

AR1300/2300/3300/4300

PRECISE CNC RECIPROCAL WIRE-CUT EDM AR SERIES



ADSPARK

**Technology leads to enterprise development
Service creates client profit**

NOVICK GROUP

Beijing Novick Digital Equipment Co., Ltd.

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AR SERIES

INTRODUCTION & HISTORY



ADSPARK



As a subsidiary company of Novick Group, Beijing Novick Digital Equipment Co., Ltd is a high-tech joint venture, which focuses on providing market with reliable and excellent performance metal cutting and EDM equipments. Until now, **ADSPARK** brand covers five series, fourteen products: precise CNC die-sinking EDM AF series, precise CNC reciprocal wire-cut EDM AR series, precise CNC diamond tools EDM AT series, precise CNC brass wire-cut EDM AW series and precise CNC drilling EDM AD series.



AR1300



AR3300



AR2300



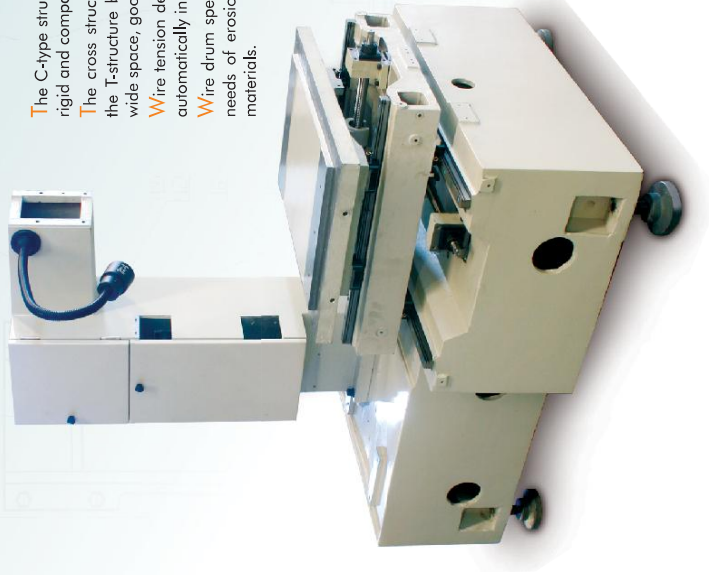
AR4300

The ISO-9001 quality system with effective process control and advanced monitoring measurements ensures products delivered in the condition of good quality and high reliability. Professional sales and services network offers effective and quick technical consulting, training and service support both on theories and applications.

ISO-9001 QUALITY SYSTEM



The ISO-9001 quality system ensures products delivered absolutely under control.



The C-type structure of the machine makes the mechanical body rigid and compact.

The cross structured worktable movement system is located on the T-structure bed, and XY axes with linear guideways ensure wide space, good stability and strong bearing capacity.

Wire tension device allows erosion machining last a longer time automatically in the absence of operators.

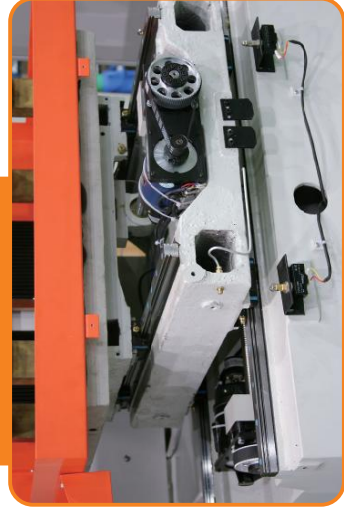
Wire drum speed can be adjusted in several levels to cover the needs of erosion in various kinds of thickness, roughness and materials.

XY axes adopt precise linear guideways, ball-screws and DC servo system which ensure smooth movement and high accuracy.

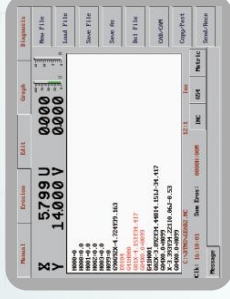
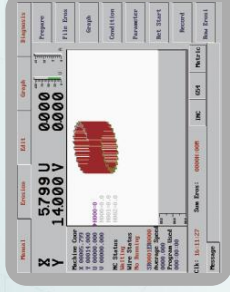
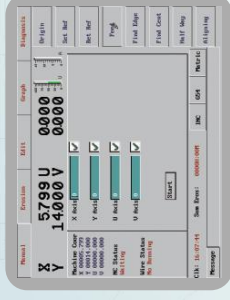
The cross structured U/V axes with linear guideways and precise screws as its movement elements provides taper cutting in high accuracy.

Z-axis can be moved up and down which ensure the possibility of closer distance between wire guide and erosion area. Workpiece accuracy can be achieved by reducing the distance between upper and lower wire guides.

