Tooling System

- Cutoff Tool Holder □20/20×12 (3/4sq. 3/4"×1/2"×2)
- Double Plane & Turning Tool Holder □20, φ25 (3/4sq. 1"dia.)
- Double Turning Tool Holder □20 (3/4"sq.)
- Turning & Plane Holder □20, φ25 (3/4sq. 1"dia.)
- Turning Tool Holder □20 (3/4"sq.)
- Double Plane Holder φ25
- Revolving Tool Drive Unit X
- Double Revolving Tool Drive Unit Z
- Revolving Drive Tool Unit Z
- Single Plane Head φ25
- Wedge Clamp

NC SPECIFICATIONS MIYANO-FANUC

•Simultaneously controlled axes	3 axes/2 paths, X1, X2, Z1, Z2, Y1, Cs1, Csz-axis
•Min. input increment	0.001mm, 0.0001inch, 0.001deg.
•Min. output increment	X-axis: 0.0005mm, Z-axis: 0.001mm
•Parts program storage capacity	16,000ch(40m Tape Length)
•Spindle function	Spindle speed S5 digits direct specify, Constant cutting speed control
•Rapid traverse rate	X1, X2, Z1, axis: 18m/min., Z2-axis: 20m/min. Y-axis: 10m/min.
•Cutting feed rate	F3.4 digit direct specify
•Cutting feed rate override	0~150% (10% steps)
•Interpolation	G01, G02, G03
•Threading	G32, G92
•Canned Cycle	G90, G92, G94
•Work coordinate setting	Automatic setting, 32 sets by the geometry offset function.
•Tool selection and work coordinate system selection	Tool selection 1~32 can be done by the first two digit of the T-4 digit code.
•Tool wear offset	Tool wear selection 1~32 sets can be done by the last two digit of the T-4 digit code.
•Direct input of tool positions	Measured value can be directly key in
•Input/Output interface	RS-232C, PC Card Slot.
•Automatic operation	Single/Continuous cycle operation. Single block operation, Block delete, Machine lock, Dry run. Feed hold.

■Others

7.2" monochrome LCD, Decimal point input, Manual pulse generator, Memory protect, Start interlock, AC digital servo, 63 storage parts programs, Polar coordinate interpolation, Synchronous mixing feed function.

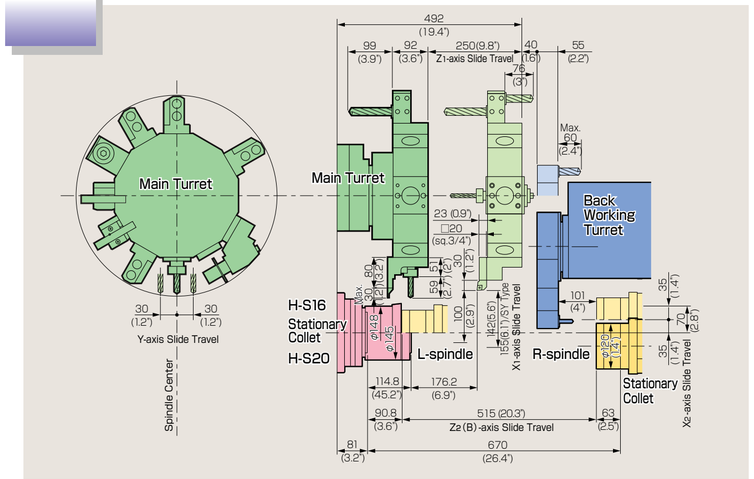
■Basic Options

Chamfering/Corner R control, Tool nose R compensation, Cs-axis control, Wear offset, Inch/Metric conversion, Constant cutting speed control, Background editing, Filler tube assembly, Alarm display, Run hour/Parts number countering.

■NC Options

Multiple repetitive canned cycle (G70~G76), Custom macro B, Additional parts program storage (Total : 80m, 160m, 320m), Cylindrical Interpolation, Rigid Tapping Function (Spindle / Revolving Tools), Total & Preset Counter, Superimpose Feed Function A, Programmable Data Input (G10), Continuous multi-lead thread cutting, Variable lead thread cutting, Tool life management system.

