TOOLING

●Tooling examples

●Front-end working

●Rear-end working

Standard Machine Specifications

OP : OPTION

Item		Specifications
Max. machining diameter		φ23mm(29/32in) OP : φ25.4mm(1in)
Max. headstock stroke	Standard	205mm(8in) MR25 : 196mm(7-15/16in)
	R.M.G.B. type	155mm(6-3/32in)
	N.G.B. type	Bar diameter×2.5(Max.50mm)(Max.1-31/32in)
Tool		8 tools (□12mm)
sleeve holder	Number of tools	7 tools (□16mm×3, □12mm×4)
		4 tools (φ32×2, φ22×2)
		5 tools (φ22×5)
	Max. drilling capability	φ12mm(1/2in) OP : 13mm(33/64in)
	Max. tapping capability	M10×P1.5 (OP : M12×P1.75)
Power driven attachment	Number of tools	Cross drilling x 2 tools + cartridge type 5 pos.
	Max. drilling capability	φ8mm(φ5/16in)
	Max. tapping capability	M6×P1.0
Main spindle indexing angle		C-axis control
Main spindle speed		Max.10,000min^{-1} (OP : Max.8,000min^{-1})
Main spindle motor		2.2kW (CONT.)／3.7kW (15min.／60%ED)
Rapid feed rate		35m/min (X1, Y1, Z1, X2, Z2)
Power-driven att. spindle speed		Max.8,000min^{-1}
Power-driven att. drive motor		1.4kW
Coolant tank capability		190ℓ
Dimensions(W×D×H)		2,100×1,200×1,785mm
Weight		2,250kg
Power consumption		5.52kVA
A-weighted sound pressure : note-1		Max.67dB (A)

Backworking Attachment Specifications

Item			Specifications
Max. chucking diameter			φ23mm(29/32in) OP : φ25.4mm(1in)
Max. length for front ejection			105mm(4-9/64in)
Max. parts projection length			30mm(1-3/16in)
4-spindle backworking unit	Number of tools	Stationary tool	Max.4 tools
		Power driven tool	Max.4 tools
	Max. drilling capability	Stationary tool	φ8mm(φ5/16in) OP : 10mm(25/64in)
		Power driven tool	φ6mm(15/64in)
	Max. tapping capability	Stationary tool	M6×P1.0 (OP : M8×P1.25)
		Power driven tool	M5×P0.8
Power driven att. spindle speed			Max.8,000min^{-1}
Power driven att. spindle motor			0.75kW
Sub spindle indexing angle			C-axis control
Sub spindle speed			Max.10,000min^{-1} (OP : Max.8,000min^{-1})
Sub spindle motor			1.5kW (CONT.)／2.2kW (15min.／60%ED)

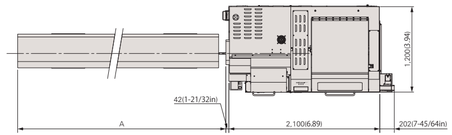
External Dimensions and Floor Space

unit : mm(ft)

●Bar Feeder

Type \ Length	A	mm(ft)	
		2.5	3.0	4.0
ASR X-32PN3	3,639(11.94)	4,139(13.57)	5,139(16.85)
OS20VS II-25	3,210(10.53)	3,710(12.17)	4,710(15.45)
OS20RE-25	3,400(11.15)	3,900(12.79)	4,900(16.07)

Overall height : 1,785mm(57.7ft)



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9001 ISO 14001 CERTIFIED

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NEW model

CNC SWISS TYPE AUTOMATIC LATHE

SP-20/23

Max. φ25.4 mm

Standard Accessories and Functions

1. CNC unit FANUC 0i-TF Plus
2. Operation panel 10.4-inch color LCD display
3. Pneumatic unit
4. Coolant level detector
5. Automatic centralized lubrication unit
6. Door interlock system
7. Broken cutoff tool detector
8. Water removal unit
9. Cs contouring control (Main/Sub)
10. Spindle clamp unit (Main / Sub)
11. Revolving guide bush unit
12. Drive unit for revolving guide bush
13. Air purge for revolving guide bush
14. Main / Sub collet
15. Tool holder (7-station or 8-station)
16. Sleeve holder (4-spindle or 5-spindle)
17. 7-spindle cross drilling unit
18. Sub spindle air purge unit
19. Sub spindle air blow unit
20. 4-spindle backworking unit
21. Drive unit for power-driven attachment (4-spindle backworking unit)
22. Work light
23. Leakage breake

Optional Accessories and Functions

1. Torque up specification (main/sub)
2. Coolant flow detector
3. Beacon
4. Parts conveyor
5. Built-in stocker
6. Product separator system, A-type
7. Main spindle inner tube
8. Parts ejector with Spring type
9. Parts ejector (Air cylinder type)
10. Parts ejector with guide tube
11. Parts stopper unit
12. Coolant unit (2.5MPa / 6.9MPa)
13. Coolant unit signal cable
14. Coolant unit power cable
15. Coolant valve (2.5MPa / 6.9MPa)
16. Coolant pipings
17. Automatic bar feeder interface
18. LAN / RS232C interface
19. Transformer
20. Transformer CE marking version
21. Transformer CE marking-version cable
22. CE / UKCA marking specifications

