



**MLP-HCM102
AUTOMATIC CUTTING MACHINE
(ADVANCED TYPE)
OPERATION MANUAL**



Safety Notice

Before you install and use this product, please read this manual carefully, and pay special attention to the contents and suggestions and observe the precautions so as to avoid damage to equipment, fire and personal injury!

◆ Check the input range of the power supply before using and check if matches to the equipment.

Check if the grounding meets the requirements.

◆ The operator must do some safety training before working and after qualified ,the operator may use this machine

◆ We determined whether the environment meet the installation requirements We operate the equipment according to the operating rules

◆ The cleaning equipment should unplug the power

◆ When trouble ,do not allow to disassemble the equipment, we should ask professional maintenance, to avoid electric shock

◆ Please keep the manual good

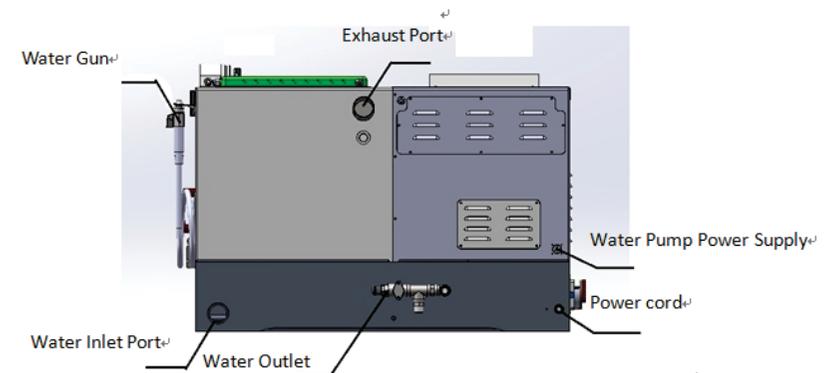
Foreword

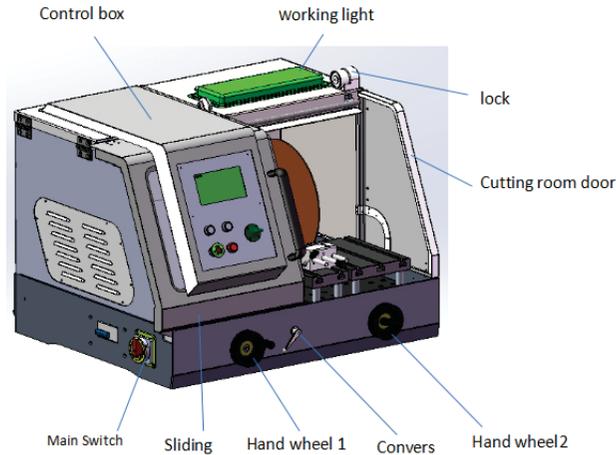
MLP-HCM102 hand-in-one cutting machine is composed of machine body, electronic control box, cutting room, motor, cooling system, cutting grinding wheel and other components. The cutting machine can not only cut round workpieces with diameter less than 100 mm, but also cut rectangular samples with height of 70 mm and width less than 100 mm. The machine cools the sample through the cooling system to prevent the sample from overheating and burning the structure during the cutting process. The machine can select three different cutting modes for cutting samples, and can set the cutting feed speed and cutting stroke, thus improving the quality of cutting samples. The machine is divided into manual cutting and automatic cutting. It also has the function of safety protection and operation prompt, which is more convenient for man-machine conversation. Large volume cutting room, more convenient for the use of cutters, is one of the necessary sampling equipment for metallographic test in colleges, factories and enterprises

Main Technical Indexes

Maximum cutting diameter	Ø100mm
Cutting blade	Ø350×2.5×Ø32mm
Rotation speed	2200r/min
Spindle travel	145mm
Table travel	300mm
Illumination	LED ceiling Light
Noise	≤85dB
Cooling tank	60L
Removable baffle	Contain
Table dimension	330×280mm
Power	3KW
Power supply	AC 380V, 50Hz
Dimension	900×860×620mm
Weight	285Kg

Machine Schematic Drawing





Please read the following terms carefully.

