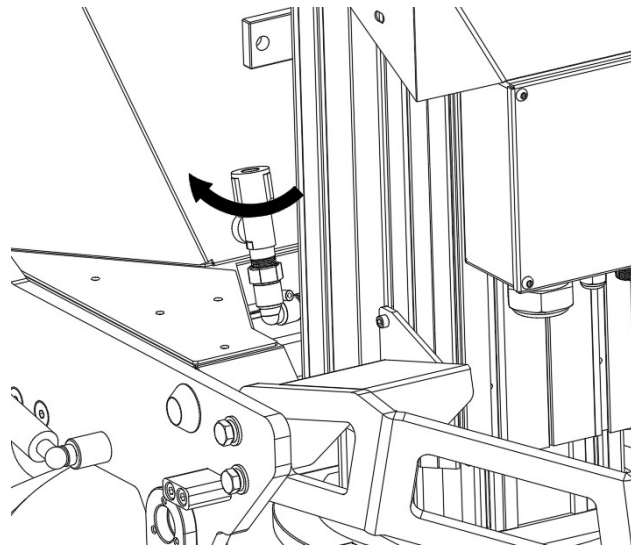
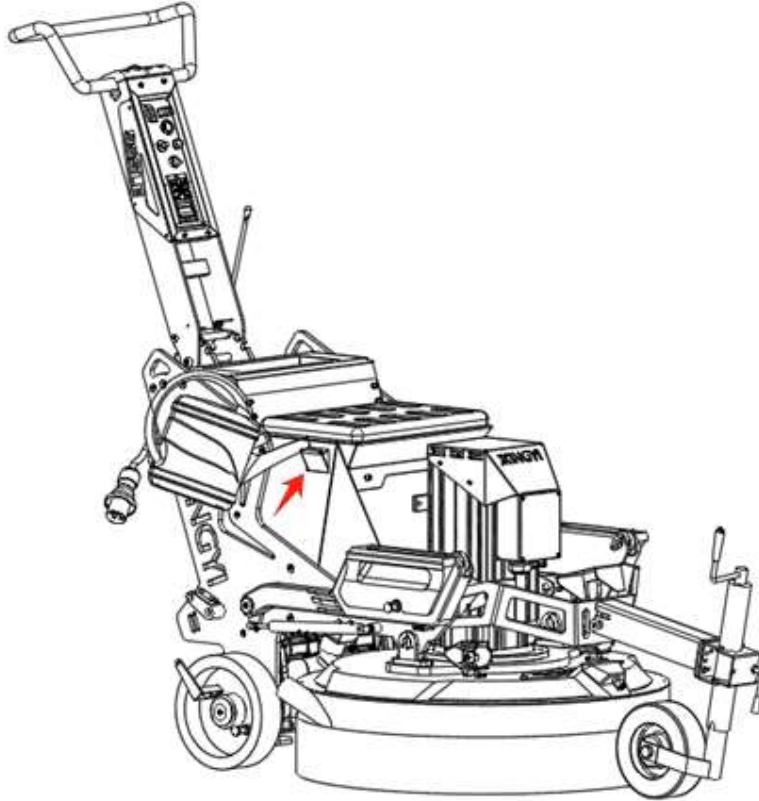
### 3.3.5 Main Handle Adjustment Lever

Use the main handle adjustment lever to release the lock that holds the handle in place. Adjust the handle to the position required, release the lever to reengage the locking pin. The three main positions are detailed in the drawing below.



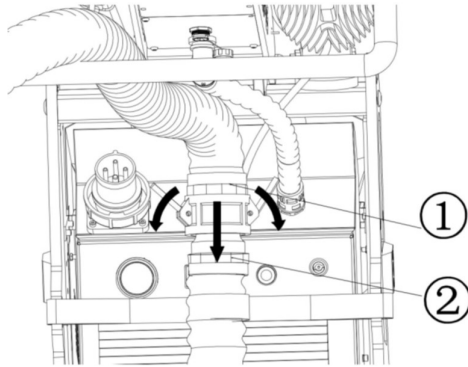
### 3.4 Water tank

There is a water fill port on the side of the water tank (open the water fill port as shown in the figure below) to fill the water tank with water. When the equipment needs to perform wet grinding work, turn the water switch clockwise to open the valve.



