

CITIZEN

Miyano

ANX42sYY

Fixed Headstock Type CNC Automatic Lathe



「個の量産」
いろんな一つを、たくさんつくる



The new model ANX featuring new functions opens up a new era for turret lathes.

Now a turret lathe from Miyano brand is equipped with LFV technology for the first time. This solves the problem of chip entanglement that had persisted for many years.

Another noteworthy feature is the operation panel featuring the new HMI (human machine interface).

Machine operating convenience has been improved, including compatibility of operations that assures ease of use even for users of the Cincom brand in addition to those of the Miyano brand.

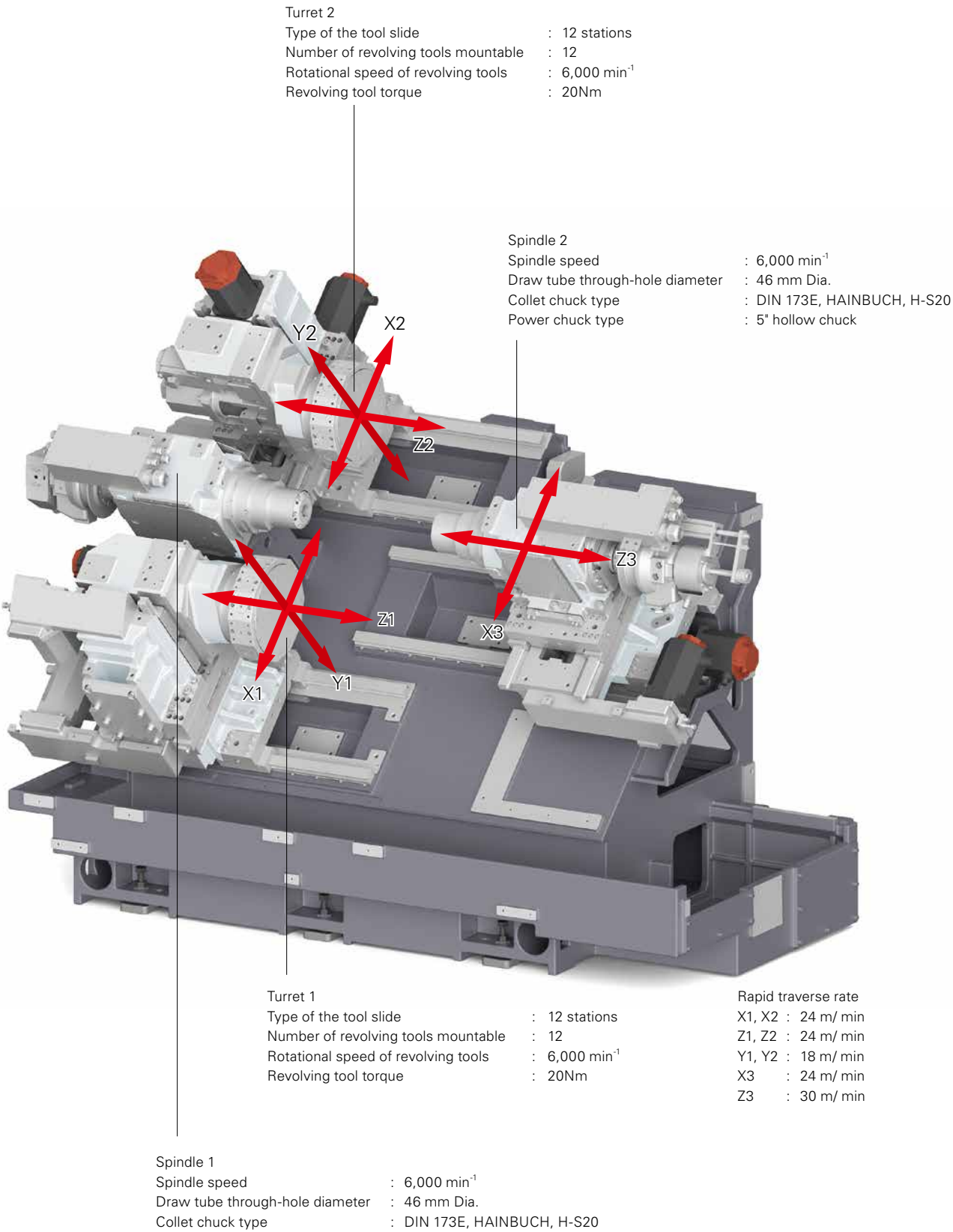
We propose new operating methods that lessen the feeling of struggling due to differences in NC systems and cross the boundaries between brands.

