



# HTG550 plus manual

## 1. Introduction

### 1.1 Summary

HTG machines are used to treat floor surfaces. The range of use of the machine depends on the choice of tools. In addition to usage and general functions, this manual provides information on the use, repair and maintenance of the grinder. For further information, contact your local retailer.

### 1.2 Liability

We have made every effort to make this manual as complete and accurate as possible, and we do not assume any responsibility for any errors or missing information. HTG reserves the right to change the instructions in this manual without prior notice.

This manual is protected by copyright law. No part of it may be copied or used without the written consent of HTG

### 1.3 Spare parts

The product mainly includes the following items, if anything is missing please contact the retailer.

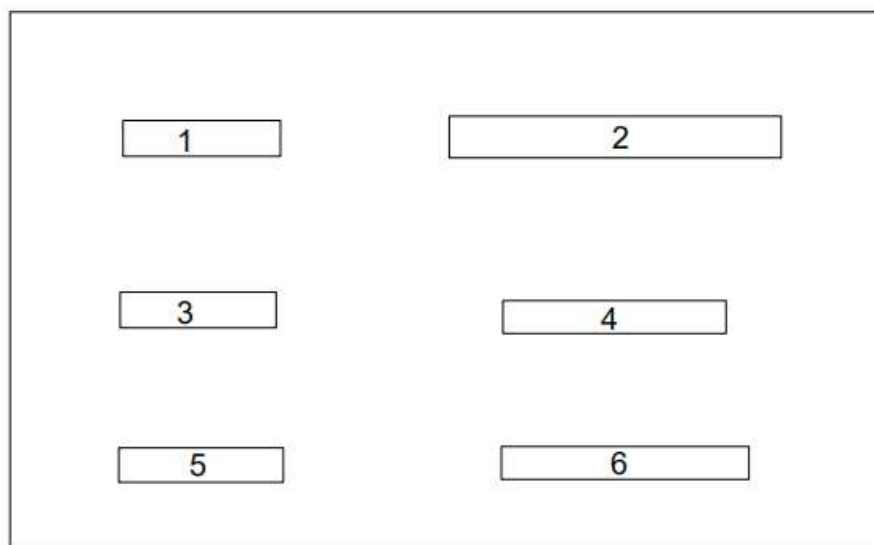
- (1) Grinding machine\*1
- (2) Instruction manual\*1
- (3) Inverter box key\*1

## 1.4 Receiving goods

Carefully inspect the packaging and the machine for shipping damage. If the machine shows any signs of damage, contact the retailer and report the damage. If the packaging is damaged, report the packaging damage to the shipping company.

Check that the delivery is what you ordered. If you have any questions, contact the retailer.

## 1.5 Machine nameplate



- 1. Model 4. Voltage
- 2. Production date 5. Weight
- 3. Power 6. Speed

## 1.6 Processing and storage

The grinder should be stored in a dry place at room temperature when not in use. Otherwise it may be damaged by condensation and cold. The dimensions and weight of the grinder are given in the technical data.

## 1.7 Warranty

This warranty covers manufacturing defects only. HTG is not responsible for damages that occur during transportation, unpacking or use. In no case will the manufacturer be responsible for damages and defects caused by improper use, corrosion or use beyond the specified specifications. The manufacturer is not responsible for consequential damages or expenses in any case. For complete information on the product warranty period, please refer to HTG current warranty terms. Local dealers may have special warranty terms. If there is anything unclear about the warranty terms, please contact your retailer.

## 2. Risk List

### 2.1 General safety instructions



**Warning: Please read the following carefully before using the machine.**

1. This manual lists important information for using this machine and operating it safely! You must read this manual carefully before operating this machine for the first time!
2. This product must not be operated unless the operator has read and understood the contents of the operator's manual.
3. Never rent a machine without its operating instructions.
4. Please comply with local laws and regulations when using this device.
5. All work must be done by trained and qualified professionals, and operators should ensure safety and prevent dangers during operation .
6. Do not operate this product when you are tired, sick, or under the influence of alcohol or drugs.
7. Keep this device out of reach of children.
8. this machine. When the machine is working, please be careful not to let children or unrelated people approach the machine, keep a certain working distance and remember "one machine, one person".

9. Do not modify the product at will, and do not use illegally modified products. Only personnel designated by HTG can perform repairs and modifications using accessories provided by HTG.
10. Keep the product clean and ensure that you can read markings and labels clearly.
11. The products used should be intact and undamaged to ensure safe use.

## 2.2 Operation Safety Instructions



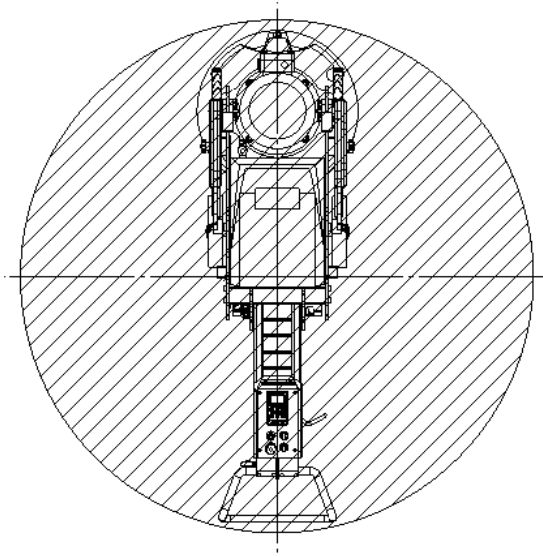
**Warning: Please read the following carefully before using the machine.**

1. When working, you should wear professional personal protective equipment.
2. This machine is only used for floor surface grinding and polishing. Please do not use it in other occasions.
3. HTG machines can only be used in the way recommended by HTG. Please read and understand the operating instructions of the machine manual. Different models have different accessories and control operations. Wrong operation may cause safety problems.
4. This machine must be operated at a slope less than 20°. The company will not be held responsible for any accidents caused by operation at a slope greater than 20°.
5. When the machine is operating, the operator should not leave the product and ensure that the product operates normally within sight.
6. When leaving this product, press the emergency stop button and disconnect the power cord.
7. Before operation, make sure the dust skirt is installed and vacuum connected to the machine to prevent dust from being inhaled into the lungs and causing harm.
8. During operation, ensure that the machine is in a safe and stable position to prevent personal injury during operation.
9. Your body, hair, jewelry, and loose clothing away from moving parts of the machine; otherwise, physical injury may occur.
10. If you find that the machine is working abnormally, such as abnormal vibration, abnormal noise, etc., you should stop using the machine immediately and have it checked for damage and repaired by authorized dealers and maintenance personnel.

### 2.2.1 Personal protective equipment

1. When operating this equipment, please make sure to wear personal protective equipment that meets relevant standards.
2. Do not wear loose clothes or carry anything that could be dangerous, such as scarves, bracelets, rings, etc to prevent being caught in the machine and causing injury.
3. Certified protective glasses must be worn to prevent dust or foreign objects from damaging your eyes.
4. Certified protective gloves must be worn to ensure a firm grip and protect your hands from injury.
5. Certified safety boots must be worn with steel toe caps and non-slip soles to avoid slips and foot injuries.
6. The machine will generate noise and dust when working. Protective earmuffs and masks must be worn to prevent noise from damaging the ears and dust from being inhaled into the lungs and damaging the respiratory tract.
7. An approved protective helmet must be worn.
8. It is necessary to ensure that there are fire extinguishers, first aid kits and other supplies on the work site to prevent accidents.