Tooling Area



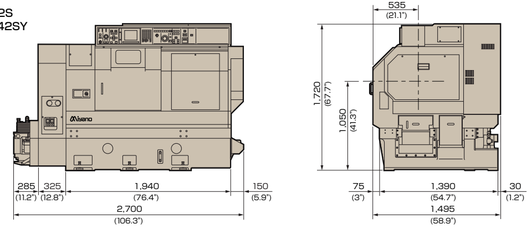
MACHINE SPECIFICATIONS

Items \ Model Name		BNJ-34S	BNJ-42S	BNJ-34SY	BNJ-42SY
Machining Capacity & Chuck System					
Power Chuck & Size	L / R-spindle	5"/4" Oil Hyd.	5"/4" Oil Hyd.	5"/4" Oil Hyd.	5"/4" Oil Hyd.
Max. Bar Capacity	L&R-spindle	φ34mm(1.34" Dia.)	φ42mm(1.65" Dia.)	φ34mm(1.34" Dia.)	φ42mm(1.65" Dia.)
Type of Collet Chuck	L&R-spindle	Stationary	Stationary	Stationary	Stationary
Max. Turning Length	Bar/Chuck	100mm/80mm	100mm/80mm	100mm/80mm	100mm/80mm
Spindle					
Spindle Motor	L-spindle	VAC 5.5/7.5kW	VAC 7.5/11kW	VAC 5.5/7.5kW	VAC 7.5/11kW
Cont/30min. Rat	R-spindle	VAC 2.2/3.7kW	VAC 3.7/5.5kW	VAC 2.2/3.7kW	VAC 3.7/5.5kW
Spindle Speed Range	L-spindle	80~6,000rev./min	67~5,000rev./min	80~6,000rev./min	67~5,000rev./min
	R-spindle	67~5,000rev./min	67~5,000rev./min	67~5,000rev./min	67~5,000rev./min
R-spindle Slide Travel	X2-axis	70mm	70mm	70mm	70mm
	Z2-axis	515mm	515mm	515mm	515mm
Main Turret					
Type of Turret		12 St. Turret	12 St. Turret	12 St. Turret	12 St. Turret
Turret Indexing Time		0.2 Sec./1St.	0.2 Sec./1St.	0.2 Sec./1St.	0.2 Sec./1St.
Turret Indexing Method		Curvic C. & AC Servo	Curvic C. & AC Servo	Curvic C. & AC Servo	Curvic C. & AC Servo
Slide Travel	X1-slide	142mm	142mm	155mm	155mm
	Z1-slide	250mm	250mm	250mm	250mm
	Y1-slide	-----	-----	±30mm	±30mm
Buck working Turret					
Type of Turret		6 St. Segmental Turret	6 St. Segmental Turret	6 St. Segmental Turret	6 St. Segmental Turret
Turret Indexing Time		0.2 Sec./1St.	0.2 Sec./1St.	0.2 Sec./1St	0.2 Sec./1St
Turret Indexing Method		Curvic C. & AC Servo	Curvic C. & AC Servo	Curvic C. & AC Servo	Curvic C. & AC Servo
Revolving Tools (Main Turret/Opt.)					
No. of Revolving Tool Stations		6	6	6	6
Tool Spindle Speed Range		100~4,000rev./min	100~4,000rev./min	100~4,000rev./min	100~4,000rev./min
Tool Spindle Driving Motor		AC Servo 2.5kW	AC Servo 2.5kW	AC Servo 2.5kW	AC Servo 2.5kW
Machining Capacity	Drill/Tap	φ13mm/M8×1.25	φ13mm/M8×1.25	φ13mm/M8×1.25	φ13mm/M8×1.25
Machine Dimensions					
Machine Hight		1,720mm(67.7")	1,720mm(67.7")	1,720mm(67.7")	1,720mm(67.7")
Floor Space		2,700mm×1,495mm (106"×58.9")	2,700mm×1,495mm (106"×58.9")	2,700mm×1,495mm (106"×58.9")	2,700mm×1,495mm (106"×58.9")
Machine Weight		5,100kg(11,230Lbs.)	5,100kg(11,230Lbs.)	5,100kg(11,230Lbs.)	5,100kg(11,230Lbs.)
Others					
Splash Guard Interlock, Coolant, Pneumatic Unit, Machine Light, Regular Hand Tools Kit & Tool Box.					
Options					
Cut-off Confirmation, High Pressure Coolant(L/R-turret), R-spindle Inner Coolant and Work Ejector, Revolving Tools and Driving Unit., Spindle Brake for Main Spindle, Drill Breakage Detector, Air Blow, R-spindle Through Parts Carrier(Max. φ23mm), Parts Catcher and Parts Conveyer, Hinge Type Chip Conveyer, Chip Box, Coolant Revel Switch, Magazine Loaded Automatic Bar Feeder, Signal Light (3 Steps), Auto Door.					