### 3.5 Vacuum Quick Connector

The fast connector consists of 2 parts, the first part is connected to the grinder, and the second part is connected to the vacuum hose. This allows for fast connection of the vacuum to the grinder.

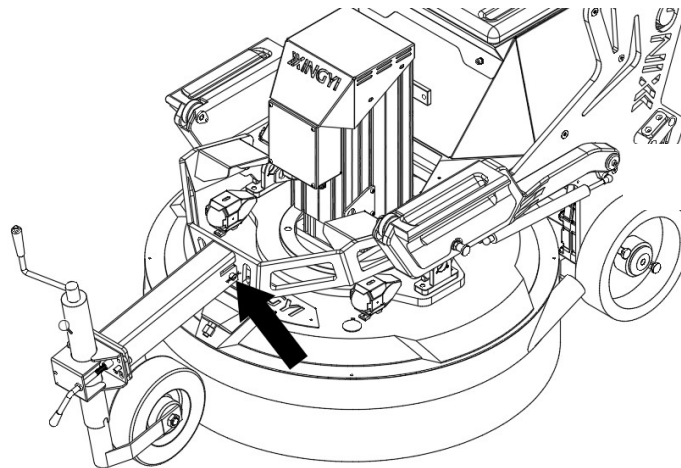


### 3.6 Transport wheel

The transport wheel should be assembled before transportation. This makes it simple to mobilize the machine from a truck or trailer into a building without the need to manually push the machine.

Install the transport wheel: first press the emergency stop switch, align the support wheel with the pin hole of the front wheel support frame, then insert the positioning pin into the hole in the frame, insert the cotter pin to lock the wheel in place.

Remove the transport wheel: first press the emergency stop switch, remove the cotter pin, remove the locating pin outward, and remove the transport wheel.



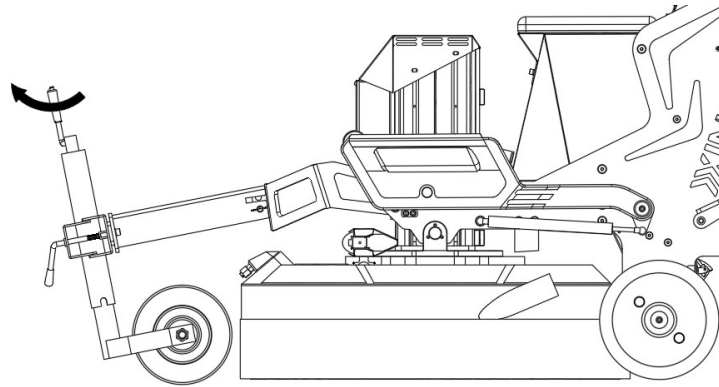
### 3.6.2 Adjusting transport wheel

Turn the crank on the top of the transport wheel to raise or lower the head of the machine.

**Notes:**

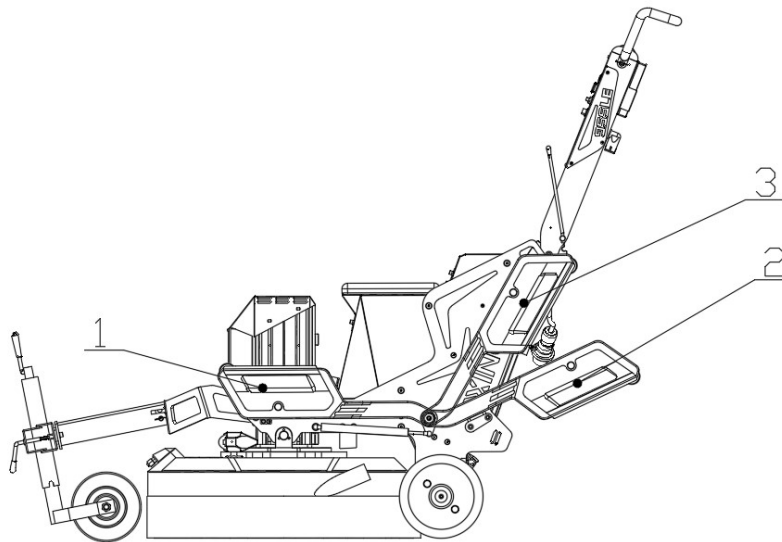
During transportation, it is best to remove any diamond tooling to avoid damage or loss.

