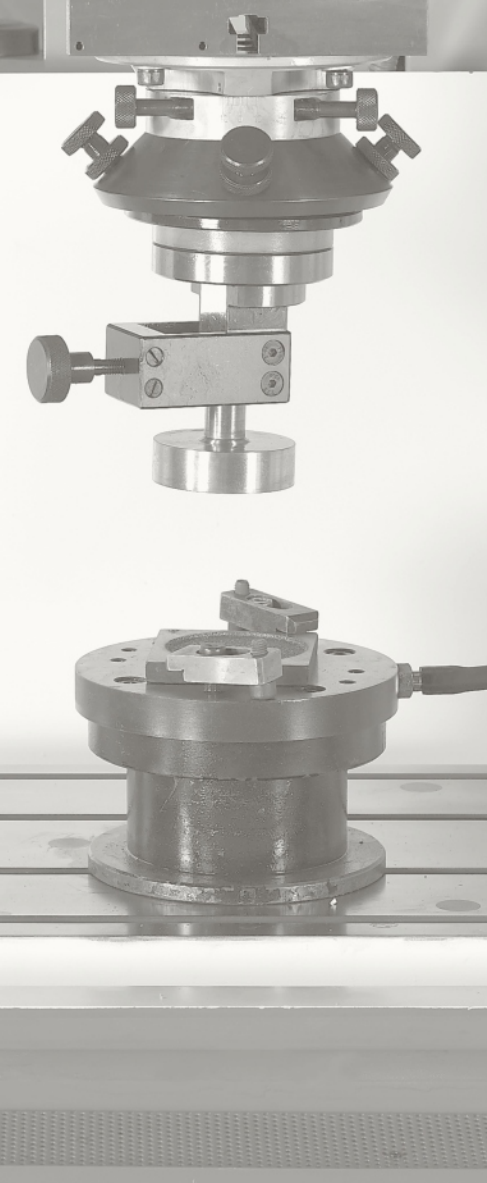


High-Precision CNC EDM

NO LIVE FLAME NEAR THE MACHINE

DO NOT TOUCH PLATEN DURING SPARKING



Lead with the leader

electronica
machine tools

smart cnc
for unlimited machining possibilities

www.ElectronicaEMT.com

Electronica Machine Tools Ltd. and the EDM Technology have been synonymous for more than three decades.

In fact, Electronica pioneered indigenous EDMs way back in 1973.

Now, Electronica presents CNC EDMs with new features, new applications and new benefits. With, of course, the proven economy in operation and lower cost of ownership.

Our new, proud introduction SMART CNC - the smart choice for you to lead all the way.

- High speed jump
- Built-in GURU
- Definable erosion axis
- Canned orbiting cycles
- Adaptive anti-arc and flushing control
- SAFE machining circuit
- Ball screws on X,Y, Z
- C axis (optional)



High Speed Jump

High speed jump of 1500 mm/min. creates a pumping action of dielectric, resulting in good flushing conditions always ensuring clean gap conditions.

Built-in GURU

General User's Recommended Utility

Simple 4-step programing

- 1 Enter basic information such as electrode and workpiece material, machining area, machining depth, and type of machining (low wear / optimum / efficient).
- 2 Select the cavity pattern viz. Single cavity, Multi-cavity array, PCD, assorted.
- 3 Select START & END machining set up from the recipe generated by GURU based on under-sizing of the electrode and the surface finish required.
- 4 Select orbiting pattern suitable for the profile.

Adaptive Anti-arc and Flushing Control

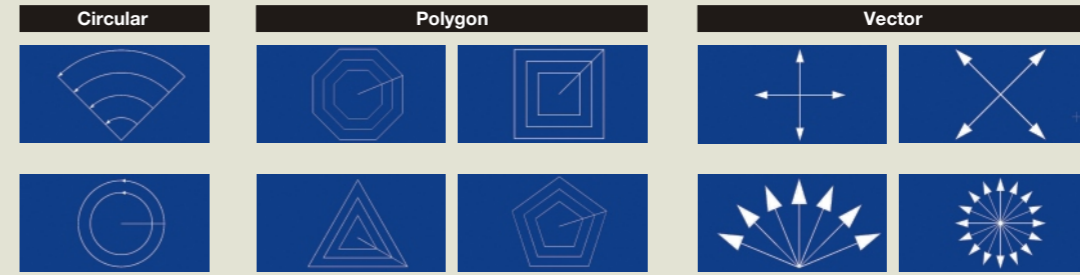
Gap discharges are monitored and instant pulse-to-pulse corrective actions are taken.

