CITIZEN

Cincom Miyano Products Guide

Citizen Machinery provides production innovation solutions that are at the cutting edge in global terms through the new value of “Mass Customization”, which is a response to a transformation of manufacturing.

Citizen Machinery believes that the requirements in 21st century manufacturing are greater efficiency to achieve “volume” and diversity to achieve “individualization”, and that “innovative manufacturing” that integrates and concurrently achieves these two conflicting goals is the new value for the manufacturing required in the 21st century. Through it, we grasp and interpret the transformation of manufacturing, and provide production innovation solutions.

In recent years, in the automotive field and other areas of the manufacturing world, there have been efforts to come up with a response to diverse requirements that are spreading globally by skillfully combining standardized common parts and common modules. This is a new trend to innovatively evolve conventional manufacturing in order to efficiently make mass-produced products that are tailored to regions and tastes.

New product brands clearly expressing the value of “Mass Customization” that we provide through optimization for each customer as a manufacturer of general automatic lathes

We at Citizen Machinery are re-organizing the product brands that symbolize our determination to set up “Mass Customization”. In order to clearly convey to customers the characteristics of products that are likely to become harder to discern as modular design progresses, we have established Cincom as the product brand for sliding headstock type automatic lathes, and Miyano as the product brand for fixed headstock type automatic lathes. We have also established the following technology brands to show differentiating technologies: MultiStationMachiningCell to indicate an innovative machine construction embodied by the MC20, “Ocean technology”, the high-accuracy scraping technology, and “LFV technology”, meaning low frequency vibration cutting technology. And we are also rolling out the service brand “alkapplysolution”.

CITIZEN

Product Brands

Cincom

Sliding Headstock Type Automatic Lathes

Specialized for machining of long, small-diameter workpieces, supporting the supply of bar stock from 0 mm to 32 mm diameter.

L12

Miyano

Fixed Headstock Type Automatic Lathes

Specialized for machining of short, medium-diameter workpieces, supporting the supply of bar stock from 0 mm to 60 mm diameter.

BNA42

Technology Brands

MultiStationMachiningCell	Innovative machine construction technology
LFV technology	Low frequency vibration cutting technology
Ocean technology	High-accuracy scraping technology

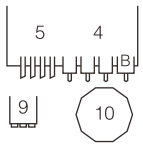
Service Brand

alkapplysolution	Provides solutions based on accumulated technical knowhow using network technology

