Mikrosize®

iCut-100A
Auto Metallographic Abrasive Cutting Machine



Contact us

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Feature and Application

Product Feature

- Stainless steel housing
- Extra-large cutting chamber
- Manual/automatic dual cutting mode
- Enclosed cutting
- Automatic 3-channel cooling system to avoid damage to samples due to overheating
- Pattern programming is more suitable for batch cutting sampling
- Automatic reset function of the cutting knife after sampling
- Real-time tracking and display of the feed depth (LCD digital display)
- The feed stroke can be set arbitrarily (0-200mm)



Product Application

- Material science research and performance testing.
- This machine can be used to prepare high-quality metallographic samples, conduct various scientific research, study the microstructure and crystal structure of experimental materials, reveal the performance and mechanism of materials, and provide technical support for the development of new materials and the improvement of existing material performance.
- Industrial manufacturing and quality control.
- This machine can perform high-precision cutting and processing on various metal materials such as steel, aluminum alloy, etc., to meet the needs of industrial manufacturing with high precision requirements; it can also be used to prepare metallographic samples of various mechanical parts, helping engineers analyze the performance and reliability of parts, optimize material selection, and improve the performance and durability of parts.
- New material research and development and product failure analysis
- The metallographic cutting machine can accurately cut out the sample area containing the fracture source, providing key evidence for diagnosing the cause of the problem.





