

CNC Precision Lathe

X-180



*The above photo shows the machine equipped with some optional features.

Upgraded Machine with Higher Productivity

Highest Productivity among 8-inch-class Lathes

- Supported by the track record of 400 machines that have been delivered so far, X-18 is upgraded to X-180. Productivity and milling/turning capability have been greatly improved to meet the customers' needs for complicated and diverse applications.

Idle Time Shortened

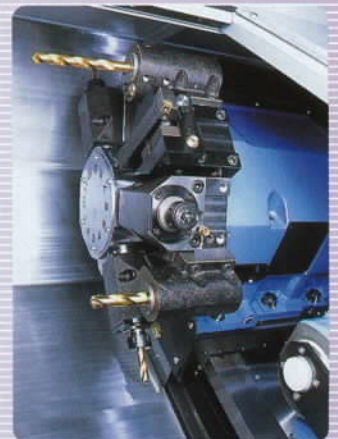
- The latest AC servomotors are used for driving the axes. Thanks to these motors, the positioning time has been greatly shortened: X-axis about 27% and Z-axis about 12%, assuring higher productivity.

Ultimate Mill/Turn Capability

- A drive motor of AC2.2/1.5kW is mounted for power tools, which strengthens the capability to machine hard-to-cut material. The rigid tap function of power tools is provided as a standard feature for high-accuracy tapping. A variety of secondary machining is possible with a combination of spindle C-axis control and power tools.

New Σ GH Loader Mounted

- The new high-speed gantry loader " Σ GH150" mounted on this machine achieves rapid feed of the traverse axis of 155m/min and of the vertical axis of 125m/min as a result of extensive improvement in detail.



Machine Specifications

Item		Unit	X-180	
Capacity	Max. turning diameter		φ210	
	Max. turning length	mm	230 (278 : Collet)	
	Max. bar diameter	mm	φ51 (φ42 Opt.)	
	Chuck size	mm	8	
Spindle	Spindle nose	inch	A ₂ -6	
	Spindle bearing I.D.	JIS	φ100	
	Hole through spindle	mm	φ61	
	Spindle speed	mm	Max.3,500 (4,000, 5,000 Opt.*1)	
	Type	min ⁻¹	12-station	
Tool post	Tool shank	mm	□25	
	Boring holder I.D.	mm	φ32	
	Max. stroke	mm	X : 175 Z : 330	
	Rapid traverse rate	mm	X : 18 Z : 24	
Motors	Spindle motor	m/min	AC7.5/5.5 (11/7.5 Opt.*2)	
	Feed motor	X	kW	AC2.5
		Z	kW	AC2.7
	Coolant motor	kW	AC0.25	
	Hydraulic motor	kW	AC0.75 (1.5: with tailstock)	
	Power tools motor	kW	AC2.2/1.5	
	C-axis motor	kW	AC0.5	
	Tool storage capacity	pcs.	6	
	Spindle speed	min ⁻¹	Max.3,600	
	Power tool unit	Capacity	Drill	mm
Endmill			mm	Max.φ12
Tap		mm	M8	
Size	C axis	Rapid traverse rate	min ⁻¹	50
		L×W×H	mm	1,835 × 1,525 × 1,760
	Machine weight	kg	3,500	
Total Power capacity	KVA	24 (27 Opt.)		

*1 A spindle motor of AC11/7.5kW is mounted for the 5,000min⁻¹ spindle.
*2 The AC11/7.5kW spindle motor is of the external mount type.

Standard Accessories

- | | |
|--|--|
| <input type="checkbox"/> O.D. holder 2 pcs. | <input type="checkbox"/> Hydraulic unit 1 set |
| <input type="checkbox"/> Boring holder L 2 pcs. | <input type="checkbox"/> Thread cutting unit 1 set |
| <input type="checkbox"/> Hydraulic power chuck (B*) 1 set | <input type="checkbox"/> Coolant unit 1 set |
| <input type="checkbox"/> Hydraulic chucking cylinder 1 set | <input type="checkbox"/> Service tool kit 1 set |
| <input type="checkbox"/> Spindle C-axis indexer 1 set | <input type="checkbox"/> Instruction manual 1 set |
| <input type="checkbox"/> Power tool drive unit 1 set | |

Optional Accessories

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

- | | |
|---|---|
| <input type="checkbox"/> Tool holders | <input type="checkbox"/> Rear coolant unit |
| <input type="checkbox"/> Collet flange | <input type="checkbox"/> Cycle end signal light (1-color/2-color/3-color) |
| <input type="checkbox"/> Stroke adjusting hydraulic cylinder | <input type="checkbox"/> TAKAMAZ loader system |
| <input type="checkbox"/> High-speed spindle (4,000/5,000min ⁻¹) | <input type="checkbox"/> Bar feeder system |
| <input type="checkbox"/> Tailstock | <input type="checkbox"/> Parts catcher |
| <input type="checkbox"/> Power tools | <input type="checkbox"/> Tool presetter |
| <input type="checkbox"/> Chuck clamp detector | <input type="checkbox"/> Chip conveyor (Right/Rear) |
| <input type="checkbox"/> Automatic door system (Auto door/Shutter) | (Floor type/Spiral type) |
| <input type="checkbox"/> Front air blower | <input type="checkbox"/> Special color |
| <input type="checkbox"/> Rear air blower | <input type="checkbox"/> Others |

Optional Machine Specifications

Item		Unit	X-180
Tailstock	Front taper		MT-4
	Quill O.D.	mm	φ75
	Quill stroke	mm	100
	Tailstock stroke	mm	170
	Max. thrust	kN	4 (2MPa)

Item	TAKAMAZ & FANUC
Controlled axes	3 axes (X, Z, C)
Simultaneously controllable axes	Simultaneous 3 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	1~5,000mm/min
Command system	Incremental/Absolute
Linear interpolation	G01
Circular interpolation	G02, G03
Cutting feedrate override	0~150%
Rapid traverse override	F0, 100%
Program number	4 digits
Backlash compensation	0~9999μm
Part program storage length	640m
Tool offsets	64 sets
Registered programs	400 pcs.
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 B	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
Canned drilling cycle	Standard
Rigid tapping	Standard (For power tool)
Spindle orientation	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
Sub-program call	Up to 4 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
Graphic display	Standard
Conversational programming with graphic function	Standard
Abnormal load detection	Standard

Optional Attachments

Tool life management	
Multiple M codes in one block	Max. 3
Dynamic graphic function	
Option function	Work/Tool counter, Tool load monitor

TAKAMAZ

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Standard specifications of the machine may differ according to destinations.



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