

TableCUT-200 Automatic Precision Cutting Machine Manual Instruction



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I. Essential information

1. Introduction

Suzhou Trojan is a professional metallographic equipment and consumables supplier and service provider. A series of metallographic cutting machines have been produced and designed.

Tablecut-200 is an automatic precision plate cutting machine, which is suitable for precision cutting of various metal materials, PCB circuit boards, semiconductors, crystals, ceramics, quartz glass and petrographic samples. The equipment is equipped with a variety of fixtures, which can cut irregular shaped workpieces. It is an ideal precision cutting equipment for enterprises and scientific research institutes.

Product features:

- Using the mainstream touch screen, automatic program control, handy, intuitive and convenient.
- The two cutting modes can be selected freely.
- Fully closed cutting, safe and reliable.
- The cutting speed is 0.05-5mm/s, and the cutting accuracy can reach 0.01mm.
- The speed of the cutting blade is adjustable from 500 to 3000 rpm, with speed fast key.
- Automatic tool setting to avoid the potential risk of manual knife collision and improve cutting efficiency.
- Laser knife setting, intuitive prediction of sample cutting route and effective estimation of cutting amount.
- A variety of saw blades can be selected to adapt to the cutting of different materials
- Dry and wet cutting, optional with vacuum cleaner. Hidden cooling system, simple and beautiful.

2. Matters Needing Attention

Please read this manual carefully before operating the equipment. And strictly follow this manual to operate. The equipment damage caused by not following the instructions is not covered by the company's warranty regulations. This manual is only for users who own this machine.

3. Restrictions On Use

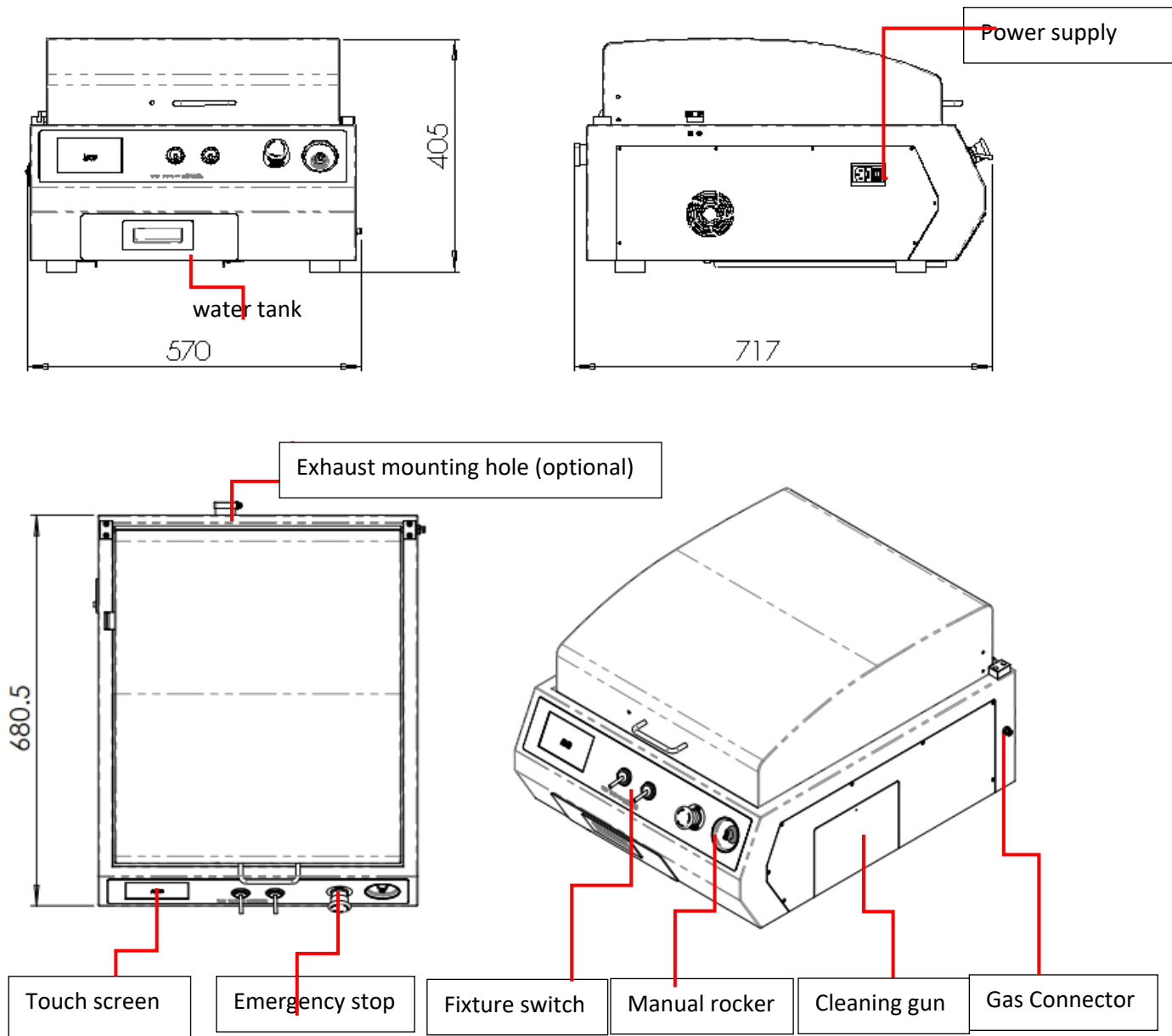
Tablecut-200 is used for cutting equipment of metallographic specimen, which provides a variety of user-defined operations. It is forbidden to operate the equipment without training or other personnel in metallographic industry.