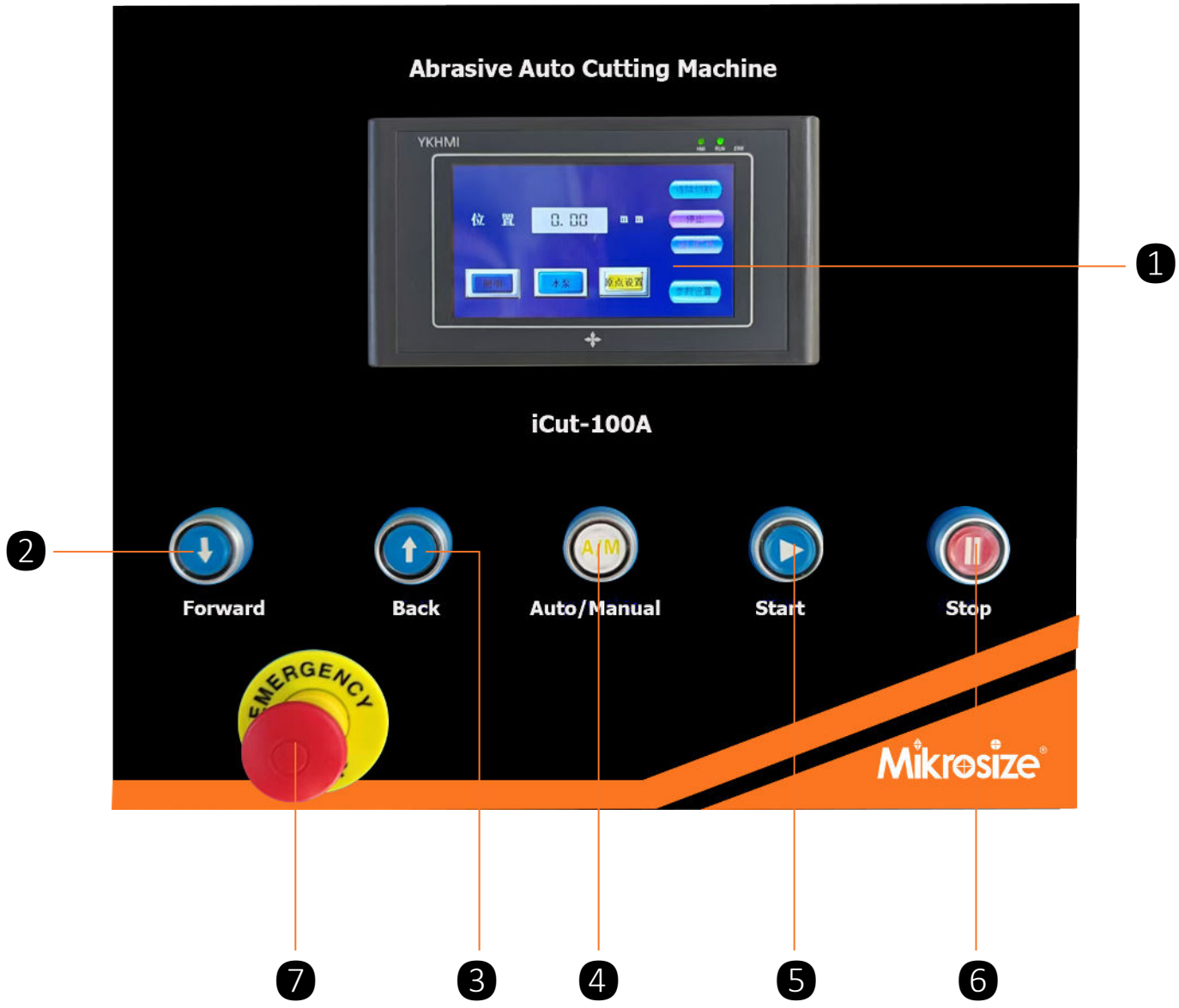
Product Details



1. Protective housing **2. Support rod** **3. Lighting** **4. Cut-off wheel**
5. Outlet pipe port **6. Clamp** **7. Handwheel** **8. Screen and buttons**
9. Coolant nozzle **10. Transparent observation window**

Product Details

Screen & Button



1. Display screen **2. Forward button: Manual mode forward button**
3. Back button: Manual mode back button
4. Automatic/manual switch button: The button has a self-locking function, "pressed" state is manual mode; "pop-up" state is automatic mode
5. Start button: Automatic mode start button
6. Stop button: Automatic mode stop button **7. Emergency stop button**

