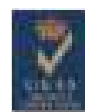




# MCut-90A

Manual /Auto Abrasive Metallographic Cutter  
(Cutting Capacity:90mm)





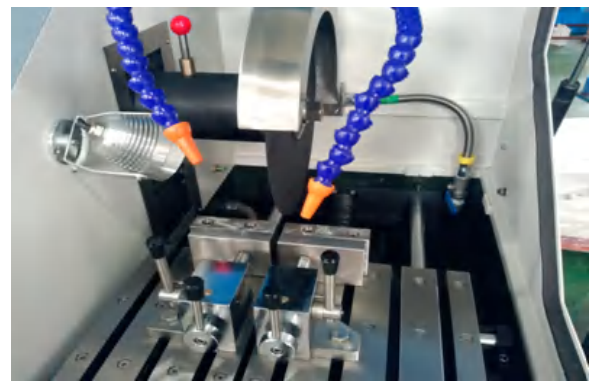
# Product Feature & Application

## Product Feature

- Manual / automatic precision cutting machine.
- Z-axis manually adjusted, suitable for various sizes cut-off wheels, effectively improving the utilization rate of cut-off wheels.
- Y-axis and X-axis can be both manually and automatically controlled accurately.
- Y-axis automatic intelligent feeding, cutting speed can be automatically adjusted according to the hardness of the material to avoid blockage.
- X-axis automatic table can achieve the continuous thin slice cutting of the sample.
- The machine body is made of thick sheet metal.
- With explosion-proof transparent observation window and protection of cover opening, it is safe and reliable.
- With powerful exhaust fan, it makes observation more clear.
- Adjustable LED lamp to achieve effective lighting for the whole cutting chamber.
- Electro-mechanical separation structure, effective in protecting electrical safety and convenient in maintenance.
- With double-sided quick clamping vise and T- slot cutting table.
- With gas spring support, limit switch and emergency stop button for safe use.
- Three adjustable cooling water lines can prevent sample burns.
- Independent cleaning water gun.
- The mobile magnetic circulating cooling water tank has effective filtration and can prevent sample burns.
- 10 inch high-definition color touch screen, visual display and easy to operate.



Machine Mainframe



Cutting Chamber



Magnetic Circulating Cooling Water Tank

## Product Application

This machine is suitable for the sample cutting of various shapes, sizes and materials, the surface of the sample after cutting is bright and flat without burns, thus it is the ideal equipment for sample cutting. It is suitable for various ferrous metals, non-ferrous metals, heat treatment parts, forgings, semiconductors, crystals, ceramics and rocks etc.





# Flexible Cutting

Both manual / automatic precision cutting machine. Z-axis manually adjusted, suitable for various sizes cut-off wheels, effectively improving the utilization rate of cut-off wheels. Y-axis and X-axis can be both manually and automatically controlled accurately. Y-axis automatic intelligent feeding, cutting speed can be automatically adjusted according to the hardness of the material to avoid blockage. X-axis automatic table can achieve the continuous thin slice cutting of the sample.



Z-axis Manual Adjusted by Rotating Handwheel(left)



Y-axis Manual/Auto Adjusted by Rotating Handwheel





# Cutting Observation

With explosion-proof transparent observation window and protection of cover opening, it is safe and reliable, easy to change cut-off wheel, With powerful exhaust fan, it makes observation more clear. Adjustable LED lamp to achieve effective lighting for the whole cutting chamber.



