



#### **CREATOR INDUSTRY (SUZHOU) CO., LTD.**

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AGENT:







#### LERD

#### **DESIGNED TO KEEP MOLD MAKERS AHEAD**

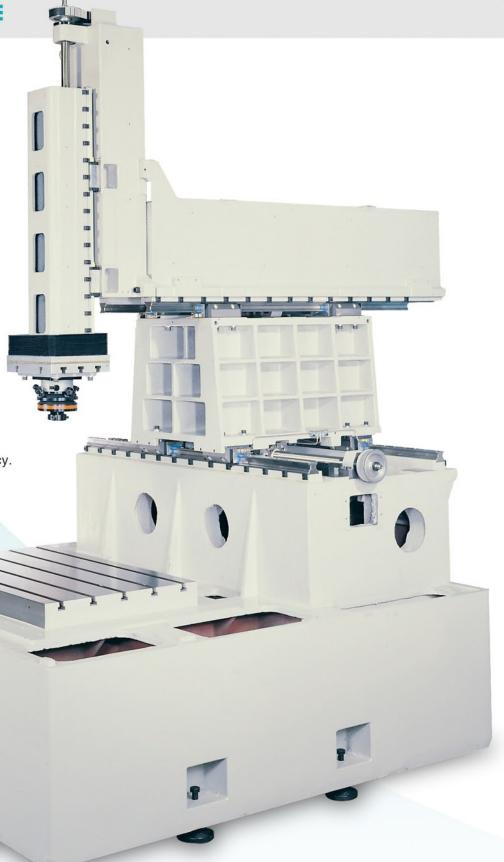
Lead CNC EDM offers the ability to produce exceptional surface finishes with the ultimate in CNC cycle capability and machining efficiency to reduce cycle time.

Lead CNC EDM combines advanced CNC control logic with extra rigid construction to insure positioning accuracy and repeatability from cycle to cycle. A high performance power supply generates consistent current to optimize surface finish. And with the widest range of models in the industry, making a choice for your application is a breeze.





- Precision linear ways on all axis assures smooth movement and high accuracy.
- All structural casting are made of FC-30 cast iron, tempered and stress relieved for deformation free performance.
- High precision spindle assembly insures excellent eroding performance.
- Table surface is hardened and precision ground, assuring high machining accuracy and long service life.
- Three axes movements are transmitted by precision ball screws.
- Three axes are driven by DC servo motors.
- $\bullet$  Three axes are equipped with  $1\mu$  linear scale for closed loop control.
- Each machine is compensated by laser interferometer, ensuring position reliability and increasing machine efficiency.





Model		1160	1270	1570	1880	2390	3090
Table travel (X axis)	mm	1100	1200	1500	1800	2300	3000
Table travel (Y axis)	mm	600	700	700	800	900	900
Work head travel (Z2 axis)	mm	450	500	500	580	580	580



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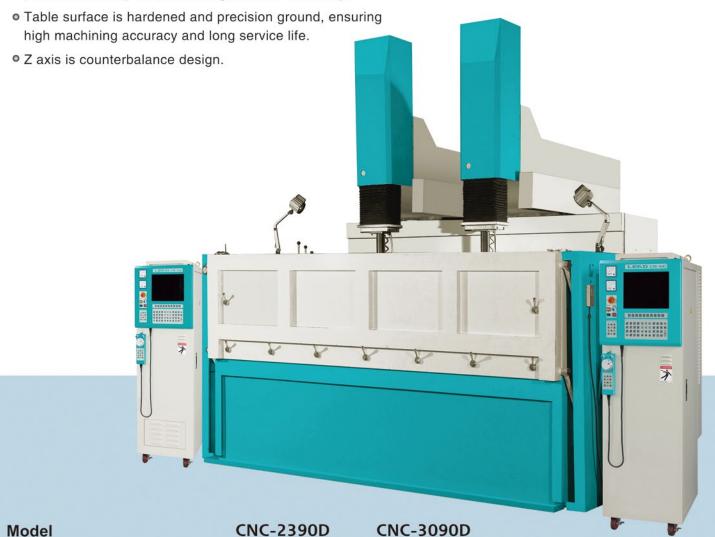
Table travel (X axis)

Table travel (Y axis)

Work head travel (Z2 axis)

# RAM Type Double Quill Machine

- Two work heads design, the independent controllers can execute different programs so improve the efficiency up to two times.
- The work tank door elevates and descends by auto hydraulic equipment.
- X,Y axis uses high precision roller slide way, uses C5 grade high precision ball screw, with 1 μ unit linear scale full close loop feedback control.
- Each machine is compensated by laser interferometer, ensuring position reliability and increasing machine efficiency.



