

NEW



# CNC Automatic Lathe

# SK-51 type A/D

## Star Micronics Enters Its New Territory With the Fixed-Headstock Lathes

Star Micronics offers the fixed-headstock lathe users the new product line including the fully configured 2-spindle + 3-turret model at its highest end. In pursuit of the highest level of functionality, rigidity, and operability in the category, SK-51 suggests innovations in 51 mm diameter-class bar stock processing with confidence.



### High Functionalities

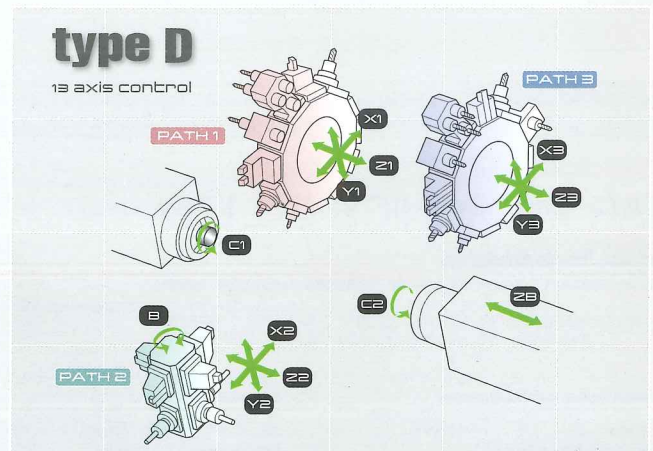
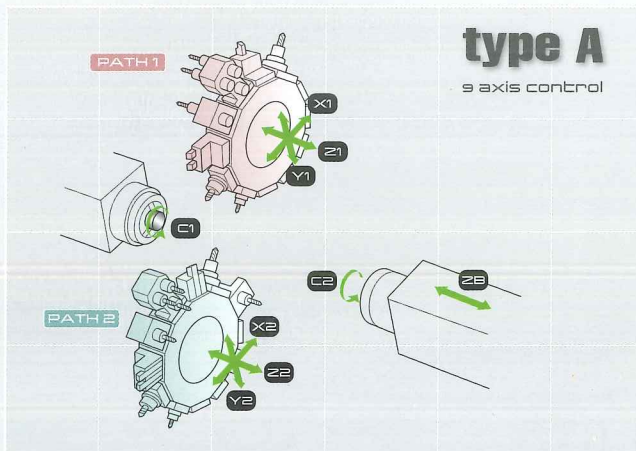
- ① 2 models are lined up by a combination of 12-stationed turret-type tool post with 3-axis control and 4-stationed turret-type tool post with B-axis control.
- ② Type D is mounted with a 4-stationed turret-type tool post with B-axis control which is capable of simultaneous 5-axis processing on both the front and back sides.
- ③ The main and sub spindles can be mounted with power chuck to enable the processing of the cast or forged workpieces.

### Operability and Workability

- ① The short distance from the front side of the machine to the spindles improves operator workability.
- ② The swing type control panel mounts a large, 15-inch touch panel display.
- ③ Program checking function enables verification beforehand by 3D simulation.

### High Rigidity and Accuracy

- ① The slide of the X-axis of each tool post adopts the square type slide guideway structure to improve the post rigidity.
- ② The power tool of the 12-stationed turret-type tool post is designed with one position drive mechanism.
- ③ The thermal data from multiple locations of the machine enables highly accurate and flexible thermal displacement correction.



2 spindles

2 turrets : 2 x 12 stations

2 spindles

2 x 12 stations + 1 x 4 stations (with B axis)

