

Cincom Miyano Products Guide



Innovative Manufacturing Workflows for a Sustainable Society

Citizen Machinery aims to create a sustainable society by innovating customers' manufacturing workflow with a focus on their future issues as well as their current ones. We work to continuously enhance corporate value through "sustainable management" that takes into account social issues such as human rights and the global environment throughout the value chain, while at the same time promoting the provision of "sustainable products" such as our proprietary technologies, which include LFV (low frequency vibration cutting) technology, the "FA Friendly" robot system, and "alkappliesolution" utilizing ICT technology, centering on the Cincom and Miyano brands.

EcoBalance Machine

LFV (low frequency vibration cutting) technology

LFV* is a technology for performing machining while vibrating the X and Z servo axes in the cutting direction in synchrony with the rotation of the spindle. It reduces various problems caused by chips entangling with the product or tool, and is effective for small-diameter deep hole machining and the machining of difficult-to-cut materials.



Chips generated by conventional cutting

Chips with LFV

LFV mode 1

When you want to thoroughly break up chips

Method where the number of vibrations per revolution of the workpiece is specified

Computer graphics videos



Machining videos



LFV mode 2

When a surface speed is required, such as when machining thin workpieces or small-diameter deep holes

Method where the amount of workpiece rotation per vibration is specified

Computer graphics videos



Machining videos



LFV mode 3

When you want to break up chips in thread cutting

Method where machining is performed while changing the vibration timing every thread cutting pass

Computer graphics videos



Machining videos



* "LFV" is a registered trademark of Citizen Watch, Co., Ltd.

Humans gravitating toward more creative work

This is an "FA Friendly" solution that addresses automation and labor savings needs in customers' plants. CITIZEN Machinery's accumulated expertise in automation is combined with FA Friendly to provide products that are ideally suited to FA applications, aiming to solve problems at production sites such as workpiece supply, unloading, and storage. Allowing both humans and robots to devote themselves to the tasks suited to them, humans to delicate and complex work and robots to simple and monotonous work. Differentiating these types of work is expected to have a positive impact on the working environment and the way you work.



On-machine Loader

A high-speed loader is installed on the BNA42SY machine, and a stocker is installed at its rear. High-speed supply/unloading of workpieces is automated.

FA Friendly



On Cart Type + Storage Unit

The unloaded workpieces are washed, blown with compressed air, palletized, and stored in a cabinet. This enables unmanned operation over a prolonged time.

Sliding Headstock Type CNC Automatic Lathe

<div>M32</div> <div>V VII VIII</div>	<div>M16</div> <div>V VII VIII</div>	<div>D25</div> <div>VII VIII</div>	<div>L32</div> <div>(2nd generation)</div> <div>VIII IX X XII</div> <div>XIIB5</div>	<div>L32</div> <div>(1st generation)</div> <div>VIII IX X XII</div>	<div>L20</div> <div>(3rd generation)</div> <div>VIII IX X XII</div> <div>XIIB5</div>
32	16	25	32	32	20
320(GB) 80(GBL)	200	250(GB) 62.5(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)	200(GB) 50(GBL)
<div>V : 8 axis VII : 9 axis VIII : 10 axis</div>	<div>V : 8 axis VII : 9 axis VIII : 10 axis</div>	<div>VII : 9 axis VIII : 10 axis</div>	<div>VIII : 5 axis IX : 6 axis X : 6 axis XII : 7 axis XIIB5 : 7 axis</div>	<div>VIII : 5 axis IX : 6 axis X : 6 axis XII : 6 axis XII : 7 axis</div>	<div>VIII : 5 axis IX : 6 axis X : 6 axis XII : 7 axis XIIB5 : 7 axis</div>
P.8	P.9	P.10	P.11	P.12	P.13

Fixed Headstock Type CNC Automatic Lathe

<div>ABX</div> <div>65THY 80THY</div>	<div>ABX</div> <div>51SY 64SY</div>	<div>ANX</div> <div>42SY</div>	<div>BNE</div> <div>51MY 65MY</div>	<div>BNE</div> <div>51MS</div>	<div>BNE</div> <div>42S 51S 42SY 51SY</div>
65 80	51 64	42	51 65	51	42 51
1,031	961(51) 987(64)	660	694(51) 740(65)	644	626(42) 635(51)
<div>10 axis</div>	<div>7 axis</div>	<div>8 axis</div>	<div>8 axis</div>	<div>7 axis</div>	<div>S : 5 axis SY : 6 axis</div>
P.22	P.23	P.24	P.25	P.26	P.27

MultiStationMachiningCell

L20
(2nd generation)
VII VIII IX X XII

20

200(GB)
50(GBL)

VII : 5 axis
VIII : 5 axis
IX : 6 axis
X : 6 axis
XII : 7 axis

P.14

L12
VII X

12

135(GB)
30(GBL)

VII : 5 axis
X : 6 axis

P.15, P.16

A20
VII

20

200(GB)
50(GBL)

VII : 5 axis

P.17

B12/ 16E
II V VI

12
16

135

II : 3 axis
V VI : 4 axis

P.18

R01/ 04
II VI

1
4

20(R01)
40(R04)

II : 5 axis
VI : 6 axis

P.19

MC20
III

20

70

10 axis

P.47

MC20
IV

20

70

14 axis

P.48

BNJ
(7th generation)
51SY

51

825

SY : 5 axis

P.28

BNJ
(6th generation)
42S
42SY

42

756

S : 4 axis
SY : 5 axis

P.29

BNX
51MSY
65MSY

51
65

857(51)
892(65)

S : 4 axis
SY : 5 axis

P.30

BND
51SY

51

661

4 axis

P.31

BNA
42GTY

42

561

8 axis

P.32

BNA
42DHY

42

540

5 axis

P.33

BNA
42SY
42CY






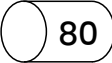





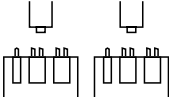



42

540(sy)
464(cy)