2400 / 2400

900 / 900

580 / 580

1450 / 1450

900 / 900

580 / 580

mm

mm

C Type

Machine Structure

- Compact construction with small footprint.
- The structural parts are manufactured from high quality cast iron (FC-30), tempered and stress relieved for deformation-free performance.
- Base structure casting uses FC35 for high rigidity and reliability.
- All-in-one structure design, lessening space requirement.
- X, Y axis uses high precision roller slide way, uses C5 grade high precision ball screw, with 1μ linear scale full close loop feedback control.
- Each machine is compensated by laser interferometer, ensuring position reliability and increasing machine efficiency.
- Table surface is hardened and precision ground, ensuring high machining accuracy and long service life.
- "GRUNDFOS" horizontal pump.





### **Economic Type**

	CNC-341S
mm	400
mm	300
mm	260
mm	210
	mm mm



#### **Standard Functions**

- Built-in parameter table for standard materials.
- 50 sets of workpiece coordinates.
- Automatic depth table creating function.
- Automatic setting for square circular pattern.
- Machine trouble record function.

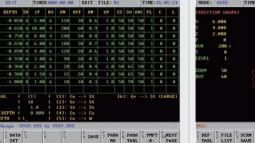
#### **Optional Functions**

- Path retrace orbital function.
- 3D coordinate rotating function.
- 3D orbital function.
- Automatic offset compensation function for C-axis.
- Automatic spark reset function.
- MPG function.
- · C-axis simultaneous eroding.
- LORAN discharge function.
- Cone type discharge function.
- 3D path working capacity
- Machine/human dialogue
- Auto parameter table

#### ▶ Convenient Machining Programs Input Interface



Conversational setting for machining hole positions list.



Conversational automatic creating of depths list.

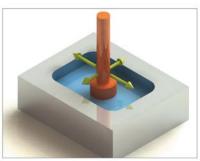
# TABL LIST SAVE PUMP ZERO SHEW TRUM TRUM PARA PARA P TABL LIST SAVE PUMP ZERO RUN RUN RUN B PLOT SET TOSLEE P

Machining mode simulation graphic.

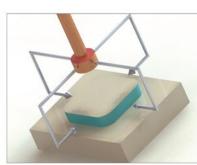
#### ▶ Touch Point Function



touch point function by automatic and manual modes, and 50 sets of touch point memory. The edgesearch values are automatically memorized into machining programs.



In addition to single point touch function, the control also allows for automatic internal center touch.

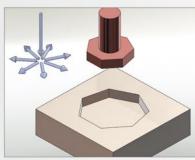


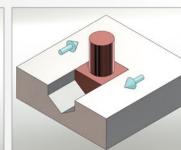
Automatic external center touch.

#### ▶ Orbital Eroding Function (Standard orbital eroding function display)



The orbital eroding function provides paths from simple arcs and to complex 3D movements and path return to generate intricate

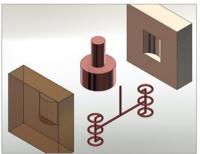


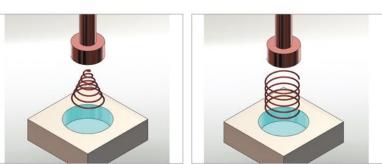


squares shapes.

#### ➤ Orbital Eroding Function (Advanc∈d orbital eroding function display)

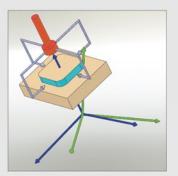


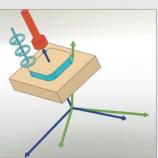




Standard LORAN and conical LORAN functions.

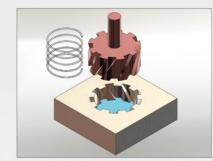
#### **▶** Coordinate rotation Function



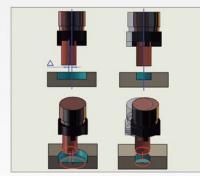


The coordinate rotation function permits machining axes to be rotated as desired. With this function, the machine can perform point touch after 3D rotation, single/multiple points machining or orbital eroding.

#### **▶**C-axis Function



When applying the optional C-axis function, the C-axis and Z-axis can perform machining simultaneously. This function is suitable for helical eroding operation such as helical gear, etc.