You can use the transport wheel during storage of the machine so that the heads are not sitting on the ground. The couplers can hold a position if left on an uneven surface for extended periods of time.



### 3.7 Additional Weight Kit

There are three positions for the additional weight kit: Transporting, tilting, and working position.



1. Working position    2. Tilting position    3. Transporting position



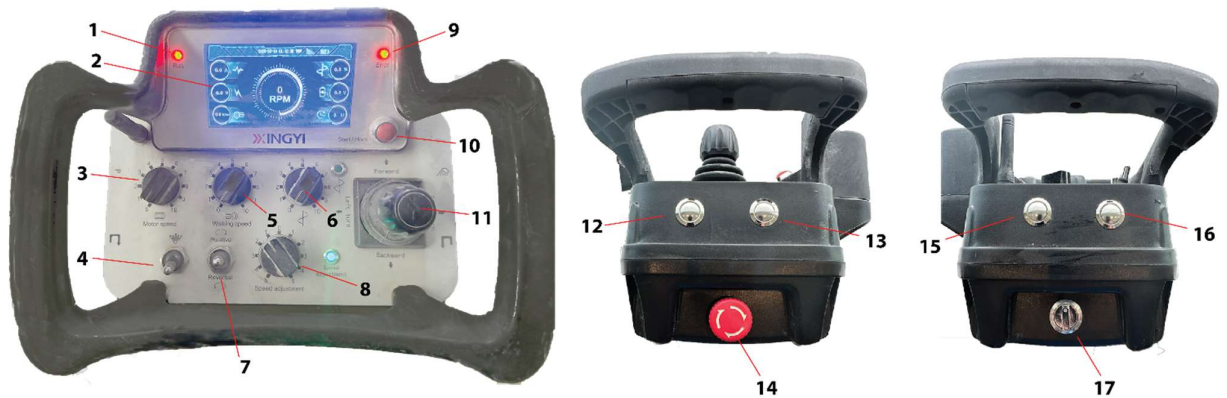
**Notice:**

When switching the position of the additional weight kit, you need to hold the weight with one hand during adjustment.

To move the weights, simply pull out the locking pin while supporting the weight with one hand. Move the weight to the required position and release the pin to allow it to lock.

**3.9 Remote control device**

**Overview**



- |                          |                       |
|--------------------------|-----------------------|
| 1. Run indicator light   | 10. Start button      |
| 2. Display screen        | 11. Joy stick         |
| 3. Motor RPM             | 12. Left turn button  |
| 4. Water spray switch    | 13. Light switch      |
| 5. Travel speed          | 14. Emergency stop    |
| 6. Oscillation control   | 15. Program button    |
| 7. Motor forward/reverse | 16. Right turn button |
| 8. Tracking control      | 17. Power switch      |
| 9. Error light           |                       |

### 3.10 Using the Remote Control

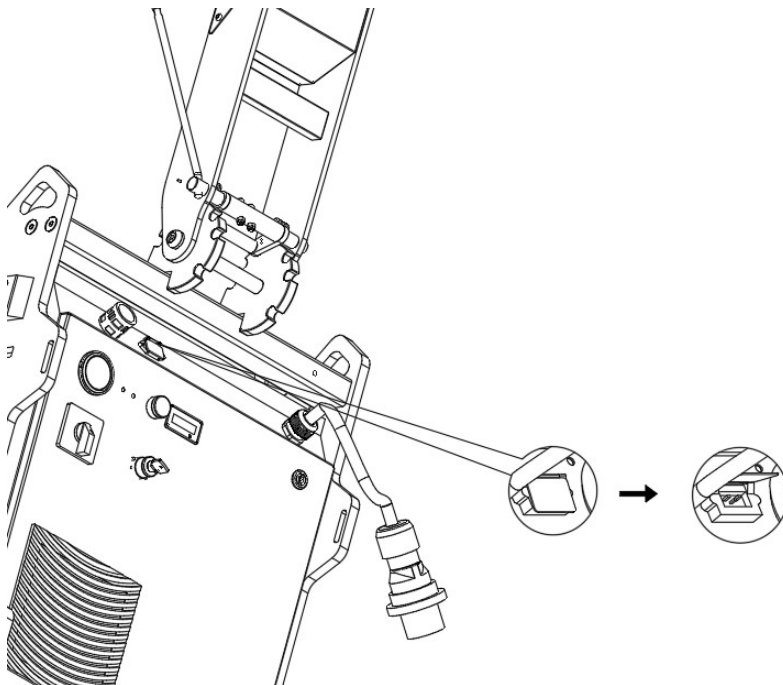
Install the remote-control battery: Please check the Battery Percentage before installation. Slide the charged battery into the slot on the bottom of the remote-control device. Make sure it snaps into place securely.