4. Technical Parameter

Model		TableCUT 200
Cutting Wheels	Speed	500-5000rpm
	Diameter	180~200mm
	Arbor	12.7mm/22mm/32mm
Electrical	Voltage / frequency	110V/60Hz, 或 220V/50Hz
	Rated power	1.5KW
	Touch screen	5inch
	Y-axis feed	Rocker manual control or automatic feed
	X-axis feed	Selection of X-direction feeding fixture
Cutting capacity	Maximum diameter	Ø50mm(Ø200mm cutting machine)
	Maximum square section	50x130
Workbench	Size	465x270mm (WxD)
	Trip	Adjustable maximum 260mm
Water tank	Capacity	4.5L

5. Equipment Installation and Composition

For the installation of tablecut-200, an area of 720 mm x 570 mm and a space of 1000 mm in height shall be reserved.



Installation and requirements:

1. Power socket: 220 V, power: 1.5 kW, good grounding.

2. Compressed air, pressure less than 0.6MPa. The outer diameter of the trachea is 6 mm.
Compressed gas must be dried before it can be connected to the equipment.

II. Equipment Operation

After the installation of the equipment, the precautions before cutting are as follows:

1. Install coolant:

- a. Pull out the drawer water tank (as shown above).
- b. Pull out the quick plug connector of the water inlet pipe at the rear of the water tank
- c. Inject 4.5-5 litres of coolant, plug in the quick connector, and push the water tank in place.
- d. Regularly check whether the water inlet silicone hose is intact and unobstructed.
- e. In view of the fact that silicone tube is easy to wear and tear parts, and is related to the working temperature and working environment, the silicone tube causes the cooling is abnormal. It is recommended to replace it every 3 months.

2. Before cutting for the first time, click the cooling button (as shown in the figure below) to discharge the air in the water inlet pipe

3. Do not pull out the water tank when cutting

4. After replacing the cutting wheel, click the pin shaft to unlock again. If the action fails, please turn the cutting wheels back and forth manually, and prompt that it can be used only if it is normal!

1. Main Interface

The main functions of the interface are described as follows:



The above figure shows the power on the interface. Click to enter the main interface below

The detailed screenshot shows the control interface with the following elements and callouts:

- Spindle speed:** A callout box points to the 'rpm' icon and the '1000 rpm' display. Below the display are buttons for '1000', '2000', and '3000'.
- Platform feed rate:** A callout box points to the 'V' icon and the '0.1 mm/s' display. Below the display are buttons for '0.5', '1.0', and '2.0'.
- Feed distance:** A callout box points to the 'mm' icon and the '50 mm' display. Below the display are buttons for '50', '100', and 'End' with an upward arrow.
- Running Status (运行状态):** A blue header box containing:
 - M:** Cutting mode
 - Y:** Current position of platform
 - A:** Real time spindle current
 - T:** Running time
- Control Buttons:** A row of six green buttons: '冷却' (Cooling), '激光' (Laser), '吸尘' (Dust Suction), '回零' (Zero Return), '锁轴' (Lock Axis), and '设置' (Settings). A red '启动' (Start) button and a red '停止' (Stop) button are also present.
- Optional common values, quick settings, long press to change:** A callout box points to the '回零' (Zero Return) button.
- If the cutting spindle is locked, the cutting wheel can be replaced:** A callout box points to the '锁轴' (Lock Axis) button.

2.Setting

参数设置
返回

冷却自动开;

吸尘自动开;

空程速度: mm/S

切割结束:

回零; 回起点; 停在原位;

摇杆行程: 限制; 不限制;

自动对刀: 启用; 不启用;

切割模式:

恒速切割;

脉冲切割;

脉冲电流 A

自动调速;

减速电流 A

增速电流 A

变化幅度 %

Automatic cooling on: it is on by default. In automatic mode, one key start and one key cutting can be realized.

Automatic opening of dust collection: it can be used only with a vacuum cleaner, which can realize one key dust collection.

Idle speed: that is, the speed when the cutting platform returns after cutting, or when the rocker is manually controlled.

Return to zero: return to the factory defined initial point, that is, the cutting platform returns to the position closest to the operator and within the range of travel.

Return to the starting point: the position when starting cutting.

Automatic tool setting: the automatic tool setting point is theoretically the contact point between the cutting piece and the object to be cut. This point is defined in advance. When enabled, the cutting platform will reach point a quickly at 1 / 2 idle speed in automatic mode, and then cut slowly according to the set feed cutting speed. If the whole process is not enabled, it will work at the cutting feed speed;

Rocker stroke: after the limit, the rocker can only control the platform to run to the automatic tool setting point a, which cannot be exceeded, otherwise it can only move backward and cannot move forward.

Three automatic cutting modes

Constant speed cutting: the cutting platform moves forward according to the speed set by the interface without changing speed;

Pulse cutting: the cutting platform advances according to the speed set by the interface. If the actual current exceeds the set pulse current, it will stop moving until the current is less than the pulse current, and continue to move forward;

Automatic speed regulation: when the actual current is less than the set deceleration current, the speed will increase by 40%; similarly, if the actual current is greater than the set acceleration current, the speed will decrease by 40%.

Standard Accessories

Name	Qty	Name	Qty
Vertical fixture	2	Pneumatic fixture	2
Ring for different inner holes of cutting wheel	2	Power cord	1
Product manual	1	Product certificate	1
Product warranty card	1	Tool	1
Cutting wheel 200mmx22mmx0.8mm	10		

Optional Accessories

Name	Specifications	Name	Qty
Diamond cutting blade	180,200		
Adhesive fixture		Flat platform	
Multi purpose fixture		Angle clamp	