

PROFESSIONAL &  
RICH EXPERIENCE  
MANUFACTURER

**CNC WIRE CUT EDM**



**Jiangsu Sammlite Machinery Co., Ltd.**

# Wire Cut EDM

## Applications



Material	DC53
Thickness	30mm
Cuts	3 cuts
Hours	6 hours
Ra	0.95 um



Material	CR12
Thickness	210mm
Cuts	3 cuts
Hours	2 hours
Ra	1.5 um



Material	H13
Thickness	42mm
Cuts	2 cuts
Hours	3 hours
Ra	0.9 um
Accuracy	0.01mm



Material	CR12
Thickness	40mm
Cuts	3 cuts
Hours	40 min
Ra	0.8 um
Accuracy	0.008mm

## CNC-W-Series



- High-quality cast iron material, multiple tempering process
- C-shaped structure and T-shaped bed ensure the long-term stability of the machines
- High rigidity, high-quality workbench with anti-rust and anti-corrosion performance
- Z-axis Servo Motor, higher taper machining accuracy
- Semi-Automatic threading without manual tightening

## Mechanical Specification

MODEL	UNIT	CNC320W	CNC400W	CNC500W	CNC630W
Table Size	mm	660*420	760*500	900*600	1170*830
Table Travel	mm	400*320	500*400	630*500	800*630
Max Workpiece Weight	kg	400	500	600	1000
Max. Cutting Thickness	mm	300	300	300	300
Motor Power	W	750	750	750	750
Driven Motor		Servo Motor			
Cutting Speed	mm <sup>2</sup> /min	>200	>200	>200	>200
Surface Roughness	μm	1st Cut Ra<2.3um, 2nd Ra<1.6um, 3rd Ra≤0.8um			
Wire Diameters	mm	φ0.12-φ0.20			
Taper		±3 Degree/80mm			
Dimension	mm	1810*1480*2180	2100*1680*2180	2200*1960*2180	2070*1655*2060
Machine Weight	kg	2000	2400	3000	3450

## Accessories

Description
Industrial PC control panel AutoCut
High Pressure Recycle Water Tank
Tool Box
X/Y Axis HI-Win/PMI Ball Screw& Linear Guide
Machine Taper +3°,-3°
TAIWAN auto Lubrication System
Panasonic Servo-Motor X/Y Axis X/Y
Molybdenum Wire 0.18/0.20
Paper Filter 20 μ m
Taiwan SHIHLIN Converter

Optional
Z-axis Servo-Motor, UV-axis ball screw
Taper ±6° /±12° /±15°
Double Filtration Pump 10 μ m

## CNC-C-Series

- C Series is an economical model developed by our company to meet the development of small and medium-sized enterprises
- step-motor & servo-motor two selections.
- X/Y axis linear guide and ball screw, can achieve pitch compensation and backlash compensation to ensure accuracy.



## Mechanical Specification

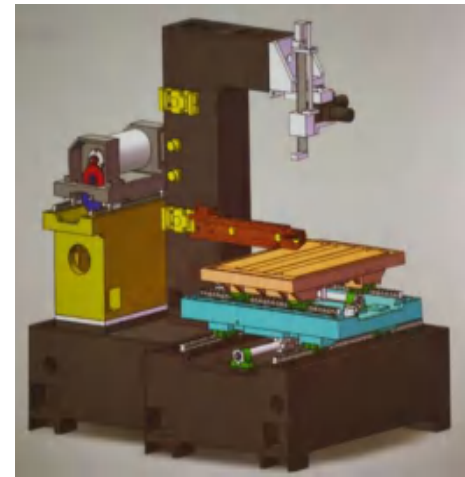
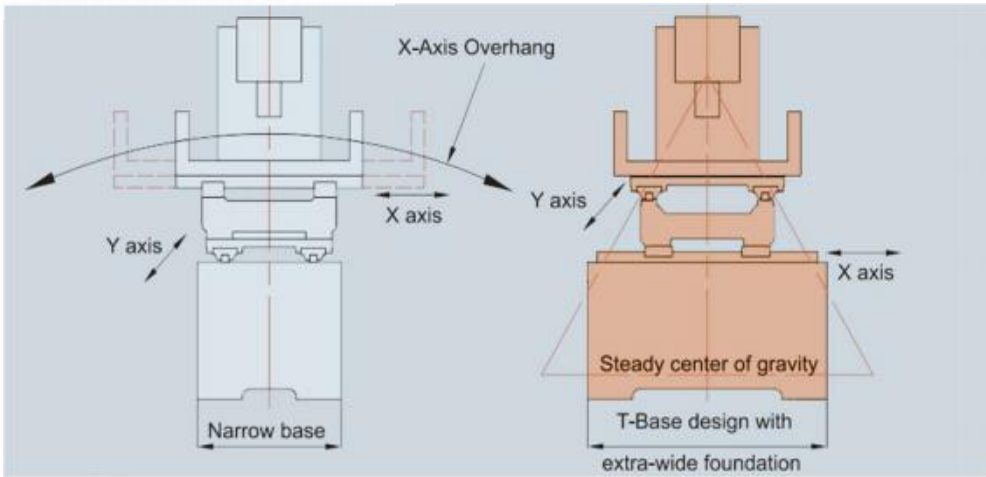
MODEL	UNIT	CNC320C	CNC400C	CNC500C
Table Size	mm	660*420	760*500	900*600
Table Travel	mm	400*320	500*400	630*500
Max Workpiece Weight	kg	200	250	400
Max. Cutting Thickness	mm	250	250	250
Motor Power	W	750	750	750
Driven Motor		Step Motor/ Servo Motor		
Cutting Speed	mm <sup>2</sup> /min	>180	>180	>180
Surface Roughness	μm	1st Cut Ra<2.3um, 2nd Ra<1.6um, 3rd Ra≤1.0um		
Wire Diameters	mm	φ0.12-φ0.20		
Taper		±3 Degree/80mm		
Dimension	mm	1580*1100*2000	1710*1250*2000	2000*1350*2000
Machine Weight	kg	1700	1850	2300