Turn the key on the machine electrical box to engage the onboard systems, this will include the receiver for the remote. Next turn on the remote control using the switch on the side of the controller. Allow a few seconds for the remote to power up. The locking pins on the machine wheels must be engaged for the remote control to work, either for grinding or transport. The emergency stop on the machine control handle must be in the up position. See the specific instructions for each operation as needed.

Power indicator: The green light flashes for one second to indicate that the remote control is working normally; If the red-light flashes once every second, then release the emergency stop button the side of the remote control. The run light should turn green.

#### 3.10.1 Battery charging

When the battery of the device is out of power, the power indicator on the electric box is lower than 20%, and the battery needs to be charged at this time. Open the cover of the charging port and use the charger provided by the manufacturer to charge.



## Remote Control charger



Put the rechargeable battery into 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 red, indicating:

When the battery is over-discharged, the charger is in the trickle charge state. After a short time, the indicator light change to red, and the battery is in the normal charging state.

The rechargeable battery is faulty and needs to be replaced.

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

## 4. Machine Operation

### 4.1 Overview

The following part describes how to run the grinder in different modes. Manual operation or remote operation.

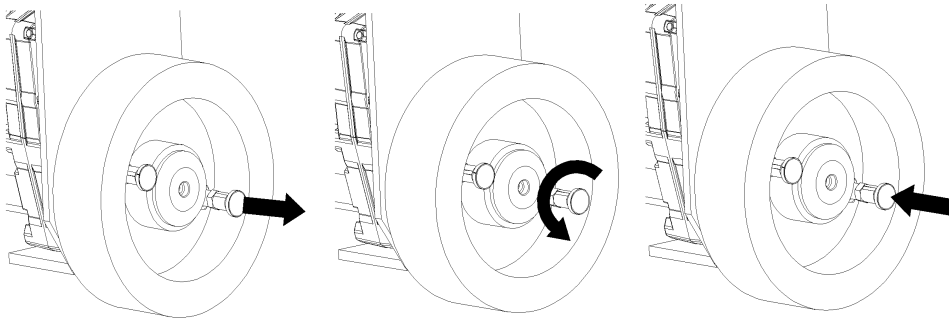
### 4.2 Manual operation.

Place the machine where you intend to start grinding operations. Install the tooling on the grinding heads as needed for the operation. Remove the transport wheel or place it in the upright position so the heads can touch the ground. Connect the vacuum hose using the quick connector, (unless wet grinding. If wet grinding be sure that the water tank has been filled). Release the locking wheel pins to allow the machine to move freely, unless you are running the machine in self-propelled mode, in which case you can keep the wheel pins locked. Make sure

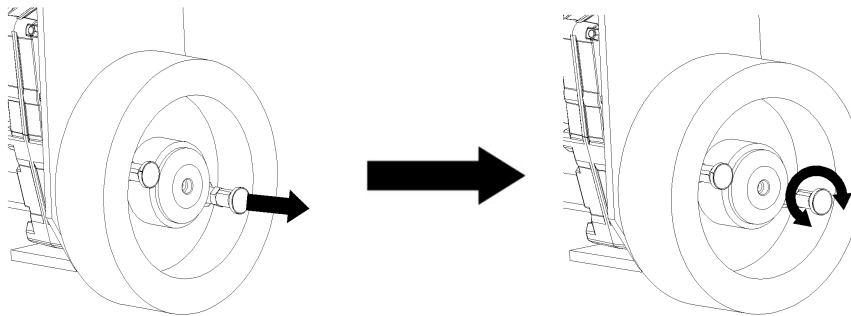
the emergency stop switch is pressed down (stop position). Plug in the power supply to the machine. Be sure it is the correct voltage for your machine, (240V or 480V). Set the mode selection switch to manual operation. Turn on the key to engage the onboard systems. Rotate the emergency switch to the up position. Flip the rotation switch to any direction, (clockwise or counterclockwise) turn up the motor speed knob and the machine will begin grinding. Adjust the motor speed as needed for the tooling. Push the forward/reverse switch to the forward position and adjust the travel speed. Average speed for grinding should not exceed 8-10 feet per minute. To stop the machine, press down the emergency stop switch.

