

NEW model

star⁺

CNC SWISS TYPE AUTOMATIC LATHE



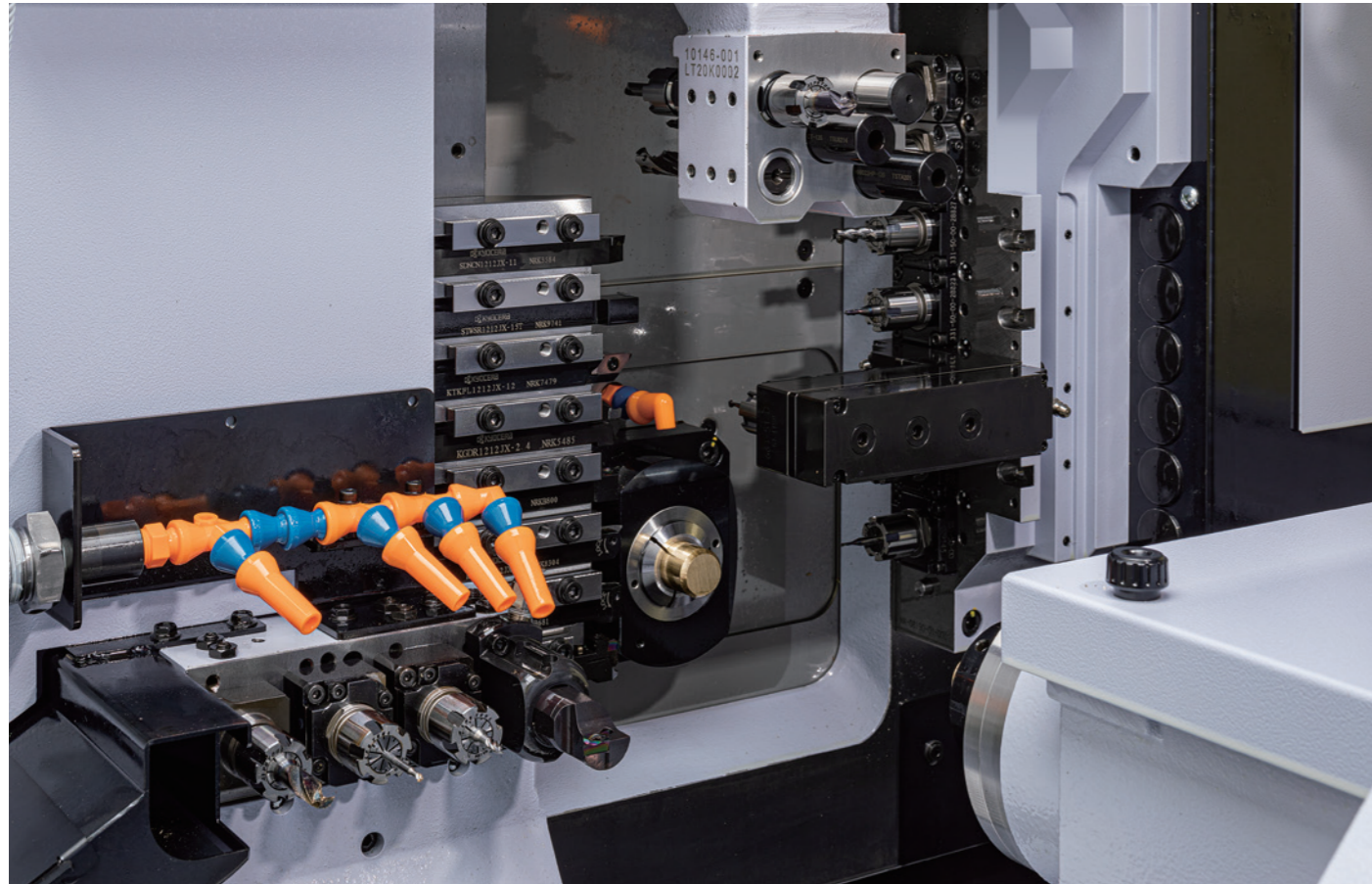
SP-20/23

Max.
 $\phi 25.4$
mm



The awaited lathe that supports tool |

Machine configuration that supports machining up to 25.4 mm dia. (OF



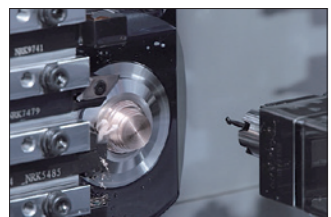
CNC SWISS TYPE AUTOMATIC LATHE

SP-20/23

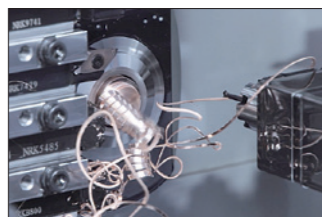


High Functionalities

- 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.

TOOLING

● Tooling examples

● Front-end working



● Rear-end working

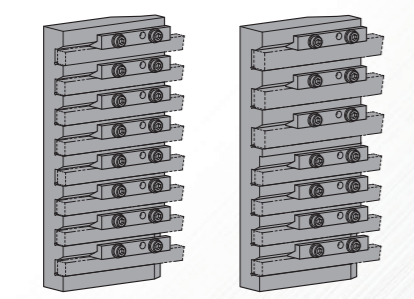


posts for diverse machining needs up to 1 inch has arrived!

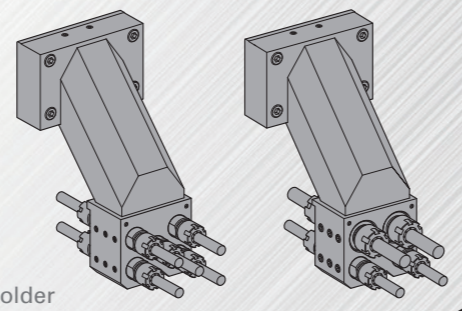
), and high precision realized through various measures against heat generation