The specifications are subject to change without notice. Standard equipment package may vary by region.
Machines in photos may not look exactly the same as the actual products.

EXTERNAL VIEW

■BNJ-34S/42S
BNJ-34SY/42SY



MIYANO MACHINERY INC.
36 Sunriyoshi, Ueda-shi, Nagano-ken, 386-0002 Japan
Phone: 0268-26-7184 Facsimile: 0268-26-7203

MIYANO MACHINERY USA INC.
940 North Central Ave., Wood Dale, Illinois, 60191 U.S.A.
Phone: 630-766-4141 Facsimile: 630-860-7266

MIYANO MACHINERY EUROPE GMBH
Feldheider Strasse 62, D-40699 Erkrath, Germany
Phone: 02104-30390 Facsimile: 02104-303930

MACRO CNC MACHINE TOOLS LTD.
9A Navigation Drive, Hurst Business Park, Brierley Hill, West Midlands DY5 1UT United Kingdom
Phone: 01384-489500 Facsimile: 01384-489501

MIYANO MACHINERY ASIA CO., LTD.
Room 1301, Kam Hing Building, No.20, Hillwood Road, Tsimshatsui, Kowloon, Hong Kong
Phone: 2314-8128 Facsimile: 2737-2304

MIYANO MACHINERY (THAILAND) CO., LTD.
240/7-8 Moo 11 Bangna-Trad Rd., Kwaeng Bangna, Khet Bangna, Bangkok 10260 Thailand.
Phone: (662)746-7223~5 Facsimile: (662)746-7226

MIYANO MACHINERY (SHANGHAI) CO., LTD.
602, ShengGao International Tower, 137Lane, Xian Xia Road, Shanghai, 200051, China Post Code 200051
Phone: (021)5206-3716~8 Facsimile: (021)5206-3715

Internet Home Page http://www.miyano-jpn.co.jp
http://www.miyano-usa.com

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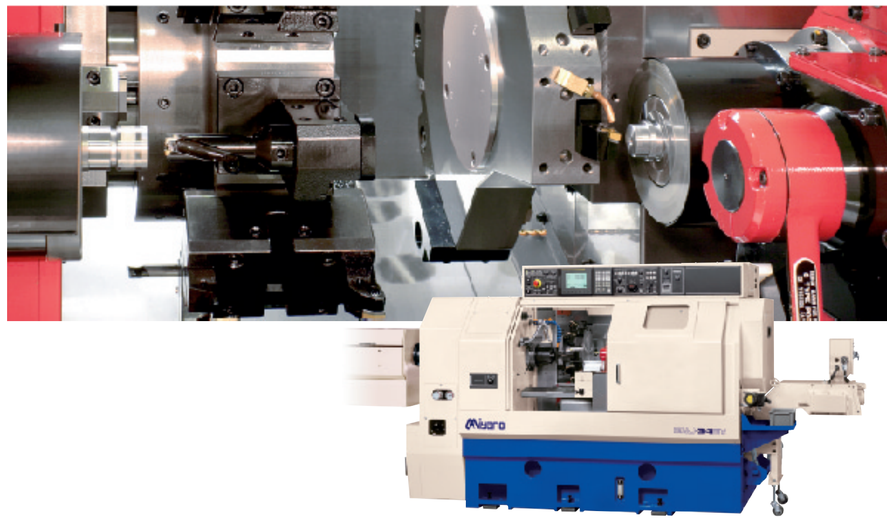
Miyano
The World Leader in Precision

