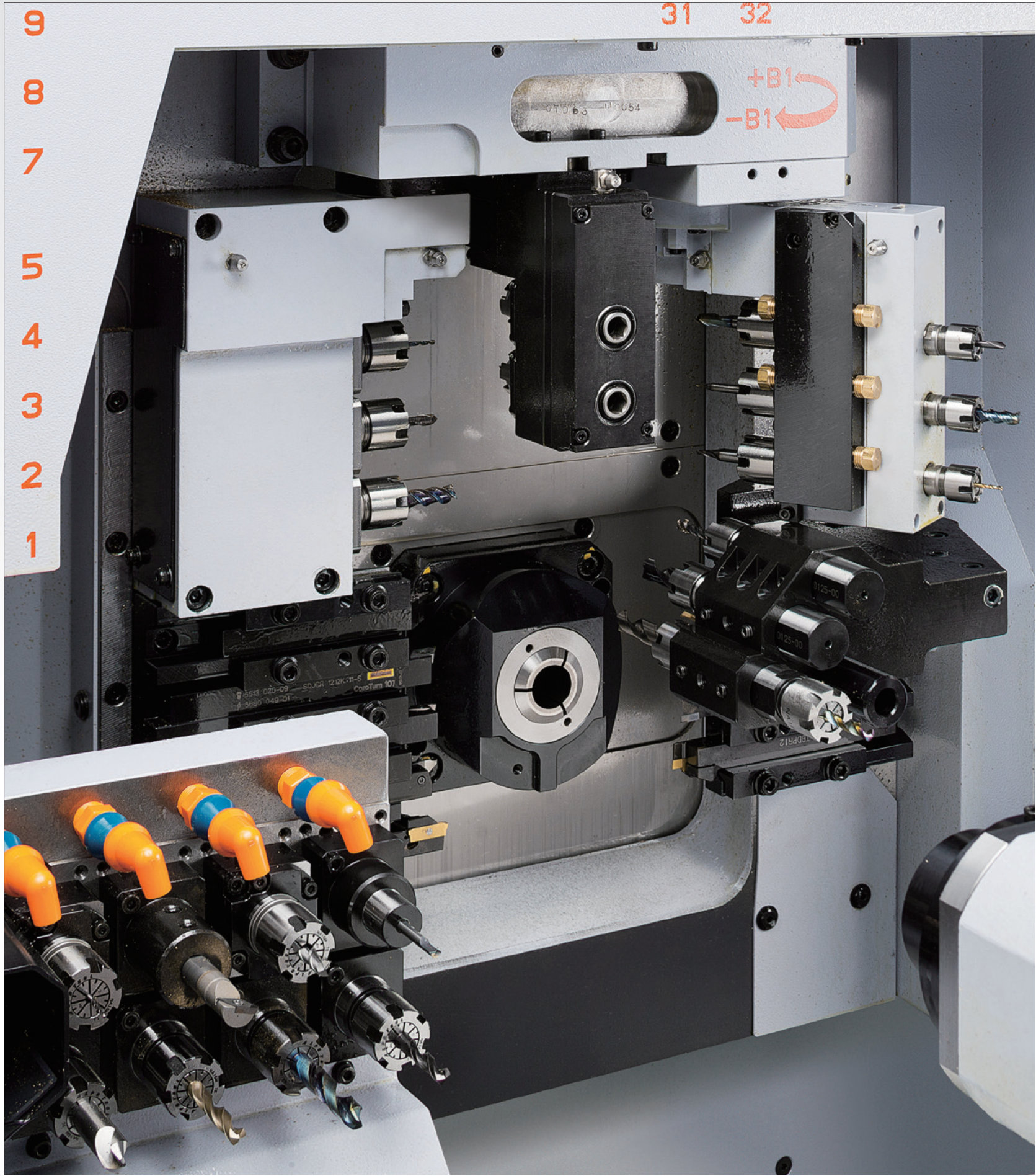


SR-20RV type E



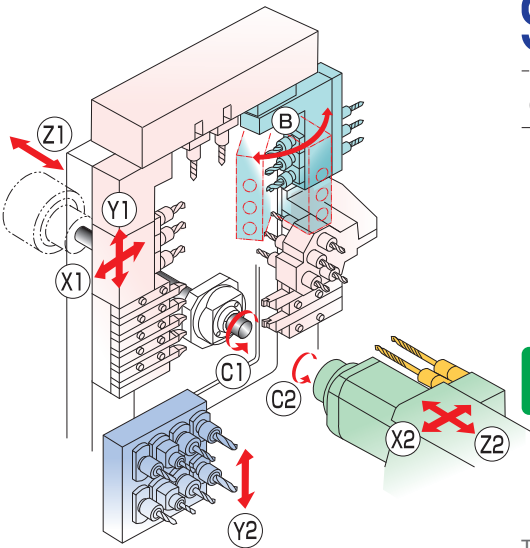


Impressive Complex Machining to Meet the Needs of Every Field.

A maximum of 41 tools to mount in the 27-position tool station ensures a flexible tooling layout and allows a variety of complex machining.

The SR-20R IV Series has been changed to deliver a machine that satisfies even more users. Machine composition consisting of a gate-shaped tool post with equal-load cross guide structure, and a tool post specially designed for back working with Y-axis control. Tooling with capacity for up to 41 tools (27-pos.). Multi-axis, multi-series control, etc., including B-axis control.