Cincom

Sliding Headstock Type CNC Automatic Lathe

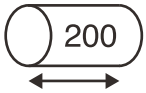
M32
V VII VIII

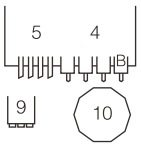


V : 8 axis
VII : 9 axis
VIII : 10 axis

P.7

M16
V VII VIII

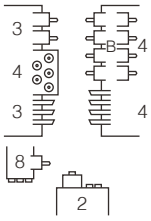




V : 8 axis
VII : 9 axis
VIII : 10 axis

P.8

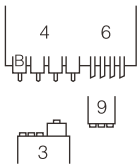
D25
VII VIII



VII : 9 axis
VIII : 10 axis

P.9

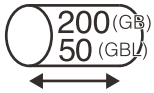
L32
VIII IX X XII

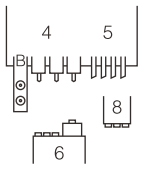


VIII : 5 axis
IX : 6 axis
X : 6 axis
XII : 7 axis

P.10

L20
VIII IX X XII

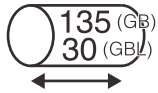


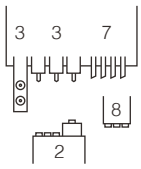


VIII : 5 axis
IX : 6 axis
X : 6 axis
XII : 7 axis

P.11

L12
VII X





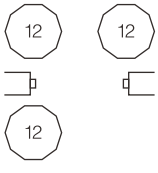
VII : 5 axis
X : 6 axis

P.12

Miyano

Fixed Headstock Type CNC Automatic Lathe

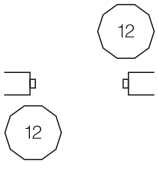
ABX
51THY
64THY



10 axis

P.17

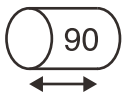
ABX
51SYY
64SYY

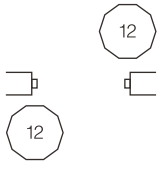


7axis

P.18

BNE
51MSY

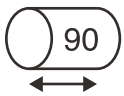


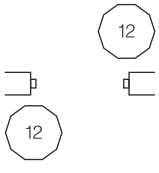


MSY : 7 axis

P.19

BNE
42S
51S
42SY
51SY

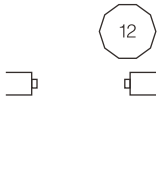




S : 5 axis
SY : 6 axis

P.20

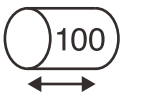
BND
51SY

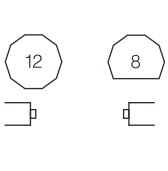


4 axis

P.21

BNJ
42S
42SY
51SY

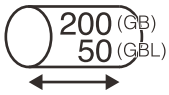


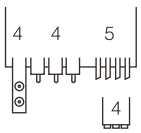


S : 4 axis
SY : 5 axis

P.22

A20
VII

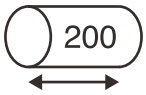


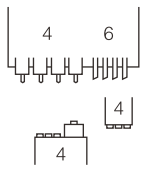


VII : 5 axis

P.13

K12 / 16E
VII

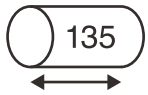


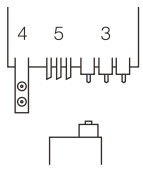


VII : 5 axis

P.14

B12 / 16E
II V VI

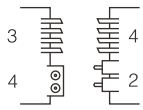




I, II : 3 axis
V, VI : 4 axis

P.14

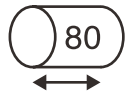
R01 / 04
II VI

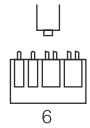


II : 5 axis
VI : 6 axis

P.15

GN
4200

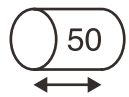


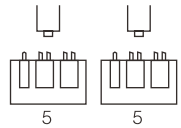


2 axis

P.32

GN
3200W

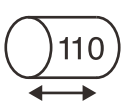


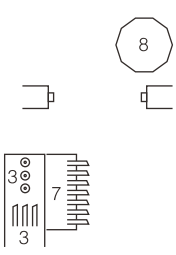


4 axis

P.33

BNA
42GTY

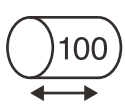


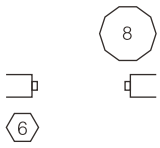


8 axis

P.23

BNA
42DHY

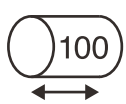


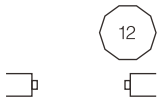


5 axis

P.24

BNA
42SY

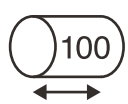


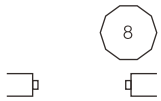


4 axis

P.25

BNA
42MSY

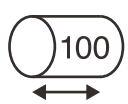


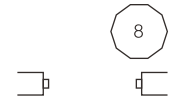


5 axis

P.26

BNA
42S

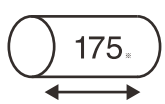


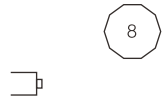


3 axis

P.26

BNC
42C



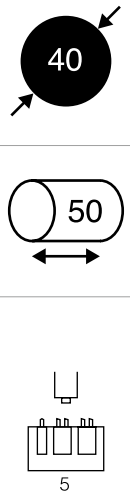
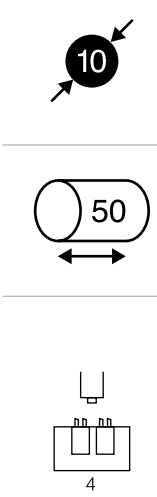
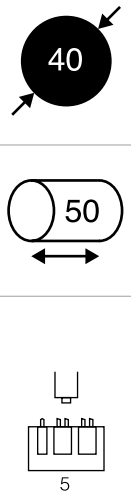
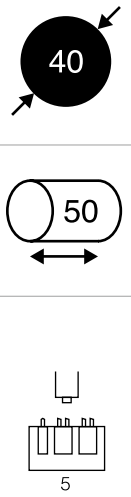
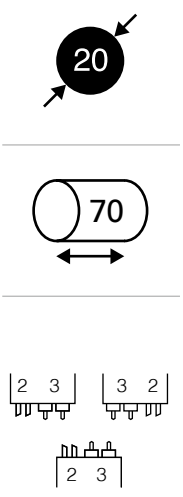
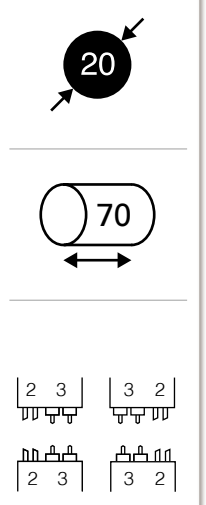


2 axis

P.27

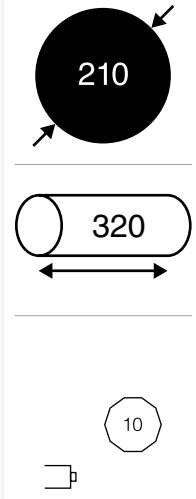
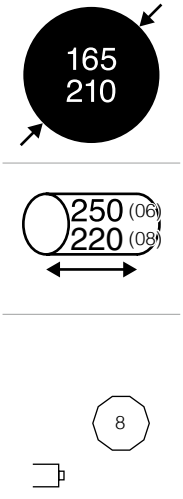
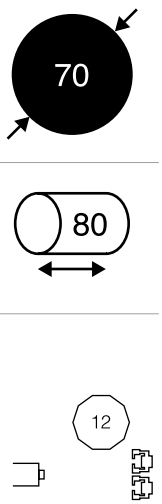
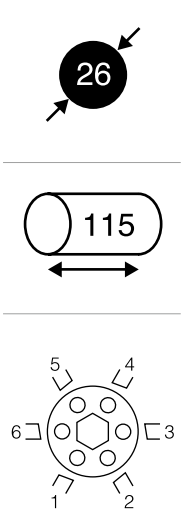
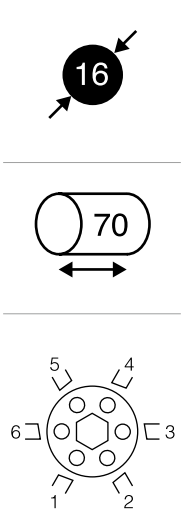
※Restrictions apply depending on the chuck.
JPN34, B&S#22D, 5" power chuck···175mm
DIN173E···160mm, H-S20···150mm

