XINGYI Machine USA

V_1.2

Manual

955LE Remote Control Floor Grinder

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1. Introduction

1.1 Summary

XINGYI Machine are used for processing the floor surface. The scope of use of the machine depends on the choice of tools. In addition to the use and general functions, this manual describes information on the use, repair, and maintenance of the grinder. Contact your local dealer for further information.

1.2 Liability

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.

1.3 Warranty

This warranty only covers manufacturing defects. XINGYI bears no responsibility for damage that arises or occurs during transportation, unpacking or use. In no instance and under no circumstances shall the manufacturer be held responsible for damage and defects caused by incorrect use, corrosion or use outside the prescribed specifications. The manufacturer is not responsible for indirect damage or costs under any circumstances. For complete information on the manufacturer's warranty period, see XINGYI MACHINE USA's current warranty terms. Local distributors may have special warranty terms specified in their terms of sale, delivery and warranty. If there is any uncertainty regarding warranty terms, please contact your dealer.

2. Safety

This manual indicates the important information / rules that must be observed when using XINGYI's machine.

2.1 Operation safety

Users of machines from XINGYI have the ultimate responsibility for ensuring that everybody who works with or in the vicinity of the equipment follows all applicable safety rules. Safety measures must meet the requirements that apply to this type of equipment. Apart from the standard rules that apply in the workplace, the recommendations in this manual shall also be observed.

All work must be done by trained personnel. Users of machines from XINGYI must have read through the dedicated manual for the machine. Incorrect use of the equipment could result in situations that could cause harm to the operator, the surroundings, or the machine.

Machines from XINGYI may only be used in the way recommended by XINGYI. Machines from XINGYI may only be used for commercial purposes.

Anyone using the machine shall know about:

- its functions
- location of emergency stops
- the safety rules for the work

The operator shall ensure that:

- No unauthorized person is stationed within the work area when the machine is started up

The workplace shall:

- be suitable for the purpose.
- be secured from loose objects that can be thrown out by the machine.
- be free from protruding bolts etc. on the surface to be processed.

Individuals in the workplace shall always use the recommended personal protective equipment and wear suitable clothing:

- safety goggles
- protective gloves
- steel toe safety shoes
- hearing protection
- respiratory mask
- Do not wear loose-fitting clothing or anything that can catch, such as scarves, bracelets, rings, etc.

General precautions:

- Check the machine is connected to an earthed wall socket.
- Work on live parts shall only be performed by qualified personnel.
- Suitable fire extinguishers should be clearly marked and close to hand.
- Maintenance of the equipment must not be performed during operation.

2.2 Electrical safety

- Work on live parts shall only be performed by qualified personnel.
- The cables and connectors shall meet the machine's specifications.
- The machine is equipped with an overload protector. Once trip the overload protector, power off and then power in to resume it.
- Check the cords before powering in. Any broken cords may cause a serious accident.
- The wires should be away from the high temperature surface.
- Keep motor, electrical box, and inverter away from water.

3. General Information

3.1 Delivery

Check the packaging and equipment carefully on delivery of any possible transport damage. If there is any sign of damage, contact the dealer and report the damage by photos, report form or any other necessary evidence in the first place. Report packaging damage to the carrier as well. Check whether the delivery meets the order. If you have any questions, please contact the dealer.

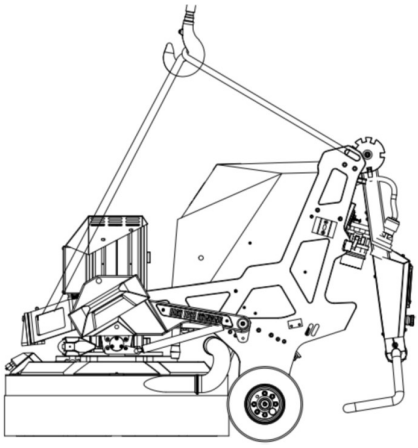
3.2 Transport

Always make sure that the machine is securely anchored to its surroundings and that the grinding head is lowered on to the surface. Tighten the securing straps, or other equipment used for anchoring during transport over non-moving parts, e.g. the machine's chassis. This machine has a protective cover for the electronic display screen; be sure this is in place during transport.

