



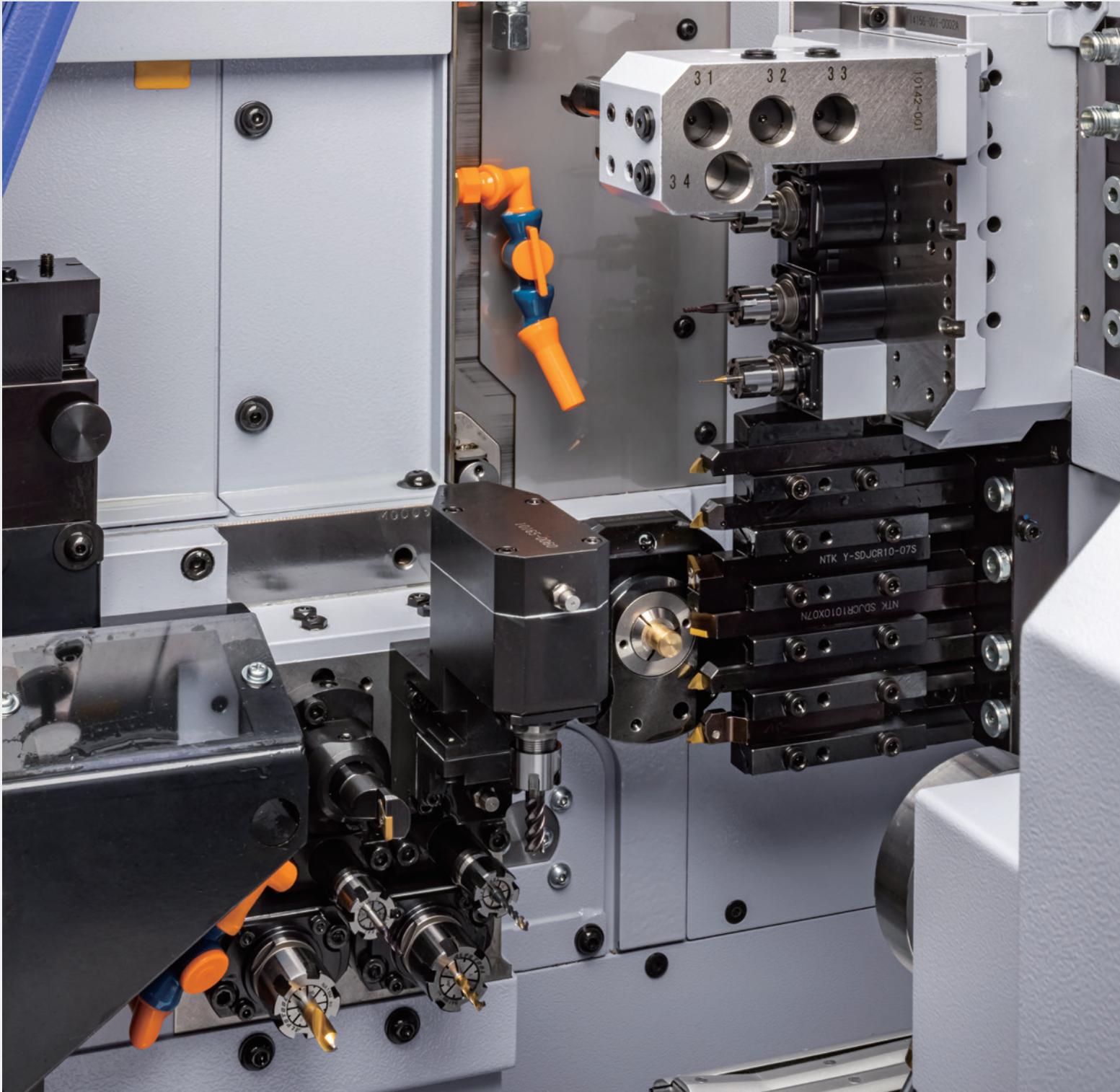
CNC SWISS TYPE AUTOMATIC LATHE 

SL-7/10



High-spec and Compactness

A New Generation Machine Specialized in Small Diameter Processing from Star Micronics