### 2.2.2 Work area safety



1. As shown in the figure above, except for the operator, no other personnel are allowed to enter this area, and the operator in this area should be extra careful during operation.
2. Do not use the machine in rain, lightning, dense fog, strong wind or other adverse conditions.
3. Do not operate the machine near explosive or flammable materials or steam. Do not operate the machine near dust, solvents, thinners or other flammable items.
4. Before the equipment is working, check the ground area to be ground and remove any hard objects such as bolts and nails that may cause damage to the grinding disc and equipment; for hard objects such as steel bars and expansion screws protruding from the ground, use a cutting machine in advance to clean up the part protruding from the ground.

## 2.3 Electricity Safety Tips



**Warning: Please read the following carefully before using the machine.**

1. All repairs can only be performed by professionals.
2. After the machine stops, the circuit is still energized. All power supplies should be cut off before repairing the machine.
3. The machine is equipped with an overload protection device which will automatically trip and prohibit the machine from running when the machine is overloaded (the overload can be readjusted under safe conditions).
4. The manufacturer will not provide warranty for other losses and malfunction of the machine caused by continuous use of the machine under overload conditions.
5. The purpose of adding a frequency converter to the machine is to adjust the speed and protect the safety of the user and the machine. It is prohibited to modify or adjust the frequency converter or modify the frequency converter parameters without the manufacturer's consent. If the device fails, only the accessories provided by the manufacturer can be used to replace the broken accessories. (The manufacturer will not provide warranty for other losses and machine malfunction caused by modifying or adjusting the frequency converter or modifying the frequency converter parameters without the manufacturer's consent)
6. Never modify the internal parts or circuits of the inverter by yourself.
7. Do not operate the machine when the electric box is not closed.
8. If the machine current is overloaded, special attention must be paid.
9. Never connect or remove wires when the wires are live or under load.
10. Using a damaged power cable may cause electric shock.
11. Keep cable away from high temperature surfaces.
12. All electrical components of the machine should be kept dry and the machine should be stored in a dry place.
13. After cutting off the power supply, before the panel indicator light goes out, there is still high

voltage inside the inverter, which can be dangerous. Do not touch the uninsulated electrical machine parts.

14. Do not allow water to enter the machine motor or frequency converter. (The manufacturer will not provide warranty for other losses or malfunction of the machine due to water ingress )

15. The machine must use the wire specifications and voltage specifications specified by the manufacturer.

## 2.4 Safety warning signs



Please read and understand the instructions before using this equipment.



Be sure to wear ear defenders and protective glasses to avoid noise damage to the ears and foreign objects to the eyes.



It is necessary to wear a protective mask to avoid inhaling dust and damaging the lungs.





Make sure all parts of the equipment are intact and all screws are tightened, otherwise personal injury may occur.



Insulated rubber shoes must be worn, otherwise there may be a risk of electric shock.



High voltage danger, do not open, otherwise it may cause personal injury.



Danger warning, please pay attention to the text description below this icon to avoid danger.



This is the hook.

## **3. Machine**

### **3.1 Overview**

HTG-550 PLUS is used to treat various types of floors and used to grind concrete, natural stone and terrazzo floors or materials specified in this manual or recommended by HTG. The machine can be used for a variety of purposes from rough grinding to fine polishing. The machine is intended for commercial applications, such as hotels, schools, hospitals, factories, offices and other places.

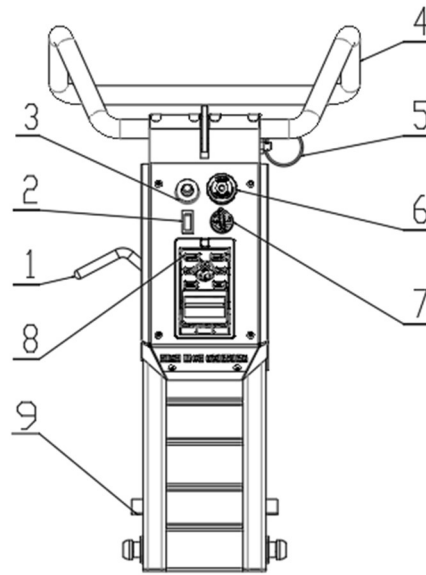
The Swing bar and the handle can be set in many different tilting positions. When the machine is operated manually, a position that is most suitable can be selected. The grinding head of the machine can be used with different grinding discs for various grinding operations.

Equipped with a water tank the machine can wet grind when required.

When dry grinding, be sure to connect a vacuum cleaner to the grinder. This prevents dust posing a threat to the health of the operator and nearby people. Inhaling dust is harmful so during operation even with a vacuum connected you should wear a protective mask to protect your own health.

This machine can use different grinding wheels, and the grinding wheels used will be different depending on the different ground materials.

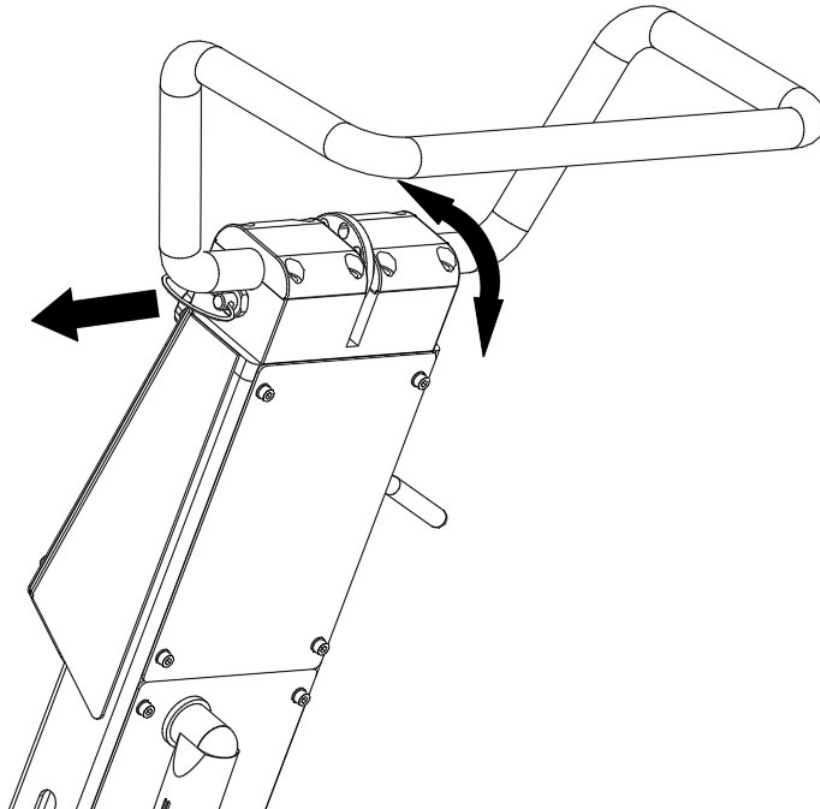
### 3.3.1 Overview



1. Swing bar angle adjustment handle: Use the handle to adjust the angle of the Swing bar to working position.
2. LED light switch: controls the switch of LED light.
3. Start / Stop switch: The switch has three positions. The motor rotates anti clockwise in left position ; the motor is OFF in the middle position ; and the motor rotates clockwise in the right position – SELECT CORRECT POSITION REQUIRED FOR GRINDING TOOL ROTATION
4. Operating handle:
5. Handle latch: Pull out the latch, and the handle can be freely rotated to a suitable position to operate the machine.
6. Emergency stop switch: Press the emergency stop switch to cut off the power supply and stop the equipment. Twist button to reset.
7. Speed control knob : Turn to increase / decrease grinding speed.
8. Display screen: displays parameters, such as voltage, current, motor speed overload fault prompt.
9. Swing bar lock lever:

### 3.3. 2 Handle

The adjustment pin on the handle can be adjusted to different positions by positioning the circular holes to meet different needs of users. Hold the handle with one hand and pull out the adjustment pin with the other hand. When it is rotated to the appropriate position, release the adjustment pin.

