

ELECTRICAL DISCHARGE MACHINE

ZNC/PNC/CNC

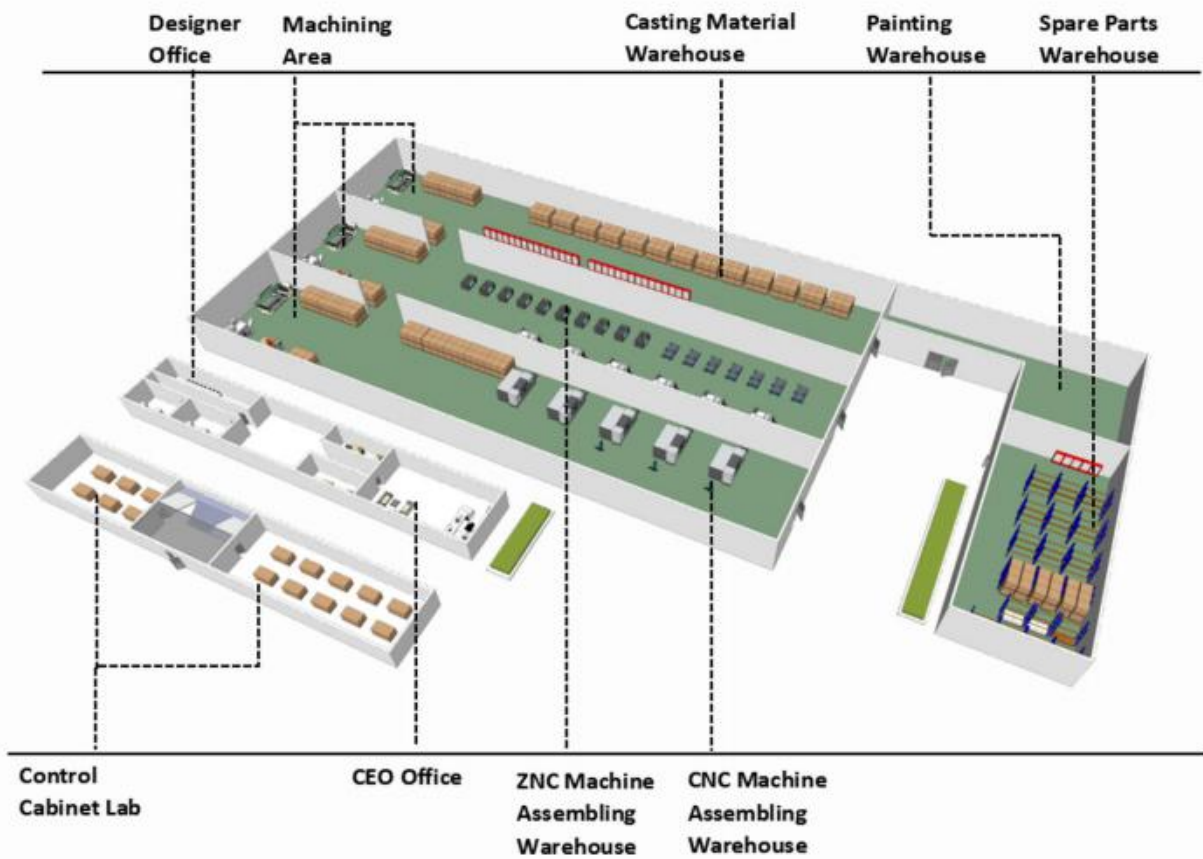


Jiangsu Sammlite Machinery Co.,Ltd.

- 1992 The first prototype of numerical tubes manual control electrical discharge machine came out
- 1999 A successful cooperation with Taiwan EDM manufacturer & introduction of Taiwan Technology
- 2000 Massive production of ZNC, PNC, CNC based on Taiwan technology
- 2005 First assemble of Taiwan C-Tek system control cabinet
- 2006 Supplying C-Tek system cabinet for EDM China mainland area
- 2009 Developing own control system with user-friendly interface suiting mainland users
- 2012 Another cooperation with Beijing DMT, successfully introduce their mirror finishing CNC type
- 2013 Improve of the system to meet tungsten metals & mirror finishing conditions on ZNC series
- 2014 Oversea department established, exporting EDMs to world areas (Malaysia, Thailand, Brazil)
- 2015 Introduce of Sodick EDM system from Beijing DMT Laboratory, new models approval by CE & ISO
- 2016 Extended business markets to Mexico, Australia, Turkey, Argentina & most Mid east countries
- 2017 Invest a share of new factory & two EDM high quality brands
- 2018 Developing customized EDM machine on special materials & complex structure projects



