

CITIZEN

Miyano

BNE-51 MYY/MSB

BNE-65 MYY/MSB

Fixed Headstock Type CNC Automatic Lathe





BNE65MSB



BNE65MY

Equipped with twin Y axes and a B axis. New BNE series models: Improved superimposed machining

These four new BNE Series models, developed from the existing BNE range have inherited the characteristics of high rigidity and precision for which the BNE Series has been greatly praised. Made up of MYY models with a Y axis equipped to both upper and lower turrets, and MSB models that are also equipped with a B axis on the upper turret.

The cover has been completely redesigned with a large window to provide excellent visibility. It has also been equipped with a new HMI (Human Machine Interface).

Use of a touch panel for ease of operation, and its use with the new NC units also improves productivity.



MSB models equipped with B axis function

The BNE-51MSB and BNE-65MSB are equipped with a B axis function on the upper turret.

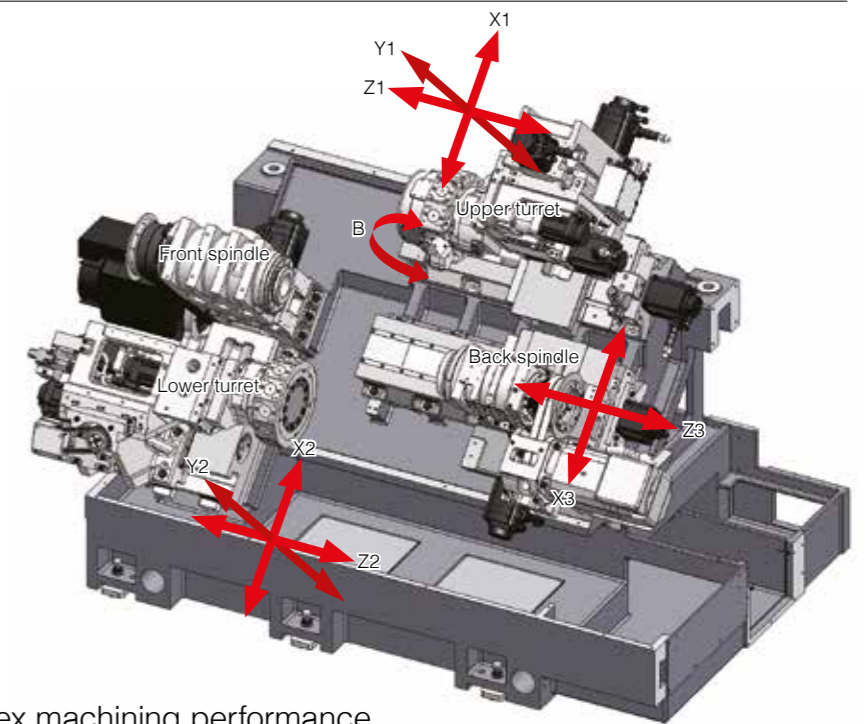
The B axis function increases your range of freedom for machining due to the 360° range of movement that enables machining on both main and sub spindles.

It also allows you to execute NC programs for the normally difficult angular machining by simple commands using dedicated G codes.



Basic structure and axis configuration

These new models have inherited the slide structure of the BNE that makes it easy for swarf to drop away. Rectangular lapped slides have been adopted for all slides except for the X3 axis. The sliding contact between surfaces provides excellent rigidity and damping performance, enabling heavy metal removal while also helping to extend cutting tool life.

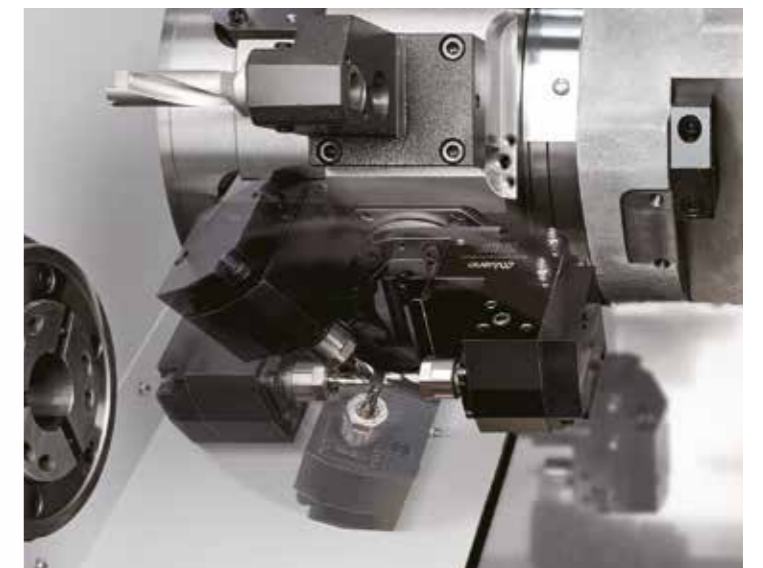


Equipping of B axis to improve complex machining performance

The B axis tool, which can be mounted to the upper turret, can occupy five of the 10 stations. The 360° range of movement enables machining on the back spindle to increase your range of machining options.



