

**SUNPOC®**



# Metallographic Instrument Mounting Press



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## Features:

Mounting is a very important process of metallographic sample preparation, especially for some difficult holding tiny samples, irregularly shaped samples, and what needs for protecting edge or automatic grinding and polishing, mounting is an essential procedure before sample preparation. SZXQ-10 automatic metallographic sample mounting press adopts automatic mechanical pressure. The mounting process is controlled by the program, which realizes the one-key operation of heating, loading, holding, cooling and unloading process. The sample mounting is automatically completed without the need of the operator on duty. The machine adopts gear motor with stable pressure, and the water cooling system makes sample preparation fast. With stable and reliable performance, it is the ideal equipment for sample mounting.



# Product structure diagram

(SZXQ-10 Automatic Inlaying Machine)



## Technical Specification:

Model	SZXQ-10
Mould diameter	Φ25mm,φ30mm,φ40mm (choose one)
Mould hole height	89mm
Heating power	Φ25mm/φ30mm 1.2w;φ40mm 1.6kw
Pressure type	Mechanical pressure,130bar
Motor power	120w
Heating temperature	50~180℃ (default is 120℃)
Heating time	1~7min (default is 4min30s)
Hold time	30s~7min (default is 1min)
Cooling time	1~30min (default is 2min20s)
Cooling method	External water source cooling
Power supply	220v, 50hz, 10a
Dimensions	463×402×430mm
Net weight	50kg

### First. Unpacking

This machine is fixed on the bottom plate in case of the damage during the transportation. First cut off the iron belt and screw off the bottom edge screws with the cross screwdriver, pull out the case there will be the machine and the bottom plate, and then screw off the M10 bolt under the bottom plate with the spanner. Place the machine on the stable table.

### Second. Working Condition

- 1.The work table should be smooth and stable, recommended height 0.8m and should be higher than the drainage outlet.
- 2.Power supply should accord with general factory electricity use, 220V, 50Hz. The power cable is about 1 meter long.
- 3.The water supply should be clean and free of impurities, water pressure is between 0.3-0.4mPa.
- 4.Temperature 5~40℃, humidity 30%~90% noncondensing.

### Third. Installation

- 1.Connect the one end of water inlet pipe to the water supply and the other end to machine, pay attention to the filter; Connect the water outlet to the machine and the drainage, should be lower than the outlet port.
- 2.Connect to the power supply, open the water valve and switch on.

### Five. Operation Panel

#### 1.Main interface

The function of the four mechanical buttons on the panel board is same to the above four keys on the screen.

#### (1)UNLOCK

Press once, the system is valid and the button changes the color; Press again, the system is invalid. This key is to protect from touching by mistake.

#### (2)START

Under unlock state, press START key to automatically run the mounting process, divided to heating, holding and cooling.

### (3)UP

Under unlock state, press this key to raise the mould, it will automatically stop and push out the sample after reaching the top. It will stop when you press again during rising.

### (4)DOWN

Under unlock state, press this key to descend the mould, it will automatically stop after reaching the bottom. It will stop when you press again during descending.

### (5)SET

Press this key to enter the setting interface, the icon by side showing the clock means Time Mode and which showing the thermometer means the Temperature Mode.

## 2.Parameter setting interface

The bottom four keys are manual operation keys which are used for commissioning, only valid under unlock state.

Press Time Mode to enter the setting interface of relative mode:

(1)Thermoset and Termoplastic is two keys selection of mounting materials, generally the melting temperature of thermoset material (Bakelite powder) is  $120^{\circ}\text{C}$ , and the melting temperature of termoplastic material (Transparent powder) is  $150^{\circ}\text{C}$ .

(2)Press Ok key to confirm the time mode, the mounting process will run according to the time.

(3)Press the figures to turn up the keyboard, press OK to confirm the digit press ESC to return, and press Backspace to delete.

(4)Heat Time: For reference, set 5min0s for thermoset material and set 7min30s for termoplastic material.

(5)Hold Time: For reference, set 1min for thermoset material and set 11min30s for termoplastic material.

(6)Cool Time: For reference, set 2min30s.

(7)Total Time: is the sum of the heat time, hold time and cool time.

(8)Process No.: Select the process no and press Save to save the current setting inside. The default no is 1, select the relative no and press Call to select the saved setting. Maximum 10 sets.

(9)The default setting selection of the machine is Thermoset and Temperature Mode.

Press Temperature Mode to enter the setting interface of relative mode:

(1)Min.Heat Time: To ensure the mounting effect, this parameter has to be set. For reference, set 5min0s.

(2)Min.Cool Time: To ensure the mounting effect, this parameter has to be set. For reference, set 3min.

(3)Other parameters are the same setting method as above mentioned.

## Usage Instruction

1. First of all, turn on the power switch. Then do the relevant preparatory work, don't rush to start mounting. Need to check the edge of up and down mould whether there is mounting powder adhesion, clean it in time (Do not be too hard to avoid scratches).

2. Set the parameter, after setting, press the UNLOCK key to make the system under start state. The default parameter is for thermoset material.

Termoplastic material setting: heat 7min30s, hold 11min30s, cool 3min30s.

Thermoset material setting: heat 5min0s, hold 1min, cool 3min.

3. Open the up mould and press the UP key to make the lower mould rise to the top. Place on the sample, and then press the DOWN key to make the lower mould descend to the bottom. Use the measuring cup to add the mounting powder with a reasonable quantity, at least there should be 40mm distance from the top of the mould.

4. Close the mould cover and press the START key on the touch screen, it begins to start heating, holding and cooling, and it shows the time of this whole process.

5. Open the mould cover after the mounting is over, press the UP key to raise the lower mould to the top, take the sample, and the whole work is over.

6. When start the second sample, place on the sample. Repeat the above procedure.

1. Clean the residual powder on the up and down mould.
2. When install the water inlet interface, pay attention to place the water filter and clean the impurities every seven days.
3. After each use, must timely do cleaning and maintenance work. It is strictly prohibited to clean by corrosive liquid. The inner cavity of steel mould and the upper and lower mold should be coated with grease after cleaning to prevent from rust.
4. Keep the cleanness of the machine body after the work.

### Nine. Cautions

1. This machine works upon heating, so don't mount thermoplastic material continuously for a long time because of the high temperature, and there should be staff at side in case of overflow of the material.
2. The touch screen cannot be continuously pressed at the blank area, otherwise it will turn up blue screen for displaying calibration. Users can not set it and should turn off the machine and start in one minute.
3. When connect to the external water supply, we suggest the switch half open to avoid the high water pressure and water leakage.
4. The mounting quality is depended on the sample size and material or some other factors, so it should be tested to work out the most suitable setting parameters.

### Packing List:

Name	Specification	Qty
Machine Body		1 set
Water Inlet Pipe		1 pc
Water Outlet Pipe	Φ10mm	1 pc
Water Inlet Filter Screen		1 pc
Hoop		1 pc
Bakelite Powder	500g	1 bottle
Measuring Cup		1 pc
Funnel		1 pc
Usage Instruction Manual		1 copy