MultiStationMachiningCell

GN 3200	RL 01	RL 03	VC03	MC20 III	MC20 IV
					
2 axis	2 axis	2 axis	2 axis	10 axis	14 axis
P.33	P.34	P.34	P.35	P.36	P.37

CNC Lathe

Multi Spindle Automatic Lathe

LX 08C	LX 06E 08E	LZ 01R 01RY	G6 26N	MM A16
				
2 axis	2 axis	R : 2 axis RY : 3 axis	6 axis (NC : 4 axis)	6 axis
P.28	P.29	P.30	P.31	P.31

Cincom

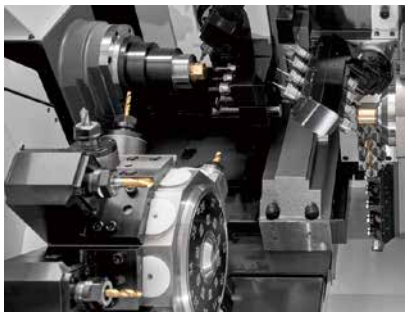
Cincom is synonymous with CNC automatic lathes that have a high level of versatility and can handle a wide range of complex machining.
The sliding headstock type machines, which are in their element with the machining of long, small-diameter workpieces using a guide bushing, support the supply of bar stock from ϕ4 mm to ϕ32 mm.

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	ϕ32 (38OP.)	ϕ32 (38OP.)	ϕ32 (38OP.)
1 chuck machining length	mm	320(GB) 2.5D(GBL)	320(GB) 2.5D(GBL)	320(GB) 2.5D(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 non-cutting 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.

LFV technology

MODEL NAME		D25 VII	D25 VIII
Control axis / line control group		9 axes, 3 axis control groups	10 axes, 3 axis control groups
Max. machining diameter	mm	φ 25	φ 25
Machining length per chucking	mm	250(GB) 2.5D(GBL)	250(GB) 2.5D(GBL)
Spindle speed	min^{-1}	10,000	10,000
Number of mountable tools	tools	59	43
Spindle motor	kW	3.7/5.5	3.7/5.5

The new L32 -an 'icon' reinvented

Sliding Headstock Type
CNC Automatic Lathe

L32

- 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

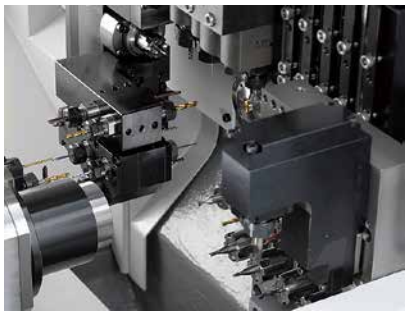
LFV technology

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

Sliding Headstock Type
CNC Automatic Lathe

L20

- 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 VIII	L20 IX	L20 X	L20 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	ϕ20 (ϕ25^{OP})	ϕ20 (ϕ25^{OP})	ϕ20 (ϕ25^{OP})	ϕ20 (ϕ25^{OP})
1 chuck machining length	mm	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
No. mountable tools	tools	37	33	44	40
Spindle motor	kW	2.2/3.7	2.2/3.7	2.2/3.7	2.2/3.7

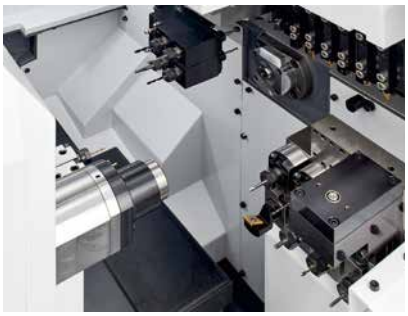
LFV technology

Modular Tooling System Adopted
Y2 Axis Added for Greater Functionality

Sliding Headstock Type
CNC Automatic Lathe

L12

- 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 (Type X)
- Built-in motor adopted as the drive system for the back spindle: realizes a maximum spindle speed of 12,000 min^{-1} (Type X)



MODEL NAME			L12 VII	L12 X
Control axis / line control group			5-axes, 2-lines control groups	6-axes, 2-lines control groups
Max. machining diameter	mm		ϕ 12	ϕ 12
1 chuck machining length	mm	GB GBL	135 30	135 30
Max. spindle speed	min^{-1}	GB GBL	15,000 12,000	15,000 12,000
No. mountable tools	tools		27	38
Spindle motor	kW		2.2/3.7	2.2/3.7

LFV technology

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 ϕ25 mm by installing the optional 25 mm size chuck device.

