

CITIZEN

**Miyano**

**BNE51 MYY**

**BNE65 MYY**

Fixed Headstock Type CNC Automatic Lathe





## Improved Composite Machining

The new BNE-51MYY and BNE-65MYY, with machining diameter of 51mm and 65mm respectively, has inherited the characteristics of high rigidity and precision for which the BNE series has been greatly praised.

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).

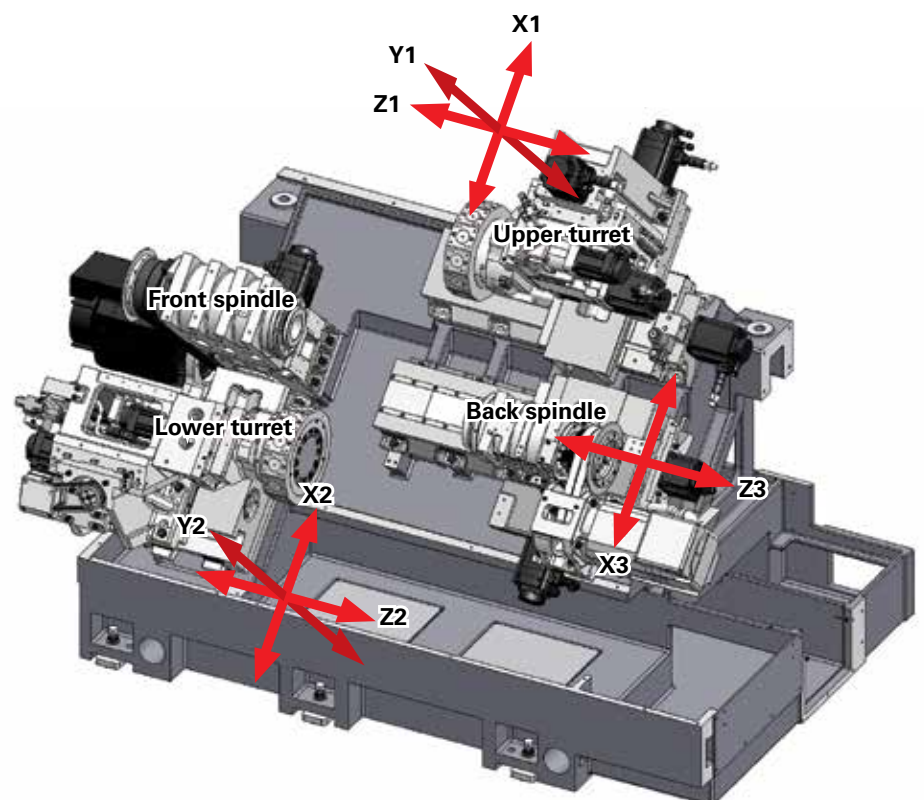
Use of a touch panel improves operability and its use with the new NC unit also improves productivity.



## Basic Structure and Axis Configuration

These new models have inherited the slide structure of the BNE that makes it easy to clean away chips.

Hand scraped box way slides have been adopted for all slides except for the X3 axis which is a dovetail design. The sliding contact between surfaces provides excellent rigidity and damping performance, as well as strong cutting performance, while also helping to extend the service life of cutting tools.





## **MYY models equipped with double-Y axis**

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The upper and lower turrets of the BNEMYY are equipped with a Y axis. Operating with the same capabilities, these two 12-station turrets provide even more flexible tooling due to

optimal process allocation that is not restricted by machining balance limitations.



## Reduced Cycle Times with High-Efficiency Machining

The two turrets equipped with a Y axis, and mechanical structure formed from the front and back spindles serve to reduce cycle times by enabling high efficiency machining such as simultaneous left/right and up/down machining for superimposed and similar types of machining.



Superimposed machining

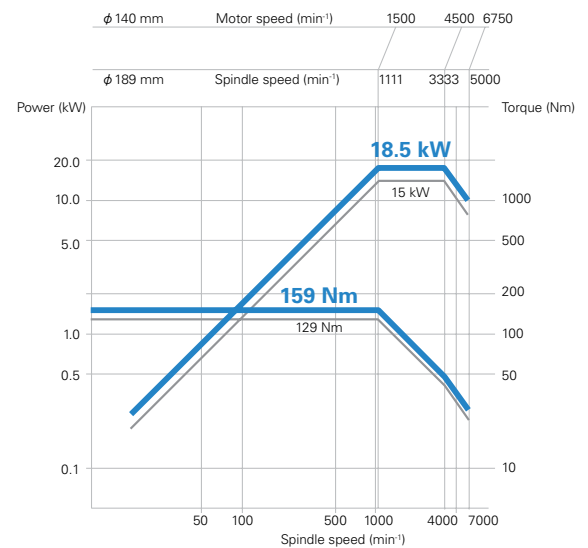
## Maximum machining diameter of 65 mm

The 65mm bar capacity of the BNE65 gives it the largest machining capability of the entire Miyano brand.