3.3 Lifting

The machine can also be lifted using the lifting eyes provided or using other approved lifting equipment. In which case, make sure that the weights are locked in the forward position and that the handle is in its back position. When lifting the machine, lifting straps must be used.

The image shows the correct configuration for lifting the machine using a crane or forklift. Always use the designated lifting eyes 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 that the area is clear before lifting, be sure there are no people under the machine during lifting.



3.4 Storage

The grinding machine should be stored in a heated, dry place at normal temperature when not in use. It may be damaged by condensation and cold.

4. Machine Description

4.1 Overview

955LE is a 4-head planetary grinder and designed for handling a wide range of concrete surfaces. It is suitable for grinding, polishing, and surface preparation on concrete, natural stone, and terrazzo. Always use the appropriate abrasive tools, or those specifically recommended by Xingyi, for optimal performance and safety.

955LE is a remote-controlled grinding machine that can be used for both dry and wet grinding. It is equipped with a battery-powered transport system, allowing the operator to mobilize the machine without manual pushing. This feature makes it easy to move the grinder from a trailer or truck into a building without requiring a power connection.

The machine's adjustable handle can be set from transport to operating positions, ensuring comfort and efficiency. For remote-control operation, the handle can be positioned higher to avoid interference from walls or other obstacles.

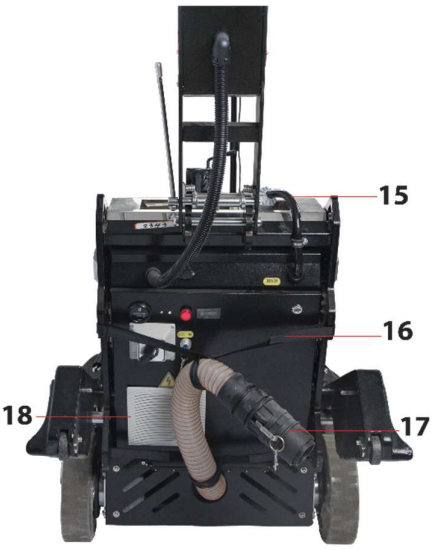
When performing dry grinding, a dust extractor should be connected to minimizing dust exposure, protecting both the operator and the work area. In the United States, the OSHA Silica Rule requires that the machine is always connected to a dust extractor recommended by the manufacturer. For the 955LE, the approved vacuum is the IVC-45L or equivalent.

4.2 Standard delivery

The machine will go with the following items. If anything is lost, please contact your dealer.

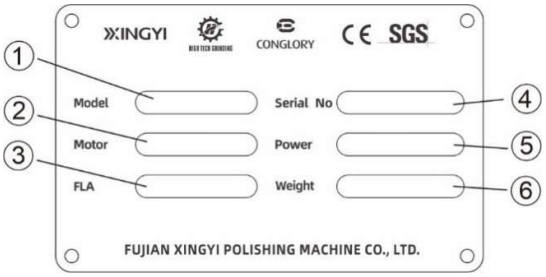
- full dust skirt, 1
- female power connector, 1 (male connector on the machine)
- Remote control case, including the remote controller, 2 batteries and a charger, plus a charger for the transport battery, and a strap.
- 2 keys for the main electrical box
- 24-3" Velcro tooling adaptors
- lifting strap, 1

4.3 General diagram



1. Handlebar
2. Control panel
3. Main handle
4. Water tank
5. Electric motor
6. Transport wheel kit
7. Main handle adjustment lever
8. Operator seat
9. Additional weight kit
10. Weight kit gas shock
11. Rear wheel
12. Grinding discs
13. LED Spotlight
14. Gear house
15. power input
16. Electric cabinet
17. Connector for dust extractor
18. Fan filter: cooking fan to prevent excess heat inside

ID Plate



1. 1. Model name
2. Rated power
3. Full load amps
4. Serial number
5. Rated voltage, phase, frequency
6. Weight

Main Control Panel

1. Forward/Neutral/Reverse rocker
2. Emergency Stop switch
3. Motor RPM control
4. Motor direction switch
5. Display screen to display voltage, current, motor speed and fault codes
6. Left/Right Turn rocker
7. Travel speed control

Forward/Neutral/Reverse rocker

The Forward/Neutral/Reverse rocker controls the directional movement of the machine, eliminating the need for the operator to manually push or pull it. This feature makes the machine significantly easier to mobilize.

