

**HCM**

**CNC EDM**



**CNC/DZNC** series

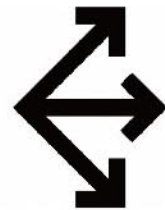
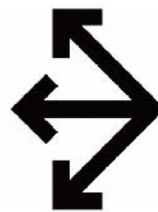
**SUPER DRILL EDM**

**HO CHEN MACHINERY & ELECTRIC INDUSTRIAL CO., LTD.**

# CNC High Speed Drilling EDM

## FEATURES OF THE MACHINE

- ◆ Close-Loop design of digital feedback on three axis of the machine, significantly increases positioning accuracy.
- ◆ Possessing good and simple operation interfaces.
  - Common function keys are located on the operation panel for direct use, hot key function on screen for quick access.
- ◆ ATC (automatic tool changer) and AGC (automatic guide changer) can be installed.
- ◆ Unlimited number of machining conditions can be saved as machining archives.
  - Each set of machining conditions can be edited, modified or stored. They are easy to edit and easy to search.
- ◆ Automatic origin search and multi-point coordinate memory capability.
- ◆ Chinese/English versions, Metric/British system switch and variable speed change function, resolution can reach 1 $\mu$ m.
- ◆ All alarms describe the source, data and exact time of problem occurrence.
- ◆ Able to proceed standard GM code and extra GM code.
- ◆ Coordinate point input from dxf file function.
- ◆ During discharge change new electrode can automatically compensate depth.
- ◆ Position simulation and work route can be displayed.
- ◆ Backlash point automatic compensate function.
- ◆ Touchscreen type interface.
- ◆ AB axis rotate table can be installed.
- ◆ Able to do single hole drilling, multiple hole drilling and multi thickness drilling.
- ◆ Blindhole drilling function, any depth can be set.
- ◆ Initial current can set to reduced value, which can prevent workjob surface damage.
- ◆ Initial polarity reverse function, can prevent uneven electrode caused efficiency decrease.
- ◆ Six axis linear interoperate accelerate speed movement.
- ◆ Input, output, various of machine status real time display system.
- ◆ This system utilizes Windows CE controller.
- ◆ Able to store data through USB and internet.
- ◆ Dialogue window, along with picture description functions.
- ◆ Special repaired frames to quicken the maintenance speed.
- ◆ Able to rotate XY coordinate angle.



Cellphone



PC

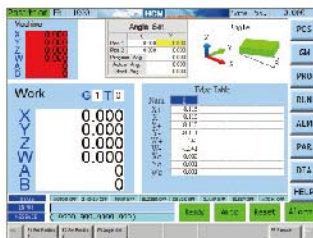


Tablet

EDM machine can collect and upload data to cloud server to intergrate information, then transfer to Cellphone/PC/Tablet devices.



EDM control center



Angle rotate function: Able to rotate XY axis lines for irregular job.

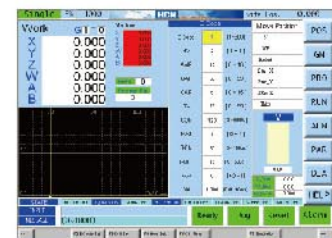


Able to proceed standard GM code and extra GM code.



### PROGRAM EDITING (MOVEMENT EDITING)

- ◆ Input position values into the table for direct machining.
- ◆ Hole positions can be extended infinitely.
- ◆ 12 sets of machining coordinates.



### MACHINING EXECUTION (MOVE MACHINING)

- ◆ Graphical simulation for checking if hole positions are correct.
- ◆ Machining conditions meet copper tubes and materials automatically (Single hole machining)
- ◆ Machining conditions can called out through program edit.



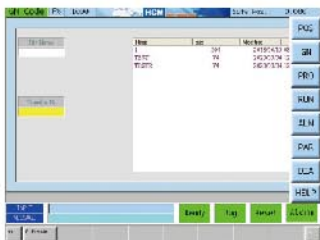
▶ **CNC S3025/S4030/S5040**



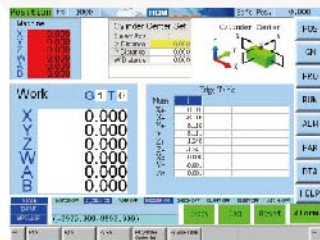
▶ **CNC S6040S**  
RAM TYPE CNC HIGH SPEED DRILLING EDM



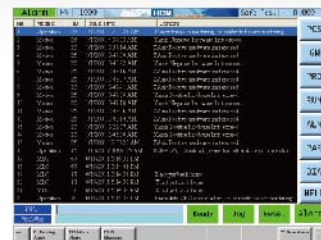
▶ **CNC S6040**  
RAM TYPE CNC HIGH SPEED DRILLING EDM



The NC file can download from USB or Internet, and convert to movement coordinate.



