2-spindle 2-turret CNC precision lathe XY-2000 PLUS

Machine Specifications

	Item	Unit	#1 Spindle	#2 Spindle
Capacity	Max. turning diameter	mm	φ240	
	Max. hole through spindle	mm	φ51 (φ65)	φ51
	Chuck size	inch	8	
Spindle	Spindle nose	JIS	A2-6 (A2-8)	A2-6
	Spindle bearing I.D.	mm	φ100 (φ120)	φ100
	Spindle speed	min⁻¹	Max.4,000	
Tool post	Type		12-station (VDI:40)	
	Tool shank	mm	□25 (VDI:40)	
	Boring holder I.D.	mm	φ40 (VDI:40)	
	Max. stroke	mm	X1,2:170 Y:±40 Z1,2:510 A:570	
	Rapid traverserate	m/min	X1,2:18 Y:12 Z1,2:24 A:30	
Motors	Spindle motor	kW	AC18.5/15	AC11/7.5
	Feed motor	kW	X1:AC2.5 X2:AC2.7 Y:AC2.5 Z:AC2.7 A:AC2.7	
	Coolant motor	kW	AC0.62	
	Hydraulic motor	kW	AC0.75/0.75	
Power tools	Tool storage capacity	pcs.	12 each	
	Spindle speed	min⁻¹	Max.4,000	
	Power tools motor	kW	AC3.7/2.2	
	Max. endmill diameter	mm	φ16	
C-axis	Rapid traverse rate	deg/min	24,000	
	C-axis motor	kW	AC0.75	
Size	Spindle center height	mm	1,220	
	L × W × H	mm	3,050×2,125×2,365	
	Machine weight	kg	8,100	
Total electric capacity		KVA	73	

( ):Option

Standard Accessories

- ☐Y-axis function (Primary turret) ··· 1 set
- ☐C-axis indexing function (For both spindles) ··· 2 sets
- ☐Power tool drive unit (For both turrets) ··· 2 sets
- ☐O.D. holder ····· 4 pcs.
- ☐Boring holder ····· 4 pcs.
- ☐Hydraulic chuck (For both spindles) ··· 2 sets
- ☐Coolant unit (405lit.) ····· 1 set
- ☐Service tool kit ····· 1 set
- ☐Instruction manuals ····· 1 set

Optional Accessories

- ☐Power tools (Face/Side milling)
- ☐VDI 40 12-station turret
- ☐Bar feeder system
- ☐Parts catcher
- ☐Push rod
- ☐Spindle through parts ejector device on the #2 Spindle
- ☐Chuck clamp detector
- ☐Auto measurement unit
- ☐Work set detector
- ☐Cut-off check device
- ☐Tooling
- ☐Chip conveyor
  (Can be mounted only on the right side)
  (Floor type/Spiral type)
- ☐Chip bucket
- ☐Air blow unit (Front/Rear)
- ☐Rear coolant unit
- ☐Signal light
  (1-color/2-color/3-color)
- ☐Automatic fire extinguisher
- ☐Automatic power shut-off device
- ☐Magnetic counter (Total/Preset/Multi)
- ☐Special color
- ☐Others※

※For more information on attachments, consult our sales representative.

Controller Specifications

Item	TAKAMAZ & FANUC 31i-A
Controlled axes	8 axes (X1, Z1, C1, Y, X2, Z2, C2, A)
Simultaneously controllable axes	Simultaneous 4 axes (Single system)
Least input increment	0.001mm (X in diameter)
Least command increment	X:0.0005mm Y, Z, A:0.001mm
Auxiliary function	M-code 3 digit
Spindle function	S-code 4 digit
Tool function	T-code 4 digit
Tape code	EIA(RS232C)/ISO(840) automatic recognition
Cutting feedrate	1~5,000mm/min
Command system	Incremental/Absolute
Linear interpolation	G01
Circular interpolation	G02, G03
Cutting feedrate override	0~150%
Rapid traverse override	F0, 50, 100%
Program file name	32 characters
Backlash compensation	0~9999μm
Program memory capacity	64KB(160m) (Dual systems total)
Tool offsets	32 sets (Dual systems total)
Registered programs	63 pcs. (Dual systems total)
Tool geometry/Wear offset	Standard
Canned cycle	G90, G92, G94
Radius designation on arc	Standard
Tool offset measurement input	Standard
Background editing	Standard
Custom macro	Standard
Nose R compensation	G40, G41, G42
Programmable data input	G10
Multiple repetitive cycle	G70~G76
Expansion program editing	Standard
Continuous thread cutting	G32
Canned drilling cycle	Standard
Spindle synchronous control	Standard
Sub-spindle torque skip	Standard
Y-axis offset	Standard
Chamfering/Corner R	Standard
Rigid tapping	Standard
Spindle orientation	Standard
Constant surface speed control	G96, G97
Clock function	Standard
Help function	Standard
Alarm history display	60 pcs.
Self-diagnosis function	Standard
Sub-program call	Up to 10 loops
Decimal point input	Standard
2nd reference point return	G30
Work coordinate system setting	G50, G54~G59
Polar coordinate interpolation	Standard
Cylindrical interpolation	Standard
Stored stroke check 1	Standard
Stored stroke check 2, 3	Standard
Input/Output interface	RS232C, Memory card
Alarm message	Standard
Abnormal load detection	Standard
Synchronous/Composite control	Standard
Balance cut	G68, G69