### 4.3 Locking wheel pins

Locking the wheel pins: Pull the pin outwards, rotate it 90 degrees counterclockwise, and then push it back inward.



Unlock the wheels: Pull the pin outward, and then rotate it 90 degrees counterclockwise.



**Note:**

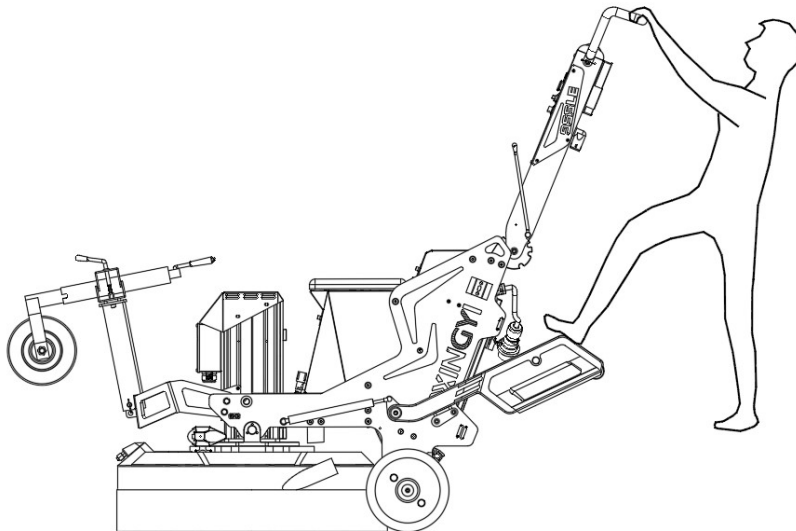
1. The pin may be stuck sometimes when you try to pull it out, shake the machine in this case.