Mold setup display provides various functions, including home positioning, edge search, internal hole-center search, external hole-center search, auto displacement, top point setting, top point search and coordinate conversion. It also can record unlimited mold setup data.



The alarm display shows all alarms occurred currently and the previous alarms. Display contents include alarm causes, times and dates. The previous alarms can be saved in the USB disc.



**PARAMETER SETTING:** This function provides compensation and backlash setting, enabled the machine to achieve the best condition.

# ➤ DZNC Programmable Deep Hole Drilling Machine

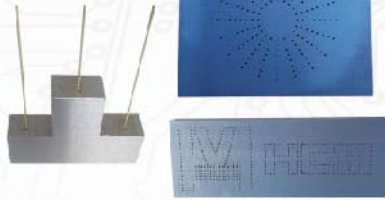
## FEATURES OF THE MACHINE

- ◆ Oscillation output is controlled by a micro-computer, achieving accurate fine machining at high speed.
- ◆ The operator only needs to enter the working current.  
The other working parameters will be generated automatically.
- ◆ The working fluid is water--pollution free.
- ◆ Machining parameter can be altered during machining.
- ◆ Machining at high speed or at a low rate of electrode wear can be chosen according to specific needs.
- ◆ It's ideal for machining on hard alloy and various type of surface like spherical, curved and inclined.
- ◆ The machine is capable of retaining data in case of a power outage.  
All machining data and position values are stored automatically when a power failure occurs.
- ◆ In case of power outage, this machine prevents data loss for up to ten years.
- ◆ The controller allows machining depth setting.

## ➤ Example

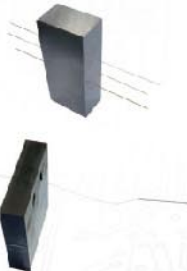


- ◆ Work piece made by CNC drilling EDM equipped with ATC.

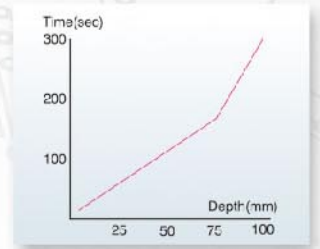
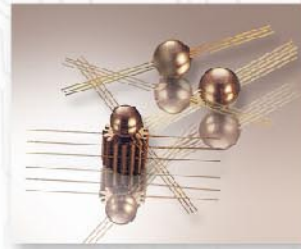


- ◆ Work piece sample made by CNC drilling EDM, equipped with ATC and 3/6 guide changer.

- ◆ Drilling EDM sample of 30mm thick SKD11 steel with 0.2, 0.5, 1.0mm electrode tube.



- ◆ CNC drilling EDM drill with 0.1mm brass tube to 10mm thickness SKD11 workjob.



◆ Speed performance

An intelligent programmable deep hole drilling machine is designed to meet various machining requirements. Simply enter the machining current alone allows other machining parameters to be set automatically. This machine is easy to operate and will give you the high quality machining you've been looking for.



➤ DZNC S2520



➤ DZNC S3025 / S4030 / S5040



**STANDARD ACCESSORIES**

ITEM	DZNC	CNC
Tool box	✓	✓
Electrode guide φ 1.0	✓	✓
Electrode tube φ 1.0	✓	✓
Halogen work lamp	✓	✓
Work fluid nozzle	✓	✓
Filter	✓	✓
Precision electrode chuck 0.1~3.0mm	✓	✓
Z axis encoder	✓	✓
W axis encoder		✓
Leveling pad	✓	✓
Water seal	✓	✓
Standard work tank	✓	✓
Electric pump	✓	✓
Automatic electrode tube assist device		✓
X.Y5μ optical scale	✓	

