

# ***SMART CUT 1805***

## **PRECISION CUTTING SAW**

### **OPERATING MANUAL**

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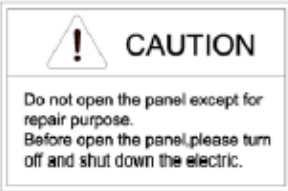

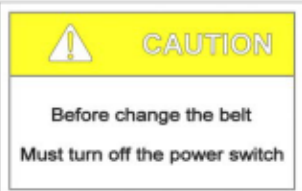

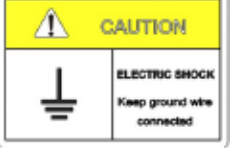
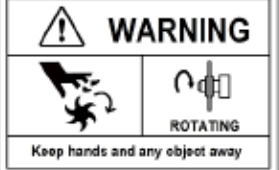
## A. Safety Instruction

### 1-1 Safety Regulation

The safety signs described below are affixed to the press brake in appropriate locations to indicate operations to be carried out or to direct attention to hazards or unsafe practices. Ensure that safety signs are kept clean and legible at all times. Immediately replace any missing, damaged or illegible signs.

Read the instruction manual carefully before starting work of any kind on the machine. Before attempting to service or maintain the machine in any way, stop the machine, disconnect power sources and consult the instruction manual.

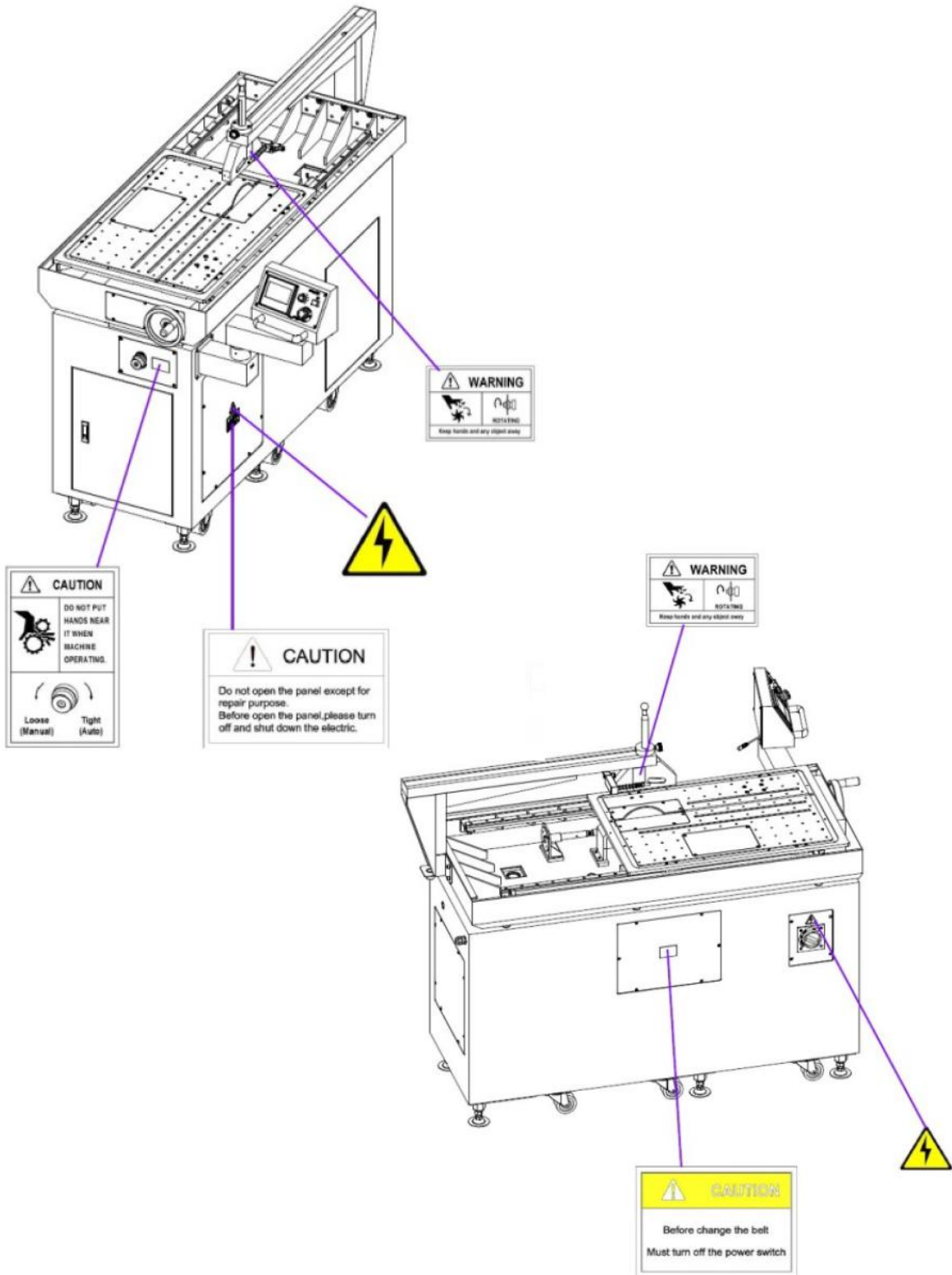
### 1-2 Safety Signs

CAUTION	CAUTION	CAUTION
		
CAUTION	CAUTION	WARNING
		

### 1-3 Temporary Storage

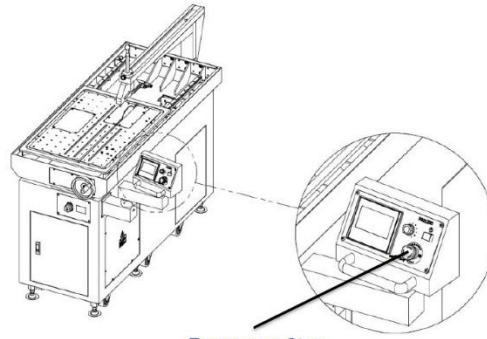
If the machine is not installed and used immediately upon delivery, it should be stored in a dry place that is adequately protected against atmospheric condition. We recommend that the machine is kept in its original packaging cases and protective package until the time of installation. The reason is to retain integrity of hygienic standard of the machine.

