

THE BEST MICRO EROSION
TECHNOLOGY
SINCE 1993

SARIX

3D Micro EDM Milling

SX100 - hpm

3D HIGH PRECISION MICRO EROSION MACHINE

3D Micro EDM Milling & Micro EDM Drilling

SX-MPS
Micro Pulse Shape
generator

MICRO MECHANICS
MICRO MOLD
AUTOMOTIVE
TEXTILE
MEDICAL
AEROSPACE



- The closed cell configuration of the **SX100-hpm** machine suits perfectly the high production line as well as any dedicated high precision machining. Its efficiency brings innovative "multiaxismotion" features for the **high precision 3D Micro machining** requirements.
- The integrated cell compact **SX-CNC** multi-axis controller gives the latest performance in **Micro EDM Machining** with the optimized functions for the **3D Micro EDM Milling** programming.
- **SX-HMI**, "Onboard" trolley console interface easy user friendly with color touch screen panel and joystick hand box along with the monitoring of the entire machining process.
- 3 sides wide open access machine with safety operator protection and setting mode access.
- **SX-DA**, free accessible from side, dielectric unit for maintenance and control. Machine side flushing visual for the various settings valves.
- **SX-A344L**, high precision rotating spindle with automatic electrode refeeding and wear compensation control for continuous unlimited production. The **SP06** collet on the SX-A344L spindle can use electrodes down to **45 µm**.
- The high performance **SARIX Micro Pulse Shape EDM generator SX-MPS**, is improved on the closed cell **SX100-hpm** with the integration of the **PULSAR** generator, offering new opportunities for faster, smaller, deeper and more precise perfect holes and 3D cavities.
- **Micro EDMing** machining technology using solid and tube electrode from **45 µm**.
- **Micro Holes**, high precision micro round and shape holes down to **20 µm** to 3.0 mm.
- High surface finishing capability down to **Ra 0.10** and **Ra 0.05** with the **Micro Fine Pulse Shape generator SX-MFPS** and with the **Micro Ultra Fine Pulse Shape generator SX-UFPS** for the **3D Micro EDM Milling**.
- High precision positioning accuracy and drilling depth control up to **±1 µm**.
- **SX-MDH**, Micro Deep Hole drilling device for **0.10 mm** holes with tolerance of **±5 µm** on depth ratio up to 100 - 150 time.
- **Industry 4.0 - smart production** and automation process integration capability.

PERFECT ROUND HOLES

CONCENTRIC &
ACCURATE HOLES

HOLE TAPER CONTROLLED

NO ANGLE LIMIT

NO BURNING EFFECT

NO MATERIAL ALTERATION

WITHOUT ENTRANCE AND
EXIT DEFORMATION

HIGH
PRODUCTIVITY QUALITY

HIGH
QUALITY SURFACE

HIGH
PRECISION FINISHING

3D µEDM

IF YOU NEED
THIS TOP
PERFORMANCE
WITH REDUCED
MACHINING TIMES,
WITHOUT MATERIAL
ALTERATION,
CALL SARIX
OR VISIT US

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TECHNICAL SPECIFICATION

Closed cell machine	SX100-hpm	
Type	3D High Precision Micro EDM Machine	
Work table	L 510 mm I 270 mm	
Travel X axis	300 mm	
Travel Y axis	150 mm	
Travel Z axis	200 mm	
Z axis feed rate	1200 mm/min	
X-Y axis feed rate	1200 mm/min	
Precision of positioning	±2.0 µm	
Resolution	0.1 µm	
Table load	~ 25 kg	
Net weight	~ 1000 kg	
Dimensions Machine	L = 1200 x I = 1200 x h = 2000 mm	

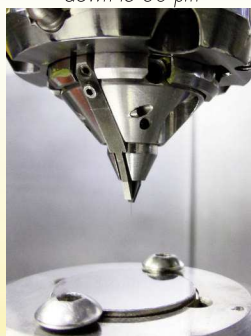
	SX-MPS	SX-HPS
Generator	MICRO PULSE SHAPE	HIGH PULSE SHAPE
Freerun voltage	60 ÷ 255 V	fixed voltage
Frequency	1 ÷ 250 pos.	1 ÷ 100 pos.
Current pulse	1 ÷ 200 pos.	1 ÷ 200 pos.
Dimensions	135 x 110 x 500 mm	
Control Unit	SX-CU	
SX-CU integrated in the electrical cabinet on the table		
Power supply	400 V - 3 Ph / 50 Hz	
Nominal power	2 KVA	
Dielectric Unit	SX-DA	
Capacity	75 liters	
Dielectric	deionised water or dielectric oil	
Dimensions	550 x 1200 x 600 mm	

Our specifications are subject to any change, giving you a continuous technological advantage.