- 'Machining difficulty index' signal is generated, based on which pulse parameters are suitably corrected.
- Adaptive jump cycle control based on the concentration of debris in the machining gap.

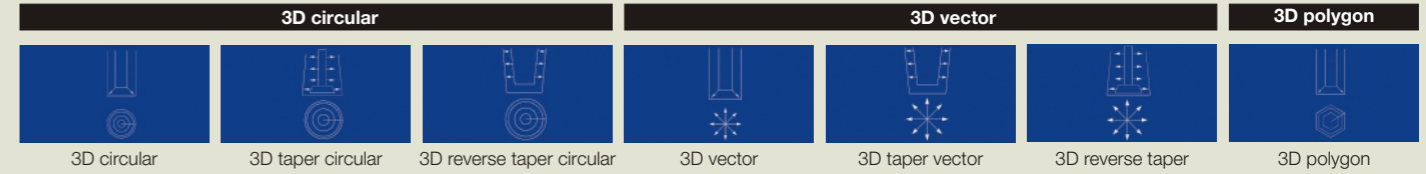
SAFE Machining Circuit

- Safe and stable, no-arc machining
- Ultra-low electrode wear even on sharp corners and edges resulting in:
 - Longer electrode life
 - Sharper machining details
- High-efficiency rib machining

Basic 2D Orbital Cycles



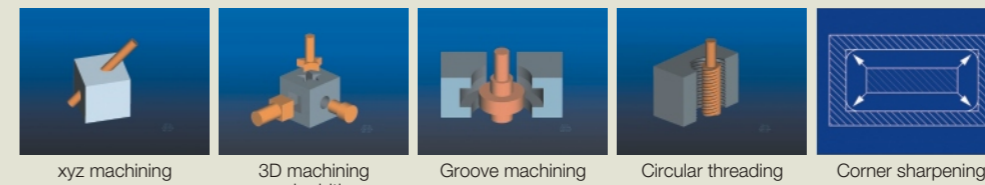
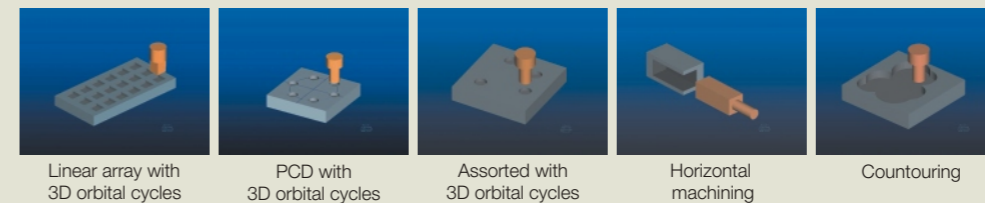
3D Orbital Cycles



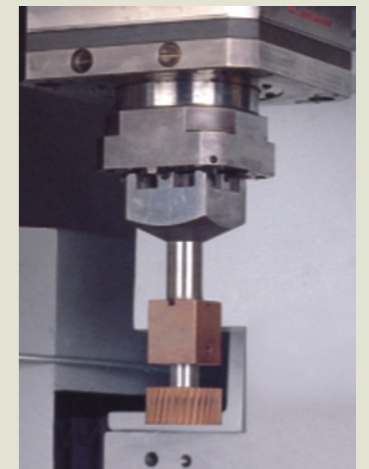
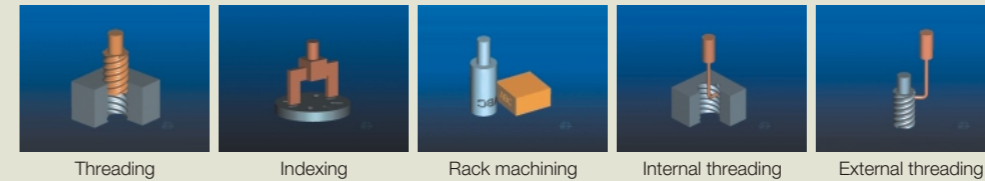
Advanced 3D Orbital Cycles



CNC Applications



With optional C Axis



Integrated C axis (optional)

CNC Pulse Generator - S 50 CNC



CNC Controller

- 32-bit Pentium-based computer for human-machine interface and 56-bit Digital Signal Processor (DSP)
- Multi-axes precise motion control
- Independent programing for X, Y, Z
- Background programing and simulation
- Part program edit
- Programmable multi-cavity operation
- Orbiting in XY, XZ, YZ planes
- Auto edge find and center find (internal and external)
- Selectable auto shut-off function
- Auto power recovery
- Programmable jump to enhance machining stability
- Automatic frontal wear compensation cycle (for Z axis)
- Mirror image on X or Y axis
- Display of electrode path during machining
- Pitch error and backlash compensation
- Menu-driven dialogue box
- Built-in EDM technology data for various materials to set erosion conditions efficiently (auto and user definable)
- Self-diagnostics