## 1-4 Location of Safety Signs



### 1-5 Emergency Stop & Safety Device

When starting machine remember to release Emergency stop first. During operation, if any malfunction occurs, press Emergency stop to stop all the motion.



Emergency Stop

### 1-6 Name Plate

<p style="text-align: right;">CE</p> <p>EQUIPMENT ITEM <input type="text"/></p> <p>MODEL <input type="text"/> SER.NO. <input type="text"/></p> <p>MFG DATE <input type="text"/> WEIGHT <input type="text"/></p> <p>ELECTRIC <input type="text"/></p>	<p>EQUIPMENT ITEM <input type="text"/></p> <p>MODEL <input type="text"/> SER.NO. <input type="text"/></p> <p>MFG DATE <input type="text"/> WEIGHT <input type="text"/></p> <p>ELECTRIC <input type="text"/></p>
(CE)	(NO CE)

## B. Specifications

### 2-1 Specifications

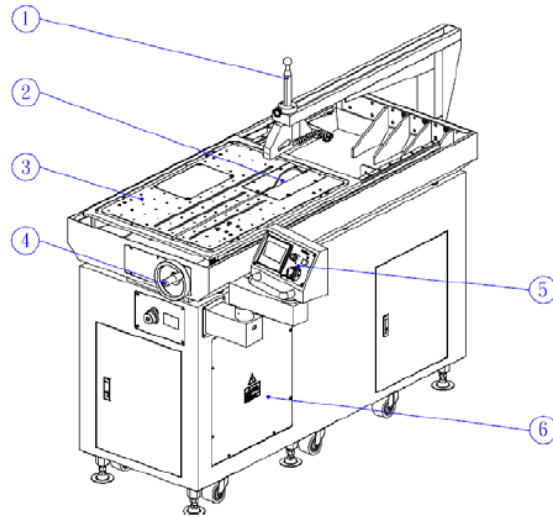
Motor	370W	
Table size (mm)	600x500	
Cut-off wheel (mm)	Max.φ200(8")	
Feeding rate (mm/min)	0~150(Min:25)	
Feeding way	Automatic	Button control, home point return after cutting.
	Manual	Button control
Spindle speed (rpm)	0 ~ 2000	
Cutting distance (mm)	550	
Vise	Quick vise	
Recirculation coolant motor	1/4HP	
Recirculation coolant capacity (L)	17	
Dimension WxDxH (mm)	1150 x 1800 x 1350	
Weight (Kg)	315Kg	
Power supply	1φAC220V	
Vise (option)	Special vise can be customized	

※We reserve the right of changing design without notice.

## 2-2 Machine Functions and Features

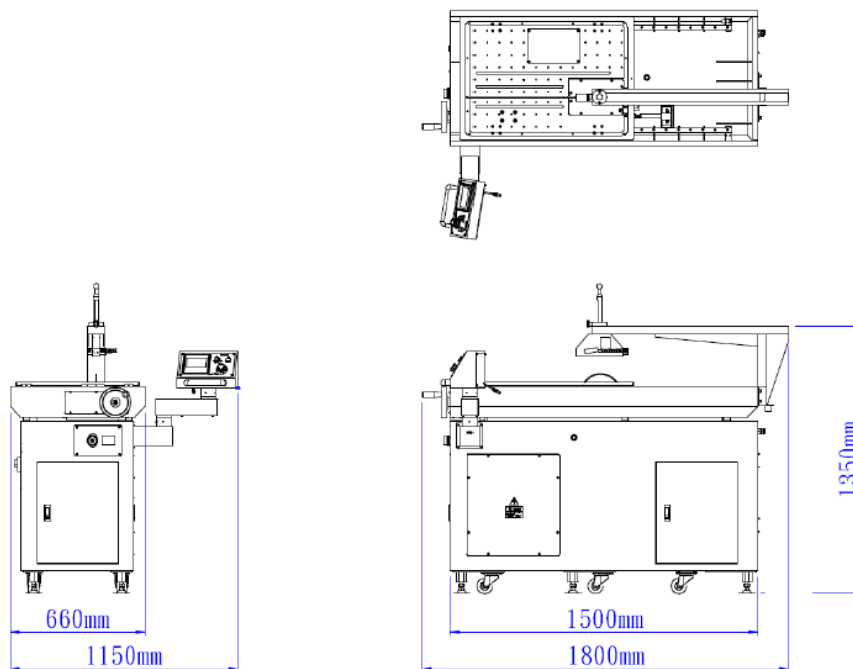
1. Easy operation
2. Wide cutting table is suitable for different kinds of vise

## 2-3 Legend of the Machine



1. Cover adjustment lever
2. Cut-off wheel
3. Cutting table
4. Hand wheel
5. Control panel
6. Distribution box

## 2-4 Machine Dimension





## C. Installation and Haulage

### 3-1 Safety Rules for Machine Lifting

1. Confirm all parts are completed placed on the platform.
2. Have another person help guide the way when lifting the machine.