In addition to the standard angular positioning function, the C-axis also provides real time compensation function for rotating part. In case of mold offset on C-axis, the X and Y axis will move simultaneously according to rotating angle. This will ensure centering for part on C-axis.





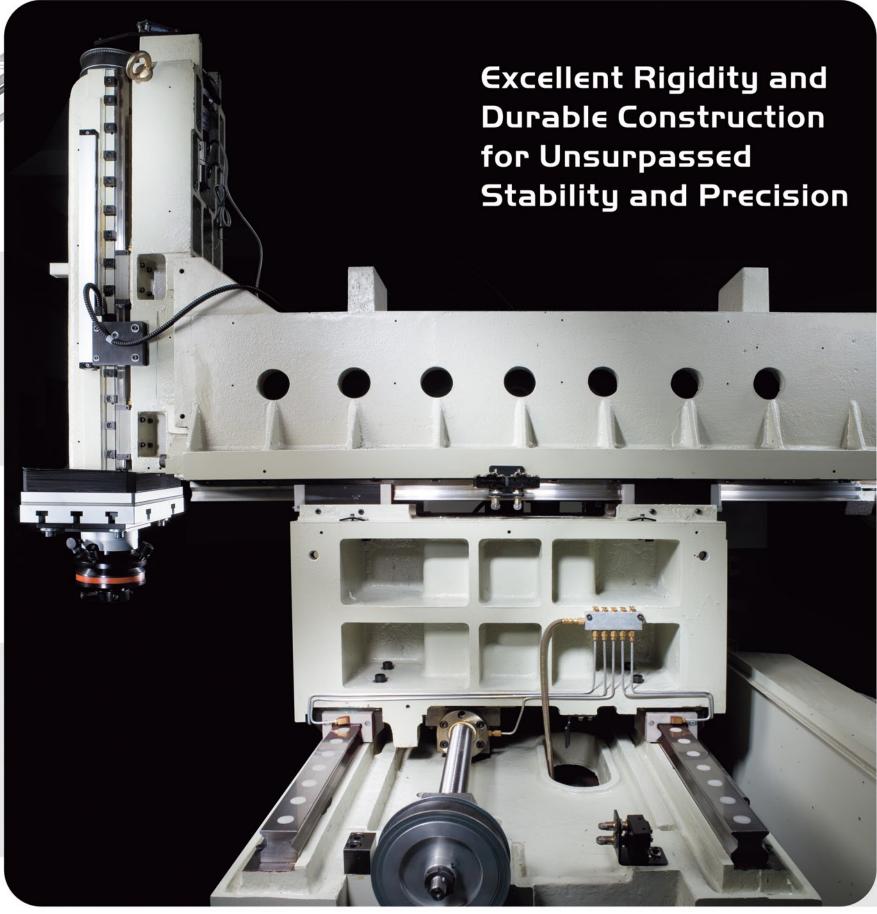
# Precision Linear Ways on 3 Axes

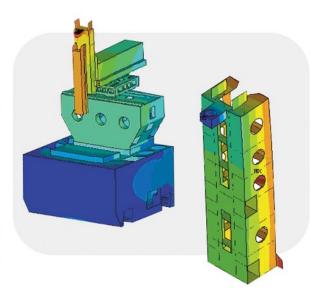
- X, Y-axis employ roller type linear ways, exhibiting outstanding structural rigidity and machining stability.
- Z-axis is equipped with ball type linear ways for minimum friction and vibration.



#### **Precision Ball Screw**

Three axes are transmitted by
 C5 grade precision ball screws.





#### Finite Element Analysis (FEA)

The structural parts of Lead CNC EDM are designed and analyzed by applying the advanced Finite Element Analysis (FEA). This enables Lead machines to achieve the best machine rigidity, stability and dynamic performance of operation.



#### $1\mu$ Linear Scale on 3 Axes

Three axes are equipped with  $1\mu$  differential type precision linear scales, providing closed loop control. The linear scale features excellent anti-interfering signal performance while ensuring high positioning accuracy.

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- PC BASED controller
- PENTIUM 586 micro processor
- 50A 250A working current

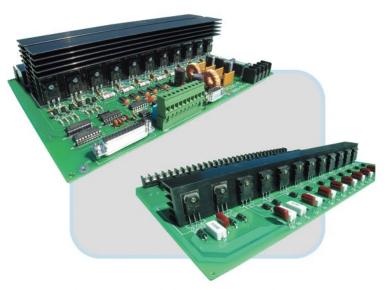


**Specially Designed for Tungsten Carbide Applications** 



#### **Features of CNC Control**

- The controller employs INTEL PENTIUM industrial grade mother board.
- 15" TFT LCD monitor.
- Conversational man-machine interface.
- Automatic table type editing for 10-step machining programs creation.
- Tungsten steel, extra hard and special material eroding circuit.
- MPG handwheel for micrometric positioning adjustment.



