

# CNC SERIES

## FEATURES OF CNC SERIES ELETRICITY FUNCTION

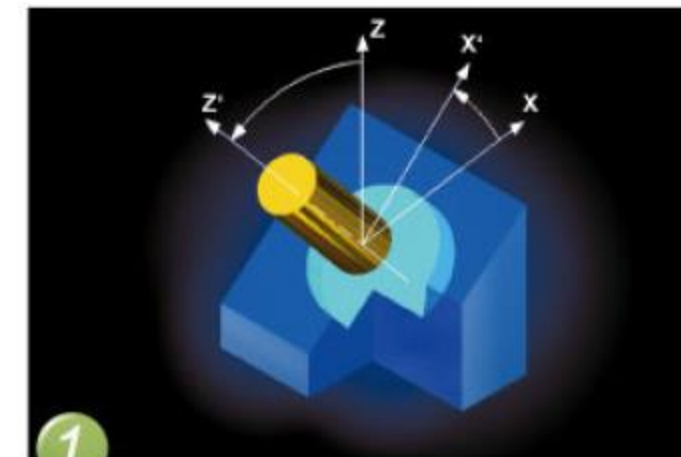


CM 655C+75N

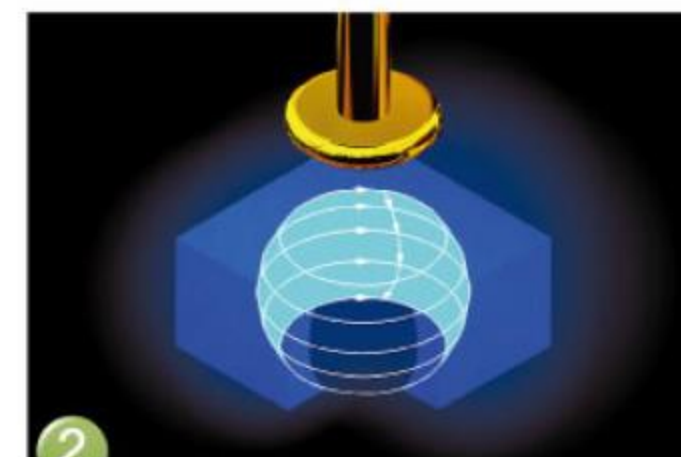


### E-CODE FUNCTION (CANNED CYCLES)

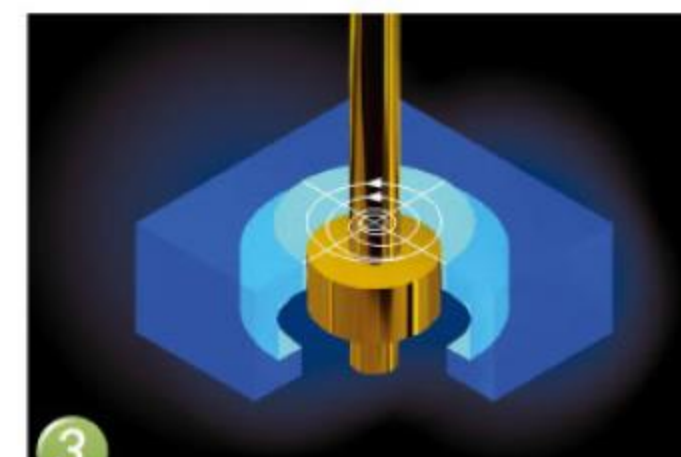
Canned Cycles (E-Code) provides simple programming solution for diverse mould production.



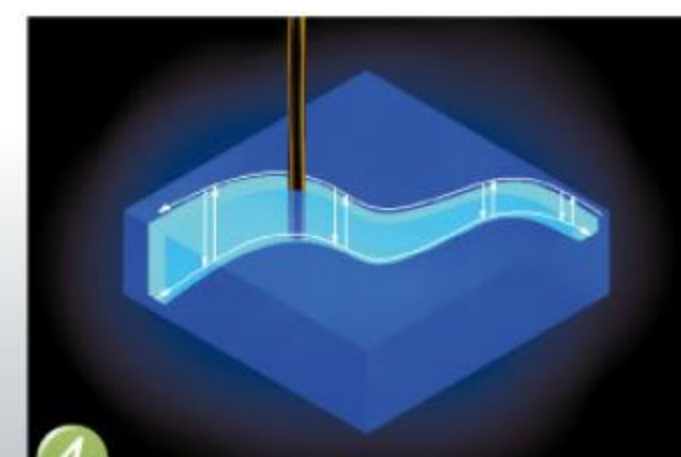
1 Work-piece slanted at 45 degree to do orbiting sparking at 45° ramp.



