

MIDLAND METROLOGY LTD

iCut-80A

Metallographic Automatic Cutting Machine



Product Feature & Application

Product Features

- 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 feed depth (LCD digital display)
- Arbitrary setting of feed stroke (0-200mm)

Product Application

- Material science research and performance testing The metallographic cutting 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 The metallographic cutting 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.



The Left Side of Machine

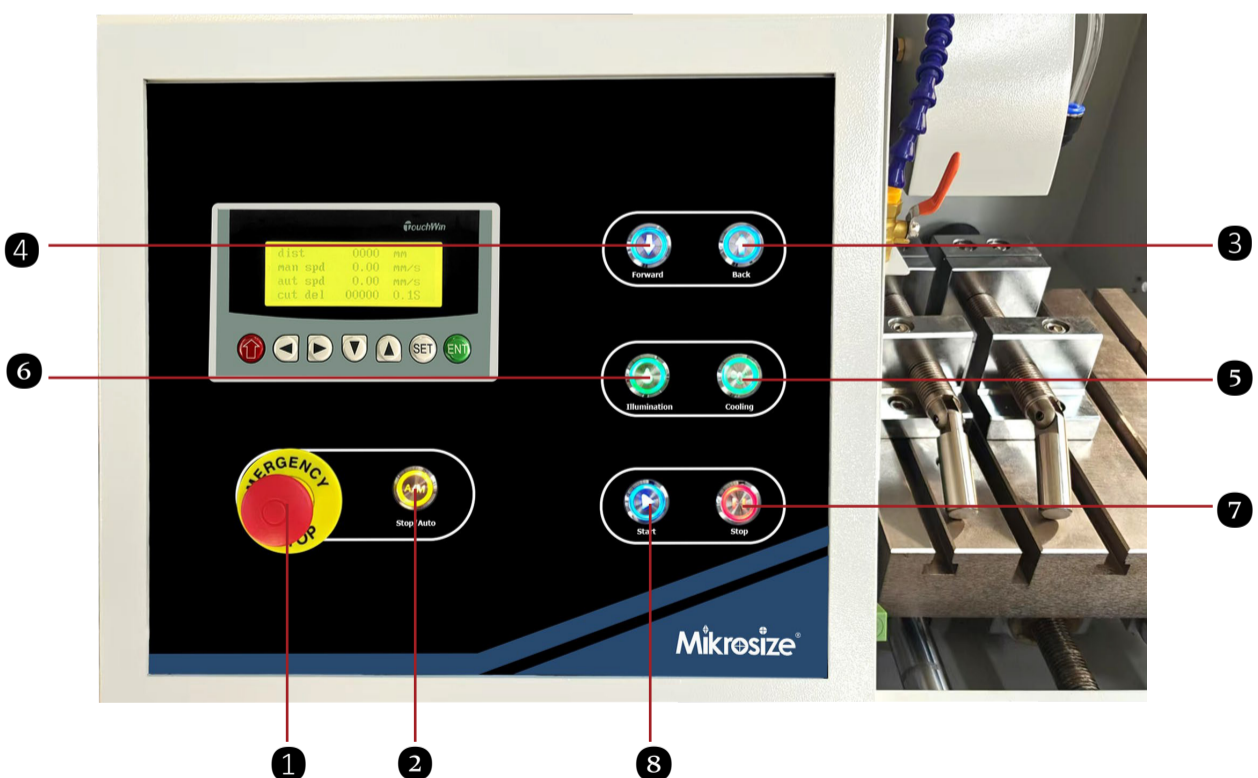


Cut-off Wheel

Instrument Appearance



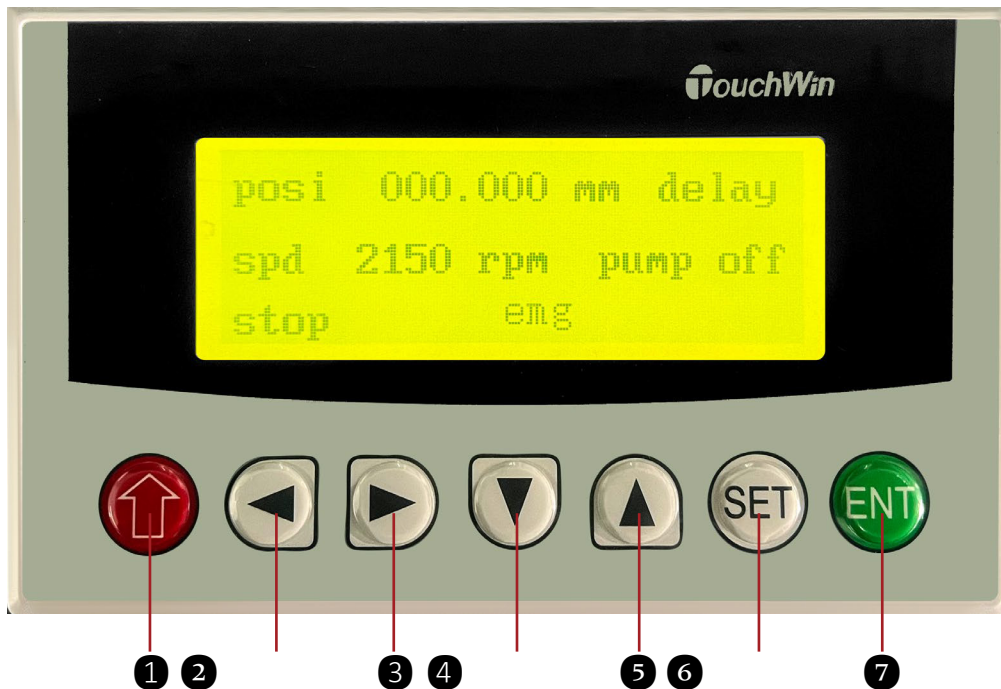
2. Protective lighting lamp 4. Cut-off wheel 5. Outlet pipe port 6. Clamp 7. Handwheel 8. Screen and buttons 9. Coolant nozzle 10. Transparent observation window



