

CNC 1 Spindle 1 Turret Precision Lathe

**TAKAMAZ**

**AT-1**

Tailstock is available as an option

A simple machine that is easy to use with emphasis on cost performance.

High quality High cost performance

**Made in JAPAN**

**NEW**



### Space-saving Compact Design

The space-saving, compact design with a machine width of 1,810 mm and depth of 1,690 make it easy to find an installation site.

The spindle center height of 960 mm makes workpiece loading and unloading less onerous.

And the lowered center of gravity realizes stable machining accuracy.

At only 1,500 mm high, this machine alleviates any cramped feeling inside the plant. It creates an open space, allowing personnel to see all around them.

### More Versatile, Better Maintainability

The spindle can accommodate 6" and 8" chucks.

The covers are so constructed as to allow easy access to the structural components of the machine such as the spindles, turrets and slides.

Shower coolant is provided at the top of the turret and the bottom of the door as standard. This lightens the burden of cleaning work.

### Functions Combined with Cost Performance

A large, 15-inch LCD touch panel is adopted as the monitor to ensure ease of use with its good visibility and intuitive operability.

An idle stop function and power consumption monitor screen are featured as standard. This helps to reduce the consumption of lubricating oil and cut running costs.

### Trust in Made in Japan

The main parts are made in Japan. The adjustment and assembly are done at high quality at our factory.

TAKAMAZ machines can be used abroad with confidence in "practicality" and "durability".

## Machine Specifications

Item		Unit	AT-1
Capacity	Max. turning diameter	mm	φ310
	Max. turning length	mm	300*1
	Max. bar diameter	mm	φ42
Spindle	Chuck size	inch	(6,8)*2
	Spindle nose	JIS	A2-5
	Spindle bearing I.D.	mm	φ85
	Through-hole on spindle	mm	φ52
	Spindle speed	min <sup>-1</sup>	4,500
Tool post	Type		8-station turret
	Tool shank	mm	□25
	Boring holder I.D.	mm	φ32
	Max. stroke	mm	X:175 Z:330 with tailstock X:160 Z:330
Rapid traverse rate	m/min	X:24 Z:24	
Motors	Spindle motor	kW	AC 7.5/5.5
	Feed motor	kW	X:1.2 Z:2.2
	Coolant motor	kW	AC 0.4
	Hydraulic motor	kW	AC 0.75
Tailstock	Front taper		MT-4
	Quill O.D.	mm	φ56
	Quill stroke	mm	85
	Tailstock stroke	mm	220
	Max. thrust	kN	3.5
Size	L×W×H	mm	1,810×1,690×1,500 with tailstock 1,945×1,690×1,500
	Machine weight	kg	2,200 (with tailstock 2,400)
	Spindle center height	mm	960
	Hydraulic tank	L	110
	Cutting oil tank	L	18
Total electric capacity	KVA		17
Noise level	dB(A)		69.5*3

\*1 When a TAKAMAZ collet chuck is mounted (TSC-F43-A5, TSC-D43 type)  
 \*2 Optional attachments  
 \*3 When a Nikko power chuck (HF3-8B) is mounted

## Standard Accessories

- Boring holder ..... 2 sets
- Clamp block ..... 8 sets
- Coolant block ..... 8 sets
- Stroke adjust cylinder ..... 1 set
- Chuck clamp detector ..... 1 set
- Hydraulic unit ..... 1 set
- Thread cutting unit ..... 1 set
- Coolant unit ..... 1 set (110L)
- Work light ..... 1 set
- Cycle end signal light (1-color) ... 1 set
- TAKAMAZ Instruction manual ... 1 set

## Optional Accessories

- Tool holders
- Collet chucks
- Various power chucks (6-/8-inch, solid/hollow)
- Various hydraulic chucking cylinders (solid/hollow)
- Rear chip conveyor (Spiral type)
- Front air blower
- Tailstock slide simple movement unit
- Automatic door system

## Controller Specifications

Item	TAKAMAZ & MITSUBISHI
Controlled axes	2 axes (X, Z)
Simultaneously controllable axes	Simultaneous 2 axes
Least input increment	0.001mm(X in diameter)
Least command increment	X:0.0005mm Z: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	1~7,000mm/min
Command system	Incremental/Absolute
Linear interpolation	G01
Circular interpolation	G02, G03
Cutting feedrate override	0~150%
Rapid traverse override	F0, 100%
Program file name	32 characters
Backlash compensation	0~999999.9μm
Part program storage length	500Kbyte (1,280m)
Tool offsets	128 sets
Registered programs	1000 pcs
Tool geometry/Wear offset	Standard
Background editing	Standard
Direct drawing dimension programming	Standard
Nose R compensation	G40, G41, G42
Inch/Metric conversion	G20/G21
Programmable data input	G10
Multiple repetitive cycle	G70~G76
Multiple repetitive cycle II	Pocket-shaped
Canned drilling cycle	Standard
Chamfering/Corner R	Standard
Custom macro	Standard
Multiple M codes in one block	Max. 1
Constant surface speed control	G96, G97
Thread cutting retract	G32
Variable lead thread cutting	G34
Thread cutting retract	Standard
Clock function	Standard
Help function	Standard
Alarm history display	512 pcs
Self-diagnosis function	Standard
Sub-program call	up to 8 loops
Decimal point input	Standard
2nd reference point return	G30
Stored stroke check	Standard
Work coordinate system setting	G50, G54~G59
Input/Output interface	SD card, Flash Memory, Ethernet
Alarm message	Standard
Graphic trace	Standard
Graphic check	Standard
T-ECO Support	Idle stop function, Power consumption monitor screen
TAKAMAZ maintenance function	MAINTENANCE MENU Screen
Set of Instruction Manuals for Control Device	CD-ROM

## Optional Specifications

Item	TAKAMAZ & MITSUBISHI
Multiple M codes in one block	Max. 3
Spindle orientation	6 set
TAKAMAZ option functions Lite	Work Counter, Tool Counter, Fixed wear (64 sets)



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