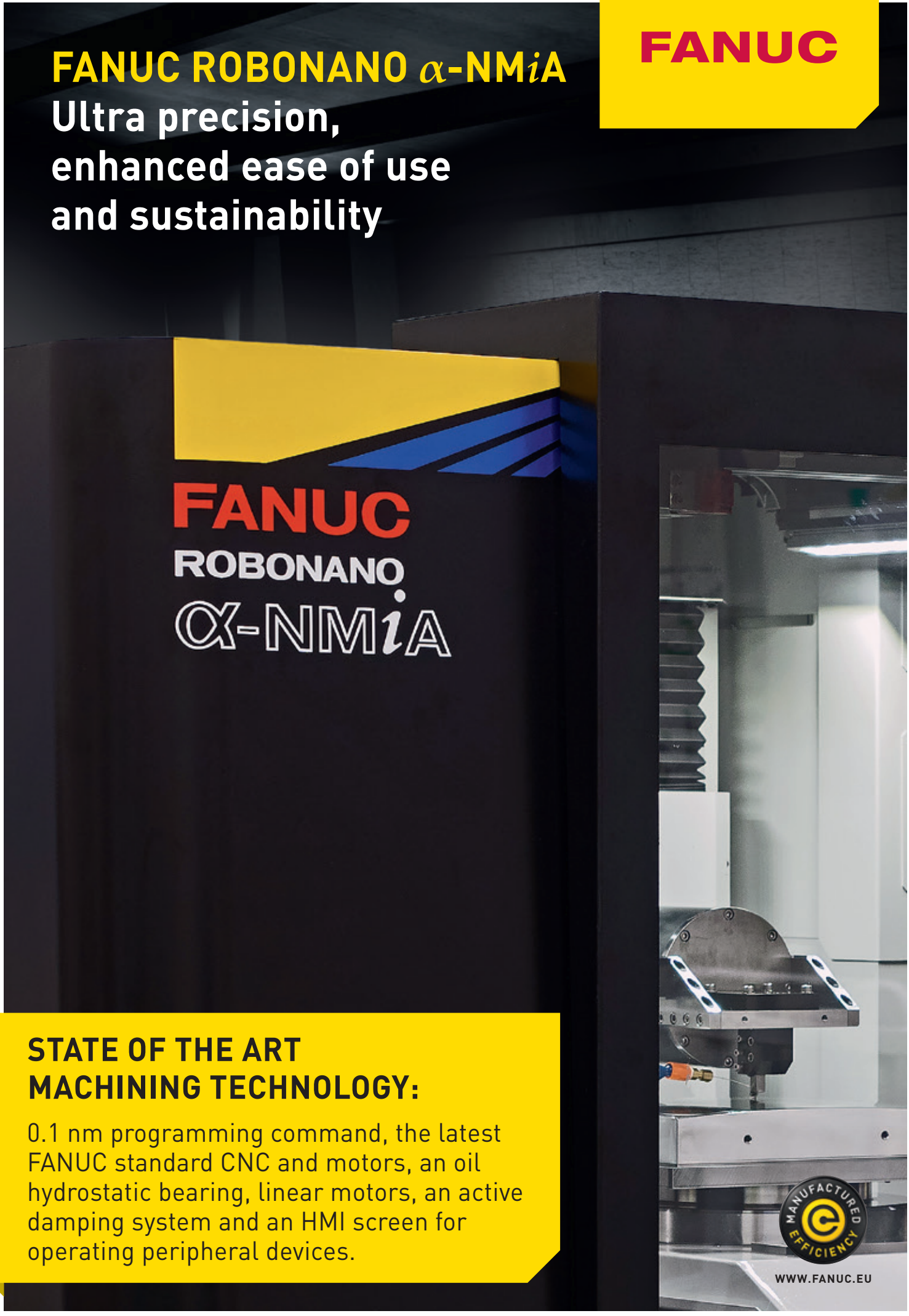
FANUC

FANUC ROBONANO α-NMiA

Ultra precision, enhanced ease of use and sustainability



STATE OF THE ART MACHINING TECHNOLOGY:

0.1 nm programming command, the latest FANUC standard CNC and motors, an oil hydrostatic bearing, linear motors, an active damping system and an HMI screen for operating peripheral devices.

