



MPress-1MA

Automatic Mounting Press

Instruction Manual



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One. Introduction

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. MPress-1MA 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.

Two. Technical Parameters

Model	MPress-1MA
Mould Diameter	Φ25mm,Φ30mm,Φ40mm (Choose one)
Cavity Height	115mm, effective 60mm
Heating Power	Φ25mm/Φ30mm 1.2W; Φ40mm 1.6kW
Pressure	Mechanical pressure, 130bar
Electromotor Power	120W
Heating Temperature	0~255°C
Hold Time	0~99min
Total Time	8min30s for Φ30mm
Cooling Method	External water source cooling
Power Supply	220V, 50Hz,10A
Dimensions	463×402×430mm
Net Weight	50kg

Three. Structure



Four. Unpacking and Installation

1. 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.

2. 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.

Four. Unpacking and Installation

4. Temperature 5~40°C, humidity 30%~90% noncondensing.

3. 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.

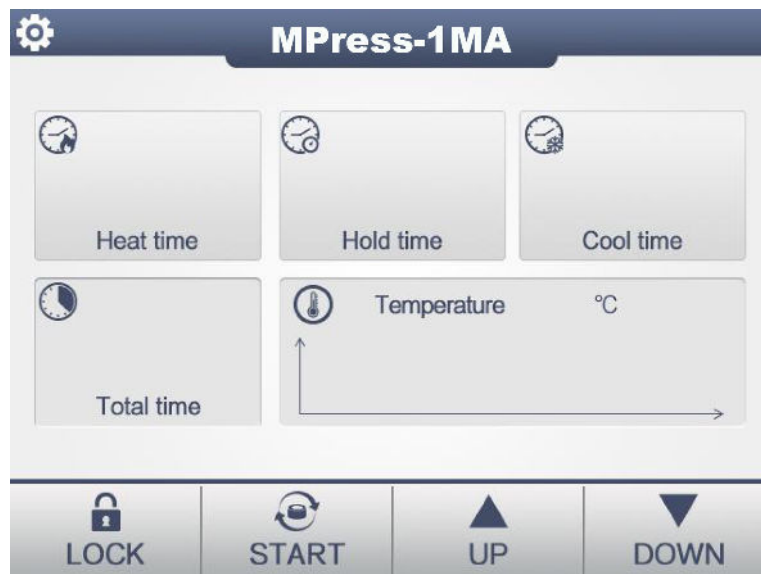
2. Connect to the power supply, open the water valve and switch on.

Five. Operation Panel



Five. Operation Panel

1.Main interface



(1)LOCK

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.

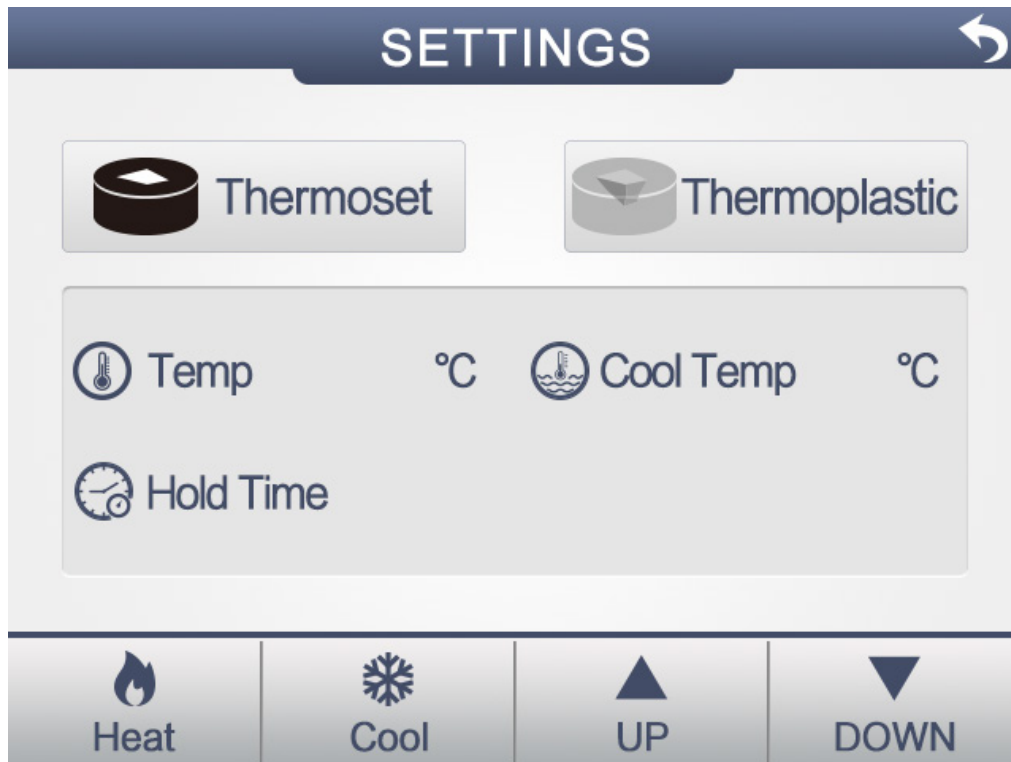
(5)SET

Press this key to enter the setting interface to set the heating and cooling temperature and the hold time.

Five. Operation Panel

2.Parameter setting interface

Press  to enter the setting interface.