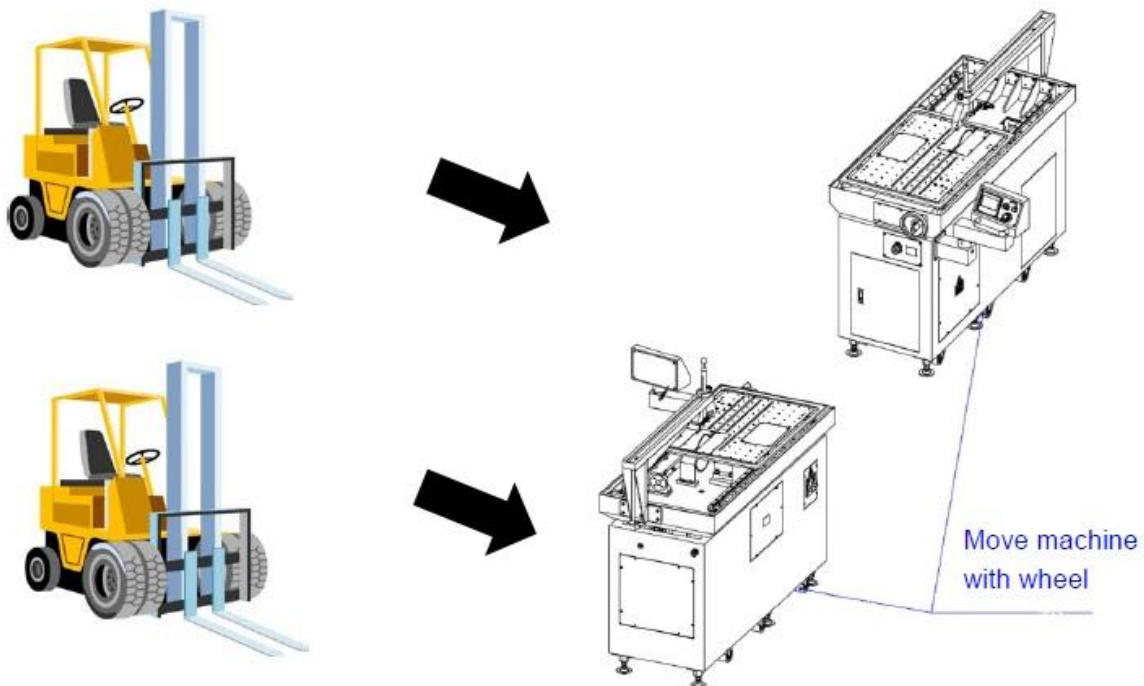
### 3-2 Methods for Machine Lifting

1. The machine can be lifted by a forklift, as below drawing.
2. The forks should insert through the central of machine bottom.
3. Pay attention to the balance of machine while lifting.
4. Actual weight refers to real machine.
5. The number of tons of forklifts refer to below table

Weight( Kgs )	Forklifts capacity (tons)
315kgs	Machine weight + 1 tons

※ Attention should be paid to the forklift inserts location

Remark: Following picture for reference only

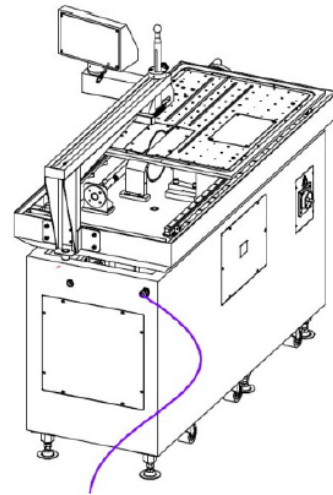
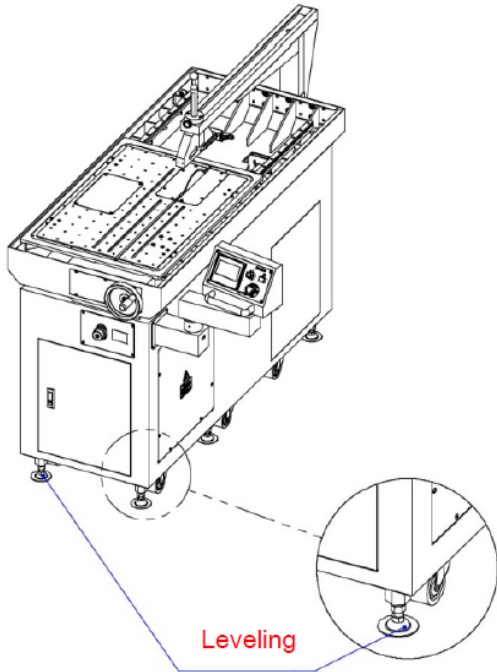


### 3-3 Specifications Table about Haulage/Section of Location

Leave proper space around the machine for handling the materials to be machined.  
After locating the machine at a proper work site, proper leveling needs to be made.

The following steps should be taken:

1. Screw the rubber pad under the machine
2. Adjust the leveling screws until proper leveling is obtained
3. Fix the leveling nuts



**Connect the plug which corresponds to local specification**

Temperature requirement for machine operation (°C)	+5°C ~ +40°C
Humidity requirement for machine operation (%)	85%

### 3-4 Power Supply Requirements

Insufficient voltage from factory power source may affect the power output of the motor and the function of the controller. It is important to connect this machine to the correct voltage in the factory power source. Use only an independent power source.