Product Details

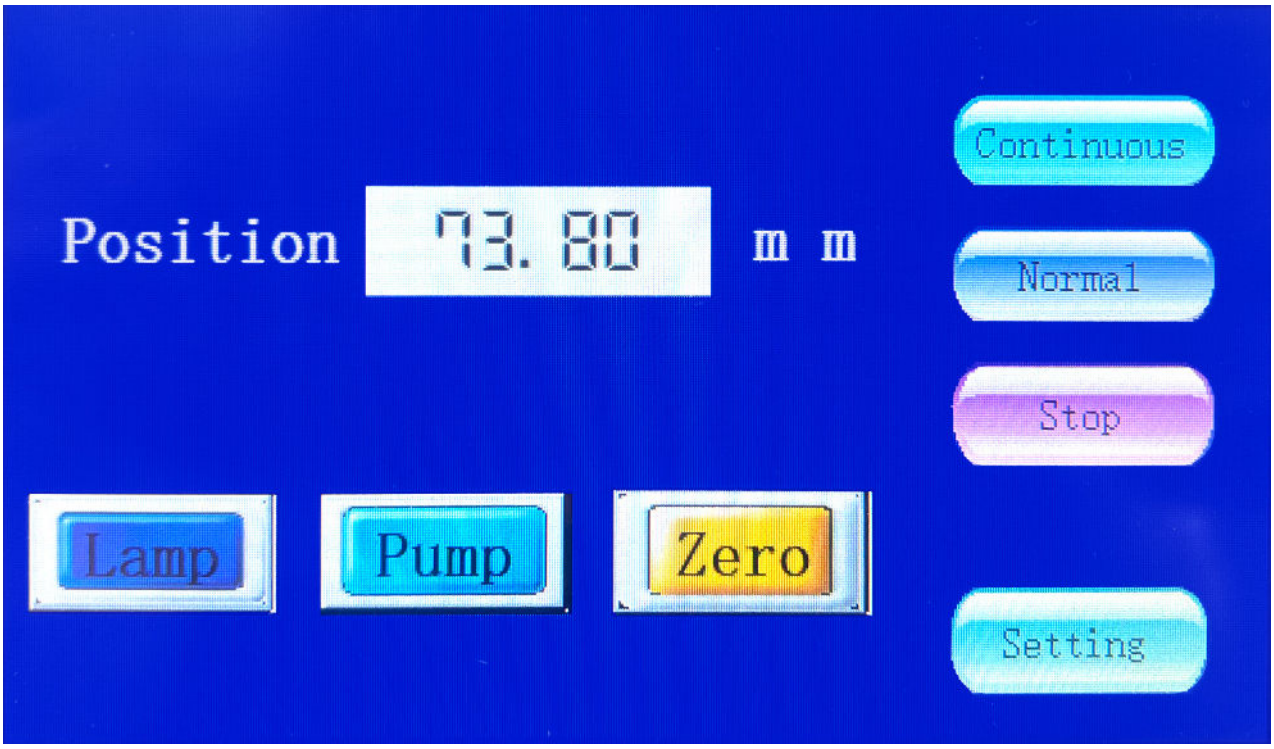
Instrument Appearance



1. Inlet pipe	2. Power cord	3. Water pump port	4. Switch

Screen Interface

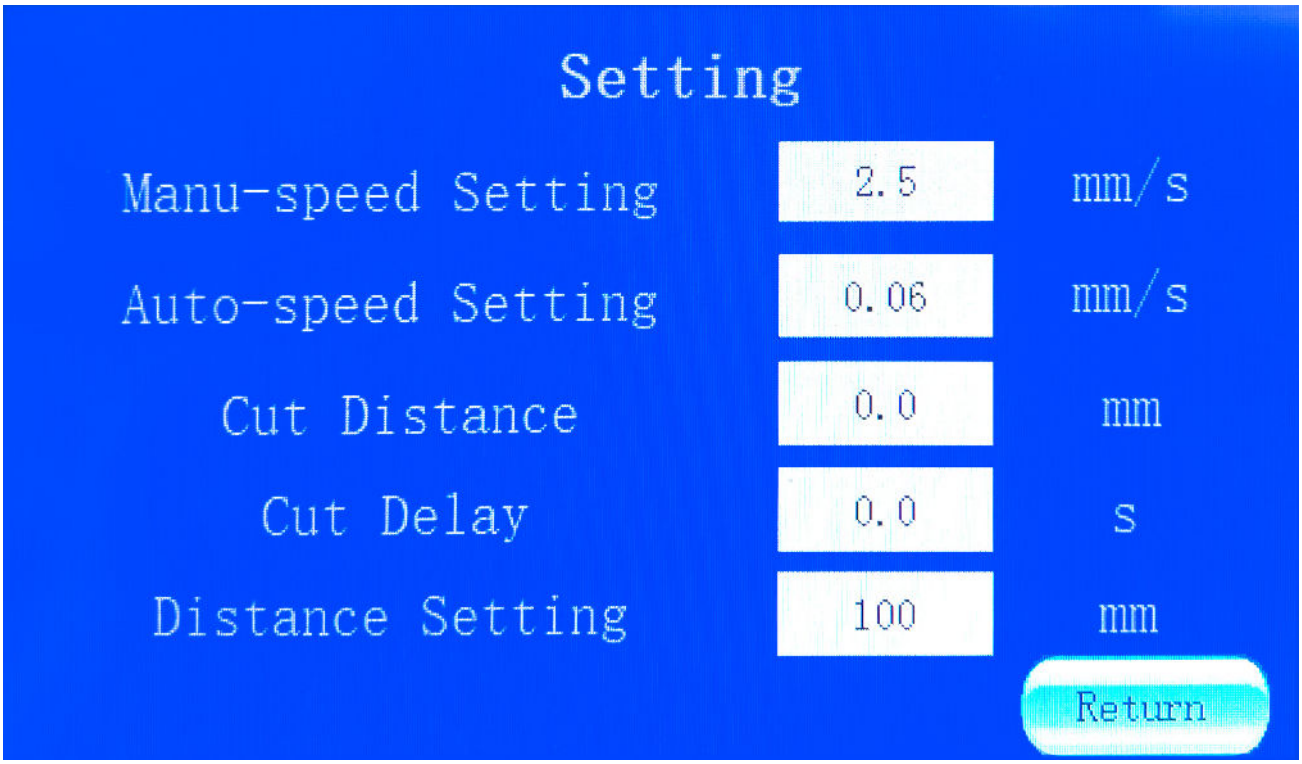
Interface



- After booting up, enter this interface, which mainly includes the following functions:
- 1. Y-axis position parameter: the relative position of the cutting table. During the automatic cutting process, the Y-axis position parameter will be displayed in real time
- 2. Lighting: the lighting switch in the cutting room, tap to turn it on or off
- 3. Water pump: cutting water pump switch, in manual mode, press the water pump switch to turn on the water pump; in automatic mode, press the start button to automatically turn on the water pump
- 4. Origin setting: tap once to clear the Y-axis position parameter
- 5. Continuous cutting: This machine has two modes: continuous cutting and intermittent cutting. For metal materials, the "intermittent cutting" mode must be used; some non-metallic materials can use the "continuous cutting" mode
- 6. Stop
- 7. Warehouse door alarm: the screen will prompt when the protective door is opened
- 8. Parameter setting