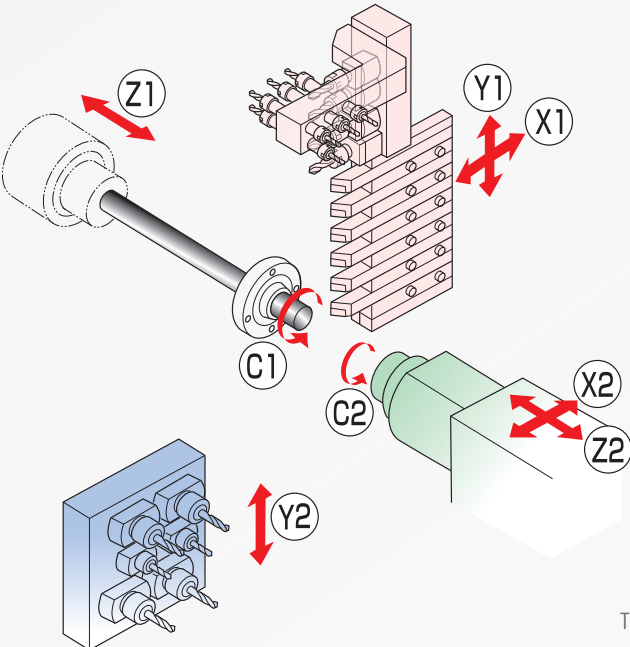
Condensed high-spec technology fulfilling updated needs by new design idea

State-of-the-art small diameter processing is made possible by yet another evolution of design by Star Micronics. The single gang type tool post is laid out vertically to save space which is a new design concept. The combination of a 5-spindle cartridge-type cross drilling unit and the backworking 6-spindle unit with Y-axis control offers a variety of multi-processing activities. At the same time, the main spindle and faster power-driven tools are designed to optimize small diameter processing. The debut of the SL-7/10 with its compact body and high performance marks the arrival of the new generation of small diameter processing special models for you.

SL-7/10

CNC SWISS TYPE AUTOMATIC LATHE

- Machine composition :
- Main spindle
 - Sub spindle
 - Gang type Tool post
 - Cartridge-type 5-spindle cross drilling unit
 - Backworking 6-spindle unit with Y-axis control



TOOLING SYSTEM

■ Tool holder	Turning tool	6 tools
■ Sleeve holder (Cartridge Type)	Front-end stationary tool	4 tools or 6 tools
	Rear-end stationary tool	4 tools or 6 tools
■ Power-driven tool	Special tool for cross drilling : 1 tools+Cartridge type (4pos.)	
■ Backworking 6-spindle unit with Y-axis control	Stationary tool	Max.6 tools
	Power-driven tool	Max.4 tools

✦ In Pursuit of Higher Functionality and Performance ✦



With Stepcycle



A detailed close-up of a precision machine tool head, likely a CNC lathe or mill. The image shows a complex assembly of black and silver metal components. A large, dark grey tool holder is mounted on a white base. Below it, several smaller tool holders are visible, each containing a different type of cutting tool or probe. The tools have various diameters and lengths, some with gold-colored tips. The background is a blurred view of the machine's interior, showing other components and a bright light source.



Technical drawing of the rear view of the device. The drawing shows the mounting holes and dimensions for the rear panel. Key dimensions include a horizontal distance of 41.5mm between the centers of the top two mounting holes, a vertical distance of 34mm between the top and bottom rows of mounting holes, a vertical distance of 25.8mm between the centers of the bottom two mounting holes, a horizontal distance of 50mm between the centers of the bottom two mounting holes, and a horizontal distance of 12mm from the center of the bottom-left mounting hole to the left edge of the device.

