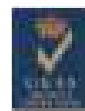




MCut-100A/120A/200A/300A

Auto Metallographic Abrasive Cutter





Product Feature & Application

Product Feature

- PLC controlled automatic metallographic cutting machine. Mitsubishi brand control system and servo motor.
- X, Y, Z axis controlled automatically and precisely.
- Intelligent cutting speed according to material's hardness, to achieve the fastest cutting efficiency.
- Frequency conversion controls cutting speed.
- Electro- handwheel, for automatic control.
- Touch screen displays various cutting data.
- Infrared precise positioning.
- 4 cutting modes: swing cutting, continuous cutting, reciprocating cutting, variable speed cutting.
- Cutting speed for solid steel cylinder can reach 10mm/min.
- Electro-mechanical separation design to facilitate cutting chamber cleaning and spindle motor security.
- Large observation window for cutting chamber installed, LED lights equipped inside.
- Ventilation fan ensures the efficient flow discharge of various steam and smoke caused by cutting.
- Ergonomics design,. low noise, easy to operate, beautiful appearance, safety use.
- Vertical machine, mainly composed of upper safety cover, middle frame, right sliding door, side door, underside frame including electrical box, tool box inside, clamping fixture, rinsing tap, independent cooling water tank.
- Stepless speed, ABB 7.5KW frequency conversion motor directly connected to the cut-off wheel.
- Sliding door and hinged door is more convenient for you to place the large sample in the right position from three directions (up, front and left).



