

AW310/500/510/1100

PRECISE CNC BRASS WIRE-CUT EDM AW SERIES



ADSPARK

Technology leads to enterprise development
Service creates client profit

NOVICK GROUP

Beijing Novick Digital Equipment Co., Ltd.

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Novick

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AW 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.



AW310T



AW500



AW510

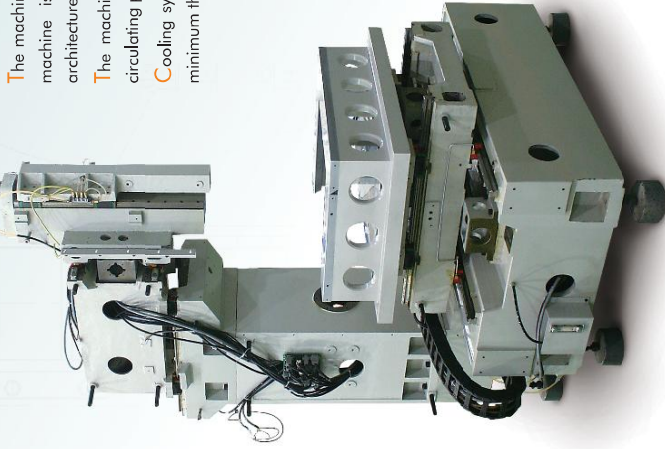
The ISO-9001 quality system with effective process control and advanced monitoring measurements ensures products delivered in the condition of good quality and high reliability. Professional sales and services network offers effective and quick technical consulting, training and service support both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

ISO-9001 QUALITY SYSTEM



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

THE COMPACT, RIGID AND PRECISE MECHANICAL BODY



The machine, designed by the method of limit element analysis, the whole machine is located on the T-structure bed and features compacted architecture, good rigidity, high precision and strong bearing capacity.

The machine is equipped with high pressure pump, quick filling pump, circulating pump, deionized pump and cooling pump.

Cooling system for constant temperature of the dielectric unit ensures the minimum thermal deformation of the machine and workpiece.

Dielectric unit with cooler



Pump group



Linear guideways and ϕ 32mm ball-screws, connected with AC servo system directly makes axes move sensitively and maintain high accuracy.

Lower arm water cooling circulating temperature control device ensures optimum condition of machine heat balance, which ensures the machining accuracy.

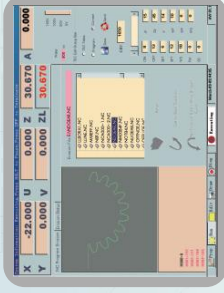


Linear guideways and ball-screws



Lower arm with water cooling

CNC CONTROL SYSTEM



5 pages of screens, consisted of Prepare, Run, Edit, Draw and Diagnostic, offer very friendly man-machine interface.

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

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

NC programming takes the standard ISO G-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 external CAD system.

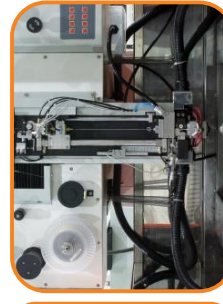
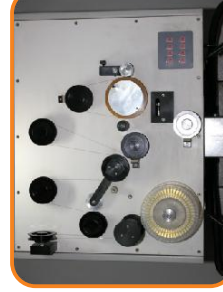
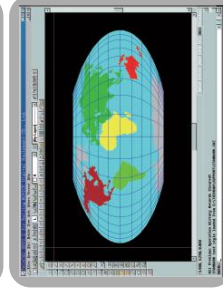
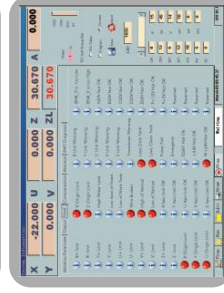
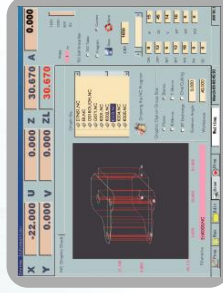
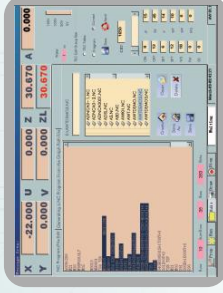
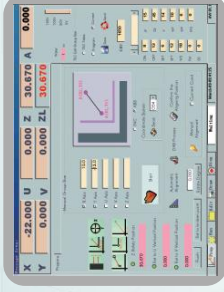
Trouble shooting will be very easy to achieve using Diagnostic function.

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

Corner control strategy: With the corner control strategy the CNC system ensures effectively the shape error of workpiece.

Wire system: The two grades of wire-tension system is used in wire running system, which enables wire tension in a state of dynamic constant by adjusting wire speed adaptively according to the feed back of wire running status.