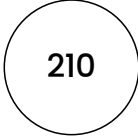
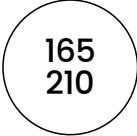
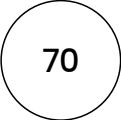


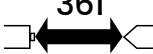
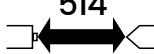
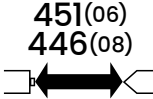
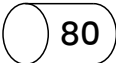
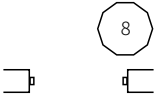
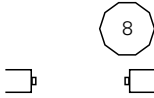
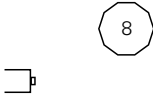
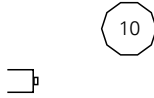
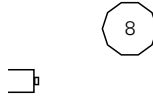
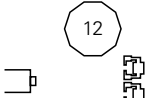
SY : 4 axis

P.34, P.35

High Precision CNC Lathe

GN 4200	GN 3200W	GN 3200	RL 01	VC03
				
				
				
2 axis	4 axis	2 axis	2 axis	2 axis
P.42	P.43	P.44	P.45	P.46

CNC Lathe

BNA 42MSY	BNA 42S	BNC 42C	LX 08C	LX 06E 08E	LZ 01R 01RY
					
					
					
5 axis	3 axis	2 axis	2 axis	2 axis	R : 2 axis RY : 3 axis
P.36	P.37	P.38	P.39	P.40	P.41



Confidence Maximum

L20xii



Cincom

Cincom is synonymous with CNC automatic lathes that have a high level of versatility and can handle a wide range of complex machining. The sliding headstock type machines, which are in their element with the machining of long, small-diameter workpieces using a guide bushing, support the supply of bar stock 32 mm diameter.



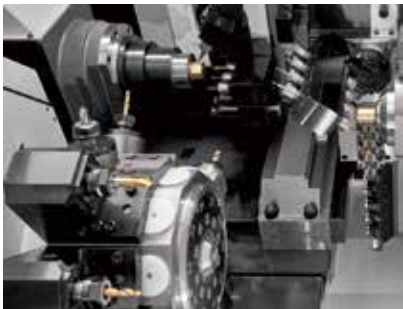
The ultimate gang tool + turret

Revamped M32

Sliding Headstock Type
CNC Automatic Lathe

M32

High-rigidity design aiming at the optimum balance between strength and weight through structural analysis. Revamped turret tooling with "single drive" adopted for rotary tools and beefed-up rotary tool motors. Degree of freedom in allocation of machining processes increased by featuring a B axis spindle on the gang tool post^(Type VIII) and an angle adjustable spindle on the back tool post^(Type VII/VIII) to bolster back machining.



MODEL NAME		M32 V	M32 VII	M32 VIII
Control axis / line control group		8-axes, 3-lines control groups	9-axes, 3-lines control groups	10-axes, 3-lines control groups
Max. machining diameter	mm	φ 32 (φ 38 ^{GB})	φ 32 (φ 38 ^{GB})	φ 32 (φ 38 ^{GB})
1 chuck machining length	mm	320(GB) 25D(GBL)	320(GB) 25D(GBL)	320(GB) 25D(GBL)
Max. spindle speed	min ⁻¹	8,000	8,000	8,000
No. mountable tools	tools	31 + α	35 + α	36 + α
Spindle motor	kW	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5



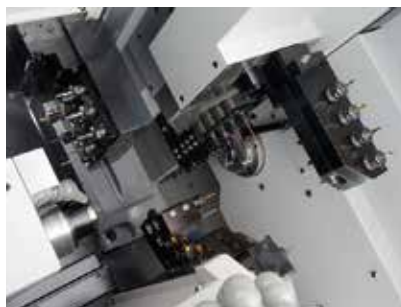
The M16: A High-end Model Covering 16 mm.

The B axis function of rotary tools on the gang tool post and the back tool post
Y axis function give the advantage with complex shapes and secondary machining.

Sliding Headstock Type
CNC Automatic Lathe

M16

On the M16 type VIII, the rotary tools on the gang tool post feature a B axis as standard, and four tools each can be mounted for back and front machining. The back tool post can accommodate holders at three positions, and up to nine tools can be used (type VII and VIII).



MODEL NAME		M16 V	M16 VII	M16 VIII
Control axis / line control group		8-axes, 3-lines control groups	9-axes, 3-lines control groups	10-axes, 3-lines control groups
Max. machining diameter	mm	φ16	φ16	φ16
1 chuck machining length	mm	200	200	200
Max. spindle speed	min ⁻¹	12,000	12,000	12,000
No. mountable tools	tools	25+α	29+α	36+α
Spindle motor	kW	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7



Double Gang Tool Post with B Axis Control.

Comprehensive tool configuration supporting high productivity.

Sliding Headstock
Type Automatic CNC Lathe

D25

The double gang tool construction allows a tool not engaged in machining to be prepared for the next machining, shortening noncutting time. Full range of machining realized with a total of up to 59 diverse front/back tools. Cutting time shortened by machining with three tools simultaneously: two front tools and a tool on the independent back tool post. Featuring a B axis control that can be used for either front or back machining and allows contouring with simultaneous 5-axis control, expanding the range of turning work.



MODEL NAME		D25 VII	D25 VIII
Control axis / line control group		9-axes, 3-lines control groups	10-axes, 3-lines control groups
Max. machining diameter	mm	φ 25	φ 25
1 chuck machining length	mm	250(GB) 25D(GBL)	250(GB) 25D(GBL)
Max. spindle speed	min ⁻¹	10,000	10,000
No. mountable tools	tools	59	43
Spindle motor	kW	3.7 / 5.5	3.7 / 5.5



Full Model Change for L32 with Introduction of the L32XIIIB5 Capable of Simultaneous 5-Axis Control

Sliding Headstock Type
CNC automatic lathe

L32 (second Generation)

Maximum of 53 simultaneously-mounted tools, with an expansion tool holder mountable on the back tool post to give it a capacity of up to 12 tools.