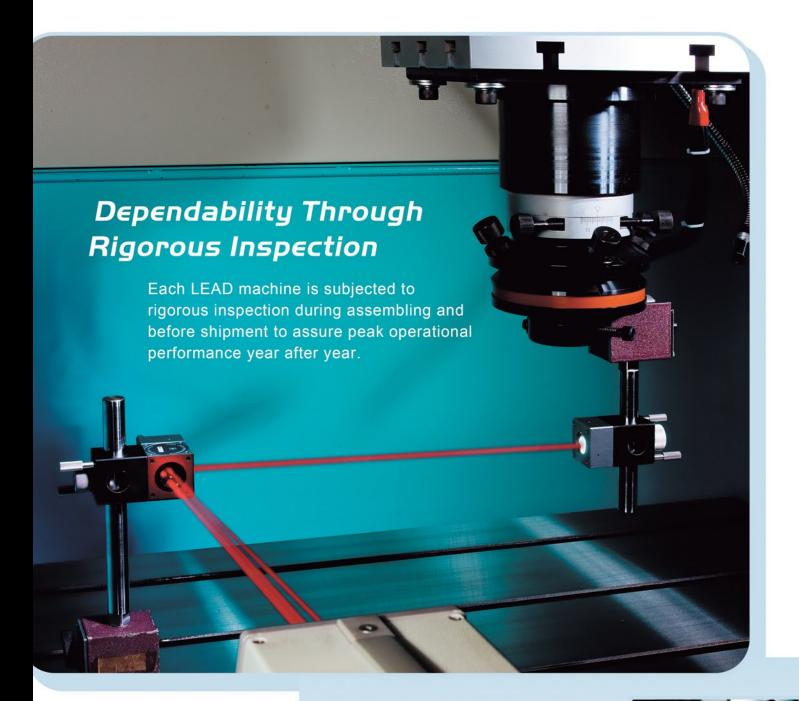
#### **Operational Interface**

- Conversational Chinese/English operational
- Graphic automatic touch mode interface.
- Table type program input interface.
- Selection type 2D/3D orbital setting.
- Diagnostic interface for system I/O.
- Graphic display interface for moving path.

#### **Features of Power Supply Unit**

- Isolated modular circuit design increases convenience of maintenance and stability of circuit.
- Full digital discharge pulse control combined with the use of FPGA extra large IC components.
- This permits high efficiency discharge pulse control, minimizes ARC and greatly upgrades discharging efficiency.
- Extra hard material discharge circuit is available upon request.





# Excellent for Sophisticated Micro Finish. High Precision and Extra Hard Material Machining.

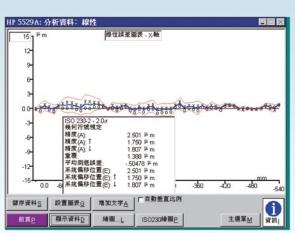


The Lead CNC EDMs are precision engineered machines incorporating all the advanced features that have been requested for mould and die industries. Lead EDMs can help you reach new levels of accuracy, surface finish and productivity.

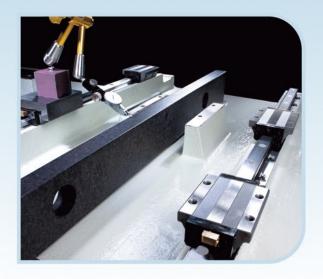
#### **Versatile Applications**

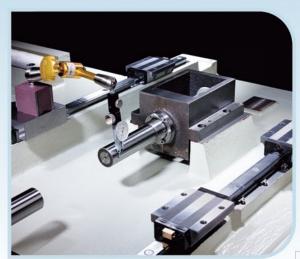
- Precision tungsten steel moulds.
- Electronic parts moulds.
- Injection moulds.
- Mirror-finish injection moulds.
- Die casting moulds.
- Progressive IC punching moulds.

Axis travel accuracy is assured through inspections during assembling.