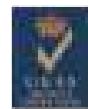
Machine Mainframe



Magnetic Cooling Water Tank

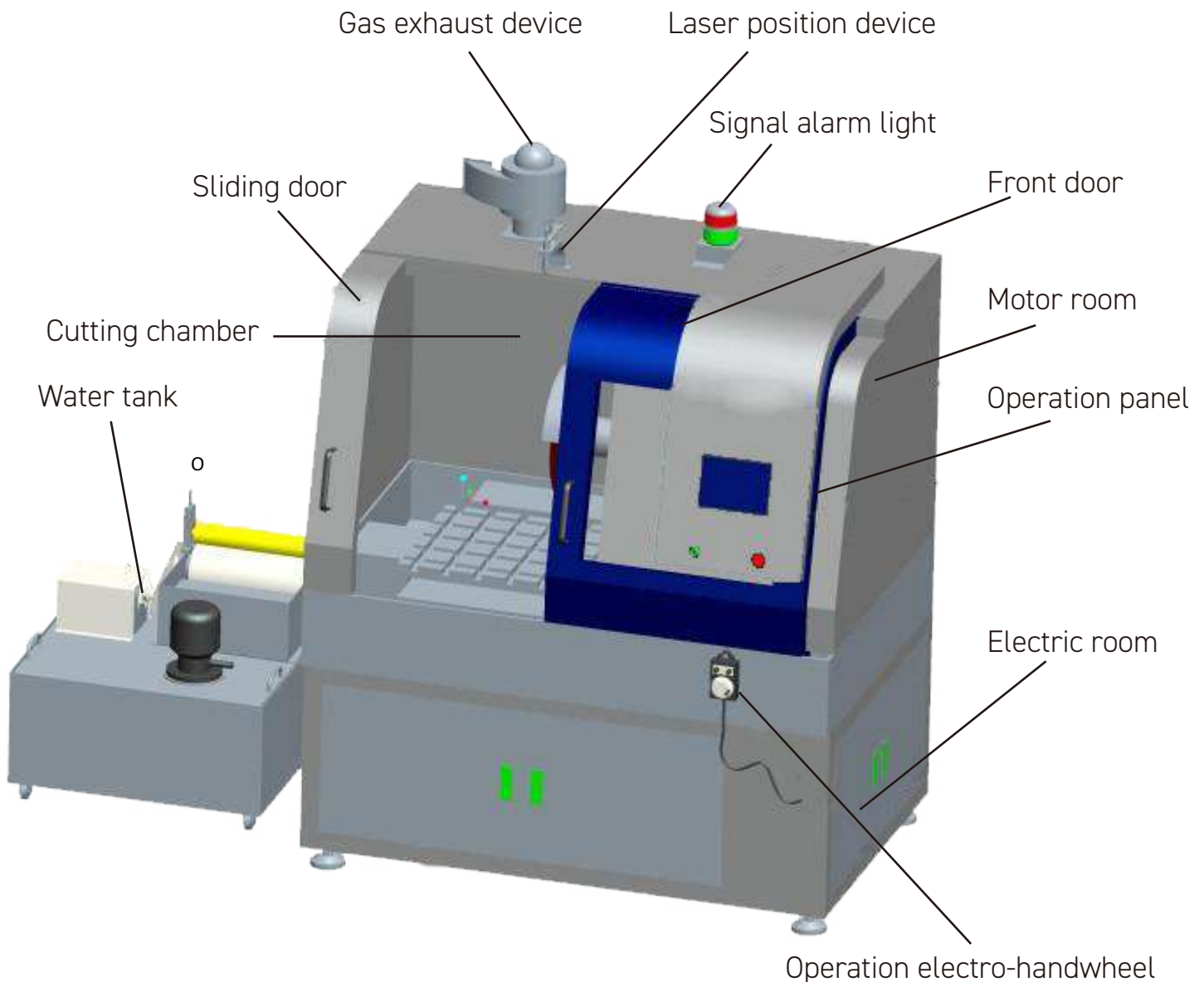
Product Application

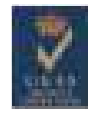
Designed for large sample cutting, high efficiency and low noise. making it easier to maintain machine parts and handle large samples. Easy to operate, beautiful appearance and safe use. It is one of the necessary equipment for laboratory sample preparation.