**OPTIONAL ACCESSORIES**

ITEM	DZNC	CNC
Automatic tool changer turret type 10/20 pieces		✓
Automatic guide changer 3/6 (only available on S6040S)		✓
±45 degree tilt machine head	✓	
ER pneumatic chuck 0.3~6.35mm		✓
Precision pneumatic chuck 0.1~3.0mm		✓
ER convert to precision type chuck 0.1~3.0mm	✓	
Single axis rotate table (A axis)	✓	✓
Double axis rotate table (AB axis)		✓
Stainless steel submerge work tank	✓	✓
Stainless steel water filtration tank 200ℓ	✓	✓
Resin ion filtration system	✓	✓
Water purity detection system	✓	✓
Upgrade to 75 ampere	✓	✓
Special extended guide	✓	✓
Cooler	✓	✓
Traditional electrode tube assist device	✓	
X.Y1μ optical scale		✓
Upgrade to ER manual chuck 6.35mm	✓	

## DZNC Programmable deep hole drilling machine

ITEM	UNIT	DZNC S2520	DZNC S3025	DZNC S4030	DZNC S5040
X,Y axis travel	mm(inch)	250x200(10"x8")	300x250(12"x10")	400x300(16"x12")	500x400(20"x16")
Z axis travel (discharge axis)	mm(inch)	350(14")	350(14")	350(14")	350(14")
W axis travel	mm(inch)	0	200(8")	200(8")	200(8")
Work table	mm(inch)	450x210(18"x8")	600x300(24"x12")	650x400(26"x16")	800x450(32"x18")
Max. work piece	mm (inch)	630x430x160 (25"x17"x6")	850x530x300 (34"x21"x12")	1000x600x300 (40"x24"x12")	1200x700x300 (48"x28"x12")
Max. work piece weight	kg	250	400	600	1000
Distance from table to guide plate	mm(inch)	0~150(0~6")	0~350(0~14")	0~350(0~14")	0~350(0~14")
Machine net weight	kg	600	1000	1520	1600
Electrode diameter	mm	0.2~3.0	0.2~3.0	0.2~3.0	0.2~3.0
Working fluid system					
Working fluid type		Pure water	Pure water	Pure water	Pure water
Working fluid tank capacity	ℓ	20	20	20	20
Filtration		Paper filter	Paper filter	Paper filter	Paper filter

## CNC High speed drilling EDM

ITEM	UNIT	CNC S3025	CNC S4030	CNC S5040	CNC S6040	CNC S6040S
X axis travel	mm(inch)	300(12")	400(16")	500(20")	600(24")	600(24")
Y axis travel	mm(inch)	250(10")	300(12")	400(16")	400(16")	400(16")
Z axis travel	mm(inch)	350(14")	350(14")	350(14")	350(14")	400(16")
W axis travel (discharge axis)	mm(inch)	350(14")	350(14")	350(14")	350(14")	450(18")
Work table	mm (inch)	600x300 (24"x12")	650x400 (26"x16")	800x450 (32"x18")	800x500 (32"x20")	650x450 (26"x18")
Max. work piece	mm (inch)	850x530x300 (34"x21"x12")	1000x600x300 (40"x24"x12")	1200x700x300 (48"x28"x12")	1000x700x300 (40"x28"x12")	900x500x300 (36"x20"x12")
Max. work piece weight	kg	400	600	1000	950	700
Distance from table to guide plate	mm (inch)	50~400 (2"~16")	50~400 (2"~16")	50~400 (2"~16")	20~370 (1"~15")	25~425 (1"~17")
Automatic tool changer	piece	10/20	10/20	10/20	10/20	10/20
Automatic guide changer	piece	N/A	N/A	N/A	N/A	3/6
Machine net weight	kg	1100	1500	1600	1650	1200
Occupancy area (LxWxH)	mm (inch)	1300x1600x2600 (51"x63"x102")	1700x1950x2600 (67"x77"x102")	1800x2050x2600 (71"x81"x102")	2000x2550x2150 (79"x100"x85")	2000x1450x2600 (79"x57"x102")
Max. output ampere	A	30	50	50	50	50
Max. power input	KVA	3	4.5	4.5	4.5	4.5

※All specifications and designs are subject to change without notice.



## HO CHEN MACHINERY & ELECTRIC INDUSTRIAL CO., LTD.

No.10, Aly. 186, Ln. 745, Sec. 1, Xinan Rd., Wuri Dist., Taichung City 414, Taiwan. (R.O.C.)

Tel:886-4-2335-7689 Fax:886-4-2335-2855 E-mail:hcm.edm@gmail.com

http://www.hcmedm.com.tw