This machine is suitable for thermoset materials (bakelite powder) and thermoplastic materials (transparent materials). The melting temperature of thermoset materials is generally 120 °C, and the melting temperature of thermoplastic materials is generally 150 °C.

Click the number to directly set the value of the required parameter.

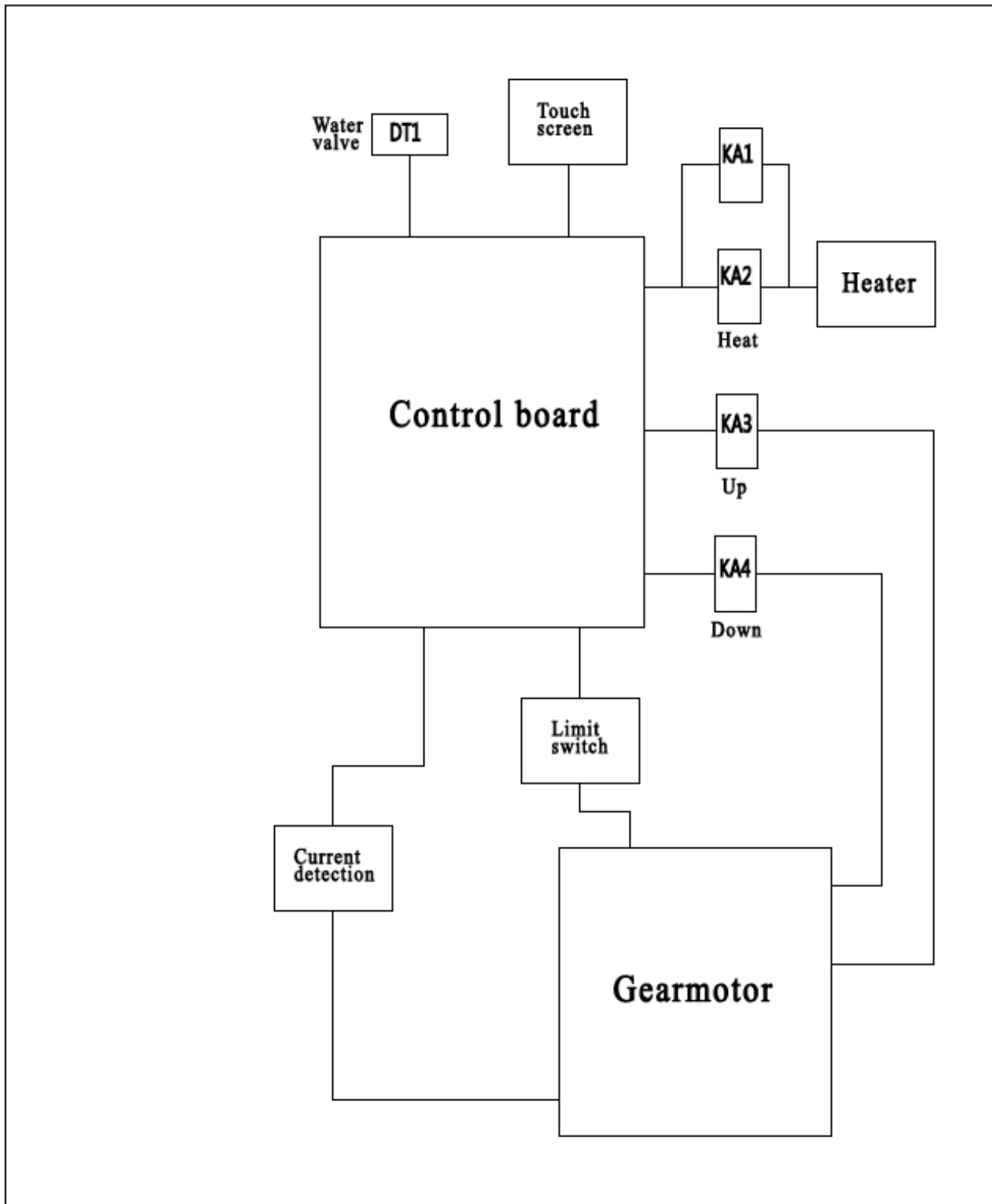
Six. Usage Instruction

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 LOCK key to make the system under start state.
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.

Seven. Maintenance

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.

Eight. Electrical Diagram



Nine. Cautions

- 1.This machine works upon heating, so don't mount termoplastic 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 sample shall not be larger than the diameter of the mould. Forcible insertion will lead to galling and damage of the mould.
- 5.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.

Ten. Troubleshooting

Failure Phenomenon	Possible Cause	Solution
Touch screen is ineffective.	The inside plug is not inserted. Circuit board is broken. Touch screen is broken.	Fasten the plug connection. Change the circuit board or touch screen.
Screen is not light.	The switch is broken. The power is broken.	Change the switch or change the power.
Temperature cannot get to what set.	The electromagnetic water valve is not closed because of the block. The heating rod is broken.	Clean the block in the valve or change the valve. Change the heating rod.
Sample has preijection, cracking or granular phenomenon.	The heat time and cool time are set too short, material is not melting.	Increase the heat time and cool time.
Up and down key action failure.	The photoelectric switch of down limit is broken. The rising current detection module is broken.	Replace the photoelectric switch. Replace the module.
Temperature is not correct.	The temperature sensor is broken.	Change the sensor.

Eleven. 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

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