The rocker has three positions:

- Forward – moves the machine forward.
- Neutral – disengages movement.
- Reverse – moves the machine backward.

Each position directly corresponds to the intended direction of travel.

Left/Right Turn rocker

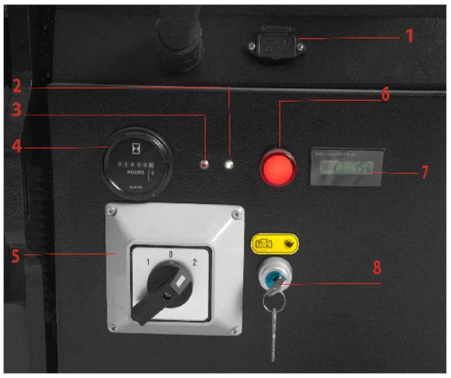
The Left/Right Turn rocker controls the machine's turning movement during transport, eliminating the need for the operator to manually push or pull the equipment to steer it. This feature makes maneuvering the machine much easier.

The rocker has three positions:

- Left – turns the machine to the left.
- Neutral – disengages turning movement.
- Right – turns the machine to the right.

Each position corresponds directly to the intended direction of travel.

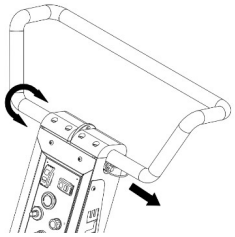
Electric cabinet



1. Charging Port – Connection point for the external charger.
2. Remote Pairing Indicator (Green) – Illuminates when the remote control is paired successfully.
3. Remote Operation Indicator (Red) – Lights up when the machine is switched to remote operation mode.
4. Hour Meter – Displays total operating hours of the machine.
5. Mode Selector Switch (see section **4.10**)
6. Power Indicator – Indicates when the machine is powered on.
7. Battery Power Indicator – Displays the charge status of the on-board batteries.
8. Key Switch – Used to select between Remote and Non-Remote operation.

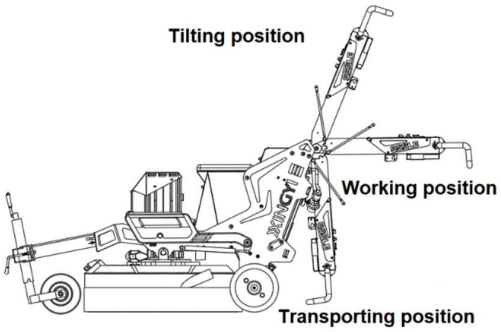
4.4 Handle adjustment

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.



4.5 Main handle adjustment

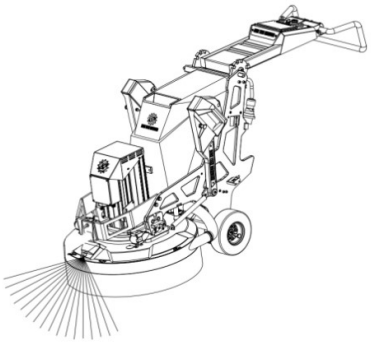
Use the handle position lever to adjust the position of the handle. Hold the handle tightly with one hand to support the handle, pull the lever lock back to release the handle, rotate the handle to a position that suits you best and release the lever to lock. Be sure that the handle has locked into a notch.



4.6 Water tank

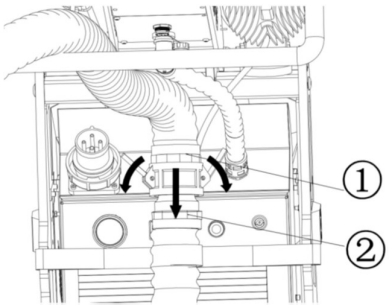
The capacity of the water tank is 39L/10 Gal. There is a water inlet by the side of water tank. During wet grinding, turn on the water valve located above the grinding head to inject water into the grinding head.

Also, push up the switch on the side of the remote-control when you operate by remote control mode to spray water in front of the machine.



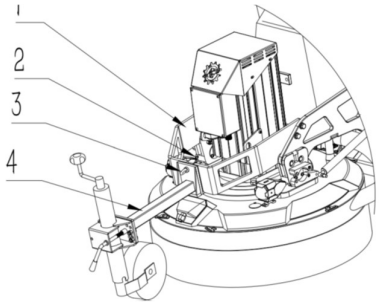
4.7 Vacuum quick connector

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.