Realizes diverse machining variation

Tool holder / Sleeve holder

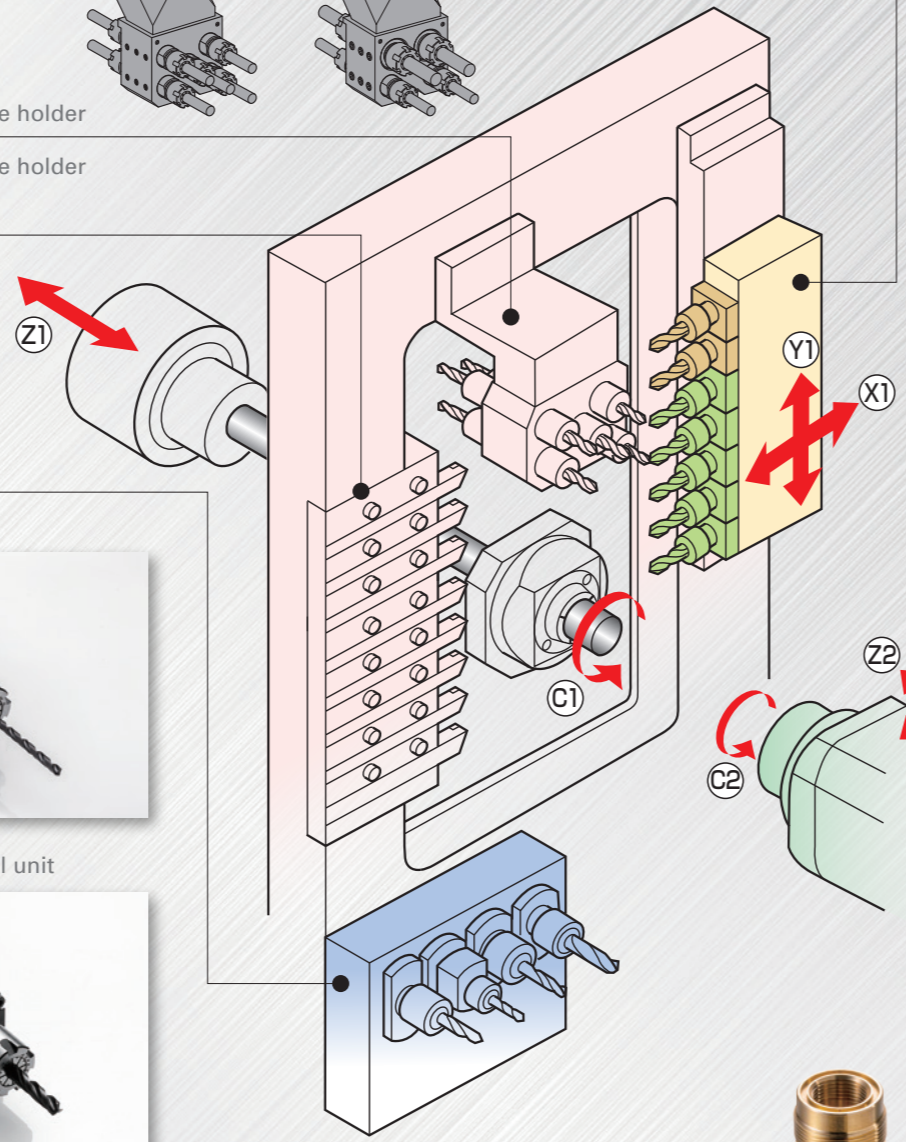


- Gang-type 8 station tool holder
- Gang-type 7 station tool holder



- 4-spindle sleeve holder
- 5-spindle sleeve holder

7-spindle cross drilling unit



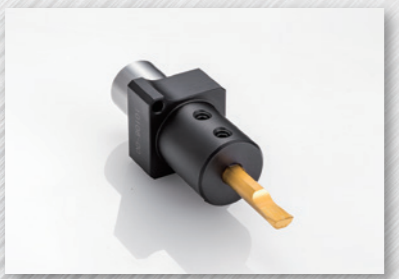
4-spindle backworking unit



● Drill sleeve



● Oil-through type Back working drill unit



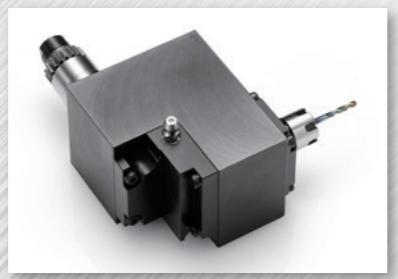
● Boring sleeve



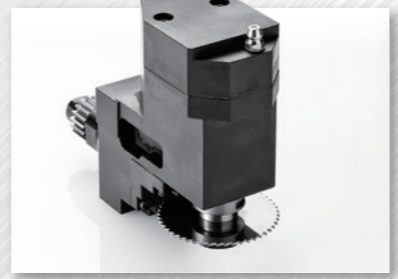
● Milling unit



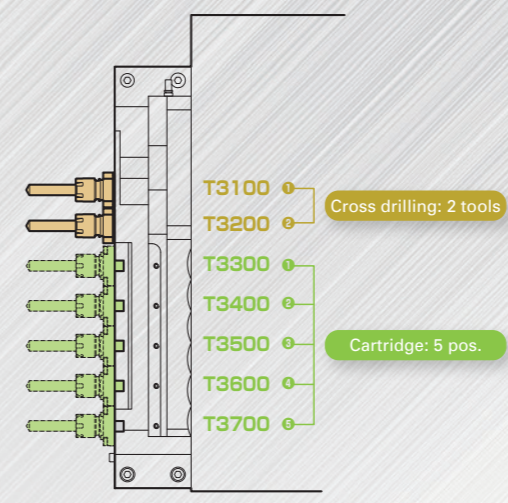
● Quad-speed milling unit



● Cross drilling unit



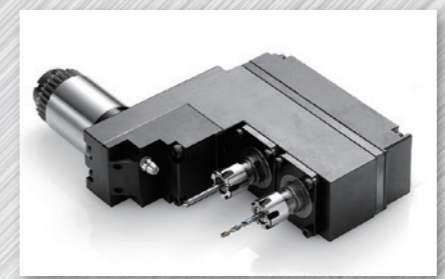
● Slotting unit



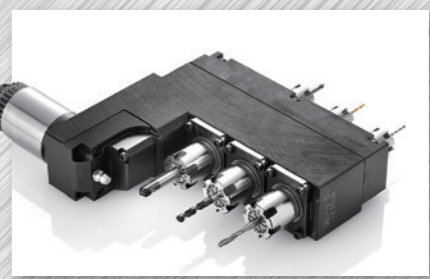
● Milling unit



● 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

Standard Machine Specifications

OP : OPTION

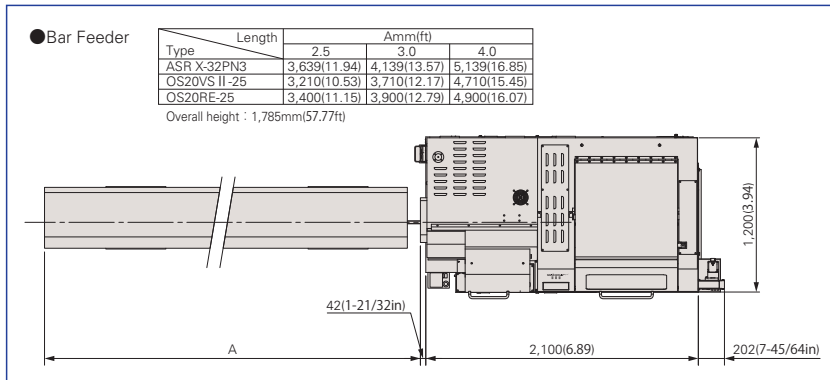
Item	Specifications	
Max. machining diameter	φ23mm(29/32in) OP : φ25.4mm(1in)	