Screen Interface

Interface



- This interface is the setting screen of the main cutting parameters of the machine, including the following functions:
- 1. Manual cutting speed: the speed of manually moving the cutting spindle, the maximum value is 2 mm/S
- 2. Automatic cutting speed: set the cutting speed according to the hardness and material of the workpiece to be cut, the maximum is 0.25mm/s
- 3. Intermittent cutting distance: set the cutting distance for automatic cutting and intermittent cutting mode
- 4. Intermittent cutting time: set the pause time for automatic cutting and intermittent cutting mode
- 5. Cutting stroke: set the cutting distance for automatic cutting.
  Click the number behind to pop up the input keyboard, press the OK button to confirm

Product Details

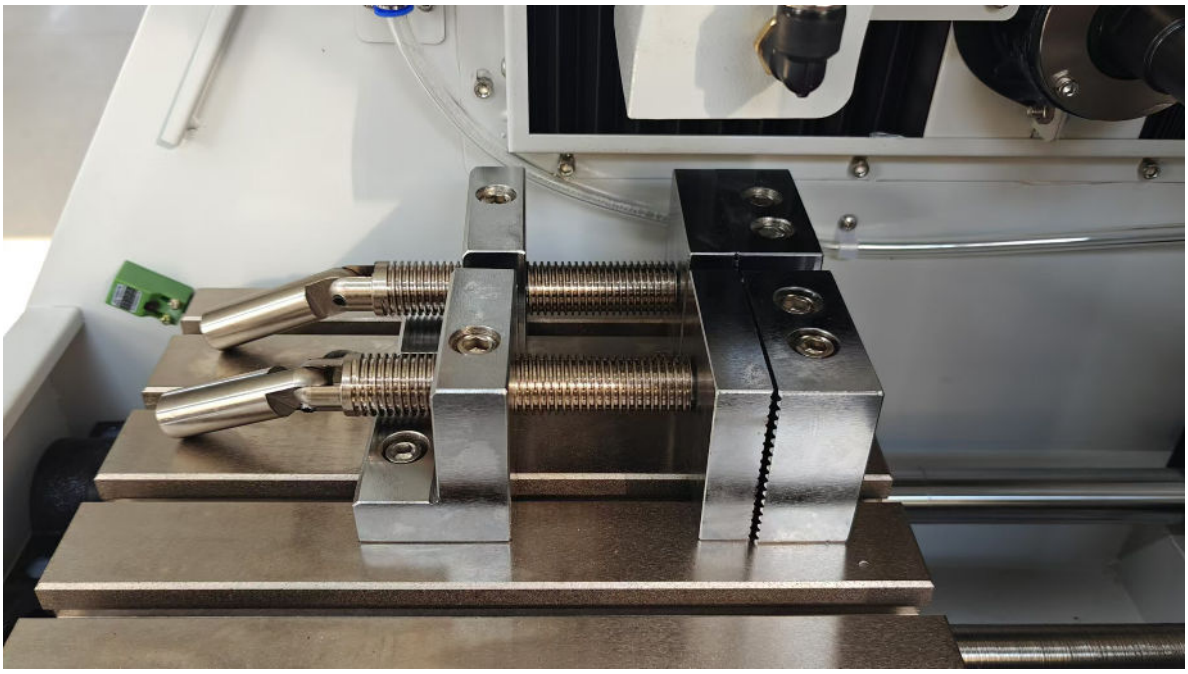
Cut-off Wheel



- This machine adopts a large-size grinding wheel cutting disc, which has high hardness and good wear resistance. It can process the workpiece with high precision and high quality. It can be applied to most metal materials, and the air cooling effect of the grinding wheel cutting disc can significantly avoid work. The phenomenon of surface heating and burning.

Product Details

Clamp



- This equipment uses a double-sided clamp with threads that can be tightened to clamp the sample. It has a simple structure, is easy to use, and can clamp tightly.