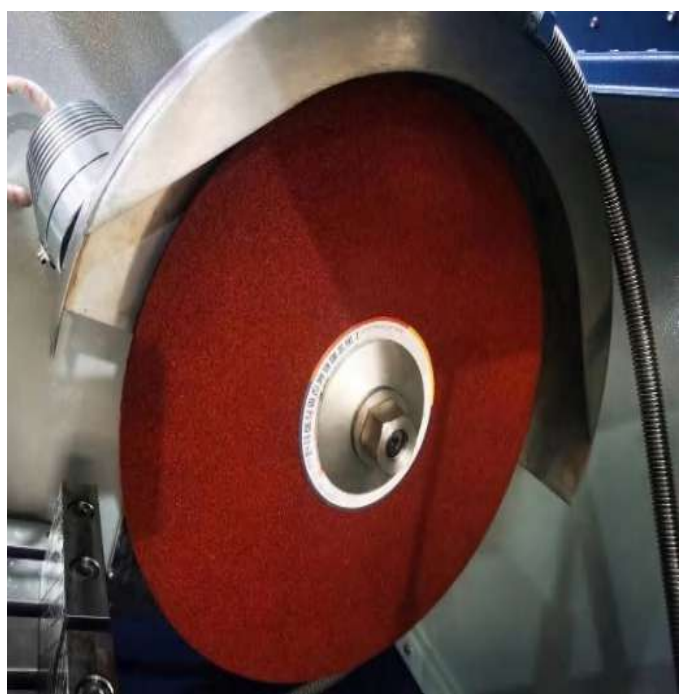
Transparent Observation Window



Transparent Observation Window



Transparent Observation Window



Cut-off Wheel



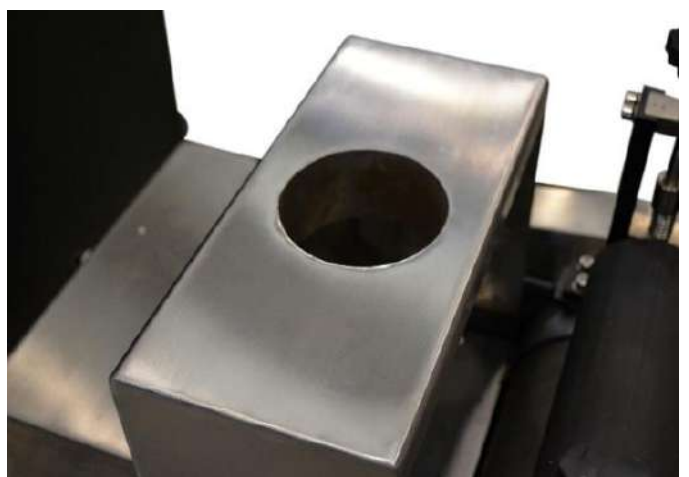
LED Illumination Inside Cutting Chamber



LED Illumination Inside Cutting Chamber



Exhaust Outlet on Machine

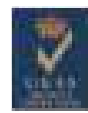


Exhaust Inlet on Water Tank



Exhaust Inlet on Water Tank





## Safe Use

Electro-mechanical separation structure, effective in protecting electrical safety and convenient in maintenance. Limit switch and emergency stop button for safe use.