# **Excellent Accessories creat more** convenience operation

#### Standard Accessories (Each Machine)

- Automatic fire extinguisher
- Magnetic nozzles

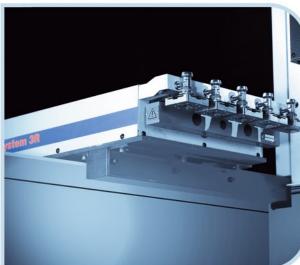
- Halogen lamp
- Drill chuck

Filters

Tool box and kit

#### Optional Accessories

- ATC
- C axis
- Magnetic table



3R ATC system (4~6 tools)



C axis simultaneously eroding



Oil cooler



**Magnetic table** 



## **Specifications of Machine Unit C Type**

Model		CNC-341S
Table travel (X axis)	mm	400
Table travel (Y axis)	mm	300
Quill travel (Z1 axis)	mm	260
Work head travel (Z2 axis)	mm	210
Work table dimensions (LxW)	mm	650×400
Distance between plate and table	mm	195-625
Work tank inner dimensions (WxDxH)	mm	1066x560x424
Max.capacity of dielectric fluid	Litre	400
Max.electrode weight	kg	75
Max.workpiece weight	kg	1000
Machine unit dimensions (WxDxH)	mm	1210x1300x2150
Machine unit weight	kg	950



## Specifications of Machine Unit RAM Type

Model		CNC-430	CNC-640	CNC-850	CNC-1160	CNC-1270	CNC-1570	CNC-1880	CNC-2390	CNC-3090
Table travel (X axis)	mm	400	600	800	1100	1200	1500	1800	2300	3000
Table travel (Y axis)	mm	300	400	500	600	700	700	800	900	900
Quill travel (Z1axis)	mm	: <b>.</b> :	-	-	-	-	-	-		-
Work head travel (Z2 axis)	mm	320	350	400	450	500	500	580	580	580
Work table dimensions (LxW)	mm	650x320	900x500	1000x600	1250x800	1400x900	1600x900	2000x1000	2500x1200	3200x1200
Distance between plate and table	mm	355-675	410-760	450-850	500-1000	596-1084	596-1084	600-1200	650-1250	700-1300
Work tank inner dimensions (WxDxH)	mm	990x600x455	1260x816x542	1600x983x588	2000x1300x700	2150x1150x700	2150x1150x700	3000x1500x650	3500x1800x650	4500x1800x650
Max.capacity of dielectric fluid	Litre	450	850	1150	1810	2300	2300	3585	5000	5520
Max.electrode weight	kg	75	100	120	300	200	200	400	450	450
Max.workpiece weight	kg	1000	1500	2000	3500	4000	4000	6500	8000	15000
Machine unit dimensions (WxDxH)	mm	1150x1700x2280	1520x2325x2465	1850x2800x2750	3400x3350x3200	2500x2500x2040	2500x2500x2040	4690x3880x3450	5400x4300x3450	5700x4450x3600
Machine unit weight	kg	2300	4150	5400	5500	6190	6190	13000	15000	23000

## Specifications of Machine Unit RAM Type Double Quill

Model		CNC-2390D	CNC-3090D
Table travel (X axis)	mm	1450 / 1450	2400 / 2400
Table travel (Y axis)	mm	900 / 900	900 / 900
Quill travel (Z1axis)	mm	-	-
Work head travel (Z2 axis)	mm	580 / 580	580 / 580
Work table dimensions (LxW)	mm	2500x1200	3200x1200
Distance between plate and table	mm	650-1250	700-1300
Work tank inner dimensions (WxDxH)	mm	3500x1800x650	4500x1800x650
Max.capacity of dielectric fluid	Litre	5000	5520
Max.electrode weight	kg	450	450
Max.workpiece weight	kg	8000	15000
Machine unit dimensions (WxDxH)	mm	5400x4300x3450	5700x4450x3600
Machine unit weight	kg	15000	23000





# ZNC EDM MODEL: CR5/CR5C

## **Features of Machine structure**

#### CJ125/CJ235

- CAD design and high precision structure.
- FC-30 casting made from Furan No-Bake Molding system.
- Base, Saddle, Column and Spindle are made by synchronous boring to keep the highest precision.
- "GRUNDFOS" horizontal pump made in Denmark.
- Movement surface with TRUCITE.
- X and Y axes are constructed with V-Shape and Flat sideways
- High precision and strength Quill assures excellent eroding
- Hardness heat treatment and high precision grinding worktable assures structure precision and life.



#### Standard accessories:

Halogen lamp
Filters
Magnetic nozzles set
Drill Chuck
Tool box and kit







CAD design and high precision structure



Bass and saddle, column and spindle are with synchronous boring



Quill: High precision sideways and ball screw to ensure machine performance.