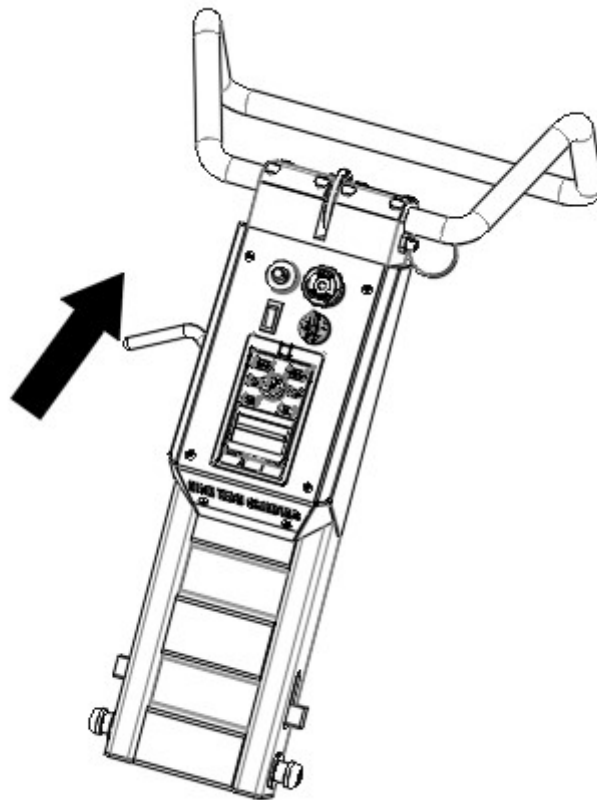


#### Notice:

1. When pulling out the handle adjustment pin, it may get stuck . In this case, you need to shake the handle while pulling out the pin.
2. When the handle adjustment pin automatically resets, the holes may not be aligned. Simply rotate it up and down.
3. When adjusting the handle position, be sure to check whether the handle adjustment pin is located correctly before operating the equipment.

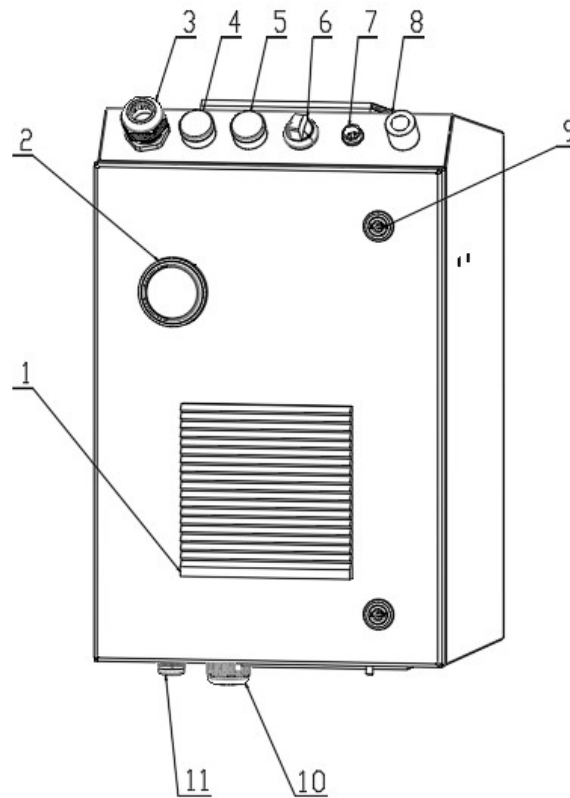
### 3.3.3 Swing bar angle adjustment

The Swing bar adjustable device uses a handle to control the different positions of the Swing bar to adapt to the conversion of the machine placement mode in different positions. Hold the handle with one hand to support the Swing bar, pull the handle upward with the other hand without moving, rotate the Swing bar to the required position according to the hole position on the fan plate, and then release the handle.



- 1、 After adjusting the position of the Swing bar, you need to check whether the Swing bar has been located before operating the equipment.
2. The Swing bar is heavy, so hold it with one hand to keep it steady!

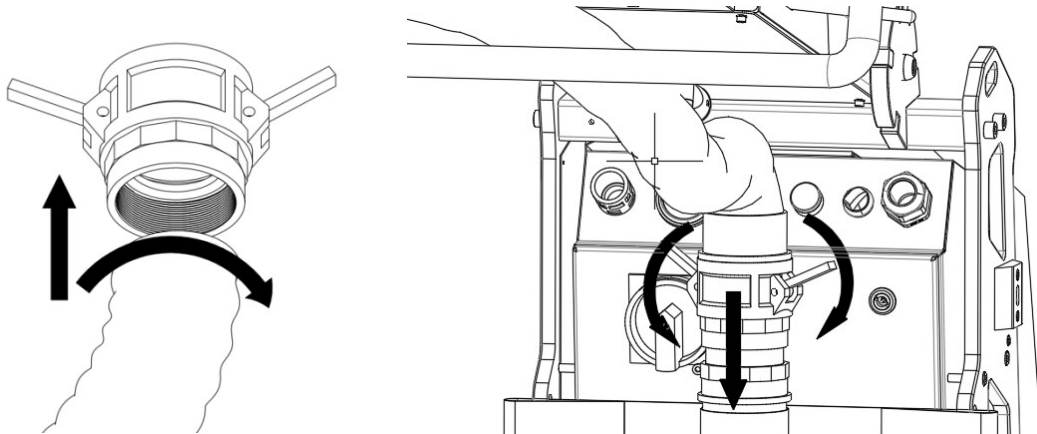
### 3.4 Electric control box components



1. Fan filter: It plays a role in heat dissipation to prevent the internal temperature of the inverter box from being too high, which may cause the components inside the inverter box to burn out.
2. Timer: Displays the total running time of the machine.
3. Cable guard PG25: used to connect lines and protect cables.
4. Red indicator light: indicates power in and illuminates when there is a fault.
5. Green indicator light: illuminates when working normally.
6. Selector switch: controls the water pump.
7. LED lamp socket: external LED lamp two-core aviation plug
8. Cable guard AD18.5: used to connect lines and protect cables.
9. Inverter box key lock: The inverter box can be locked with a key.
10. Cable guard PG25: used to connect lines and protect cables.
11. Wire guard PG11: used to connect lines and protect cables.

### 11. 3.5 Quick Connectors

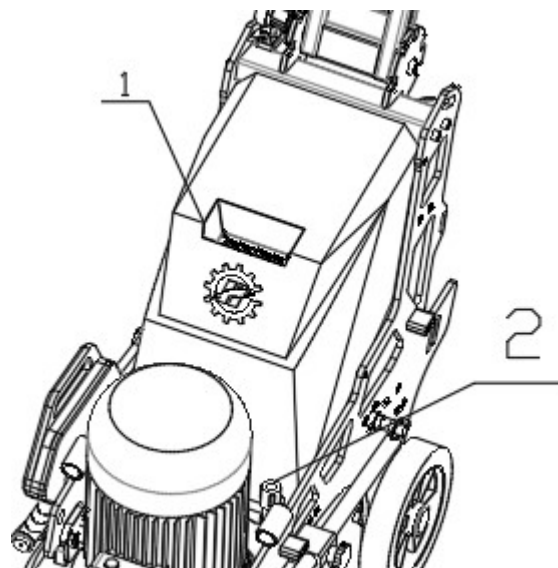
The quick connector consists of a front part and a rear part (as shown below). The front part is assembled with the dust suction hose opening of the grinder (screw the front part into the dust suction hose interface through a thread and tighten it), and the rear part cooperates with the dust suction hose (screw dust suction hose into the rear part and tighten it).



