

# NOVICK

## AR35/55/65/80/100

PRECISE CNC RECIPROCAL WIRE-CUT EDM AR SERIES



### NOVICK GROUP

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

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## Enterprise introduction

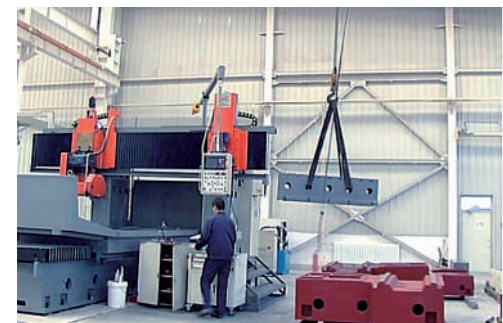
Novick Digital Equipment Co., Ltd. is a high-tech enterprise engaged in research & development, manufacturing and selling higher-level CNC machine tools. The enterprise aims at providing EDM and metal cutting machine tools with reliable quality and excellent performance vs price to global market under the brand "NOVICK".



The company has formed a perfect team with sophisticated experiences ranging from R&D, manufacturing and marketing & sales. Through ten years' efforts, the company has launched more than twenty models of CNC products to the market. These products have been promoted and sold to more than twenty countries and districts of the world including China.



Research and development



Grinding machining

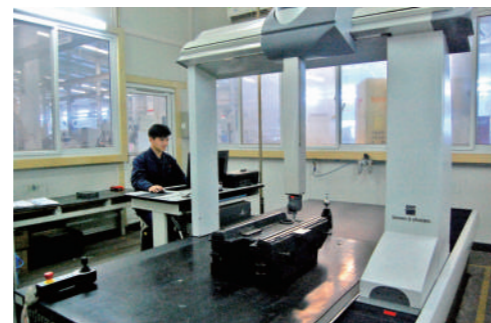


Laser measuring

The company has established ISO-9000 quality control system which ensures all processes are controlled strictly and effectively, including research & development, manufacturing, sales and technical services.