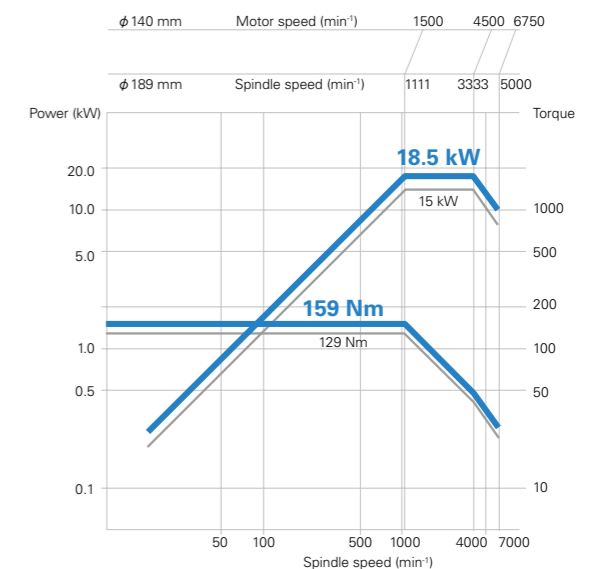
B axis tool



Max. machining bar diameter of 65 mm

The BNE65 Series can take 65mm bar diameter through the main spindle. The output of the front and back spindle motors has been greatly increased in order to improve machining capability. Additionally, increasing the maximum speed to 5,000 RPM enables optimal conditions for cutting of small diameter workpieces.

Graph of BNE65MY/65MSB front spindle torque





Upper/Lower Y-axis machining

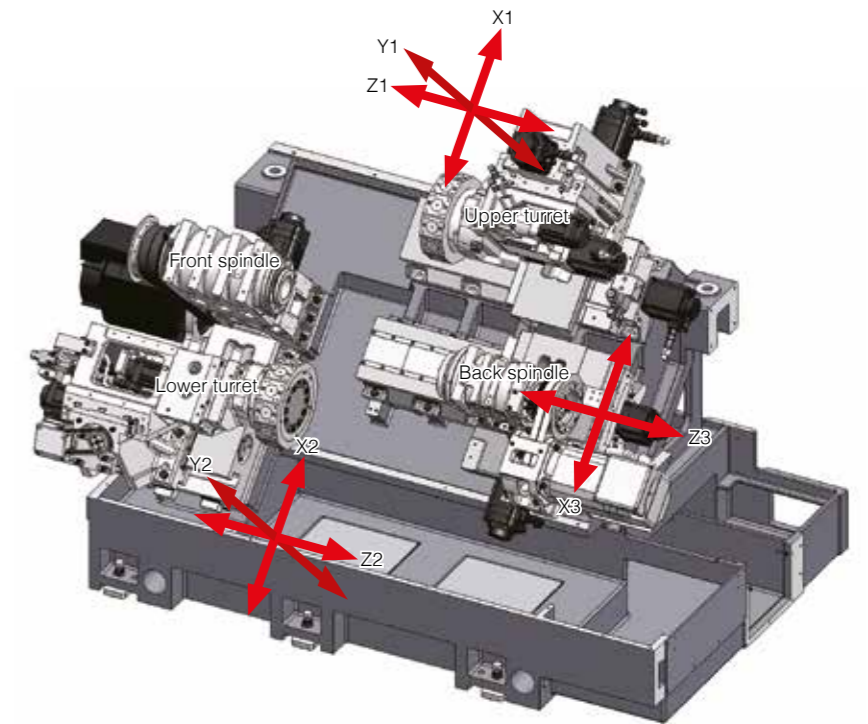
MYM models equipped with twin Y axes

The upper and lower turrets of the BNE-51MYM and BNE-65MYM are equipped with a Y axis. Operating with the same capabilities, these two 12-station turrets complete tooling flexibility thus maximising balanced machining operations.