### 3.6 Water Tank

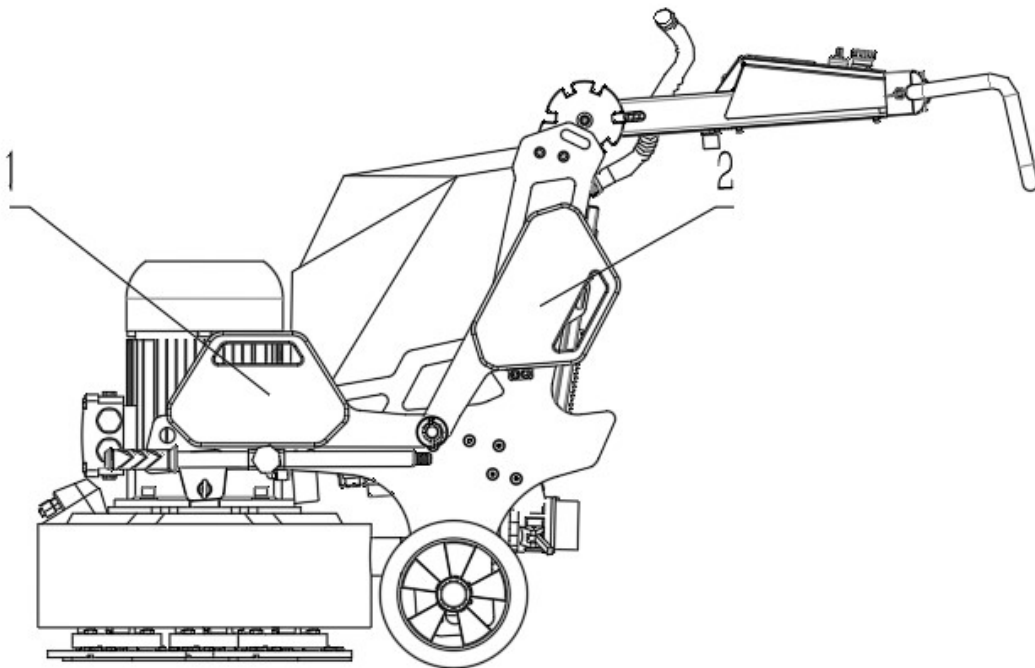
The water tank filling port is used to fill the tank with water. When the equipment is to perform wet grinding, turn the water switch clockwise to start the water grinding work. After the water grinding work is completed, turn the water switch counterclockwise to end the water grinding work.

Using a small amount of water can help to cooling the tooling when grinding hard concrete.



1. Water tank filling port 2. Water tap

### 3.6 Weights



1. Working position 2. Transport and lifting position

The weights have two different positions, the transport position / lifting position and the working position on the equipment. The adjustment of the weight position is controlled manually by the operator.



Notice:

1. Weights are heavy, please be sure to handle with care, otherwise may cause personal injury or machine damage.
2. Please hold the handle of the weight to adjust. Improper movement of the weight may cause cause personal injury.



## 4. Machine Operation

### 4.1 Overview

The following sections describe the different locations of the grinder, the main operations of the grinder, and how to install and replace the grinding discs.



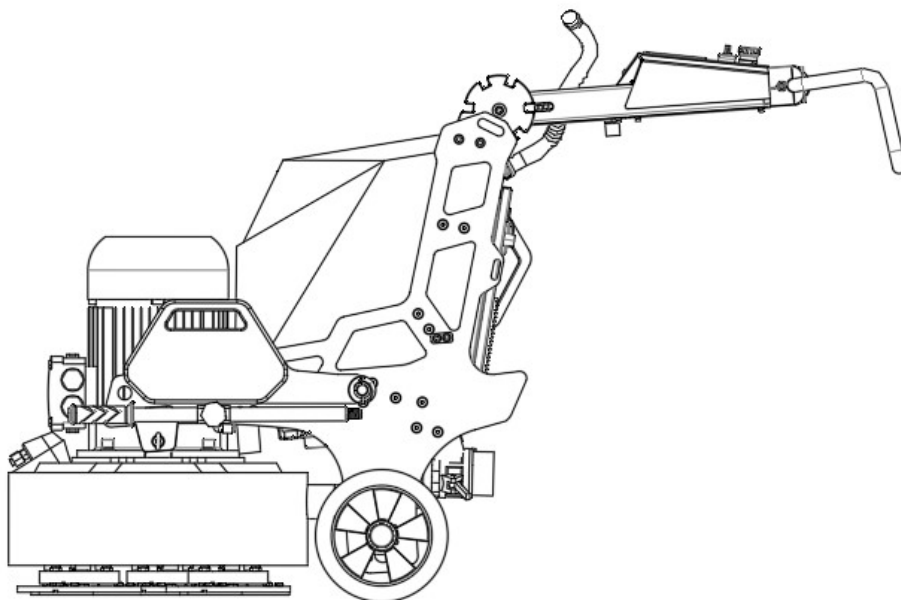
Note:

1. The grinder may only be used or repaired by personnel who has received the necessary training and have carefully read the user manual.
2. Protective equipment must be used when operating the grinder, such as protective gloves, protective mask, safety helmet, boots , etc.

### 4.2 Machine Description

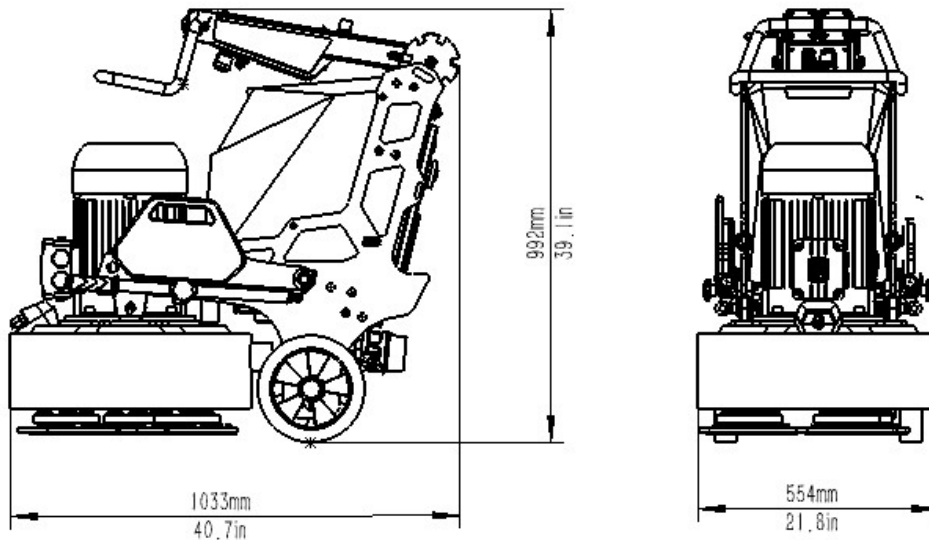
#### 4.2.1 Machine working position

Adjust the position of the handle and Swing bar to achieve the most suitable working position. When the grinder is running , gently lower the weights into the appropriate position.