Machine Structure

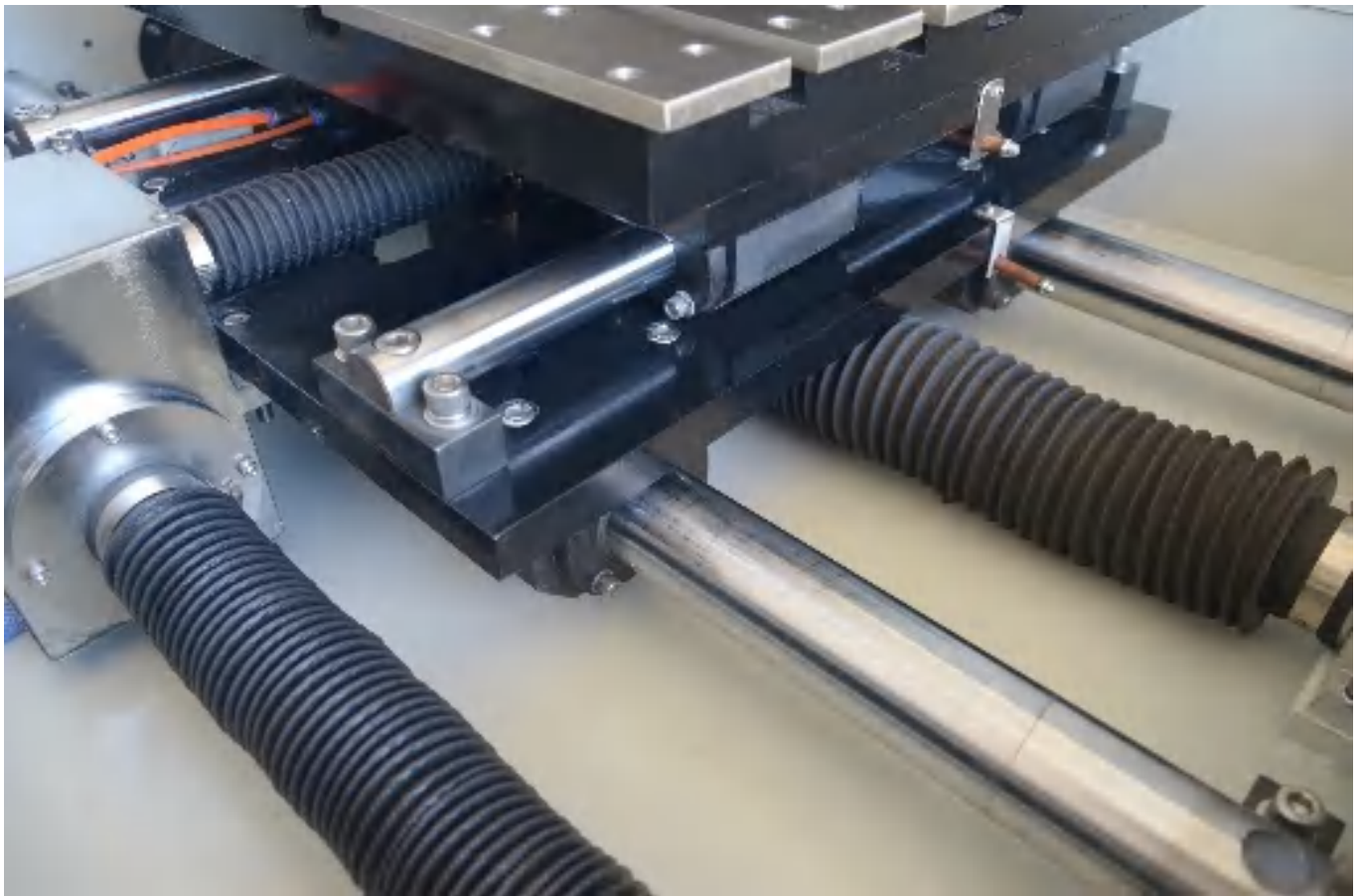