Voltage	Power	Current	Breaker capacity	Wires
220V	370W	3 A	10A	ø2.0mm <sup>2</sup> (above) -3wires

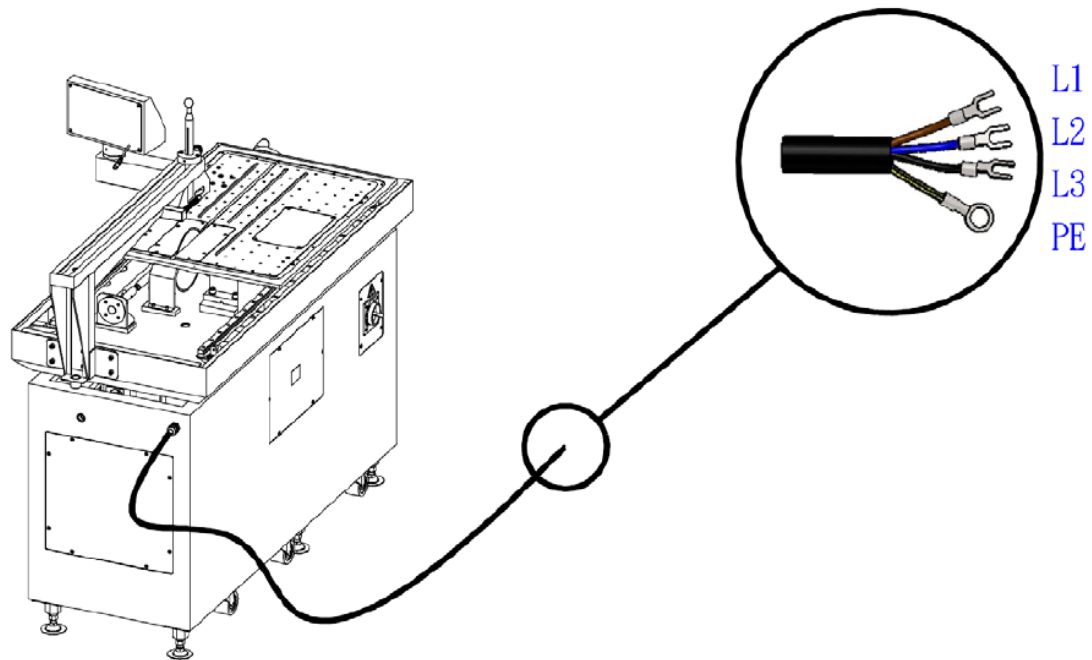
### 3-5 Power Supply Wiring Guidelines

1. Before connecting the power wires, make sure the voltage between the machine and your factory power source is the same.
2. Qualified electrical personnel should perform all electrical connections.



## WARNING

1. Machine is not allowed to use under no earth ground.
2. Any question, Contact to manufactory, do not connect electronic.