The new Type E was born from narrowing down to necessary and sufficient performance while maintaining the highly-rated software and hardware. It meets the expectations of diverse parts machining scenarios.



SR-20R IV type E

CNC SWISS TYPE AUTOMATIC LATHE

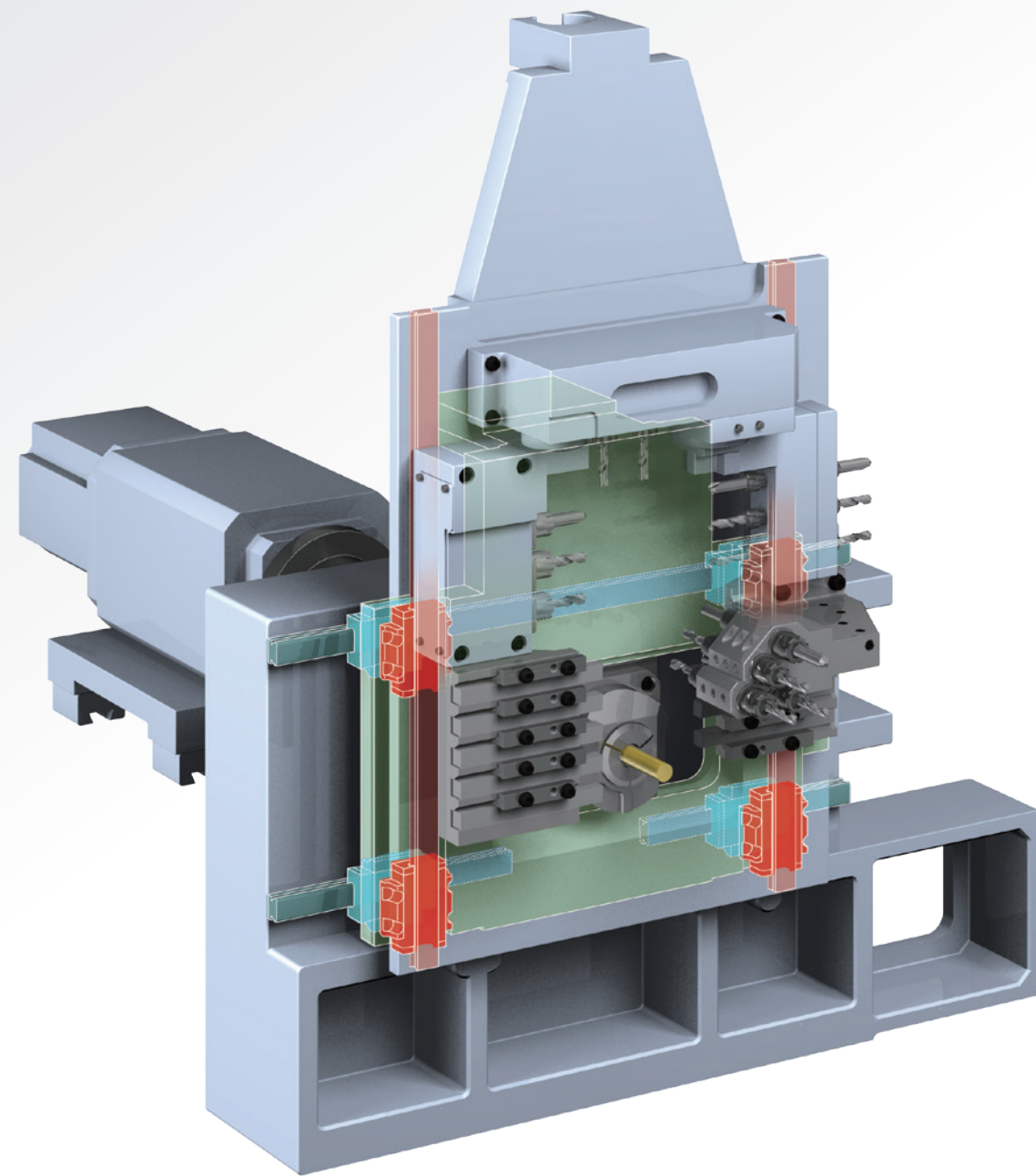
- Control method : CNC control
- Machine composition :
 - Main spindle
 - Sub spindle
 - Gantry-type tool post (B-axis control power-driven tool unit)
 - 8-spindle unit especially designed for back-working (with Y-axis control)