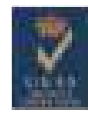
Electro-mechanical separation structure



Emergency Stop Button

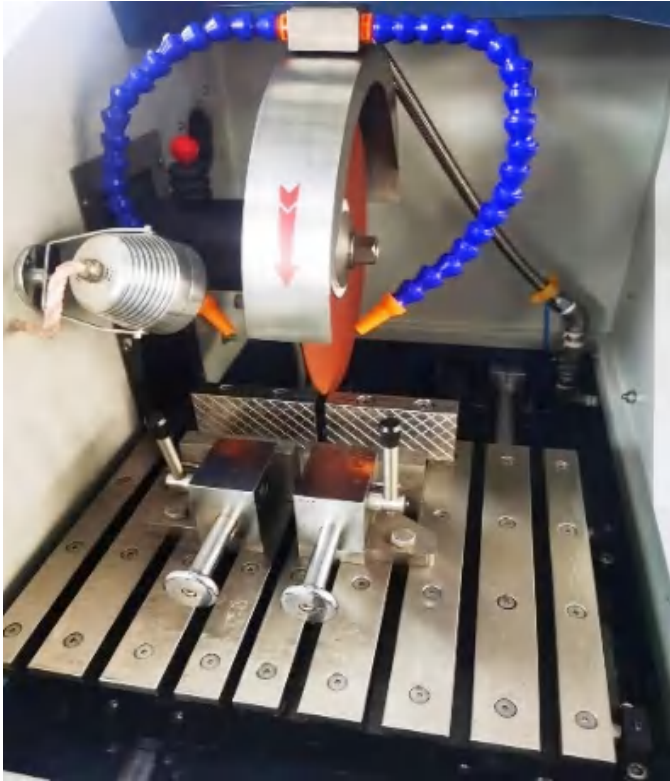


Limit Switch



# User Friendly

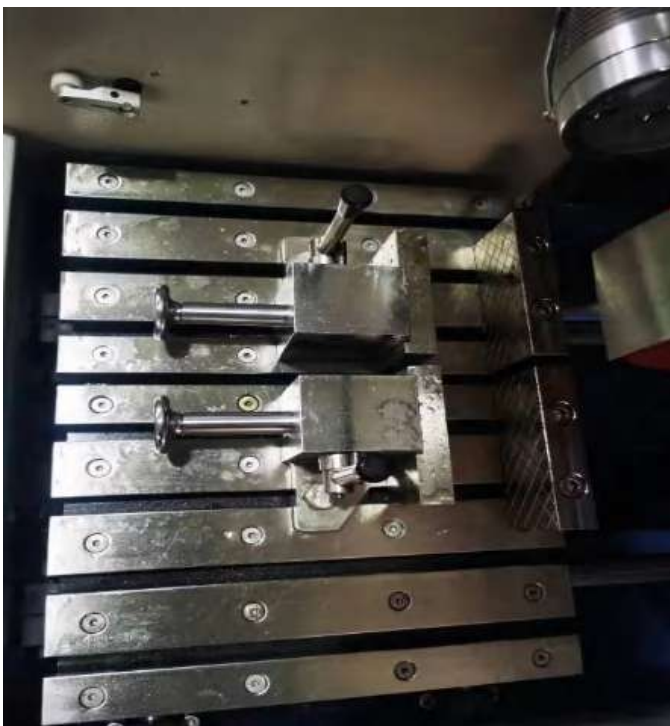
Double-sided quick clamping vise and T- slot cutting table, with gas spring support.



