SPEEDIO
S1000X1

Machine Specifications and NC Unit Specifications

Item			S1000X1
CNC Unit			CNC-C00
Travels	X axis	mm (inch)	1,000 (39.4)
	Y axis	mm (inch)	500 (19.7)
	Z axis	mm (inch)	300 (11.8)
	Distance between table top and spindle nose end	mm (inch)	180～480 (7.1～18.9)
Table	Work area size	mm (inch)	1,100 × 500 (43.3 × 19.7)
	Max.loading capacity (uniform load)	kg (lbs)	300 [400 *6] (661 [881 *6])
Spindle	Spindle speed	min^{-1}	10,000min^{-1} specifications : 10～10,000 16,000min^{-1} specifications (optional) : 16～16,000 10,000min^{-1} high-torque specifications (optional) : 10～10,000
	Speed during tapping	min^{-1}	MAX. 6,000
	Tapered hole		7/24 tapered No.30
	BT dual contact system (BIG-PLUS)		Optional
	Coolant Through Spindle (CTS)		Optional
Feed rate	Rapid traverse rate (XYZ-area)	m/min (inch/min)	50 × 50 × 56 (1,969 × 1,969 × 2,205)
	Cutting feed rate	mm/min (inch/min)	X, Y, Z axis : 1～30,000 (0.04～1,181) *7
ATC unit	Tool shank type		MAS-BT30
	Pull stad type *4		MAS-P30T-2
	Tool storage capacity	pcs.	14／21
	Max. tool length	mm (inch)	250 (9.8)
	Max. tool diameter	mm (inch)	110 (4.3)
	Max. tool weight *1	kg (lbs)	3.0 (6.6)／Tool〈TOTAL TOOL WEIGHT : 25 (55.1) for 14 tools, 35 (77.2) for 21 tools〉
	Tool selection method		Random shortcut method
Tool change time *5	Tool To Tool	sec.	0.8
	Chip To Chip	sec.	1.4
	Cut To Cut	sec.	1.2
Electric motor	Main spindle motor (10min/continuous) *2	kW	10,000min^{-1} specifications : 10.1／6.7 16,000min^{-1} specifications (optional) : 7.4／4.9 10,000min^{-1} high-torque specifications (optional) : 12.8／8.8
	Axis feed motor	kW	X, Y axis : 1.0 Z axis : 2.0
Power source	Power supply		AC V±10%、50/60Hz±1Hz
	Power capacity (continuous)	kVA	10,000min^{-1} specifications : 9.5 16,000min^{-1} specifications (optional) : 9.5 10,000min^{-1} high-torque specifications (optional) : 10.4
	Air supply — Regular air pressure	MPa	0.4～0.6 (recommended value : 0.5MPa *8)
	Air supply — Required flow	L/min	45
Machining dimensions	Height	mm (inch)	2,532 (99.7)
	Required floor space [with control unit door open]	mm (inch)	2,410×2442 [2,692] (94.9×96.1 [106.0])
	Weight	kg (lbs)	3,300 (7,275)
Accuracy *3	Accuracy of bidirectional axis positioning (ISO230-2:2006)	mm (inch)	0.006～0.020 (0.00024～0.00079)
	Repeatability of bidirectional axis positioning (ISO230-2:2006)	mm (inch)	Less than 0.004 (0.00016)
Front door			2doors
Standard accessories			Instruction Manual (1 set), anchor bolts (4 pcs.), leveling bolts (4 pcs.), machine cover (manual door)

*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 ISO standards and Brother standards. *4. Brother specifications apply to the pull studs for CTS. *5. Measured in compliance with JIS B6336-9 and MAS011-1987. *6. Acceleration must be adjusted for X and Y axes. *7. When using high accuracy mode B. 〈Non high accuracy mode B〉 X,Y axis : 1～10,000mm/min. Z axis : 1～20,000mm/min. *8. Regular air pressure varies depending on the machine specifications, machining program details, or use of peripheral equipment. Set the pressure higher than the recommended value.

NC unit specifications

CNC model		CNC-C00
Control axes		5 axes (X,Y,Z, two additional axes)
Simultaneously controlled axes	Positioning	5 axes (X,Y,Z,A,B)
	Interpolation	Linear : 4 axes (X,Y,Z one additional axis)
		Circular : 2 axes Helical/conical : 3 axes (X,Y,Z)
Least input increment		0.001mm, 0.0001inch, 0.001 deg.
Max.programmable dimension		±9999.999mm, ±999.9999inch
Display		12.1-inch color LCD
Memory capacity		Approx.100 Mbytes (Total capacity of program and data bank)
External communication		USB memory interface, Ethernet, RS232C (optional)
No.of registrable programs		4,000 (Total capacity of program and data bank)
Program format		NC language, conversation (changed by parameter), conversation from conversation program to NC language program available

* Number of "control axes" and/or "simultaneously controlled axes" are the maximum number of axes, which will differ depending on the destination country and the machine specifications.
* Ethernet is a trademark or registered trademark of XEROX in the United States.

*1 Measuring instrument needs to be prepared by users.
*2 When the submicron command is used, changing to the conversation program is disabled.
*3 Minute block processing time can be changed. As there are some restrictions, please contact your local distributor for details.
*Functions listed under (NC) and (Conversation) are available only for NC programs and conversation programs respectively.

Standard NC functions

- Absolute / incremental
- Inch / metric
- Corner C / Corner R
- Rotational transformation
- Synchronized tap
- Coordinate system setting
- Dry run
- Restart
- Backlash compensation
- Rapid traverse override
- Cutting feed override
- Alarm history (1,000 pieces)
- Startus log
- Machine lock
- Computer remote
- Built-in PLC
- Motor insulation resistance measurement
- Operation log
- High accuracy mode AIII
- Tool length measurement
- Tool life management / spare tool
- Background editing
- Graphic display
- Subprogram
- Herical / conical interpolation
- Tool washing filter with filter clogging detection
- Automatic power off (energy saving function)
- Servomotor off standby mode (energy saving function)
- Chip shower off delay
- Automatic coolant off (energy saving function)
- Automatic work light off (energy saving function)
- Heat expansion compensation systemII (X,Y,Z axes)
- Tap return function
- Automatic workpiece measurement *1
- Waveform display
- Operation level
- External input signal key
- High accuracy mode BI (look-ahead 30blocks)

(NC)
- Expanded workpice coordinate system
- Scaling
- Mirror image
- Menu programming
- Program compensation
- Tool length compensation
- Cutter compensation
- Macro function
- Local coordinate system
- One-way positioning
- Opeation in tape mode

(Conversation)
- Operation program
- Schedule program
- Automatic tool selection
- Automatic cutting condition setting
- Autmatic tool length compensation setting
- Autmatic cutter compensation setting
- Autmatic calculation of unknown number input
- Machining order control

Optional NC functions

- Memory expansion (Approx. 500 Mbytes)
- High accuracy mode BII (look-ahead 200 blocks, smooth path offset)
- Spindle override

(NC)
- Submicron command *2
- Interrupt type macro
- Rotary fixture offset
- High-speed processing *3