

CITIZEN

Miyano

**BNA42SY/CY**

Fixed Headstock Type CNC Automatic Lathe



# Machine Specification

Item	BNA-42CY5		BNA-42SY5		NC specifications							
<b>Capabilities/Capacities</b>					<b>BNA-42CY5</b>			<b>BNA-42SY5</b>				
Max. machining length	200 mm		100 mm		Control unit	FS.0i-TF PLUS						
Standard machining diameter (Chuck diameter)	SP1	42 mm dia.				Control axis						
	SP2	---		34 mm dia.		HD1	X1, Z1, Y1, C1, E1 (Turret)	X1,Z1,Y1,B1, C1, C2, E1		During superimposed operation: X1, Z1, Y1, C1, E1 (Turret)		
<b>Travel distance</b>												
Turret slide travel distance	X axis	140 mm					A1 (Rotary tools)		A1 (Rotary tools)			
	Z axis	285 mm										
	Y axis	70 (+/-35) mm										
Back spindle slide travel distance	B axis	---		360 mm		HD2	---		During superimposed operation: Z2, C2,			
<b>Spindles</b>												
Number of spindles	1		2		Feed axis absolute position detector	X, Z1, Y1		X1,Z1,Y1,B				
Spindle speed	SP1	60 to 6,000 min <sup>-1</sup>				Min. set unit	0.001 mm/0.001 deg.					
	SP2	---		50 to 5,000 min <sup>-1</sup>		Interpolation function						
Closing tube through-hole diameter	SP1	43 mm dia.				Positioner	G00					
	SP2	---		30 mm dia.		Linear interpolation	G01					
Collet chuck type	SP1	Hardinge S20, DIN173E, B&S #22D, JPN34, Hainbuch				Circular interpolation	G02, G03 (multiple quadrants available)					
	SP2	---		JPN, DIN171E		Dwell	G04					
Power chuck type	SP1	5" and 6" hollow chucks		5" hollow chuck		Threading	G32					
	SP2	---		4" hollow chuck		Multiple threading	G33					
<b>Tool post</b>												
Number of tool posts	1				Feed function							
Type of tool post	12 ST.				Rapid feeding override	0 to 100% (10% increments)						
Opposite side distance of tool post	300 mm				Cutting feed speed override	0 to 150% (10% increments)						
Max. turning radius of tool post	505 mm dia.				Per minute feed and per rotation	G98/G99						
Dimensions of tools used	20 mm sq.				Manual handle feeding	x1, x10, x100						
Dimensions of tool post holes	25 mm dia.				Reference point return	G28						
<b>Rotary tools</b>												
Number of installed rotary tools	Max. 12				Reference point return chuck	G27						
Type of rotary tool drive	Independent clutch drive				2nd reference point return	G30 or G30P2						
Rotating speed of rotary tools	50 to 5,000 min <sup>-1</sup>				Program input function							
Machining capacities	Drill	Max. 10 dia.				Tape code	EIA/ISO auto-detection					
	Tap	Max. M6 x 1 (Limited to spiral and point taps for M8 x 1.25)				Absolute commands	X,Z,Y,C		X,Z,Y,C,B			
		Max. M8 x 1.25 for BSBM				Incremental commands	U, W, V, H					
<b>Feed rate</b>												
Rapid feed rate	X axis	20 m/min				Programmable data input	G10					
	Z axis	20 m/min				Coordinate system settings	G50					
	Y axis	12 m/min				Workpiece coordinate system	G54 to G59					
	B axis	---		20 m/min		Program storage and editing						
<b>Slide thrust</b>												
Slide thrust	X axis	5 kN				Program storage capacity	512 Kbyte		1 Mbyte (Two system total)			
	Z axis	5 kN				Number of registered programs	400		800 (Two system total)			
	Y axis	6.7 kN				Spindle and supplementary functions						
	B axis	---		5 kN		Spindle functions	S4 digits					
<b>Tailstock</b>												
Tailstock	Max. travel distance	200 mm				Supplementary functions	M3 digits					
	Morse taper size	MT2				Constant peripheral speed control	G96					
	Max. slide thrust	4.3 kN (at 3.4 MPa)				Tool and tool compensation functions						
	Min. slide thrust	0.57kN (at 0.45 MPa)				Tool functions	T4 digits command					
	Drive method	Hydraulic				Upper 2 digits: Tool selection & Geometry offset						
<b>Motors</b>												
Spindle motor	SP1	11/ 7.5/ 5.5 kW (15%/ 15 min/ cont.)				Lower 2 digits: Wear offset						
	SP2	5.5/ 3.7 kW (15 min/ cont.)				Nose radius compensation	G40,G41,G42					
Rotary tools motor	2.8/ 1.0 kW				Operating functions							
Coolant pump motor	0.25 kW				Optional stop	M01						
High-pressure coolant motor	1.1/0.75 kW (60/ 50Hz)				Jog feeding	0 to 1,260 mm/min						
<b>Required power source</b>												
Power supply	AC 200/ 220 +5%/-10%, 50/ 60 Hz ±1%				Input/Output interface							
Power supply capacity	16 kVA		26 kVA		PC card slot and USB memory slot							
Air pressure source	0.5 MPa				Automatic operation							
Fuse capacity on facilities side	75 A		100 A		One-cycle/Continuous operation, Single block, Block delete, Machine lock							
<b>Tank capacities</b>												
Hydraulic tank capacity	18 L				Optional block skip, Dry run, Feed-hold, Optional stop							
Lubricating oil tank capacity	2 L				Other							
Coolant tank capacity	235 L				10.4" color LCD, Supporting multiple languages, Decimal-point input, Manual pulse generator							
<b>Machine size</b>												
Machine height	1,745 mm				Memory protection, AC digital servos, etc.							
Required floor surface area	W 2,260 x D 1,433 mm		W 2,350 x D 1,433 mm		Standard NC functions							
Machine weight	3,220 kg		3,650 kg		Chamfering/corner R, Background editing, Operating time/Number of parts display							

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# CITIZEN

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