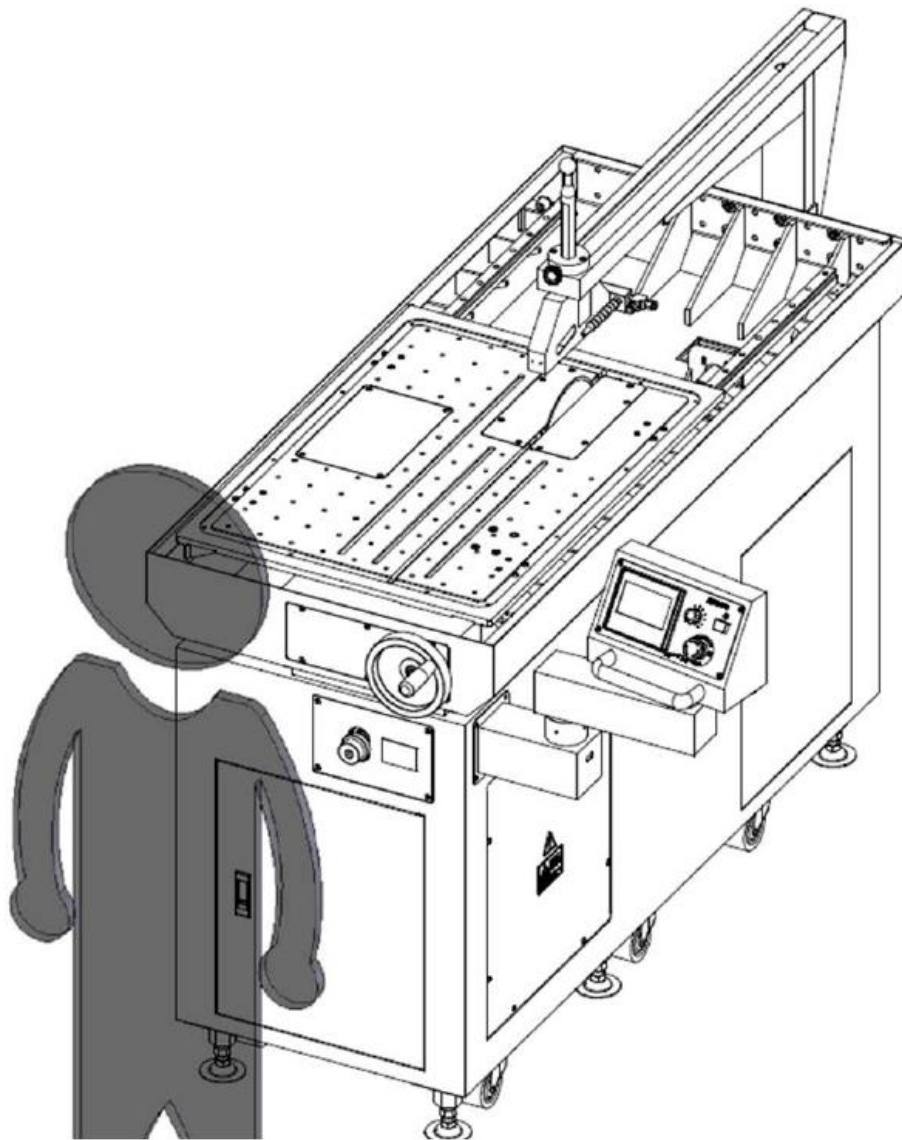


## CAUTION

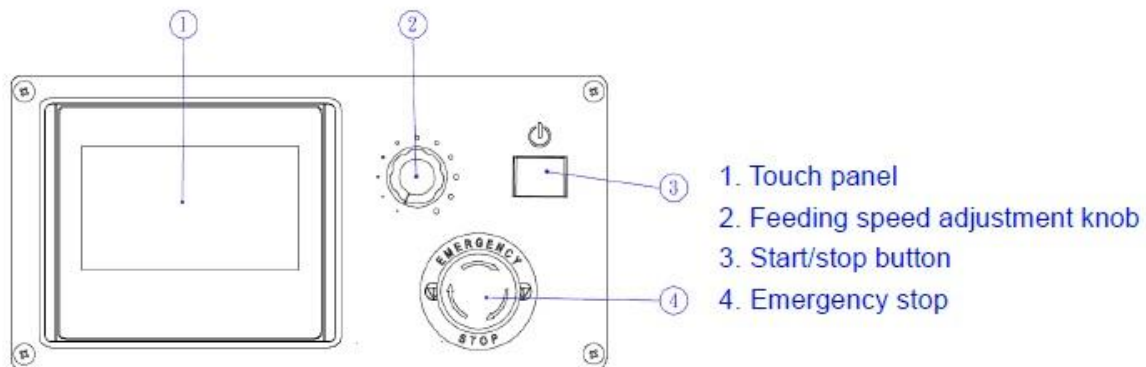
1. Actual voltage in according to label on the machine.
2. If you find voltage between the machine and your factory power source is different. Do not connect the power, avoid damaged.