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.

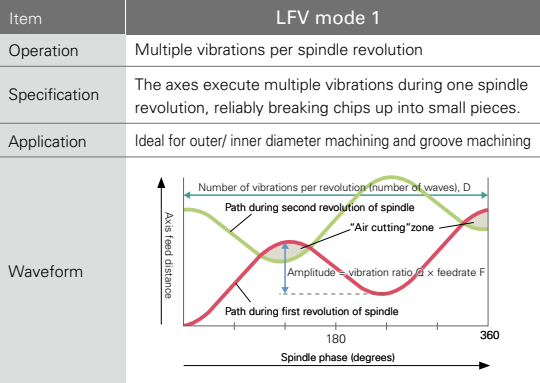
The turrets can use the same tool holders as the BNA Series, and accommodate 20 Nm revolving tools.

These advanced functions are packed into a compact machine body only 2,650 mm wide. The ANX achieves advanced functions, space savings and high productivity.





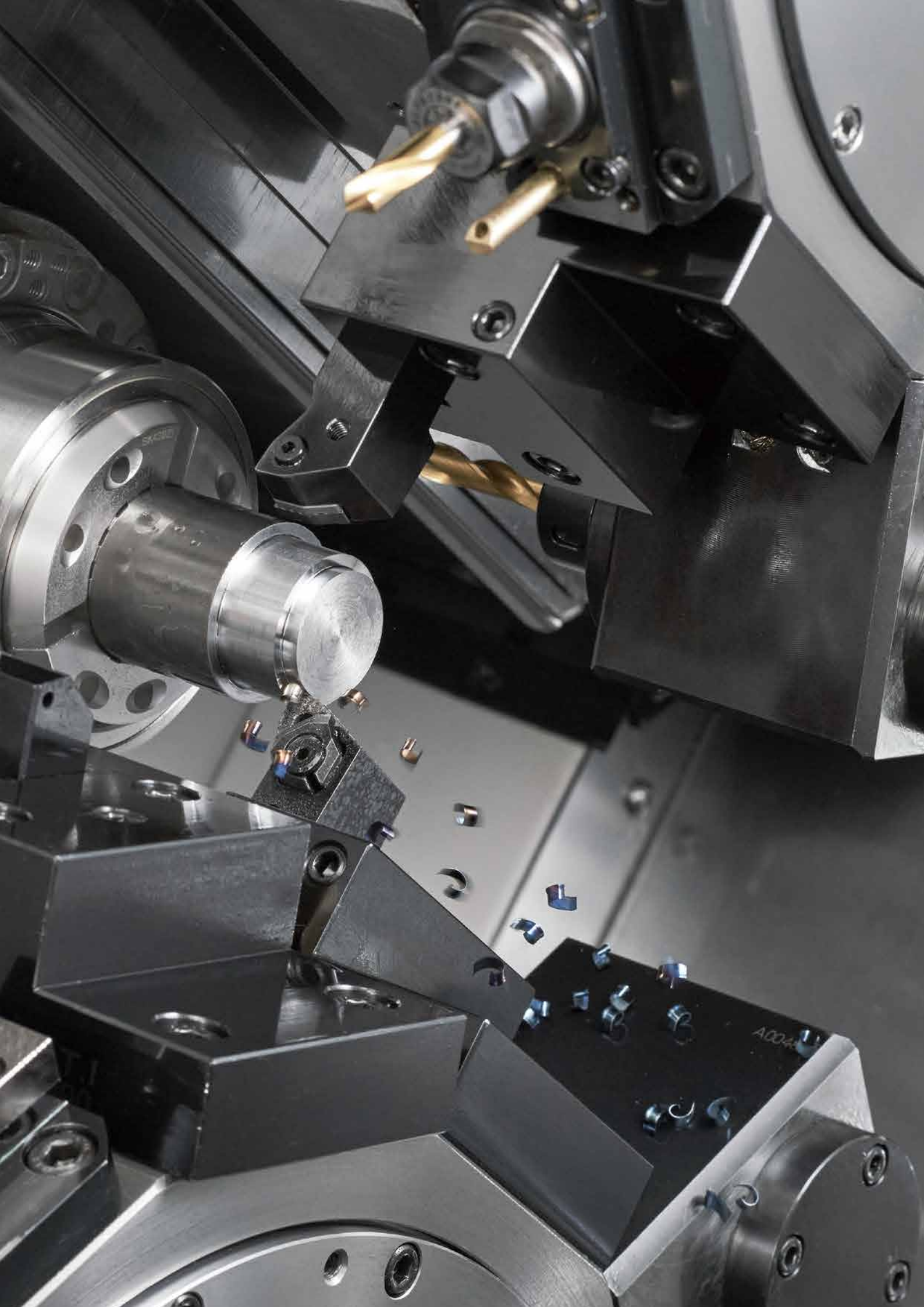
LFV* is a technology for performing machining while vibrating the X and Z servo axes in the cutting direction in synchrony with the rotation of the spindle. It reduces various problems caused by chips entangling with the product or tool, and is effective for small-diameter deep hole machining and the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