LFV technology

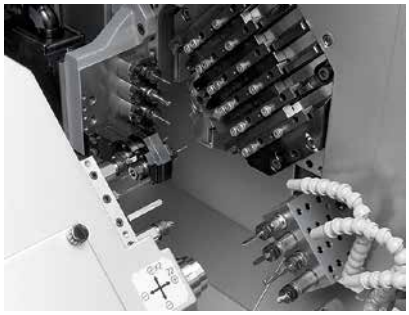
MODEL NAME		A20 VII
Control axis / line control group		5-axes, 2 lines control groups
Max. machining diameter	mm	ϕ 20 (ϕ 25^{OP})
1 chuck machining length	mm	200(GB)/50(GBL)
Max. spindle speed	min^{-1}	10,000
No. mountable tools	tools	21
Spindle motor	kW	2.2/3.7

Cincom Evolution line from Citizen introducing the K12E and K16E – faster processing with outstanding ease-of-use.

Sliding Headstock Type
CNC Automatic Lathe

K12/16E

- The new control and user interface makes using the K series even easier than before.
- New control delivers significant cycle time savings for complex parts.
- Same holder is adaptable for both slitting and cross drilling.



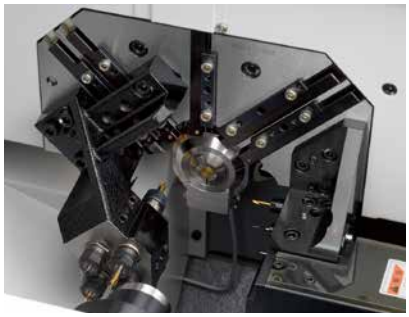
MODEL NAME		K12E VII	K16E VII
Control axis / line control group		5-axes,2-lines control groups	5-axes, 2-lines control groups
Max. machining diameter	mm	ϕ 12	ϕ 16
1 chuck machining length	mm	200	200
Max. spindle speed	min^{-1}	15,000	15,000
No. mountable tools	tools	23	23
Spindle motor	kW	2.2/3.7	2.2/3.7

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.



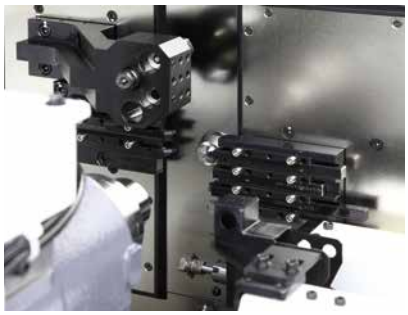
MODEL NAME		B12/16E I/II	B12/16E V	B12/16EVI
Control axis / line control group		3/1	4/1	4/1
Max. machining diameter	mm	B12E: ϕ12 B16E: ϕ16	B12E: ϕ12 B16E: ϕ16	B12E: ϕ12 B12E: ϕ16
1 chuck machining length	mm	135 (60 with RGB)	135 (60 with RGB)	135 (60 with RGB)
Max. spindle speed	min^{-1}	B12E:12,000 (8,000 with RGB) B16E:10,000 (8,000 with RGB)	B12E:12,000 (8,000 with RGB) B16E:10,000 (8,000 with RGB)	B12E:12,000 (8,000 with RGB) B16E:10,000 (8,000 with RGB)
No. mountable tools	tools	9 / 11	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.

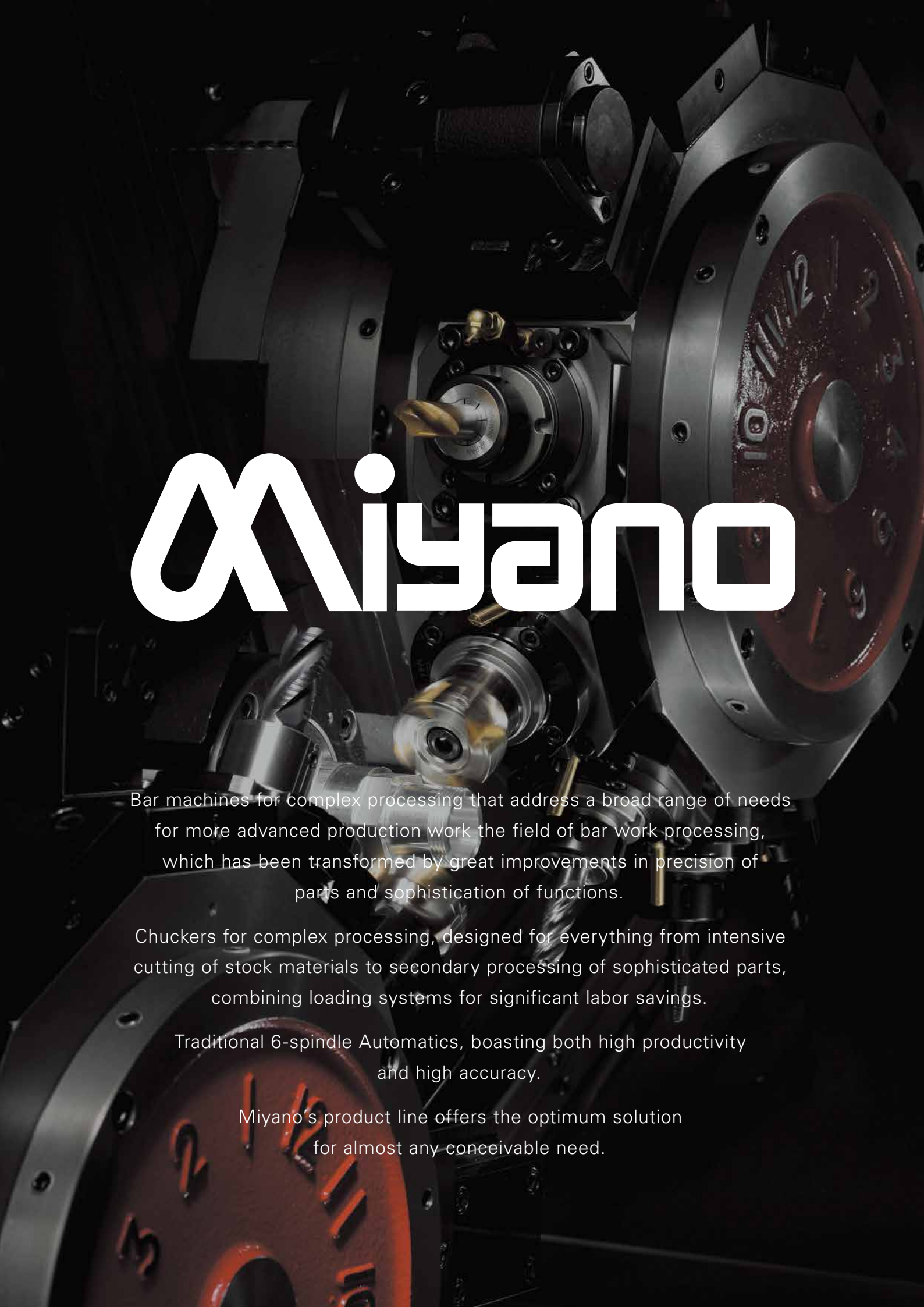
Sliding Headstock Type
CNC Automatic Lathe

