

New ROBODRILL α -DiB5ADV Plus series

High performance vertical
machining center



SUPER FAST TOOL CHANGER -
TOOL TO TOOL IN 0,7 SEC



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



Designed for cutting edge high-speed machining

The models of the ROBODRILL α -DiB5ADV Plus series come with a range of highly advanced features not available on the standard machine. Providing the ultimate in precision and repeatability, they are perfect for long fully automated production runs and represent a versatile alternative to larger machines. With minimum tool change times of 0.7 seconds tool to tool using a fast servo driven tool turret and table loads of up to 400 kg, these high-speed all-rounders are suitable for all vertical machining applications, from short production runs requiring fast turnaround times to flawless mass production.

Technical data

Item		α -D21SiB5ADV Plus	α -D28MiB5ADV Plus α -D21MiB5ADV Plus	α -D21LiB5ADV Plus	α -D28LiB5ADV Plus Y500
Machine (Standard)					
Capacity	X-axis travel	300 mm	500 mm	700 mm	
	Y-axis travel	300 mm + 100 mm	400 mm		500 mm
	Z-axis travel	400 mm			
	Distance from table surface to spindle gauge plane	280 mm to 680 mm (when standard HC200 is specified) 80 mm to 480 mm (when no high column is specified)			
Table	Working space (X-axis×Y-axis)	630 mm x 330 mm	650 mm x 400 mm	850 mm x 410 mm	850 mm x 500 mm
	Capacity of workpiece mass	200 kg (uniform load)	400 kg (uniform load)		
	Working surface configuration	3 x T-slots size 14mm pitch 125 mm			
Spindle	Speed range	100 min ⁻¹ to 10000 min ⁻¹ / 240 min ⁻¹ to 24000 min ⁻¹ (option)			
	Spindle gauge (Call number) *1	7/24 taper No.30 (with air blow)			
Feedrate	Rapid traverse rate in all axes	54 m/min (X, Y, Z)			54 m/min (X,Y), 60 m/min (Z)
	Feedrate	1 mm/min to 30000 mm/min			
Turret	Type of tooling / Type of pull stud bolt	JIS B 6339-2 No.30 / MAS 403-1982 P30T-1 (45°) *2			
	Tool storage capacity	28 tools: α -D28MiB5ADV Plus / D28LiB5ADV Plus Y500 21 tools: α -D21SiB5ADV Plus / D21MiB5ADV Plus / D21LiB5ADV Plus			
	Maximum tool diameter	80 mm			
	Maximum tool length	90 mm (changes by specifications)	250 mm (changes by specifications)		
	Maximum tool mass (Total Mass)	28 tools: 1.5 kg/tool (24 kg) / 2 kg/tool (30 kg) / 3 kg/tool (38 kg) / 4 kg/tool (46 kg) 21 tools: 2 kg/tool (23 kg) / 3 kg/tool (33 kg) / 4 kg/tool (46 kg)			
	Tool changing time (Tool to Tool)	28 tools: 0.7 s (1.5 kg/tool) / 0.8 s (2 kg/tool) / 1.0 s (3 kg/tool) / 1.1 s (4 kg/tool) 21 tools: 0.7 s (2 kg/tool) / 0.9 s (3 kg/tool) / 1.1 s (4 kg/tool)			
	Tool changing time (Cut to Cut)	28 tools: 1.3 s (1.5 kg/tool) / 1.5 s (2 kg/tool) / 1.7 s (3 kg/tool) / 1.8 s (4 kg/tool) 21 tools: 1.3 s (2 kg/tool) / 1.5 s (3 kg/tool) / 1.7 s (4 kg/tool)			
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 230-2:1988)	Less than 0.006 mm			
	Bidirectional repeatability of positioning of an axis (ISO 230-2:1997, 2006)	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 10k High torque (High power version): 9.5 kVA, 24k High speed (High power version): 11.5 kVA*6			
	Compressed air supply	0.35 MPa to 0.55 MPa (0.5 MPa is recommended) (gauge pressure), 0.16 m ³ /min (at atmospheric pressure) *7			
Machine size	Machine height	2236 mm ± 10 mm (when no high column is specified)			
	Floor space	995 mm × 2220 mm	1615 mm × 2050 mm	2165 mm × 2050 mm	2165 mm × 2115 mm
	Mass of machine	Approx. 2200 kg	Approx. 2250 kg	Approx. 2350 kg	Approx. 2450 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 mm² or more should be used at primary power connection.

*7) In case of centre through coolant, additional + 0.05 m³/min is required. In case of air blow for chips, additional + 0.2 m³/min is required. In case of automatic side door, 0.4 MPa compressed air supply or more is required.