Screen & Buttons

1. Emergency stop button
2. Automatic/manual switch button: The button has a self-locking function, the "pressed" state is manual mode; the "pop-up" state is automatic mode
3. Back button
4. Forward button
5. Cooling button: Press the nozzle to spray coolant
6. Lighting button: Press to turn on the light
7. Stop button
8. Start button

Instrument Appearance



Interface

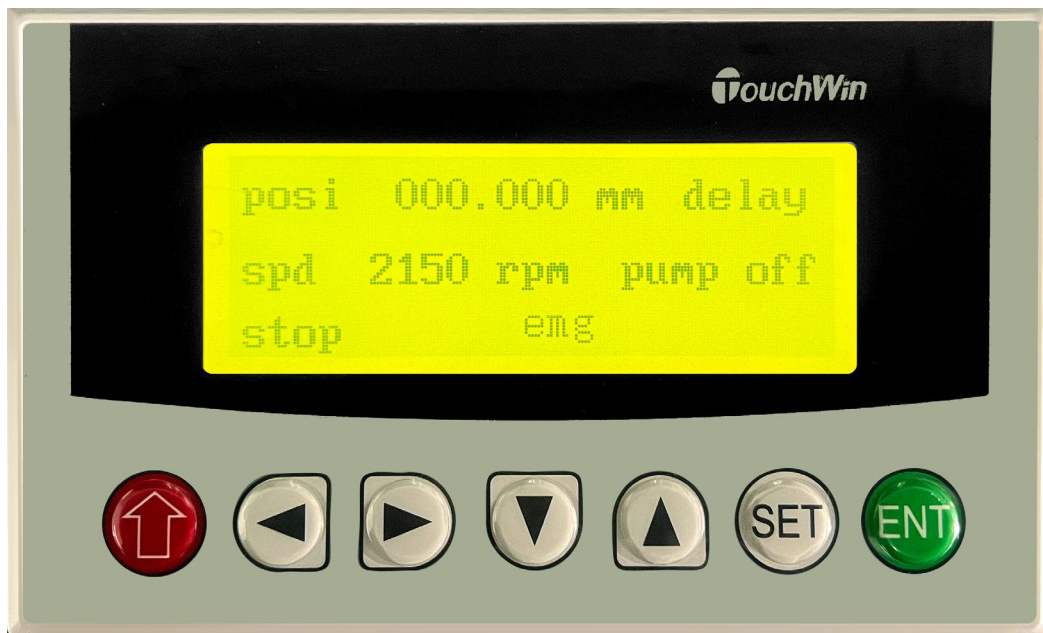
1. Return button
2. Left digit selection button/intermittent/continuous mode switch button
3. Right digit selection button
4. Page down button/down digit selection button
5. Page up button/up digit selection button
6. Set button
7. Save button