▪ Main spindle motor	3.7/5.5kW
▪ Cross machining tool motor	1.0/1.2kW
▪ Backworking tool motor	1.0/1.2kW

▪ Main spindle	18,000min ⁻¹ *
▪ Sub spindle	12,000min ⁻¹
▪ Cross machining tool	12,000min ⁻¹
▪ Backworking tool	12,000min ⁻¹



A Backworking Tool Post with High Rigidity

+	Improved Operability and Workability	+
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A Star 6000 fax machine is shown. It has a dark grey body and a blue handset. The control panel includes a small LCD screen displaying '1234567890', a numeric keypad, and various function buttons. The brand name 'star' is visible on the handset.

Schedulability

Task Name	Period	Deadline	Priority
Task 1	1000	1000	1
Task 2	500	500	2
Task 3	250	250	3
Task 4	125	125	4
Task 5	62.5	62.5	5
Task 6	31.25	31.25	6
Task 7	15.625	15.625	7
Task 8	7.8125	7.8125	8
Task 9	3.90625	3.90625	9
Task 10	1.953125	1.953125	10
Task 11	976.5625	976.5625	11
Task 12	488.28125	488.28125	12
Task 13	244.140625	244.140625	13
Task 14	122.0703125	122.0703125	14
Task 15	61.03515625	61.03515625	15
Task 16	30.517578125	30.517578125	16
Task 17	15.2587890625	15.2587890625	17
Task 18	7.62939453125	7.62939453125	18
Task 19	3.814697265625	3.814697265625	19
Task 20	1.9073486328125	1.9073486328125	20
Task 21	953.67431640625	953.67431640625	21
Task 22	476.837158203125	476.837158203125	22
Task 23	238.4185791015625	238.4185791015625	23
Task 24	119.20928955078125	119.20928955078125	24
Task 25	59.604644775390625	59.604644775390625	25
Task 26	29.802322387695312	29.802322387695312	26
Task 27	14.901161193847656	14.901161193847656	27
Task 28	7.450580596923828	7.450580596923828	28
Task 29	3.725290298461914	3.725290298461914	29
Task 30	1.862645149230957	1.862645149230957	30
Task 31	931.3225596196308	931.3225596196308	31
Task 32	465.6612798098154	465.6612798098154	32
Task 33	232.8306399049077	232.8306399049077	33
Task 34	116.4153199524538	116.4153199524538	34
Task 35	58.2076599762269	58.2076599762269	35
Task 36	29.10382998811345	29.10382998811345	36
Task 37	14.551914994056725	14.551914994056725	37
Task 38	7.275957497028362	7.275957497028362	38
Task 39	3.637978748514181	3.637978748514181	39
Task 40	1.8189893742570905	1.8189893742570905	40
Task 41	909.4944921875	909.4944921875	41
Task 42	454.74724609375	454.74724609375	42
Task 43	227.373623046875	227.373623046875	43
Task 44	113.6868115234375	113.6868115234375	44
Task 45	56.84340576171875	56.84340576171875	45
Task 46	28.421702880859375	28.421702880859375	46
Task 47	14.210851440429688	14.210851440429688	47
Task 48	7.105425720214844	7.105425720214844	48
Task 49	3.552712860107422	3.552712860107422	49
Task 50	1.776356430053711	1.776356430053711	50
Task 51	888.1782470703125	888.1782470703125	51
Task 52	444.0891235351562	444.0891235351562	52
Task 53	222.0445617675781	222.0445617675781	53
Task 54	111.02228088378905	111.02228088378905	54
Task 55	55.511140441894525	55.511140441894525	55
Task 56	27.75557022094726	27.75557022094726	56
Task 57	13.87778511047363	13.87778511047363	57
Task 58	6.938892555236815	6.938892555236815	58
Task 59	3.4694462776184075	3.4694462776184075	59
Task 60	1.7347231388092037	1.7347231388092037	60
Task 6			

Table 1: ...