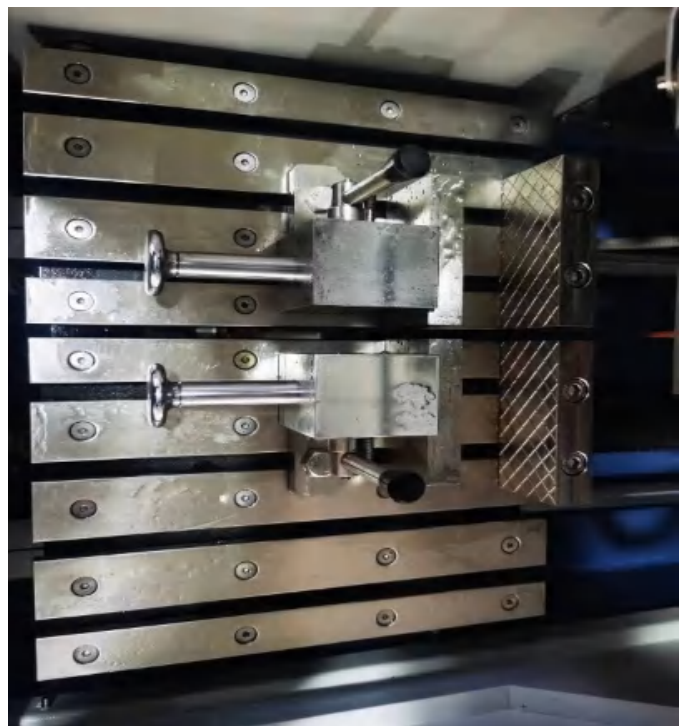
Gas Spring Support



Gas Spring Support



Quick Clamping Vise



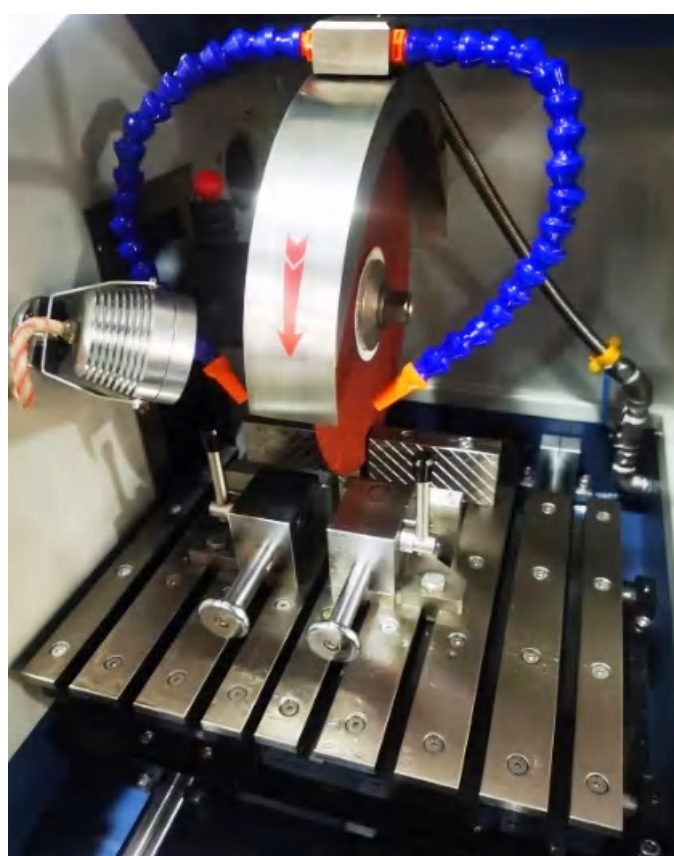
Quick Clamping Vise





# Cooling&Washing System

Three adjustable cooling water lines can prevent sample burns .Independent cleaning water gun. The mobile magnetic circulating cooling water tank has effective filtration and can prevent sample burns.