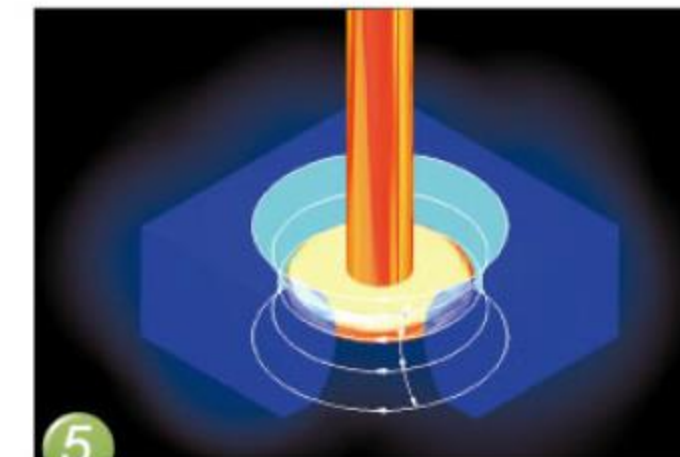
2 Interior sphere forming by X,Y circular motion and Z at various depths.



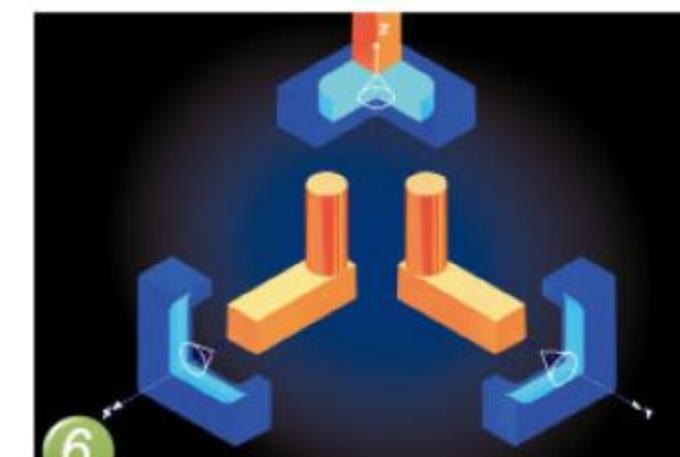
3 X,Y axes do orbiting at specified depth.



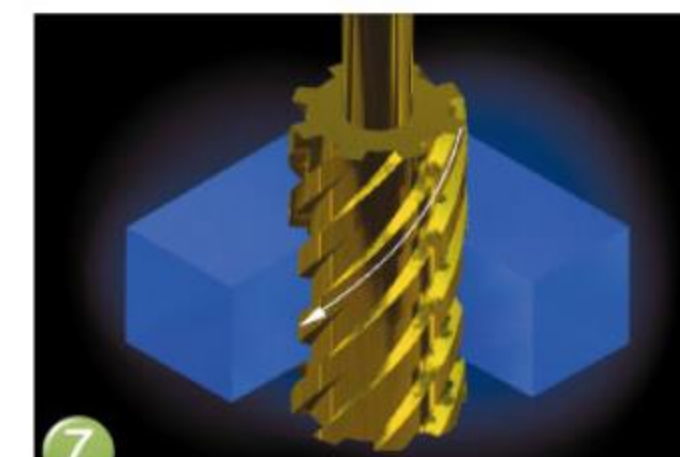
4 G, M Code programming enables complex 3D contour erosion.



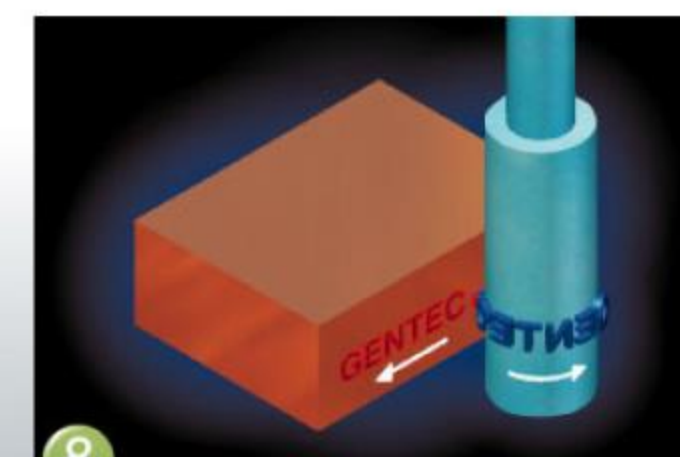
5 Exterior sphere forming by X,Y circular motion and Z at various depths.



6 3 orbiting planes (XY, YZ, XZ) by rotating electrode along with Z, X and Y axes respectively.