## Accessories

	Description
	Industrial PC control panel AutoCut
	High Pressure Recycle Water Tank
	Tool Box
	X/Y Axis HI-Win/PMI Ball Screw& Linear Guide
	Machine Taper +3°,-3°
	Auto Lubrication System
	Panasonic Servo-Motor X/Y Axis X/Y
	Molybdenum Wire 0.18/0.20
	Paper Filter 20 μ m
	Taiwan SHIHLIN Converter

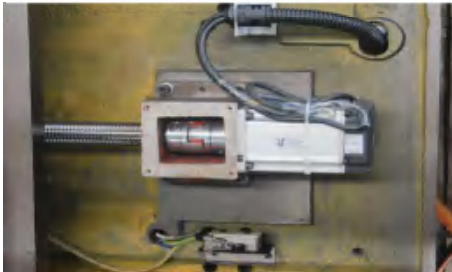
# Wire Cut EDM

## T - Base Design



C-Frame with multi-ribbed structure features high rigidity  
T-Base to prevent cantilever situation

## Mechanical Structure

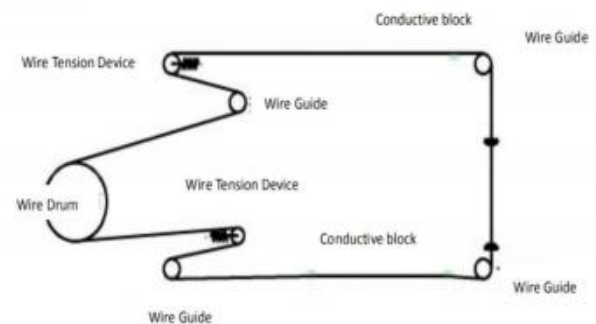


- T Shape Structure Machine
- HT250 Casting Iron
- Wire Guide Nozzle lifting
- Direct Motor Driven
- HI-WIN Linear Guide & Ball Screw & Panasonic Servo Motor

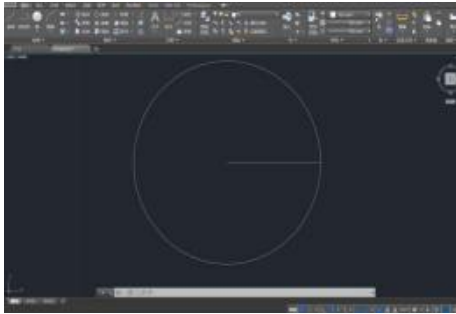
## Wiring System



- Adapting Taiwan SHIHLIN Converter for Stability of Multi Cuts & wiring
- HI-Win Linear Guide Wire Drum to ensure long term usage & precision
- Auto Wire Tension Devices
- Diamond Wire Guide & Water Nozzle durable in use