The output of the front and back spindle motors has been increased 1.2 to 1.5 times that of current models, greatly improving cutting capability.

Additionally, increasing the maximum speed to 5,000 rpm enables optimal conditions for cutting of small-diameter workpieces.

Graph of BNE-65MYY front spindle torque



## New HMI (Human Machine Interface) Operating Panel



A new HMI equipped operating panel with a 15-inch touch panel has been adopted to improve operability for workers.

Additionally, universal design has been applied to operating panel colors and similar elements for the first time. Universal design has been adopted in consideration of the different ways colors are perceived in order to ensure that information is provided in a manner that is readily visible and easily understood by anyone.

## Accessories



### Rotary Tools

5.3 HP rotary tool drive motor (HD1 and HD2). The rigid tapping function is used for tapping. Ensures high-power stable milling.



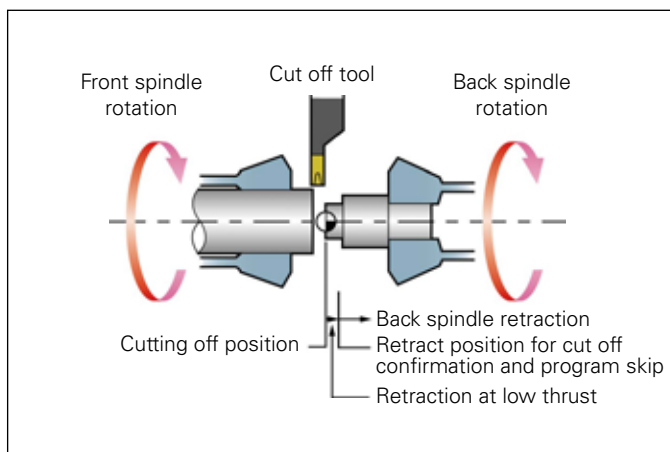
### Drill breakage detector (Option)

Drill breakage is detected by the swing cylinder. The machine stops when breakage is detected.



### Parts catcher

Discharges workpiece onto standard parts conveyor.



### Cut off confirmation (Torque check)

This function moves the back spindle to the retract position at a low thrust after the workpiece has been cut off to check for failure in the cut off operation.