A full range of automation and labor-saving functions, including in-machine measurement and collection of workpieces according to type using FA Friendly, supports customers' next-generation smart factories.

LFV (low frequency vibration cutting technology) is evolving. Simultaneous 4-axis operation of two axes at the front side and two axes at the back side is now possible.



MODEL NAME	L32 VIII	L32 IX	L32 X	L32 XII	L32 XIIIB5
Control axis / line control group	5-axes, 2-lines control groups	6-axes, 2-lines control groups	6-axes, 2-lines control groups	7-axes, 2-lines control groups	7-axes, 2-lines control groups
Max. machining diameter	mm $\phi 32$ ($\phi 38^{(2)}$)	$\phi 32$ ($\phi 38^{(2)}$)	$\phi 32$ ($\phi 38^{(2)}$)	$\phi 32$ ($\phi 38^{(2)}$)	$\phi 32$ ($\phi 38^{(2)}$)
1 chuck machining length	mm 320(GB) 80(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)
Max. spindle speed	min ⁻¹ 8,000	8,000	8,000	8,000	8,000
No. mountable tools	tools 48	40	53	45	45
Spindle motor	kW 5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5



Cincom's Time-tested L Series Adopts Modular Design.

Sliding Headstock Type
CNC Automatic Lathe

L32 (first generation)

Ranging from a 5-axis machine with excellent cost performance to a high-end machine equipped with B axis and back tool post Y axis.
Workpiece conveyor equipped as standard.



MODEL NAME	L32 VIII	L32 IX	L32 X	L32 XII
Control axis / line control group	5-axes, 2-lines control groups	6-axes, 2-lines control groups	6-axes, 2-lines control groups	7-axes, 2-lines control groups
Max. machining diameter	mm φ 32 (φ 38 ^{OP})	φ 32 (φ 38 ^{OP})	φ 32 (φ 38 ^{OP})	φ 32 (φ 38 ^{OP})
1 chuck machining length	mm 320(GB) 80(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)	320(GB) 80(GBL)
Max. spindle speed	min ⁻¹ 8,000	8,000	8,000	8,000
No. mountable tools	tools 30	36	44	40
Spindle motor	kW 3.7 / 7.5	3.7 / 7.5	3.7 / 7.5	3.7 / 7.5



The L20 improved basic performance, along with great advances in easy usability.

Sliding Headstock Type CNC Automatic Lathe

L20 (third generation)

B-axis tools expand the machining range for the front spindle to 110°. This allows more complex machining with higher accuracy.

(XIIIB5)

The number of turning tools is increased to six, resolving tool shortages.

LFV can now be used for back machining, eliminating problems with chip entanglement.

The available peripheral units include motor-driven knock-out devices, loaders/unloaders, ATC units, and servo-driven chucking devices.



MODEL NAME		L20 VIII	L20 IX	L20 X	L20 XII	L20 XIIIB5
Control axis / line control group		5-axes, 2-lines control groups	6-axes, 2-lines control groups	6-axes, 2-lines control groups	7-axes, 2-lines control groups	7-axes, 2-lines control groups
Max. machining diameter	mm	φ 20 (φ 25 ^{GB})	φ 20 (φ 25 ^{GB})	φ 20 (φ 25 ^{GB})	φ 20 (φ 25 ^{GB})	φ 20 (φ 25 ^{GB})
1 chuck machining length	mm	200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)
Max. spindle speed	min ⁻¹	10,000	10,000	10,000	10,000	10,000
No. mountable tools	tools	38	34	45	41	41
Spindle motor (Cont./ 15min./ 10%ED)	kW	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7



L series revamped.
 B axis for rotary tools, and Y2 axis control for the opposite tool post.

Sliding Headstock Type
 CNC Automatic Lathe

L20 (second generation)
 Ranging from a 5-axis machine with excellent cost performance to a high-end machine equipped with B axis and opposite tool post Y axis. The detachable guide-bushing device is easy to change.



MODEL NAME	L20 VII	L20 VIII	L20 IX	L20 X	L20 XII
Control axis / line control group	5-axes, 2-lines control groups	5-axes, 2-lines control groups	6-axes, 2-lines control groups	6-axes, 2-lines control groups	7-axes, 2-lines control groups
Max. machining diameter	mm $\phi 20$ ($\phi 25^{(2)}$)	$\phi 20$ ($\phi 25^{(2)}$)	$\phi 20$ ($\phi 25^{(2)}$)	$\phi 20$ ($\phi 25^{(2)}$)	$\phi 20$ ($\phi 25^{(2)}$)
1 chuck machining length	mm 200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)	200(GB) 50(GBL)
Max. spindle speed	min-1 10,000	10,000	10,000	10,000	10,000
No. mountable tools	tools 32	37	33	44	40
Spindle motor	kW 2.2 / 3.7	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7



The L12: Handling All Small-diameter Work with 5-axis Control. Detachable Guide Bushing and 15,000 min⁻¹ High-speed Spindle.

Sliding Headstock Type
CNC Automatic Lathe

L12vii

The guide bushing can be fitted and removed simply.

It shortens cycle times with a front spindle capable of high-speed rotation of 15,000 min⁻¹ and 10,000 min⁻¹ rotary tools.

A full range of optional tooling is available. It possible to mount end face rotary tools and a slitting spindle for back machining.