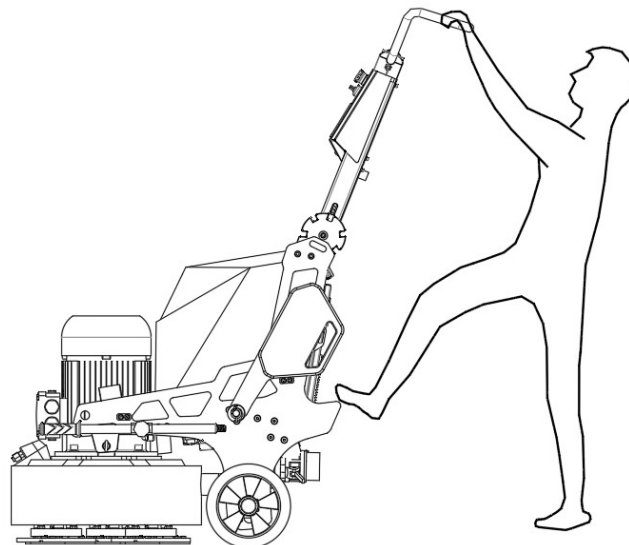
### 4.2.2 Transporting machine

When transporting adjust the position of the swing bar handle to reach the below position.



### 4.2.3 Tilting machine backwards.

Adjust the position of the weights to the up position, and adjust the handle and swing bar to the tilting position of the machine. Hold the handle tightly with both hands and pull the machine down / backwards with force.



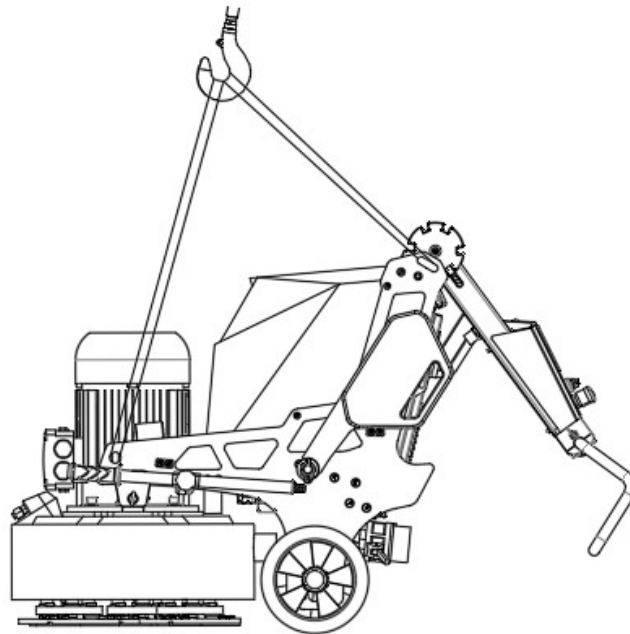
To put the machine back down on to the ground hold the handles tightly with both hands, balance the machine and slowly lower to avoid damage to grinding head assemblies. The company does not assume any responsibility for machine losses and personal injuries caused by improper operation.



After lowering ensure machine is stable to ensure your own personal safety.

#### 4.2.4 Lifting Machine

When lifting the machine, fasten the lifting belt to the two lifting ears on the frame next to the motor and the two lifting ears on the frame near the swing bar to lift the machine. (Note: Two straps / chains that can withstand 500 kg are required to lift the machine)



Notice:

1. When lifting the machine, there is a possibility of personal injury or damage to the machine or surrounding objects. Determine the danger zone and then check to ensure that no one is in the danger zone during lifting.
2. Check whether the strap / chain is fixed firmly to the lifting eye.
3. The two straps / chains need to be connected diagonally to the lifting ports.

#### 4.2.5 Notes



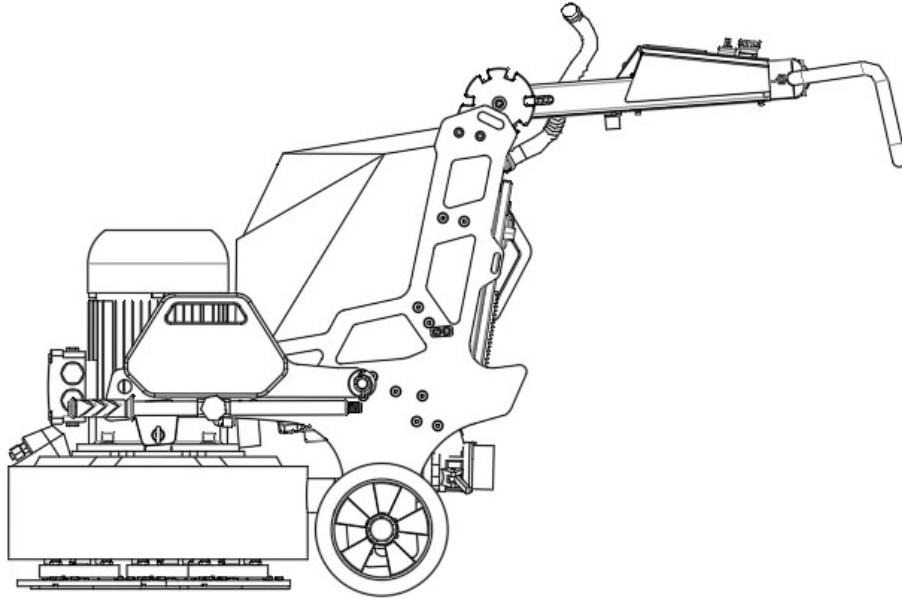
Please be sure to read the following content carefully to avoid unnecessary injury.

1. If the surface is uneven the grinder may overturn, causing machine damage and personal injury – avoid grinding uneven surfaces.
2. When adjusting the handle position, be sure to check whether the handle adjustment pin has been located before operating the machine.
3. After adjusting the position of the Swing bar, you need to check whether the Swing bar has been located before operating the machine.
4. When the grinder handle is adjusted to the position for transportation or packaging, there is a risk of hand injury – take care.
5. When lifting or lowering the machine, you must pay special attention to your own safety to avoid injury or damage to the machine.

## 4.3 Starting and stopping the grinder

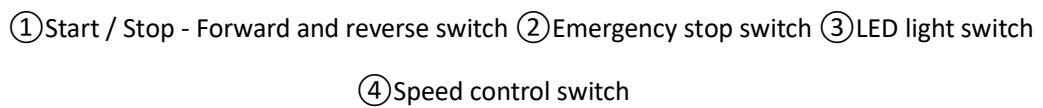
### 4.3.1 Start the grinder

(1) First adjust the Swing bar, handle, and weights to the corresponding working position (as shown in the figure below after adjustment).

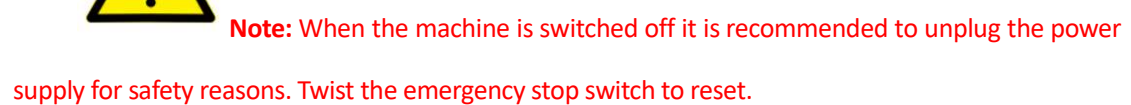
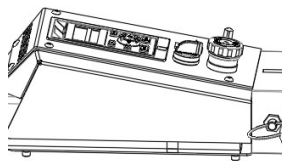


(2) Plug in the power cord (before doing this, make sure the emergency stop is pressed and all switches have been reset); if dry grinding, connect vacuum. For wet grinding, fill the water tank with water.

1. Check the forward and reverse switch to ensure that the switch is in the middle position.
2. Make sure the emergency stop button is pressed.
3. Connect to power supply.
4. Check whether the red power light indicator light on the panel is on.