Max. headstock stroke	Standard	205mm(8in) MR25 : 196mm(7-15/16in)
	R.M.G.B. type	155mm(6-3/32in)
	N.G.B. type	Bar diameter × 2.5(Max.50mm)(Max.1-31/32in)
Tool	8 tools (□12mm)	
	7 tools (□16mm × 3, □12mm × 4)	
	4 tools (φ32 × 2, φ22 × 2)	
sleeve holder	Number of tools	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 × 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	190 ℓ	
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)



Standard Accessories and Functions

- CNC unit FANUC 0i-TF Plus
- Operation panel 10.4-inch color LCD display
- Pneumatic unit
- Coolant level detector
- Automatic centralized lubrication unit
- Door interlock system
- Broken cutoff tool detector
- Water removal unit
- Cs contouring control (Main/Sub)
- Spindle clamp unit (Main / Sub)
- Revolving guide bush unit
- Drive unit for revolving guide bush
- Air purge for revolving guide bush
- Main / Sub collet
- Tool holder (7-station or 8-station)
- Sleeve holder (4-spindle or 5-spindle)
- 7-spindle cross drilling unit
- Sub spindle air purge unit
- Sub spindle air blow unit
- 4-spindle backworking unit
- Drive unit for power-driven attachment (4-spindle backworking unit)
- Work light
- Leakage brake

Optional Accessories and Functions

- Torque up specification (main/sub)
- Coolant flow detector
- Beacon
- Parts conveyer
- Built-in stocker
- Product separator system, A-type
- Main spindle inner tube
- Parts ejector with Spring type
- Parts ejector (Air cylinder type)
- Parts ejector with guide tube
- Parts stopper unit
- Coolant unit (2.5MPa / 6.9MPa)
- Coolant unit signal cable
- Coolant unit power cable
- Coolant valve (2.5MPa / 6.9MPa)
- Coolant pipings
- Automatic bar feeder interface
- LAN / RS232C interface
- Transformer
- Transformer CE marking version
- Transformer CE marking-version cable
- 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.

※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.

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