MODEL NAME		L12 VII	
Control axis /line control group		5-axes, 2-lines control groups	
Max. machining diameter	mm		φ 12
1 chuck machining length	mm	GB	135
		GBL	30
Max. spindle speed	min ⁻¹	GB	15,000
		GBL	12,000
No. mountable tools	tools	27	
Spindle motor	kW	2.2 / 3.7	

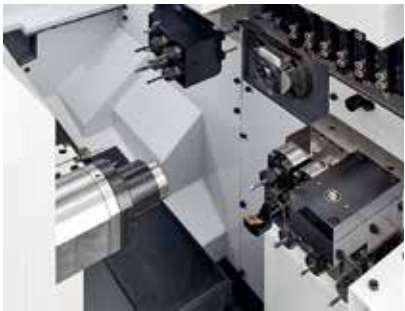


Modular Tooling System Adopted Y2 Axis Added for Greater Functionality

Sliding Headstock Type
CNC Automatic Lathe

L12x

Versatile tooling layout achieved, including slanted hole machining with the angle adjustable end face spindle. Back machining capability enhanced by equipping the back spindle with a Y2 axis Built-in motor adopted as the drive system for the back spindle: realizes a maximum spindle speed of 12,000 min⁻¹



MODEL NAME		L12 X	
Control axis /line control group		6-axes, 2-lines control groups	
Max. machining diameter	mm		φ 12
1 chuck machining length	mm	GB	135
		GBL	30
Max. spindle speed	min ⁻¹	GB	15,000
		GBL	12,000
No. mountable tools	tools	38	
Spindle motor	kW	2.2 / 3.7	



An evolving 5-Axis CNC sliding head machine,
featuring the ability to switch between guide bush and non-guide bush types.

Sliding Headstock Type
CNC Automatic Lathe

A20

New capability to switch between guide bush and non-guide bush operating modes.

A20 is capable of machining bar stockup to 25 mm dia. by installing the optional 25 mm size chuck device.



MODEL NAME		A20 VII
Control axis / line control group		5-axes, 2-lines control groups
Max. machining diameter	mm	φ 20 (φ 25 ^{op})
1 chuck machining length	mm	200(GB)/50(GBL)
Max. spindle speed	min ⁻¹	10,000
No. mountable tools	tools	21
Spindle motor	kW	2.2 / 3.7

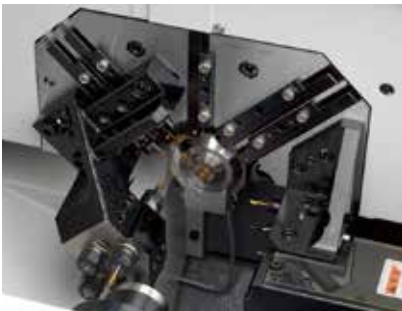


Cincom's B series 'best seller' model has been revamped to expand the machining range up to 16 mm. And the cost has been substantially reduced.

Sliding Headstock Type
CNC Automatic Lathe

B12/16E

Running the calculations in NC programs in advance shortens the processing time during operation, which helps to cut cycle times.
Virtual XY axis control is used to achieve a tool layout that is not too focused on the ball screw axis.



MODEL NAME		B12/16E II	B12/16E V	B12/16E VI
Control axis / line control group		3-axes, I-lines control groups	4-axes, I-lines control groups	4-axes, I-lines control groups
Max. machining diameter	mm	B12E : $\phi 12$ B16E : $\phi 16$	B12E : $\phi 12$ B16E : $\phi 16$	B12E : $\phi 12$ B16E : $\phi 16$
I chuck machining length	mm	135 (60 with RGE)	135 (60 with RGE)	135 (60 with RGE)
Max. spindle speed	min-1	B12E : 12,000 (8,000 with RGE) B16E : 10,000 (8,000 with RGE)	B12E : 12,000 (8,000 with RGE) B16E : 10,000 (8,000 with RGE)	B12E : 12,000 (8,000 with RGE) B16E : 10,000 (8,000 with RGE)
No. mountable tools	tools	12	13	16
Spindle motor	kW	2.2 / 3.7	2.2 / 3.7	2.2 / 3.7



New R series – the solution for ultra-small-diameter parts.

Sliding Headstock Type
CNC Automatic Lathe

R01/04

The R01/04 Type I has a compact design with a depth of only 455 mm. This means it can be installed in restricted spaces in plants.

All the models in the R/RD series achieve a maximum continuous spindle speed of 20,000 min⁻¹. These spindles can be used together with a rotary guide bushing device.



MODEL NAME		R01/04 II	R01/04 VI
Control axis / line control group		5-axes, 2-lines control groups	6-axes, 2-lines control groups
Max. machining diameter	mm	R01 : $\phi 1$ R04 : $\phi 4$ ($\phi 7$) ^{CP}	R01 : $\phi 1$ R04 : $\phi 4$ ($\phi 7$) ^{CP}
1 chuck machining length	mm	R01 : 20 R04 : 40	R01 : 20 R04 : 40
Max. spindle speed	min ⁻¹	20,000 16,000 (at oversized)	20,000 16,000 (at oversized)
No. mountable tools	tools	13	17
Spindle motor	kW	0.5 / 0.75	0.5 / 0.75





Bar machines for complex processing that address a broad range of needs for more advanced production work the field of bar work processing, which has been transformed by great improvements in precision of parts and sophistication of functions.

Chuckers for complex processing, designed for everything from intensive cutting of stock materials to secondary processing of sophisticated parts, combining loading systems for significant labor savings.

Miyano's product line offers the optimum solution for almost any conceivable need.



CITIZEN *Miyano*

EcoBalance Machine

BNJ51SY *LFV
technology*

Next-generation flagship model equipped with a spindle with a maximum machining diameter of $\phi 80\text{mm}$ that opens up new machining areas

Fixed headstock type
CNC Automatic lathe

ABX^{THY}

The machining range has been extended with a $\phi 80\text{ mm}$ front spindle and $\phi 65\text{ mm}$ back spindle. The new product design is more user-friendly, featuring a 19-inch touchscreen operation panel for improved operability and a large window for better visibility in the tooling area. Environmental performance is also improved by the air blow intermittent discharge function and air purge control function. The Ecoll function visualizes power consumption and CO2 emissions on a screen to support customers' efforts to save energy.