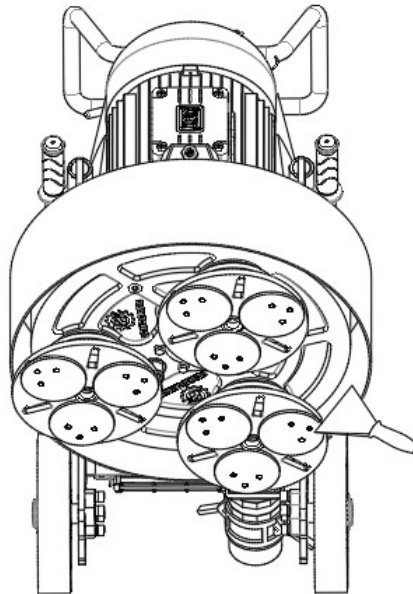
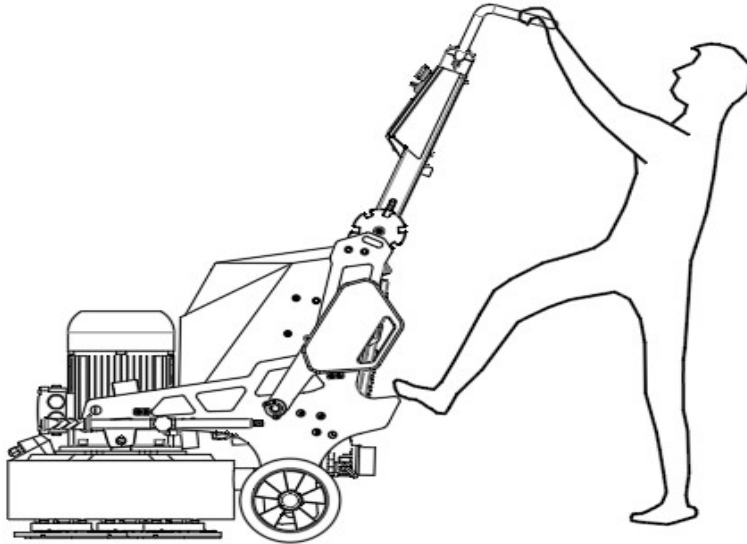


Stop the grinder: Turn the Start / Stop switch of the grinder to the middle position, press the emergency stop button, disconnect the incoming power, and unplug.



#### 4.4 Replace grinding tools

When replacing the tools, adjust the machine to the tilting position - tilt the machine and carefully lay backwards. After laying the machine flat ensure machine is stable. Use a flat screwdriver or a small hammer to remove tool holders / tools.



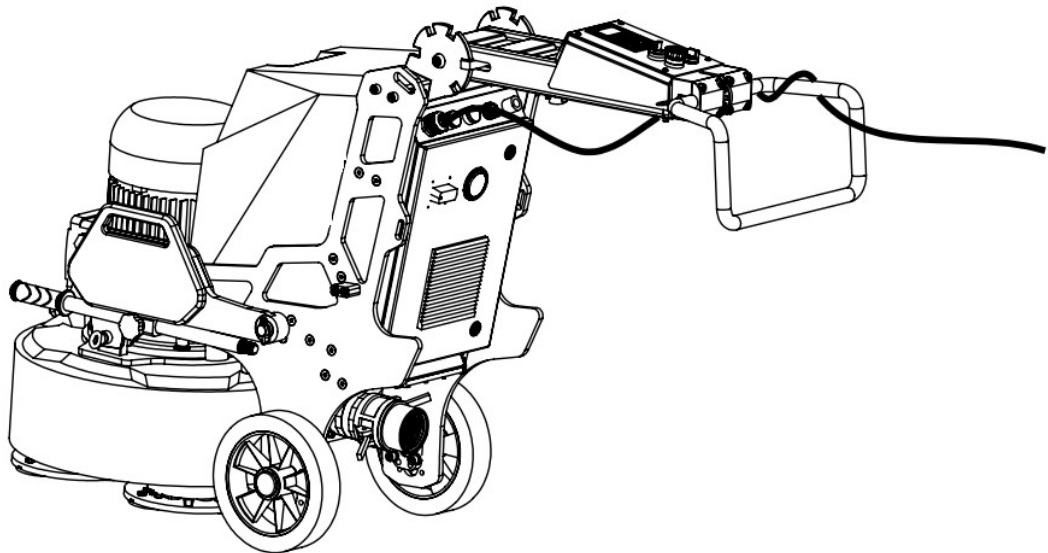
1. Make sure the machine does not tilt forwards whilst changing the tools;
2. When run for a period of time, the tools, grinding disc and gear box will generate high temperature. Take care when changing the tools.

3. Make sure the power is unplugged and the emergency stop button is pressed before replacing the grinding disc.

## 4.5 How to position power cable

When the machine is working power cable position is particularly important, this can improve your work efficiency and safety. The suggested operation methods are as follows:

1. Plug in the external power supply;
2. Pass the power cord through the Swing bar handle;
3. Wrap the power cord around one side of the handle at least twice;
4. Pull the power cord slightly to ensure that there is enough friction to firmly fix the power cord on the handle.





