



## **Manual for HTG-550 Pro Planetary Grinding Machine**

----- Version 1.1

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## **1. Introduction**

### **1.1 Summary**

XINGYI Machines are used for processing the concrete 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 information 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 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 performed 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 understand:

- 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.

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 glasses
- protective gloves
- steel toe safety shoes or work boots
- 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 electrical 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 electrical 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 the overload protector has been tripped, power off and unplug, then restart the machine.
- 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 Unpacking

Check the packaging and equipment carefully on delivery for 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 right away. Report packaging damage to the carrier as well. Check whether the delivery meets the order. If you have any questions, please contact the dealer.

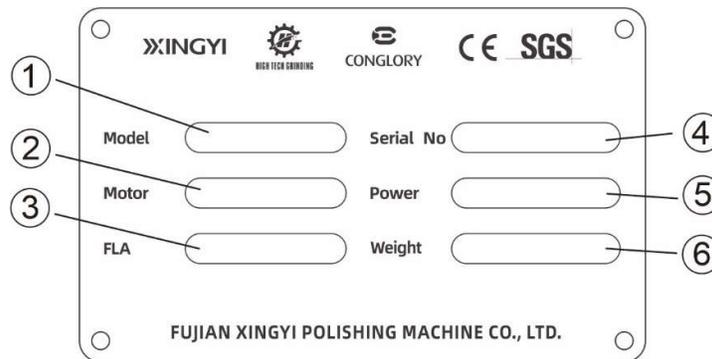
#### 3.2 Transport

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.

#### 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.

#### 3.4 Machine name plate



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

#### 3.5 Storage

The grinding machine should be stored in a heated, dry place at normal temperature when not in use, to prevent damage by condensation and cold.

#### **4. Machine description**

The HTG-550 Pro is used to grind (rough grind, fine grind and polish) concrete, natural stone and terrazzo floors or other materials specified in this manual or recommend by XINGYI. This machine is expected to be used in commercial applications such as hotels, schools, hospitals, factories, offices and warehouses and retail environments. This machine is equipped with a water tank that can be used for wet grinding. The handle can be set in different positions. When the machine is operated, you can choose the most suitable position for the operator. To prevent crystalline silica exposure, posing a threat to the health of the operator and other workers, when dry grinding, make sure that a dust collection system of the proper CFM is connected to the grinder (The recommended dust collector for this machine is the Xingyi IVC-V3).

##### **4.1 Standard delivery**

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

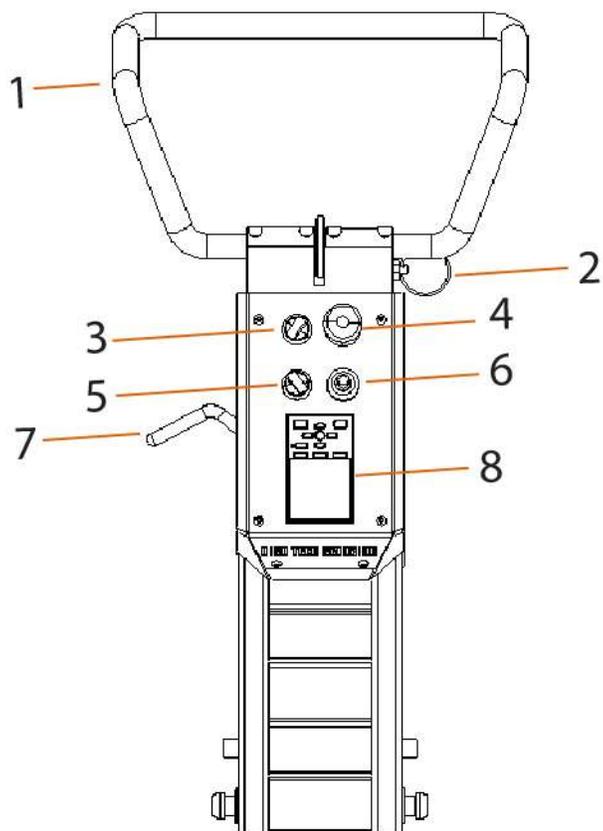
- operation manual, 1
- full dust skirt, 1
- female power connector, 1 (male connector on the machine)
- 2 keys for the main electrical box
- 9-3" Velcro tooling adaptors

