

CITIZEN

Miyano

BNJ42 / 51

Fixed Headstock Type CNC Automatic Lathe



Machine specifications

		BNJ-42S6	BNJ-42SY6	BNJ-51SY6
Machining capacity				
Maximum machining length		100 mm		
Diameter of standard cutting	Spindle No. 1	42 mm Dia.		51 mm Dia.
	Spindle No. 2	42 mm Dia.		
Chuck size	Spindle No. 1	5 inch		6 inch
	Spindle No. 2	5 inch		
Spindle				
Number of spindle		2		
Spindle speed range	Spindle No. 1	6,000 min ⁻¹		5,000 min ⁻¹
	Spindle No. 2	5,000 min ⁻¹		
Inner diameter of draw tube	Spindle No. 1	43 mm Dia.		52 mm Dia.
	Spindle No. 2	43 mm Dia.		
Collet chuck	Spindle No. 1	H-S22, DIN177E		
	Spindle No. 2	JPN, H-S16, DIN171E		
Power chuck	Spindle No. 1	5" thru-hole chuck		6" thru-hole chuck
	Spindle No. 2	5" thru-hole chuck		
Turret				
Number of turret		2		
Type of turret	Turret No. 1	12 station turret		
	Turret No. 2	8 station turret		
Shank height of square turning tool		20 mm Sq.		
Diameter of drill shank		25 mm Dia.		
Revolving tools				
Number of revolving tool	Turret No. 1	Max. 12		
	Turret No. 2	Max. 4		
Type of revolving tool	Turret No. 1	Single clutch		
	Turret No. 2	Simultaneous drive in all positions		
Tool spindle speed range	Turret No. 1	6,000 min ⁻¹		
	Turret No. 2	3,000 min ⁻¹		
Machining capacity	Drill	Turret No. 1	Max. 13 mm Dia.	
		Turret No. 2	Max. 10 mm Dia.	
	Tap	Turret No. 1	Max. M12×1.75 (S45C-D)	
		Turret No. 2	Max. M6×1.0 (S45C-D)	
Slide stroke				
Turret slide stroke	X1 axis	165 mm		
	Z1 axis	246 mm		
	Y1 axis	— 80 (±40) mm		
Spindle slide stroke	X2 axis	85 mm		
	Z2 axis	590 mm		
Feed rate				
Rapid feed rate	X1 axis	20 m/ min		
	Z1 axis	20 m/ min		
	Y1 axis	— 12 m/ min		
	X2 axis	20 m/ min		
	Z2 axis	20 m/ min		
Motors				
Spindle drive	Spindle No. 1 Cs	15/ 11 kw (15 min/ cont.)		
	Spindle No. 2 Cs	7.5/ 5.5 (15 min/ cont.)		
Revolving tool drive	Turret No. 1	2.2 kw		
	Turret No. 2	0.75 kw		
Slide		1.2 kw (X1, Z1, Y, X2, Z2)		
Hydraulic oil motor		2.2 kw		
Lubricating oil motor		0.004 kw		
Coolant pump		0.25 kw×1, 0.18 kw×1		
Turret index motor		0.75 kw		
Power supply				
Voltage		AC 200/ 220±10% 50/ 60 Hz±1%		
Capacity		33 KVA		
Air supply		0.5 MPa		
Fuse		100 A		
Tank capacity				
Hydraulic oil tank capacity		10 L		
Lubricating oil tank capacity		4 L		
Coolant tank capacity		300 L		
Machine dimensions				
Machine height		1,700 mm		
Floor space		2,840×1,560 mm (without Chip conveyor)		
Machine weight		5,300 kg		
Others				
Splash guard interlock, Coolant, Pneumatic unit, Machine light, Non-fuse breaker, SP2 Work ejector & inner high pressure coolant, Chuck close confirmation,				
Total & preset counter (Custom menu)				
Optional accessories				
Cut-off confirmation, High pressure coolant, Revolving tool (HD2), Spindle brake, Drill breakage detector, Air blow, Part carrier, Parts catcher & Parts conveyor, Chip conveyor, Chip box, Coolant level switch, Bar feeder interface, Coolant mist collector & blast-proof damper, Signal tower, Automatic power shut-off, Automatic fire extinguishing equipment, Thermo revision, Tool holder, tools, etc.				

