

CNC

EDM NP series



NP series

3-Axes FULL CNC EDM

Dialogue and GM code Programming



JMNC32A+NP50+D32



JMNC43A+NP50+D43



JMNC62+NP50+D62



JMNC1140+NP75+D1140



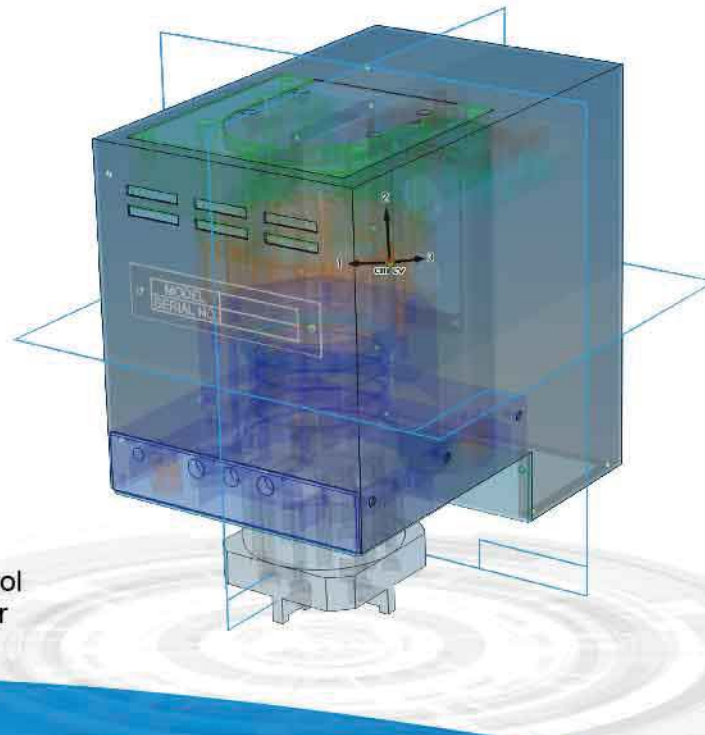
JMNC860S+NP100+D860S



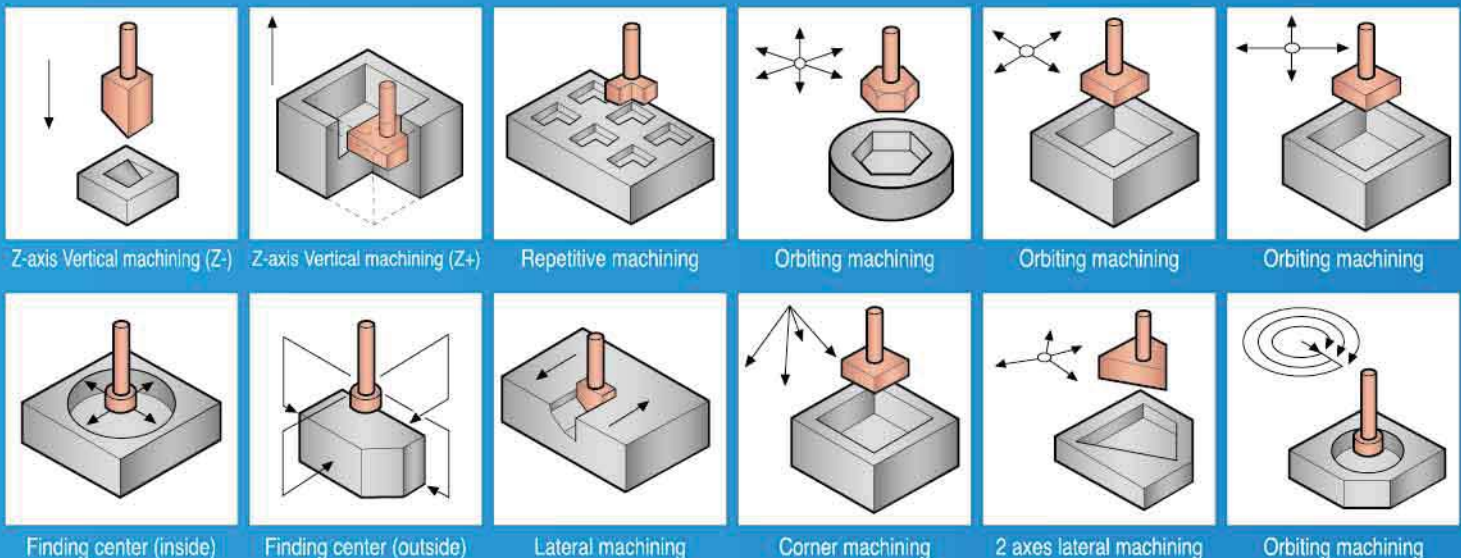
JMNC2210-2HS+NP100x2+D2210-2HS

CNC EDM FEATURES

- 32 bit Industrial grade PC based CNC controller
- 12.1" TFT LCD color panel
- Dialogue programming or GM code programming
- Background editing
- User Macro function
- Multi language support
- Machining path display
- MPG positioning and discharging alignment
- Multi-holes macro programming: Linear/Circular/Array/Arbitrary Multi-holes
- Multi-conditions macro programming for finish machining
- 1000 machining condition tables with 1000 conditions in each table
- 17 kinds of Loran & Orbit function
- 5 kinds of retraction path (Reverse, Zp, Tracking, Center, 45 degree)
- Machine Reference point finding
- Auto center finding
- Auto edge finding
- 3 kinds Manual mode moving (Continue, Increment, No guard)
- Sub-program calling function
- Machining time record
- Most advanced "L.W.F" sparking circuit able to control the peak current rising slope, reduce the corner wear
- Tracking mode OFF-TIME control circuit to prevent Arcing