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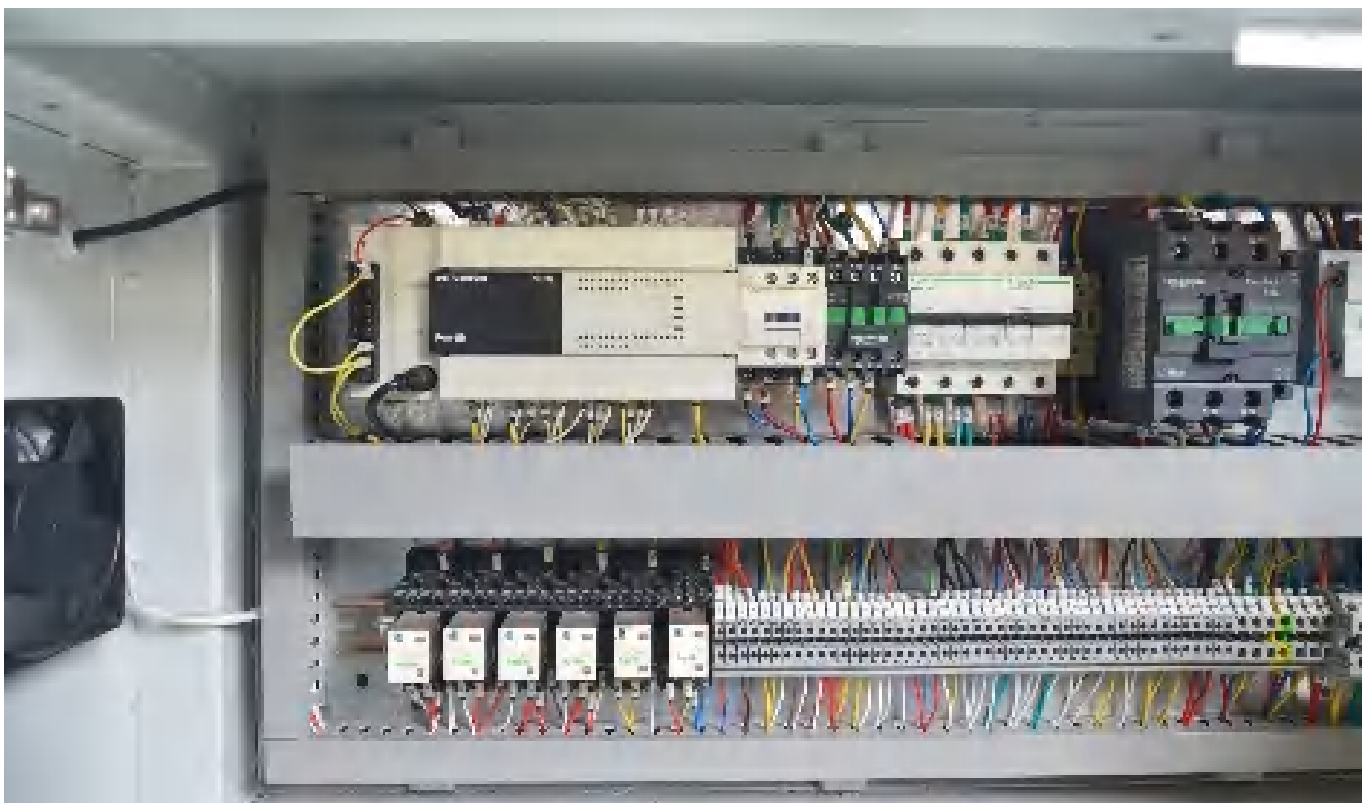