TOOLING SYSTEM

■ Tool holder	Turning tool	7 tools (5 tools on the front / 2 tools on the rear)
■ 4-spindle sleeve holder	Front-end stationary tool	4 tools
	Rear-end stationary tool	4 tools
■ Power-driven tool	Cross machining tool only	3 tools
	Cartridge type	2Pos
	Power-driven tool unit ※	1 Pos (front 3 tools / rear 3 tools)
■ 2-spindle front sleeve holder	Front-end stationary tool	2 tools
■ Back 8-spindle unit	Rear-end stationary tool	Max. 8 tools
	Rear-end power-driven tool	Max. 8 tools

※B-axis control power-driven tool unit

Machine design that pursues rigidity, function and precision

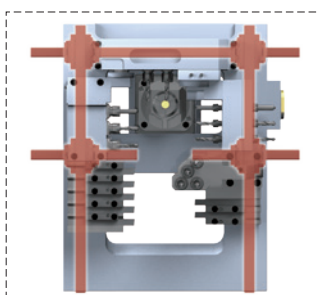


Original Technology

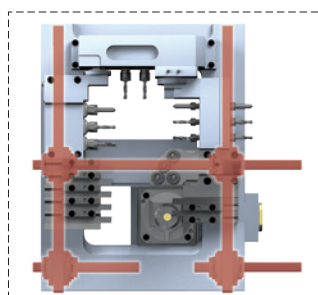
Uniform Load Cross Guide Structure

High rigidity tool post

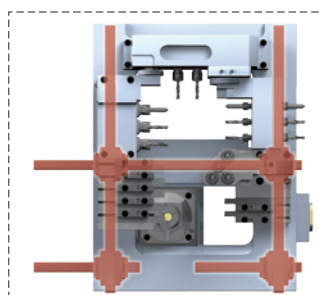
X,Y AXIS POSITION ①



X,Y AXIS POSITION ②



X,Y AXIS POSITION ③

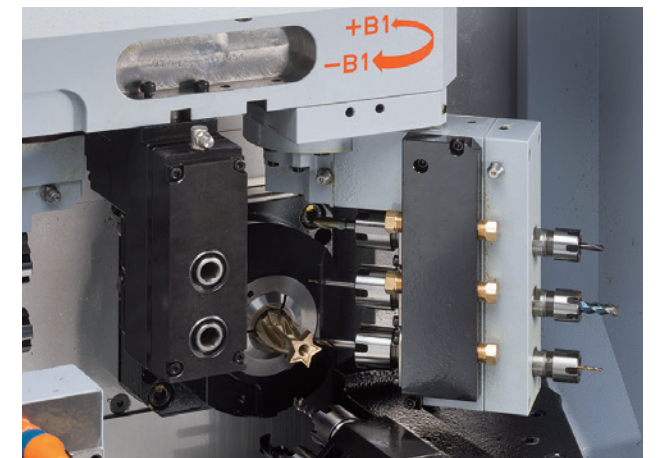
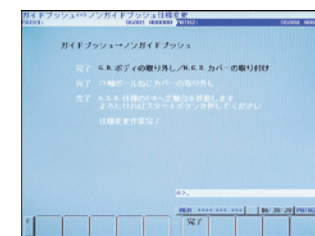


The moment load is applied to eight bearings uniformly at all times even when the X/Y axis moves because the guide bush is positioned in the guide bearing. (See figures ①, ② and ③)

Competitive Basic Specification

- ① Equipped with a swiveling 3-spindle opposing-type unit capable of simultaneous 4-spindle control. Enables machining of complex shapes such as free angle commands and 3D milling using a program.
- ② Use the guide bush specification (G.B.) to process long workpieces with high accuracy while preventing deflection. Use the non-guide bush specification (N.G.B.) to process short workpieces while significantly reducing the stock waste. By switching the guide bush//non-guide bush, you can select the optimal specification for full-length dimensions of machining parts on a single unit.

By proceeding with the job in accordance with the procedures displayed on the operation panel, switching from the guide bush type to non-guide bush type is easily accomplished.

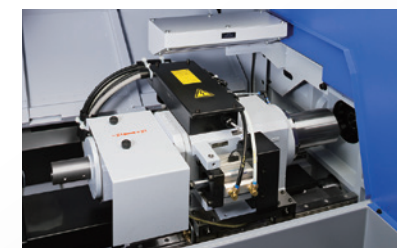
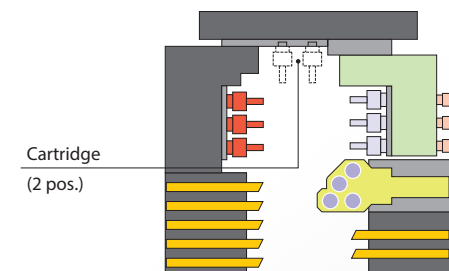


Swiveling 3-spindle opposing-type unit

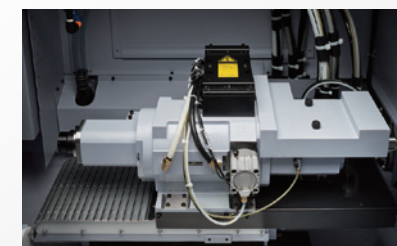
- ③ Equipped with 2-spindle sleeve holder for deep hole processing alongside the sub spindle. Realizes deep-hole drilling of up to 10-dia. and depth of 100 mm.

- ④ Employs built-in motors with the same output for the main spindle and sub spindle. Realizes the same machining capacity for the main and back, as well as high indexing accuracy.

- ⑤ Various rotary tool units for slitting, polygon machining, etc. can be mounted on the two cartridge positions of the tool post for front machining. Realizes a wide variety of tooling layouts according to the parts for machining.



Main spindle (built-in type)