MODEL NAME			ABX-65THY	ABX-80THY
Max Machining Diameter of Bar Work	SPI / SP2	mm	$\phi 65 / \phi 65$	$\phi 80 / \phi 65$
Standard Machining Length		mm	1031	1031
Spindle Motor (30 min. / Cont.)	SPI & SP2	kW	18.5 / 15	18.5 / 15
Spindle Speed Range	SPI / SP2	min ⁻¹	5,000 / 5,000	4,000 / 5,000
Type of Turret	TR1, TR2 & TR3		12-St. Turret	12-St. Turret
Max. Number of Revolving Tools		tools	36	36



Simultaneous left/right machining with 2 Y-axis turrets enables faster processing

Fixed Headstock Type
CNC Automatic Lathe

ABXsYY

Both 2 turrets with the Y-axis function means flexible tooling without any concern for processing balance restrictions.

Up to 24 high-rigidity, high-torque (40 Nm) revolving tool stations.



MODEL NAME		ABX-51sYY	ABX-64sYY
Max Machining Diameter of Bar Work	SP1 / SP2 mm	φ51 / φ51	φ64 / φ51
Standard Machining Length	mm	961	987
Spindle Motor (30 min. / cont.)	SP1 kW	15 / 11	15 / 11
	SP2 kW	7.5 / 5.5	7.5 / 5.5
Spindle Speed Range	SP1 / SP2 min ⁻¹	5,000 / 5,000	4,000 / 5,000
Type of Turret	TR1 & TR2	12 St. Turret	12 St. Turret
Max. Number of Revolving Tools	tools	24	24



Now a turret lathe from Miyano brand is equipped with LFV technology for the first time.

Fixed Headstock Type
CNC Automatic Lathe

ANX

The machine is configured with two spindles, two turrets and a double Y axis, and the rapid traverse rate has been increased by adopting linear guides for all axes. The spindles have built-in motors, which shortens acceleration/deceleration times and improves response time. Compact machine body only 2,650 mm wide. The ANX achieves advanced functions, space savings and high productivity.



MODEL NAME			ANX-42SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	φ 42 / φ 42
Standard Machining Length		mm	660
Spindle Motor (30 min. / Cont.)	SP1 & SP2	kW	11 / 7.5
Spindle Speed Range	SP1 & SP2	min-1	6,000
Type of Turret	TR1 & TR2		12 St. Turret
Max. Number of Revolving Tools		tools	24



Two 12-station turrets with Y-axis provide even more flexible tooling due to optimal process allocation that is not restricted by machining balance limitations

Fixed Headstock Type
CNC Automatic Lathe

BNE^{MY}Y

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.

A new HMI (Human Machine Interface)-equipped operating panel with a 15-inch touch panel has been adopted to improve machine operability for workers.



MODEL NAME		BNE-51MY	BNE-65MY
Max Machining Diameter of Bar Work	mm	φ51	φ65
Standard Machining Length	mm	694	740
Spindle Motor (30 min. / Cont.)	SPI	18.5 / 15	18.5 / 15
	SP2	11 / 7.5	11 / 7.5
Spindle Speed Range		5,000	5,000
Type of Turret		12 St. Turret	12 St. Turret
Max. Number of Revolving Tools	tools	12 +12	12 +12



Realizes “simultaneous hole machining at both ends” and
“simultaneous machining with three tools” using superimposition control

Fixed Headstock Type
CNC Automatic Lathe

BNEmsy

Mitsubishi's NC unit is used. Its useful support screens for programming assistance and other purposes present the necessary information in an easy-to-find manner, helping to improve operating convenience.
The machining diameter on SP2 has been increased to 51 mm dia., expanding the range of products.



MODEL NAME			BNE-51MSY
Max Machining Diameter of Bar Work	SP1 & SP2	mm	φ51
Standard Machining Length		mm	644
Spindle Motor (30 min. / Cont.)	SP1	kW	15 / 11
	SP2	kW	7.5 / 5.5
Spindle Speed Range	SP1 & SP2	min ⁻¹	5,000
Type of Turret	TR1 & TR2		12 St. Turret
Max. Number of Revolving Tools		tools	12 +12



2 spindle + 2 Turret Model enables high productivity, high-accuracy and complex processing.

Fixed Headstock Type
CNC Automatic Lathe

BNE

In addition to front / back integrated machining and multiple cutting achievable by the 2-spindle and 2-turret specification machines, the Y axis installed on turret HD1 (SY type) enables a greater variety of complex machining.



MODEL NAME		BNE-42S / 42SY	BNE-51S / 51SY
Max Machining Diameter of Bar Work	SPI / SP2 mm	φ42 / φ42	φ51 / φ42
Standard Machining Length	mm	626	635
Spindle Motor (30 min / Cont)	SP1 kW	15 / 11	15 / 11
	SP2 kW	5.5 / 3.7	5.5 / 3.7
Spindle Speed Range	SPI / SP2 min ⁻¹	6,000 / 5,000	5,000 / 5,000
Type of Turret	TRI & TR2	12 St. Turret	12 St. Turret
Max. Number of Revolving Tools	tools	12	12



Revised Basic Structure for Improved Machine Rigidity, with 7 Types Supporting LFV (Low Frequency Vibration Cutting)

Fixed headstock type
CNC Automatic lathe

BNJ (seventh generation)

The increased machining area at the back side allows a $\phi 51$ mm back spindle chuck to be mounted. The machining possibilities have been expanded by enabling handling of the same diameter on the front and back sides.

Tools for turret 2 are common-use with turret 1, increasing the revolving tool capacity to 8 tools. In addition, the torque for revolving tools has been increased to 25 Nm.

The slideways incorporate the LFV (low frequency vibration cutting) function. In addition to modes 1 to 3, simultaneous 4-axis vibration operation is now possible. This eliminates trouble caused by chips, helping to achieve stable production.