7 Z sparking with C-axis equipment for complex shape like thread and helical forming.



8 Sparking with C axis rotation for parts embossing.

### SPECIFICATIONS

Machine body	CM 323C	CM 434C	CM 655C	CM 865C	CM 1065C	CM 1265C
Table size (WxD)	500x350	650x400	900x600	1200x800	1200x800	1500x800
Work tank size (WxDxH)	820x500x300	1050x630x350	1450x950x550	1600x1000x550	2100x1200x600	2500x1350x700
Table travel (X, Y)	300x200	400x300	600x500	800x600	1000x600	1200x600
Ram travel (Z1)	300	350	500	500	500	500
Distance from RAM platen to work table	250-550	250-600	300-800	290-790	450-950	500-1000
Max. electrode weight	60	100	300	300	300	300
Max. workpiece weight	500	750	3000	4000	5000	7500
Outside dimensions	1200x1350x2250	1240x1380x2230	2000x2230x2685	2200x2400x2860	2600x2600x3050	2700x3000x3200
Weight	1000	1400	3500	5800	6500	8500
For Dielectric Tank	D323	D434	D655	D865	D1065	D1265

Note: For CM323C and CM434C, in case of workpiece weight that exceeds 200Kg, please keep the manufacturer and agents notified for further consultation.

Power Supply Unit	50N	75N	125N	150N
Max. machining current	50	75	125	150
Max. power input	5	6	10	12
Electrode wear rate	0.2	0.2	0.2	0.2
Best surface roughness	0.25	0.25	0.25	0.25
Outside dimensions	620x850x1860	620x850x1860	620x850x1860 + 450x470x1650	620x850x1860 + 450x470x1650
Weight	180	220	400	440

Dielectric	D323	D434	D655	D865	D1065	D1265
Volume	280	390	1300	1600	2100	3500
Filter method	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter	Paper filter
Power	0.5	0.5	0.5x1 1x1	0.5x1 1x1	0.5x1 1x1	0.5x2 1x1
Weight	Built in	80	220	250	350	450
Outside Dimensions	Built in	1400x800x430	2200x1000x520 +1600x800x520	2750x1000x480 +1200x700x480 +1200x700x480	3000x1000x480 +1450x500x480 +1450x500x480	3000x1500x580 +1800x630x580 +1800x630x580

\* Note: The manufacturer reserves the right to modify the design for specifications, mechanisms, ...etc. to improve the performance of the machine without notice, all the specifications above are just for reference.

#### STANDARD ACCESSORIES:

- Paper filter ----- 1set
- Clamping kits ----- 1set
- Tool box ----- 1set
- Flushing nozzle ----- 2sets
- Machine stand ----- 1set
- Drill chuck ----- 1set
- Electrode holder ----- 1set
- Halogen work lamp ----- 1set

#### OPTIONAL ACCESSORIES:

- Fire extinguisher
- Magnetic base
- Tool changer (3R, EROWA, Hirschmann)
- C axis (3R, EROWA, Hirschmann)
- CE Conformity
- System 3R accessories
- EROWA accessories
- Rotary / Tilting Table (4th & 5th Axis)

#### PREPARING FOR INSTALLATION

Input power	AC220V ± 10% 3 Phase 50/60Hz ± 1Hz	Space	Take notice of the space for machine stroke to move during normal operation and daily maintenance.
Location	1. Optimum room temperature: 20 ± 1°C. 2. Humidity: below 75% RH. 3. Best with minimum possible floor vibration. 4. Avoid exposing the machine to airflow from air-conditioning/heating systems or set in a place that received directly sunshine. 5. Locate machine in a low dust environment.	Grounding	1. It is recommended to have a grounding resistance of 10Ω or less. 2. An independent ground is recommended. 3. The grounding cable should be 14mm².
		Demand of air pressure	Air pressure of 6kg/cm² for options of ATC and C axis is needed.

#### Dielectric Tank



## FEATURES OF CNC SERIES

## ELECTRICITY FUNCTION



## A-SERIES

### USER FRIENDLY INTERFACE FUNCTION

- ◆ Erosion data On-Time (TON:0.5~2400 μs) and Of-Time (0.5~2400 μs) fine tuning (0.5 μs, 1 μs, 2 μs, 5 μs, 10 μs), for coping with special alloy machining.
- ◆ Closed-loop linear scales feedback on X, Y and Z axes for precise positioning and cutting accuracy.
- ◆ Optional C-Axis and ATC (3R or Erowa) enables fully automated machining from rough erosion to fine finishing.
- ◆ Dialog programming helps with selecting optimum machining conditions based on electrode size and material, work piece type, depth of erosion and target surface finish.
- ◆ E-codes (canned cycles) commonly used as: side machining, square, vectoring and circular orbiting, tapering, etc., substituting the complicated G-code programming.
- ◆ Automatic edge, center find, and Z reference location find.
- ◆ 3-axis linear, 2-axis arc, 3-axis spiral and 4-axis contouring offset movement.
- ◆ 15" TFT with graphics, 3 1/2" FDD, RS232, Ethernet.
- ◆ Sub-routine programming.
- ◆ Automatic programming for depth of skimming discharge to maximum 999 blocks.
- ◆ 99 sets of working parameters available from database-operator changeable.
- ◆ Logic ARC-OFF and APC effectively prevent DC-Arcing from damaging your parts.