Machine on the Back

1. Inlet Pipe
2. Power cord
3. Water pump interface
4. Switch

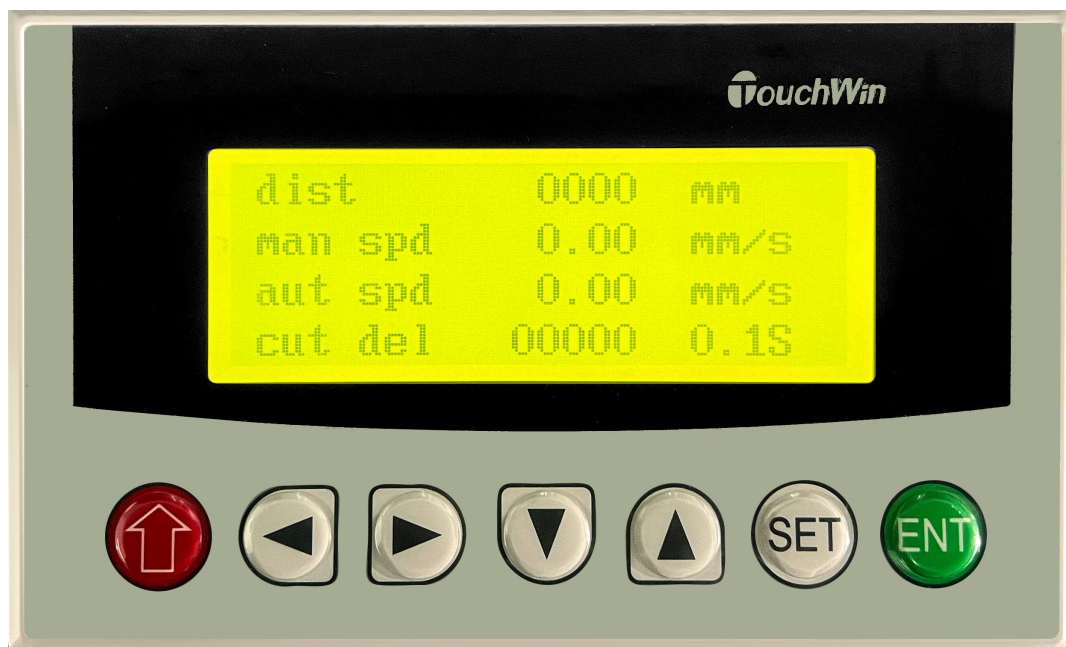
Screen Interface



Interface

After the device is turned on, enter this interface, which displays

1. Current position parameters; (position parameters will be displayed in real time during automatic cutting)
2. Spindle speed (2150rpm is the preset value and cannot be changed);
3. Equipment operating status;
4. Water pump operating status;
5. Emergency stop status;
6. Continuous/intermittent mode (switch by pressing the left digit selection key, metal materials must be in intermittent mode, some non-metallic materials can choose continuous mode)