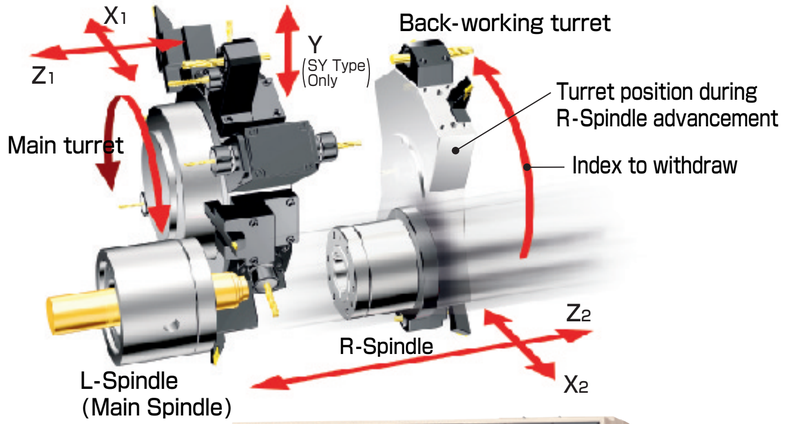
2 Spindles, 2 Turrets
/ 1 Y-axis Slide
CNC Turning Center
BNJ
series



BNJ-34S
BNJ-42S
BNJ-34SY
BNJ-42SY

Smart Machine Movement and SY-type's Y-axis Machining Save Time & Add Value.

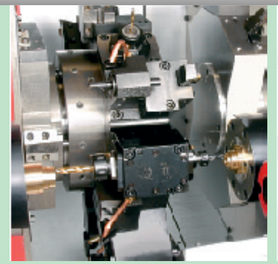
The unique design of a stationary main spindle headstock, main turret traversing on X-& Z-Axis, and back working turret provides a speedy and effective mechanism for complete front and back machining. While the main turret is working on the main spindle, the R-spindle can simultaneously perform secondary function on either the main turret (by means of overlapping control) or on the back-working turret. The main spindle can work with up to 12 tools, while the R-spindle can work with up to 18 tools: 12 on the main turret and 6 on the secondary turret. Revolving tools on the main turret can be shared by both spindles, so tool shortages are virtually eliminated. Better yet, the availability of a Y-axis(SY-type model) provides a whole new set of machining capabilities such as plane milling, pocket milling, and large diameter helical threading.

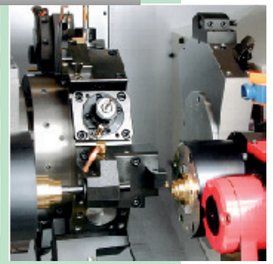


BNJ-34S/42S
BNJ-34SY/42SY

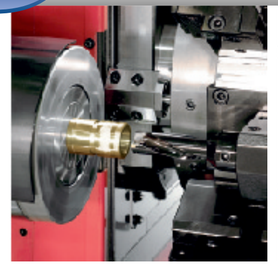
Feature 1 Simultaneous, Overlapping Machining Using Main Turret

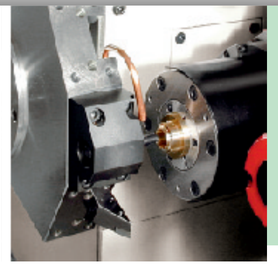
A single main turret can simultaneously work on two workpieces, one each on the left and right spindles. This is achieved by an overlapping control which enables the right spindle movement to precisely follow the movement of the main turret while it is working on the left spindle. At the same time the right spindle can make a movement of its own to machine its own workpiece using rearward facing tools mounted on the main turret. Thus two machining programs are processed with extreme efficiency.