## D. Operation

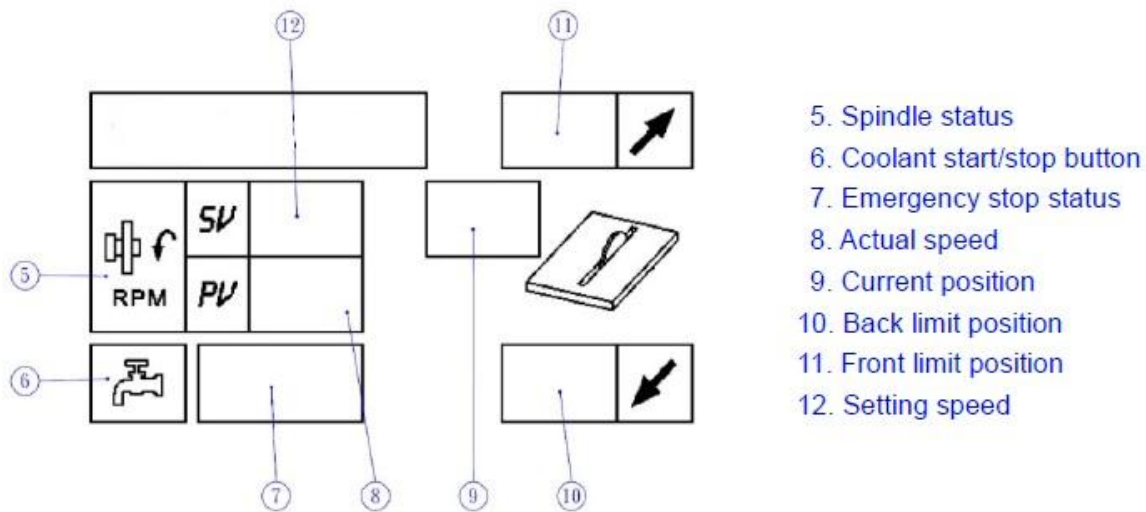
### 4-1 Operator Position



## 4-2 Panel Diagram

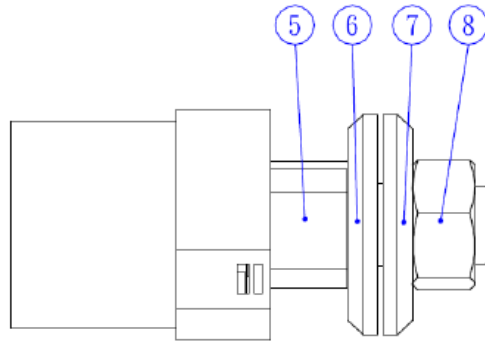


### 4-2-1 Touch Panel



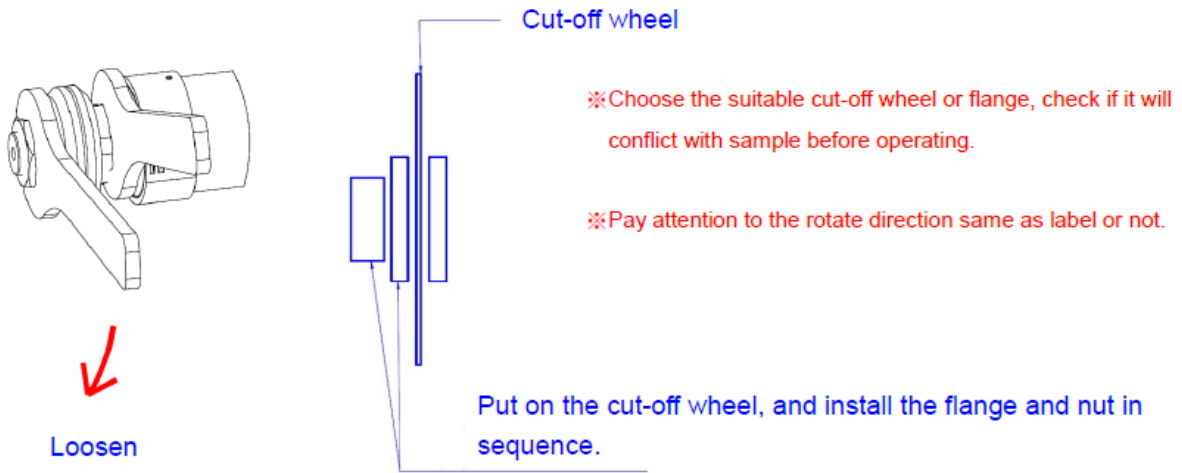
※ When machine is malfunction, touch screen and it will display the error status.  
(Please refer to trouble shooting in P.17)

### 4-3 Spindle Diagram



- 5. Mill-flat position
- 6. Left flange
- 7. Right flange
- 8. Nut

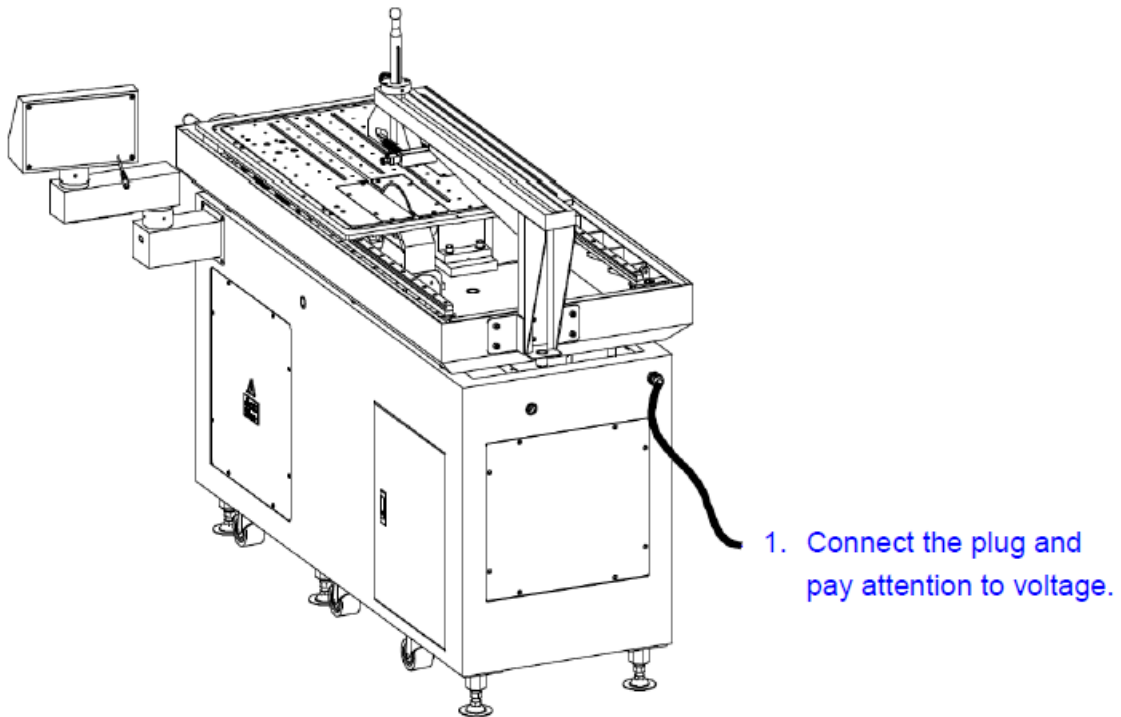
### 4-4 Spindle Disassemble Diagram



Use one spanner to fix on the mill-flat position,  
use another spanner to screw the nut and flange  
out in the clockwise direction.