Interface

The interface displays the following parameters

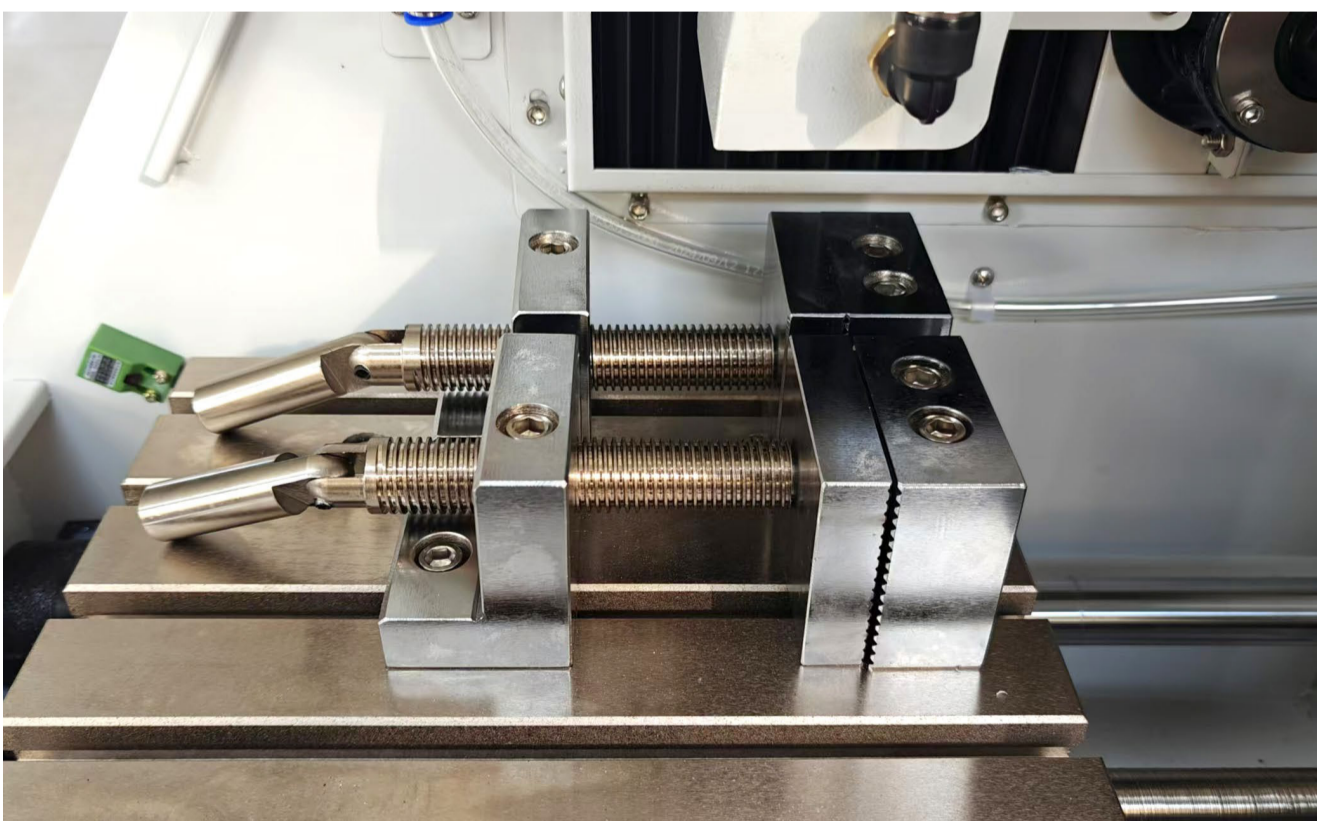
1. Cutting stroke (feed distance, range is 0-200mm)
2. Manual speed (speed when pressing the "forward" and "backward" keys)
3. Automatic speed (setting range 0-0.25mm/s when processing metal materials, the speed cannot be greater than: 0.02 mm/s)
4. Cutting delay (the stop time in the "intermittent" state, the time cannot be less than: 0005, i.e.: 0.5 seconds)

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.