x	y
$x = 100$	$y = 100$
$x = 100$	$y = 100$

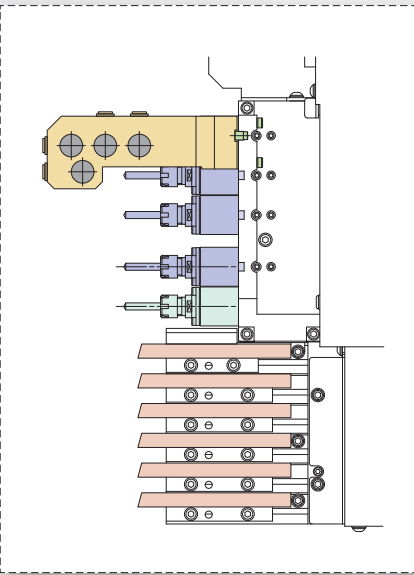
Navigation icons: back, forward, search, etc.

[illegible]

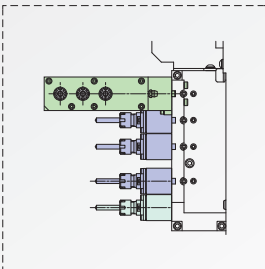


Main Tool Post

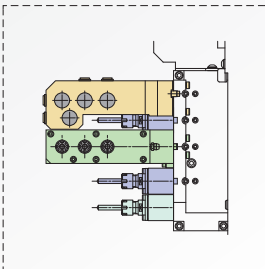
TOOLING SYSTEM
Cartridge-type 5-spindle cross drilling unit



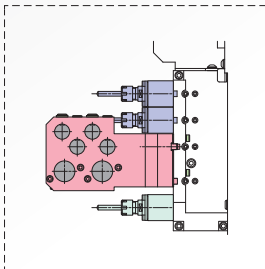
VARIATION 01



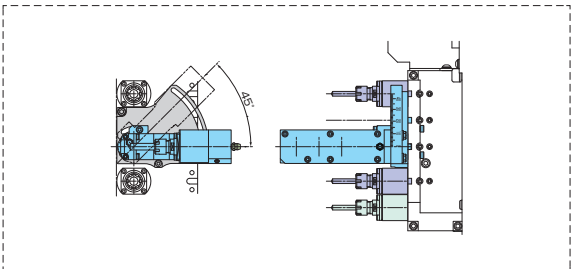
VARIATION 03



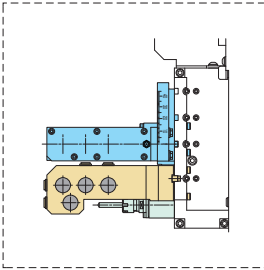
VARIATION 04



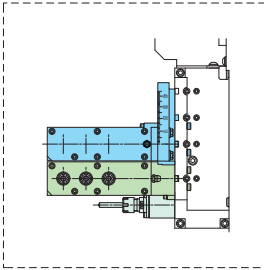
VARIATION 05



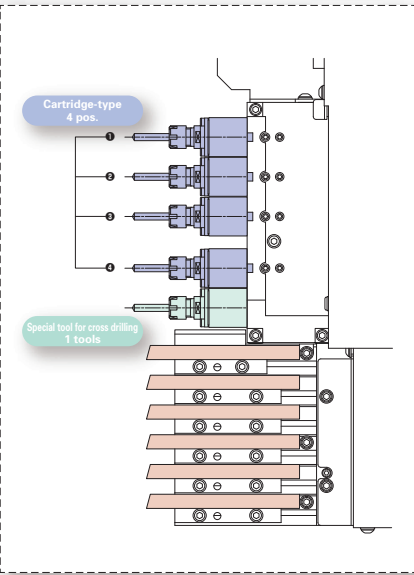
VARIATION 14



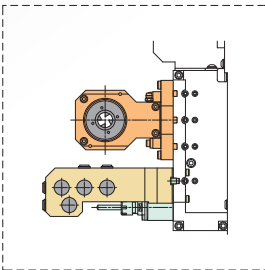
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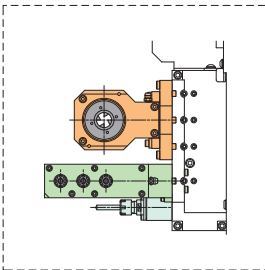
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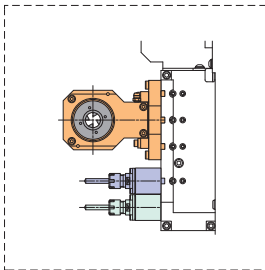
VARIATION 02