4.8 Transport wheel

When mobilizing the machine on a job site, it is more convenient and labor-saving to install the supporting wheel to move the grinder. Remove or place it in the up position when grinding.

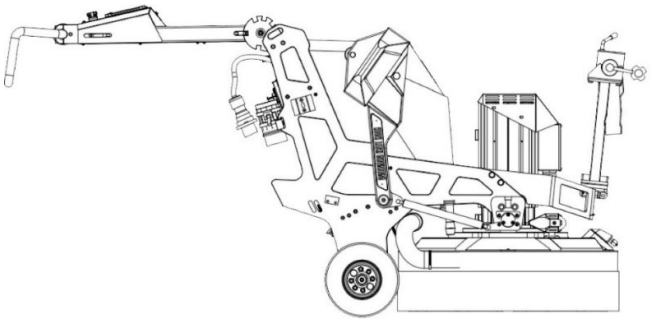


(1) Front wheel supporting frame
(2)R-type cotter pin
(3) locating pin
(4) Supporting wheel

To remove the supporting wheel: press the emergency stop switch, crank the support wheel jack to the lowest position (so there is no weight on the wheel) remove the R-shaped split pin, remove the locating pin, remove the support wheel from the bracket.

To install the supporting wheel: press the emergency stop switch, align the support wheel with the pin hole on front wheel support frame, then insert the wheel into the bracket, insert the R-type cotter pin, and lock the locating pin. Rotate the lever on the top in clockwise direction to raise the grinding head until it is off the ground.

The support wheel may also be mounted to the front of the machine, upside down, when not in use. This allows for additional head weight and eliminates the need to store the wheel in another place.

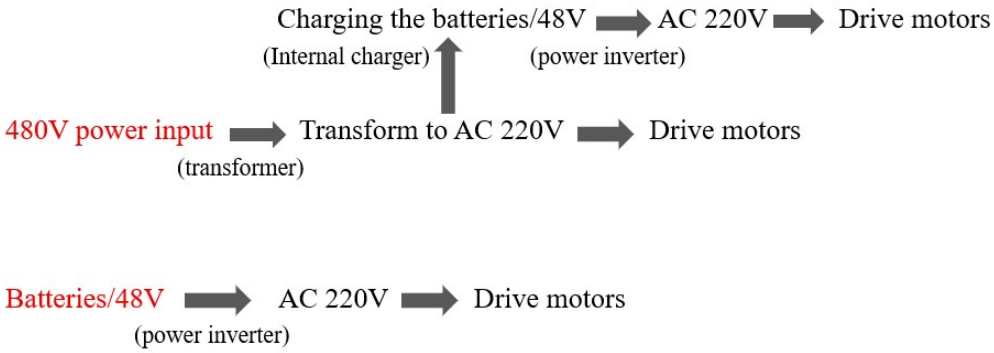


4.9 Battery / Self-propelled system

The machine is equipped with on-board batteries, consisting of four 12V lead-acid batteries connected in series (48V), which drive the wheels when the machine is not connected to external power. The battery charge level is displayed on the screen located on the electrical cabinet.

When the machine is connected to an external power supply, the on-board batteries are automatically charged by an internal charger. At the same time, the AC power directly drives the wheels, instead of drawing power from the batteries, which helps to reduce battery drain and extend battery life.

How the battery system works



4.10 Mode selection

When operating the 955LE you should always select the proper mode on the selection switch located on the main electrical box.

- Mode 0: Disconnect
- Mode 1: AC 220V drive
- Mode 2: DC 48V drive

During transport while unplugged, use Mode 2, which utilizes the 48V battery system to move the machine.

During normal operation when connected to power supply, use Mode 1.

Note: Always move the selector switch to Mode 1 before plugging in the power supply.

This will prevent system error codes.

4.11 External charger

The batteries must be recharged when:

- The charge level drops below 20%, or
- The machine needs to move on or off a ramp/hill and the charge level is below 60%.

To recharge, open the charging port cover and use the 110V charger provided by the manufacturer.