- Using "MOSFET" sparking circuit to enhance performance
- All PC boards are sectioned in modular box design, reduce maintenance cost
- Dual voltage (high & Low voltage) currents being synchronously discharged allows faster metal removal rate and uniform surface finish

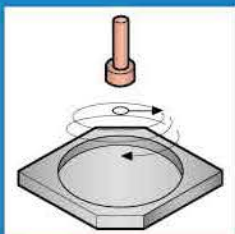
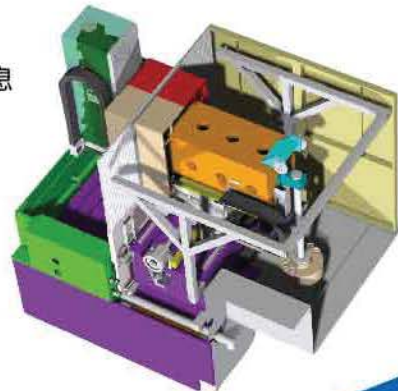
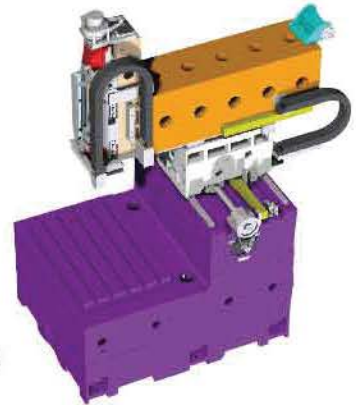


Covering the entire spectrum of CNC EDM technology

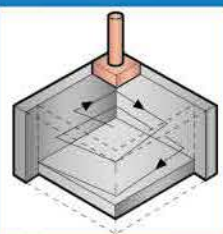


CNC EDM 機械特點

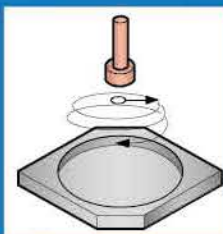
1. 鑄件均採用高強度的鑄鐵鑄造型，並經退火處理且為對稱性的結構設計，具有高剛性及良好的熱平衡穩定性
2. 各軸使用高精度的滾珠螺桿，部分軸向使用大定位栓的螺桿預拉結構，因此在定位精度、機台剛性及運動特性上均極為優良
3. 各軸使用高精密度無餘隙的滾珠/滾柱式軌道，提供高精度的軸向運行導引
4. 各軸軸承使用大角度的精密斜角滾珠軸承，確保軸向及徑向的荷載所需，提供運轉的順暢度及精度
5. 工作台表面經硬化研磨處理，具有絕佳的耐磨耗性並提升使用壽命
6. 各軸均配置高精度及高解析度的光學尺，確保各軸的靜態及動態的尺度精度
7. 先進的各軸傳動機構，可提升放電加工效率、加工穩定性及加工精度
8. Z軸配置電磁式制動器，即時提供Z軸制動所需
9. 機台的潤滑系統使用大容量的注油器，配合高效率的潤滑油迴路，提供各軸可靠的給油，提升零件的使用壽命
10. 各軸採用包覆式的防護結構，確保操作人員的安全並防止粉塵或液體落入機台
11. 油槽及機頭均有噴油或吸油裝置，方便各種工件加工使用
12. 油槽液面高度控制採用無段式，方便快速設定油槽的給油高度
13. 油槽排油系統採用大口徑的排油裝置，能在極短時間內將油槽的加工油排至油箱
14. 油箱使用大流量的PUMP，提供快速的油槽給油
15. 油箱內部採迷宮式隔間，能有效的提升加工油的潔淨度
16. 油箱的過濾系統使用高效率的紙網過濾，提供快速且乾淨的加工油
17. 油箱配置壓力表，即時提供過濾系統及管路內加工油流動是否正常的訊息
18. 部份機型的油箱底部配置高荷載能力的活動輪，方便油箱的移動，以便進行油箱內部的清理或維修
19. 簡潔的機台/油箱/電源箱配置方式，減少佔地面積且方便維修



