

MACHline

THE BEST MICRO EROSION
TECHNOLOGY
SINCE 1993

SARIX
3D Micro EDM Milling

PROCESS VERSATILITY

Micro EDM
Machining Center **MACHline**
Twin Axis

Processing Combination

Micro EDM Drilling
Micro EDM Sinking
Wire EDM Electrode grinding
3D Micro EDM Milling
3D Scope Measuring
Micro Laser Ablation

Productivity

Tools Integration

8 Axis Controller
Multi-Diameter Electrode Changer
Larger Part Micro EDMing

INNOVATION

SARIX maintains his commitment to a continuous innovation of the micro EDM technology with the introduction the new **MACHline** machining centers. The **MACHline** is a family of Micro EDM machining centers and contain a unique combination of high precision machining capability to process large parts and high productivity.

The possibility to combine multiple machining processes is another unique feature of the **MACHline** series. The design of these unique machining centers is the result of the experience of SARIX: more than 15 years of worldwide leadership in the Micro EDM Technology.

TECHNOLOGY

The constant development of the SARIX Micro EDM Technology has orientated the innovative design of the EDM axis of the **MACHline** series. All EDM axis are concentrated in a core unit, a X-Y-Z module that is lightweight, very accurate and with high dynamic. Large positioning axis U, V, W applies the micromachining precision to larger parts.

- SARIX has also improved its Deepest Drilling Technology with devices that now can drill 100 microns holes with stringent tolerances, in up to 15 mm tungsten carbide.

These devices are available for all ranges of machines, including the installed SX machine line.

PROCESS VERSATILITY

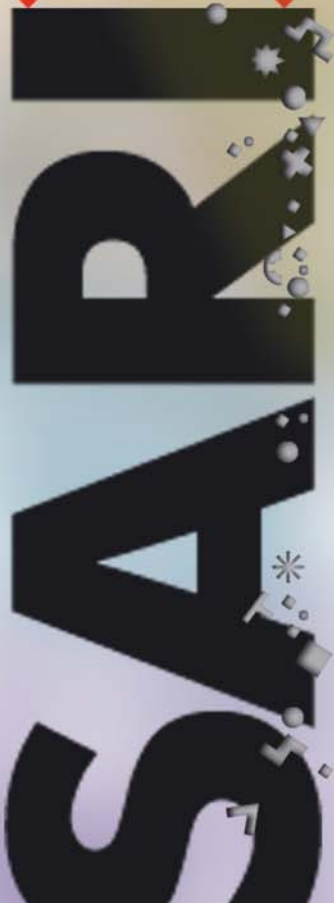
The EDM core module carries two Z-axis that can be fitted with independent process unit: the Twin Axis capability. Customer can choose the best head configuration for the maximal performance. The Twin Axis system can accept for example, a roughing and a finishing Micro EDM milling spindle. In another configuration one Micro EDM head and the 3D Scope measurement unit allow in-process part measurement without dismounting the work piece. Process combination on the Twin axis unit can also be extended to complementary processes like Micro EDM and Micro Laser Ablation as proposed by SARIX for aircraft and the gas turbine industry for ceramic-coated components ...

PRODUCTIVITY

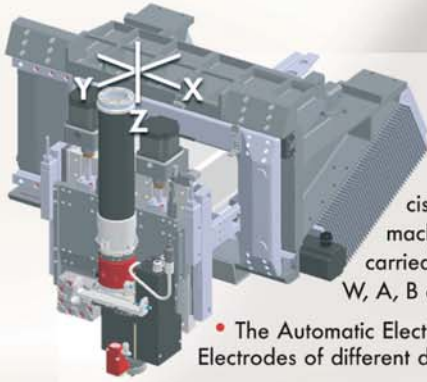
All features of the **MACHline** models are optimized for productivity. The optional tool changer unit automatically loads electrodes of different diameter. The new multi-diameter collet can change the working diameter and maintains optimal flushing conditions with each diameter. The large displacement of the U, V, W axis allow to machine large parts or the loading of multiple part pallets. In the MACH Aero model the machine has 2 indexing axis for the positioning of complex shaped parts. Through the large front window, the operator has an ideal accessibility and visibility of the working area.



MACH AERO 8 axis



TECHNICAL SPECIFICATIONS



MACH_{aero} 8 axis

- Up to two process heads are mounted on the high-dynamic, high-precision Micro EDM CORE X-Y-Z Module. This module is the core of the machine and is optimized for micromachining performance. This module is carried by the positioning axis U, V, while the part is positioned with the W, A, B axis.
- The Automatic Electrode Changer guarantees long machining autonomy. Electrodes of different diameter can be automatically used with the Multi-Diameter collet.
- Complex cavity structures and high profile casting are machined by the High Speed EDM Drilling process with the proven SARIX Breakthrough Detection.
- Programming a part with round holes or diffuser holes is easy even on complex surface parts thanks to the SX-CAM Aero, developed specifically for the turbine industry.

MACH_{milling} 5 axis

- The micro EDM core with up to 2 process heads is positioned by the basic U-V axis
- Automatic electrode feeding spindle with C indexing function
- Wire EDM electrode grinding device for micro round and complex shaped electrode (Laser electrode measurement as option)
- 3D Model programming with the SX-3D Milling CAM software package

MACH basic configuration

EDM Axis	X 100 mm	Y 100 mm	Z 100 mm	Glass Scale resolution 0.1 um
Accuracy	+/- 2 um			
Positioning Axis	U 650 mm	V 500 mm	W 450 mm	Glass Scale resolution 0.1 um
Tilting positioning Axis	A +/- 90°	B 360°		Direct Encoder resolution 0.0005°
Work piece weight	50 kg on B axis including fixture on chuck holder 3R or EROWA			
Power supply	400 VAC	3 Phase	6 KVA	
Air pressure	6 bar dry			
Chilled water line	15° C	Facility line or external chiller on option		
Dimensions	W = 2200 x D = 2500 x H = 2300 mm machine closed with front door opened 3000 mm			
Machine weight	2500 Kg	without extended High Autonomy Dielectric Unit		

Integrated basic pneumatic and hydraulic cabinet - easy access

Inlet air filtering and pressure regulator - High pressure 70 bars and low pressure flushing for deionised water or dielectric oil with temperature control

Machine temperature conditioning - constant stable process

Machining area, electronics and electrical cabinet with temperature control

Safety operating area - easy operation access

Machine safer motorized frontal operating door Bright visibility and cold light illumination. Vapour extraction and fire estinguish integration on request

Ergonomic control panel - user friendly control

High quality 15" color Touchscreen on ergonomic adjustable command panel Ethernet and USB connection

ACCESSORIES original accessory for a machining warranty

The standard range of accessories for the MACH Line options are based on a constant compatibility SARIX philosophy applied since years on collets, guides and electrodes or electrode-tubes.

From the high precision SP02, SP06 collet to the multi-diameter collet SP-MDC together with our high precision solid carbide electrode range SE01 & SE03, SARIX is pleased to design complex accessory and dedicated tooling according your needs.

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



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