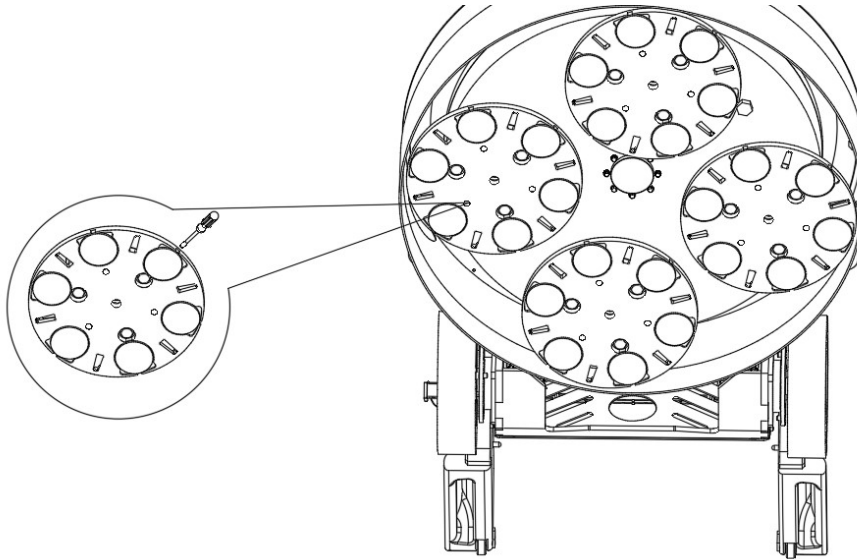
#### 4.4 Remote control operation

Place the machine where you intend to start grinding operations. Install the tooling on the grinding heads as needed for the operation. Remove the transport wheel or place it in the upright position so the heads can touch the ground. Connect the vacuum hose using the quick connector, (unless wet grinding. If wet grinding be sure that the water tank has been filled). Lock the self-locking wheel pins. Be sure that the pins click into the locked position. Make sure the emergency stop switch is pressed down (stop position). Plug in the power supply into the machine. Be sure it is the correct voltage for your machine, (240V or 480V). Set the mode selection switch to remote operation. Install a fully charged battery into the remote controller, (install the shoulder strap for easier operation). Turn on the key on the electrical box to engage the onboard systems. Power up the remote control using the switch on the left side. Rotate the emergency stop switch (on the machine handle) to the up position. Rotate the emergency stop switch on the remote control to the up position, (the indicator light on the electrical box should turn green, indicating the remote is paired and ready to use). Flip the rotation switch on the remote to any direction, (clockwise or counterclockwise). Press the start button on the remote to start grinding. Be sure the motor speed is set to a low setting. The remote-control screen will show you the motor speed in RPM's. Bump the joystick forward to begin moving the machine over the surface. Use the travel speed knob to set the machine walking speed. Maneuver the grinder using the remote-control. To stop grinding press the emergency stop switch on the remote.

#### 4.5 Changing tooling

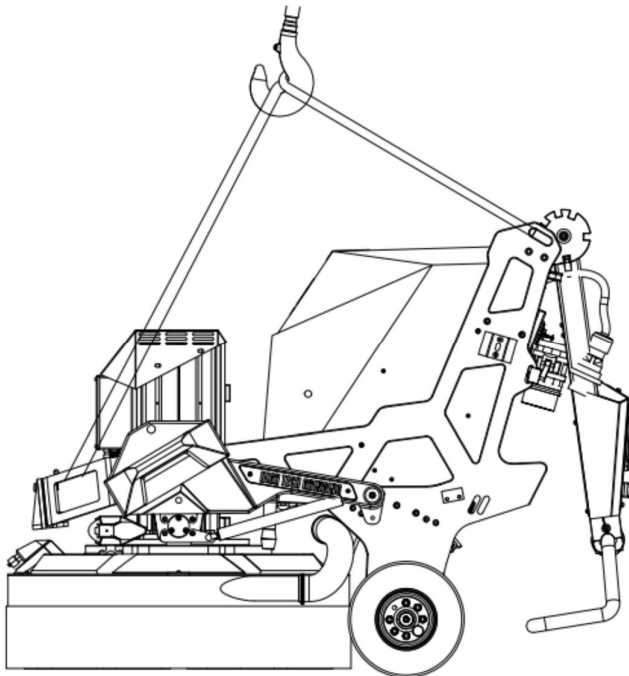
When it becomes time to change the tooling on the machine you must tip the machine back to access the grinding heads. Begin by shutting off the grinder using the emergency stop button. Unplug the machine from the power supply. Place the weights to the rear position. Adjust the main handle to the upright position. With one foot on the weight and both hands on the handle tilt the machine back until it is resting on the weights. Now the tooling can be changed as needed.



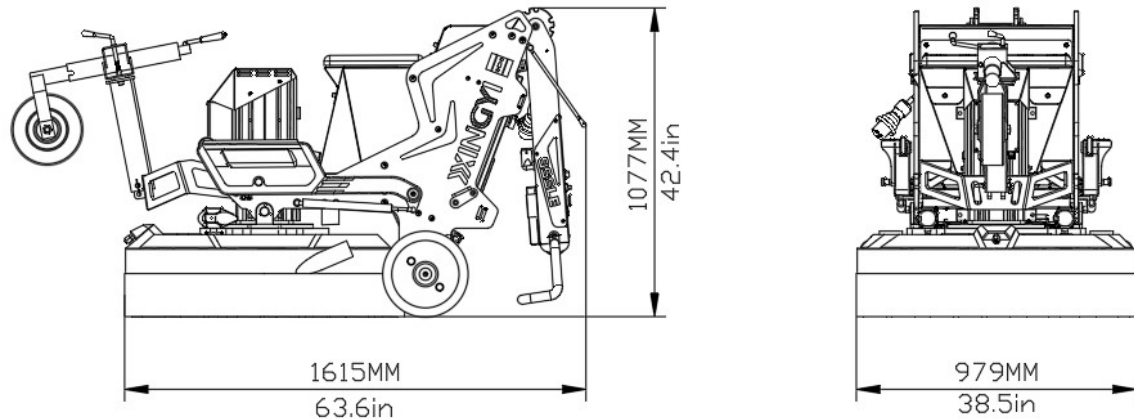


#### **4.6 Machine lifting position**

The image below shows the correct configuration for lifting the machine using a crane or forklift. Always use the designated pick points on the frame. Use the lifting straps that come with the machine, or straps that are sufficient for the weight of the machine. Be sure there is no one under the machine during lifting.