# **ZNC Controller Box Features**

# 

CR5



- Pentium PC-base CNC controller(CR5C).
- 15 inch color monitor(CR5C).
- Dialogue Operation Box(CR5C)
- Z axis automatic touch touch and reset zero function(CR5C).
- Digital control panel with 3 axes digital display(CR5).
- Ten groups of eroding parameters in the memory mode.
- Ten-step depth eroding parameters from rough to fine finish.
- Automatic save eroding parameters after electricity power off.
- ARC prevention system.
- Alarms system can indicate what the alarm happens and stop the machine to prevent from the damages.
- Special electrical circuit design for mirror finish, and cutting tungsten carbide.

# DRILL EDM

- Depth controller (Z axis)
- Overcut (gap) on each side is 0.05~0.2 mm.
- The use of pure water as working fluids for cost saving and extra safety.
- Precision (hole straightness) is approx 0.04 mm ± 0.02mm.
- For drilling 0.3 mm holes, copper is better than brasspipe.
- Able to drill extremely hard material such alloys etc.
- Digital readout 3 axis (X,Y,Z)
- Drilling depth reach to 300mm by electrode Ø1.0 mm
- Able to drill extremely hard material such steel(SKD11,SKD61), Tungsten Carbide, alloys etc.....
- Three axes are driven by DC motors.

#### Standard accessories:

Digital readout 3 axis (x, y, z) Electrode guide Ø1.0 mm. Tool box & kits. Electrode holder Ø0.3~3.0 mm.
Electrode pipe Ø1.0mm.

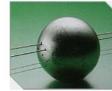
Optional accessories:

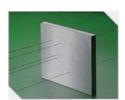
Electrical guide Ø0.3~3.0mm Electrical pipe brass 400mm Electrical pipe copper 300mm

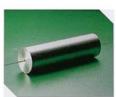
#### **Extra hard Material Machining:**



Metal:Tungsten Carbide 15mm







SPECIFICATIONS OF POWER SUPPLY UNIT

Model			C	R5			CR5C	/ CR6C			
Specification		30A	50A	75A	100A#	50A	75A	100A#	150A#	250A#	
Input voltage	3Ø V	220.346 380.415									
Input power	KVA	3	5	8	10	7	10	15	20	30	
Working voltage(No load)	V	100	100	100	100	100	100	100	150	250	
High voltage	V	210	150or270	150or270	150or270	140or250	140or250	140or250	140or250	140or250	
Min. ON TIME	μS	2	1	1	1	1	1	1	1	1	
Min. OFF TIME	μS	2	1	1	1	1	1	1	1	1	
Max. Cutting speed	mm³/min	220	480	720	1050	480	720	1050	1500	2500	
Best surface finish	μmRa.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Min.Electrode wear rate	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Weight	Kg	170	200	230	350	210	248	360	490	700	

<sup>#</sup> One extra power unit. Continuing improvement will allow the maker to modify the design or specification without notice.

Metal: SKD 11 40mm Metal: SKD 11 110mm

Deep holes drilling

ACCOUNTS AND THE FOLLOW THE PROPERTY AND MINES COME IN AN INTERPORT OF THE ACCOUNTS AND ACCOUNTS			2002 pt (100 400.3), (1.50 300.1 (100 - 15%) 1 50/20 **	
Model		CJ102	CJ345D	CJ560D
Work table dimensions(LxW)	mm	600x350	700x400	880x500
Table travel(X axis)	mm	350	450	600
Table travel(Y axis)	mm	250	350	500
Quill travel(Z1 axis)	mm	210	260	280
Work head travel(Z2 axis)	mm	300	300	300
Electrode guide travel	mm	150	150	150
Max. drilling depth	mm	300	300	300
Electrode pipe diameter	mm	Ø0.3-Ø3.0	Ø0.3-Ø3.0	Ø0.3-Ø3.0
Max. workpiece thickness	mm	300	300	300
Max. workpiece weight	kg	350	700	1100
Dielectric fluid		pure water	pure water	pure water
Servocontrol		DC servomotor	DC servomotor	DC servomotor
Digital readout		X.Y.Z	X.Y.Z	X.Y.Z
power supply		3Ø,380V,50Hz	3Ø,380V,50Hz	3Ø,380V,50Hz
Input power	KVA	3.5	3.5	3.5
Machine unit dimensions(WxDxH)	mm	1165x1190x2100	1300x1350x2160	2650x1900x2300
Machine unit weight	kg	840	1550	2200 19