□ Standard Machine Specifications

OP : Option

Item	SK-51 type A	SK-51 type D	
Main spindle	Max. machining diameter	φ51mm(2in)	
	Max. machining length	125mm(4-59/64in)	
	Main spindle speed	Max.5,000min <sup>-1</sup>	
	Main spindle motor	7.5kW(continuous)/15kW(10min./15%ED)	
	Main spindle indexing angle	C-axis control	
	Through-spindle hole diameter	φ52.5mm(2-1/16in)	
	Chucking type	Hydraulic rotary cylinder	
	Collet chuck type	H-S22/DIN177E	
	Power chuck type	6inch	
	Sub spindle	Max. machining diameter	φ51mm(2in)
Max. length for front ejection		125mm(4-59/64in)	
Max. parts projection length		80mm(3-5/32in)	
Main spindle speed		Max.5,000min <sup>-1</sup>	
Main spindle motor		7.5kW(continuous)/11kW(15min./25%ED)	
Main spindle indexing angle		C-axis control	
Through-spindle hole diameter		φ52.5mm(2-1/16in)	
Chucking type		Hydraulic rotary cylinder	
Collet chuck type		H-S22/DIN177E	
Power chuck type		6inch	
PATH 1 Tool post	Type	12-stationed turret □20mm(25/32in)	
	Number of tools	Tool	Max. 2 tools/station
		Sleeve	Max. 3 sleeves/station
		Power driven tool	Max. 2 tools/station
	Power driven tool	Spindle speed	Max.6,000min <sup>-1</sup>
		Drive motor	4.5kW(continuous)/7.5kW(5min./30%ED)
		Max. drilling capability	φ16mm(5/8in)
		Max. tapping capability	M12×P1.75
	Milling	φ20mm(25/32in)	
	PATH 2 Tool post	Type	12-stationed turret □20mm(25/32in)
Number of tools		Tool	Max. 2 tools/station Max. 1 tool at upper position Max. 2 tools at lower position
		Sleeve	Max. 3 sleeves/station Max. 1 tool at upper position Max. 2 tools at lower position
		Power driven tool	Max. 2 tools/station Max. 2 tools at lower position
Power driven tool		Spindle speed	Max.6,000min <sup>-1</sup>
		Drive motor	4.5kW(continuous)/7.5kW(5min./30%ED)
		Max. drilling capability	φ16mm(5/8in)
		Max. tapping capability	M12×P1.75
		Milling	φ20mm(25/32in)
PATH 3 Tool post		Type	— □20mm(25/32in)
	Number of tools	Tool	— Max. 2 tools/station
		Sleeve	— Max. 3 sleeves/station
		Power driven tool	— Max. 2 tools/station
	Power driven tool	Spindle speed	— Max.6,000min <sup>-1</sup>
		Drive motor	— 4.5kW(continuous)/7.5kW(5min./30%ED)
		Max. drilling capability	— φ16mm(5/8in)
		Max. tapping capability	— M12×P1.75
		Milling	— φ20mm(25/32in)
	Rapid feed rate	X1, X2, X3 Y1, Y2, Y3 Z1, Z2, Z3, ZB	20m/min 15m/min 40m/min
Coolant tank		458 ℓ	
Coolant pump		1.5kW (2.5MPa) ×1, 0.4kW×1	
Dimensions (W×D×H)		2,800×2,070×2,130mm	
Weight		6,600kg 7,200kg	

Note)  
The machining capacities apply to SUS303 material. The machining capacities may differ from listed values depending on the machining conditions, such as the material to be machined or the tools to be used.

※Design features, specifications and technical execution are subject to change without prior notice.

※This product is an export control item subject to the foreign exchange and foreign trade laws. Thus, before exporting this product, or taking it overseas, contact your STAR MICRONICS dealer.

□ Standard Accessories and Functions

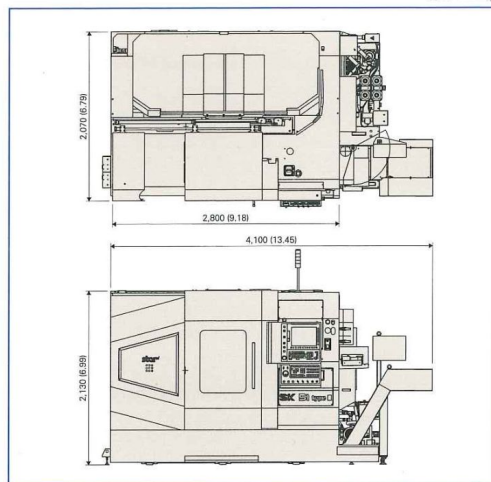
- CNC unit FANUC 32i-B (type A)
- CNC unit FANUC 31i-B5 (type D)
- Operation panel 15-inch color LCD display
- Pneumatic unit
- Hydraulic unit
- Automatic centralized lubrication unit
- Coolant level detector
- Door interlock system
- Cut-off tool breakage detection function (Software)
- Cs contouring control (Main / Sub)
- B-axis control (Type D: PATH 2 turret)
- Spindle clamp unit (main/sub)
- Spindle air purge system (Main/Sub)
- Pneumatic cylinder type product ejection system (with ejection detection system)
- Sub spindle mix blow system (Air & Coolant)
- Tool drive unit (Turret type tool post)
- Parts catcher
- Parts conveyor
- Work light
- Leakage breaker

□ Optional Accessories and Functions

- Chip conveyor
- Coolant flow detector
- Water removal unit
- Beacon
- Cut-off tool breakage detection system (Mechanical type)
- Main/Sub chuck (to be selected from the tooling system)
- Main spindle inner tube
- Main/Sub spindle upper air blow (for power chuck)
- Foot switch (Main/Sub chuck opening and closing)
- Coolant pump extension (2.5 MPa)
- Coolant unit (6.9MPaa)
- Coolant unit signal cable
- Coolant system piping 6.9 MPa
- Tool setter
- Automatic bar feeder interface
- LAN/RS232C interface
- Transformer CE marking version
- Transformer CE marking cable
- CE marking version

□ External Dimensions

Unit : mm(ft)



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