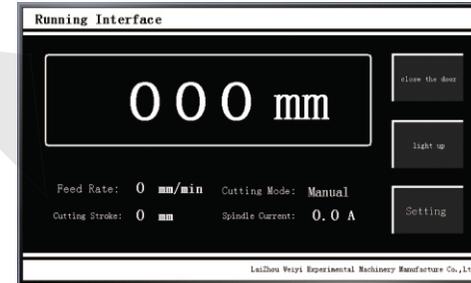
Preparation before working

- ◆ Take off the foot bolt from the equipment, this machine will be placed on a flat surface.
- ◆ The machine is equipped with a cooling water tank, opening the tank, with special cutting fluid, observe the horizontal position of the cooling liquid, water can reach the highest standard position.
- ◆ Check the power line, plug, plug in electric element is installed on the original; electricity, starting motor, steering motor and steering direction should be waterproof logo on the cover.
- ◆ The steering pump should be identified and equipment on the same direction.

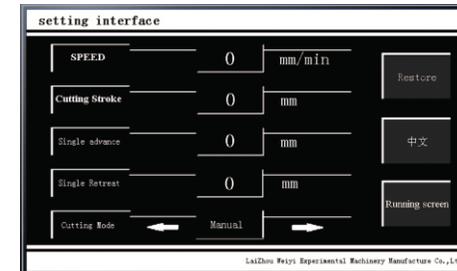
Parameter Setting & Operation Instruction

- ◆ Operation button description
 - 1) Water pump : Non self locking button, this button control water pump start/stop.
 - 2) Start : Non self locking button, to begin manual cutting or auto cutting.
 - 3) Stop : Non self locking button, press this button while cutting, the cutting wheel will back to position then stop

- 4) Rocker : By controlling the up and down direction of the rocker, the worktable can move forward and backward accordingly.
 - 5) Emergency stop : self locking button, after pressing this button, all action will be stopped right now.
- ◆ Interface Description and instruction Operating instructions
Operating instructions



- 1) Cutting room door closing (cutting room door opening) key: is to control the cutting room door switch, cutting machine is not running, you can manually control the door switch, when running, you must press the stop key, can press the cutting room door closing (cutting room door opening) key to open the door. Lighting on (lighting off) key, control the switch of LED lamp.
 - 2) Parameter setting key: enter parameter setting interface and set cutting parameters
 - 3) Feed speed: It shows the distance of the worktable per minute.: 1-10mm/min.
 - 4) Cutting mode: can be selected in parameter setting interface: manual, push, pulse three cutting modes
 - 5) Cutting stroke: maximum cutting distance of Y axis 140mm
 - 6) Spindle Current: It shows the current of the spindle motor and protects the motor from overload
- Setting Interface Instructions :

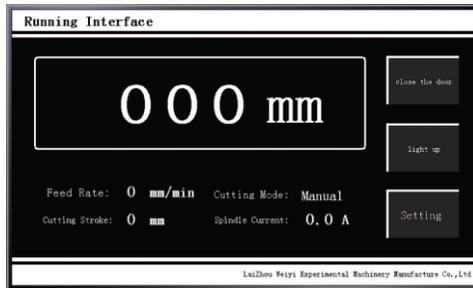


- 1) Feed speed: It is to set the required working table forward speed per minute: 1-10mm/min
- 2) Cutting stroke: It is the distance that the worktable advances according to the size of the workpiece. The maximum distance is 145mm.
- 3) Single feed of pulse cutting: the single forward distance of pulse cutting mode: 1-10mm/min
- 4) Pulse cutting single step backward: is the single step backward distance of pulse cutting mode: 1-10 mm/min
- 5) Cutting mode: manual cutting, automatic cutting and pulse cutting can be selected.
- 6) Restore default key: Restore settings to factory settings.
- 7) English button: switch between Chinese and English.
- 8) Running Interface Key: Return to Running Interface.

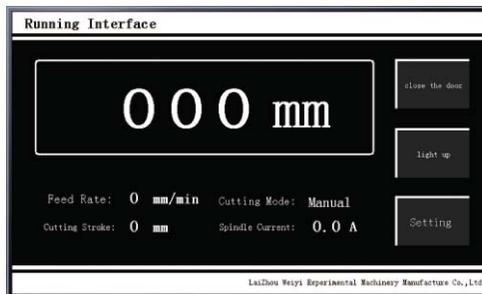
Alarm interface:

When cutting motor overload, pump motor overload, cutting clamp saw occurs, the machine stops running and shows the corresponding prompts. When this phenomenon occurs, the power should be cut off to check the cause of equipment failure.

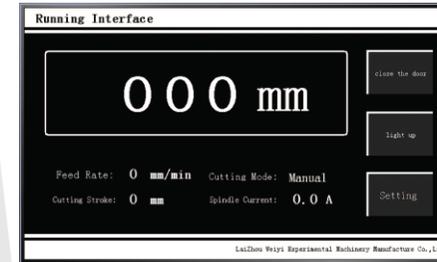
- 1) If hatch door is not closed, the cutting machine can not start and alarm prompt.