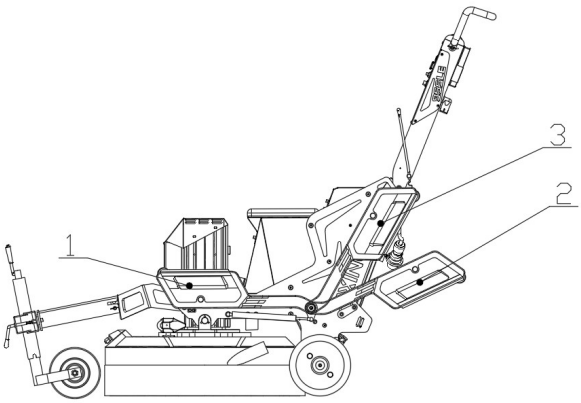
Indicator Light of charger

- Steady red light: charging.
- Flashing red light (two possible reasons):
  1) The battery is over-discharged. In this case, the charger enters a trickle charge mode. After a short time, the indicator changes to red, and the battery begins normal charging.
  2) The battery is defective and must be replaced.
- Steady red light to steady green light: Charging is complete.

4.12 Additional weight kit

The machine is equipped with two weights to make it easy to move the machine's center of gravity. Each weight is provided with a locking pin, and a front limiting stop and a rear limiting stop on the frame of each side as well as a neutral position weight block.

Position 1----Pull the pin outwards and take hold of the weight and move the weight all the way forward until reaching the front stop.



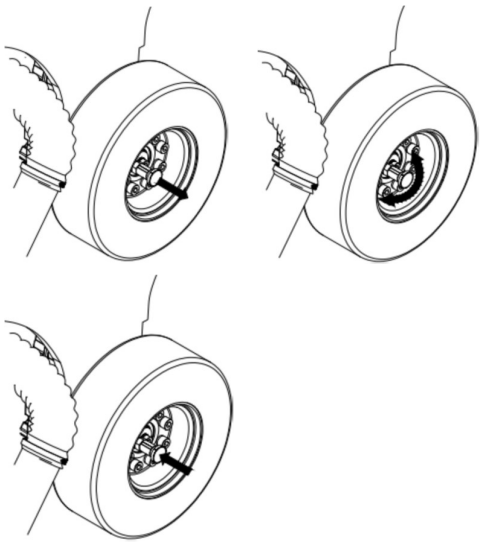
Position 2----Lift the weight up until the pin locks into the neutral position weight block.

Position 3----Pull the pin outwards and take hold of the weight and move the weight all the way backward until reach the rear limiting stop.

In order for the grinding pressure to be maximized, the weights shall be placed in position 1 and to be minimized in position 3. If the machine feels heavy to operate, it may be due to the placing of the weights. Raise the weights to position 2, position 3 to relieve the grinding head. Ensure that the weights are in the same position on both sides to prevent the risk of uneven grinding.

4.13 Wheel locking pins

When using the machine in remote-controlled mode or during battery-powered transport, the wheels must be securely locked with wheel locking pins. There are two locking pins located on each side of the wheels to ensure stability and safe operation.



To lock the wheels, pull the pin out and turn it until it locks into the slot, so the pin will snap into the hole to lock the wheel.

To unlock the wheels for manual operation, pull the pin out and turn it to make sure the pin is stuck to the housing which prevents the pin from snapping back into the wheel.

If the pin is tight, simply rock the machine slightly to relieve the tension and the pin will move freely.