FACTORY OVERVIEW



CNC Machine Assembling Warehouse



ZNC Machine Assembling Warehouse



Control Cabinet Lab



Spare Parts Warehouse



Casting Material Warehouse

CNC Die Sinking EDM

Japan Technology

CNC Model



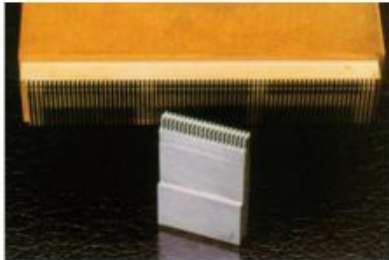
Column Type





Mirror Surface Finishing

Model	<u>CNC40</u>
Electrode Material	<u>Copper</u>
Workpiece Material	<u>Steel</u>
Surface Roughness	<u>0.08um</u>



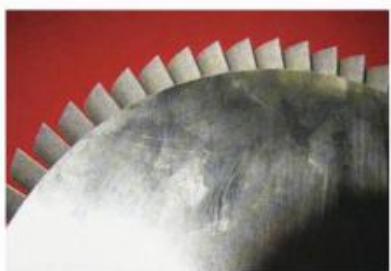
RIB Machining

Model	<u>CNC40</u>
Electrode Material	<u>Copper</u>
Workpiece Material	<u>Steel</u>
Surface Roughness	<u>0.8um</u>



Machining with Graphite Electrode

Model	<u>CNC45</u>
Electrode Material	<u>Graphite</u>
Workpiece Material	<u>Steel</u>
Surface Roughness	<u>0.8um</u>



Machining with Graphite Electrode

Model	<u>CNC45</u>
Electrode Material	<u>Graphite</u>
Workpiece Material	<u>Titanium</u>
Surface Roughness	<u>0.4um</u>

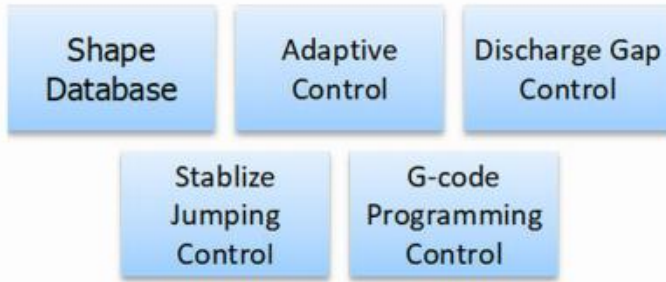


Machining with Graphite Electrode

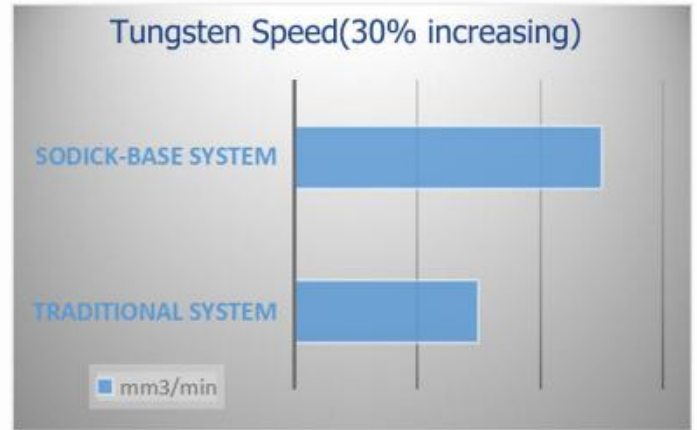
Model	<u>CNC45</u>
Electrode Material	<u>Copper</u>
Workpiece Material	<u>Steel</u>
Surface Roughness	<u>0.5um</u>

Machining Control

Japan (Sodick) based advanced system leads to a quality machining



Adaptive Control



System Overview

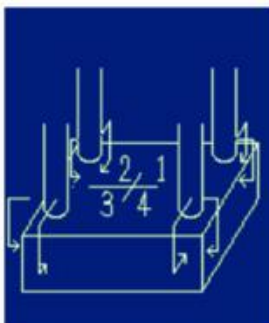
Database

- Expert database for automatic processing
- Selecting best suit processing methods & conditions

