

NEW

# VARIAXIS i-800 NEO

Next-generation 5-axis machining center  
for extended fully automatic operation



VARIAXIS i-800 NEO  
Shown with optional equipment

■ Spindle specifications to meet a wide variety of machining requirements

**10,000 min<sup>-1</sup> (rpm)**  
37 kW (50 HP)

Standard (No. 50/BBT-50/HSK-A100)  
Max. torque (40% ED; 30-min. rating): 350 N·m (258 ft·lbs)

**18,000 min<sup>-1</sup> (rpm)**  
55 kW (74 HP) / 35 kW (47 HP)

High speed (HSK-A100/HSK-A63)  
Max. torque (40% ED; 30-min. rating):  
105 N·m/134 N·m (77 ft·lbs/99 ft·lbs)

**7,000 min<sup>-1</sup> (rpm)**  
30 kW (40 HP)

High torque (No. 50/BBT-50/HSK-A100)  
Max. torque (40% ED; 30-min. rating): 442 N·m (326 ft·lbs)

**25,000 min<sup>-1</sup> (rpm)**  
23 kW (31 HP)

High speed (HSK-A63)  
Max. torque (40% ED; 30-min. rating): 22 N·m (16 ft·lbs)

Spindle output rating is 40% ED (30-min. rating)

- Tilting/rotary table plus high-rigidity machine construction ensures high-accuracy machining over extended periods of operation
- The VARIAXIS i Series can be integrated with other machines, such as horizontal machining centers, using the Mazak PALLETECH system

## MAZATROL *SMOOTH*Ai**

Next-generation MAZATROL CNC for higher productivity

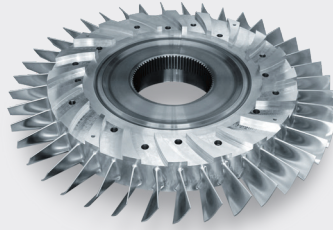
- Advanced programming and simulation provide extensive support at every step of the process, from programming to machining
- AI-based vibration control and heat displacement compensation ensure improved part surfaces as well as stable, high-accuracy machining
- MAZATROL TWINS – Create virtual machines on office PC for efficient setup and enhanced productivity
- Equipped with support functions for easy automation configuration

Shown with optional MAZATROL SmoothAi dual monitor

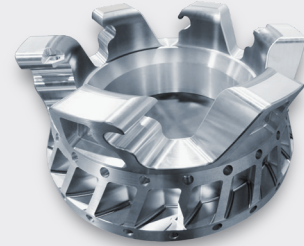


## Reduce cycle times with effective 5-axis process integration

Machine a variety of workpieces effectively with greater X, Y and Z-axis travels and faster rapid traverse rates than conventional machines.



Aerospace component (bisk)



Industrial machine component (structural part)

### Standard Machine Specifications

Stroke	X-axis travel (spindle head left/right)	750 mm (29.53")
	Y-axis travel (spindle head back/forth)	890 mm (35.04")
	Z-axis travel (spindle head up/down)	600 mm (23.62")
	A-axis travel (table tilt)	-120° ~ +30°
	C-axis travel (table rotation)	±360°
Table	Distance from table top to spindle nose	190 mm ~ 790 mm (7.48" ~ 31.1") (table horizontal)
	Table size	ø800 mm (ø31.5") × 630 mm (24.8") wide
	Max. workpiece size	ø1,000 mm (ø39.37") × 415 mm (16.34") [ø850 mm (ø33.46") × 500 mm (19.69")]
	Table load capacity (evenly distributed)*1	1,000 kg (2205 lbs)
Milling spindle	Max. spindle speed	10,000 min <sup>-1</sup> (rpm)
	Spindle taper	7/24 taper No. 50
	Spindle bearing I.D.	ø100 mm (ø3.94")
	Feedrate	
Feedrate	Rapid traverse rate (X, Y, Z axis)	48 m/min (1890 IPM)
	Rapid traverse rate (A, C axis)	10,800°/min, 18,000°/min
	Min. indexing increment (A, C axis)	0.0001°
	Automatic tool changer	
Automatic tool changer	Tool shank configuration	No. 50
	Tool storage capacity	30
	Max. tool diameter	ø125 mm (ø4.92")
	Length (from gauge line)/weight	415 mm (16.34")/20 kg (44 lbs)
	Max. tool diameter (adjacent tool pockets empty)	ø210 mm (8.27")
Motors	Tool selection method	Random selection, shortest path (fixed pocket assignment)
	Spindle motor (40% ED/cont. rating)	37 kW (50 HP)/30 kW (40 HP)
	Electrical power requirement (40% ED/cont. rating)	89.82 kVA/78.62 kVA
	Air supply	300 NL/min (11.43 ft <sup>3</sup> /min)
Coolant	Coolant tank capacity	400 L (105.68 gal)
	Height	3497 mm (137.68")
Machine size	Width × Length	2695 mm × 5265 mm (106.1" × 207.28")
	Machine weight	19,600 kg (43,210 lbs)
	Sound	
Sound	Equivalent continuous sound pressure level at operator position (dependent on equipment options)	Less than 80 dB (A)

\*1 Specifications are different for 2-pallet changer

### 2-pallet changer OPTION

For higher productivity, set up the next workpiece while machining the current workpiece.



VARIAXIS i-800 NEO (2-pallet changer)  
Shown with optional equipment

### Standard and Optional Equipment

●: Standard ○: Option

Machine	10,000 min <sup>-1</sup> (rpm) No. 50 spindle	●
	Ai Thermal Shield	●
Factory automation	Tool length measurement & tool breakage detection	○
	Tool breakage detection (ATC area)	○
	Laser tool measurement system	○
	Ball screw core cooling (X, Y, Z axis)	●
	30-tool magazine	●
	40, 80, 120-tool magazine	○
	Scale feedback	○
	Absolute positioning system	●
	Factory automation	
	Remote manual pulse generator	○
Safety equipment	Automatic power ON/OFF + warm-up operation	●
	Automatic front door	○
	2-pallet changer	○
	Preparation for hydraulic fixtures	○
	Wireless touch probe RMP600	○
	Operator door interlock	●
	High accuracy	MAZA-CHECK (software, reference sphere)*1
	Coolant/	Coolant system
	Chip disposal	Work air blast
	Coolant/	Oil skimmer (RB-200)
Coolant/	Chip disposal	Mist collector
		Coolant temperature control
		Coolant-through spindle system 0.5 MPa (73 PSI)
		High pressure coolant-through spindle 1.5, 7.0 MPa (218, 1,015 PSI)
		Flood coolant 0.44 MPa, 30 L/min (64 PSI, 8 gal/min)
		Chip conveyor (hinge) side discharge
		Chip conveyor (ConSep) side discharge
		Chip bucket (swing type)

\*1 MAZA-CHECK requires optional RMP600 wireless touch probe

# Mazak

## YAMAZAKI MAZAK CORPORATION

1-131 Takeda, Oguchi-cho, Niwa-gun, Aichi-pref., Japan  
TEL : +(81)587-95-1131

www.mazak.com

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