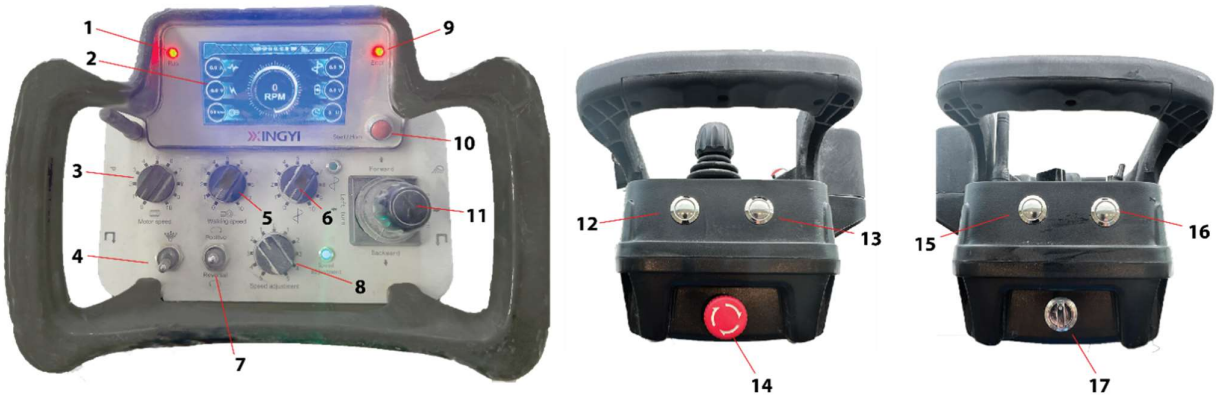
4.14 Remote package

The remote package includes:

- One remote-control unit
- Two batteries
- One charger
- One carrying strap for the remote

To charge a battery, place it in the charger slot and connect the charger to a 110V power supply. A spare battery is also provided by the manufacturer to ensure uninterrupted operation.

4.15 Remote-control device



1. Run indicator light
2. Display screen
3. Motor RPM
4. Water spray switch
5. Travel speed
6. Ossilation control
7. Motor forward/reverse
8. Tracking control
9. Error indication light
10. Start button

11. Joy stick
12. 90-degree left turn button
13. Light switch
14. Emergency Stop switch
15. Program button
16. 90-degree right turn button
17. Power switch

5. Machine Operation

The following section describes how to change tools and how to operate the machine in manual or remote-control mode.

The machine may be operated either way depending on the job site requirements and the operator's skill level. Only experienced operators should use the remote control to run the machine.

5.1 Handle setting

Place in the right working height using the various settings. Ensure that the handle lock locks properly in the position wanted when adjusting the handle.

5.2 Weight setting

Place the weights in the right position for current work. If the machine is heavy to operate, it may be due to the placing of the weights. Fold the weights up or back to unload the grinding head.
Risk of crushing.
Risk for the lock release.

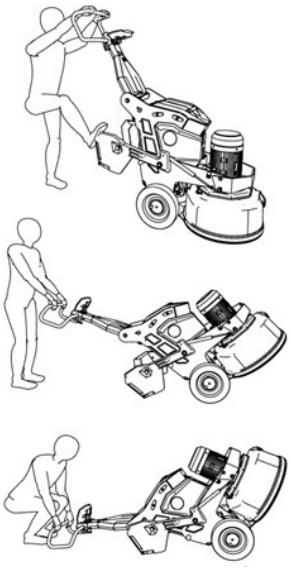
5.3 Access to grinding tools.

WARNING

Risk of crushing.
Risk for personal injury and mechanical damage.
Disconnect the power prior to cleaning, maintenance, change of tools and repair.

Raise the handle to the high position in accordance with the Handle Settings page 9. Lower the weights back and place a foot on one of the weights. See Weight Kit page 14. Carefully, tip the machine backwards, until the weights reach the floor.

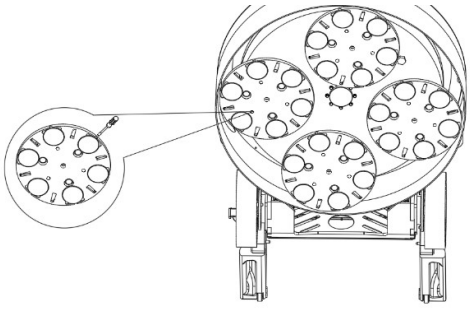
Ensure that the machine lies supported on the handle.



5.4 Fitting grinding tools

The machine uses 12 or 24 grinding tools.

Insert the flat screwdriver into the slot to remove the Velcro adapter. Align the 3 holes on the tool with the 3 pins on the plate and the tool will be attached immediately by magnet which is embedded in the tool plate.



The tool plate holds the tools in place for the grinding application.

