









MSY

Configured with two spindles and one turret and equipped with a Y axis and X2 axis, the BNA42MSY is able to handle complex machining, with short cycle times and fast set ups.

The X2 axis to sub-spindle enables simultaneous independent machining of the front and back of the workpiece. This, in effect, provides the benefits of a twin turret machine with the significant cost savings of a single turret model.

- 2 tool simultaneous cutting
- renowned Miyano accuracy
- quick to set up and changeover
- highly efficient for small and medium batch sizes (lots)
- compact design for improved floor space efficiency





Cycle time shortened by superimposition control

A turret incorporating X, Y and Z axes (HD1) and a sub spindle incorporating X and Z axes (SP2) open up the possibility of machining by superimposition control, where the sub spindle synchronizes with the turret to machine a workpiece in the main spindle (SP1), a very effective way to shorten cycle time.

High-rigidity spindle

To achieve powerful cutting, the spindle, which is the key component in machining, is equipped with angular contact ball bearings at the front and double-row cylindrical roller bearings at the rear.



Spindle Motors with Increased Output

The spindle 1 motor has the highest output in the BNA series. This enables powerful cutting.



Basic Construction

High-rigidity scraped slideways are used on all axes. These slideways with face contacts have exceptional rigidity and damping characteristics, achieve powerful cutting, and help to prolong cutting tool life.



Substantial Reduction in Non-cutting Time

The unique control system cuts non-cutting time by 27% (compared to earlier equivalent Miyano products). The result is a 13% reduction in cycle time.



Easy to Use Tooling System

The turret has 8 stations, but the half-indexing mechanism makes it possible to mount tools at up to 16 positions. The use of optional multiple tool holders can further increase the number of tool positions.



Support Screens Improve Operating Convenience





The program screen, organized for easy reading, can be displayed in synchronization with the editing screen. This simplifies the editing of complex programs with a lot of queuing.







All you have to do is input the machining length, chucking length and so on, and the escape and approach positions are automatically calculated. This is useful for collision prevention and shortening setup times.



HMI (Human Machine Interface) Adopted

Graphics displayed for each item and screens that display all the necessary information in one place greatly improve operating convenience.







The function displays the list of G and M codes including explanations of the arguments to support programming.





The coordinate calculation function and calculator function incorporated in the NC unit can be used for complex intersection point calculations.

Programs for canned cycles etc. can be created in the conversational style.

External view







Tooling system



Machine specification

Items		BNA-42MSY2	NC Specification		
Machining capacity			Model device	MITSUBISHI M70V	
Max. machining diameter of bar work	SP1	42 mm Dia.	Display devise	8.4" color LCD	
	SP2	34 mm Dia.	Controllable axis		
Max. work length		100 mm	command specified axes	X1, Z1, Y1, C1, X2, Z2, C2-axis	
Slide stroke			auxiliary axes	C3, TI-axis	
Turret slide stroke	X1 axis	140 mm	Control axis groups	Two groups	
	Z1 axis	235 mm	Input code	ISO	
	Y1 axis	70 (±35 mm)	Command input system	Incremental and absolute	
Spindle slide stroke	X2 axis	140 mm	Feed command system	Per rotation feed and per minute	
	Z2 axis	310 mm	Cutting Feed Rate Override	Max.100%	
Spindle			Tool offset data	80 pairs	
Number of spindle		2	Program storage capacity	160m	
Inner diameter of draw tube	SP1	43 mm Dia.	Standard function		
	SP2	30 mm Dia.	On machine program check fi	unction	
Spindle speed range	SP1	6,000 min ⁻¹	Manual feed function		
	SP2	5,000 min ⁻¹	Manual data input (MDI) funct	Manual data input (MDI) function	
Collet chuck type	SP1	Hardinge S20, DIN 173E,	Operation time display		
		B&S 22D, HAINBUCH SK42	Product counter display		
	SP2	Spring collet, DIN171E, B&S 22	Cycle time check function		
Power chuck type		5"thru-hole chuck	Preparation functions		
Spindle minimum index angle	SP1	0.001°	Start position automatic return		
	SP2	0.001°	Automatic cut-off machining fi	unction	
Turret			Tool set function		
Number of turret		1	Spindle speed simultaneous command for 3 spindle		
Type of turret		8st.	3 Sets of M code simultaneous command		
Shank size of turning tool	nk size of turning tool		Control axis swap function		
Diameter of sleeve holder		25mm Dia.	Control axes superimpose command		
Revolving tools			Arbitrary superposition function		
Number of revolving tools		Max. 8	Function to superimpose 2 pairs of axes		
Tool spindle speed range		Max. 6,000min ⁻¹	BNA-42MSY dedicated macro	0S	
Machining capacity	Drill	Max.10 mm Dia.	Background editing		
	Тар	Max. M8×1.25	Simultaneous program editing	two control axis group	
Feed rate			Editing support functions		
Rapid Feed rate	X1 axis	20 m/ min	Calculator function		
	Z1 axis	20 m/ min	Code list display		
	Y1 axis	12 m/ min	Coordinate calculation function	n	
	X2 axis	12 m/ min	Main spindle C-axis function s	spindle	
	Z2 axis	20 m /min	Constant surface speed contr	ol	
Motors			Cut off confirmation		
Spindle drive	SP1	11/ 7.5kw (15min/ cont.)	Tool nose R compensation fur	nction	
	SP2	5.5/ 3.7kw (15min/ cont.)	Arc radius specification		
Revolving tool drive		1.0 kW	Thread cutting canned cycle		
Power supply			Spindle synchronizing control	function	
Electrical capacity		29 KVA	Milling interpolation		
Coolant tank capacity		165 L	Option		
		1 000	Helical interpolation, Corner c	hamferring/ Radius function,	
Spindle synchro		Spindle synchronous tap func	tion, Revolving tool synchronous tap function,		
Hoor space		w 2,278 × D 1,450 mm	Custom macro, Multiple canned cycles for turning, Canned cycles for drilling,		
		3,000 Kg	Inchi/ metric change		
Optional accessories					
Spindle air blow, Spindle Brake, High pre	ssure coolan	h, Cianal tawar			

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Drill breakage detector, RS-232C, 100V

Automatic power shut-off, Chip conveyor, Chip box, Parts catcher, Parts conveyor,

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