## 4.7 Machine Dimensions



## 5. Machine Maintenance

### 5.1 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.

### 5.2 Daily maintenance

#### 5.2.1 Check the switches

Release the emergency stop switch by clockwise rotate. Turn on the motor switch to start the machine(a positive and negative knob) .Normally, the running light (green indicator) will light up, if not, the error code will show on the display screen.

Turn on the grinder and press the emergency stop switch to check if the machine stops.

Turn on the emergency stop switch and turn LED light switches to check if the corresponding light is on.

**Note:**

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

When starting the equipment, it is recommended to press the handle and not lift the grinding device out of the ground to reduce the pressure between the grinding saw blade and the ground.

### **5.3 Monthly maintenance**

Check the batteries, they should be charged monthly to ensure proper operation. If storing the machine for more than one month, you should remove the batteries from the remote controller to prevent discharge. The batteries are lead-acid based batteries. In cold weather conditions the operation time will be shorter. If the machine has been stored for more than a month, the battery should be charged before plugging in to 3 phase power. During normal grinding operations the battery will trickle-charge when connected to power. Check the electrical compartment for dust, make sure it is clean and dry.

### **5.4 Gear box service**

The machine gear box oil should be changed after the first 500 hours of operation, after that the gear oil should be changed annually. There is a drain plug under the gear box, where the grinding plates are attached. The fill point is on top of the gear box cover. The HTG-820 RC holds approx. 2 gallons/8.2L of gear oil. The recommended oil is VG320 or VG460, These are ISO-VG(viscosity) mm<sup>2</sup> /s DIN-51519,at 40°C.

### **5.5 Overload protection**

The machine comes with an overload protection circuit for the inverter in case of an overload event. Typically caused by incorrect power, or a power surge from a generator or unstable power source. If the machine becomes overloaded, a warning will appear on the control panel. Disconnect the machine from power and wait for the power to drain, (this can take up to 3 minutes). Re-connect the power supply and restart the machine.

### **5.6 Service repairs**

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.



## 7. Troubleshooting

This chapter describes some of the possible problems and answers, if your issues cannot be resolved contact your dealer for further assistance.

Problem	Possible reason	Solution
The machine won't run.	Emergency stop switch is pressed	Turn on the emergency stop switch
	Machine Overload	Reduce the loading of machine ,e.g. take off the additional weight,turn down the rpm properly etc.
	cable not big enough or damaged	Replace the cable
	Wrong cable/plug connection	Check the cable connection
	Switches damaged	Replace with good ones
The machine is difficult to control	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
Machine bouncing	Diamond pads may not be properly installed, or heights are different	Make sure the diamonds are properly seated, and are the same height
	The grinding disk is not flat	Adjust and install the disks
	The plates have dirt under the tooling	Clean the plate so the tooling can sit properly

## 8. Technical Data

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

	955LE
Motor power	18.5KW/25HP
Rated voltage	3P 240V/480V
Rated Amps	43.1A
Input hertz	50HZ/60HZ
Inverter power	18.5KW/25HP
Working width	955mm/37.6in
Diameter of grinding disk	370mm/14.6in
Grinding speed	450~1950 rpm
Dimension(rear position)L*W*H	1913×979×1896mm/75.31×38.54×74.65in
Dimension(working position)L*W*H	2402×979×1165mm/94.57×38.54×45.87in
Dimension(packaging position)L*W*H	1615×979×1077mm/63.58×38.54×42.45in
Max.Length*width*height	2890×979×1896mm/113.78×38.54×74.65in
Total weight	750kg
Storage temperature	-20~+60 °C/-4~+140 °F
Working temperature	-10~+40 °C/+14~+104 °F
Humidity	Below 95% (no condensation)