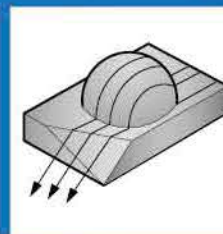
Orbiting machining



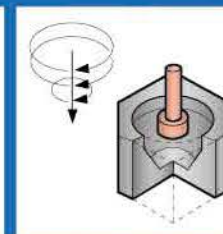
Orbiting machining



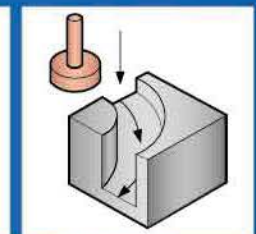
Orbiting machining



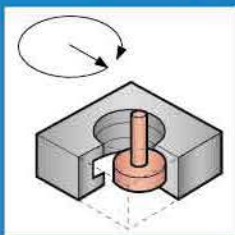
Contour machining



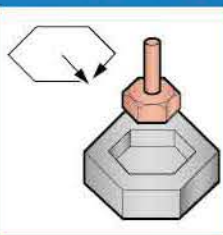
Taper machining



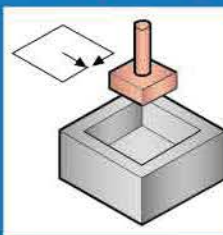
Helical machining
(Only for HQ & NP series)



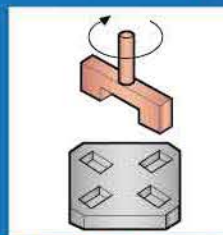
Orbiting machining



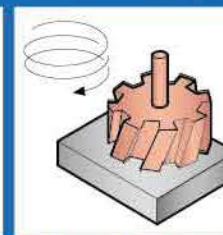
Orbiting machining



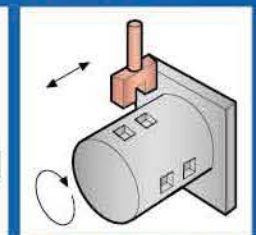
Orbiting machining



C-axis index machining
(option)



C-axis Helical-gear machining
(option)



A-axis index machining
(option)

CONTROL

CNC

» Software Specification

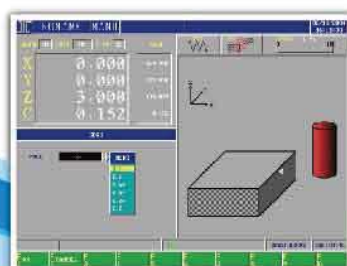
Item	Specification
Language	English / Chinese
Unit	Inch system/Metric system
Programming	Dialog programming / G/M code programming / background programming / expert system auto-programming / RS232
Operation mode	Auto/Manual / Edit/Manual Data Input(MDI)
Screen function	Expert / Graph / Diagnostic / Alarm / Set
Software panel function	DRN / MLK / SBK / BDT / ZLK
Positioning function	Rim Searching / Groove Center Searching / Hole Center Searching / Outer Center Searching / Apex / Sparkle Tooling Correction
Machining function	Orbit Cutting /Cone/Planar Expansion Orbit / Vector Orbit /3-Dimension Orbit / Machining Along Path / Time Limited Machining / Multi-Hole MacroMulti-section Finishing / Cutting with C Axis
Offset function	Tool Length / Tool Radius / Gap / Thread
MLC function	I/O Point / C Point / S Point / A Point / Timer / Counter / Temporary Saver /D Temporary Saver / Real-Time Ladder Diagram Display
General function	Multi-Coordinate System / Coordinate System Zoom Scale / Coordinate System Rotation / Graph Rotation / Machining Path Display / User Macro Command / On-Line Instruction