PMAC® is a registered trade mark of Delta Tau Data Systems, USA

smart cnc

High-Precision CNC EDM

Unlimited machining possibilities

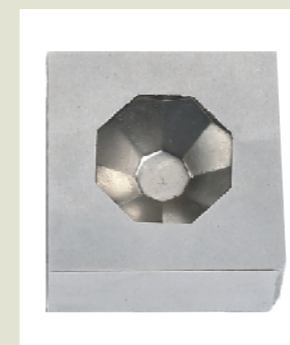


Safety and Protections

- For CPU, measuring circuit, Servo overload, over traverse limits and mains over and under voltage. Dielectric over-temperature, low level, overflow and fire detection.

Data Input and Output

- Keyboard ASCII with 10 software keys
- Isolated RS 232 C serial interface
- 1.44 MB, 3.5" floppy disk
- LCD monitor



Polygon Cycle Orbiting

Workpiece : Stavax
Electrode : Copper
No. of electrodes : 1
Time : 3 hr. 40 min.
Surface Finish : 0.6 μ Ra



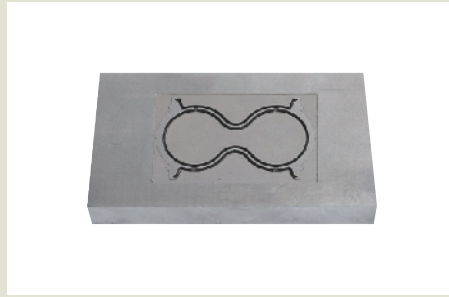
Good Quality Finish with Single Electrode

Electrode : Copper
No. of electrodes : 1
Time : 5 hr. 20 min.
Surface Finish : 1.8 μ Ra



Threading in Carbide

Workpiece : Carbide
 Electrode : Copper
 No. of electrodes : 1
 Time : 3 hr. 45 min.



Arc-Free Rib Profile Machining

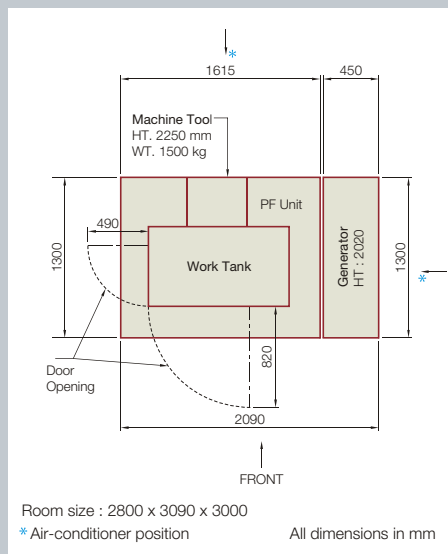
Electrode : Copper
 No. of electrodes : 1
 Time : 3 hr. 50 min.
 Surface finish : 1.6 µ Ra



Deep Cavity Rib Machining with Ultra-low Electrode wear

Electrode : Copper
 No. of electrodes : 1
 Time : 3 hr. 20 min.
 Surface finish : 1.8 µ Ra

Floor Plan



Technical Specifications

Machine Tool

Work tank internal dimensions (W x D x H)	800 x 500 x 350 mm
Work table dimensions	550 x 350 mm
Traverse (X,Y,Z)	300, 200, 250 mm
Maximum job weight	300 kg
Maximum electrode weight (with accessories)	70 kg
Maximum job height	250 mm

Dielectric unit

Dielectric capacity	400 Liters
Filtration system	10 µ paper cartridge 2 nos.

Pulse Generator

Pulse generator type	MOSFET
Maximum working current	50 A
Max. MRR (Cu-St)	350 mm ³ / min.
Max. MRR (Gr-St) (GR-1)	500 mm ³ / min.
Best surface finish (Cu-St)	0.29 µ Ra
Min. electrode wear (Cu-St & Gr-St)	< 0.2 %
Power supply	3 phase, 415 V * AC , 50 Hz
Connected load	6 kVA

S 50 CNC

* Alternate power supply ratings available on request

In keeping with our constant endeavour to meet ever-changing market needs, we reserve the right to alter or change the specifications mentioned without prior notice.



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