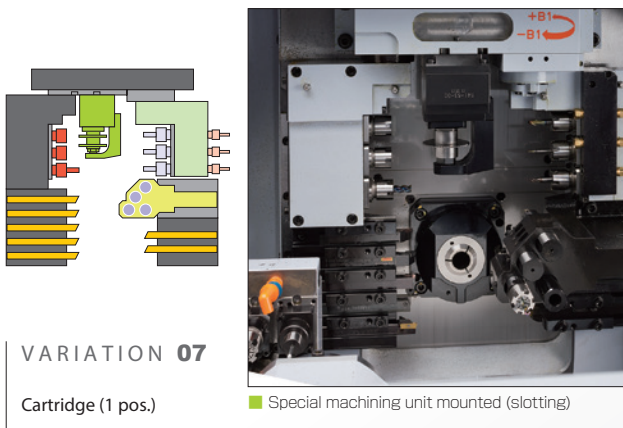
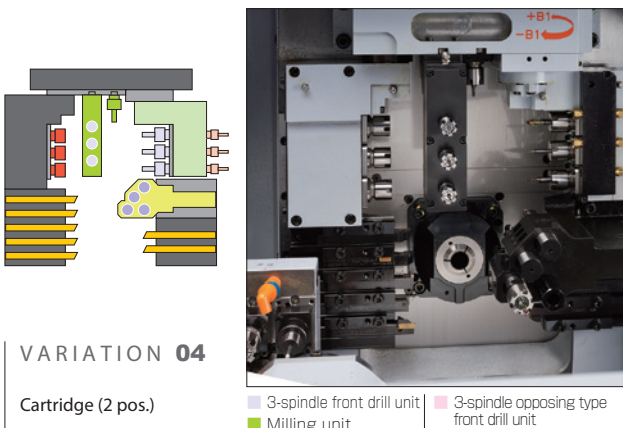
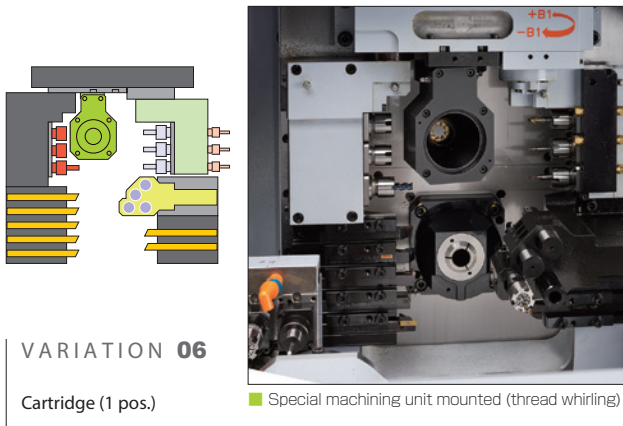
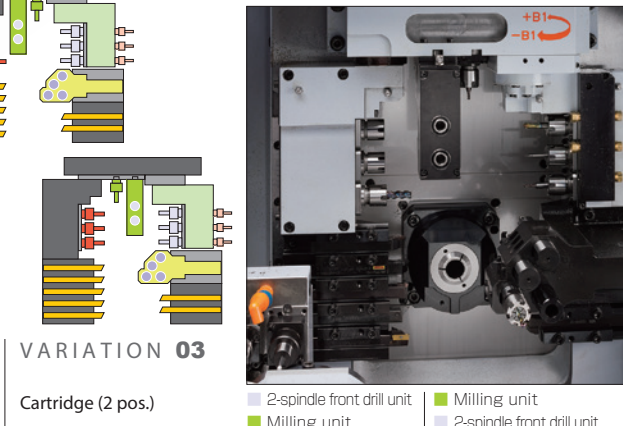