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 : ϕ1 R04 : ϕ4	R01 : ϕ1 R04 : ϕ4
1 chuck machining length	mm	R01 : 20 R04 : 40	R01 : 20 R04 : 40
Max. spindle speed	min^{-1}	20,000	20,000
No. mountable tools	tools	13	17
Spindle motor	kW	0.5/0.75	0.5/0.75



Miyano

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.

Traditional 6-spindle Automatics, boasting both high productivity and high accuracy.

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

The flagship of Miyano CNCs for bar work
The perfect turning center

Fixed Headstock Type
CNC Automatic Lathe

ABX THY

- Upper/lower turrets equipped with Y-axis function and left/right spindles for simultaneous left and right processing, enabling faster completion of products requiring front/back processing
- Up to 36 revolving tools (40 Nm) realize high rigidity and stable milling

MODEL NAME			ABX-51THY	ABX-64THY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ51 / ϕ51	ϕ64 / ϕ51
Standard Machining Length		mm	125	118
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	HD1, HD2 & HD3		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

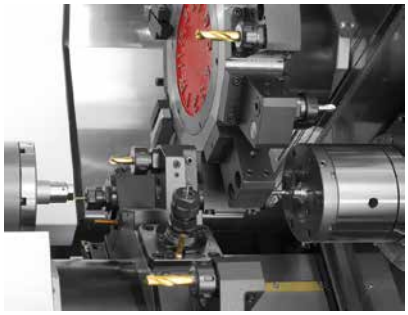
MODEL NAME			ABX-51SYY	ABX-64SYY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ51 / ϕ51	ϕ64 / ϕ51
Standard Machining Length		mm	125	118
Spindle Motor (30 min. / Cont.)	SP1	kW	15 / 11	15 / 11
	SP2	kW	7.5 / 5.5	7.5 / 5.5
Spindle Speed Range	SP1 / SP2	min^{-1}	5,000 / 5,000	4,000 / 5,000
Type of Turret	HD1 & HD2		12 St.Turret	12 St.Turret
Max. Number of Revolving Tools		tools	24	24

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

Fixed Headstock Type
CNC Automatic Lathe

BNE51MSY

- 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 ϕ51 mm, expanding the range of products.



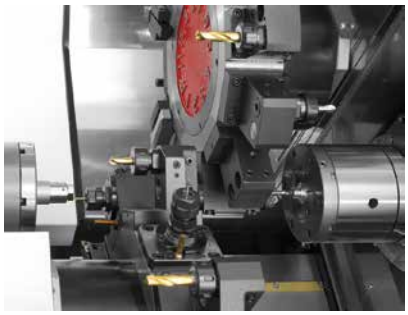
MODEL NAME			BNE-51MSY
Max Machining Diameter of Bar Work	SP1 & SP2	mm	ϕ51
Standard Machining Length		mm	90
Spindle Motor (30 min. / Cont.)	SP1	kW	15 / 11
	SP2	kW	7.5 / 5.5
Spindle Speed Range	SP1 & SP2	min^{-1}	5,000
Type of Turret	HD1 & HD2		12 st. turret
Max. Number of Revolving Tools		tools	12+12