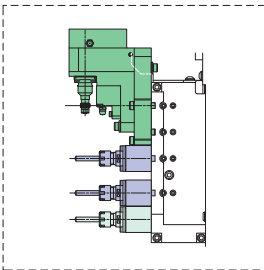
VARIATION 08



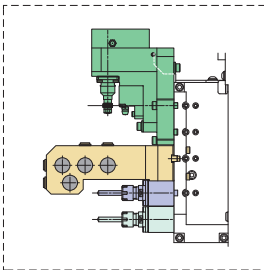
VARIATION 09



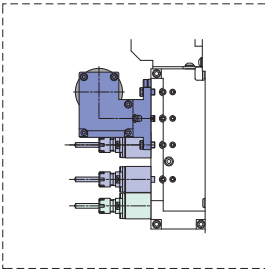
VARIATION 10



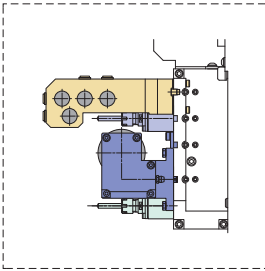
VARIATION 17



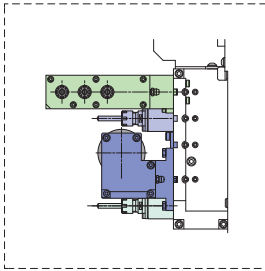
VARIATION 18



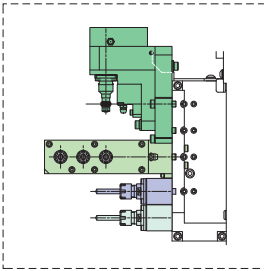
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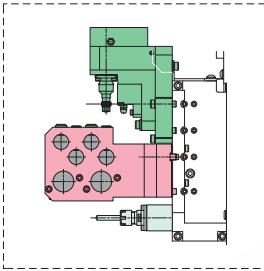
VARIATION 12



VARIATION 13



VARIATION 19

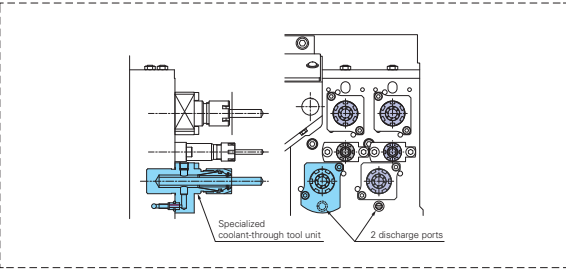
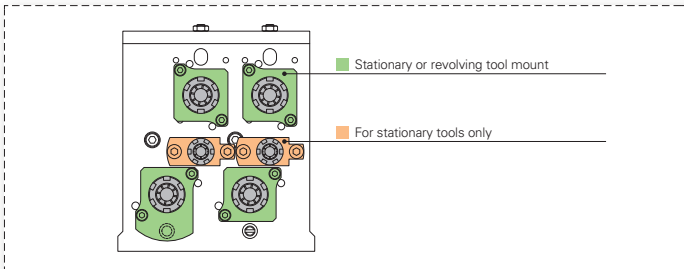


VARIATION 20

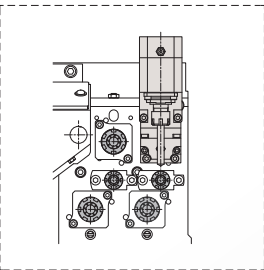
- Milling unit
- 4-spindle sleeve holder
- 6-spindle sleeve holder
- 3-spindle counterface drilling unit
- Skewed hole processing unit
- Slotting unit
- Thread whirling unit
- Polygon machining unit
- Gear hobbing unit