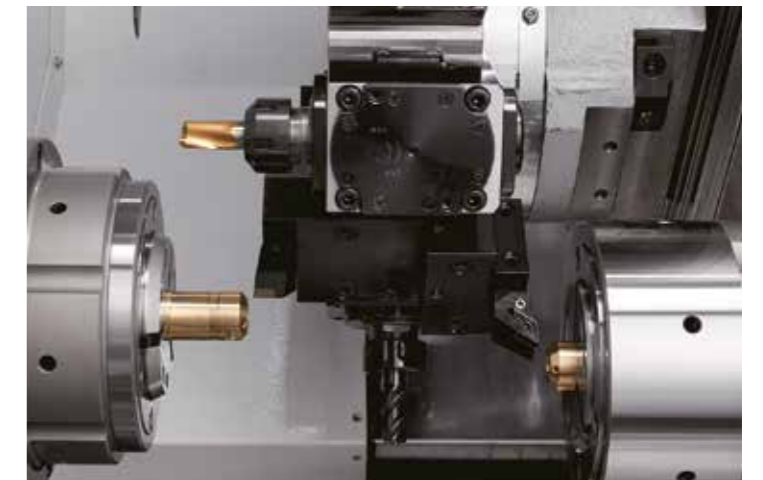
Basic structure and axis configuration

These new models have inherited the slide structure of the BNE that makes it easy swarf to drop away. Rectangular lapped slides have been adopted for all slides except for the X3 axis. The sliding contact between surfaces provides excellent rigidity and damping performance, enabling heavy metal removal, while also helping to extend cutting tool life.



Reduced cycle times with high-efficiency machining

The two turrets equipped with a Y axis, on rigid construction, serve to reduce cycle times by enabling highly efficient machining. Utilising simultaneous and superimposed machining.



Superimposed machining

New HMI (Human Machine Interface) operating panel

A new HMI (Human Machine Interface) equipped operating panel with a 15-inch touchscreen has been added to improve ease of use for the machine operator.

Consideration has been given to the different ways colours are perceived in order to ensure that information is provided in a manner that is readily visible and easily understood by anyone.