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

Fixed Headstock Type
CNC Automatic Lathe

BNE

- Upper/lower turrets enable balanced cutting and complex machine,



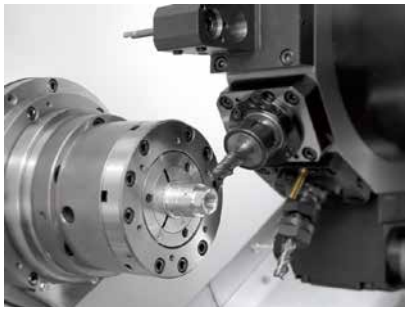
MODEL NAME			BNE-42S / 42SY	BNE-51S / 51SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ42 / ϕ42	ϕ51 / ϕ42
Standard Machining Length		mm	90	90
Spindle Motor (30 min. / Cont.)	SP1	kW	15/11	15 / 11
	SP2	kW	5.5 / 3.7	5.5 / 3.7
Spindle Speed Range	SP1 / SP2	min^{-1}	6,000 / 5,000	5,000 / 5,000
Type of Turret	HD1		12 St.Turret	12 St.Turret
	HD2		8 St.Turret	8 St.Turret
Max. Number of Revolving Tools		tools	24	24

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	ϕ51 / ϕ42
Standard Machining Length		mm	320
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	HD1		12 St.Turret
Max. Number of Revolving Tools		tools	12

Uniquely shaped back-working turret reduces production time greatly

Fixed Headstock Type
CNC Automatic Lathe

BNJ

- 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.

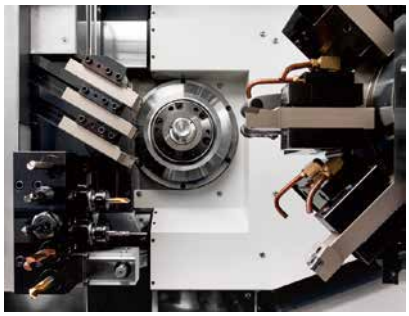
MODEL NAME			BNJ-42S / 42SY	BNJ-51SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ42 / ϕ42	ϕ51 / ϕ42
Standard Machining Length		mm	100	100
Spindle Motor (30 min. /Cont.)	SP1	kW	15 / 11	15 / 11
	SP2	kW	7.5 / 5.5	7.5 / 5.5
Spindle Speed Range	SP1 / SP2	min^{-1}	6,000/5,000	5,000/5,000
Type of Turret	HD1		12 St.Turret	12 St.Turret
	HD2		8 St.Turret	8 St.Turret
Max. Number of Revolving Tools	SP1	tools	12	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	SP1/SP2	mm	ϕ42 / ϕ34
Max. Machining Length for Bar Work		mm	110 mm
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	HD1		8-station turret
	HD2		Gang tool post
Maximum mountable tools			45

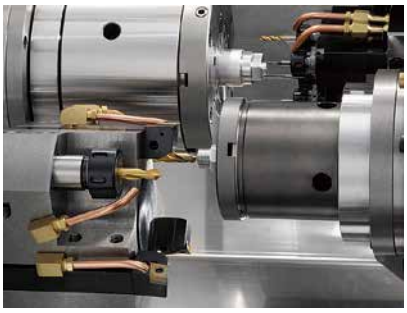
LFV technology

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.



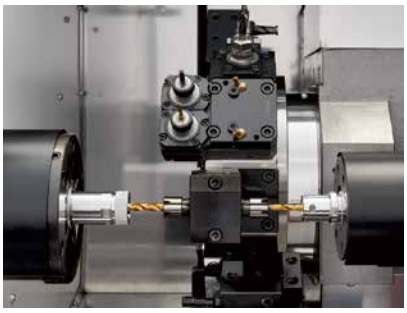
MODEL NAME			BNA-42DHY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ42 / ϕ34
Standard Machining Lengtha		mm	100
Spindle Motor (15 min. / Cont.)	SP1	kW	7.5 / 5.5
	SP2	min^{-1}	5.5 / 3.7
Spindle Speed Range	SP1 / SP2		6,000 / 5,000
Type of Turret	HD1		8 St.Turret
	HD2		6 St.Turret
Max. Number of Revolving Tools		tools	8

Base and Turret Rigidity Increased
Basic Performance as a Bar Work Machine Improved

Fixed Headstock Type
CNC Lathe

BNAsy

- 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 platform construction of the Miyano brand, the bed features improved damping characteristics with the increased weight and greater size.



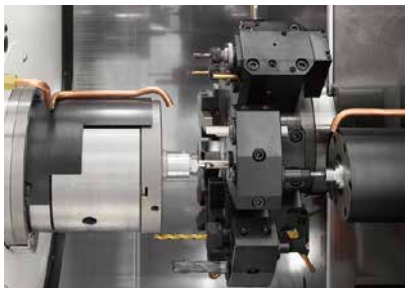
MODEL NAME			BNA-42SY
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ42 / ϕ34
Standard Machining Lengtha		mm	100
Spindle Motor (15 min. / Cont.)	SP1	kW	11/ 7.5 / 5.5
	SP2	kW	5.5 / 3.7
Spindle Speed Range	SP1 / SP2		6,000 / 5,000
Type of Turret	HD1	min^{-1}	12 St.Turret
Max. Number of Revolving Tools		tools	12

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.



