

2012 BROTHER TC-R2B Machine Specifications

CNC model	CNC-B00
X axis [mm (inch)]	420 (16.5)
Y axis [mm (inch)]	320 (12.6) ⁷
Travels	Z axis [mm (inch)] 305 (12.0)
	Distance between table top / spindle nose end [mm (inch)] 200 - 505 (7.9 - 19.9)
	Work area size [mm (inch)] 600 x 300 (23.6 x 11.8)(one side)
Table	Max. loading capacity (uniform load) [kg (lbs)] 120 (265)(one side) ⁶
	Spindle speed [min ⁻¹] 10,000min ⁻¹ specifications : 10 - 10,000 16,000min ⁻¹ specifications : 16 - 16,000 10,000min ⁻¹ high-torque specifications : 10 - 10,000
Spindle	Speed during tapping [min ⁻¹] Max. 6,000
	Tapered hole 7/24 tapered no.30
	BT dual contact system(BIG-PLUS) Available
	Rapid traverse rate (XYZ-area) 50 x 50 x 50 (1,969 x 1,969 x 1,969)
Feed rate	[m/min (inch/min)]
	Cutting feed rate [mm/min (inch/min)] 1 - 10,000 (0.04 - 394) (X, Y), 1 - 20,000 (0.04 - 787) (Z)
	Tool shank type MAS-BT30
	Pull stud type ⁴ MAS-P30T-2
	Tool storage capacity [pcs.] 14
	Max. tool length [mm (inch)] 200 (7.9)
ATC unit	Distance from taper gauge line/Max. tool diameter[mm (inch)] 0 - 30(0 - 1.2)/ D46(1.8) 30 - 160(1.2 - 6.3)/ D80(3.1) 160 - 200(6.3 - 7.9)/ D40(1.6)
	Max. tool weight ¹ [kg (lbs)] 3.0 (6.6) (total tool weight : 25 (55.1) for 14 tools)
	Tool selection method Random shortcut method
	Tool change time ⁵ Tool To Tool [sec.] 0.9 Chip To Chip [sec.] 1.7 Cut To Cut [sec.] 1.4
Electric motor	Main spindle motor (10 min/continuous) ² [kW] 10,000min ⁻¹ specifications : 10.1 / 6.7 16,000min ⁻¹ specifications : 7.4 / 4.9 10,000min ⁻¹ high-torque specifications : 12.8 / 8.8
	Axis feed motor[kW] 1.0 (X, Y) / 1.5 (Z)
	Power supply ACV ± 10% 3-phase, 50/60Hz ± 1Hz
Power source	Power capacity (continuous) [kVA] 10,000min ⁻¹ specifications : 9.5 16,000min ⁻¹ specifications : 9.5 10,000min ⁻¹ high-torque specifications : 10.4
	Air Regular air supply pressure 0.4 - 0.6

	[MPa]	
	Required flow	60
	[L/min]	
	Height	2,588 (101.9)
	[mm (inch)]	
	Required floor space	
	(with control unit	
Machine	door open)[mm	1,456 x 2,644(3,454)[57.3 x 104.1(136.0)]
dimensions	(inch)]	
	Machine weight	
	(including control	
	unit splash	2,600 (5,732)
	guard)[kg (lbs)]	
	Positioning accuracy	0.005/300 (0.0002/11.8)
Accuracy ³	[mm (inch)]	
	Repeatability	
	[mm (inch)]	±0.003 (±0.00012)
Standard accessories	Instruction Manual(1 set), anchor bolts(4 pcs.), leveling bolts(4 pcs.), splash guard(manual door), fuse(1 set)	

- *1 Actual tool weight differs depending on the configuration and center of gravity. The figures shown here are for reference only.
- *2 Spindle motor output differs depending on the spindle speed.
- *3 Measured in compliance with JIS B6201-1987 and Brother standards. Please contact Brother for details.
- *4 Brother specifications apply to the pull studs for CTS.
- *5 Measured in compliance with JIS B6336-9 and MAS011-1987.
- *6 Can handle work loads up to 170 kg (per one side). Please contact Brother.
- *7 The Y-axis travel distance decreases to 270mm(generally 320mm) when using a hydraulic rotary joint.

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	Quick turn table specifications
Type	0°/180° turntable system
Table dimension	
[mm (inch)]	600 x 420 (23.6 x 16.5)(one side)
Max. turning diameter	
[mm (inch)]	D1,020(D40.2)
Max. jig height	
[mm (inch)]	300 (11.8)
Table work area size	
[mm (inch)]	600 x 300 (23.6 x 11.8)(one side)
Max. loading capacity	
[kg (lbs)]	120 (265)(one side) ^{*6}
Rated table load inertia for	
turning axis	14.2(one side)
[(kg · m ²)]	
Table turning system	AC servo motor (750W)

Table position time	HRH gear(total speed reduction ratio: 1/90) 2.9s/180°
Table change repeatability [mm (inch)]	0.01(0.0004) (in the X, Y, and Z axes directions 270 (10.6) from the center of rotation)

- * Quick turn table is a turntable type 2-face pallet changer

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NC Unit specification	
CNC Model	CNC-B00
Control axes	7 axes (X, Y, Z, A, B)
Positioning	5 axes (X, Y, Z, A, B)
Simultaneously controlled axes	Linear : 4 axes (X, Y, Z, one additional axis) Circular : 2 axes Helical/ conical : 3 axes (X, Y, Z) (Optional)
Least input increment	0.001 mm, 0.0001 inch, 0.001°
Max. programmable dimension	±9999.999mm, 999.9999inch
Display	12.1-inch color LCD
Memory capacity	Approx.10 Mbytes (Total capacity of program and data bank)
External communication	USB memory interface, RS232C 1ch, Ethernet
No.of registrable programs	1,024 (Total capacity of program and data bank)
Program format	NC language, conversation (changed by parameter), conversion from conversation program to NC language program available Absolute/incremental Inch/metric Corner C / Corner R Rotational transformation Synchronized tap Coordinate system setting Dry run Restart Backlash compensation Pitch error compensation Rapid traverse override Cutting feed override Alarm history
NC function	Status log Machine lock Computer remote High-accuracy mode All Tool length measurement Tool life management / spare tool Background editing Graphic display Subprogram Expanded workpiece coordinate system (NC) Helical / conical interpolation Scaling (NC) Tool washing filter with filter clogging detection Mirror image (NC)

Menu programming (NC)
Program compensation (NC)
Tool length compensation (NC)
Cutter compensation (NC)
Operation program (conv.)
Schedule program (conv.)
Automatic tool selection (conv.)
Automatic cutting condition setting (conv.)
Automatic tool length compensation setting (conv.)
Automatic cutter compensation setting (conv.)
Automatic calculation of unknown number input (conv.)
Machining order control(conv.)
Macro function(NC)
Automatic power off
Servomotor off standby mode
Chip shower off delay
Automatic coolant off
Automatic work light off
Local coordinate system (NC)
One-way positioning(NC)
Operation in tape mode(NC)
Heat expansion compensation system II (X,Y,Z axes)
Tap return function

- * When program size is bigger than 2 Mbytes, machine works with extended memory operation.
- * Ethernet is a trademark or registered trademark of XEROX in the United States.
- * Functions with (NC) and (conv.) are available only for NC programs and conversation programs respectively.