Clamp

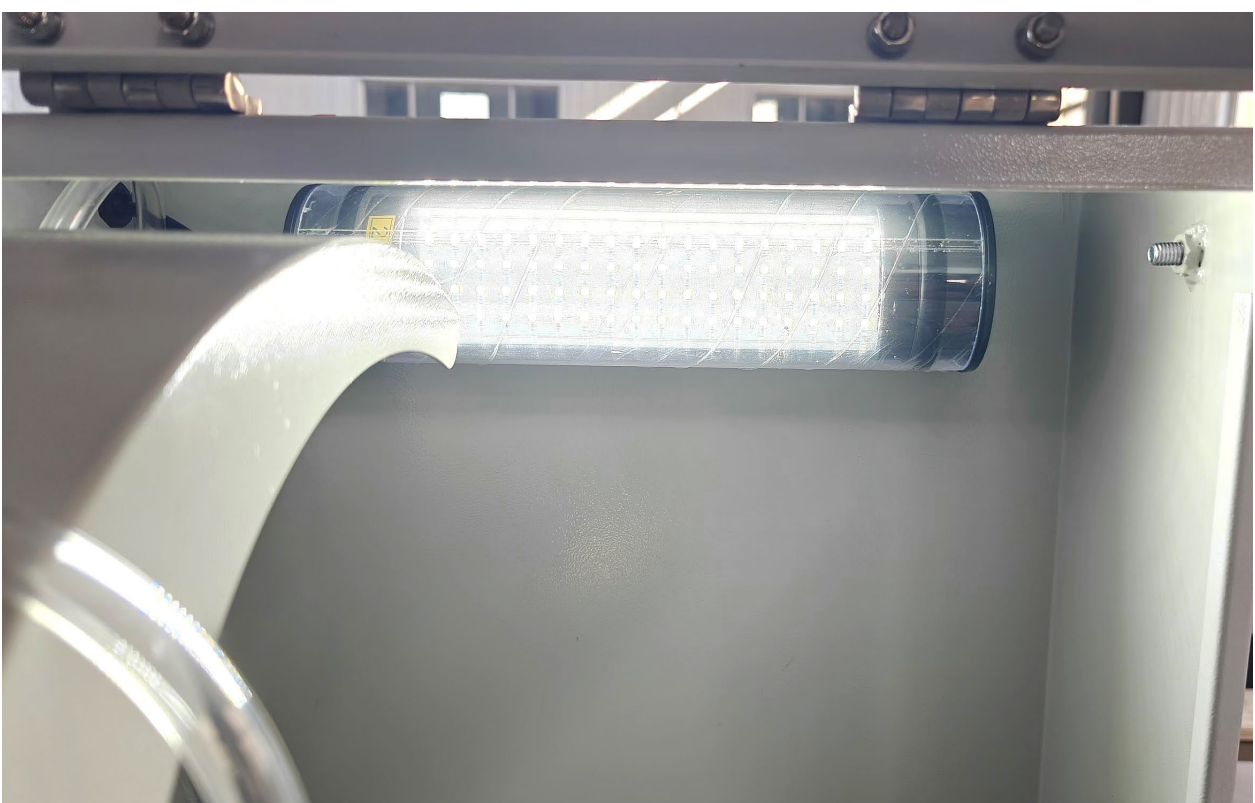
This equipment uses a double-sided clamp with threads that can be tightened to clamp the sample. It has a simple structure, is easy to use, and can clamp tightly.

Product Details



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.



Illuminator

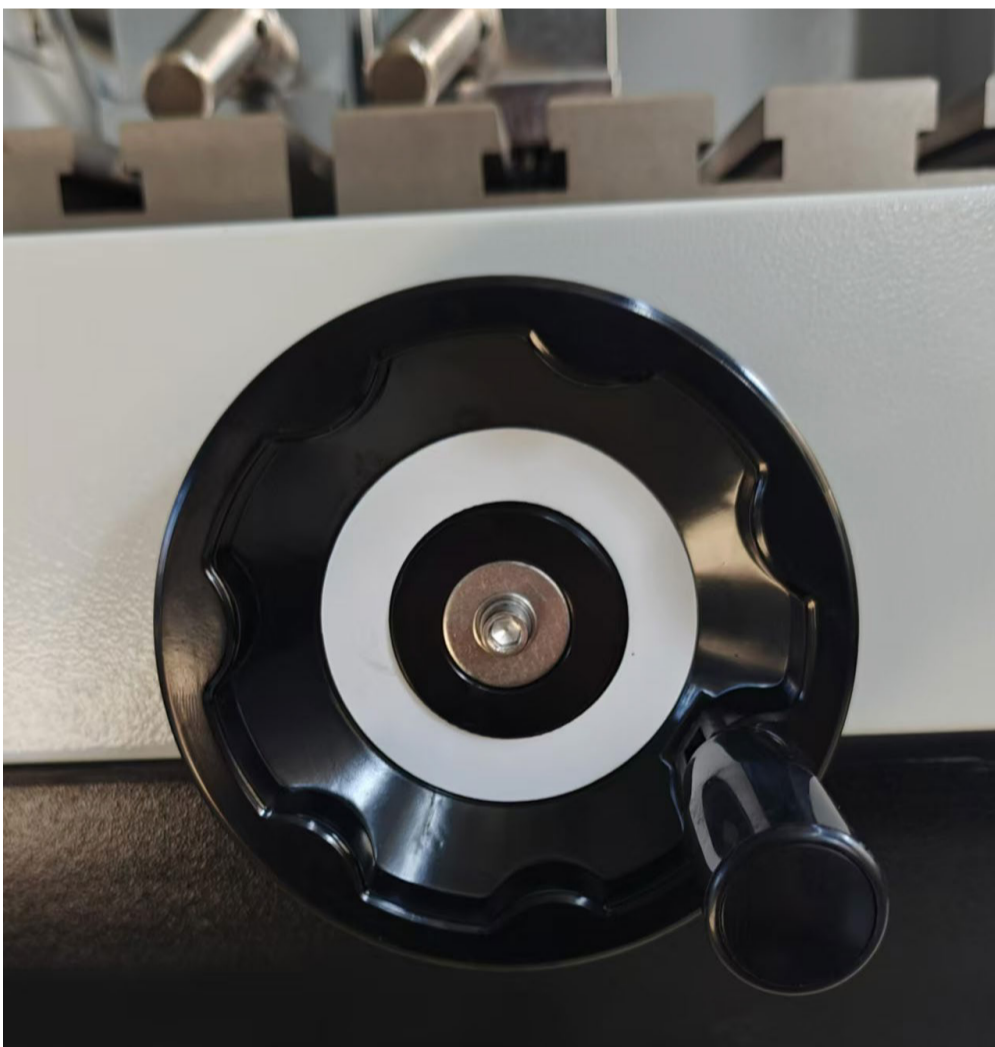
LED lighting is installed in the cutting room to effectively illuminate the entire area of the cutting room; it increases the brightness and clarity of the studio, and the transparent observation window on the protective door allows a clear view of the situation in the cutting room.