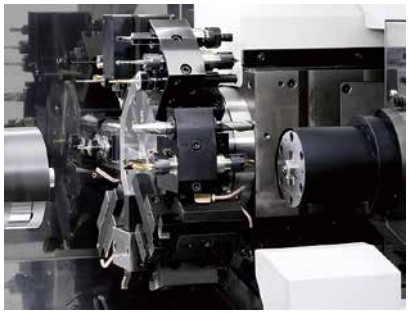
MODEL NAME			BNA-42MSY
Max Machining Diameter of Bar Work	SP1/SP2	mm	ϕ42 / ϕ34
Max. Machining Length for Bar Work		mm	100 mm
Spindle Motor (15 min. / Cont.)	SP1	kW	11 / 7.5
	SP2	kW	7.5 / 5.5
Type of Turret	HD1		8 st. turret
Max. Number of Revolving Tools			8

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)



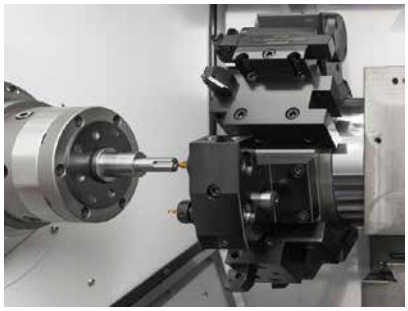
MODEL NAME			BNA-42S
Max Machining Diameter of Bar Work	SP1 / SP2	mm	ϕ42 / ϕ34
Standard Machining Length		mm	100
Spindle Motor (15 min. / Cont.)	SP1	kW	7.5 / 5.5
	SP2	kW	5.5 / 3.7
Spindle Speed Range	SP1 / SP2	min^{-1}	6,000 / 5,000
Type of Turret	HD1		8 St.Turret
Max. Number of Revolving Tools		tools	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 / SP2	mm	ϕ42 / ϕ34
Standard Machining Length		mm	175*
Spindle Motor (15 min. / Cont.)	SP1	kW	7.5 / 5.5
Spindle Speed Range	SP1	min^{-1}	6,000
Type of Turret	HD1		8 St.Turret
Max. Number of Revolving Tools		tools	8

*Restrictions apply depending on the chuck.
JPN34, B&S#22D, 5" power chuck … 175 mm, DIN173E … 160 mm, H-S20 … 150 mm

Chucker 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 bet for efficient chip flow and rigid spindle construction. Ideal for High powered and accurate machining such as hardened material work pieces.

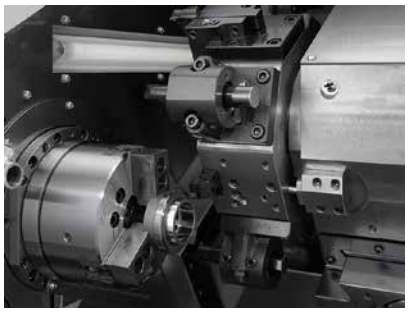
MODEL NAME			LX-08C
Power Chuck Size	oil hydraulic	inch	8
Max. Turning Dia.		mm	210
Max. Turning Length		mm	320
Spindle Motor (30 min. / Cont.)		kW	11 / 7.5
Spindle Speed Range		min^{-1}	4,000
Type of Turret			10St.Turret
Max. Number of Revolving Tools		tools	---

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.		mm	ϕ165	ϕ210
Max. Turning Length		mm	250	220
Spindle Motor (30 min. / Cont.)		kW	7.5 / 5.5	11 / 7.5
Spindle Speed Range		min^{-1}	5,000	4,000
Type of Turret			8 St.Turret	8 St.Turret

Chucker 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

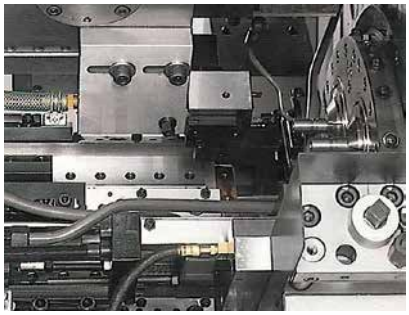
MODEL NAME			LZ-01R / 01RY
Power Chuck Size	oil hydraulic	inch	6
Max. Turning Dia.	SP1	mm	70
Max. Turning Length		mm	80
Spindle Motor (30 min. / Cont.)	SP1	kW	7.5 / 5.5
Spindle Speed Range	SP1	min^{-1}	6,000
Type of Turret	HD1		12st.Turret
Max. Number of Revolving Tools		tools	6
Max. Work Size		mm	ϕ70×80
Max. Work Weight		kg	0.7 (×2)

Combines NC with a traditional 6-spindle Automatics, for high-accuracy, volume production, even for processing long work pieces

Multi spindle
CNC Automatic Lathe

G626

- Positioning on the spindle carrier is performed by a curvic coupling, and any time differential between axes is corrected by an offset function. An NC slide for finishing results realizes a level of accuracy that has never been possible before



MODEL NAME		G6-26N
Max Machining Diameter of Bar Work	mm	ϕ26
Bar feeding length	mm	115
Max. Bar length	mm	4,000
Spindle Motor / Cam Axis Motor	kW	15 / 4
Spindle Speed Range	min^{-1}	4,000
No. of Tools on End-slide		6
No. of Cross Slide		6
No. of NC slide		2

Multi-spindle automatic lathe for the most sophisticated needs
A multi-spindle Automatics that boasts both high accuracy and high productivity

Multi spindle
Automatic Lathe

MM16

- Features a Hirth coupling carrier positioning, for higher repeatability acczuracy
- Extremely fine control, independent variable-speed and gearless main motor and feed motor

MODEL NAME		MM-A16
Max Machining Diameter of Bar Work	mm	ϕ16
Bar feeding length	mm	70
Max. Bar length	mm	4,000
Spindle Motor / Cam Axis Motor	kW	15 / 4.5
Spindle Speed Range	min^{-1}	4,000
No. of Tools on End-slide		6
No. of Cross Slide		6
No. of NC slide		2

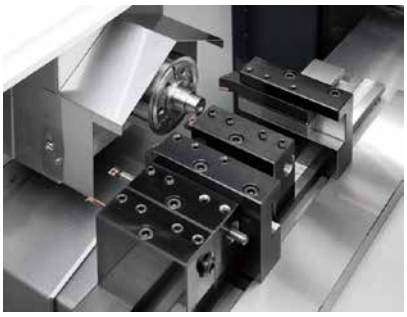
Advanced high precision machining is achieved with extended slide stroke and higher rapid feed on slides.