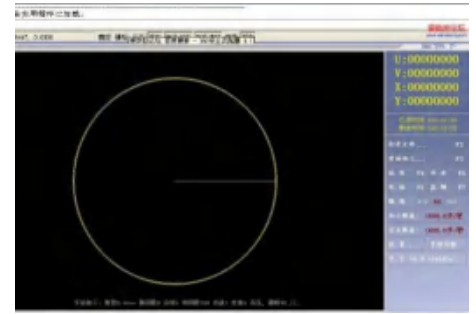
## Programme Interface



Draw in AutoCAD



Fill in Specification

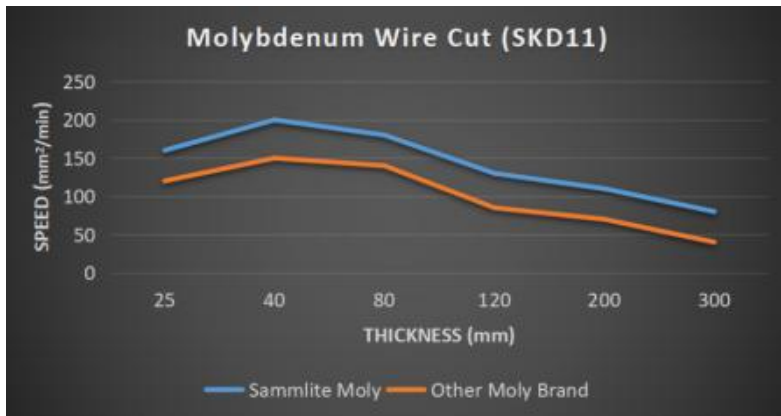


Direct Cutting Form

- Win XP
- USB & Lan
- Expert Database

- Autocut Programme
- Auto edge & Center Finding
- Wire Speed chaning, continuesly , single phase, forward & reverse, corner delay

## Generator ( Roughness & Speed)



	Roughness
<b>1<sup>st</sup> cut</b>	<b>2.5 μ m</b>
<b>2<sup>nd</sup> cut</b>	<b>1.8 μ m</b>
<b>3<sup>rd</sup> cut</b>	<b>0.8 μ m</b>

Ra<0.8um

Speed <12000mm<sup>2</sup>/min

# Preparation For Machine Installation

## Installation conditions

Before setting up the machine, the total electrical capacity should be worked out based on digital controller power, optional components' power and the machine power. An air breaker adaptor needs to install to suit the power consumption.

$$\text{Total Capacity} = \text{Machine} + \text{Optional components} + \text{Controller}$$

## Electrical equipment

1. Electrical capacity equals 11KW or less, a 50amp air breaker should be equipped.

A 100amp air breaker need to replace when the power is between 11-22KW.

2. Separated Air Switch, 100-200mA frequency converter included.

3. In order to prevent electrical shot, grounding construction is must needed. Grounding should be 10  $\Omega$  or less.

4. Electrical installation must comply with the safety requirements, and current overload protection must be installed as well. Over current protection requirements:

**A2-50: 25A/Phase    A2-100: 30A/phase**

5. Grid voltage, frequency, phase: 380V(220V) 50(60) HZ, three phase four wire or three phase five wire power supply

Allowance: 10% differences. Installing a 3 phase stabilizer if the power grid is unstable.

## Vibration

To ensure accuracy & prevent vibration

1. Take anti-vibration methods

2. Move to the place with small vibration.

## DUST

1. The machine should be installed in rooms with minimal dust.

2. Away from other metal cutting machines. For example: metal dust accumulation of the grinder easy to cause the control circuit board short circuited the other metal particles will cause the ball screw, guide and work surface wear.

3. Away from the graphite processing machine due to graphite dust, can cause a short circuit electronic components

## CORROSION AND VENTILATION

1. Install the machine in a acid, chemical etching gas, smoke and powder free environment. Especially abrasive and grinding fluid mist will lay a bad influence on the sliding parts of the machine, please note.

2. To avoid toxic and harmful gas environment.

3. For ventilation, not only EDM machines, but cutting tools during machining can produce smoke. the operator working environment ventilation measures should be taken.

## INDOOR TEMPERATURE AND HUMIDITY

The best temperature to run the machine is 10-35 c. humidity s 80% .

Considering a high quality finishing surface, following rules should be obey.

1. Discharge mirror finishing(such as PIKA processing). air-conditioning should be installed in the room, so to keep a constant temperature.

2. Keep the temperature in the range of 20+2C

3. EDM machine and the NC device parts do not sensitive to humidity, taking into account the operators working environment, it should be kept humidity at 50%.

4. In places without air conditioning. Machines should avoid direct sunlight or windy air.

5. For touch screen function, pay attention to the sensitivity of the touch screen on the humidity. High humidity occurs the touch screen not function correctly.

## ELECTROMAGNETIC INTERFERENCE

EDM often cause electromagnetic interference to TV sets, electronic instruments, A shielded processing room can effectively remove the interference of electromagnetic interference.

## HEAT OF THE MACHINE

With full-load operation, each machine can produce 4.2Kcal/h heating energy. With liquid cooling device(optional)1500w heat can also be generated.

## EDM LIQUID

Selecting corrected EDM liquid leads to a great processing performance of the machine(especially mirror finish). Please use the professionals recommend EDM machining dedicated liquid; it you choose not to meet the technical specifications, it will result in normal processing performance.

## **Jiangsu Sammlite Machinery Co.,Ltd.**

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