Milling machining



3D measuring



Assembling

## AR series

## Continues improvement and innovations



AR55



AR65



AR80

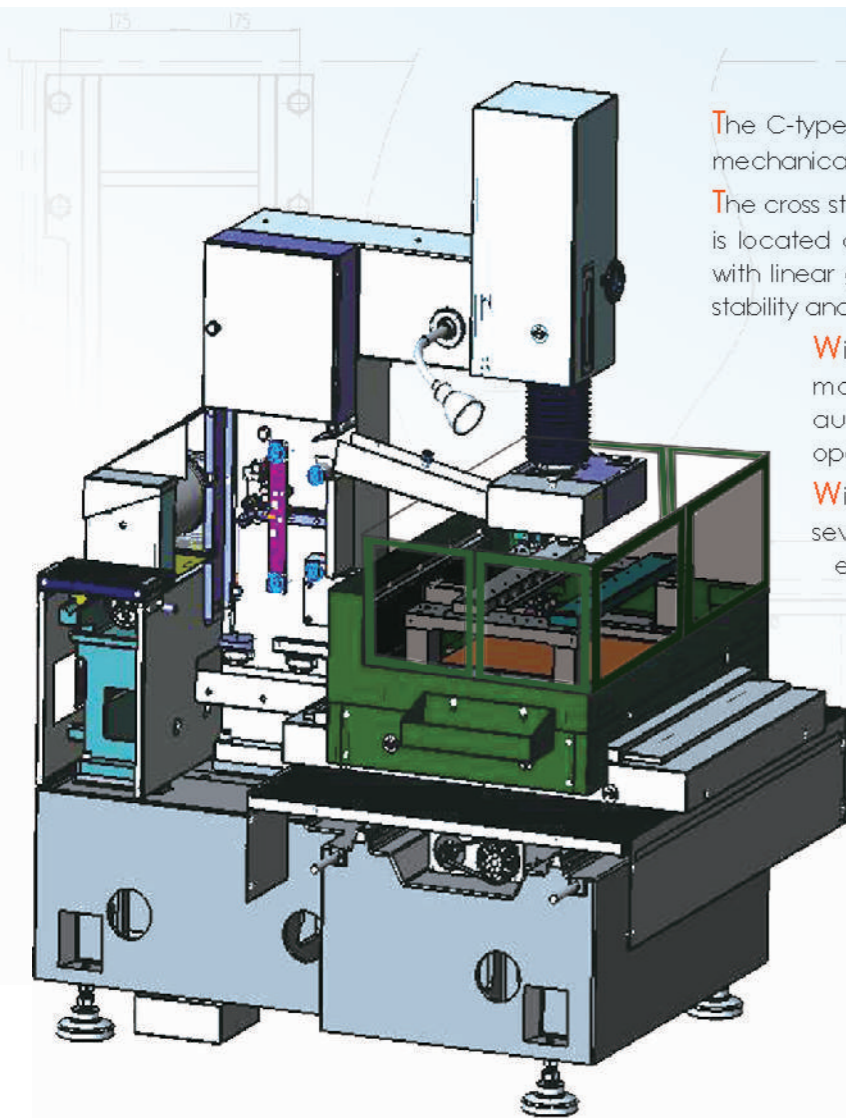


AR100



## The compact, rigid and precise mechanical body

## CNC control system



The servo motor, linear guide ways and ball screw

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 X/Y axes with linear guideways ensure wide space, good stability and strong bearing capacity.

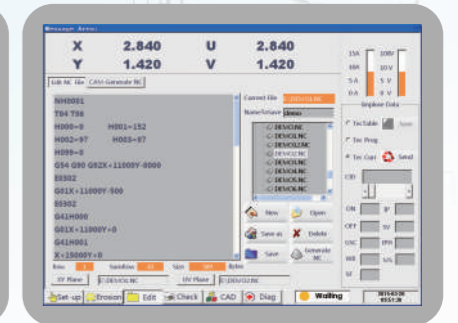
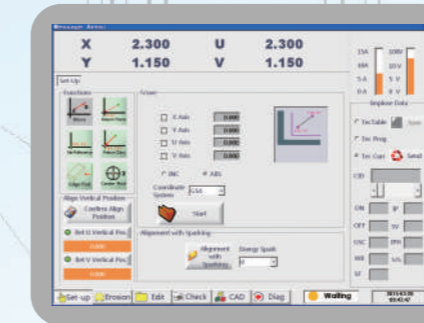
Wire tension device allows erosion machining to last a longer time automatically in the absence of operators.

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

X/Y axes adopt precise linear guide ways, 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 ensures 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.



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

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

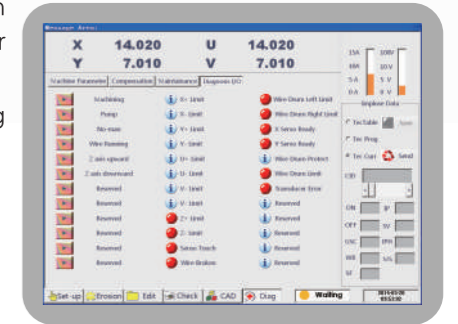
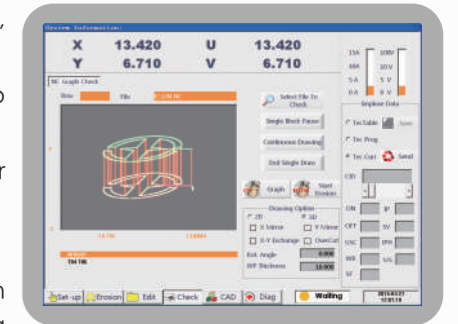
The friendly man-machine interface can meet the needs both for beginners and experienced operators.

NC programming takes the standard ISO G/M code.

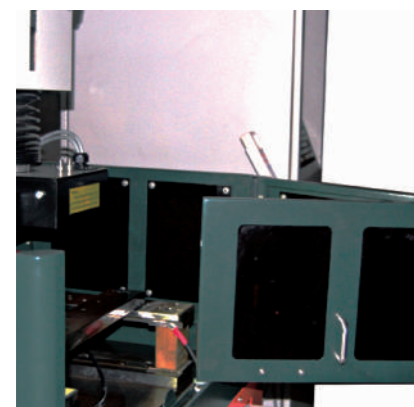
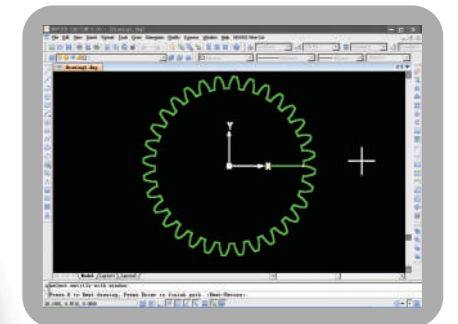
Integrated CAD/CAM programming system allows operators to design NC programs automatically by key-in drawings in machine or receiving drawing files in DXF/DWG format from USB and LAN.

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

Windows XP operation system, it will give you excellent operating experience.



With the remote controller, operators can operate the machine within short distance.