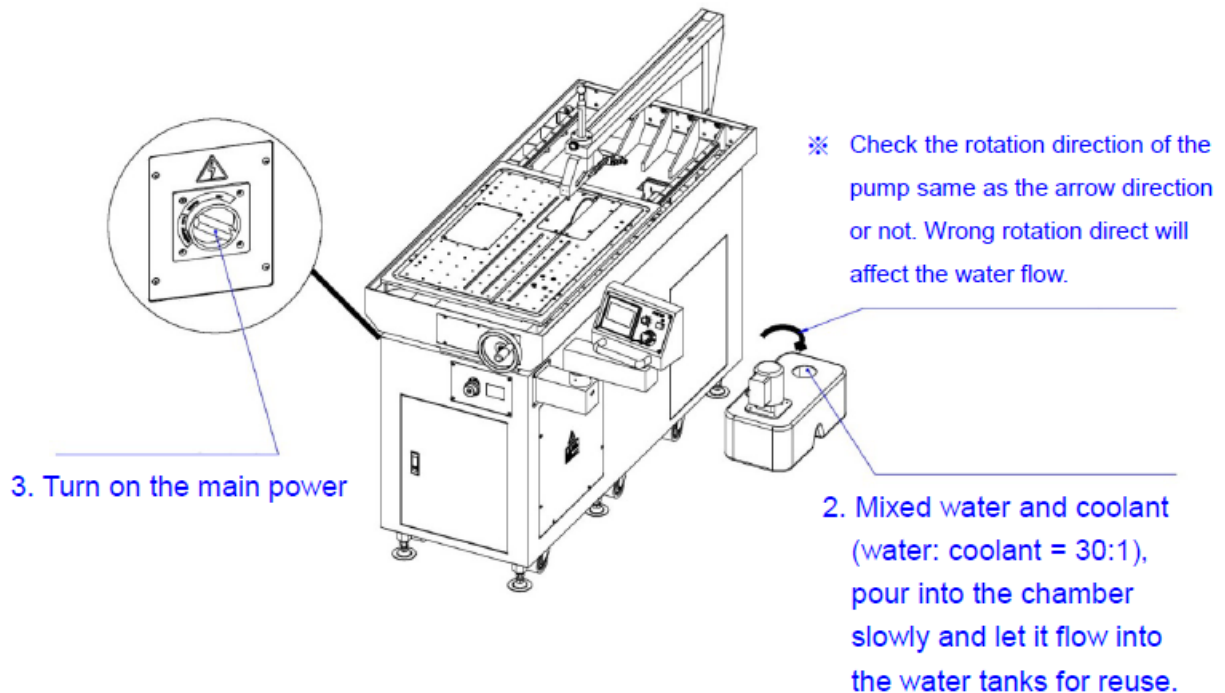


## 4-5 Installation Steps



### CAUTION:

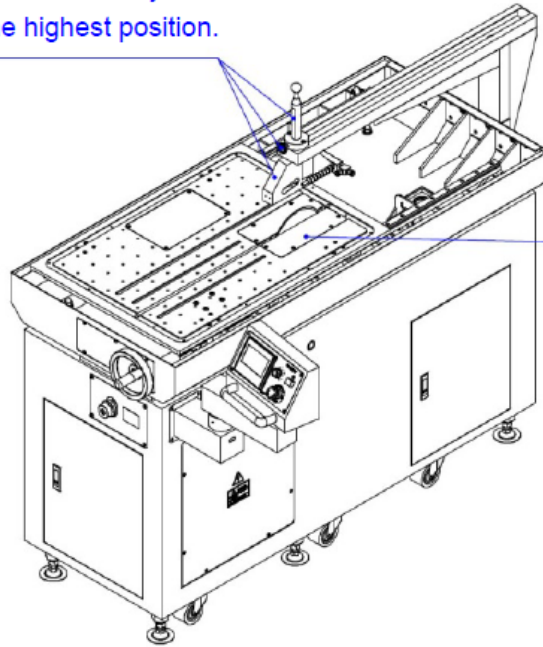
For areas of unstable voltage, install a power stabilizer to avoid the damage on circuit system inside the machine. Any damage on circuit system by unstable voltage is not warranted.



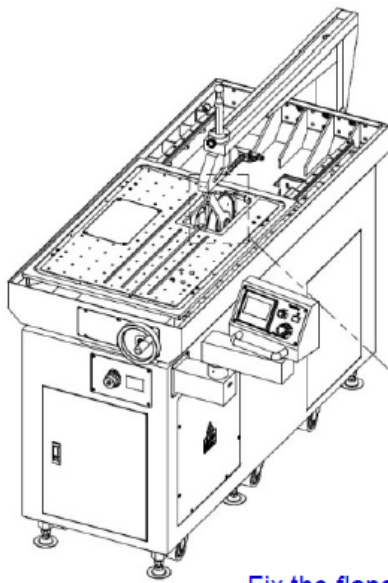


## 4-5-1 Cut-off Wheel Replace Instruction

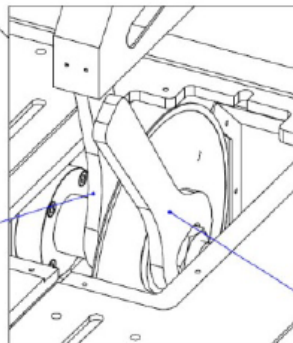
1. Loosen the nut, and adjust the cover to the highest position.



2. Remove the plate



Fix the flange



3. Use the spanners to dismantle nut and install cut-off wheel.

**Clockwise: Lock**  
**Anticlockwise: Release**

## 4-6 Operation Steps

### 4-6-1 Touch Panel Setting Steps

1. Set the front limit position  
※Move the table to home point, and input the current position to the front limit position.

Cutting home point: push the sliding rail to the specified position.

2. Set the back limit position  
※Move the table to final point, and input the current position to the back limit position.

2. Set the speed.  
(150~2000rpm)

Cutting final point: push the sliding rail to the specified position.

