

# Specification

Item		$\alpha$ -D21SiB $\alpha$ -D14SiB	$\alpha$ -D21MiB $\alpha$ -D14MiB	$\alpha$ -D21LiB $\alpha$ -D14LiB
Machine (Standard)				
Capacity	X-axis-travel (longitudinal movement of table)	300 mm	500 mm	700 mm
	Y-axis travel (cross movement of saddle)	300 mm + 100 mm	400 mm	
	Z-axis travel (vertical movement of spindle head)	330 mm		
	Distance from table surface to spindle gage plane	150 mm to 480 mm (when no high column is specified)		
Table	Working space (X-axis×Y-axis)	630 mm×330 mm	650 mm×400 mm	850 mm×410 mm
	Capacity of workpiece mass	200 kg (uniform load)	300 kg (uniform load)	
	Working surface configuration	3×T-slots size 14 mm pitch 125 mm		
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 gage (call number)	7/24 taper No.30 (with air blow)		
Feedrate	Rapid traverse rate	48 m/min (X,Y,Z)		
	Feedrate	1 mm/min to 30000 mm/min		
Turret	Tool change system	Turret type		
	Type of tooling	JIS B 6339-2011 BT30, MAS 403-1982 P30T-1 (45° )		
	Tool storage capacity	21 tools : $\alpha$ -D21SiB/D21MiB/D21LiB 14 tools : $\alpha$ -D14SiB/D14MiB/D14LiB		
	Maximum tool diameter	80 mm		
	Maximum tool length	200 mm : $\alpha$ -D14SiB 190 mm : $\alpha$ -D21SiB (changed by specifications)	250 mm (changed by specifications)	
	Method of tool selection	Random shortest path		
	Maximum tool mass	2 kg/tool (total mass 23 kg)/3 kg/tool (total mass 33 kg) : $\alpha$ -D21SiB/D21MiB/D21LiB 2 kg/tool (total mass 15 kg)/3 kg/tool (total mass 22 kg) : $\alpha$ -D14SiB/D14MiB/D14LiB		
	Tool changing time (Cut to Cut)	1.4 s : $\alpha$ -D14SiB/D14MiB/D14LiB (when 2 kg/tool is specified) 1.6 s : $\alpha$ -D21SiB/D21MiB/D21LiB (when 2 kg/tool is specified)		
Motors	Spindle drive motor	11.0 kW (1minute rating)/3.7 kW(continuous rating) (changed by specifications)		
Accuracy *1	Bidirectional accuracy of positioning of an axis (ISO230-2:1988)	0.006 mm to 0.020 mm		
	Bidirectional repeatability of positioning of an axis (ISO230-2:1997, 2006)	Less than 0.004 mm		
Sound pressure level		Less than 70 dB *2		
Control unit	Model	FANUC Series 31i-B		
	Simultaneously controlled axes	Max.4 axes		
Installations	(note)Please make sure to comply with installation conditions specified by FANUC when installing ROBODRILL *3			
Power source	Power supply	200 V.a.c. to 220 V.a.c., -15 % to +10 %, 3-phase, 50 Hz±1 Hz or 60 Hz±1 Hz 10 kVA *4		
	Compressed air supply	0.35 MPa to 0.55 MPa (0.5 MPa is recommend) (gage pressure) , 0.15 m³/min (at atmospheric pressure) *5		
Machine size	Machine height	2236 mm ± 10 mm (when no high column is specified)		
	Floor space	995 mm×2210 mm	1615 mm×2040 mm	2165 mm×2040 mm
	Mass of machine	Approx. 1950 kg	Approx. 2000 kg	Approx. 2100 kg

\*1 Positioning accuracy is the adjusted and measured value in compliance with applicable standard at FANUC's factory. Depending on an influence of JIG & workpiece mass on table, the use conditions and installation environment, there may be a case where the accuracy shown in this catalog can not be achieved.

\*2 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 catalog can not be achieved.

\*3 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.

\*4 In case of center through coolant and cleaning unit for tool taper shank, additional + 1 kVA is required respectively. In case of additional 1 axis, additional maximum + 1.5 kVA is required. A cable with 10 mm<sup>2</sup> or more should be used at primary power connection.

\*5 In case of center 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 side automatic door, 0.4 MPa compressed air supply or more is required.

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 RDRILLA-DiB(E)-01, 2016.8, Printed in Japan