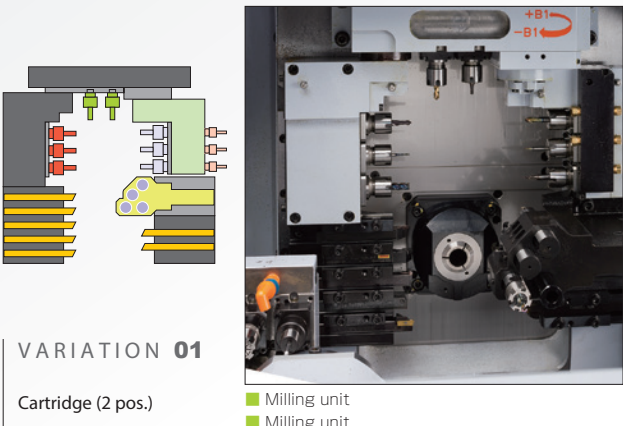
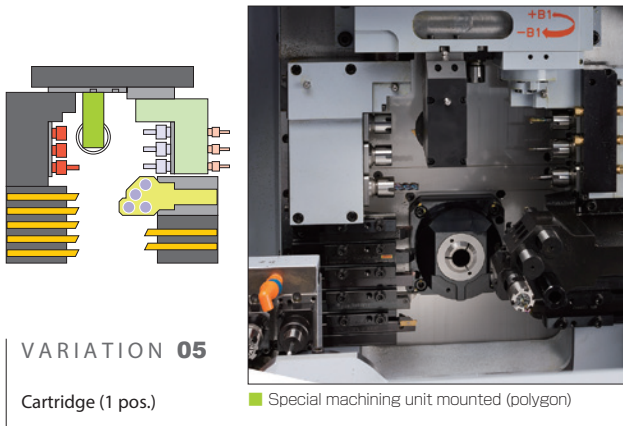
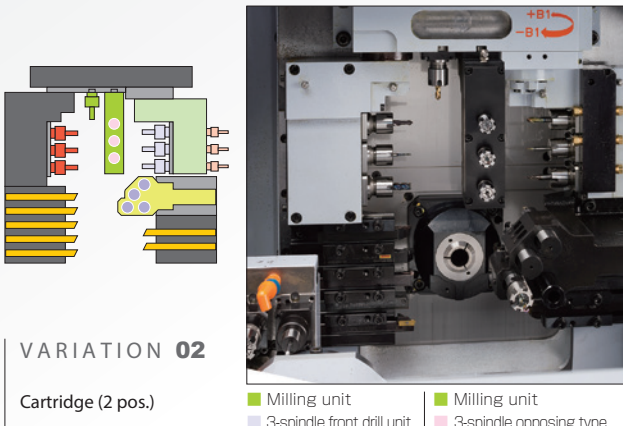
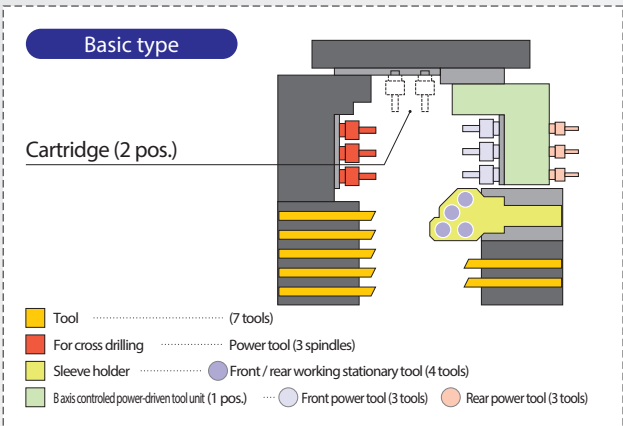