DC drive system is used in wire sending forth and collection, which ensures smooth movement of wire. The wire speed can be adjusted in 20 levels.





Precise gear, consisted of several parts

Taper gear

Electrical connector mold

Zipper mold

Thickness cutting (TKM=5 μm)

Curve cutting

Big taper cutting (20°)

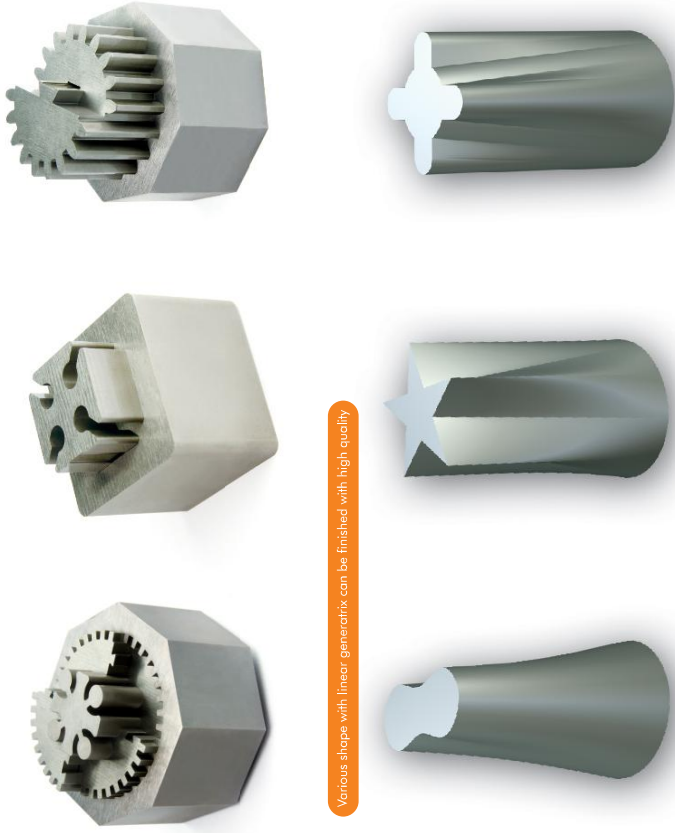
Ir-resistance and high efficient MOSFET discharge power circuit saves energy greatly.

Main cut and trim cuts are all finished under the control of AC generator which reduces greatly the softening of the erosion surface and extending the work life of the work-piece.

High speed IC chips are used in discharge sampling circuits. Every impulse is monitored and adjusted real-timely which prevent brass wire from broken effectively.

Intelligent expert programming system and complete set of technology database enable machine's operation and good performance-getting easily. The technology parameters for cutting steel, copper, carbide are provided in standard machine configuration.

Optional PC/DC/BN generator can meet the cut need of those special harden materials.



Various shapes with linear generator can be finished with high quality

TECHNICAL SPECIFICATIONS

Item	Unit	AW310(T)	AW500(T)	AW510(T)	AW1100(T)
Main machine					
Size of machine	mm	2480×2500×2120	2720×2840×2254	2650×2672×2254	4100×2900×2400
Weight of machine	kg	2500	3500	3500	7000
Travels X/Y	mm	360×250	500×350	500×350	1100×800
Travels U/V	mm		100×100		
Travel Z	mm	220	300	300	350
Capacity of dielectric unit	L	800	800	800	500
Capacity of resin	L		20		
Wire diameter	mm		φ0.15-φ0.3		
Wire tension	N		4-25		
Speed of wire	mm/s		30-200		
Resistivity control			automatic		
Temperature control			automatic		
Full close cover		without	with	without	without
Dielectric door type		pulling down	pulling down	pulling down	water eliminator
Work type			submerged and flushing		flushing
Automatic wire through			AW310T/AW500T/AW510T/AW1100T equipped with automatic wire filling system		
Max.cutting speed	mm ² /min		250		
Max.cutting taper			±25° (50mm)		
Workpiece					
Max.workpiece weight	kg	400	500	500	2000
Max.workpiece size	mm	900×600×210	1000×680×295	1000×680×295	1300×1000×345
Power supply system					
Standard configuration			3 phase AC380V±10%		
Power input	KW		10		
Generator					
Generator type			AC MOSFET generator		
Best roughness(Ra)	μm		≤0.3		
Machining conditions	group		5000		
CNC control system					
Central control unit			industrial PC		
Display			15" Color LCD		
Input type			stainless steel and waterproof keyboard、USB、LAN		
Axes controlled			X/Y/U/V Z 5 axes		
Min. input unit	mm/inch		0.001/0.0001		
Max. input value	mm		9999.9999		
Unit			mm/inch		
Operation system			Windows		