Backworking
Tool Post

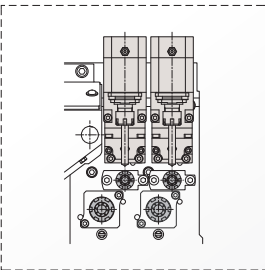
TOOLING SYSTEM
Backworking 6-spindle unit with Y-axis control



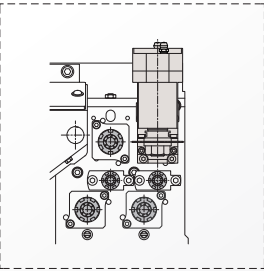
VARIATION 01



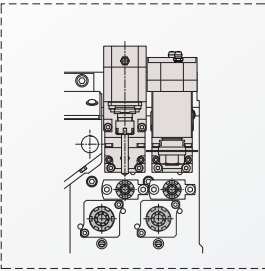
VARIATION 02



VARIATION 03



VARIATION 04



VARIATION 05

Main Tool Post

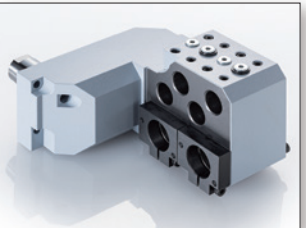
Tool Units



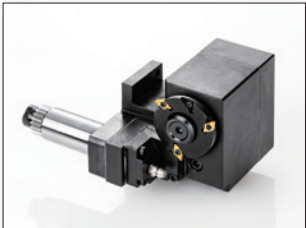
Milling unit



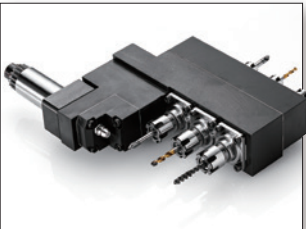
4-spindle sleeve holder



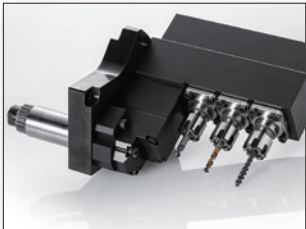
6-spindle sleeve holder



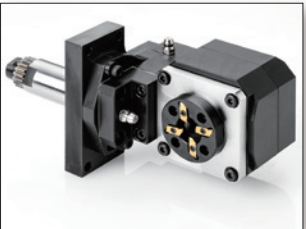
Polygon machining unit



3-spindle counterface drilling unit



Skewed hole processing unit



Thread whirling unit



Slotting unit

Backworking
Tool Post

Tool Units



Drill sleeve



Specialized coolant-through tool unit



Gear hobbing unit



Milling unit



Cross drilling unit



Slotting unit

□ Standard Machine Specifications

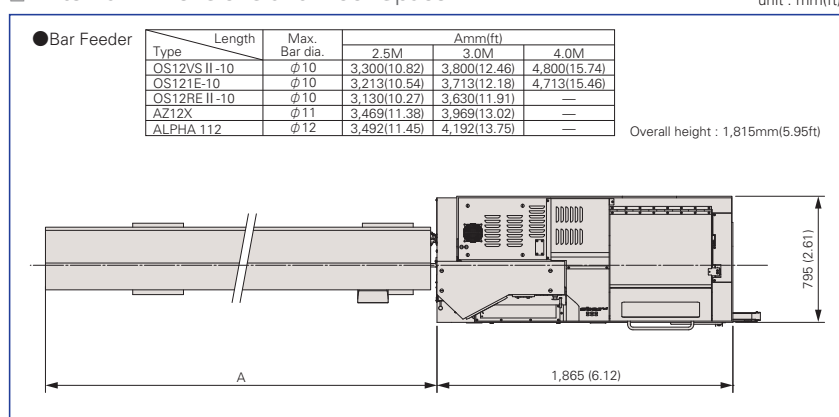
Item		Specifications
Max. machining diameter		φ 10mm(25/64in)
Max. headstock stroke	Stationary G.B. type	135mm(5-5/16in)
	R.G.B. type	105mm(4-9/64in)
	R.M.G.B. type	75mm(2-61/64in)
Tool	Number of tools	6 tools
	Tool shank	□8mm / □10mm
Sleeve holder	4-spindle	φ 16mm(5/8in)×4 tools
	6-spindle	φ 16mm(5/8in)×4 tools
		φ 22mm(55/64in)×2 tools
	Max. drilling capability	φ 6mm(15/64in)
	Max. tapping capability	M5×P0.8
Power driven attachment	Number of tools	Cross milling 1 tools(ER11)+ Cartridge type 4 positions
	Max. drilling capability	φ 5mm(3/16in)
	Max. tapping capability	M4×P0.7
	Spindle speed	Max.12,000min ⁻¹
	Drive motor	1.0kW(continuous) / 1.2kW(5min./30%ED)
Rapid feed rate		35m/min (X1, X2,Y1, Z1, Z2), 15m/min (Y2)
Main spindle indexing angle		C-axis control
Main spindle speed	Stationary G.B. type	Max.18,000min ⁻¹
	R.G.B. type	Max.15,000min ⁻¹
Main spindle motor		3.7kW(continuous) / 5.5kW(10min./25%ED)
Coolant tank capacity		109 ℓ
Dimensions (W×D×H)		1,865×795×1,815mm
Weight		1,600kg
Power consumption		3.8kVA
A-weighted sound pressure : note-1		Max.74dB(A)

□ Backworking Attachment Specifications

Item			Specifications
Max. chucking diameter			φ 10mm(25/64in)
Max. length for front ejection			70mm(2-3/4in)
Max. parts projection length			20mm(25/32in)