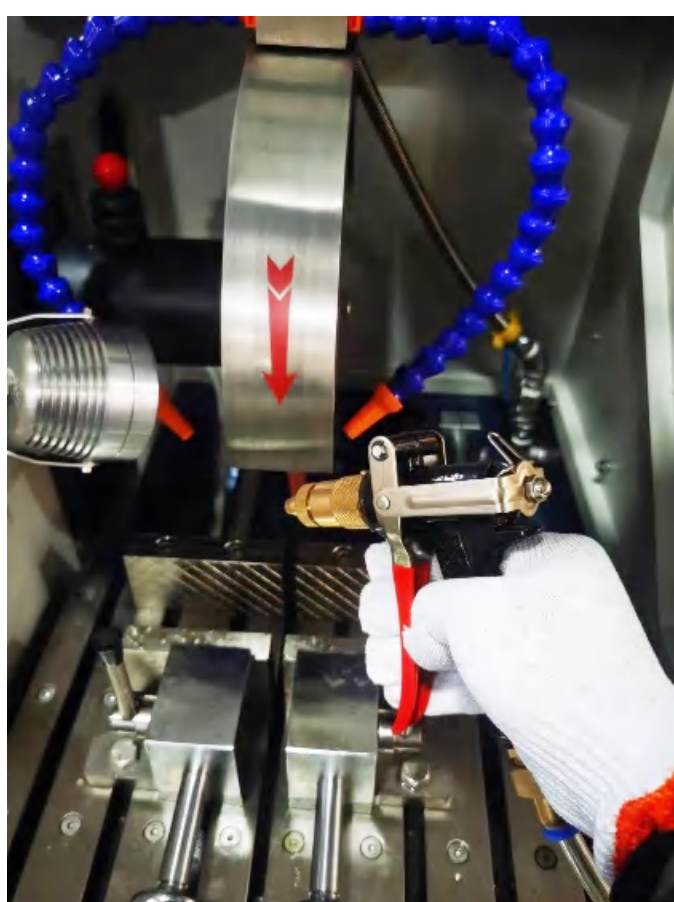
Water Cooling System



Water Cooling System



Cleaning Water Gun



Cleaning Water Gun



Water Inlet/Outlet



Water Tank Connection Plug



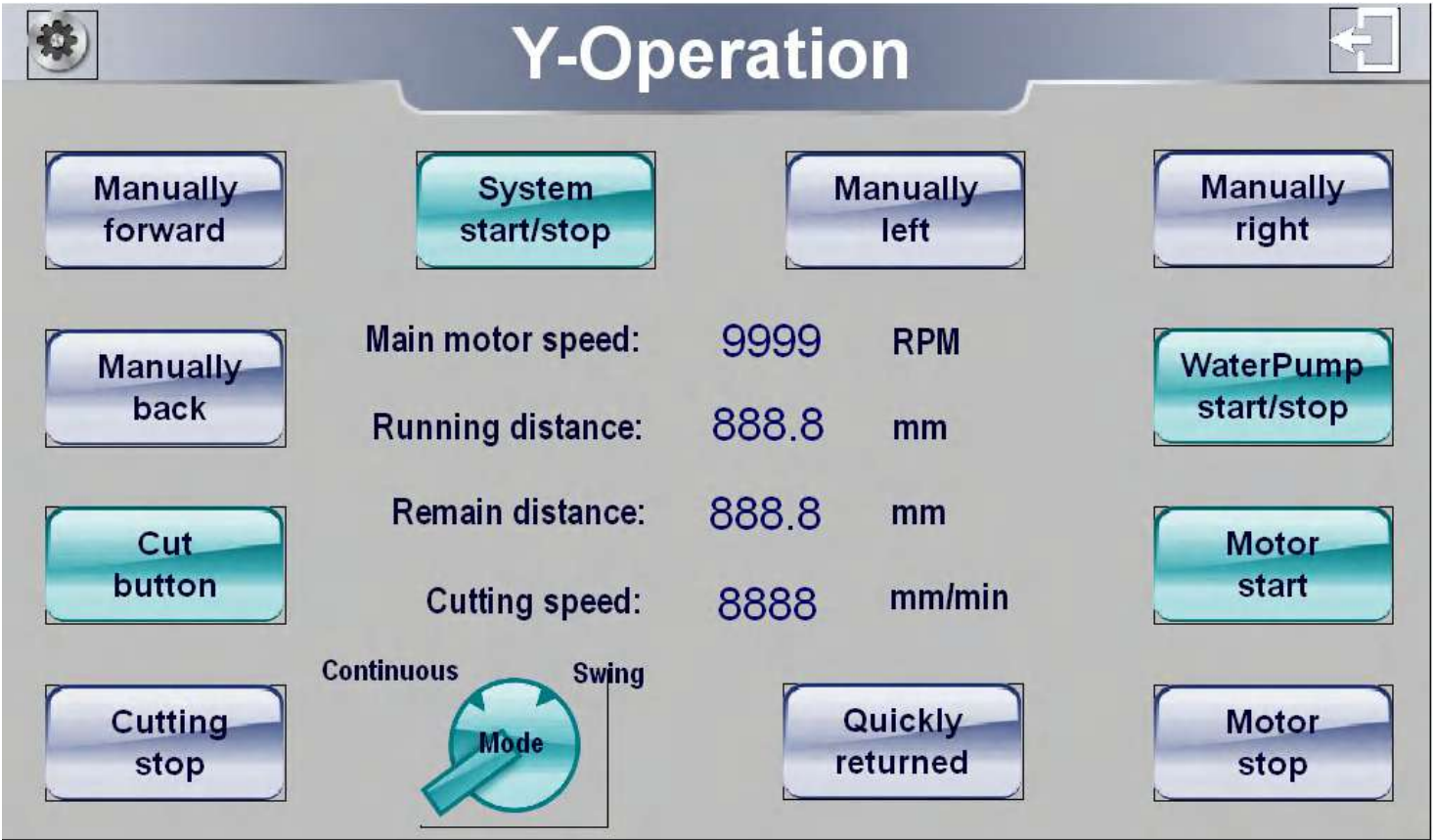
Water Inlet to Water Tank





# Touch Screen Interface

10 inch high-definition color touch screen, visual display and easy to operate.







# Touch Screen Interface

## Parameter Set

Cutting length: 9999 mm

Cutting speed: 9999 mm/min

Main motor speed: 9999 RPM

Cycle index: 9

Horizontal run length: 99.9 mm



Coordinate  
Zero

Light on

Cutting End  
Back

## Debug Parameter

Fine fraction: 99999 step / circle

Pitch: 999.9 mm / circle

Return speed: 9999 mm / min

Swing distance: 9999 mm/ time

Time: 99 : 99 : 99

Date: 99 : 99 : 99

Day: 9

Time set

## Status Display

Motor failure X1:	ON	frequency control Y3:	OFF
Cut limit X2:	ON	X direction Y4:	OFF
Back limit X3:	ON	Motor run Y5:	OFF
Emergency stop X5:	ON	Stepper motor stop Y6:	OFF
Door Limit X6:	OFF	Failure alarm Y7:	OFF
Y Step pulse Y0:	OFF	lighting Y12:	OFF
Y Stepping forward Y1:	OFF	Pump Y13:	OFF
X impulse Y2:	OFF		



# Technical Specification

Product Name	Manual /Auto Abrasive Metallographic Cutter
Model	MCut-90A
Cutting Method	Manual/Automatic, Y axis Table feeding
Cutting Mode	Continuous Cutting, Pulse Cutting
Feeding Speed	Manual / Automatic 1~240mm/min
Cut-off Wheel	Φ300×2×Φ32mm
Max. Cutting Capacity	Φ90mm
Y Axis Travel	260mm
X Axis Travel	40mm
Z Axis Travel	50mm
Spindle Speed	500~3000r/min
Electromotor Power	4kW
Cutting Table	435×300mm, T-slot 12mm
Clamping Vise	Quick Clamp, Jaw Height 60mm
Display and Control	10 inch Touch screen
Power Supply	380V, 50Hz, 12A, Three-phase five-wire