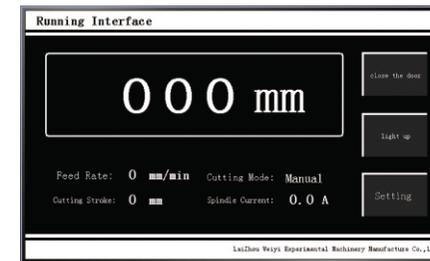
- 2) When the worktable reaches the near limit, the cutting machine can't continue to move forward. It will give an alarm and prompt



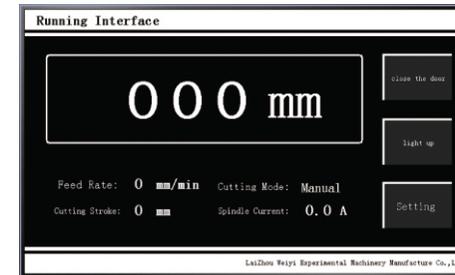
- 3) When the worktable reaches the far limit, the cutting machine can't continue to move forward and backward. It will give an alarm and prompt:



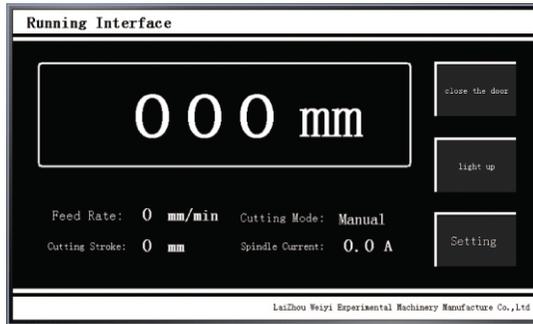
- 4) When the emergency stop is pressed, the cutter can not run and will give an alarm.:



- 5) Cutting motor overload or feed speed does not match the cutting material, cutting machine can not run, there will be prompts:



- 6) When the pump motor is overloaded, the cutting machine can't run. There will be a hint.:



Operational instructions and precautions

This machine has two cutting modes: automatic cutting and manual cutting. Next, the specific operation procedures of automatic cutting and manual cutting are introduced respectively.

- ◆ Automatic Cutting Mode:
 - 1) Fix the sample in the clamp of the cutting chamber and clamp the sample. When the diameter of the sample is too large, the fastening screw of the clamp can be loosened, the sample can be put into the clamp, the clamp can be pushed to the appropriate position by hand, the screw can be tightened, and the movable clamp handle can be pushed to clamp the sample.
 - 2) Choose the cutting mode, set the cutting speed and the cutting stroke. According to the operation interface and setting instructions of the previous section, choose the appropriate cutting mode, set the appropriate feed speed and cutting stroke
 - 3) Control the upstream and downward direction of the rocker, and close the cutting piece to the sample, but do not let the cutting piece touch the workpiece
 - 4) Press the "Start" button to start the motor and the pump motor. At this time, the sample will be cut automatically
 - 5) When the cutting sample is finished, the machine automatically withdraws the knife, and the cutting motor and the pump motor stop. It shows that the sample has been cut.
- ◆ Manual Cutting Mode
 - 1) In the parameter setting interface, manual cutting is selected as the cutting mode.
 - 2) Press the "Start" button to start the cutting machine, and the pump motor will start at the same time
 - 3) Rotate handwheel 1 or handwheel 2 and cut with a manual feed knife

- 4) After cutting, press the stop button and the machine stops cutting. Rotate the handwheel to return the cutting piece to its starting position.

Maintenance and maintenance

- ◆ After cutting, clean the cutting room in time to keep the room clean and free of impurities, so as to reduce machine failure.
- ◆ Do not use sharp devices to collide with the display screen, which will damage the display screen.
- ◆ Please do not change the electrical wiring and procedures at will, which may cause harm
- ◆ It is recommended that the clamping device be cleaned and lubricated regularly. Improve service life.
- ◆ Check the water level of cutting fluid at least once a week to maintain the appropriate water level.
- ◆ Lubrication maintenance of equipment is recommended once a week.
- ◆ Storage of resin cutting pieces: : These cutting pieces are sensitive to humid environment. Therefore, do not mix wet cutting pieces with new, dry cutting pieces. Store the cutting pieces in a dry place and place them horizontally on the supporting surface.



Be careful:

1. Please use qualified metallographic cutting slices. Users can purchase metallographic cutting slices from our company.
2. It is suggested that the special sample be used to cut the cooling lubricant, otherwise the equipment will be easily damaged.