## 4-6-2 Operation Steps

2. Put on the sample, and fix it on the platform.

1. Install the cut-off wheel.

3. Set the parameter.

5. Press the start button to cut the sample.

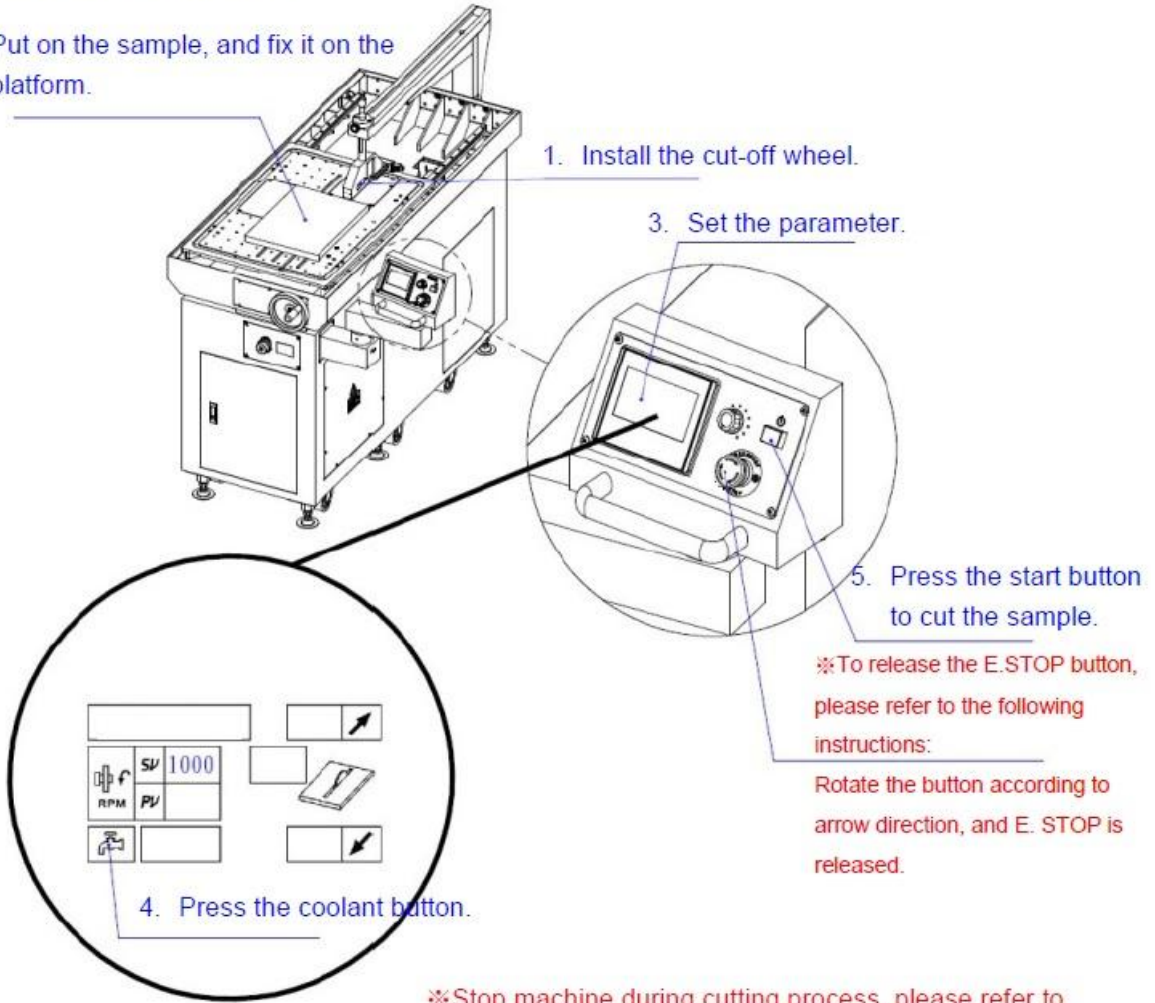
※To release the E.STOP button, please refer to the following instructions:

Rotate the button according to arrow direction, and E. STOP is released.

4. Press the coolant button.

※Stop machine during cutting process, please refer to following ways:

1. Press start/stop button, machine stops cutting
2. Press E.STOP button, machine stops working



## E. Maintenance

### 5-1 Daily Maintenance Routine

1. Turn off the machine during maintenance.
2. Machine should be cleaned and maintained regularly.
3. The coolant only has short-term antirust function. If machine not be used more than 5 days, should apply maintenance oil, otherwise; it will reduce the anti-rust, become rusty.
4. The ratio of coolant and water: First time → 1 : 20 , Resupply → 1 : 30
5. Coolant should be replaced regularly about 3 to 6 months, depend on the usage situation, and take out the iron filings tray to clean the residue.
6. The ratio of coolant should be normal standard. If consistency is too high, that will corrode the machine.

6-1 Strong acid or strong alkali coolant is prohibited, or the machine and window would be corroded.

6-2 Pour the water into the tank first, then pour the coolant gradually (according to the ratio) and stir at the same time. The coolant would become emulsion.

7. If there is any foreign body inside the water spray gun, must clean the water spray gun by water or air, and then draw out the water tray to clean.
8. Recirculation coolant tank should be clean regularly according to the usage. (Advise to clean it 1~3 days).

### 5-2 Troubleshooting

1. Make sure the turn off the machine power during troubleshooting.
2. Check the circuits are connected correctly, if machine doesn't work after pressing the start button.
3. If the button on the panel doesn't work, please check E.STOP is released or not. If E.STOP is released, please check the fuse is broken and replace a new one.

## F. Safety Rules

### 6-1 Machine Notification

1. Please read the operation manual carefully before operating the machine.
2. Machine must earth ground.
3. Before starting, read and observe all warning labels.
4. Keep at least one operator to take care of the equipment while machine is running.
5. Installation and maintenance personnel should have sufficient knowledge of electrician and mechanism.
6. Once installation completely, no warranty if dismantle machine parts without notice.
7. Actual voltage of the machine should according to label voltage on the machine.
8. If you find voltage between the machine and your factory power source is different. Do not connect the power, avoid damaged.
9. Take damp proof precautions in damp areas to prevent from accident.

### 6-2 Maintenance Notification

1. Keep machine always clean, prevent rust on machine.
2. Pay attention if there have oil or water leakage.
3. The speed of cutting depends on the hardness of the sample and the material of the cut-off wheel, to avoid cutting in the event of vibration.
4. Chosen the cut-off wheel or flange which would not interfere with machine or samples.

G · Electrical Schematic