### FEATURES

- ◆ Rigid and stable casting construction.
- ◆ Dialogue box operating system.
- ◆ High precision ballscrews on X, Y, Z
- ◆ Linear guideways X, Y, Z
- ◆ DC-Arc proof circuit (APC)



### REMOTE CONTROLLER FUNCTION



- ◆ X, Y, Z, C axis jog for positioning.
- ◆ Emergency stop button.
- ◆ Switch on and off dielectric pump.
- ◆ X,Y axes hand wheel. (Opt.)

### OPERATION INTERFACE

- ◆ Friendly operation with quick start manual to shorten the operator training hours and increase operator efficiency.

### S CODE FUNCTION

- ◆ Built-in working conditions applicable for different workpieces and electrodes for most efficient machining.
- ◆ 1000 sets of working conditions edition and memory storage. It's convenient to call spark data during processing.
- ◆ Working conditions can be changed and saved in memory during processing.

### AUTO EDIT FUNCTION

- ◆ Friendly conversation window available. Suitable working conditions easily and quickly come up by just input electrode and work piece material, sparking current and desired surface roughness.
- ◆ Working depth will be automatically adjusted by controller after changing sparking depth for ideal working condition.

### E CODE FUNCTION

- ◆ Unique CHMER E code function to achieve 3 axis simultaneous machining without complicated G, M codes.
- ◆ Different E codes available for different working applications.
- ◆ Friendly E code illustration for operator to understand E code machining before and during the processing.



CM 323C+50N



CM 434C+50N



CM 865C+75N



CM 1065C+75N



CM A64C

### SPECIFICATIONS

Machine body	CM A43	CM A53	CM A64	
Table size (WxD)	mm	650X 400	800x500	
Work tank siz (WxDxH)	mm	1100x640x400	1350x 740x 450	
Table travel (X, Y)	mm	400x300	500x350	600x400
Ram travel (Z)	mm	300	350	350
Distance from RAM platen to work table	mm	320-620	260-610	265-615
Max. electrode weight	kg	60	100	100
Max. workpiece weight	kg	1000		1500
Outside dimensions	mm	1910x1800x2280	2185x1950x2370	
Weight	kg	2150	2230	3000
Best surface roughness μm/Ra		0.25 / 0.15		
For Dielectric		DA43	DA53	DA64

### FEATURES

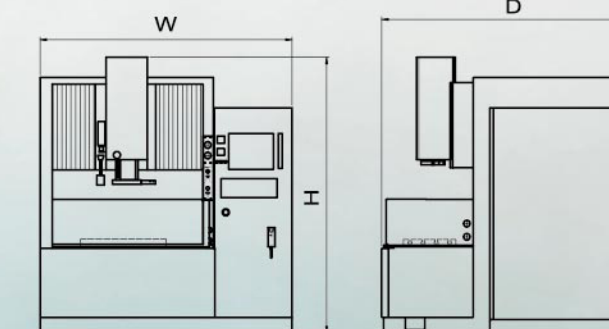
- ◆ Pass muter with CE conformity, ideal bridge design (column move) can bear heavy duty work-piece above on the compact basement.
- ◆ Linear glass scale with close-loop control system for consistent precision over time.
- ◆ Friendly dialogue PC BASED CNC controller for easy operation.
- ◆ Intelligent CNC editing, working program is made automatically after inputting electrode and workpiece materials, and size of electrode. Prevent arcing from finish machining, a better solution with APC protection circuit.

Power Supply	50N	75N	
Max. machining current	A	50	75
Max. power input	KVA	5	6
Electrode wear rate	%	0.2	0.2
Outside dimensions	mm	Built in	Built in
Weight	kg	Built in	Built in

Dielectric	DA43	DA53	DA64	
Volume	L	480/414	480/414	635/672
Filter	method	Paper filter		
Power	HP	0.5/0.5x2, 075x1		
Weight	kg	Built in		
Outside Dimensions	mm	Built in		

### LAYOUT

#### A-SERIES



Type	W	D	H
CM A43C	1910	1800	2280
CM A53C	1910	1800	2280
CM A64C	2185	1950	2370

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