

ROBONANO α -NMiA Mechanical specifications



Stroke	X-axis (horizontal linear) [mm]	450
	Y-axis (vertical linear) [mm]	200
	Z-axis (horizontal linear) [mm]	300
	B-axis (horizontal rotation) [°]	360 (note 1)
	C-axis (vertical rotation,) [°]	360 (note 1)
Command resolution	X-, Y-, Z-axes [mm]	0.0000001 (0.1 nm)
	B- and C-axes [°]	1/1,000,000
Work-table area	B- and C-axes [mm]	ϕ 215
Hydrostatic bearing medium	X-, Y-, Z-, B- and C-axes	Oil
	Milling spindle	Air
Max. loading capacity	B-axis table [kg]	60
Max. feed rate	X-axis [mm/min]	1,000
	Y-axis [mm/min]	200
	Z-axis [mm/min]	1,000
	B-axis [°/min]	3,600
	C-axis [°/min]	3,600
Straightness	X-axis [nm over 450 mm]	200
	Y-axis [nm over 200 mm]	200
	Z-axis [nm over 300 mm]	200
Run-out	B- and C-axes [nm]	< 100
Accuracy	Positioning accuracy [nm over 450 mm]	\pm 200 (note 2)
Operation and display	Display unit	15" Colour LCD
	Operation unit	Flat keyboard
Milling spindle	Tool shank diameter [mm]	ϕ 6 (notes 2, 3)
	Max. speed [rpm]	50,000
	Max. output [W]	50
	Run-out [mm]	0.00005 (note 4)
	Air bearing flow rate [m ³ /min]	0.02
	Air turbine flow rate [m ³ /min]	0.2
	Dimensions [mm]	ϕ 74 x 84
Weight [kg]	1.5	

Note 1) Indexing table with continuous rotation

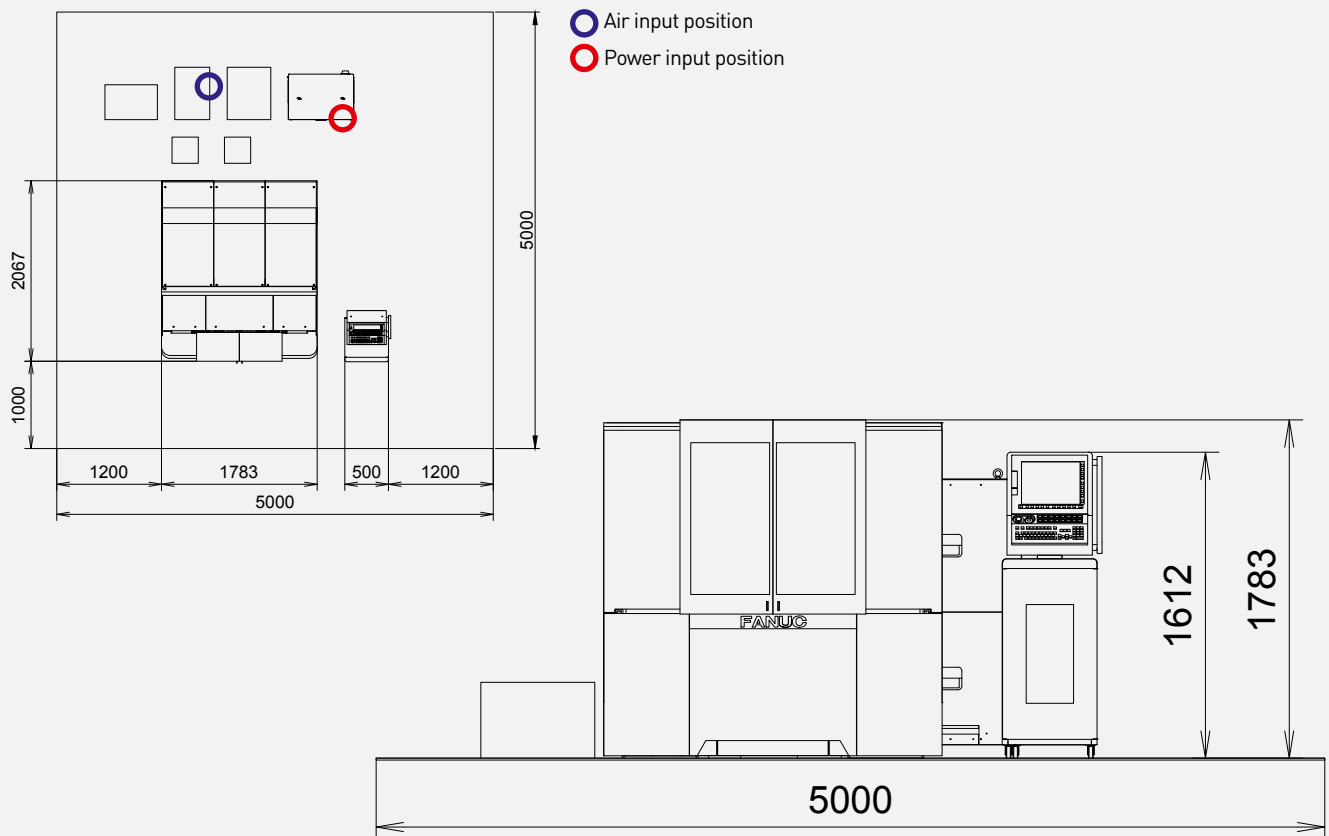
Note 2) Compliant with JIS B 6201

Note 2) Tool shank tolerance: ϕ 6 mm +0.000/-0.001 mm

Note 3) ϕ 4, ϕ 3 mm with shrink-fit adapter (not included)

Note 4) NRRO (Non-Repeatable Run Out)

ROBONANO α -NMiA Dimensions and requirements



Power supply	Power supply [VAC]	200-220 \pm 10%
	Phases	3
	Frequency [Hz]	50/60 \pm 1
	Power [kVA]	7
	Overvoltage category	Class III
Compressed air	Air pressure [MPa]	0.7
	Allowed air pressure change [MPa]	0.01
	Maximum air flow rate [m ³ /min]	1.0
	Purity class	[1:6:1] (note 5)
Dimensions	Width [mm]	1,800
	Length [mm]	2,100
	Height [mm]	1,800
	Required floor area [mm]	5,000x5,000
	Weight [kg]	3,600
Installation requirements	Noise level [db]	70 (note 6)
	Ambient temperature [°C]	23
	Ambient temperature stability [K]	\pm 1.0 (note 7)
	Max relative humidity [%]	0.5
	Floor vibration max. amplitude [mm]	0.001
	Floor vibration max. acceleration [Gal, 3 to 100 Hz]	0.1
	Mist collector	

Note 5) According to ISO 8573-1:2010 standards (conditions: 23°C, 0.7MPa, 1.0m³/min)

Note 6) A-weighted, with milling spindle at 50,000 RPM measured at 0.5 m from the machine, 1.5 m above the floor

Note 7) Fluctuation is tolerated according to target machining accuracy, maximum allowed fluctuation \pm 1°C.