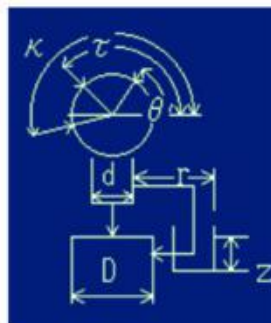


Positioning

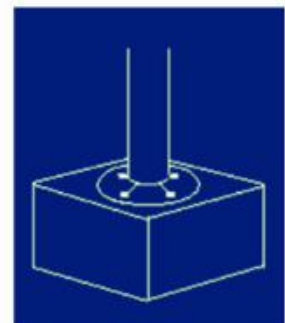
Work piece measure



Corner Positioning



Three Data Positioning



Center Positioning

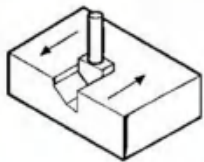
CNC CHARACTERISTIC/ FUNCTIONALITY

G-CODE SYSTEM G-CODE

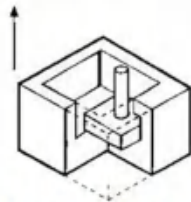
G-code system is designed for experienced processors. It includes sub programming, compensation data and so on to maximize the machine potential.

Variety Loran Function

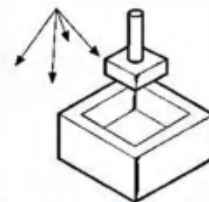
Through LN,LP data setting, total of 135 kinds of loran method are provided



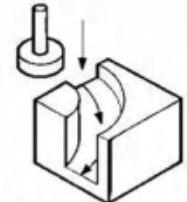
Lateral machining



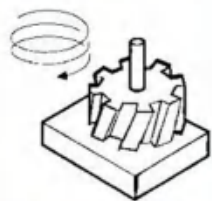
Z-axis machining



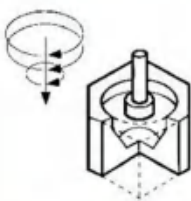
Corner machining



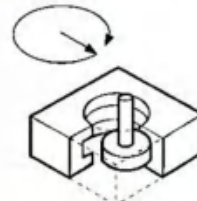
Arc machining



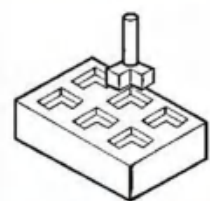
C-axis machining



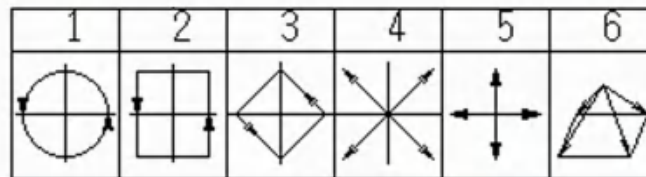
Orbiting



Orbiting



Duplicated machining



Sparking Circuit Selections

Material	Instruction	Notes
Cu-St	C100-C190	No consumption
Cu-St	C200-C290	Working efficiency
Cu-St	C300-C390	Low consumption, through hole
Gr-St	C400-C490	Low consumption
Gr-St	C500-C590	Working efficiency
Gr-St	C600-C690	through hole
CuW-Wc	C700-C790	Hard metals
CuW-Cu Cu-St	C800-C890	Capacitance circuit
Cu-St	C900-C903	Mirror finishing, Pika circuit
Cu-St	C101-C191	No consumption - Pikaden1
Cu-St	C102-C192	No consumption - Pikaden2
CuW-St	C301-C321	Low Consumption - Pikaden3

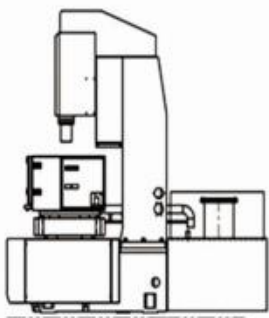
Expert Database

Circuits	Characteristics
Low Voltage	Main Circuits, power resource
High Voltage	Rough processing
Circuit Breaker Control	Increasing processing speed
Mirror Finishing-1	Improve roughness for Ø20mm below
Mirror Finishing-2	Improve roughness for Ø20mm above
Induction	Significantly reduce electrode wear
Resistance - PIKADEN	Avoiding arc burning under large area process
Capacitance- C	For Hard Metals: Tungsten, Polycrystalline Diamond
Gap Detection - GPI	Gap detection, feeding speed control, power control
Fineness	Significantly improve roughness