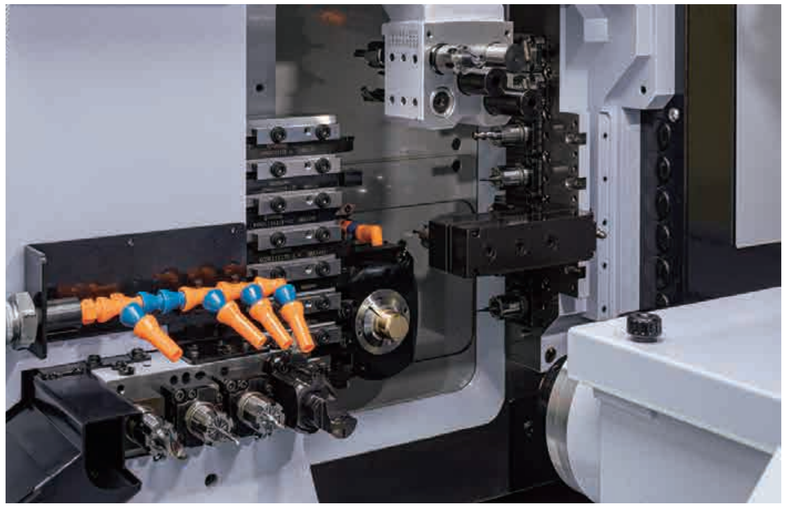
Note)
The machining capacities apply to SUS303 material. The machining capacities may differ from listed values depending on the machining conditions, such as the material to be machined or the tools to be used.

note-1 ●Measures conforming to ISO standard.
●A-weighted sound pressure is a general assessment standard characteristic that corrected the sound level to human acoustic sense.

ECO
STAR Environmental Standards Conformity models

The awaited lathe that supports tool posts for diverse machining needs up to 1 inch has arrived!

Machine configuration that supports machining up to 25.4 mm dia. (OP), and high precision realized through various measures against heat generation



CNC SWISS TYPE AUTOMATIC LATHE

SP-20/23

High Functionalities

- Equipped with a 7-spindle cross drilling unit at the rear of the front-side tool post. A wide variety of tool units can be mounted on the 5 cartridge positions.
- Drive system for power-driven tool installed as standard for the 4-spindle backworking unit.
- Can equip with Step Cycle Pro., which is effective for chip-breaking. (Optional)

Machining using Step Cycle Pro.

Standard machining

High precision

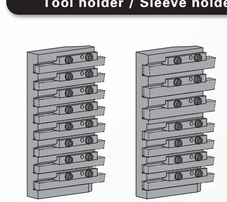
- The data from thermal sensors installed on various machine positions achieve highly accurate and flexible thermal displacement correction.
- Prevents excessive heat by using oil mist cooling of the power driven tool gear box on the front tool post.
- Built-in sensor on main/sub spindles. Realizes improved indexing accuracy.

Scalability

- With oversize specifications, capable of machining up to 25.4 mm dia.
- Equipped with G.B. / N.G.B. switching function. Capable of machining at optimal specifications according to the full dimensions of the machined parts.
- For the tool holder, select from the 8-station type (□12 mm) or the 7-station type (□16 mm x 3, □12 mm x 4) according to the purpose for turning.
- For the sleeve holder, select from the 4-spindle or 5-spindle type according to the purpose for drilling.

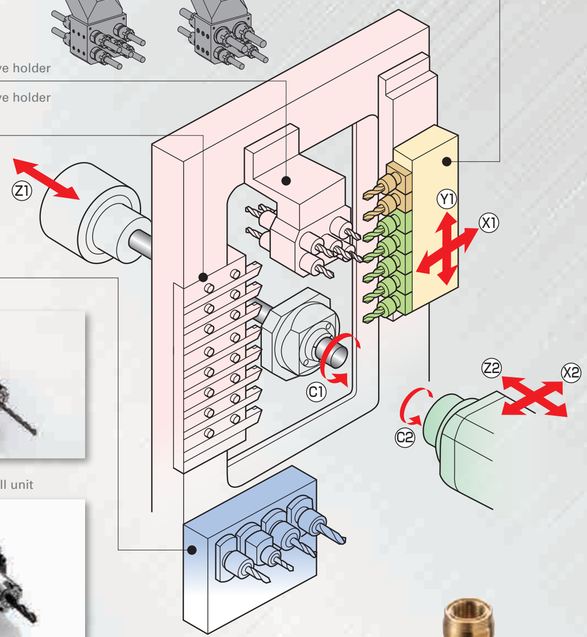
Realizes diverse machining variation

Tool holder / Sleeve holder



- 4-spindle sleeve holder
- 5-spindle sleeve holder
- Gang-type 8 station tool holder
- Gang-type 7 station tool holder

7-spindle cross drilling unit



4-spindle backworking unit

- Drill sleeve

- Oil-through type Back working drill unit

- Bowling sleeve

- Milling unit

- Quad-speed milling unit

- Cross drilling unit

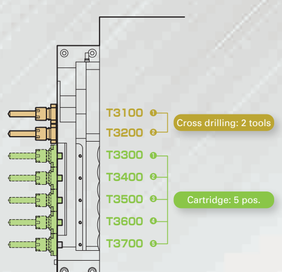
- Slotting unit

- Milling unit

- Quad-speed milling unit

- 2-spindle face drilling unit / 2-spindle counterface drilling unit

- 3-spindle face drilling unit / 3-spindle counterface drilling unit



- 2-spindle front drilling adaptor

- Slotting unit

- Polygon machining unit

- Thread whirling unit