Type	Tr 1	Tr 2
ANX42SYY	✓	✓

Note 1. LFV machining cannot be performed with the Y axis.
Note 2. LFV machining can be performed simultaneously on a maximum of two axes.
Note 3. For LFV machining with rotary tools, the "LFV function" and "rotary tool feed per revolution" options are required.
* "LFV" is a registered trademark of Citizen Watch Co., Ltd.





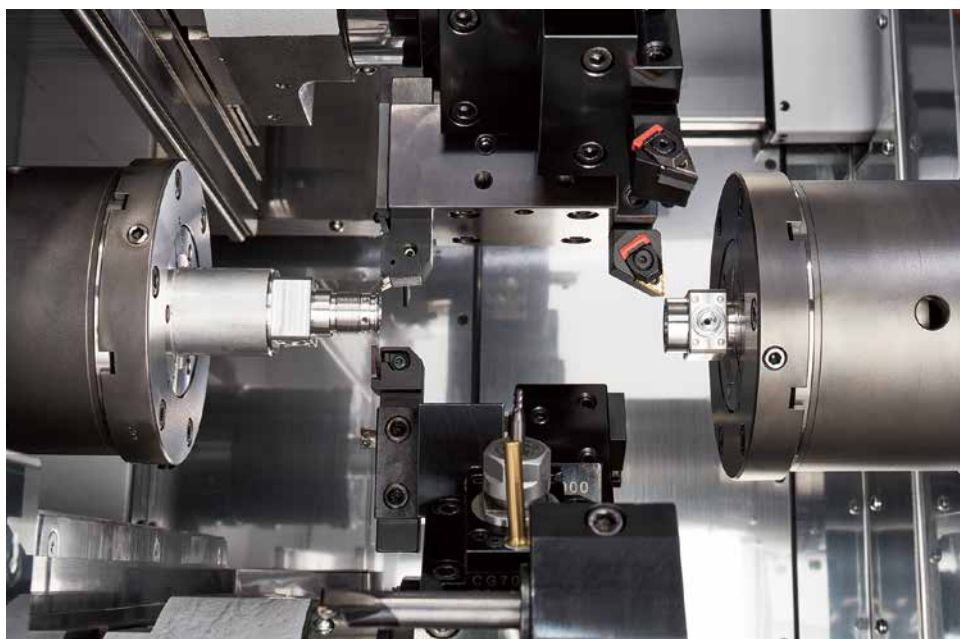


Turrets Common to the BNA Series and Spindles with Built-in Motors

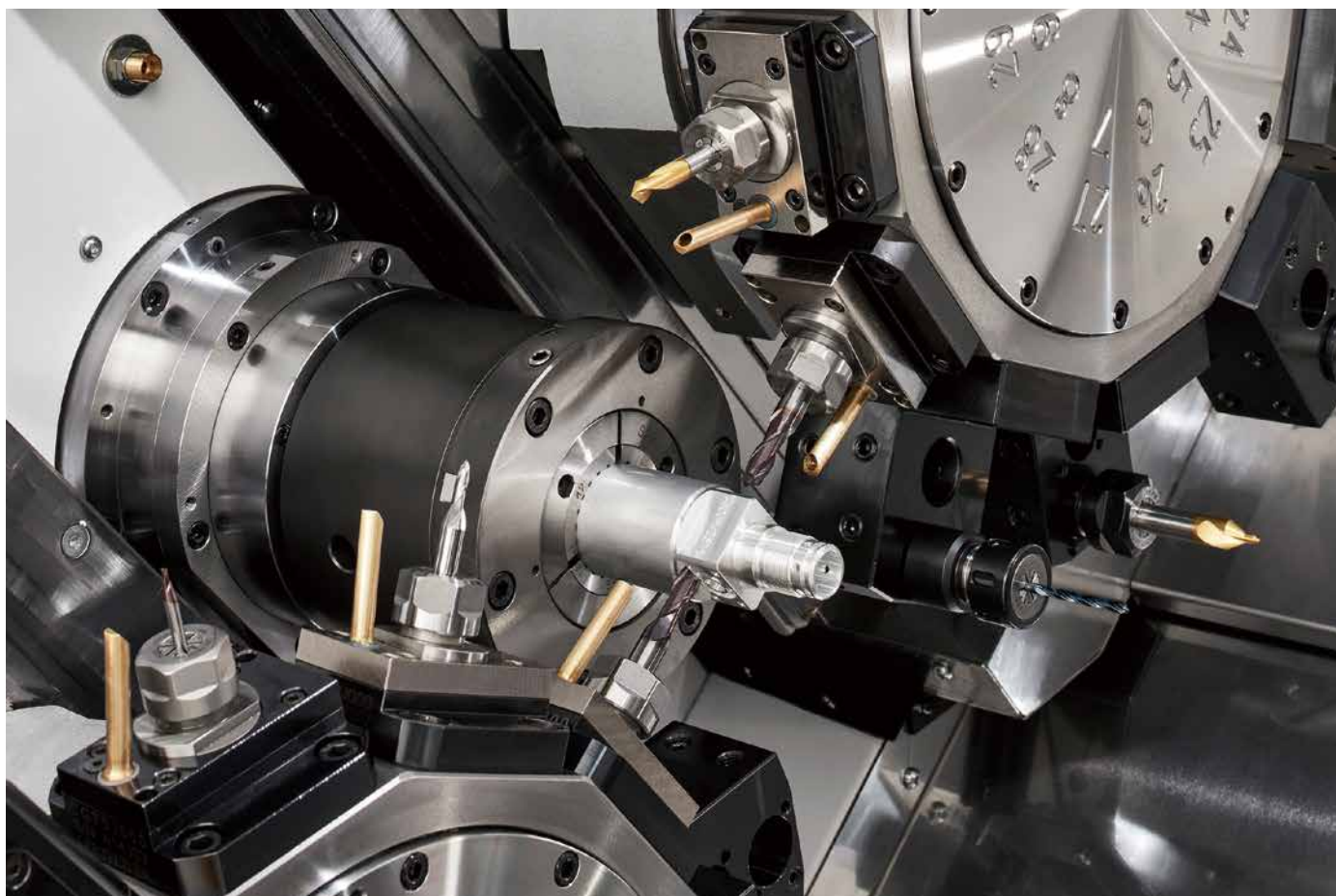
The two 12-station turrets equipped with a Y axis have the same capability and adopt tool holders that are common to the BNA series, enabling use of the same tools. 20 Nm revolving tools can be mounted at all stations.

