

THE FACTORY AUTOMATION COMPANY

FANUC

FANUC ROBONANO α -NM*i*A

Ultra precision, enhanced ease of use
and sustainability

FANUC
ROBONANO
 α -NM*i*A

**State of the art
machining technology**

More info: fanuc.eu/uk/en/robonano





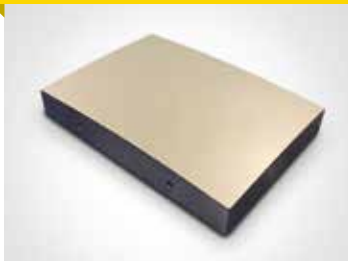
Ultra precision for mass production

- 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 60kg workpiece weight
- oil hydrostatic bearing
- linear motors
- active damping system
- HMI screen for operating peripheral devices

AUTOMOTIVE



Head UP display (HUD) core

Method: Scribing
Material: STAVAX® ESR
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

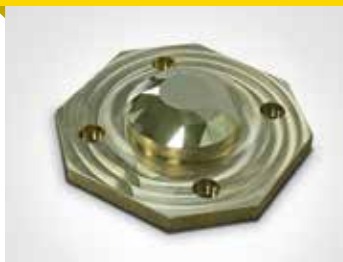
WATCHMAKERS



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-NMiA specifications:			Axis information:
Stroke	X axis	450 mm	
	Z axis	300 mm	
	Y axis	200 mm	
	B axis	360 degrees continuous rotation	
	C axis	(indexing table)	
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 215 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	Smart M-Setup (Microscope, Electric micrometer, Field balancer), Smart M-Form, Transformer		
Requirements	5x5 m ² installation area; 7 kVA three phase 400 VAC 50 Hz power supply (CEE 32A 3P+N+E socket-outlet); ISO 8573-1:2010 [1.6:1] clean and dry compressed air with 0.7 MPa pressure, ±0.01 MPa pressure stability, 1.0 m ³ /min flow rate capacity, air temperature between 15°C and 28°C (connection with Ø16 mm outer diameter tube); less than 0.1 μm floor vibration amplitude (less than 0.1 Gal floor vibration acceleration); 23°C constant room temperature with ±1°C maximum fluctuation in 30 minutes (temperature stability is directly proportional to machining accuracy); less than 50% relative humidity; mist collector; transformer (available as option).		