## 4.2 General diagram



- |                            |                    |
|----------------------------|--------------------|
| 1. handlebar               | 9. rubber wheel    |
| 2. handlebar adjusting pin | 10. gearbox        |
| 3. control panel           | 11. grinding head  |
| 4. main handle lever       | 12. female plug    |
| 5. main handle             | 13. dust shroud    |
| 6. water tank              | 14. tool bag       |
| 7. weight kit              | 15. velcro adapter |
| 8. lifting assist handle   |                    |

### 4.3 Main Handle Panel



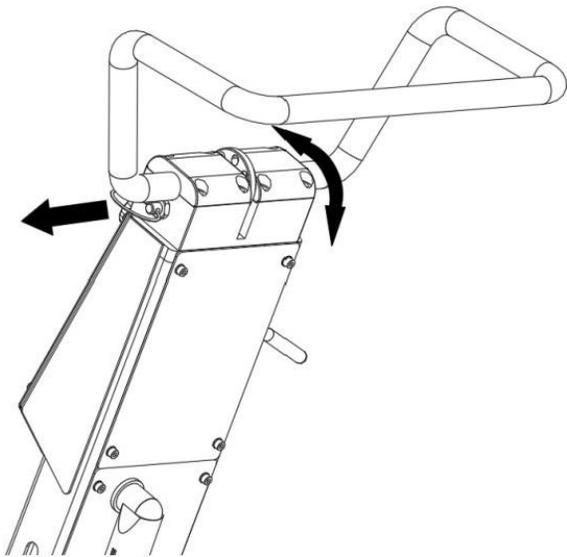
1. handlebar
2. handlebar adjusting pin
3. rotation switch
4. emergency stop
5. led light switch
6. potentiometer for motor speed
7. main handle lever
8. display screen

#### 4.4 Display Screen

The display screen is operated by pressing the function buttons at the bottom of the screen.

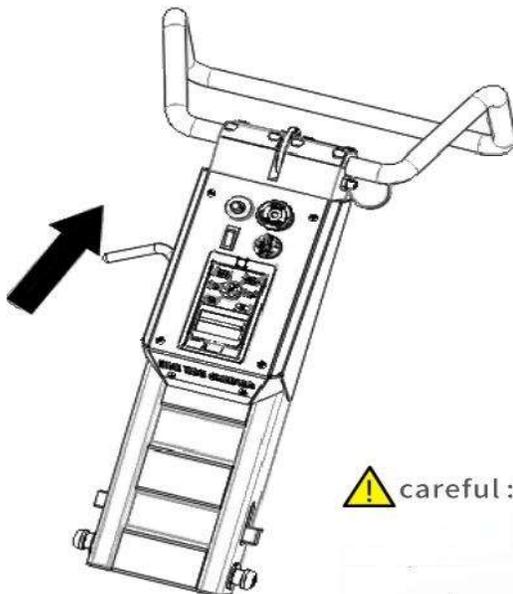
#### 4.5 Handlebar adjustment

The handlebar adjusting pin can be positioned at different positions to accommodate the operator. Hold the handlebar with one hand, pull out the adjusting pin with the other hand, when it is rotated to proper position release the adjusting pin. Be sure that the pin has locked into a secure position.