The two spindles also have the same capabilities and the built-in motor incorporated in each spindle achieves shorter acceleration and deceleration times and better response time than on existing models.

Complex machining including 3-axis simultaneous machining, superimposition machining and double Y axis machining are possible.



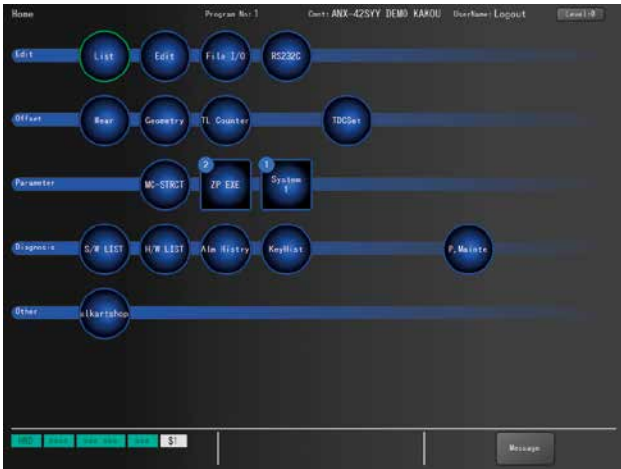
MOVIE
3





New HMI (Human Machine Interface) and Supporting Screens

Screens that display graphics and all the necessary information collectively are compatible with touch panels, greatly improving operating convenience.