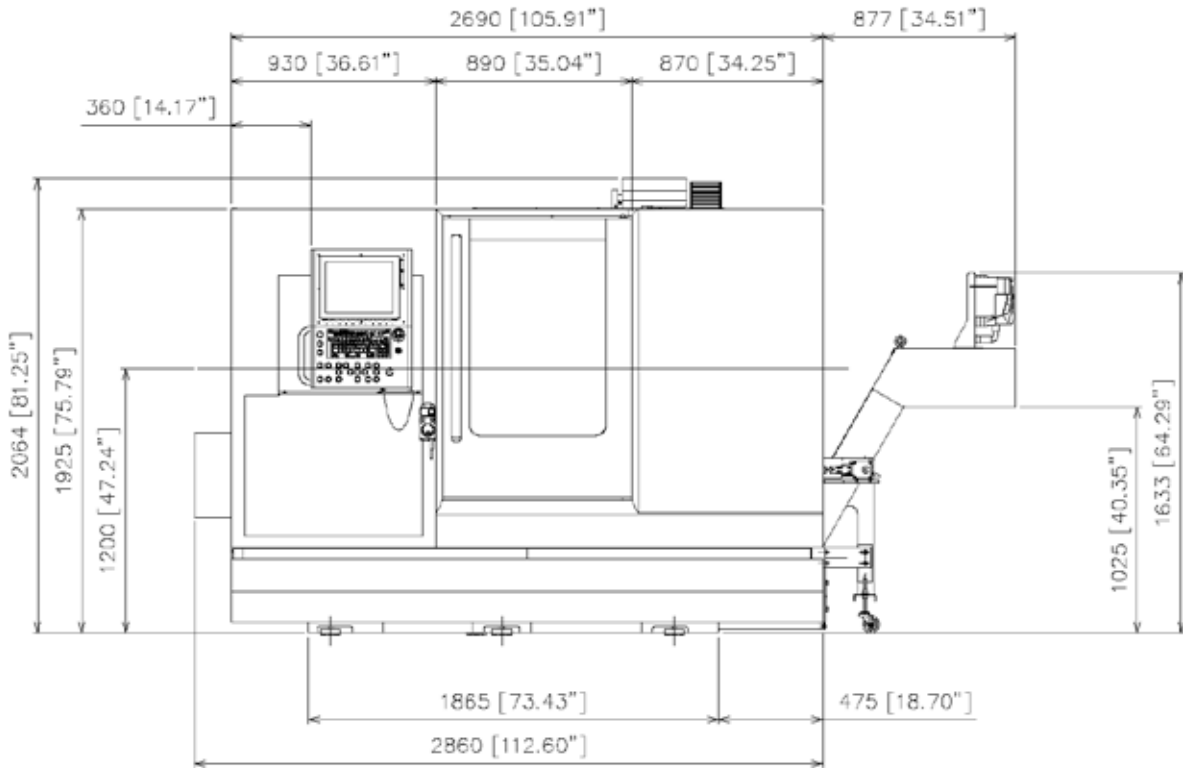


### Cut off confirmation (Cylinder type)

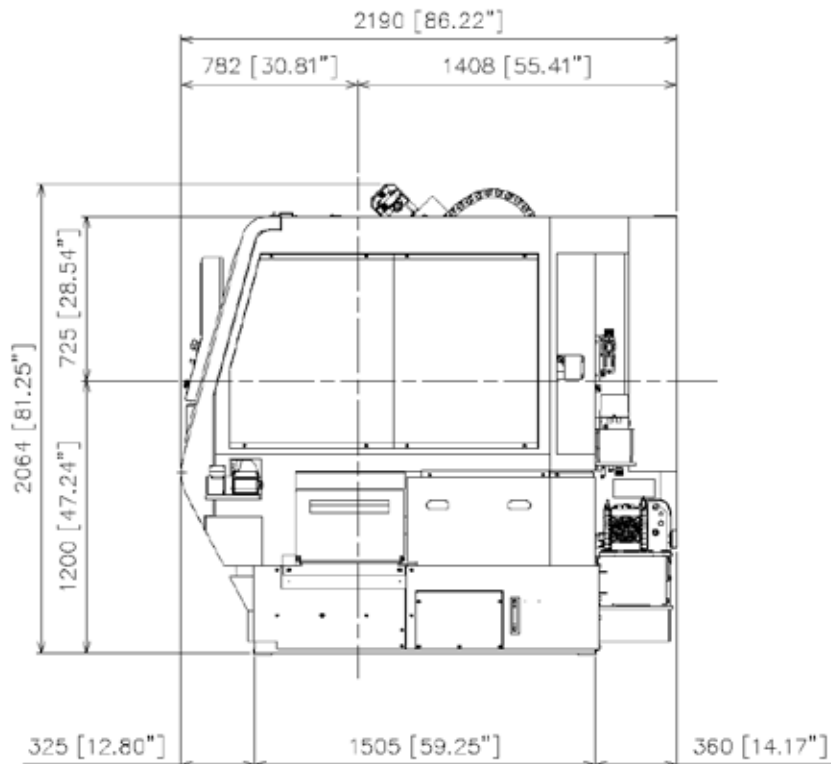
This function confirms that cut off of the workpiece is completed.