Sub spindle (built-in type)

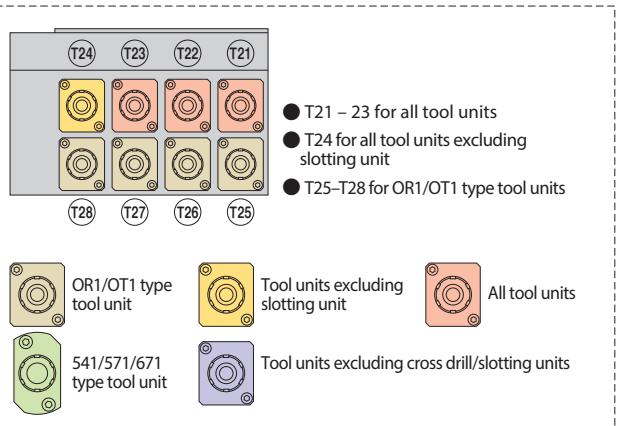
- ⑥ The power-driven tool unit can be mounted on all positions of the Y2-axis controlled back-working tool post (8-spindle type). Various power-driven tools such as cross drilling and slotting are available for expanded machining capability.



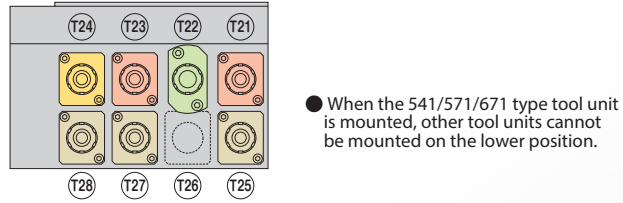
A Wide Variety of Tooling Layouts.