Home screen

Displaying shortcut icons for screens that will inevitably be used in a group allows the screens in that group to be accessed easily.

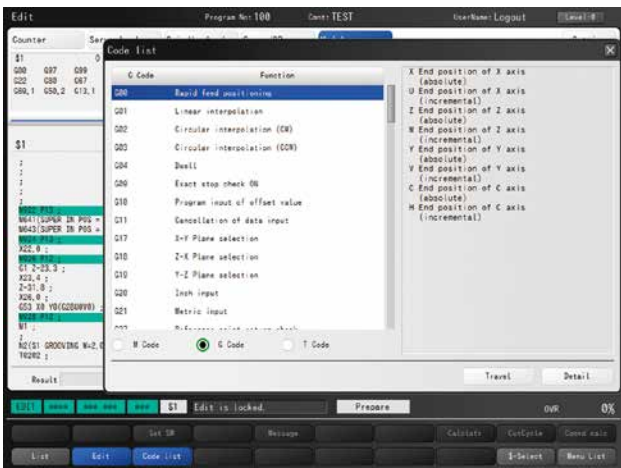
Support for setup



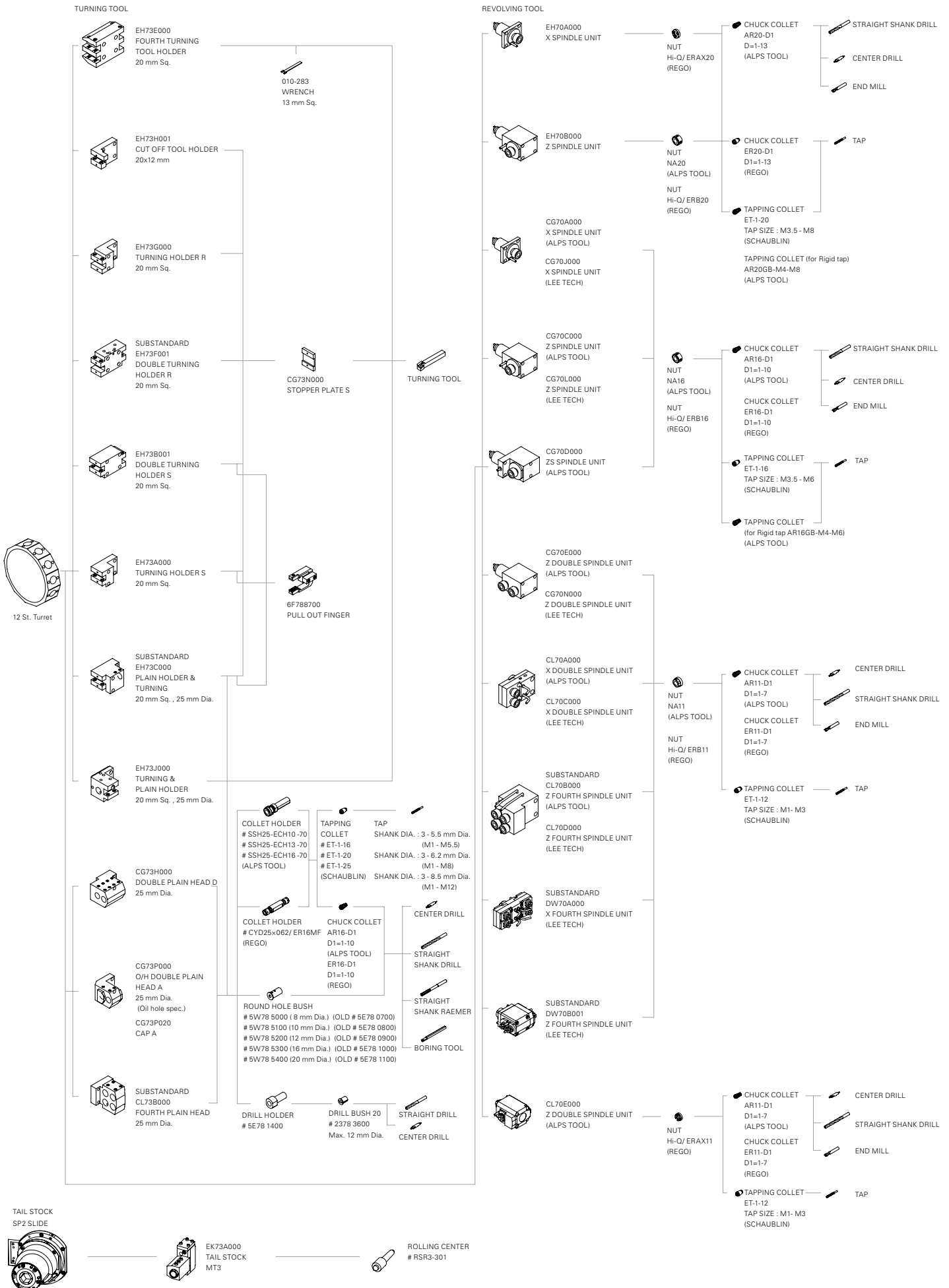
Measurement tool setting screen

Allows you to link face numbers and G numbers, actually cut workpieces, and input tool geometry offset values. All tool setting can be accomplished on this screen.