Machine Specification

Item	BNE-51MY	BNE-51MSB	BNE-65MY	BNE-65MSB
Machining capacity				
Max. machining length	195 mm			
Max. machining diameter	51 mm dia.		65 mm dia.	
Max. drilling diameter	SP1	25 mm dia.		
	SP2	20 mm dia.		
Max. tapping diameter	SP1	M22 × 2.5		
	SP2	M20 × 2.0		
Spindles				
Number of spindles	2			
Main spindle speed	SP1 & SP2	Max. 5,000 min ⁻¹		
Main spindle collet chuck	SP1	Hardinge S22	Hardinge S26	
		DIN 177E	DIN 185E	
		HAINBUCH 51	HAINBUCH 65	
	SP2	Hardinge S22	Hardinge S26	
		DIN 177E	DIN 185E	
		HAINBUCH 51	HAINBUCH 65	
Power chuck type	SP1 & SP2	6" 3-claw chuck, 6" 2-claw chuck		
Travel distance				
Slide travel distance	X axis	X1: 205 mm, X2: 205 mm, X3: 155 mm		
	Z axis	Z1: 380 mm, Z2: 175 mm, Z3: 500 mm		
	Y axis	Y1: +60/ - 40mm, Y2: ±40 mm		
Tool posts				
Number of tool posts	2			
Type of tool post	HD1	12 ST.	10 ST.	12 ST.
	HD2	12 ST.		
Dimensions of tools used	□ 20 mm			
Dimensions of tool post holes	25 mm dia.			
Rotary tools				
Number of installed rotary tools	HD1	Max.12	Max.10	Max.12
	HD2	Max.12		
Type of rotary tool drive	Independent clutch drive			
Rotating speed of rotary tools	6,000 min ⁻¹			
Machining capacities	Drill	16 mm dia.		
	Tap	M12 × 1.75		
B axis (MSB only)	Drill	10 mm dia.		
	Tap	M6 × 1.0		
		Max. M8×1.25 for BSBM		
Feed rate				
Rapid feed rate	X1, Z1, X3, Z3 axes	20 m/ min		
	X2, Z2 axes	18 m/ min		
	Y1, Y2 axes	12 m/ min		
Slide thrust				
	X1, Z1, X3 axes	8.5 KN		
	X2 axis	11.3 KN		
	Z2, Y1 axes	6.6 KN		
	Z3 axis	5 KN		
	Y2 axis	5.8 KN		
Motors				
Spindle motor	SP1	18.5/ 15 kW (30min./ cont.)		
	SP2	11/ 7.5 kW (15min./ cont.)		
Rotary tools motor	SP1 & SP2	4.0 kW		
Required power source				
Power supply	AC 200 ± 10%			
Power supply capacity	47 KVA			
Air pressure source	0.5 MPa			
Air pressure flowrate	120 NL/min. (When using air blower for 1 sec. in 3 locations)			
Tank capacity				
Hydraulic oil tank capacity	18 L			
Lubricating oil tank capacity	5 L			
Coolant tank capacity	350 L			
Machine dimensions				
Machine height	2,070 mm			
Floor space	W 2,860 × D 2,190 mm			
Machine weight	8,080 kg		8,130 kg	
Option				
Spindle brake, Air blow, Work ejector, Automatic fire extinguisher, Automatic power shut-off, Chip box				
Parts conveyor, Coolant level switch, High pressure coolant, Inner high pressure coolant & air blow				
Turret high pressure & air blow, Tool setter, Parts Catcher, Parts Box, Chuck system				
Chip conveyor, Signal tower, Filler tube, Spindle inner bushing				
Bar feeder inner bushing, Cut-off confirmation, Parts carrier				
Left over catcher, Thermal displacement correction function				
NC specifications				
NC units		MITSUBISHI M830W (BNE-MY)		
		MITSUBISHI M850W (BNE-MSB)		
Command specified axes	HD1	X1, Z1, Y1, B1(BNE-MSB)		
	HD2	X2, Z2, Y2		
	SP1	C1		
	SP2	C2		
	SP2 Slide	X3, Z3		
Auxiliary axes	HD1 Rotary tool	S3		
	HD1 Index	T1		
	HD2 Rotary tool	S4		
	HD2 Index	T2		
Control axis groups	3 groups			
Input code	ISO			
Command input system	Incremental and absolute			
Number of tool offsets	99			
Feed command system	Per rotation feed and per minute			
Override function	Rapid feeding/Cut feeding 0 to 100%			
Zero return function	Manual zero return			
On-machine program check function	Manual pulse generator			
Program operation storage capacity	960 Kbyte (2400 m)			
Input/Output interface	SD card slot and USB memory slot			
Spindle C-axis function	0.001°			
Standard function				
Zero return function, On-machine program check function, Manual feed function				
Manual data input (MDI) function, Back up function, Operation time display, Product counter display				
Eco display, Cycle time check function, Automatic screen off function				
4-Group simultaneous spindle speed command, 3-group simultaneous M command, Superimposition of freely selected axis function				
BNE-MY/MSB-dedicated macros, Optional block skip, Optional stop				
Cut-off check function, Corner chamfering/ Radius function, Arc radius specification, Canned cycle for threading				
Rotary tool synchronous tap function, Spindle synchronizing control function, Multiple canned cycles for turning, Canned cycle for drilling				
Milling interpolation, Helical interpolation, Inch/Millimeter switching function, Safety monitoring				
Program parameters input, Tool tip machining command (BNE-MSB)				
Tool oblique face machining (BNE-MSB)				
Standard operating functions				
Start position automatic return, Waiting point automatic return, Back spindle retract return, Turret retract return				
Automatic cut-off machining function, Tool set function, Spindle speed set function, Tool select function				
Check adjustment function, Auxiliary manual operation function (AUX), Jog function, Handle operation function				
Zeroing operation function				
Editing support functions				
Calculator function, Code list display, Code insert, Coordinate calculation function, Format check				
Alarm block display function, Background editing, Simultaneous 3-system program editing				
Option				
Program operation memory capacity of 1,920 Kbyte (4,800 m), Program memory capacity of 10 MB				
Program memory range of 20 MB, Program memory range of 50 MB, Program memory range of 100 MB				
Network I/O function, RS-232C, Automatic power shut-off function, Thermal displacement correction function, tool setter				
Tool monitor, 3D chamfering function, Variable lead threading, Arc threading, 2-System simultaneous threading I, 2-System simultaneous threading II, High-speed tapping function, Tool life management I				
Spindle superimposition function, External memory program operation				

CITIZEN

CITIZEN MACHINERY CO., LTD.

Japan	Citizen Machinery Co Ltd 4017-6 Miyota, Miyota-machi, Kitasaku-gun, Nagano-ken, 389-0206, Japan	Tel: 81-267-32-5901	Fax: 81-267-32-5908
Europe - Germany	Citizen Machinery Europe GmbH Mettinger Strasse 11, D-73728 Esslingen, Germany	Tel: 49-711-3906-100	Fax: 49-711-3906-106
Europe - UK	Citizen Machinery UK Ltd 1 Park Avenue, Bushey, WD23 2DA, UK	Tel: 44-1923-691500	Fax: 44-1923-691599

www.citizenmachinery.co.uk

All specifications are subject to change without prior notice. This product is an export control item subject to the foreign exchange and foreign trade act. Thus, before exporting this product, or taking it overseas, contact your CITIZEN machine dealer. Please inform your CITIZEN machine dealer in advance of your intention to re-sell, export or relocate this product. For the avoidance of doubt products includes whole or part, replica or copy, technologies and software. In the event of export, proof of approval to export by government or regulatory authority must be evidenced to CITIZEN. You can operate the machines after the confirmation of CITIZEN. CITIZEN is a registered trademark of Citizen Holdings Co., Japan.