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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SARIX SA
6592 SANT'ANTONINO
SWITZERLAND

SARIX
THE BEST MICRO EROSION TECHNOLOGY SINCE 1993

3D Micro EDM Milling

NEW SX80 - hpm

MICRO EROSION HIGH PRECISION MACHINE
TABLE TOP - SO EASY and SO PERFORMING

Micro EDM Drilling & 3D Micro EDM Milling

MICRO MECHANICS
MICRO MOLD
AUTOMOTIVE
TEXTILE
MEDICAL
AEROSPACE

SX-MPS
Micro Pulse Shape generator

SX-HMI
Touch screen interface

- The **SX80-hpm** machine is the ideal solution for the production environment with small batch size and fast changing machining jobs. Its capabilities brings new innovative technological features for the **high precision 3D Micro machining** applications needs.
- The **NEW** compact **SX-CNC** multi-axis controller offers the latest performance in **Micro EDM Machining** with the optimized functions for micro drilling and micro milling programming and a clear monitoring of the machining process.
- **SX-HMI**, "On-board" interface on the table top machine. Easy user friendly color touch screen panel with joystick handbox.
- **SX-DA**, dielectric unit integrated under table of the machine, free access for maintenance and control. The flushing controls are easily and quickly accessible on the front of the machine.
- **SX-A344L**, High precision rotating spindle with automatic electrode refeeding and wear compensation control for continuous unlimited hole production.
- **SX-BTD**, **High Speed Micro EDM drilling** Technology with breakthrough detection control.

- The high performance **SARIX Micro Pulse Shape EDM** generator **SX-MPS**, is improved on the tabletop **SX80-hpm** with the integration of the **PULSAR** generator, offering new opporunties 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 quality down to **Ra 0.10** and **Ra 0.05** with the **Micro Fine Pulse Shape** generator **SX-MFPS**.
- 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 upto 100 - 150 time the diameter.

- **Industry 4.0 - smart production** and automation process integration capability.

TECHNICAL SPECIFICATIONS

Tabletop machine	SX80-hpm
Type	High Precision Micro EDM Machine
Work table	L 510 mm l 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	~ 650 kg
Dimensions **Machine** **Table bench**	L = 850 x l = 905 x h = 1400 mm L = 1800 x l = 800 x h = 650 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 continous technological advantage.

TYPICAL CONFIGURATION
SX80-hpm High Precision Micro EDM machine

SX80-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-ROT**, High precision rotating spindle for SP02/03 collet with 3R Macro chuck.
- **SX-PG-M**, Precise ceramic guide height adjustment with retractable guide holder.

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 friendly12" 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-A344-L**, High precision rotating spindle with automatic electrode refeeding and wear compensation with through flushing function (C function optional).
- **SP06** & **SP08** collets for SX-A344-L automatic spindle down to **45 µm**.
- **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 SP02/03 collet with C-indexing function.
- **SX-TH**, "Tilting Head" for taper holes with SX-A344-L spindle using the collet SP08.
- **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 diameter 0.10 mm holes with tolerance of **± 5 µm** on depth ratio upto 100 - 150 time.
- **SX-3D-Micro EDM Milling CAM**, software for 3D Micro EDM Milling machining.
- **SX-DNC**, Sequencer software for dxf file and unlimited programmable number of holes.
- **SX-EAD**, Electrode Automatic Distributor device.

ACCESSORIES

- **SP02**, 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…

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