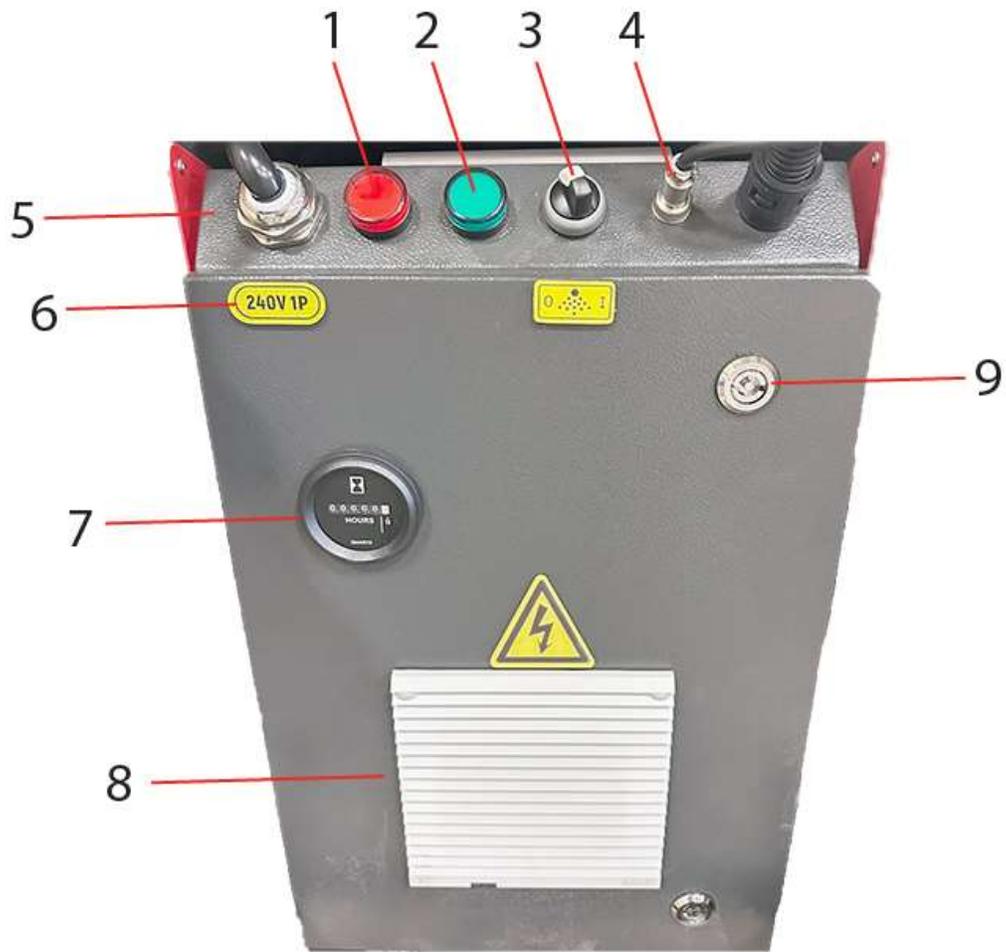


#### 4.6 Main Handle Adjustment

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, move the handle to the required position and release the lever.



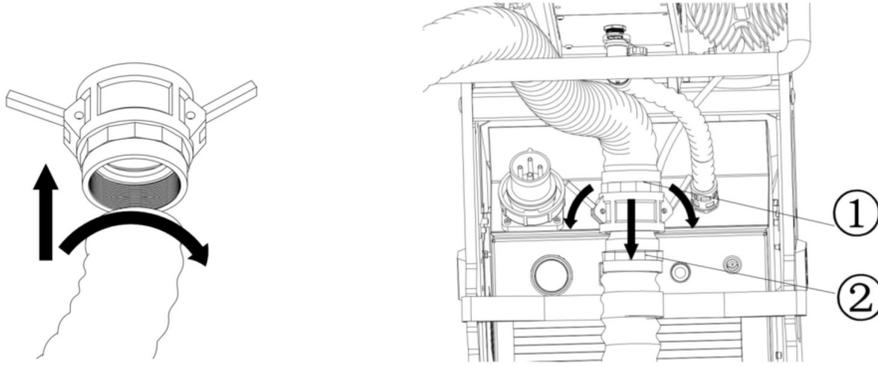
#### 4.7 Main Electrical Cabinet



1. Indicator light: red
2. Indicator light: green
3. water spray control
4. led light connection
5. power in source cable
6. voltage sticker
7. hour meter
8. dust filter cover
9. main electric cabinet key lock

#### 4.8 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 a fast connection of the vacuum to the grinder.



#### 4.9 Water Tank

There is a water inlet in front of the water tank. The heat vent openings on both sides of the water tank dissipate heat from the inverter box and can extend the service life of the electrical equipment inside the inverter box.