The bidirectional accordion door

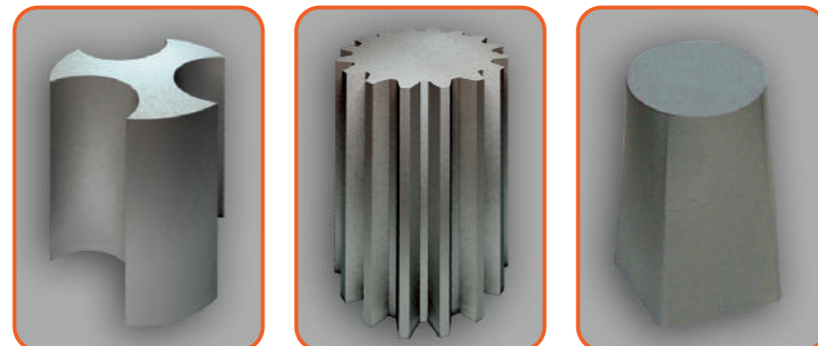


Wire tension device



Wire drum

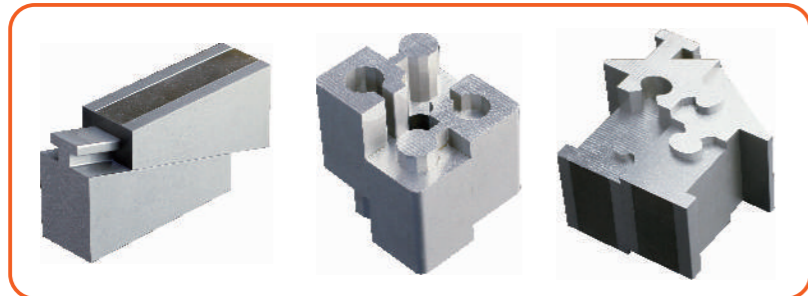
## Generator & machining technology



Normal curve

Gear cutting

Different shapes for the top and bottom



Multiparts cooperation

Super large-scale integrated circuit makes electrical discharge circuit powerful and reliable.

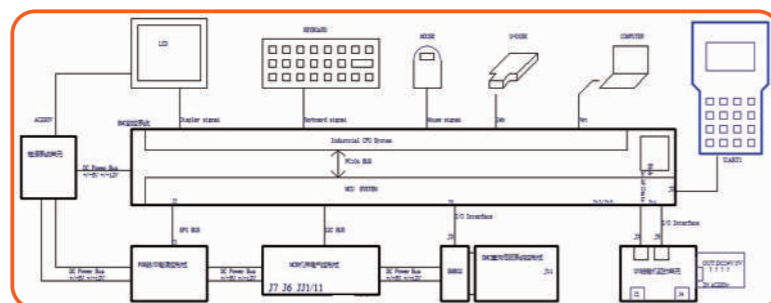
With fuzzy algorithms, status of discharge gaps are optimized adaptively which result in high process efficiency and excellent surface accuracy.

Lots of exceptional disposal 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-timely 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.



Electrical structure

## Technical specifications

Item	Unit	AR35	AR55	AR65	AR80	AR100
Main machine						
Size of machine	mm	2000*1465*1727	2300*1675*2220	2450*1900*2450	2850*2355*2515	3150*2650*2535
Weight of machine	kg	1800	2500	3500	3500	4000
Size of worktable	mm	620*400	820*500	920*600	1100*800	1300*900
Travels X/Y	mm	350*300	550*400	650*500	800*630	1000*800
Travels U/V	mm	36*36				
Travel Z	mm	150 manual	350 motorized	450 motorized	450 motorized	450 motorized
Max. cutting taper		±6°/50mm(without closed wire guide) ±10°/80mm(with closed wire guide)				
Max. cutting thickness	mm	200	400	500	500	500
Size of work tank	mm	960*600	1200*700	1300*800	1500*1000	1660*1100
Workpiece						
Max. workpiece weight	kg	300	1000	1200	1500	2000
Max. workpiece size	mm	960*600*200	1200*700*400	1300*800*500	1500*1000*500	1660*1100*500
Power supply system						
Standard configuration	KW	380V±10%, 50/60HZ 2KVA				
Generator and machining technology						
Max. machining current	A	10				
Max. cutting speed	mm <sup>2</sup> /min	>200(Cr12)				
(Ra) Best roughness(Ra)	μm	≤1.0	≤1.0	≤1.0	≤1.2	≤1.2
Standard technology parameters		steel/copper/aluminium/carbide				
CNC control system						
Equipment		PC/SSD/Color LCD screen/FeRAM memory/USB & LAN interface/ water proof keyboard				
Programmable axes		XYUV 4 axes(controlled simultaneously)				
Program mode		NovickCAD/CAM/ISO				
Servo type		XY DC servo( Optional: AC servo)				XY AC servo
Operation system		Windows XP				

## Options

Cutting aluminum device