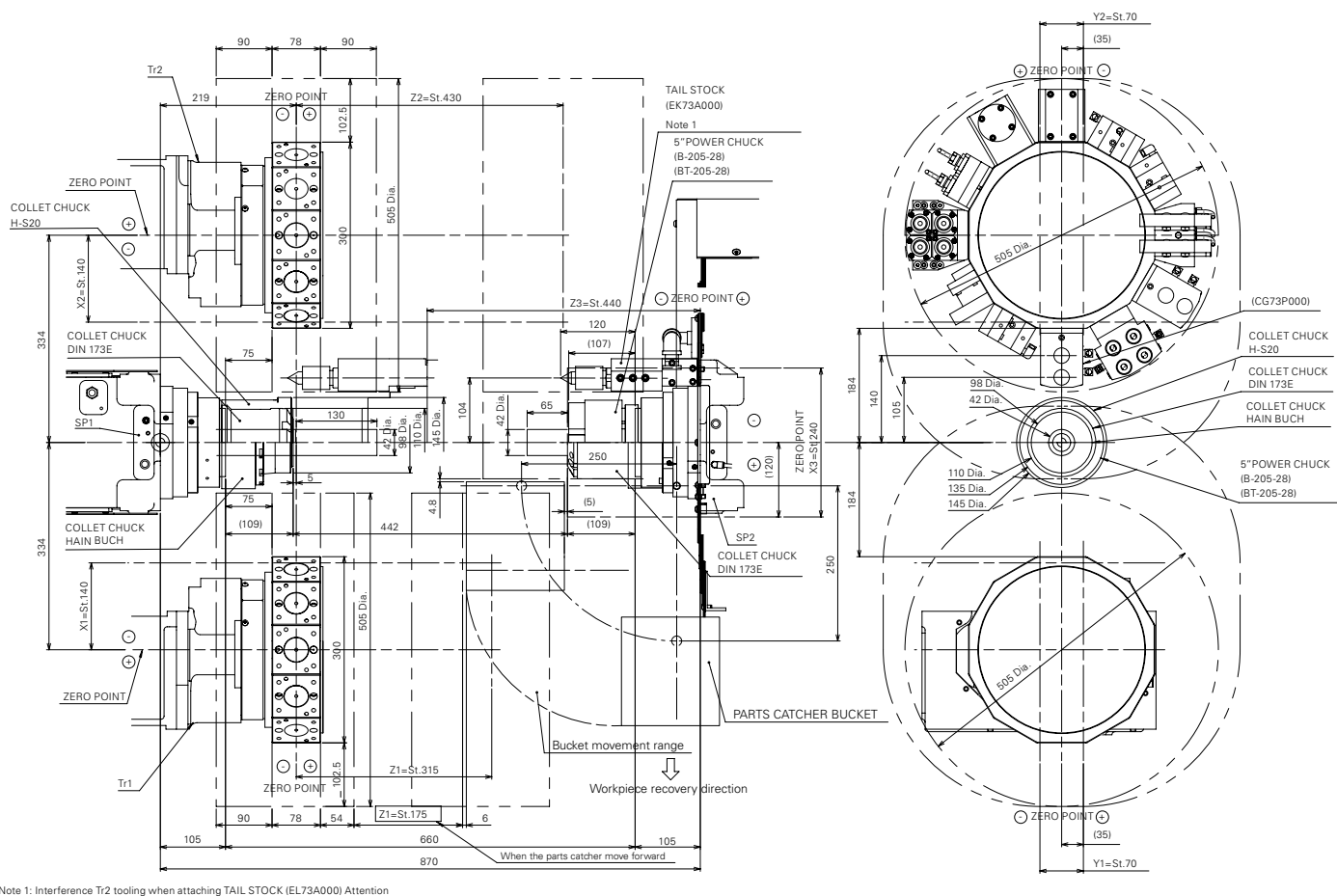
Support for Programming



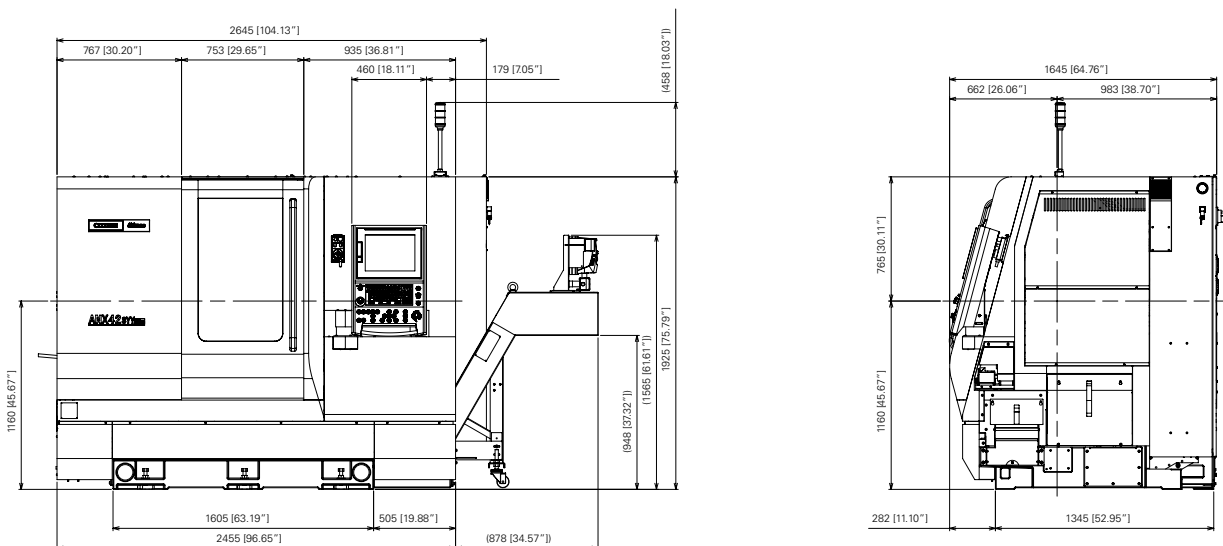
Tooling System



Tooling Area



External View



Machine Specifications

Item	ANX-42SYY		
Capabilities and requirements			
Maximum machining length		130 mm	
Max. machining diameter	S 1	42 mm	
	S 2	42 mm	
Slide stroke			
Tr 1	X 1	140 mm	
	Z 1	315 mm	
Tr 2	Y 1	70 (±35) mm	
	X 2	140 mm	
	Z 2	430 mm	
	Y 2	70 (±35) mm	
S 2	X 3	240 (±120)	
	Z 3	440 mm	
Spindle			
Number of spindles		2	
Spindle speed	S 1, S 2	6,000 min ⁻¹	
Draw tube through-hole diameter	S 1, S 2	46 mm	
Collet chuck type	S 1, S 2	DIN 173E(42 mm Dia.), HAINBUCH, H-S20	
Power chuck type	S 1	---	
	S 2	5" hollow chuck	
Machining capacity	S 1	Drilling	20 mm
		Tapping	M12 x 1.75
	S 2	Drilling	20 mm
		Tapping	M12 x 1.75
Spindle indexing			
Minimum spindle indexing command	S 1, S 2	0.001°	
Tool post			
Number of tool slides		2	
Type of the tool post	Tr 1, Tr 2	12-station turret	
Distance across turret head	Tr 1, Tr 2	300 mm	
Maximum indexing diameter	Tr 1, Tr 2	505 mm	
Turning tool		20 mm	
Drilling		25 mm	
Revolving Tool			