» Axis Control

Item	Axis
Basic axis	3 Axes
Extended axis	1 (C axis, optional)
Numbers Of Basic Co-axis	3 Axes
Number Of Simultaneously Driving Axis	At most 4 Axes
Number Of Hand Wheel's Controllable Axis	3 Axes(Optional for C Axis)

» System Setting Unit

Item	Minimum Input Unit	Minimum Command Value	Maximum Stroke Setting
Metric	0.001 mm	0.001 mm	9999.999 mm
English	0.0001 inch	0.0001 inch	999.9999 inch
Angle	0.001 deg	0.001 deg	359.999 deg



Edge finding screen



Program editing screen



Auto run screen



Orbit function screen



Orbit editing screen



Expert system editing screen



CIRCULAR_MULTI_HOLE editing screen



ARRAY_MULTI_HOLE editing screen

G Code Table

Mechanism	Function	G code	Group
Positioning Function	Rapid Positioning	G00	01
	No-Guard Rapid Positioning	G05	
	Edge Finding	G80	00
	Groove Center Finding	G82	
	Hole Center Finding	G83	09
	Locate Outer Hole Center	G84	
	Locate Circular (Square) Cylinder Center	G85	
	Apex Finding	G86	
	Home Origin Finding	G81	
	Sparkle Tooling Correction	G89	00
	Automatic return to Reference Point	G28 / G30	
General Machining	3 Axis Linear Cutting	G01	01
	Clockwise Circular Arc Cutting	G02	
	Counter-Clockwise Circular Arc Cutting	G03	
Orbit Macro Machining	Circular Macro	G71	09
	Square Macro	G72	
	Vector Macro	G73	
	Fan-Shaped Macro	G74	
Loran Machining	Standard Loran Machining	G76	01
	Loran Pattern Rotation	G45 / G46	00
	Plane Setting of Expansion Loran	G37	00
	Angular Loran	G25 / G26	00
Multi-hole Macro Machining	Linear/Circular/Arc/Square/Random Mode of Multi-hole Machining	G101~G105	Macro
Time Limited Machining	Cutting Time Setting For Time Limited Machining	G48	00
Macro	Call Macro Command	G65 / G66 / G67	12
Coordinate System Function	Machine Coordinate System	G53x	00
	Working Coordinate Systems	G54~G59, G154~159, ..., G954~959	14
	Polar Coordinate System Command	G15 / G16	17
	Zoom Scale	G50 / G51	11
	Coordinate System Rotation	G68 / G69	16
	Absolute/Incremental setting	G90/G91	03
	Setting Coordinates of Current Position	G92	00
	Selection of Working Plane	G17 / G18 / G19	02
	English/Metric Conversion	G20 / G21	06
Compensate Function	Tool Radius Compensation	G40 / G41 / G42	07
	Tool Length Compensation	G43 / G44 / G49	08
C Axis Function (Optional)	C Axis Home Origin Finding	G81	00
	C Axis Helical Machining	G34	01
	Helical Positioning	G35	
	C Axis No-Guard Helical Positioning	G33	
Other	Dwell	G04	00
	Data Setting	G10	00
	Condition table change	G38	00
	Stored Stroke Check Function	G22 / G23	04
Pumping Mode	Pumping Along Current Machining Axis	B0	-
	Pumping Upward Along Z Axis	B1	-
	Pumping Along Machining Path	B2	-
	Pumping to the center and then Along Current Machining Axis	B3	-
	45°back to the Center and then Along Current Machining Axis	B4	-

Specification Sheet



Machine Unit Specification

Item	Unit	JMNC32A	JMNC43A	JMNC50	JMNC53	JMNC60	JMNC62	JMNC1140	JMNC1142	JMNC860S
Work table size	mm	600x300	650x400	750x520	800x550	900x650	900x650	900x650	900x650	1200x700
X travel	mm	300	400	500	500	600	600	1150	1150	800
Y travel	mm	200	300	400	350	400	400	400	400	600
Z travel	mm	300	350	350	350	350	350	350	350	500
Ram platen to work table	mm	167~467	290~640	270~620	310~660	255~605	446~796	255~605	446~796	420~920
Max. electrode weight	kgs	60	75	150	150	150	150	150	150	350
Max. workpiece weight	kgs	500	800	1200	1600	2000	2000	2000	2000	2400
Work tank (W x D x H)	mm	845x510x300	1080x560x340	1290x715x420	1160x670x340	1300x900x430	1300x900x430	1500x900x430	1500x900x430	1500x1100x615
Weight of machine unit	kgs	1150	1400	1800	2800	3000	3000	3400	3400	5000
Outside dimensions (WxDxH)	mm	1675x1200x2075	1480x1900x2340	1875x1730x2375	1430x2175x2330	1870x2495x2335	1870x2495x2660	2165x2495x2335	2165x2495x2660	2000x3300x3200

