

THE FACTORY AUTOMATION COMPANY

**FANUC**

# New ROBODRILL $\alpha$ -DiB5 Plus series

High performance vertical  
machining center



SPINDLE TORQUE UP TO  
100 NM MAX AND SPINDLE  
SPEED OF 24.000 1/MIN MAX



EXCELLENT USER-INTERFACE  
FOR EASY PROGRAMMING  
AND SET-UP



LATEST CNC SERIES  
31i-B5 PLUS



FAST CYCLE-TIME TECHNOLOGY,  
FINE SURFACE TECHNOLOGY,  
INTEGRATED 5-AXIS TECHNOLOGY



## High speed, high precision & high power

The ROBODRILL  $\alpha$ -DiB5 Plus series is the latest addition to the high-profile range of ROBODRILL machines. Innovations such as revised spindle variations, new control options, servo drives and mechanical improvements have made the new series even more effective, reliable, fast and easy to use. With by far the shortest cycle times on most machining operations, all ROBODRILL machines are real highspeed all-rounders offering incredible performance and unbeatable efficiency. With everything on board from flexible 3, 4 and 5 simultaneous axes, every model has been designed to grow with your needs.

[WWW.FANUC.EU](http://WWW.FANUC.EU)

# Technical data

Item		$\alpha$ -D21SiB5 Plus $\alpha$ -D14SiB5 Plus	$\alpha$ -D21MiB5 Plus $\alpha$ -D14MiB5 Plus	$\alpha$ -D21LiB5 Plus $\alpha$ -D14LiB5 Plus
Machine (Standard)				
Capacity	X-axis travel	300 mm	500 mm	700 mm
	Y-axis travel	300 mm + 100 mm	400 mm	
	Z-axis travel	330 mm		
	Distance from table surface to spindle gauge plane	250 mm - 580 mm (when standard HC100 is specified)		
Table	Working space (X-axis×Y-axis)	630 mm x 330 mm	650 mm x 400 mm	850 mm x 410 mm
	Capacity of workpiece mass	200 kg (uniform load)	300 kg (uniform load)	
Spindle	Speed range	100 min <sup>-1</sup> to 10000 min <sup>-1</sup> / 240 min <sup>-1</sup> to 24000 min <sup>-1</sup> (option)		
	Spindle gauge (Call number) *1	7/24 taper No.30 (with air blow)		
Feedrate	Rapid traverse rate	54 m/min (X, Y, Z)		
	Feedrate	1 mm/min to 30000 mm/min		
Turret	Type of tooling	JIS B 6339-2 No.30 / MAS 403-1982 P30T-1 (45°) *2		
	Tool storage capacity	21 tools: $\alpha$ -D21SiB5 Plus/D21MiB5 Plus/D21LiB5 Plus 14 tools: $\alpha$ -D14SiB5 Plus/D14MiB5 Plus/D14LiB5 Plus		
	Maximum tool diameter	80 mm		
	Maximum tool length	200 mm (changes by specifications)	250 mm (changes by specifications)	
	Maximum tool mass	2 kg/tool (total mass 23 kg) / 3 kg/tool (total mass 33 kg): 21 tools 2 kg/tool (total mass 15 kg) / 3 kg/tool (total mass 22 kg): 14 tools		
	Tool changing time (Cut to Cut)	1.4 s: 14 tools (when 2 kg/ tool is specified) 1.6 s: 21 tools (when 2 kg/ tool is specified)		
Motors	Spindle drive motor	11.0 kW (1 minute rating) / 3.7 kW (continuous rating) (changes by specifications)		
Accuracy *3	Bidirectional positioning accuracy of an axis ISO 230-2:2014	Less than 0.006 mm		
	Bidirectional repeatability of positioning of an axis ISO 230-2:2014	Less than 0.004 mm		
Sound pressure level		Less than 70 dB *4		
Control unit		FANUC Series 31i-B5 Plus (Simultaneously controlled axes: Max. 5 axes)		
Installation (note) Please make sure to comply with installation conditions specified by FANUC when installing ROBODRILL *5				
Power source	Power supply	200 Va.c. to 220 Va.c., -15 % to -10 %, 3-phase, 50 Hz±1 Hz or 60 Hz±1 Hz Standard/High torque: 9 kVA, High torque (High power version): 9.5 kVA, High acceleration/High speed: 10 kVA, High acceleration/High speed (High power version): 11.5 kVA, Tapping: 18 kVA *6		
	Compressed air supply	0.35 MPa to 0.55 MPa (0.5 MPa is recommended (gauge pressure), 0.16 m <sup>3</sup> / min (at atmospheric pressure) *7		
Machine size	Machine height	2236 mm ± 10 mm (when no high column is specified)		
	Floor space	995 mm x 2220 mm	1615 mm x 2050 mm	2165 mm x 2050 mm
	Mass of machine	Approx. 1950 kg	Approx. 2000 kg	Approx. 2100 kg

\*1) Spindle gauge does not conform to ISO 9270:1992, ISO 9270-1:2010 or ISO 9270-2: 2010.

\*2) In case of using center through coolant, please apply suitable pull stud bolt for ROBODRILL of each tooling supplier.

\*3) Positioning accuracy is the adjusted and measured value in compliance with applicable standard at FANUC's factory. Depending on the influence of JIG & workpiece mass on table, the use conditions and installation environment, there may be a case where the accuracy shown in this flyer cannot be achieved.

\*4) Sound pressure level is measured in compliance with FANUC's own regulation. Depending on the use conditions and installation environment, there may be a case where the sound pressure level shown in this flyer cannot be achieved.

\*5) Fastening the machine to the floor (mounting anchors) may be required depending on the use conditions and installation environment or to prevent the machine from toppling over due to an earthquake.

\*6) When peripherals such as coolant unit or rotary table are added, additional power is required. Please contact FANUC for details.  
A cable with 10 mm<sup>2</sup> or more should be used at primary power connection.

\*7) In case of centre through coolant, additional + 0.05 m<sup>3</sup>/min is required. In case of air blow for chips, additional + 0.2 m<sup>3</sup>/min is required.  
In case of automatic side door, 0.4 MPa compressed air supply or more is required.