Number of revolving tools mountable		Max.12/ 12	
Revolving tool drive type		Single drive mechanism	
Rotational speed of revolving tools		6000 min ⁻¹	
Machining capacity	Drilling	Max. 12 mm	
		Tapping	Max. M8 x 1.25
Rapid traverse rate			
	X 1, X 2 , X 3	24 m/ min.	
	Z 1, Z 2	24 m/ min.	
	Y 1, Y 2	18 m/ min.	
	Z3	30 m/ min.	
Motor			
Motor for spindle	S 1, S 2	11/7.5 kW (10 min./ cont.)	
Motor for feed axes	X 1, X 2 , X 3	1.8 kW	
	Z 1, Z 2 , Z 3	1.2 kW	
	Y 1, Y 2	1.2 kW	
Motor for revolving tools	Tr 1, Tr 2	2.2 kW	
Coolant pump		0.18 kW x 2	
Motor for medium-pressure coolant (1 MPa) (option)		0.75/ 1.1 W (50/ 60 Hz)	
Motor for medium-pressure coolant (2 MPa) (option)		1.5 kW	
Required electric power source			
Power source used		AC 200/ 220 V + 5 % - 10 % 50/ 60 Hz±1 %	
Rated power consumption		34 kVA	
Load operation average power consumption		18.4 kVA	
Fuse capacity at machine side		125 A	
Pneumatic source		0.5 MPa	
Tank capacity			
Hydraulic tank capacity		18 L	
Lubricating oil tank capacity		2 L	
Coolant tank capacity		260 L	
Machine size			
Machine height		1,925 mm	
Required floor area		2,650 x 1,645 mm	
Machine weight		6,250 kg	