User Friendly

X, Y, Z axis controlled automatically and precisely. Mitsubishi controller and Schneider electricity.



X,Y,Z-axis Controlled Automatically and Precisely



Mitsubishi Controller and Schneider Electricity System



Control System

PLC controlled automatic metallographic cutting machine. Electro- handwheel, for automatic control. Touch screen displays various cutting data.



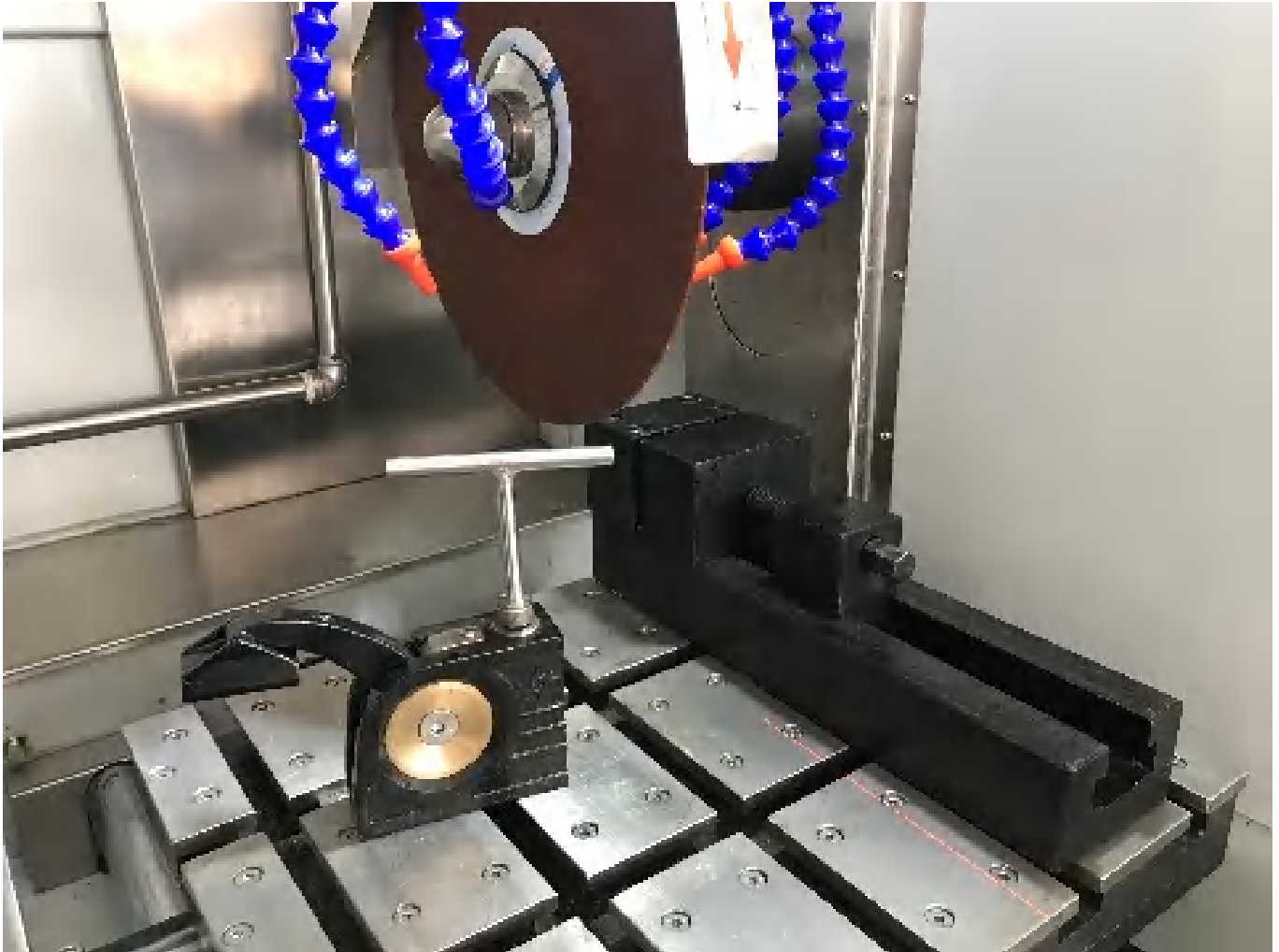
Mitsubishi Touch Screen



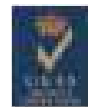
Operation Electro-handwheel



Infrared Laser Positioning Function



Infrared Laser Positioning for Precise Cutting



User Friendly

Electro-mechanical separation design to facilitate cutting chamber cleaning and spindle motor security. Stepless speed, ABB frequency conversion powerful motor directly connected to the cut-off wheel.



Electricity Cabinet



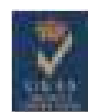
Cut-off Wheel



Powerful Motor



Powerful Motor



User Friendly

Sliding door and hinged door is more convenient for you to place the large sample in the right position from three directions (up, front and left). Schneider electricity system, safety limited switch.



Sliding Door



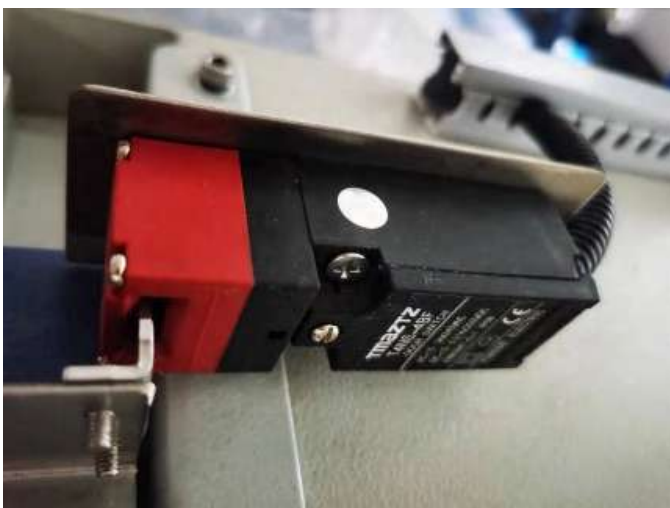
Cutting Table



Schneider Electricity



Schneider Electricity



Safety Limited Switch



Safety Limited Switch



User Friendly

Ventilation fan ensures the efficient flow discharge of various steam and smoke caused by cutting. With Laser Position Light and Signal Alarm Light. With Heat Dissipation Function.