Dielectric Tank Specification

Item	Unit	D32	D43	D50	D53	D60	D62	D1140	D1142	D860S
Capacity	L	280	320	570	600	800	800	1200	1200	1259
PUMP	HP	0.5HPx1	0.5HPx1	0.85HPx1	0.85HPx1	0.85HPx2	0.85HPx2	0.85HPx2	0.85HPx2	1.5HPx2
Net weight	kgs	built-in	100	150	180	200	200	300	300	450
Filter method		Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter
Outside dimensions (WxDxH)	mm	built-in	850x1150x1000	950x1400x1100	2060x800x1160	1200x2000x1100	1200x2000x1100	1350x2000x1100	1350x2000x1100	1900x1300x580

Machine Unit Specification

Item	Unit	JMNC1060S	JMNC1270S	JMNC1470S	JMNC1675S	JMNC1880S	JMNC2010S	JMNC2210S	JMNC2210-2HS
Work table size	mm	1250x750	1350x820	1700x950	1850x1000	1850x1000	2150x1100	2250x1100	2250x1100
X travel	mm	1000	1200	1400	1600	1800	2000	2200	Two head total travel 1550
Y travel	mm	600	700	700	750	800	1000	1000	1000
Z travel	mm	500	500	500	550	600	600	600	600
Ram platen to work table	mm	420~920	510~1010	550~1050	500~1050	450~1050	660~1260	660~1260	700~1300
Max. electrode weight	kgs	350	400	450	450	450	500	500	500
Max. workpiece weight	kgs	2750	3000	3800	4200	4800	5500	6000	9500
Work tank (W x D x H)	mm	1700x1100x615	1800x1200x615	2000x1350x615	2200x1350x650	2400x1350x700	2610x1550x700	2810x1600x750	3100x1700x800
Weight of machine unit	kgs	5500	6000	8000	8300	8500	12000	13000	14500
Outside dimensions (WxDxH)	mm	2200x3400x3200	2300x3600x3260	2500x4000x3250	2700x4000x3250	2900x4100x3250	3100x4450x3570	3200x4500x3570	3600x4540x3740 (Include leveling pad)

Dielectric Tank Specification

Item	Unit	D1060S	D1270S	D1470S	D1675S	D1880S	D2010S	D2210S	D2210-2HS
Capacity	L	1445	1458	1836	2436	2784	3320	3963	5097
PUMP	HP	1.5HPx2	1.5HPx2	1.5HPx2	1.5HPx2	1.5HPx2	1.5HPx2	1.5HPx2	1.5HPx2 1HPx2
Net weight	kgs	500	550	600	700	750	850	950	1050
Filter method		Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter
Outside dimensions (WxDxH)	mm	2100x1350x580	2200x1350x580	2400x1500x580	2800x1450x600	2900x1600x600	3100x1700x630	3400x1850x630	3540x1800x830

NP Series Generator (CNC)

Item	Unit	NP50	NP75	NP100
Max. Machining current	A	50	75	100
Total power input	KVA	4.5	7	9
Max. Metal removal rate	mm ³ /min	390	610	770
Electrode wear ratio	%	0.20	0.20	0.20
Best surface roughness	um Ra	0.20	0.20	0.20
Net weight	kgs	320	330	360
Outside dimensions (WxDxH)	mm	680x1070x1820	680x1070x1820	680x1260x1820

※ ALL specifications and design subject to change without notices.

STANDARD ACCESSORIES

Paper filters	1 set
Tool box	1 pcs
Flushing nozzle	1 set
Drill chuck	1 pcs
Clamping kit	1 set
Electrode holder	1 pcs
Halogen machine work lamp	1 pcs
Leveling pads	1 set
Linear scale (installed on machine)	1 set

OPTIONAL ACCESSORIES

Auto fire extinguisher
Permanent magnetic table
Dielectric cooler
Auto Electrode Changer
• 3 or 4 Tools for JMNC32A & JMNC43A
• 5 Tools for JMNC50 & JMNC53
• 6 Tools for JMNC60 ~ JMNC2210S
C-axis
Spare PCB set



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