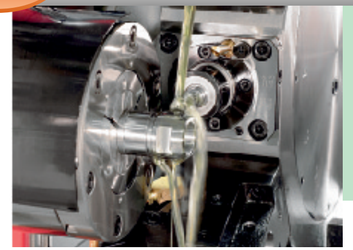
Feature 2 Simultaneous Machining by Main & Back-working Turrets





The back-working turret, designed for the secondary operations on the R-spindle, features a unique segmented form. The attenuated design clears the way for the R-spindle to move forward to do overlap machining and cutoff operations. A brief bit of turret indexing allows the R-spindle to advance. Conventional turret traversing takes a lot longer. This unique feature is the key to high efficiency

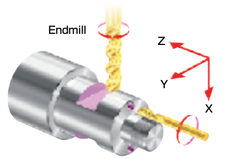
Feature 3 High Grade Y-axis Machining by SY-type



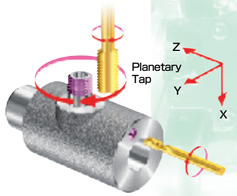
The 12-station turret of the SY-type, which is equipped with a Y-axis, provides more versatile machining capabilities enabling special work profiles such as those with large crosswise contours to be machined. Complex parts can be completely finished in one operation thus simplifying work flow, reducing work in progress and reducing overall costs.

Basic Combined Machining

In addition to conventional cross drilling, tapping and face tapping on the main spindle's center axis, a Y-axis allows for off-center drilling, tapping, and milling.

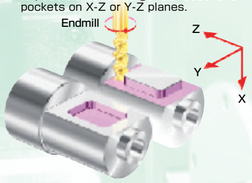


Large Diameter Helical Threading (option)



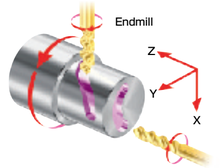
Large Pocket , Large Boss by Circular Interpolation

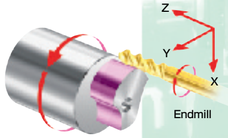
Linear and circular interpolation makes it possible to do large OD boss and pockets on X-Z or Y-Z planes.



Contour Milling

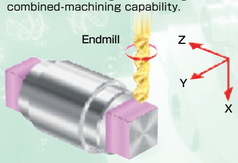
Combining the C-, X-, Y-, and Z-axis makes it possible to do 2-axis contour milling.





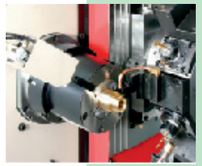
High-Precision Milling

Accurate center-axis positioning and Y-axis machining enable greater combined-machining capability.



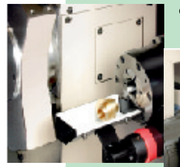
Feature 4 Various Options

- Collet Chuck & Power Chuck System
- Tool-Break Detection System for Drill using Swing Arm-Type Detector
- Main-Spindle braking System Firmly locks the main spindle in position to ensure accuracy of combined machining.
- High Pressure Coolant
  High pressure coolant works for both ID and OD tools but is especially effective on ID tools with oil holes for cooling and chip disposal.
- R-Spindle Inner Coolant & Cylinder-Type Work Ejector
  Especially effective for through-hole work to avoid chips in the collet chuck.
- Revolving Tool Drive System
- R-Spindle Work Carrier
  A rearward work-ejection system for the R-spindle, especially effective for a long-shaft work max. φ23mm(0.91") diameter
- Magazine Loaded Automatic Bar Feeder
  A variety of supporting types for bar materials are provided, including an oil-hydraulic bar feeder.
- Signal Lights(3lights)



- Cutoff Confirmation
  A must for bar work.

- Chip Conveyor (hinge type)
  Optimum operating speed can be set by the inverter drive. Helps conserve energy.



- Parts Catcher & Parts Conveyor
  A must for bar work.