Ocean technology

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	mm	ϕ35 / ϕ40
Max.Machining Length		mm	80
Spindle Motor(15 min. / Cont.)		kW	5.5/3.7
Spindle Speed Range	Standard type	min^{-1}	8,000
Type of turret			Horizontal Linear Turret

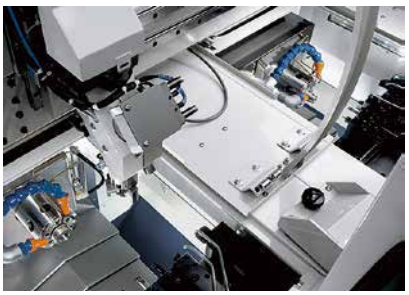
Functions equivalent to two GN-3200 have been integrated into one for further improvement of productivity

Ocean technology

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)	Pneumatic	inch	3(4)
Collet Chuck	Stationary Type/Pull Type	mm	ϕ35 / ϕ40
Diaphragm Chuck		inch	4
Max.Machining Length		mm	50
Spindle Motor (15 min. / Cont.)		kW	2.2 /1.5
Spindle Speed Range		min^{-1}	8,000
Type of turret			Horizontal Linear Turret

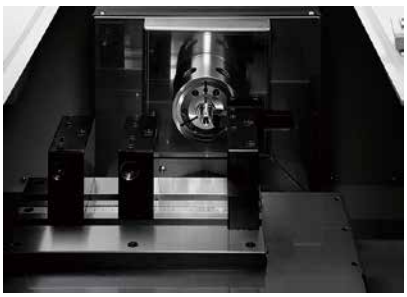
Space-saving, high-prevision chucker inheriting the traditional high-accuracy design

Ocean technology

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)	Pneumatic	inch	3 (4)
Collet Chuck	Stationary Type/Pull Type	mm	ϕ35 / ϕ40
Diaphragm Chuck		inch	4
Max.Machining Length		mm	50
Spindle Motor (15 min. / Cont.)		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

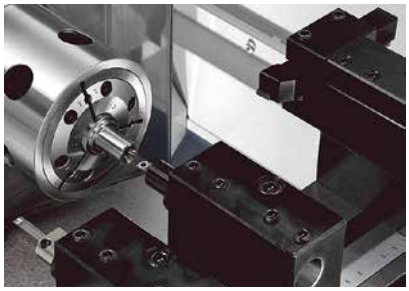
MODEL NAME			RL01 III	RL01 V
Collect Chuck	Stationary Type/ Pull Type	mm	ϕ10	ϕ10
Diaphragm chuck	Pneumatic	inch	3	3
Max. Machining Length		mm	50	50
Spindle Motor (15 min. / Cont.)		kW	0.4 (Inverter)	1.1 / 0.55 (AC Spindle)
Spindle Speed Range		min^{-1}	6,000	6,000
Max. Number of Revolving Tools			Horizontal Linear Turret	Horizontal Linear Turret

High accuracy functions all in a space of only 700mm wide

High Precision CNC Lathe

RL03

- The slide axis integrates a highly-rigid roller guide with little elastic changes to provide smooth operation



MODEL NAME			RL03
Power Chuck (Precision)	Stationary Type / Pull Type	inch	3 (4)
Collet Chuck	Pneumatic	mm	ϕ35 / ϕ40
Diaphragm Chuck		inch	4
Max.Machining Length		mm	50
Spindle Motor (15 min. / Cont.)		kW	2.2 /1.5
Spindle Speed Range		min^{-1}	8,000
Max. Number of Revolving Tools			Horizontal Linear Turret

Opening up new possibilities in machining technology with Low Frequency Vibration-cutting

LFV technology

Low Frequency Vibration-cutting

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	ϕ40
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

MultiStationMachiningCell

MC20 III

- 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.

LFV technology

Model name		MC20 III
Chuck size	inch	4
Max. through-spindle workpiece diameter	mm dia.	20
Max. workpiece length	mm	70
Number of tools to be mounted (standard machining specification)	tools	5(1Module)
Spindle speed	min^{-1}	8,000
Motor for front spindle	kW	2.2/3.7

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

MultiStationMachiningCell

Multi-station Machining Cell

MC20 IV

- 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.

LFV technology

MODEL NAME		MC20 IV
Chuck size	inch	4
Maximum through-spindle workpiece diameter	mm	ϕ20
Maximum workpiece length	mm	70
Number of tools to be mounted (standard machining specification)		5 (one module)
Spindle speed	min-1	8,000
Spindle motor	kW	2.2/3.7

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