Optional Attachments

Tool life management	
Direct drawing dimension programming	
Inch/Metric conversion	G20/G21
Run hour/Parts count display	
Multiple M codes in one block	Max.3
Helical interpolation	
Manual guide i	
Additional custom macro common variables	#100~#199, #500~#999
Multiple repetitive cycle Ⅱ	Pocket-shaped
Variable lead thread cutting	G34

TAKAMAZ

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2-spindle 2-turret
CNC precision lathe

XY-2000 PLUS

Recipient of the 39th Machine Design Award
Special Award by Awarding Committee

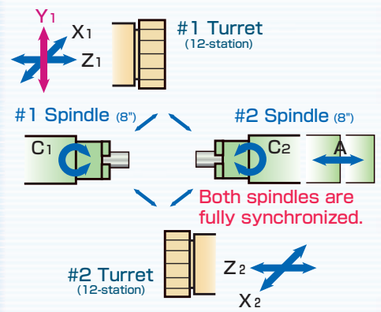
CNC PRECISION LATHE XY-2000 PLUS

TAKAMAZ

Complete cutting is possible - from turning to machining - with simultaneous 4-axis control.

2-spindle 2-turret CNC precision lathe

XY-2000 PLUS



Our top compound machining center "XY-2000" has been redesigned.

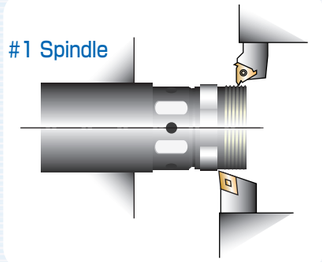
TAKAMAZ's top compound machining center "XY-2000" has been redesigned.
We have developed this specifically to provide larger work diameter, higher-level compound machining, and increased productivity, without changing the floor space.
The first spindle is capable of bar work diameters up to a maximum of ϕ65mm※.
Complex milling work is greatly considered with the combination of Y-axis control and rotary tools.
This brings to fruition a high-functionality multi-machine capable of bar work and chuck work, expanding the capabilities in the area of lathe machining.

※ Optional settings (The first and second spindles are both ϕ51mm, standard.)

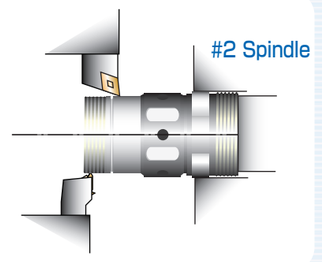
Variety of milling work

The first turret is equipped with Y-axis functions, standard.
It has a ±40mm range of motion, and achieves highly demanding high-precision milling work through superior linearity.

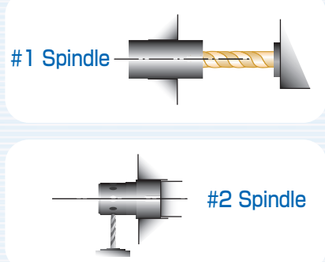
#1 Spindle:Duplicate cutting with top and bottom turrets



#2 Spindle:Duplicate cutting with top and bottom turrets

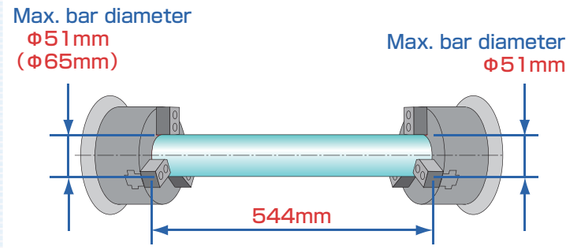


#1／#2 Spindle:Independent cutting



Capable of turning large-diameter bar material

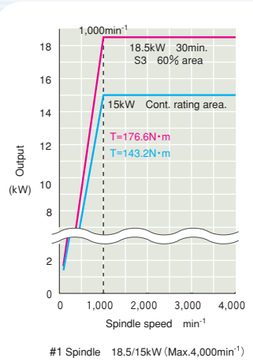
The maximum bar work diameter is ϕ51mm, standard, and an 8-inch chuck can be mounted on both spindles.
In addition, for the first spindle only, it is possible to modify the spindle to handle bar work diameters up to ϕ65mm.
Along with increased spindle diameter, the spindle motor power is also increased. An AC18.5/15kW motor is mounted for the first spindle while an AC11/7.5kW motor for the second spindle is mounted, making it possible to perform at even higher level of compound machining, and then some.



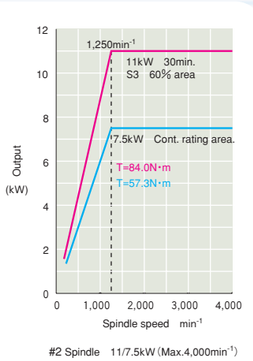
※ Varies according to chuck specifications.

Spindle motor output characteristics diagram ／ Floor Space Drawing

Spindle motor output characteristics diagram



#1 Spindle 18.5/15kW (Max.4,000min-1)



#2 Spindle 11/7.5kW (Max.4,000min-1)

Floor Space Drawing