SX-ROT with guide holder
SX-PG-M & collet SPO2



SP12 high precision collet
down to 30 µm



In the region where avant-garde technology has made EDM history



TYPICAL CONFIGURATION SX100-hpm 3D High Precision Micro EDM machine

SX100-hpm machine including **SX-CU** CNC & **SX-MPS**, Micro Pulse Shape Generator
Axis configuration X,Y,Z (A,B,C additional axis - optional)

Virtually up to 16 axis control with 4 axis on simultaneous motion

- **SX-Icon Editor**, free programming PC software with ISO and G code.
- **SX-KBS**, Knowledge Base - Micro EDM Technology data base- PC software.
- **SX-SLS-DT**, Self-learning and search technology software for drilling.
- **SX-PL**, Multi-axis-erosion software X-Y-Z axis with extended planetary-orbiting function.
- **SX-DA**, Dielectric unit with 1 µm filtering with conductivity and temperature control for deionised water or dielectric oil. *Fire extinguishing system for Dielectric Oil (option).*
- **SX-HP**, High pressure flushing unit up to 70 bars.
- **SX-A344-L**, High precision rotating spindle with automatic electrode refeeding and wear compensation with through flushing function (C function optional).
- **SPO6** or **SPO8**, Collets for SX-A344-L automatic spindle down to **45 µm**.
- **SX-3D Micro EDM Milling CAM**, Software for 3D Micro EDM Milling machining.

SX-CU CNC CONTROL UNIT

- **SX-CU**, controller with enhanced interaction and process visualisation with **free and unlimited program capacity and Micro EDM Technology settings**.
- **SX-HMI**, "On board" user friendly 12" color Touch Screen interface with USB & LAN

OPTIONS

- **SX-MFPS** and **SX-UFPS**, Micro Fine Pulse Shape and Ultra Fine Pulse Shape generators for Micro Fine and ultrafine finishing.
- **SX-HPS**, High Power Pulse Shape generator for higher stock removal.
- **SX-ROT**, High precision rotating spindle for SPO2/O3 collet with 3R Macro chuck.
- **SX-PG-M**, Precise ceramic guide height adjustment with retractable guide holder.
- **SP12**, Collet for SX-A344-L automatic spindle down to **30 µm** solid carbide electrodes.
- **SP-MDC**, Multi diameter automatic refeeding collet 0.2 - 1.0 mm and 0.5 - 1.5 mm.
- **SX-Revolver**, Automatic electrodes changer for SX-A344-L with 300 or 600 mm cartridge of 8 electrodes.
- **SX-C-ROT**, High precision rotating spindle for SPO2/O3 collet with C-indexing function.
- **SX-TH**, "Tilting Head" for taper holes with SX-A344-L spindle using the collet SPO8.
- **SX-R-AB100D**, High precision rotary programmable A/B axis with direct axis control and universal 3R & Erowa chuck.
- **SX-AB100C**, High precision single or double indexable and programmable A/B-axis.
- **SX-ARIANNE**, Electrode wire EDM grinding device for the automatic micro electrode production for round and shape micro holes down to 10 µm.
- **SX-Micrometer**, Laser for measurement of diameter and profile of micro electrodes.
- **SX-MDH**, Micro Deep Hole Drilling device for 0.10 mm holes with tolerance of **± 5 µm** on depth ratio upto 100 - 150 time.
- **SX-DNC**, Sequencer software for dxf file and unlimited programmable number of holes.
- **SX-EAD**, Electrode Automatic Distributor device.

ACCESSORIES

- **SPO2**, High precision manual collet
- High precision ceramic guide **SG01-SG03-SG08** and specials series
- High precision solid carbide electrodes tubes down to **90 µm** and blank electrodes down to **45 µm**
- Brass & Copper single holes and coreless electrodes tubes

Tooling, fixtures, microscopes, instruments, filters...