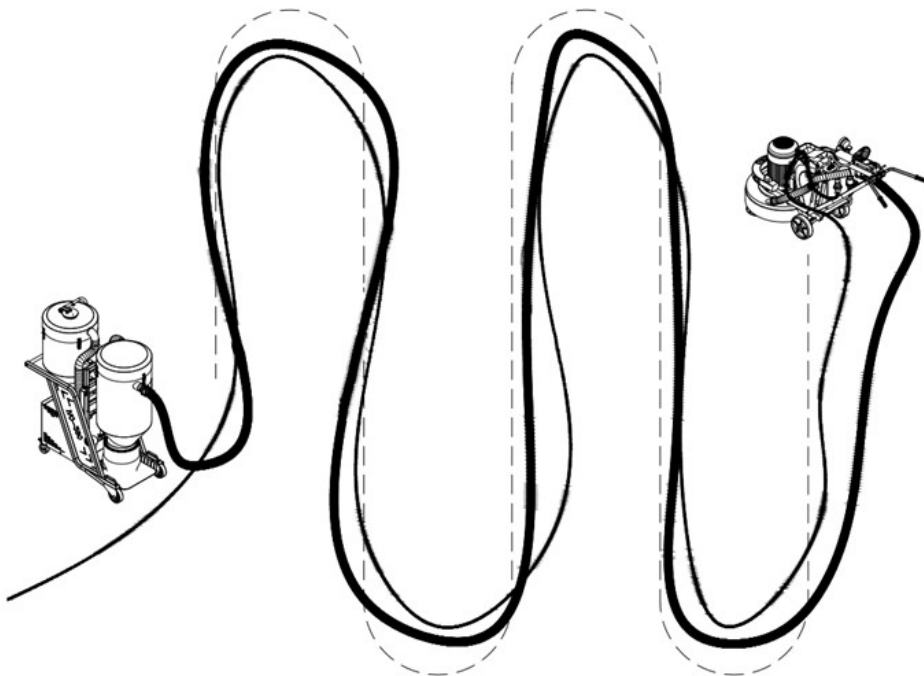


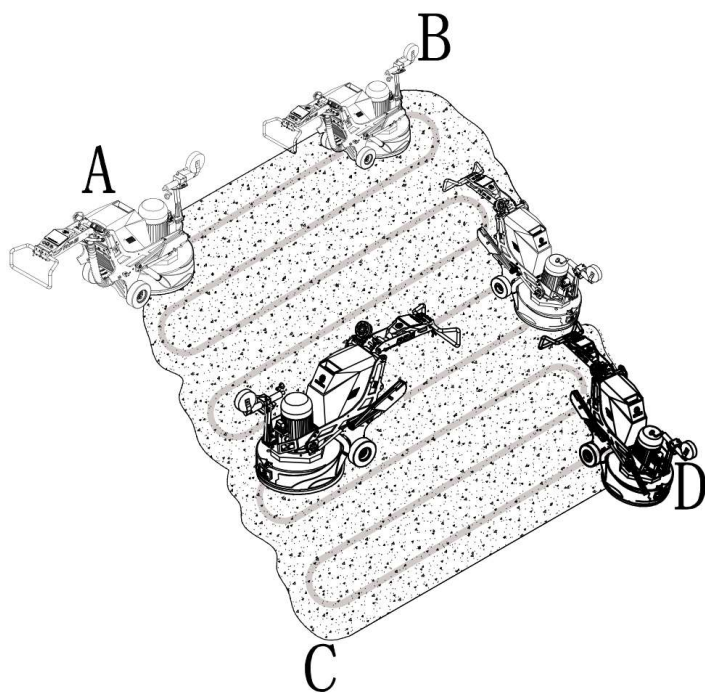
**Note:**

1. Ensure the power plug and socket are firmly connected;
2. Before connecting to the power, make sure the emergency stop button has been pressed and other switches have been reset;
3. Please use the power cord according to the minimum specifications.
4. Please use the correct power supply.

## 4.6 Optimal grinding route

When grinding the floor, you should grind it in the shape of an 8 to ensure an uniform finish. When grinding the floor in the shape of an 8, the grinding direction of the grinder should be working away from the power cable , so as to further avoid the cable interfering with the operation of the grinder.





Note: The machine model in the above picture is only for reference of grinding route and method.

#### 4.7 Precautions



Please be sure to read the following content carefully, otherwise it may cause unnecessary harm.

1. During the grinding process, you must pay attention to the working conditions reflected by the working indicator light on the electronic control.
2. During the grinding process, be sure to pay attention to nearby obstacles to avoid machine damage and personal injury.
3. Before grinding, check the safety of the working area.

## 5. Equipment maintenance

### 5.1 Overview

We recommend that you inspect your grinder regularly to extend its life.

**Notice:**

During maintenance and repair, the grinder must be disconnected from the power supply.

Use protective equipment such as safety boots, protective gloves, protective mask, etc.

### 5.2 Daily inspection

#### 5.2.1 Check machine switches

**Connect to the power supply and test the emergency stop, machine start, speed regulation and other functions of the control panel**

**Notice:**

For safety reasons, it is strongly recommended that you remember to press the emergency stop switch when stopping the machine and that all switches are reset.

#### 5.2.2 Checking the grinding disc cover

When there is a lot of dust the dust suction hose on the grinding disc cover of the grinder may become clogged with dust. Use a torch to illuminate the dust suction hose to see if there is any dust blocking it. Clean if necessary.

#### 5.2.3 Check the grinding head

When grinding for a long time or there is a lot of grinding dust, the cardan assembly of the grinding heads may become clogged with dust. Clean as required. Ensure tool plates are clear of dust when fitting tools.

#### 5.2.4 Note



Remember to use protective equipment when performing maintenance inspections, such as protective gloves, protective mask, boots, etc.

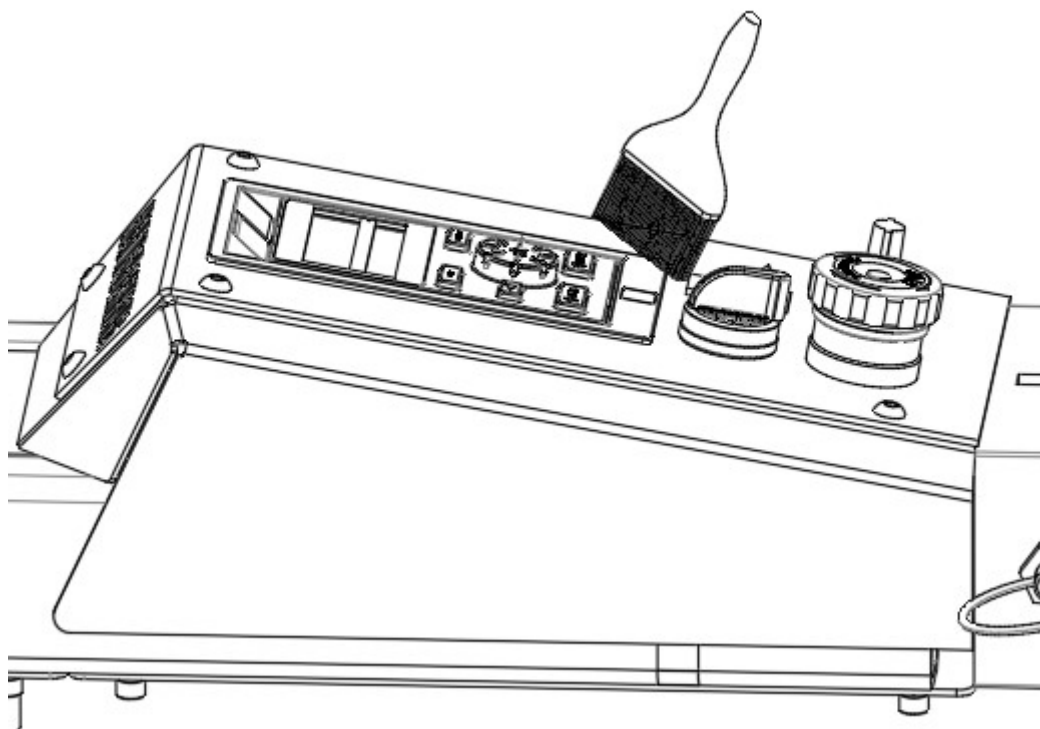
Inspection and maintenance can only be carried out after pressing the emergency stop button and unplugging the power supply.

When you tilt the machine, remember to check whether the machine is stabler before inspecting the grinding heads / tooling.

### 5.3 Cleaning

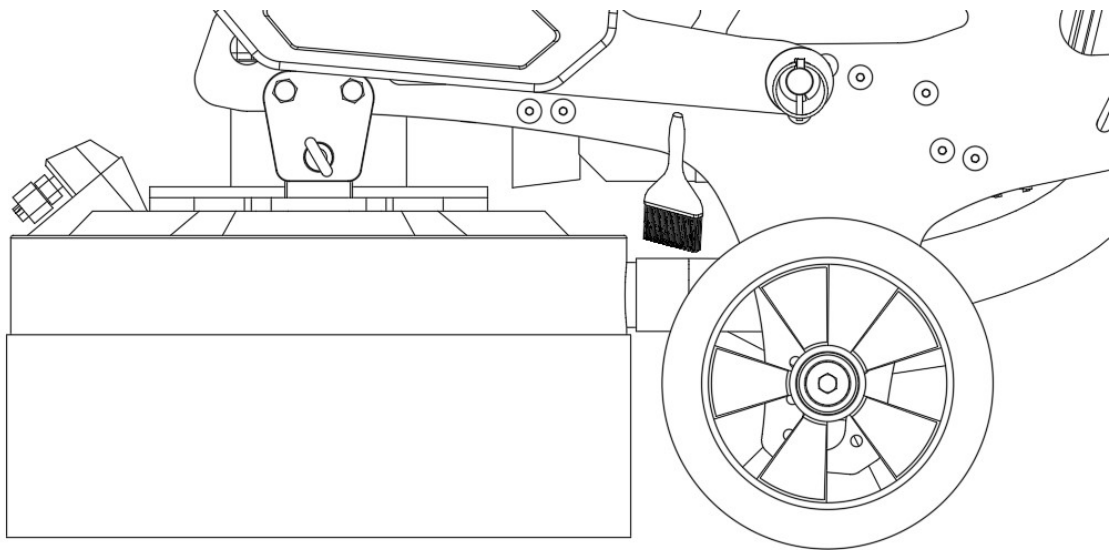
#### 5.3.1 Cleaning of switches

After long periods of use dust will inevitably get into the switches. Therefore, after each operation of the grinder, you should check whether the switch part is blocked by dust, which may cause the switches to malfunction.



