

Skiving Machine



Introducing a Special Machine Specifically Designed for Skiving

Supporting skiving for high quality surface finish and process integration

- "Skiving" is a method for thinly shaving the outer surface of turning parts by moving a dedicated tool in the Y-axis direction. The biggest advantage of this method is that the machined part is free of spiral tool marks, therefore enabling the cutting of seal sliding sections of hydraulic or lubrication related parts. In addition, since the feed rate can be increased by several times in comparison with normal turning tools and at the same time achieve a high quality surface finish, the benefits of both cycle time reduction and machine integration can be attained by eliminating the grinding process, together with improved surface finish.

Improvement of machine rigidity and cutting capability

- To enable skiving, the machine rigidity is heightened by reinforcing the bed structure and employing a highly rigid $\phi 100$ mm spindle. A spindle motor of 11/15 kW is provided to endure high cutting loads, which is typical of skiving.

Tailstock and center rest unit expands the range of machinable parts

- To enable high load high rotation cutting, a built-in tailstock is installed on a precision tail base which ensures high straightness of the tailstock motion. A center rest unit (optional) can also be installed to enable skiving of parts having less rigidity.

Automation with loader (optional)

- By adding an automation system, which is one of our specialties, your productivity and manpower saving can be improved.

Skiving Machine

Machine Specifications

Item		Unit	Skiving Machine
Capacity	Max. turning diameter	mm	φ180
	Max. turning length	mm	370
	Max. bar diameter	mm	φ51
	Chuck size	inch	8
Spindle	Spindle nose	JIS	A ₂ -6
	Spindle Bearing I.D.	mm	φ100
	Through-hole on spindle	mm	φ52
	Spindle speed	min ⁻¹	Max.5,000
Tool post	Type		12-station turret
	Tool shank	mm	□25
	Boring holder I.D.	mm	φ32
	Max. stroke		X:150 Y:±35 Z:400
	Rapid traverse rate	m/min	X:18 Y:12 Z:24
Motors	Spindle motor	KW	AC15/11
	Feed motor	KW	X:AC1.2 Y:AC 0.75 Z:AC1.8
	Coolant motor	KW	AC 0.25
	Hydraulic motor	KW	AC1.5
Tailstock	Pointed End		MT-4
	Quill O.D.	mm	φ90
	Quill stroke	mm	50
	Tailstock stroke	mm	240
	Max. thrust	kN	5.5(1.3Mpa)
Size	L×W×H	mm	2,250×1,730×1,800
	Machine weight	kg	4,100
Total electric capacity		KVA	23

Standard Accessories

- | | |
|---|---|
| <input type="checkbox"/> O.D. holder..... 2 pcs. | <input type="checkbox"/> Thread cutting unit..... 1 set |
| <input type="checkbox"/> Boring holder..... 2 pcs. | <input type="checkbox"/> Tailstock..... 1 set |
| <input type="checkbox"/> Turning holder..... 2 pcs. | <input type="checkbox"/> Automatic fire extinguisher..... 1 set |
| <input type="checkbox"/> Skiving holder..... 1 set | <input type="checkbox"/> Service tool kit..... 1 set |
| <input type="checkbox"/> Hydraulic chucking cylinder..... 1 set | <input type="checkbox"/> TAKAMAZ Instruction manual..... 1 set |
| <input type="checkbox"/> Coolant unit (122ℓ)..... 1 set | |

Optional Accessories

- | | |
|---|--|
| <input type="checkbox"/> Collet chucks | <input type="checkbox"/> Signal light(1-color/2-color/3-color) |
| <input type="checkbox"/> Toolholders | <input type="checkbox"/> Center rest unit |
| <input type="checkbox"/> TAKAMAZ loader system | <input type="checkbox"/> Automatic power shut-off device |
| <input type="checkbox"/> Rear chip conveyor
(Floor type/Spiral type) | <input type="checkbox"/> Automatic door system |
| <input type="checkbox"/> Front air blower | <input type="checkbox"/> Special color |
| <input type="checkbox"/> Rear air blower | <input type="checkbox"/> Others※ |
| <input type="checkbox"/> Rear coolant unit | |

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

Controller Specifications

Item	TAKAMAZ&FANUC Oi-TF
Controlled axes	3 axes (X,Z,Y)
Simultaneously controllable axes	Simultaneous 3 axes
Least input increment	0.0001mm (X in diameter)
Least command increment	X: 0.00005mm Z: 0.0001mm
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	FO, 100%
Program file name	32digit
Backlash compensation	0~999.9μm
Program memory capacity	512kbyte (1.280M)
Tool offsets	128sets
Registered programs	400pcs.
Tool geometry / Wear offset	Standard
Canned cycle	G90, G92, G94
Rapid 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
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	50pcs.
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
Stored stroke check 1	Standard
Stored stroke check 2,3	Standard
Input / Output interface	USBFlash Memory, Memory card, Ethernet
Alarm message	Standard (Smart Alarm Diagnostic)
Graphic display	Standard
Conversational programming with graphic function	Standard
Abnormal load detection	Standard
Manual handle trace	Standard
Automatic data backup	Max. 3pcs.
Automatic screen deletion function	Standard
TAKAMAZ option functions	Work/Tool counter, Tool load monitor, Other
TAKAMAZ maintenance functions	Standard
FANUC set of manuals	DVD-ROM

Optional Controller Specifications

Input/Output interface	RS232C
Tool life management	
Multiple M codes in one block	Max. 3pcs.
Spindle orientation	
FANUC instruction manual	Bound

TAKAMAZ

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