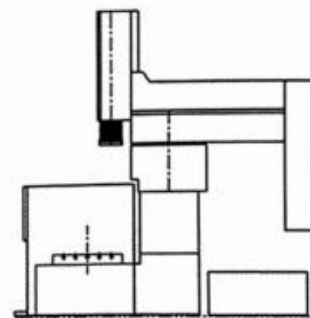
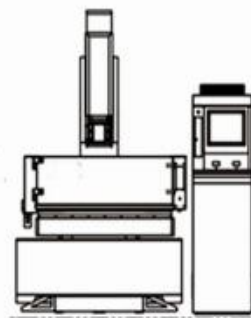
CNC MACHINE SPECIFICATIONS

- Adaptive sparking control
- High speed jump & jump control
- A variety of positioning modes
- Auto fire-extinguish & Anti carbon system
- CNC Sodick supported system & touching screen
- Work piece detection & spark gap detection
- X/Y/Z Panasonic AC motors
- Marble material work table
- code processing & Auto expert database
- Mirror finishing & tungsten circuits
- 1um driven unit

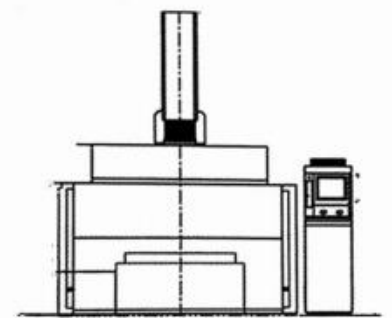
Model	Unit	CNC-300	CNC-350	CNC-400	CNC-450	CNC540	CNC850	CNC1060	CNC1570	CNC1800
Table size (length x width)	mm	600x400	600x400	650x450	700x400	850x450	1100x600	1250x800	1600x1000	2000x1000
X axis Travel	mm	300	350	400	450	500	850	1000	1500	1800
Y axis Travel	mm	210	250	300	350	400	500	600	700	800
Z axis Travel	mm	270	270	300	320	300	400	450	500	600
The internal dimensions of processing tank	mm	950x620x360	950x620x360	1100x640x410	1050x680x410	1350x790x500	1780x1100x580	2000x1300x700	2400x1380x650	3000x1500x650
Maximum electrode weight	kg	25	50	50	30	100	150	150	200	200
Table bearing weight	kg	400	550	400	400	1800	3000	3500	5000	5000
Distance from electrode plate to working table Minimum	mm	295	250	295	300	430	480	550	600	600
Distance from electrode plate to working table Maximum	mm	565	550	615	600	730	880	1000	1150	1200
Total input power	KW	9	9	9	9	9	9	9	18	18
Machine Weight	Kg	2000	2200	2500	3200	2500	5000	5500	11500	15000
Positioning Accuracy	mm	0.006	0.006	0.006	0.008	0.015	0.015	0.015	0.015	0.015
Re-positioning Accuracy	mm	0.003	0.003	0.003	0.005	0.07	0.07	0.011	0.011	0.011



CNC



CNC Column Type



CNC MACHINE SPECIFICATIONS & ACCESSORIES

Generators

	Unit	CNC	CNC Column Type
Max Working Current	Amp	40A	50A
Max Speed	mm ³ /min	400	500
Electrode Lose		≤0.1%	≤0.1%
Surface Roughness	um	Ra<0.1	Ra<0.2
Power Consumption	kw	9	9/18

Spare Parts

No	Parts
1	15" CNC Touch Panel
2	Japan Panasonic Servo Motor
3	SODICK Based System
4	Japan NSK Bearing
5	Hi-Win / PMI Linear Guide & Ball Screw
6	Denmark Grundfos Pump
7	FUJI Contactors & Bridge Connection
8	HITACHI Capacitance

Accessories

No.	Standard Accessories
1	Paper Filter
2	Tool Box
3	User Manual
4	Adjusting Pad
5	Electrode Chuck
6	Working Lamp
7	Auto Fire Extinguisher

No.	Optional Accessories
1	Auto Tool Changer
2	C Axis (3R)
3	R Axis (CNC Turntable)



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