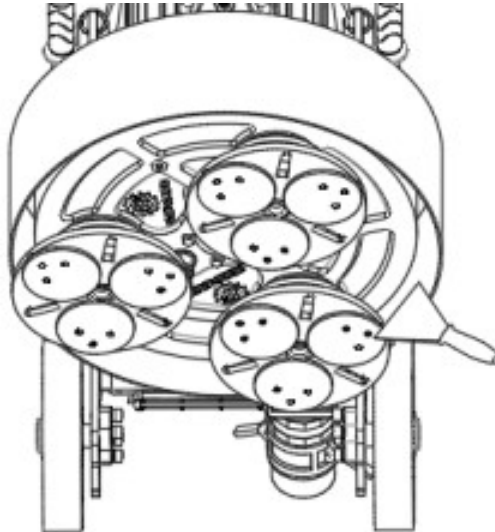
### 5.3.2 Cleaning the grinding disc cover

Remove the vacuum cleaner hose interface, illuminate the vacuum cleaner hose opening with a torch, and use a brush to clean the dust at the vacuum cleaner hose opening to prevent it from clogging the vacuum cleaner hose opening and affecting the vacuuming efficiency.



### 5.3.3 Cleaning the grinding disc conversion block

Lift the equipment, use a screwdriver / hammer to remove the tool holders / tools and remove dust. Ensure tools plates are clear of dust when fitting tool holders / tools , if not holders / tools maybe lost during the grinding process causing damage to the equipment and a threat to personal safety.



#### 5.3.4 Note



1. Always unplug from power supply before cleaning, maintenance or assembly.
2. Be sure to clean the machine after work each day. Do not use a high-pressure cleaner to clean the machine directly.

#### 5.3.5 Overload protection

The frequency converter of this equipment is equipped with overload protection. When the equipment is overloaded, the display screen on the control panel will show that the equipment is overloaded. At this time, it is necessary to cut off the power, reduce the load, let the machine stop working for approx. 10 minutes (depending on the heat of the motor), and then re start the machine.

#### 5.3.6 Repair

Any repairs that may be required must be performed by Service Center trained service personnel and using original parts and accessories. If your machine requires repair, please contact your retailer.

## 6. Common problems and solutions

This chapter describes some possible faults and how to deal with them. If they cannot be solved or an error occurs, please contact your nearest retailer.

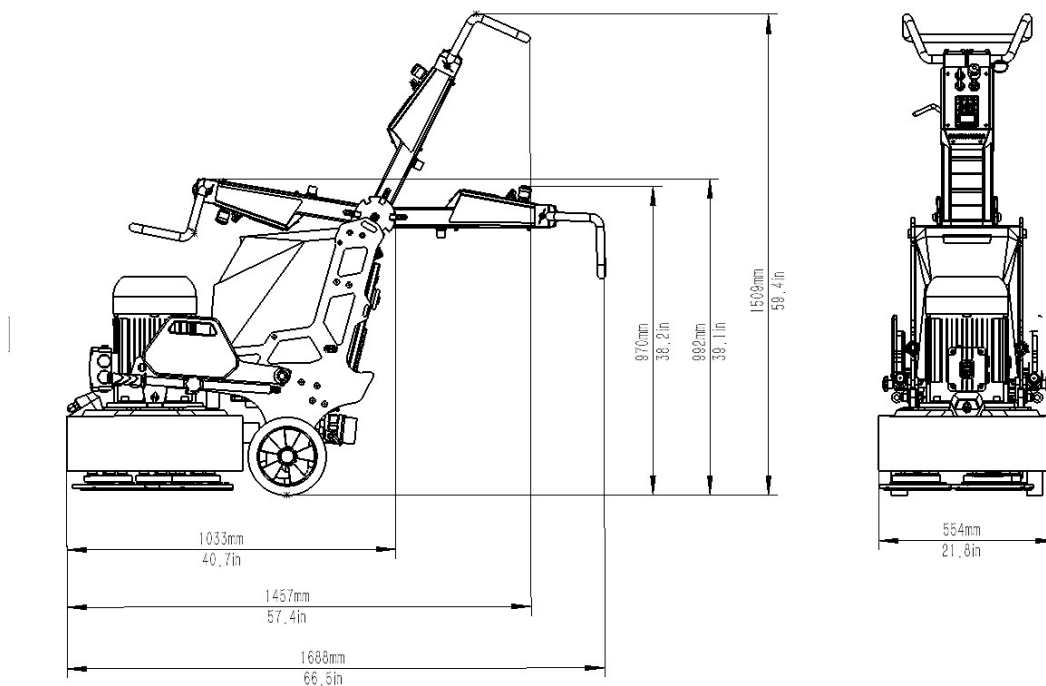
Problem	Possible causes	Solution
The machine does not start	The emergency stop switch is pressed	Reset the emergency stop switch
	overload	Reduce the load and try to start again.
	The power supply and power cable are damaged	Contact an Electrician
	There is a problem with the motor start switch	Replace the start switch
The machine stops after starting	Overload	Reduce the load and try to start again.
The machine is difficult to control or the motor consumes a lot of current	Too few diamonds under the machine or wrong type of tool applied	Use the recommended abrasive specifications and quantities
Machine jump	The abrasive may not be installed correctly or at different heights	abrasives with the same height
	Is the chassis flat?	Adjust the chassis

## 7. Technical Data

	HTG-550PLUS
Motor power	5.5KW / 7.5HP
Rated voltage	3P380V
Rated current	10.3A
Input Hertz	50HZ/60HZ
Frequency Converter	7.5KW/10HP
Grinding width	550mm/21.7in

Grinding disc size	$\Phi 230mm/\Phi 9.1in$
Grinding speed	450–1680r/min
Grinding pressure (weights forward)	168.5 KG
Grinding pressure (with weights lifted )	146.5 KG
Dimensions (working position) Length F × Width L × Height A	1688×554×970mm/66.5×21.8×38.2in
Size (Warping position) Length E × Width L × Height C	1457×554×1509mm/57.4×21.8×59.4in
Packing size: length D × width L × height A	1033×554×992mm/40.7×21.8×39.1in
Longest F × Widest L × Highest C	1688×554×1509mm/66.5×21.8×59.4in
Machine weight	280KG
Power cable	3*4+1*2.5 mm <sup>2</sup>
Storage temperature	– 20 ~ +60° C / – 4 ~ +140° F
Operating temperature	– 10 ~ +40° C / + 14 ~ +104° F
humidity	Below 95% (no condensation)





The table and pictures above show the technical data and dimensions of the grinder.

## 8. Warranty

### Warranty Policy

HTG is not responsible for equipment damage caused by transportation, unpacking, or improper use. Local dealers may have specific warranty terms. Please contact the local dealer for specific terms.