During wet grinding, press the front spray switch on the electrical box to spray water in front of the machine during wet grinding operations.

#### 4.10 Additional Weight Kit

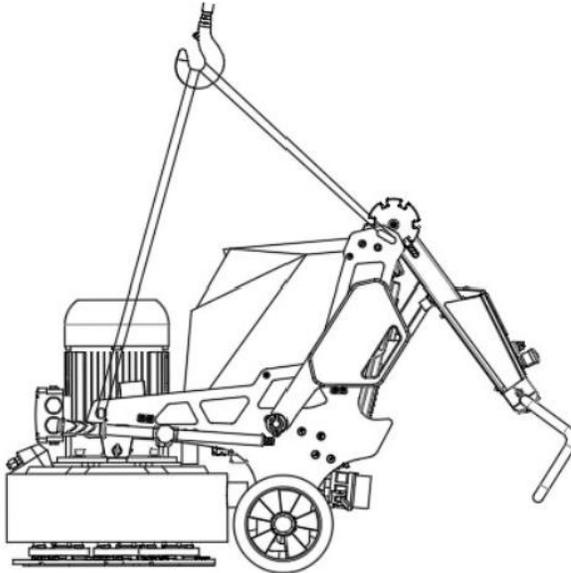
There are two positions for the additional weight kit, the tilting and working position. The adjustment of the extra weight is mainly achieved by moving the weights forward to increase the head pressure, or by bringing them to the up position for changing tools or reducing the head pressure.

### 5. Transportation

The machine can be moved or transported manually. The weights should be in the up position to make the machine easier to balance while moving. The machine should always be secured in place during transport in a truck or van to prevent damage from occurring to the unit. The grinding heads and weights should be down during transport for additional security.

## 5.1 Lifting Machine

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 that the area is clear before lifting, be sure there are no people under the machine during lifting.



The machine lifting position.

## 6. Machine Operation

The following section relates to the basic operation of the machine.

### 6.1 Normal Operation

Place the machine where you intend to start grinding operations. Install the tooling on the grinding heads as needed for the operation. Connect the vacuum hose using the quick connector, (unless wet grinding. If wet grinding be sure that the water tank has been filled). 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. Turn the emergency stop until it pops up, (off). Turn the rotation switch to either 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 machine manually to move over the surface. Average speed for grinding should not exceed 8-10 feet per minute. To stop the machine, press down the emergency stop switch.

## **7. Machine 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**

Should include keeping the machine 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. Clean the switches as needed using a soft brush or cleaning rag. Do not use water to clean the switches.

### **7.2 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-520 Pro holds approx. 0.9 gallons/3.9L 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.

### **7.3 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.

## 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
	Diamond 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
Remote control won't sync	Battery too low	Charge or change battery
	Receiver overheat	Disconnect power / let cool and restart
	Emergency stop on remote	Reset the stop switch
	Machine not in remote mode	Change the selector switch to remote operation

## 9. Technical Data

HTG-550 PRO	
Motor power	5.5 KW / 8 HP
Rated voltage	1P 240V
Rated AMPS	32 A
Input hertz	50HZ / 60HZ
Working width	550 mm / 22 in
Grinding disc size	278mm / 11in
Motor speed	350-1950 RPM
Machine weight	319-390 LBS
Dimensions	40" x 23" x 40"
Total weight	598 LBS
Cable size	10mm /6-4
Storage temperature	-20° - 60°C /-4°-140°F
Operating temperature	-10°-40°C /14°-104°F
Humidity	Below 95% (no condensation)