NC specifications

Device	FS 0i-TF
Controlled axis	Simultaneously controlled axis Max.4 X1, Z1, Y1, Cs1, A1, A2(Opt.) X2, Z2, Cs2,
Min. input increment	0.001 mm, 0.0001 inch, 0.001 deg
Min. output increment	X axis: 0.0005 mm, X axis: Z0.001 mm Y axis: 0.001mm
Parts program storage capacity	Total 1MB (2,560mTape length)
Spindle function	Spindle speed S4-digits Constant Cutting speed control (G96)
Rapid traverse rate	X1, X2, Z1 axis: 20m/ min Z2 axis: 20m/ min Y1 axis: 12m/ min
Cutting feed rate	F 3.4 digit per revolution
Cutting feed rate override	0-150% (in 10% increments)
Interpolation	G01, G02, G03
Threading	G32, G92
Canned cycle	G90, G92, G94
Work coordinate setting	Automatic Setting, 64 work coordinate setting by the tool position
Tool selection	by TAABB at the specified position for each turret tool wearcompensation is selected by BB.
Direct input of tool position	by measured MDI
Input/ Output interface	USB, PC Card slot
Automatic operation	1 cycle operation/ Continuous operation, Single block Block delete, Machine lock, Dry run, feed hold Optional block skip
NC standard functions	
10.4"color LCD, No of resistered programs: 800, Decimal point input	
Manual pulse generator, Memory protect, Polar coordinate interpolation	
Programmable data input (G10), C-axis control (SP1/SP2), superimposed control A	
Chamfering/ Corner R, Tool nose R compensation, Background editing	
Synchronous mixed control, Operating time/ Parts No. display	
Multiple repetitive canned cycle (G70-G76), Continuous threading	
Canned cycle for drilling, Tool life management system, Variable-lead cutting	
Rigid tap function (Spindle & Revolving tool), Circular interpolation, Custom macro	
Handle retrace function, Polygon cutting, Synchronized function, Dual check safety	
Reference position setting.	
NC option	
Helical interpolation, RS-232C.	

Environmental Information

Basic Information	model		
	Energy usage	Power supply voltage	AC200V
	Electrical power requirement (Max)	33KVA	
	Required pneumatic pressure	0.5MPa	
Environmental Performance Information	Power consumption	Standby power*1	4.843kW
		Power consumption with model workpiece*2	0.0798kWh/cycle*3
		Power consumption value above converted to a CO2 value*4	378g/cycle
	Air consumption	Required air flow rate	max90Nl/min. during air blow
	Lubricant consumption	At power ON	6cc/15min
	Noise level	Value measured based on JIS	78dB
	Environmental load reduction	RoHS Directive / REACH regulations	Compliant
Approach to Environmental Issues	Recycling	Indication of the material names of plastic parts	Covered in the instruction manual*5
	Environmental management		We are ISO14001 accredited. We pursue "Green Procurement", whereby we make our purchases while prioritizing goods and services that show consideration for the environment.

*1: This is the standby power in the idle stop mode (a function that turns servomotor excitation off when it is not necessary, for example during program editing).
*2: This is the power consumption in program operation (when not cutting) for one of our standard test pieces, shown for the purpose of comparing the environmental performance with that of existing models.
*3: The average cycle time is 112.896 sec with the standard test workpiece of our company.
*4: This is the value converted in accordance with the CHIEBU Electric Power CO2 emissions coefficient for 2009 as published by the Ministry of the Environment.
*5: If polyvinyl chloride (PVC) and fluorine resin are not processed correctly they can generate harmful gases.
When recycling these materials, commission a contractor that is capable of processing them appropriately.

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