Gas Exhaust/ Laser Position /Signal Alarm Light



Heat Dissipation



Observation Friendly

Large observation window for cutting chamber installed, LED lights equipped inside.



Cutting Chamber



Observation Window



Observation Window



Dual LED Illumination



Dual LED Illumination



Water Cooling&Cleaning System



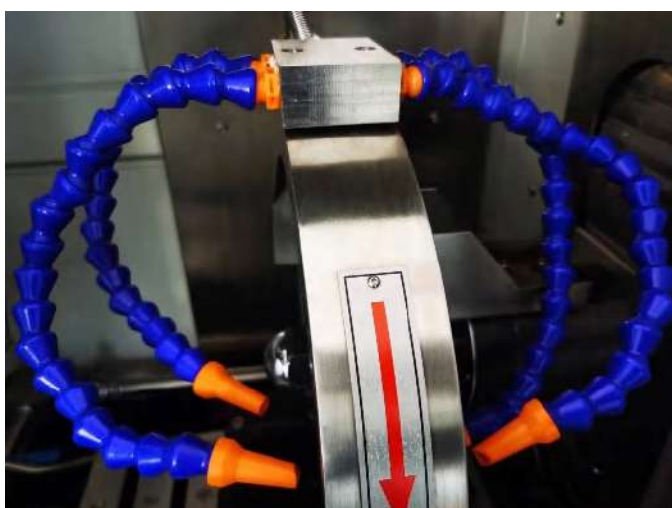
Water Inlet



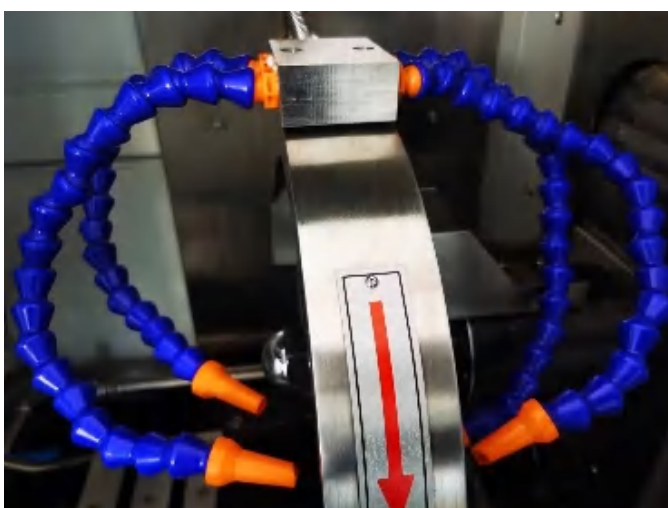
Water Outlet



Pump Socket



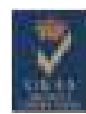
Water Cooling



Water Cooling



Cleaning Water Gun



Ordering Information



MCut-100A Auto Metallographic Abrasive Cutter
MCut-120A Auto Metallographic Abrasive Cutter
MCut-200A Auto Metallographic Abrasive Cutter
MCut-300A Auto Metallographic Abrasive Cutter



