

**TAKAMAZ**

2-Spindle 2-Turret Compound Machining CNC Lathe

# XY-120 PLUS

**NEW**



## Evolved further as a perfect TAKAMAZ turning machine

### Large Capacity for Number of Tools

- Main turret (12 stations) has a middle indexing capability, making it possible to mount tools on the 24-positions. Moreover, with the sub turret, the maximum number of tools becomes 36. This is an extensive number of tooling capable of cutting different types of different amount of workpieces at shorter idle time.

### Innovative Short Cycle Time

- With the sub spindle for overlap cutting and main and sub spindle simultaneous cutting, the cycle time is significantly reduced.

### Achieving $\Sigma$ Loader Installation

- By designing the Y-axis at 30 degree, the TAKAMAZ compact type loader can be mounted. This is a new automation system innovation.

Machine Specifications

Item		Unit	Main-spindle	Sub-spindle	
Capacity	Max. turning diameter	mm	φ170	φ135	
	Max. turning length	mm	330		
	Max. bar diameter	mm	φ42 (φ51)	φ20 (φ26)	
Spindle	Chuck size	Inch	Collet/6		
	Spindle nose	JIS	A2-5 (A2-6)	A2-4	
	Spindle bearing I.D.	mm	φ85 (φ100)	φ65	
	Through-hole on spindle	mm	φ52 (φ61)	φ36	
	Spindle speed	min <sup>-1</sup>	Max.5,000 (Max.4,000)	Max.5,000	
Tool post	Spindle indexing		Cs-axis		
	Type		12-station turret, 24ST	12-station turret	
	Tool shank	mm	□20		
	Boring holder I.D.	mm	φ25		
Motors	Max. stroke	mm	X:150 Z:330 Y:±35 X2:150 Z2(A):440		
	Rapid traverse rate	m/min	X:18 Z:24 Y:±12 X2:18 Z2(A):18		
Power tools	Spindle motor	kW	AC7.5/5.5 (AC11/7.5)	AC5.5/3.7	
	Feed motor	kW	X:AC1.2 Z:AC1.4 Y:AC0.75 X2:AC0.75 Z2(A):AC1.2		
	Coolant motor	kW	AC0.25×2		
	Hydraulic motor	kW	AC1.5		
	Tool storage capacity	pcs.	12		
Size	Spindle speed	min <sup>-1</sup>	Max.4,000		
	Power tools motor	kW	AC3.7/2.2/1.5		
	Capacity	Drill	mm	φ13	
		Endmill	mm	φ13	
Tap		mm	M8		
Cs-axis	Rapid traverse rate	deg/min <sup>-1</sup>	21,600		
	Spindle center height	mm	1,050		
	L×W×H	mm	2,500×1,850×1,700		
Machine weight	Machine weight	kg	3,900		
	Total electric capacity	KVA	28(31)		

( ):Option

Standard Accessories

- O.D. holder ..... 2sets
- Boring holder ..... 2sets
- Cut-off holder ..... 1set
- Collet flange (Main, Sub) ... 1 set ea.
- Sub-spindle (Hydraulic) ..... 1 set
- Main Spindle Cs-axis orientation ... 1set
- Sub Spindle Cs-axis orientation ... 1set
- Power tools drive unit ..... 1set
- Coolant unit ..... 1set
- Service tool kit ..... 1set
- TAKAMAZ instruction manual ... 1set

Optional Accessories

- Power tools(Face/Side milling)
- Stroke adjusting cylinder
- Hydraulic chucks (Main:6,Sub:5)
- Collet chucks
- Sub-spindle parts ejector
- Sub turret
- Automatic door system
- Air blow unit
- No Sub-spindle spec
- Tailstock
- TAKAMAZ loader system
- Rear coolant unit
- Cycle end signal light (1-color/2-color/3-color)
- Chip conveyor(Right/Left) (Floor type/Spiral type)
- Bar feeder system
- Parts catcher
- Out-conveyor
- Work set detector
- Cut-off check device
- Special color
- Others\*

\*For more information on attachments, consult our sales representative.

Item	TAKAMAZ&FANUC Oi-TD
Controlled axes	7 axes (X1, Z1, C1, Y, X2, Z2, C2)
Simultaneously controllable axes	Simultaneous 4 axes
Least input increment	0.001mm(X in diameter)
Least command increment	X: 0.0005mm Z, Y: 0.001mm
Auxiliary function	M3 digits
Spindle function	S4 digits
Tool function	T4 digits
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	FO, 100%
Program number	4 digits
Backlash compensation	0~9999μm
Program memory capacity	1Mbyte (2,560m) (Dual systems total)
Tool offsets	128 sets(Dual systems total)
Registered programs	800 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
Direct drawing dimension programming	Standard
Custom macro	Standard
Additional custom macro common variables	#100~#199, #500~#999
Pattern data input	Standard
Nose R compensation	G40, G41, G42
Inch/Metric conversion	G20/G21
Programmable data input	G10
Run hour/Parts count display	Standard
Extended part program editing	Standard
Multiple repetitive cycle	G70~G76
Multiple repetitive cycle II	Pocket-shaped
Spindle synchronous control	Standard
Sub-spindle torque skip	Standard
Y-axis offset	Standard
Rigid tapping	For Power Tools only
Polar coordinate interpolation	Standard
Cylindrical interpolation	Standard
Canned drilling cycle	Standard
Constant surface speed control	G96, G97
Continuous thread cutting	G32
Variable lead thread cutting	G34
Thread cutting retract	Standard
Clock function	Standard
Help function	Standard
Alarm history display	50 pcs.
Self-diagnosis function	Standard
Self-diagnosis function	Up to 10 loops
Decimal point input	Standard
2nd reference point return	G30
Work coordinate system setting	G50, G54~G59
Stored stroke check 1	Standard
Stored stroke check 2,3	Standard
Input/Output interface	USB Flash Memory, Memory card, Ethernet
Alarm message	Standard
Graphic display	Standard
Conversational programming with graphic function	Standard
Abnormal load detection	Standard
Overlap Cutting Process	Standard
Manual handle trace	Standard
Automatic data backup	Max.3
Automatic screen deletion function	Standard
Spindle orientation	Standard
TAKAMAZ option functions	Work/Tool counter, Tool load monitor, Others
TAKAMAZ maintenance function	Standard
FANUC set of manuals	CD-ROM

Optional Controller Specifications

Input/Output interface	RS232C
Tool life management	
Multiple M codes in one block	Max.3
Dynamic graphic function**	
Helical interpolation	
Manual guide i**	
FANUC instruction manuals	Bound

\*\*These cannot be used together.



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