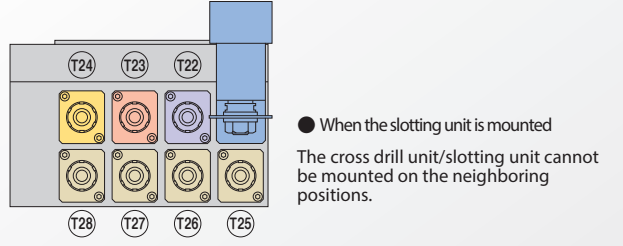
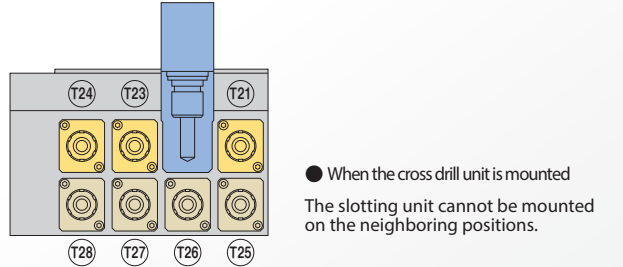
A maximum of 41 tools can be mounted in the 27-position tool station. A full line of tool units includes milling tools, thread whirling tools, slotting tools, polygon turning tools. Therefore, the most suitable tooling pattern can be selected from a wide range of tooling layouts, from a basic type through a front-end power-driven tool oriented type. A 2-spindle drill sleeve holder for deep-hole drilling is also mounted to cover a maximum of 100mm-diameter machining to expand the number of possible machining variations.



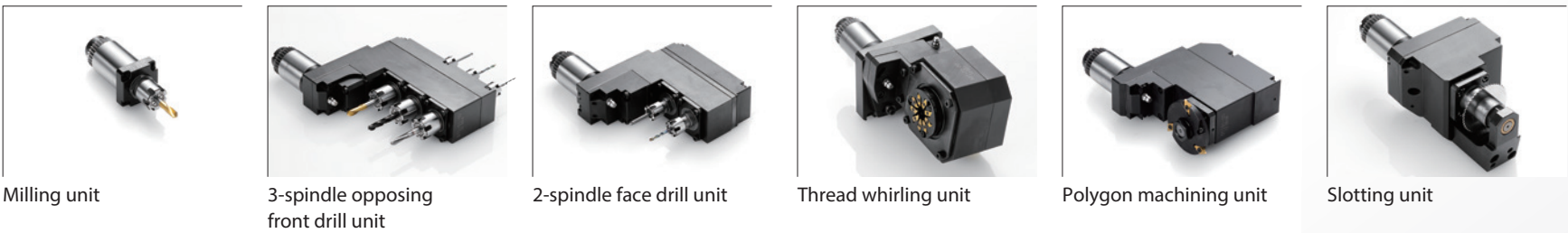
541/571/671 type unit mounting conditions



Cross drill unit/slotting unit mounting conditions



Tool unit (main side)



Tool unit (back side)