# Machine Layout

## Front View



## Right Side View



# Specifications

Item		BNE-51MY	BNE-65MY	Main Standard Accessories	
<b>Machining capacity</b>					
Standard parts catcher length		195 mm		Spindle Disk Brake on Main (Left) Spindle	
Max. machining diameter		Ø 51 mm	Ø 65 mm	Spindle Disk Brake on Back (Right) Spindle	
Max. drilling diameter	SP1	Ø 25 mm		Air Blow on Main (Left) Spindle	
	SP2	Ø 20 mm		Air Blow on Back (Right) Spindle (Outer and Inner)	
Max. tapping diameter	SP1	M22 × 2.5		Work Ejector (Cylinder Type)	
	SP2	M20 × 2.0		12 Stations Upper Turret (HD1) with Y-axis slide	
<b>Spindles</b>				12 Stations Lower Turret (HD2) with Y-axis slide	
Number of spindles		2		5.3 HP Rotary Tool Drive Motor (HD1 and HD2)	
Spindle speed	SP1 & SP2	Max. 5,000 rpm		Rotary Tool Jig	
Spindle nose	SP1	A2-6	A2-8	Filler Tube Assembly	
	SP2	A2-6		Coolant Level Switch	
Draw tube diameter	SP1	Ø 52 mm	Ø 66 mm		
	SP2	Ø 52 mm			
Type of collet chuck	SP1 & SP2	Hardinge S22	Hardinge S26		
<b>Turrets</b>					
Number of turrets		2			
Turret stations	HD1 & HD2	12 ST. each			
Shank size of square turning tools		3/4" sq.			
Diameter of drill sleeve		1"			
<b>Rotary tools</b>					
Number of installed rotary tools	HD1 & HD2	Max. 12 + 12			
Type of rotary tools		Direct tang drive			
Tool spindle speed		Max. 6,000 rpm			
Machining capacities	Max. drilling dia.	Ø 16 mm			
	Tap	M12 × 1.75			
<b>Rapid Feed rate</b>					
	X1 axis	20 m/ min			
	Z1 axis	20 m/ min			
	Y1 axis	12 m/ min			
	X2 axis	18 m/ min			
	Z2 axis	18 m/min			
	Y2 axis	12 m/min			
	X3 axis	20 m/ min			
	Z3 axis	20 m/ min			
<b>Slide stroke</b>					
	X1 axis	205 mm			
	Z1 axis	380 mm			
	Y1 axis	100 (+60/-40) mm			
	X2 axis	205 mm			
	Z2 axis	175 mm			
	Y2 axis	80 (±40) mm			
	X3 axis	155 mm			
	Z3 axis	500 mm			
<b>Motors</b>					
Spindle motor	SP1	25 hp (30 min)/ 20 hp (cont.)			
	SP2	15 hp (30 min)/ 10 hp (cont.)			
Rotary tools motor	HD1 & HD2	5.3 hp			
<b>Required power source</b>					
Power supply		AC 200V ± 10%			
Power supply capacity		47 KVA			
Air pressure source		0.5 MPa			
Air pressure flowrate		113 NL/min. (When using air blower for 1 sec. in 3 locations)			
<b>Hydraulic oil tank capacity</b>		4.75 gallons			
<b>Lubricating oil tank capacity</b>		1.06 gallons			
<b>Coolant tank capacity</b>		92.5 gallons			
<b>Machine height</b>		81.5"			
<b>Floor space</b>		112.6" W x 86.2" D			
<b>Machine weight</b>		17,813 lbs	17,924 lbs		
				<b>Standard NC Functions</b>	
				Mitsubishi M830W Control	
				15" Color Touch Panel	
				Automatic Power Off Function	
				Background Edit Function	
				Canned Cycle for Threading	
				Chamfer/Corner Rounding Function	
				Constant Surface Speed Control (Main & Back)	
				Continuous Threading Cycle	
				I/O Interface for RS232C/SD Card/USB/Ethernet	
				Inch/Metric Conversion	
				Manual Feed by Pulse Generator for all Axes	
				Minimum Increment (0.00001 inch)	
				Multiple Repetitive Cycle for Turning I/II	
				Number of Tool Offset: 99 pairs	
				Program Storage Capacity 2400m (960KB) tape length	
				Preparation Function	
				Coolant System (Turret and Right Spindle)	
				Door Interlock	
				Automatic Lubrication System	
				Automatic Power Shut-off	
				Parts Catcher	
				Parts Conveyor	
				Machine Light	
				RS232C Interface	
				Signal Tower, 3 Steps	
				Cut-off Confirmation (Cylinder Type)	
				Chip Conveyor	
				Bar Feed Interface (Harting 24 Pin Type Connector)	
				Tool Package	
				<b>Optional NC Functions</b>	
				Variable lead threading	
				Circular threading	
				Simultaneous threading in 2 system I	
				High speed synchronous tapping	
				High speed synchronous tapping phasing function	
				Differential speed synchronous tapping	
				Coordinate rotation command	
				Hobbing function	
				Program storage capacity 4800m (1920kb) tape length	
				Manual skip function	
				<b>Optional Accessories</b>	
				Chip box	
				Turret high pressure coolant & air blow	
				Tool setter	
				DIN177e collet chuck system (main & sub spindle)	
				6" 3-jaws power chuck system (main & sub spindle)	
				6" 2-jaws power chuck system (main & sub spindle)	
				Drill breakage detector (HD1)	
				Drill breakage detector (touch sensor, HD1)	
				Drill breakage detector (HD2)	

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