MANUFACTURED EFFICIENCY

WWW.FANUC.EU

Ultra precision for mass production

- suitable for machining complex shaped cores and parts
- suitable for a wide range of applications requiring nano precision

Features and benefits

- controlled by the latest FANUC CNC and motors
- 0.1 nm programming command
- up to 300x210 mm (A4 size) machining area
- HMI screen for operating peripheral devices

AUTOMOTIVE

Head UP display (HUD) core

Method: Scribing
Material: Ni-P plate
Workpiece size: 300x210 mm
Tool: Monocrystalline diamond
Surface roughness: Ra 6 nm

AUTOMOTIVE

Curved car emblem

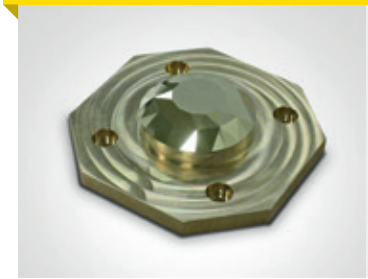
Method: Scribing
Material: Ni-P plate
Workpiece size: 300x90 mm
Tool: Monocrystalline diamond
Surface roughness: Ra 1.7 nm

WATCHMAKERS

Watch parts (hologram)

Method: Scribing
Material: Ni-P plate
Tool: Monocrystalline diamond
V-groove array: 20000 lines, pitch 1 µm

WATCHMAKERS



Brilliant cutting model

Method: Milling
Material: Brass
Workpiece size: φ50 mm
Tool: Monocrystalline diamond
Surface roughness: Ra 1.3 nm

BIOMEDICAL

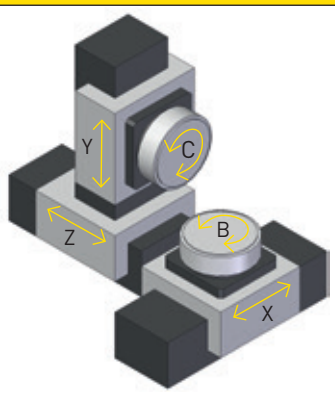
Spherical machining

Method: Ultrasonic vibration scribing
Material: STAVAX® ESR
Tool: Monocrystalline diamond
Surface roughness: Ra 4 nm

BIOMEDICAL

Microchannels

Method: Milling
Material: Ni-P plate
Tool: Monocrystalline diamond
Minimum width: 30 µm
Minimum depth: 10 µm

FANUC ROBONANO α-NM*i*A specifications:			**Axis information:**
Stroke	X axis	450 mm	
	Z axis	300 mm	
	Y axis	200 mm	
	B axis	360 degrees continuous rotation (indexing table)	
	C axis		
Bearing type	Oil hydrostatic bearing (all axes)		
Command resolution	X, Y, Z axes	0.1 nm	
	B, C axes	0.000001 degrees	
Table size	B, C axes	Φ 220 mm	
Maximum feed rate	X, Z axes	1,000 mm/min	
	Y axis	200 mm/min	
	B axis	3,600 deg/min	
	C axis	3,600 deg/min	
Maximum spindle speed	50,000 min^{-1} (Milling spindle is attached to C axis)		
Mass	3,600 kg		
Standard accessories	CNC cabinet, operator panel, milling spindle, option mount, hydraulic power unit, active damper system, cutting fluid unit, precision compressed air temperature control system		
Options	Mist collector, Smart Measurement Package (microscope, electric micrometre, field balancer)		
Requirements	5x5 m installation area, 200~220 VAC, 50/60 Hz, 7 kVA (20 A), 23 C constant room temperature (fluctuation is tolerated according to target machining accuracy, maximum allowed fluctuation ±1 C), 50% humidity, 0.7±0.01 MPa 1.0 m^3/min compressed air		

MFL-03049-EN V1 08/2017