5.5 Manual operation

1. Position the machine at the location where grinding operations will begin.
2. Remove the transport wheel or place it in the upright position so the grinding heads contact the ground.
3. Install the tooling on the grinding heads as required for the operation.
4. Connect the vacuum hose using the quick connector (for dry grinding). If performing wet grinding, ensure the water tank is filled instead.
5. Ensure the Emergency Stop switch is engaged (in the stop position).
6. Dis-engage the two locking pins on each wheel to allow the machine to move freely. Rock the machine slightly to help pull out the pins. Ensure that each pin is positioned in the right place.
7. Set the mode selector switch to “1” to use external power supply.
8. Turn the key switch to “Manual” operation.
9. Plug in the power supply into the machine. Verify that the voltage matches the machine’s requirements.
10. Release the Emergency Stop switch to disengage it.
11. Flip the rotation switch to the desired direction (clockwise or counterclockwise) to power on the motor.
12. Adjust the motor speed knob to start grinding. Increase or decrease the speed as appropriate for the tooling in use. The RPM is displayed on the control panel.
13. Push the machine manually to move it across the surface. Recommended grinding speed should not exceed 8–10 feet per minute.
14. To stop the machine, press the Emergency Stop switch.

5.6 Self-propelled operation

1–5. Same as above (see Section **5.5**).

10. Engage the two locking pins on each wheel to lock the wheels and prepare for self-propelled mode. Rock the machine slightly to help the pins engage. Ensure that each pin clicks into the locked position.
11. Set the mode selector switch to “1” to use the external power supply.
12. Turn the key switch to “Remote-Control” operation.
13. Plug the power supply into the machine. Verify that the voltage matches the machine’s requirements.
14. Release the Emergency Stop switch to disengage it.

15. Flip the rotation switch to the desired direction (clockwise or counterclockwise) to power on the motor.
16. Adjust the motor speed knob to start grinding. Increase or decrease the speed as required for the tooling. The RPM is displayed on the control panel.
17. Use the rocker switch (Forward/Reverse or Left/Right) to move the grinder. Adjust the travel speed as needed—do not exceed 8–10 feet per minute. The machine must still be steered manually by the operator during grinding.

- When turning, it may be helpful to flip the rocker switch into reverse to assist with the maneuver.
- After completing the turn, return the switch to forward.
- Switch on the LED light if additional visibility is needed.

18. To stop the machine, press down the Emergency Stop switch.

5.7 Remote-control operation

1-14. Same as above (see Section **5.6**).

15. Install a fully charged battery into the remote-control unit. (Attach the shoulder strap for easier operation, if desired.)
16. Power on the remote control using the switch located on the left side.
17. Release the Emergency Stop switch on the remote control to disengage it. The indicator light on the electrical box should turn green, confirming that the remote is paired and ready for use.
18. Flip the rotation switch to the desired direction (clockwise or counterclockwise) to power on the motor.
19. Press the Start button on the remote control to begin grinding.
20. Adjust the motor speed knob on the remote to set the grinding speed. Increase or decrease as required for the tooling. The RPM is displayed on the remote unit screen.
21. Push the joystick forward slightly to move the machine over the surface.
22. Use the travel speed knob on the remote to adjust the walking speed. Steer and maneuver the grinder entirely via the remote control.
23. To stop all machine movement, press down the Emergency Stop switch on the remote.

Oscillation Operation

The purpose of the oscillation control is to prevent the machine from creating ridge lines or stripping the floor. When engaged the machine will swing left and right during the pass automatically. The amount of swing is controlled by the oscillation knob on the remote control. This should only be used during heavy grinding or removal operations.

5.8 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. Repairs should always be performed at a XINGYI Service Center, or by an authorized XINGYI mechanic. Contact your retailer for service options, parts, and information, or www.xingyimachineusa.com

6. Movement

The machine can be transported either manually, or by using the onboard battery system with control panel on the handle or the remote control. Machine transport can be done without connecting the machine to a power supply.

6.1 Manual movement

1. Install the support wheel to raise the grinding machine from the ground. It is recommended that the lowest position of the grinding disc is one inch from the ground.
2. Unlock the wheel locking pins (see 4.15)
3. The machine can be pushed manually.

6.2 Battery-power movement

Preparation

1. Install the support wheel to raise the grinding machine off the ground. It is recommended that the lowest point of the grinding disc is approximately 1 inch above the ground.
2. Lock the wheel locking pins. Ensure that the pins click securely into the slots (see section 4.15).
3. Set the mode selector switch to “2” to use the battery power supply.
4. Turn the key switch to “Remote-Control” operation.
5. Release the Emergency Stop button on the handle.