The cross structured worktable



Wire tension device



5 pages of screens, consisted of Manual, Erosion, Edit, Graph, Diagnostic, offer very friendly man-machine interface.

Real-time multitasking control software makes it possible to do preparations for next jobs during erosion.

The friendly man-machine interface can meet the needs both for beginners and experienced operators.

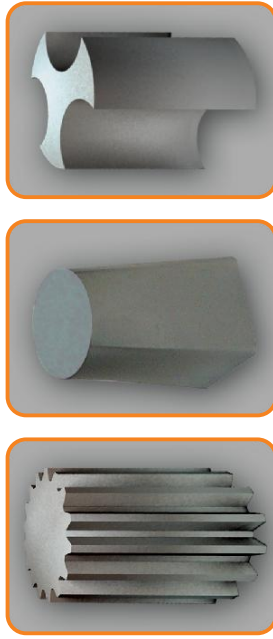
NC programming takes the standard ISO G/M code.

Integrated CAD/CAM programming system allows operators to design NC programs automatically by key-in drawings in machine or receiving drawing files in DXF format from serial communication interface.

With USB interface and LAN communication interface, the machine can exchange datum with programming computers or control center conveniently.



With the small hand-box, operators can operate the machine within short distance.

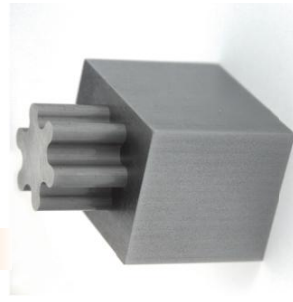


Gear cutting

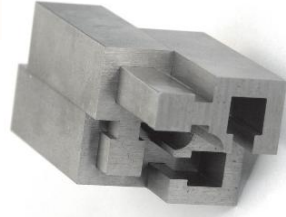
Different shapes for the top and bottom

Normal curve

Super large-scale integrated circuit makes electrical discharge circuit powerful and reliable.
With fuzzy algorithms, status of discharge gaps are optimized adaptively which result in high process efficiency and excellent surface accuracy.
Lots of exception process functions are provided: adaptive retract when short circuit, restart after power failure, cutting recovery while wire broken, wire alignment, etc.
The complete set of EDM machining technology parameters database makes various kinds of cut machining easy and convenient: steel, aluminum, copper, carbide, etc.
A group of machining parameters can be called by one code. The parameters can be modified real-time during erosion. And the modified parameters can also be stored for special use hereinafter.
Excellent multi-times cut function can greatly improve the parts accuracy by using water-based dielectric fluid.



Multiparts cooperation



Item	Unit	AR1300	AR2300	AR3300	AR4300
Main machine					
Size of machine	mm	2000×1465×1727	2300×1675×2220	2355×2060×2425	2650×2360×2465
Weight of machine	kg	1800	2500	3500	4000
Size of worktable	mm	620×400	820×500	1100×800	1300×900
The height of worktable to ground	mm	900	930	980	1020
Travels X/Y	mm	350×300	550×400	800×630	1000×800
Travels U/V	mm	36×36			
Travel Z	mm	150(manual)	350(motorized)	450(motorized)	450(motorized)
Ballscrew of X/Y axes		diameter 25mm, screw-pitch 4mm	diameter 32mm, screw-pitch 4mm	diameter 40mm, screw-pitch 4mm	diameter 40mm, screw-pitch 4mm
Linear Guideways of Axes X/Y		precise linear guideways and ball-screws			
Position feedback of Axes X/Y		encoder			
Resolution of Axes X/Y	mm	0.001			
Resolution of Axes U/V	mm	0.001			
Max.cutting taper		±6°/50mm			
Max.cutting thickness	mm	200	400	500	500
Size of work tank	mm	960×600	1200×700	1500×1000	1660×1100
Workpiece					
Max. workpiece weight	kg	300	800	1500	1500
Max. workpiece size	mm	620×400×200	820×500×400	1100×800×500	1300×900×500
Power supply system					
Standard configuration		380V±10%/50 or 60 Hz			
Power input	KW	2			
Generator and machining technology					
Max.machining current	A	10			
Max.cutting speed	mm ² /min	>160(Cr12)			
Best roughness(Ra)	μ m	≤1.0	≤1.0	≤1.2	≤1.2
Standard technology parameters		steel/copper/aluminium/carbide			
CNC control system					
Display		15"Color LCD			
Keyboard		stainless steel and waterproof keyboard			
Programmable axes		XYUV 4 axes(controlled simultaneously)			
Program mode		CAD/CAM/ISO			
Servo type		XY DC servo			
Software screw-pitch compensation	mm	5			