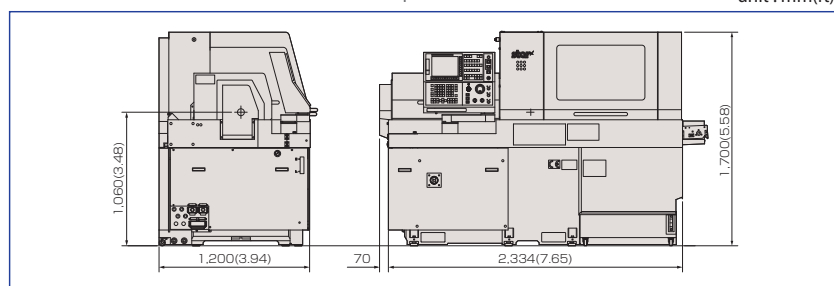
□ Standard Machine Specifications

Item		Specifications
Max. machining diameter		φ 20mm(25/32in)
Max. headstock stroke	Standard	205mm(8in)
	With R.M.G.B. unit	160mm(6-19/64in)
	Non-guide bush type	Bar diameter×2.5 (Max.50mm) (Max.1-31/32in)
Tool		5 tools on the front + 2 tools on the rear (□12mm)
4-Spindle sleeve holder	Number of tools	Front 4 tools
		Rear 4 tools
	Max. drilling capability	φ 12mm(1/2in)
	Max. tapping capability	M10×P1.5
2-spindle front sleeve holder	Number of tools(sleeve)	2 tools
	Max. drilling capability	φ 10mm(25/64in)
	Max. depth of hole	100mm (3-15/16in)
Power driven attachment	Number of tools	Cross milling : 3 tools
		Cartridge type : At 2 position
		B-axis controlled power-driven tool unit : At 1 position (Front 3 tools+Rear 3 tools)
	Max. drilling capability	φ 10mm(25/64in)
	Max. tapping capability	M8×P1.25
	Spindle speed	Max.8,000min ⁻¹
Drive motor		2.2kw
Rapid feed rate		35m/min(X1,X2,Y1,Z1,Z2), 15m/min(Y2)
Main spindle indexing angle		C-axis control
Main spindle speed		Max.10,000min ⁻¹
Main spindle motor		2.2kw(continuous) / 3.7kw(10min./25%ED)
Coolant tank capability		170 ℓ
Dimensions (W×D×H)		2,334×1,200×1,700mm
Weight		2,600kg
Power consumption		4.7KVA
A-weighted sound pressure : note-1		Max. 74.5dB

□ Backworking Attachment Specifications

Item			Specifications
Max. chucking diameter			φ 20mm(25/32in)
Max. length for front ejection			80mm(3-5/32in)
Max. parts projection length			30mm(1-3/16in)
Back 8-Spindle unit	Number of tools	Stationary tool	8 tools
		Power driven tool	8 tools
	Max. drilling capability	Stationary tool	φ 12mm(1/2in)
		Power driven tool	φ 6mm(15/64in)
	Max. tapping capability	Stationary tool	M10×P1.5
		Power driven tool	M5×P0.8
Power-driven att. spindle speed			Max.8,000min ⁻¹
Power-driven att. drive motor			1.0kw(continuous)/1.2kw(5min./30%ED)
Sub spindle indexing angle			C-axis control
Sub spindle speed			Max.10,000min ⁻¹
Sub spindle motor			Built-in motor drive 2.2kw(continuous)/ 3.7kw(10min./25%ED)

□ External Dimensions and Floor Space



unit : mm(ft)

□ Standard Accessories and Functions

1. CNC unit FANUC 31i-B
2. Operation panel 10.4-inch color LCD display
3. Pneumatic unit
4. Automatic centralized lubrication unit
5. Coolant level detector
6. Door interlock system
7. Broken cutoff tool detector
8. Parts ejection detector
9. Drive unit for revolving guide bush
10. Revolving guide bush unit
11. Main / Sub collet
12. C-axis control (Main / Sub)
13. Spindle clamp unit (Main / Sub)
14. 5-station tool holder □12mm
15. 2-station tool holder □12mm
16. Main tool post tool rotation drive unit
17. Cross milling tool unit (3-tool type)
18. B-axis controlled power-driven tool unit
19. 4-spindle sleeve holder
20. Back 8-spindle unit
21. Drive unit for power-driven attachment B
22. Y-axis control for back-working tool post
23. Parts ejector (Spring type)
24. Parts conveyor
25. Air purge for revolving guide bush
26. Sub spindle air purge unit
27. Sub spindle air blow unit
28. Work light
29. Leakage brake

□ Optional Accessories and Functions

1. Coolant flow detector
2. Water removal unit
3. Beacon
4. Parts receptacle in the machine
5. Parts separator unit A
6. Main spindle inner tube
7. Parts ejector (Air cylinder type)
8. Rotary magic guide bush unit
9. Parts ejector with guide tube
10. Parts stopper unit
11. Coolant unit 2.5MPa
12. Coolant unit 6.9MPa
13. Coolant pipings
14. Oil-hole drill type
15. Automatic bar feeder interface
16. Compliant with the RS-232C interface
17. Transformer
18. Safety relay module version
19. Transformer CE marking version
20. Transformer CE 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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