Customerized MCut-AG Auto Guide Metallographic Abrasive Cutter



Technical Specification

Product Name	Auto Metallographic Abrasive Cutter			
Model	MCut-100A	MCut-120A	MCut-200A	MCut-300A
Cutting Capacity (mm)	100x100	120x120	200x150	300x150
Function	Automatic Gas Exhaust System, Alarm System, Dual LED Lighting, Infrared Laser Positioning			
Cutting Method	Manual / Automatic X/Y/Z- axis Linkage			
Control System	10 inch Touch Screen /Operating Handle-wheel			
Cut-off Wheel Dimension (mm)	Ø350xØ32x2.5	Ø380×Ø32 ×2.8	Ø400xØ32x3	Ø400xØ32x3
Cutting Feeding Speed	1~200mm/min			
X*Y Cutting Table Dimension (mm)	410x350	450x350	485x400	4530×630
Y-axis Travel (mm)	250	250	300	420
Z-axis Travel (mm)	160	200	230	230
X-axis Travel (mm)	140	100	100	110
Clamp Opening (mm)	100	120	200	300
Spindle Motor	Power	380V,50HZ,4kw	380V,50HZ,5.5kw	380V,50HZ,7.5kw
(Frequency Conversion)	Speed	500-2800r/min	500-2800 r/min	500-2800 r/min
Feeding Motor		Stepping Motor	Servo Motor	Servo Motor
Machine Dimensions (mm) (L×W×H)		1200*1100*1800	1450×1000×1850	1550×1100×1900
Net Weight (kg)		1700	1800	2200
Machine Power Supply		3 Phases,5 Lines 380V 50HZ		
	Volume (L)	80	120	120
Water Tank	Dimension (mm)	610x550x680	700x630x800	700x630x800
	Weight (kg)	85	100	100
	Pump Flow (L/min)	50	100	100



Technical Specification Electronic Control Equipment and Related Accessories List

No.	Name	Model	Brand
1	Servo motor	HG-KN73(B)J-S100	Mitsubishi
2	Servo driver	MR-JE-70A	Mitsubishi
3	Encoder power cable	MR-J3ENCBL5M-A1-L	Mitsubishi
4	Motor power cable	MR-PWS1CBL5M-A1-L	Mitsubishi
5	Signal plug	MR-J3CN1	Mitsubishi
6	Servo motor	HG-SN102(B)J-S100	Mitsubishi
7	Servo driver	MR-JE-100A	Mitsubishi
8	Encoder power cable	MR-J3ENSCBL5M-L	Mitsubishi
9	Motor power cable	MR-PWCNS4	Mitsubishi
10	Signal plug	MR-J3CN1	Mitsubishi
11	Servo motor	HG-SN152(B)J-S100	Mitsubishi
12	Servo driver	MR-JE-200A	Mitsubishi
13	Encoder power cable	MR-J3ENSCBL5M-L	Mitsubishi
14	Motor power cable	MR-PWCNS5	Mitsubishi
15	Signal plug	MR-J3CN1	Mitsubishi
16	Touch screen	GS2110-WTBD	Mitsubishi
17	PLC	FX3U-48MT/ES-A	Mitsubishi
18	Frequency converter	FR-E740-11K-CHT	Mitsubishi
19	PLC screen communication line	FX-50DU-CABO-3M	Mitsubishi
20	Servo setting communication line	MR-J3USBCBL3M	Mitsubishi
21	Extended module	FX0N-3A	Mitsubishi
22	Contactor	LC1-E40M5N	Schneider
23	Contactor	LC1-E1210M5N	Schneider
24	Circuit breaker	C65N 2P C16A	Schneider
25	Circuit breaker	C65N 3P C40A	Schneider
26	Electric relay	RXM4AB2BD	Schneider
27	Electric relay base	RXZE2M114	Schneider
28	Plastic case circuit breaker	EZD100E3050	Schneider
29	Power switch	D-30BGD	/
30	Emergency stop switch	Normal off	Schneider
31	Fuse terminal	Fuse 2A 3pcs	/
32	Cabinet exhaust fan	220V	/
33	Door limit switch	Travel switch	/
34	Proximity switch	24V NPN NO Normal on	/
35	Waterproof LED lamp	24V JYTGD3-5	/
36	Knob switch	2 level Normal on	Schneider
37	Infrared lamp	5V	/
38	Connecting terminal	35	/
39	Connecting terminal	2.5	/
40	Three color warning lamp	24V	/
41	Lubricant pump	SLRH-108H, 220V	/