Dimensions	910×935×1350mm
Net Weight	430kg
Water Tank Capacity	80L
Pump Flow	50L/min
Water Tank Dimensions	610×550×680mm
Water Tank Weight	85kg





# Variable Cut-off Wheels Optional

Series	Name	Material	Application	Specification
Series A	Alumina Cut-off Wheel A2: 45~55HRC A3: >55HRC	Aluminum oxide (Brown corun- dum) Resin bond	For cutting of common steel materials, carbon steel, alloy steel, cast iron, unquenched steel, etc.	(250×1.2×32)(250×1.5×32) (250×2×32)
				(300×1.5×32)(300×2×32)
				(350×2.5×32)
				(380×2.8×32)
				(400×3×32)
Series B	Alumina Cut-off Wheel B2: 45~55HRC	Aluminum oxide (White corun- dum) Resin bond	For cutting of high-quality carbon steel, alloy structural steel, tool steel, bearing steel, stainless steel, high-speed steel and high hardness quenched steel, etc.	180×1×22
				205×1.2×32
				(250×1.2×32)(250×1.5×32)(2 50×2×32)
				(300×1.5×32)(300×2×32)
				(350×2.5×32)
Series C	Silicon Carbide Cut-off Wheel	Silicon Carbide Resin bond	For cutting of non-ferrous metal materials (copper, aluminum, zinc, titanium, cast aluminum, tung- sten-molybdenum alloy, cemented carbide, etc.) and non-metallic brittle materi- als (glass, ceramics, rock, etc.).	(250×1.2×32)(250×1.5×32) (250×2×32)
				(300×1.5×32)(300×2×32)
Series D	Alumina Cut-off Wheel D2: 45~55HRC	Aluminum oxide (Chromium corundum) Resin bond	For cutting of high vanadi- um high speed steel, alloy steel, tool steel, and high toughness, high viscosity, burn-prone materials, etc.	(250×1.5×32)(250×2×32)
				(300×1.5×32)(300×2×32)
Customized	Alumina Cut-off Wheel (Red sand)	Aluminum oxide Resin bond	For cutting of hard ferrous metals. (60HRC)	(250×1.2×32)(250×1.5×32) (250×2×32) (300×1.5×32)(300×2×32)