MODEL NAME			BNJ-51SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	$\phi 51$ / $\phi 51$
Standard Machining Length		mm	825
Spindle Motor (15 min. / Cont.)	SP1	kW	15 / 11
	SP2	kW	7.5 / 5.5
Spindle Speed Range	SP1 / SP2	min ⁻¹	5,000 / 5,000
Type of Turret	TR1		12 St. Turret
	TR2		8 St. Turret
Max. Number of Revolving Tools	TR1 / TR2	tools	12 / 8



Uniquely shaped back-working turret reduces production time greatly

Fixed Headstock Type
CNC Automatic Lathe

BNJ (sixth generation)

Overlap control on main turret with both of main and Sub-Spindles, or independent simultaneously machining on main spindle to main turret and sub-spindle to Sub-turret for fast production. Compact floor space although 2 spindles and 2 turrets machine construction.



MODEL NAME		BNJ-42S / 42SY	
Max Machining Diameter of Bar Work	SP1 / SP2 mm	φ 42 / φ 42	
Standard Machining Length	mm	756	
Spindle Motor (30 min. / Cont.)	SP1 kW	15 / 11	
	SP2 kW	75 / 5.5	
Spindle Speed Range	SP1 / SP2 min-1	6,000 / 5,000	
Type of Turret	TR1	12 St. Turret	
	TR2	8 St. Turret	
Max. Number of Revolving Tools	TR1 / TR2 tools	12 / 4	



An X-axis has been added to the back spindle to shorten the machining time through superimposition machining with synchronization control between axis control groups.

Fixed Headstock Type
CNC Automatic Lathe

BNX

Chucks with the same diameter at front and back are available. Enabling handling of the same diameter at the front and back allows a wide range of machining.
 ϕ 65-mm front spindle specifications have been added to the lineup. Powerful spindle motors enable robust cutting and help to shorten cycle times. The slideways incorporate the LFV (low frequency vibration cutting) function. In addition to modes 1 to 3, simultaneous 4-axis vibration operation is now possible. This eliminates trouble caused by chips, helping to achieve stable production.



MODEL NAME			BNX-51MSY	BNX-65MSY
Max Machining Diameter of Bar Work	SP1	mm	ϕ 51	ϕ 65
Standard Machining Length		mm	857	892
Spindle Motor (15 min. / Cont.)	SP1	kW	15 / 11	18.5 / 15
	SP2	kW	11 / 7.5	11 / 7.5
Spindle Speed Range	SP1	min ⁻¹	5,000	5,000
	TR1		12 St. Turret	12 St. Turret
Type of Turret				
Max. Number of Revolving Tools	SP1	tools	12	12



Multipurpose midsize CNC turning center

51mm bar capacity, 2 spindles and 1 turret with Y-Axis

Fixed Headstock Type
CNC Automatic Lathe

BND

Y-axis function is more capable for complex high-value parts.
Mono block slant bed and square slide for efficient chip flow and high accuracy.



MODEL NAME			BND-51SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	φ 51 / φ 42
Standard Machining Length		mm	661
Spindle Motor (30 min. / Cont.)	SP1	kW	15 / 11
	SP2	kW	5.5 / 3.7
Spindle Speed Range			SP1 / SP2 min ⁻¹ 5,000 / 5,000
Type of Turret	TRI		12 St. Turret
Max. Number of Revolving Tools		tools	12

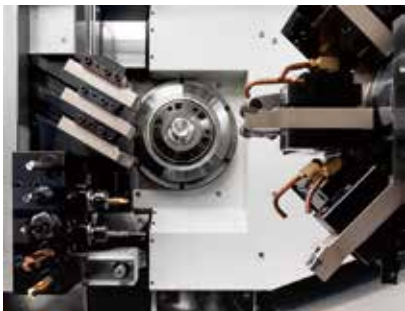


The high speed of gang tools is added to the diversity of the turret, opening up a wide range of machining possibilities.

Fixed Headstock Type
CNC Automatic Lathe

BNA^GTY

The machine can handle balance cutting and pinch milling in addition to 3-axis-control-group overlapping, giving exceptional machining efficiency. By using 4 hole tool holder and tool holders for back machining, up to 45 tools can be mounted.



MODEL NAME			BNA-42GTY
Max Machining Diameter of Bar Work	SPI/SP2	mm	φ42 / φ34
Standard Machining Length		mm	561
Spindle Motor (30 min / Cont.)	SP1	kW	11 / 7.5
	SP2	kW	5.5 / 3.7
Spindle Speed Range	SP1 / SP2	min ⁻¹	6,000 / 5,000
Type of Turret	TR1		8 St. Turret
	TR2		Gang tool post
Max. Number of Revolving Tools		tools	45



Main turret with Y-axis function

Equipped with sub turret with 2 turrets for rapid processing of complex-shaped work

Fixed Headstock Type
CNC Automatic Lathe

BNA^{DHY}

Simultaneous left /right processing with a main turret and compact sub-turret and overlap processing sharply cut the machining time.

In addition to its 5-inch power chuck on the front spindle, the back spindle can also mount a 4-inch power chuck for flexible accommodation of forged parts.



MODEL NAME		BNA-42DHY
Max Machining Diameter of Bar Work	SP/SP2 mm	φ 42 / φ 34
Standard Machining Length	mm	540
Spindle Motor (15 min. / Cont.)	SP1 kW	7.5 / 5.5
	SP2 kW	5.5 / 3.7
Spindle Speed Range	SP1 / SP2 min-1	6,000 / 5,000
	TR1	8 St. Turret
Type of Turret	TR2	6 St. Turret
Max. Number of Revolving Tools	tools	8



Base and Turret Rigidity Increased

Basic Performance as a Bar Work Machine Improved

Fixed Headstock Type
CNC Lathe

BNA_{sy}

With 12 stations and increased rigidity, the turret achieves high efficiency through a wide range of tools and left and right simultaneous machining, including superimposition machining. Inheriting the traditional lat form construction of the Miyano brand, the bed features improved damping characteristics with the increased weight and greater size.