Touch Screen Interface

Y-Parameter settings

Return

Y-Cutting length 250 mm

First Y after
Z cutting

Y-Cutting speed 100 mm/min

Spindle speed setting 1500 RPM

First Z after
Y cutting

Cycle times 0 times

Platform to the
left Right

X Automatic moving length 020.00 mm

left

light
switch

infrared
switch

Cutting
End Back

X operation screen

return

Horizontal run length 020.00 mm

left right
The running
direction

The level of
running speed 50 mm/min

Horizontal position 095.1 mm

manual
left

manual
right

X-autom-
atically

level
stop

Debug parameter setting

Return

Left

Subdivision 18000 Step /Loop

Pitch 50 mm/Loop

X-
Zero

Return speed 300 mm/Min

Swing distance 2 mm/Time

Back

Y-
Zero

Z-Up

Z-
Zero



Touch Screen Interface

Status display

Return

Hand pulse X0		Z Down limit X13		Y-Step pulse Y0		flood light Y12	
Hand pulse X1		Z up limit X14		Z-Step pulse Y1		pump Y13	
X pulse X2		Choose X X20		X-Step pulse Y2		Y-direction Y14	
Emergency stop X5		Choose Y X21		X-direction Y3		Y-reverse direction Y15	
Door Limit X6		Choose Z X22		X-reverse direction Y4		Infrared lamp Y17	
Motor failure		Choose 4 X23		Motor run Y5		System run green light Y20	
Y forward limit X10		Single speed X24		Failure alarm red light Y7		System standby yellow light Y21	
Y back limit X11		10 times speed X25		Z-direction Y10		Servo motor start Y22	
Frequency converter overcurrent X12		100 times speed X26		Z-reverse direction Y11		Electromagnetic unlocking Y24	

Instructions 1

Return

The machine can cut the general metallographic sample material with the cutting, advance and retreat, stepless speed machine equipped with a cooling device configured coolant come away cutting calories is cutting access to avoid sample overheat and burn organizations.

machine uses the user-friendly design, the use of ergonomic principles. maximum features: low noise, easy to operate, safe to use is one of the laboratory sample preparation necessary equipment. grinding wheel spindle in the wheel frame bearing, electric motors connected triangular leather wheel drive and get the effective speed of the main round of the swing cut the sample in a valid location,

the rocker arm swing to complete the cutting action. work on the table fast clamping device, the pressure rod can move back and forth, easy to use clamping device can be the free demolition, cleaning the work area with a fully enclosed structure, and a transparent protective cover for cutting and observed with a cooling water tank is designed for the storage of coolant, should not use tap water as coolant. cutting of rock, ceramic specimen, you must use a diamond grinding wheel before cutting

(diamond grinding wheel need to special order)

Next

Operating Instructions 2

return

Technical parameters:

1、Grinding wheel specification: $\varnothing 400 \times \varnothing 32 \times 2$ 10、Maximum cutting width: 300mm

2、Wheel speed: 500-2800r/min

11、Cutting distance: 420mm

3、Motor power: 7.5KW

Cut button in the case of the spindle running.

4、Supply voltage: 380V 50HZ

Quickly returned to stop according to the system start and stop button;

5、Dimensions: 1650*1350*1900mm

The jog speed is set by the cutting speed, quickly returned to the speed of 300 mm / min, and quickly returned to a distance equal to the cutting length, cutting the overtravel alarm shall jog

6、Weight: 2000kg

7、Fixture specifications: 300*150*80mm

The handwheel must slow shake can operation, slow 2 laps rear can quickly turn the handle.

8、Maximum cutting diameter: 150mm

9、Maximum cutting height: 150mm

Operating the handwheel must hit off file can touch screen operation of X, Y, Z axis move button



Packing List

Name	Specification	Qty
Machine Mainframe	/	1 set
Water Tank	80/120L	1 set
Clamping Device	100/120/200/300mm	1 set
Spanner	46#, 41#	2 pieces
Cut-off Wheel	Ø350/380/400×2.5/2.8/3×Ø32 mm	2 pieces
Water Pipe	Ø 3/4 inch, Ø 2 inch	Inlet 1 piece,Outlet 1 piece
Usage Instruction Manual	/	1 Copy