Product Details



Closed-door Detection

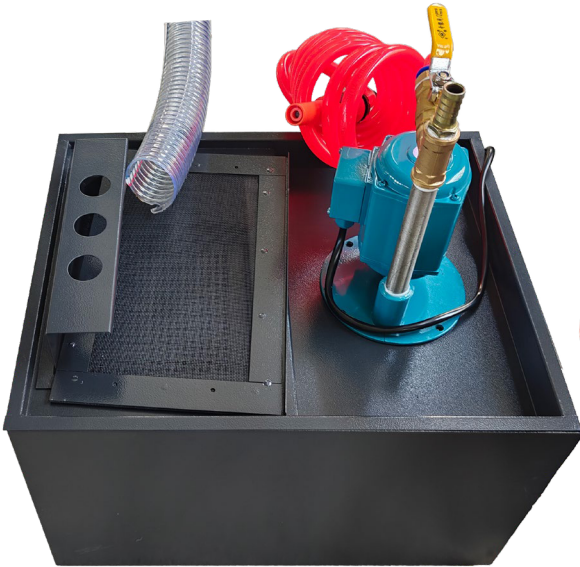
The machine cutting room is equipped with a closed door detection to ensure that the protective shell is closed when the equipment is running, protecting the safety of the operator.



Handwheel

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

Product Details



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.

Technical Specification

Product Name	Metallographic Automatic Cutting Machine
Model	iCut-80A
Cutting Chamber Housing	Steel Plate
Cutting Capacity	80mm (Pipe)
Feed Depth Tracking	LCD Digital Display
Platform Y-axis Movement	275mm
Cutting Table Dimensions	310X280mm
Cutting Disc Specifications	350X2.5X32mm
Clamping Table Specifications	The fixture is divided into left and right, with a central cutting edge.
Cutting Method	manual/automatic
Feeding Method	adjustable (manual, automatic)
Cutting Speed	0.1-2.5mm/s, automatic cutting mode can be selected: intermittent cutting (metal workpiece) and continuous cutting (non-metal workpiece)
Feed Distance	Arbitrary setting (0-200mm)
Reset Method	Automatic reset
Cooling System	Automatic (water cooling 3 channels)
Water Tank Capacity	50L
Spindle Speed	2150rpm
Motor Power	3KW
Machine Type	Desktop
Machine Dimension	900×790×600mm
Power Supply	380V
Gross Weight	150KG

Others: Special workpieces can be customized (disc fixture, rack fixture, universal fixture)

Standard Delivery

Name	Specification	Qty	Picture
Machine Mainframe	iCut-80A	1 set	
Water Tank (including water pump)	iCut-80A	1 pc	
Cut-off Wheel	350*2.5*32mm	2 pcs	
Pipe Clamp	iCut-80A	4 pcs	
Wrench	24-27mm	1 pc	
Wrench	36mm	1 pc	
Inlet Pipe	iCut-80A	1 pc	
Outlet Pipe	iCut-80A	1 pc	
Instruction Manual	iCut-80A	1 copy	
Product Certificate	iCut-80A	1 copy	
Warranty Card	iCut-80A	1 copy	