MODEL NAME			BNA-42SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	φ 42 / φ 34
Standard Machining Length		mm	540
Spindle Motor (15 min. / Cont.)	SP1	kW	11 / 7.5 / 5.5
	SP2	kW	5.5 / 3.7
Spindle Speed Range			6,000 / 5,000
Type of Turret	TR1		12 St. Turret
Max. Number of Revolving Tools		tools	12



CY type enables use as a chucker machine

Fixed Headstock Type
CNC Automatic Lathe

BNA_{cy}

Standard equipment includes mounting eyes for the legs of the gantry loader. This chip conveyor allows for rear discharge in addition to the current side discharge.



MODEL NAME			BNA-42CY
Max. Machining Diameter of Bar Work	SP1	mm	φ42
Max. Machining Length for Bar Work		mm	391
Spindle Motor (1500/15 min⁻¹ / const.)	SP1	kW	11/ 7.5 / 5.5
Spindle Speed Range	SP1	min⁻¹	6,000
Type of Turret	TR1		12 St. Turret
Max. Number of Revolving Tools		tools	12
Power Chuck Size	SP1		5" / 6" hollow chucks



The unique control system improves productivity by enabling overlap control and reduction of non-cutting time.

Fixed Headstock Type
CNC Automatic Lathe

BNAmsy

The turret features a Y axis and half-indexing, expanding the machining possibilities.
The machine is equipped with the largest spindle motor in the series, enabling powerful cutting.



MODEL NAME			BNA-42MSY
Max Machining Diameter of Bar Work	SP1/ SP2	mm	φ42 / φ34
Standard Machining Length		mm	540
Spindle Motor (15 min/ cont.)	SP1	kW	11 / 7.5
	SP2	kW	5.5 / 3.7
Type of Turret	TR1		8 St. Turret
Max. Number of Revolving Tools		tools	8



Space-saving design combined with advanced functions and high accuracy
A new standard for bar work machines

Fixed Headstock Type
CNC Automatic Lathe

BNAs

Miyano's unique control technology cuts non-machining time by 27% (compared to earlier equivalent Miyano product).



MODEL NAME			BNA-42S
Max Machining Diameter of Bar Work	SP1 / SP2	mm	φ 42 / φ 34
Standard Machining Length		mm	490
Spindle Motor (15 min/cont.)	SP1	kW	7.5 / 5.5
	SP2	kW	5.5 / 3.7
Spindle Speed Range	SP1 / SP2	min ⁻¹	6,000 / 5,000
	TRI		8 St. Turret
Max. Number of Revolving Tools		tools	8



We have revamped the concept for the BNC, a renowned machine in the Miyano heritage, and resurrected it as an “NC barfeed/chucking lathe”.

Fixed Headstock Type
CNC Automatic Lathe

BNC

Structured for powerful cutting by combining a high-rigidity bed with a platform construction and hand scraped box slideways, featuring exceptional rigidity and damping characteristics, on all axes. Comes with a comprehensive custom menu screen, which includes a machining support function that helps shorten non-cutting time called the “spindle speed attainment level changing function”.



MODEL NAME			BNC-42C
Max Machining Diameter of Bar Work	SP1	mm	φ 42
Max Machining Length for Bar Work		mm	361
Spindle Motor (15 min/cont.)	SP1	kW	7.5 / 5.5
Spindle Speed Range	SP1	min-1	6,000
Type of Turret	TRI		8 St. Turret
Max Number of Revolving Tools		tools	8

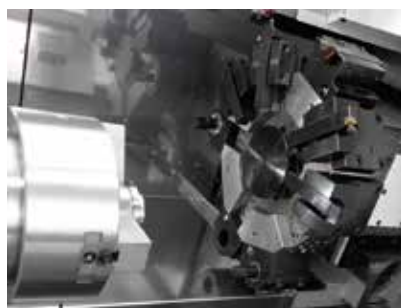


Chuck featuring high-rigidity, mono block slant bed, and 10-position turret for intensive machining work

CNC Lathe

LX08c

Powerful 10 station turret, powerful curvic coupling, positive tool holding by direct wedge clamping for OD Turning, mono block slant bed for efficient chip flow and rigid spindle construction. Ideal for High powered and accurate machining such as hardened material work pieces.



MODEL NAME			LX-08C
Power Chuck Size	all hydraulic	inch	8
Max. Turning Dia.	SPI	mm	φ210
Max. Turning Length		mm	514
Spindle Motor (30 min/cont.)	SPI	kW	11 / 7.5
Spindle Speed Range	SPI	min ⁻¹	4,000
Type of Turret	TR		10 St. Turret
Max. Number of Revolving Tools		tools	---

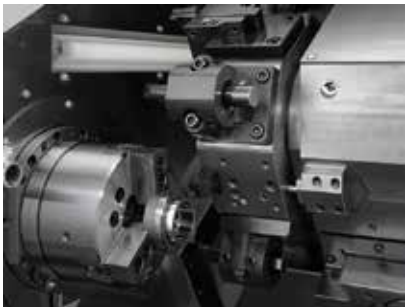


The high levels of rigidity are ideal for "Hard Turning" applications which can eliminate expensive grinding operations

CNC Lathe

LX06E
LX08E

Combines a gantry loader and NC loader for labor-saving operation



MODEL NAME			LX-06E	LX-08E
Power Chuck Size	oil hydraulic	inch	6	8
Max. Turning Dia.	SP1	mm	φ165	φ210
Max. Turning Length		mm	451	446
Spindle Motor (30 min. / Cont.)	SP1	kW	7.5 / 5.5	11 / 7.5
Spindle Speed Range	SP1	min ⁻¹	5,000	4,000
Type of Turret	TRI		8 St. Turret	8 St. Turret



Chuck featuring movable spindle and automation system, for high-speed loading

CNC Lathe

LZ

Reduces loading time substantially, a movable spindle that transfers processed work pieces to a hand inside the machine.