Back 6-spindle unit	Number of tools		6 tools
	Max. drilling capability	Stationary tool	φ 6mm(15/64in)
		Power driven tool	φ 5mm(3/16in)
	Max. tapping capability	Stationary tool	M5×P0.8
		Power driven tool	M4×P0.7
	Power-driven att. spindle speed		Max.12,000min ⁻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.12,000min ⁻¹
Sub spindle motor			0.55kW(continuous) / 1.1kW(15min./40%ED)

* The specification value depending on the type of sub-spindle chuck. Please confirm the details with the sales manager.

□ External Dimensions and Floor Space



□ Standard Accessories and Functions

1. CNC unit FANUC 32i-B
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. Cs contouring control (Main / Sub)
8. Spindle clamp unit (Main / Sub)
9. Revolving guide bush unit
10. Drive unit for revolving guide bush
11. Air purge for revolving guide bush
12. Main / Sub collet
13. 6-station tool holder (□ 8 mm or □ 10 mm)
14. 4-spindle sleeve holder
15. 5-spindle cross drilling unit
16. Broken cutoff tool detector
17. Backworking attachment
18. Back 6-spindle unit
19. Drive unit for power-driven (6-spindle backworking unit)
20. Sub spindle air purge unit
21. Sub spindle air blow unit
22. Parts ejection detector
23. Work light
24. Leakage breaker

□ Optional Accessories and Functions

1. Manual pulse generator
2. Coolant flow detector
3. Check valve
4. Parts conveyor
5. Parts receptacle in Machine
6. Oil pan cover
7. Water separator
8. Oil mist filter
9. Beacon
10. Main spindle inner tube
11. Rotary magic guide bush unit
12. Parts ejector (Spring type)
13. Parts ejector (Air cylinder type)
14. Parts ejector with guide tube
15. Product separator system, A-type
16. Coolant unit (2.5MPa/0.7MPa)
17. Coolant unit signal cable
18. Coolant unit power cable
19. Coolant valve
20. Coolant pipings
21. Coolant pump with defoaming function
22. 400 W coolant pump
23. Automatic bar feeder interface
24. LAN/RS232C interface
25. Chip conveyor interface
26. Transformer
27. Transformer CE marking version
28. CE/UKCA marking

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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9001 ISO 14001
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2021.09_Ver1.0_1