# Variable Cutting Discs Optional

Series	Name	Material	Application	Specification
Ultrathin Precision Cut-off Wheel	Diamond Cut-off Wheel	Diamond Bronze bond	For cutting of plastics, rubber, dental orthopedic materials, high hardness ceramics, glass, electronic components, printed circuit boards, non-ferrous metal materials, rocks, non-ferrous composite materials, etc.	(100×0.7×12.7)
				(180×0.8×22)
				(200×1×32)
				(250×1.2×32)
				(300×1.5×32)
	CBN Cut-off Wheel	CBN Resin bond	For cutting of iron-based metals, super alloy materials, cobalt-based alloys, nickel-based alloys, high-carbon alloys, high-speed steel, tungsten-molybdenum alloys, heat-resistant alloys, cast magnets, titanium alloys, etc.	(100×0.7×12.7)
				(180×0.8×22)
				(200×1×32)
				(250×1.2×32)
				(300×1.5×32)
	Petrographic Cut-off Wheel	Diamond Bronze bond	For cutting of petrographic materials.	(250×2×32)
Saw Blade	Toothed Saw Blade	Cemented carbide	For cutting of aluminum, aluminum alloy and other high viscosity materials.	(180×1.8×25.4)
				(200×2×32)



Standard Alumina Cut-off Wheel



Red sand Resin Cut-off Wheel



Silicon Carbide Cut-off Wheel



White Corundum Cut-off Wheel



Chrome Corundum Cut-off Wheel



Diamond Cut-off Wheel



CBN Cut-off Wheel



Petrographic Cut-off Wheel



Toothed Saw Blade





# Packing List

Name	Specification	Qty
Machine Mainframe	/	1 set
Water Tank	Magnetic Circulating	1 set
Cut-off Wheel	$\Phi 300 \times 2 \times \Phi 32$ mm, Resin cut-off wheel	2 pcs
Cutting Fluid	3kg	1 bottle
Spanner	14×17mm, 24×27mm	each 1 pc
Water Inlet Pipe	1/2 Metal pipe	1 pc
Water Outlet Pipe	$\Phi 48$ mm	1 pc
Fan Pipe	/	1 pc
Fan	/	1 pc
Usage Instruction Manual	/	1 copy



Cut-off Wheel



Cutting Fluid



Water Tank



## Optional Accessories

Name	Specification
Clamping Vice	Horizontal
Clamping Vice	Vertical
Resin Cut-off Wheel	(300×1.5×32)(300×2×32)
Silicon Carbide Cut-off Wheel	(300×1.5×32)(300×2×32)
White Alundum Cut-off Wheel	(300×1.5×32)(300×2×32)
Chrome Corundum Cut-off Wheel	(300×1.5×32)
Diamond Cut-off Wheel	(300×1.5×32)
CBN Cut-off Wheel	(300×1.5×32)
Cutting Fluid	Z0703B Synthetic Cutting Fluid



Vertical Clamping Vice



Horizontal Clamping Vice