MODEL NAME			LZ-01R / 01RY
Power Chuck Size	all hydraulic	inch	6
Max. Turning Dia.	SPI	mm	φ70
Max. Turning Length		mm	80
Spindle Motor (30 min. / Cont.)	SPI	kW	7.5 / 5.5
Spindle Speed Range	SPI	min ⁻¹	6,000
Type of Turret	TRI		12 St. Turret
Max. Number of Revolving Tools		tools	6
Max. Work Size		mm	φ70×80
Max. Work Weight		kg	0.7 (×2)



Advanced high precision machining is achieved with extended slide stroke and higher rapid feed on slides.

High Precision CNC Lathe

GN4200

Designed for high-precision machining, A tool table with an X-axis slide stroke 50 mm bigger than on existing machines allows a wide range of tools. Can of course be handled manually, but the machine also flexibly accommodates high-speed gantry loaders or robots.



MODEL NAME		GN-4200
Power Chuck (Precision)	inch	4
Collet Chuck	Stationary Type/ Pull Type	mmφ35 / φ40
Diaphragm Chuck	inch	4
Max.Machining Length	mm	80
Spindle Motor (15 min / Cont.)	Standard type	kW5.5 / 3.7
Spindle Speed Range	min-1	8,000
Type of turret	Horizontal Linear Turret	



Functions equivalent to two GN-3200 have been integrated into one for further improvement of productivity

High Precision CNC Lathe

GN3200w

Various automation needs are met by combining peripheral devices such as the high-speed gantry loader that allows selection of either one or two 2 saddles, in/out stocker, etc.



MODEL NAME		GN-3200W
Power Chuck (Precision)	inch	3 (4)
Collet Chuck	Stationary Type/ Pull Type	mm $\phi 35 / \phi 40$
Diaphragm Chuck	inch	4
Max.Machining Length	mm	50
Spindle Motor (15 min. / Cont.)	Standard type	kW 2.2 / 1.5
Spindle Speed Range	min ⁻¹	8,000
Type of turret		Horizontal Linear Turret

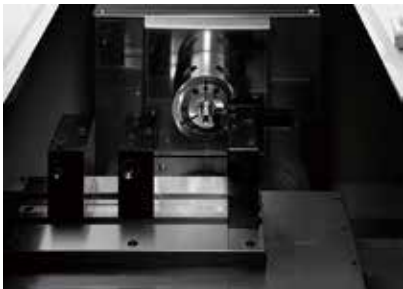


Space-saving, high-precision chucker inheriting the traditional high-accuracy design

High Precision CNC Lathe

GN3200

Heat symmetric machine frame and bed, wing type headstock and separate coolant tank that all for high precision.



MODEL NAME			GN-3200
Power Chuck (Precision)		inch	3 (4)
Collet Chuck	Stationary Type / Pull Type	mm	φ 35 / φ 40
		inch	4
Diaphragm Chuck			
Max.Machining Length		mm	50
Spindle Motor (15 min. / Cont.)		Standard type kW	2.2 / 1.5
Spindle Speed Range		min-1	8,000
Type of turret			Horizontal Linear Turret



The compact design requiring only 1.0m² of floor space saves space and reduces cost

CNC Lathe

RL01

Compact yet highly-rigid base realizes high accuracy.
Optional parts feeder enables loading, machining and unloading on a single machine.



MODEL NAME			RL01 III	RL01 V
Collet Chuck	Stationary Type/ Pull Type	mm	φ10	φ10
Diaphragm Chuck	Pneumatic	inch	3	3
Max.Machining Length		mm	50	50
Spindle Motor (15 min. / Cont.)		kW	0.4 (Inverter)	1.1 / 0.55 (AC Spindle)
Spindle Speed Range		min ⁻¹	8,000	6,000
Type of turret			Horizontal Linear Turret	Horizontal Linear Turret



Opening up new possibilities in machining technology with LfV

High Precision CNC Lathe

VC03

Vibrating slide makes chips split, reducing the troubles of tangled chips. Low cutting resistance reduces the load on a chuck.



MODEL NAME			VC03
Maximum bar diameter (Pull type collet chuck)	Pneumatic	mm	40
Maximum work length	Stationary/Type/ Pull Type	mm	50
Spindle Motor (15 min. / Cont.)		kw	3.7 / 2.2
Spindle Speed Range		min ⁻¹	8,000
Rapid feed rate (X-axis/Y-axis)		m/min	20 / 30



Integrating three NC lathes into a single machine unit with three modules realizes an ultra-high-productivity machine

MultiStationMachiningCell

MC20III

Machining processes are shared by three modules. Simultaneous multi-spindle machining improves productivity.

It is possible to substantially reduce the floor space requirements while maintaining the same production capacity.

No loader between processes is required: improves accuracy and reduces setup time.



MODEL NAME		MC20 III
Chuck size	inch	4
Max. through-spindle workpiece diameter	mm dia.	φ20
Max. workpiece length	mm	70
Number of tools to be mounted (standard machining specification)	tools	6 (1 Module)
Spindle speed	min ⁻¹	8,000
Spindle Speed Range	kW	2.2/ 3.7



Incorporating Four Modules Further Evolution of the Multi-station Machining Cell

MultiStationMachiningCell

MC20IV

Efficiency improved by sharing machining processes among the four modules.

Line comprising four single-spindle lathes integrated into a single machine. Improves the productivity per unit area. The machine features a 15-inch touch panel as the operation panel. The graphical HMI improves visibility and allows intuitive operation.



MODEL NAME		MC20 IV
Chuck size	inch	4
Max. through-spindle workpiece diameter	mm dia.	φ20
Max. workpiece length	mm	70
Number of tools to be mounted (standard machining specification)	tools	6 (1モジュール)
Spindle speed	min ⁻¹	8,000
Spindle motor	kW	2.2/ 3.7



CITIZEN

URL:<https://cmj.citizen.co.jp/>

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