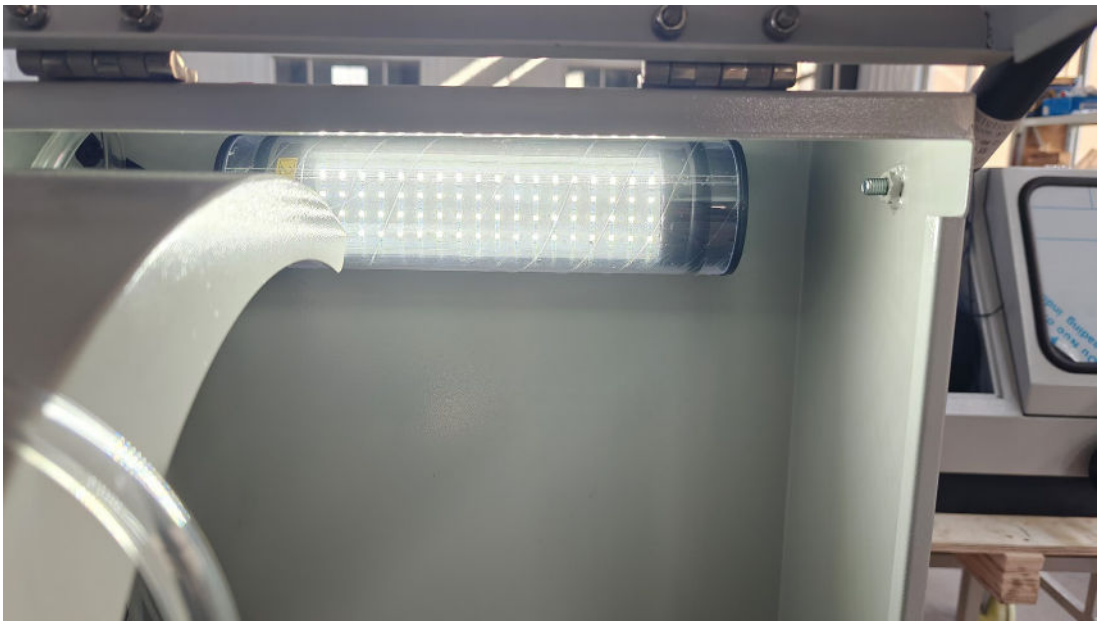


Cooling

- This equipment is equipped with a cooling system. Users can adjust the coolant flow through the valve, and the water nozzle can be bent and rotated freely to ensure that the cutting part can be effectively cooled.

Product Details

Lighting



- LED lighting is installed in the cutting room to effectively illuminate the entire area of the cutting room; it increases the brightness and clarity of the studio, and the transparent observation window on the protective door allows a clear view of the situation in the cutting room.



Closed-door Detection

- The machine cutting room is equipped with a closed door detection to ensure that the protective shell is closed when the equipment is running, protecting the safety of the operator.

Product Details

Handwheel



- The handwheel is used to move the sample forward and backward during cutting. After installing the sample, turn the handwheel to bring the sample close to the cutting blade without touching it; after cutting, turn the handwheel to move the sample to the appropriate position before removing it.



Water Tank



High Pressure Nozzle

- The equipment is equipped with a large-capacity water tank and a water pump. The water tank has a filter to separate the waste generated by cutting, and is also equipped with a pressure water nozzle to facilitate users to clean the cutting chamber.

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Technical Specification

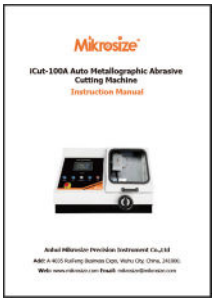
Name	Metallographic Abrasive cutting Machine
Model	iCut-100A
Cutting Chamber Housing	Steel Plate
Cutting Capacity	100mm（pipe）
Cutting Depth Tracking	LCD Digital Display
Platform Y-axis Movement	200mm
Cutting Table Size	280X310mm
Cut-off Wheel	350X2.5X32mm
Clamping Table	Divided into left and right, with central cutting edge
Cutting Method	Manual/automatic
Feeding Method	Adjustable (manual, automatic)
Cutting Speed	Maximum 0.25mm/s, automatic cutting mode can be selected:intermittent cutting (metal workpiece) and continuous cutting (non-metal workpiece)
Feed Distance	Set as needed
Reset Method	Automatic reset
Cooling System	Automatic
Water Tank Capacity	50L
Spindle Speed	2100rpm
Motor Power	3.3KW
Machine Type	Desktop
Machine Dimension	887X795X600mm
Power Supply	380V
Gross Weight	220KG

Special workpieces can be customized: disc fixture, rack fixture, universal fixture

Standard Delivery

Name	Qty	Photo
Mainframe	1set	
Water Tank(With water pump)	1pc	
Cut-off Wheel(350*2.5*32mm)	2pcs	
Outlet Pipe(φ32×1.5m)	1pc	
Inlet Pipe(φ25×1.5m)	1pc	
Hose Clamp	4pcs	

Standard Delivery

Name	Qty	Photo
Wrench(24-27mm)	1pc	/
Wrench(36mm)	1pc	/
Instruction Manual	1copy	
Product Certificate	1copy	
Warranty Card	1copy	