Operation via Control Panel

6. Use the Forward/Neutral/Reverse switch or the Left/Right switch to move the machine.
7. Adjust the travel speed using the potentiometer on the control panel.
8. Press the Emergency Stop button to stop all machine movement.

Operation via Remote Control

6. Turn on the remote control and allow it to power up.
7. Release the Emergency Stop button on the remote.
8. Set the travel speed knob on the remote to a low setting.
9. Press the Start button on the remote. The light will turn green.
10. Push the joystick forward to begin movement. Steering and direction are now controlled by the remote. Use the travel speed knob to adjust speed.
11. Press the Emergency Stop button to stop all movement.

6.3 Operating on sloping surfaces

- Ensure the battery system has at least 60% charge before operating on ramps or other inclined surfaces.
- Confirm that the wheel locking pins are securely engaged.
- Do not exceed a maximum slope of 20%.
- Always move the machine forward when going uphill and in reverse when going downhill.
- Keep the weights always positioned forward to reduce the risk of the machine tipping backward.
- Make sure no personnel are present below the machine while it is moving on a slope.
- Be sure that the area around the machine is free and clear of any debris or tools before moving.

7. Maintenance

We recommend that the grinding machine be checked regularly to extend the service life. Always be sure that the machine is unplugged from power when performing maintenance or repairs.

7.1 Daily maintenance

The machine should be kept free of dust and as clean as possible. Use a vacuum to remove excess dust from the grinding heads and other critical areas of the machine. The grinding heads should be cleaned when changing abrasives, the magnets will collect dust and metal fragments from the tooling. This can cause the tools to not sit properly on the head, loose tools may fly off and or cause irregular scratches in the floor. Check the switches on the control panel to ensure all the functions are working properly. This can be done with battery power, simply turn on the key switch. Clean the switches as needed using a soft brush or cleaning rag. Do not use water to clean the switches.

7.2 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 when connected to power. Check the electrical compartment for dust, make sure it is clean and dry.

7.3 Gear box service

The machine gear box oil should be changed after the first 500 hours of operation, after that 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^2/s DIN-51519, at 40°C.

8. Troubleshooting

Problem	Possible Cause	Solution
The Machine won't run	Emergency stop is engaged	Reset the stop switch
	The motor is jammed	Remove the debris
	Power cable damage	Replace the cable / check power supply
	Non-standard operation	Refer to operation manual
The machine makes a low buzz when turned on	Motor may be burned out	Replace the motor
	Phase loss	Have electrician check the power phase
Machine is difficult to control / AMP draw is too high	Not enough tooling under the machine	Use the correct number of tools for the heads
	Power service not sufficient	Check the service amps
Battery cannot charge with 3 phase / battery cannot charge with dedicated charger	3 phase voltage is below the required range	Check the voltage and amps are correct for the machine
	Battery has reached its service life	Replace the battery
	Battery has drained to 0%	Charge for 4 hours with dedicated charger
	Battery charger is damaged	Replace charger
Machine bouncing	Diamond tools may not be installed correctly	Check to be sure tooling is correct
	Diamonds may be different heights	Check the tooling is all the same height. Replace as needed
	The grinding plates are not flat	Replace the grinding plate
Machine travel is not correct	Wheel pins are not locked	Lock the wheel pins
	The clutch is not engaged	Check the clutch
	Servo motor control failure	Contact the factory / repair or replace
	Broken keyway between the wheel and driver	Contact the factory / replace the keyway
	Battery too low	Charge or change battery
	Receivers overheat	Disconnect power / let cool and restart

Remote control won't sync	Emergency stop on remote	Reset the stop switch
	Machine not in remote mode	Change the selector switch to remote operation

9. Technical Data

	955LE
Motor power	22*kW* / 30*HP*
Rated voltage	3*P, 480V*
Rated Amps	40 *A*
Input hertz	50*HZ*/60*HZ*
Inverter power	18.5*KW*/25*HP*
Working width	955*mm*/38 *in*
Diameter of grinding disk	370*mm*/14.6*in*
Grinding speed	450~1950 *rpm*
Dimension (packing size) L*W*H	1615×979×1077*mm*/63.58×38.54×42.45*in*
Total weight	750kg
Storage temperature	-20～+60℃/-4～+140℉
Working temperature	-10～+40℃/+14～+104℉
Humidity	Below 95% (no condensation)

10. Dimensions