Standard NC Functions

MIYANO SYSTEM Fs31i-B Plus	
15-inch XGA touch panel	USB slot
On-machine program check function	User authentication function
Operating time display	Product counter: max. 8 digits
Preparation function	Automatic power-off function
Collision detection function	B code I/F
Tool offset pairs 200	Tool offset pairs 60 pairs
Program storage area 10 MB	Program operation storage capacity 4 MB
User macro	Corner chamfering/ Corner rounding
Optional block skip (9 sets)	Spindle constant surface speed control function
Spindle C-axis function	Spindle synchronized control function
Canned drilling cycle	Helical interpolation function
Synchronized tapping function	Sub-micron specifications
Thermal displacement correction function	Milling interpolation function

Special Additional NC Unit

Tool offset pairs 400	Tool offset pairs 99 pairs
Program storage capacity 100 MB	Program operation storage capacity 8 MB
Variable lead thread cutting	Circular thread cutting
ultiple repetitive cycle for turning	Cylindrical interpolation
Polygon turning function	LFV mode 1
Rotary tool feed per revolution	

Options

Spindle brake	Air blower
Workpiece ejector	Chip box
Part conveyor	Medium-pressure coolant (1 MPa)
Medium-pressure coolant (2 MPa)	Through-spindle air blower
Turret air blower	Part catcher
Part box	Chuck System
Chip conveyor	Mist collector duct & fire prevention damper
Through-spindle bushing	3-color signal tower
RS-232C	

Environmental Performance Information

Basic Information	Model		ANX-42SYY
	Power consumption	Supply voltage	AC 200V±10%
		Electrical power requirement	34 kVA
		Required pneumatic pressure	0.5 MPa
Environmental Performance Information	Power consumption	Standby power ^{*1}	0.983 kW
		Power consumption with model workpiece ^{*2}	0.074 kWh/ cycle
		Power consumption value above converted to a CO2 value ^{*3}	31.524 g/ cycle
	Air consumption	Required air flow rate	52.7 Nl/min (max. 202.7 Nl/min: when using air blow)
	Lubricating oil consumption	At power ON	3.0 cc/ 15 min
	Noise level	Value measured based on JIS	73 dB
Approach to Environmental Issues	Recycling	Indication of the material names of plastic parts	Detailed in the Instruction Manual ^{*4}
	Environmental management		We pursue "Green Procurement", whereby we make our purchases while prioritizing goods and services that show consideration for the environment.

^{*1} This is the standby power in the idle stop mode (a function that turns servomotor excitation off when it is not necessary, for example during program editing).

^{*2} This is the power consumption in program operation (when not cutting) for one of our standard test pieces, shown for the purpose of comparing the environmental performance with that of existing models.

^{*3} This is the value converted in accordance with the CHUBU Electric Power CO2 emissions coefficient (actual emission coefficient) for 2020 as published by the Ministry of the Environment.

^{*4} If polyvinyl chloride (PVC) and fluoroc resin are not processed correctly, they can generate harmful gases. When recycling these materials, commission a contractor that is capable of processing them appropriately.

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