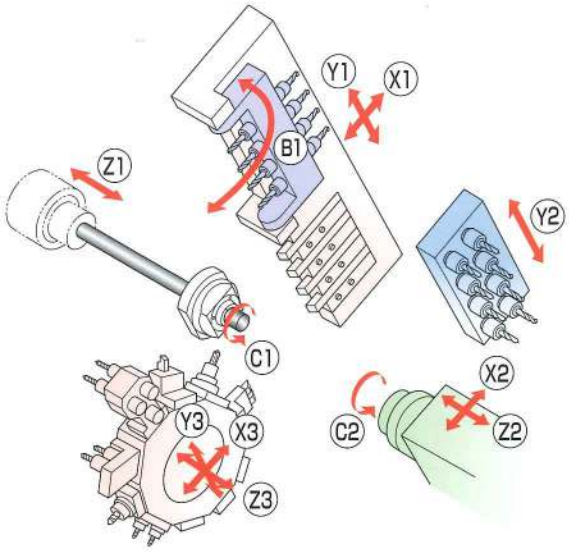
NEW model

type B:
Turret-type tool post which employs the one-position tool drive mechanism

type A:
Quick-changeable turret-type tool post which enables use of the existing tool units

SWISS TYPE AUTOMATIC LATHE
equipped with star motion control system

SX-38 type A/B





The latest model is of the highest quality in all aspects of the 38-dia. class.

The new design concept was introduced for all of functionality, rigidity, and workability to meet the needs of machining large-diameter and complex-shaped workpieces.

❶ Enhanced functionality

- The gang-type tool post is equipped with the 4-spindle counter face milling unit with B-axis control function *1. Control of turning angles at the range from 0 deg. to 90 deg. and from 0 deg. to -45 deg. is possible.
  *1: ER20 (front side) / ER16 (rear side)
- In addition to type A, quick-changeable turret-type tool post enabling use of the existing tool units, type B, turret-type tool post with one-position tool drive mechanism is lined up.
- The sub spindle motor which has the same power as the main spindle motor (7.5/11kW) enhances machining capability on the rear side.
- Power tool units can be mounted on all positions of the 8-spindle back working unit with Y-axis control function.

❷ Improved workability and operability

- The layout of the tool post with slanted bed frame greatly improved setup and maintenance workability.
- Operation assistance software has a variety of functions such as "Tool Unit No. Input Screen" for checking tool unit dimensions and "Alarm Help Function" for checking alarm contents on the screen.

❸ Higher rigidity and accuracy

- The 4-spindle counter face milling unit employs the structure for holding the upper and lower ends. Furthermore, the clamp mechanism is additionally employed to improve the unit's holding rigidity.
- The dovetail groove guideway is employed on the sliding surfaces of the X3-axis of the turret-type tool post and the Y2-axis of the 8-spindle back working unit to improve rigidity of the tool post.
- Type B turret-type tool post employs the one-position tool drive mechanism which suppresses vibration and prevents heating of the tool unit.
- The "Spindle sleeve slide guideway structure" in non-guide bush mode holds cutting force on the slideways configured close to the cutting point so as to suppress deflection of the spindle and achieve highly accurate machining.
- A hydraulic rotary cylinder installed in the main chucking mechanism secures stable gripping force regardless of variation of workpiece diameters.
- The thermal sensors installed on various positions of the machine achieve highly accurate and flexible thermal displacement correction.

Selection of turret-type tool post type	type A	type B
	Quick-changeable type	One-position tool drive type

ECO
STAR Environmental Standards Conformity models

Standard Machine Specifications

Item			Specifications
Max. machining diameter			φ38mm(1-1/2in)
Max. headstock stroke	Standard		320mm(13-19/32in)
	R.M.G.B. type		289mm(11-3/8in) : OP
	N.G.B. type		95mm(3-47/64in)
Tool post configuration		Gang type	Turning tool + Power-driven tool
		Turret type	10 stations
Tool	Number of tools	Gang type	4 tools
		Turret type	Max.2tools / station
Sleeve	Number of tools		Max.3tools / station
	Max. drilling capability		φ23mm(29/32in)
	Max. tapping capability		M16×P2.0
Power driven attachment	Number of tools	Gang type	B-axis controlled power-driven tool unit (Front : 4 tools, rear : 4 tools)
		Turret type	Max.2tools / station
	Max. drilling capability	Gang type	φ10mm(25/64in)
		Turret type	φ10mm(25/64in)
	Max. tapping capability	Gang type	M8×P1.25
		Turret type	M8×P1.25
	Spindle speed	Gang type	Max.6,000min^{-1}
		Turret type	Max.5,700min^{-1}
	Drive motor	Gang type	2.2kW(continuous) / 3.0kW(5min. / 30%ED)
		Turret type	2.7kW(continuous) / 4.0kW(5min. / 30%ED)
Rapid feed rate			30m/min(X1,X2,X3,Y1,Z1,Z2,Z3)
			24m/min(Y2), 15m/min(Y3)
Main spindle indexing angle			C-axis control
Main spindle speed			Max.7,000min^{-1}
Main spindle motor			7.5kW(continuous) / 11kW(10min. / 25%ED)
Coolant tank capability			284 ℓ
Dimensions (W×D×H)			2,955×1,430×1,975mm
Power consumption			14.4kVA

Backworking Attachment Specifications

Item			Specifications
Max. chucking diameter			φ38mm(1-1/2in)
Max. length for front ejection			150mm(5-7/8in)
Max. parts projection length			75mm(2-61/64in)
Back 8-Spindle unit	Number of tools	Stationary tool	Max.8 tools
		Power driven tool	Max.8 tools
	Max. drilling capability	Stationary tool	φ23mm(29/32in)
		Power driven tool	φ10mm(25/64in)
	Max. tapping capability	Stationary tool	M16×P2.0
		Power driven tool	M8×P1.25
Power-driven att. spindle speed			Max.5,000min-1
Power-driven att. drive motor			1.2kW(continuous) / 2.2kW(5min./30%ED)
Sub spindle indexing angle			C-axis control
Sub spindle speed			Max.7,000min-1
Sub spindle motor			7.5kw(continuous) / 11kw(10min. / 25%ED)

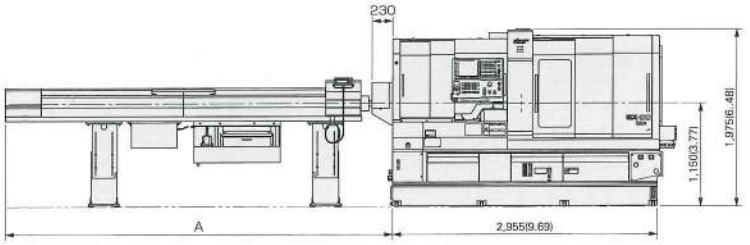
External Dimensions

Unit : mm(ft)

● Barfeeder

Type \ Length	Max. Bar dia.	A mm (ft) 2.5M	3.0M	4.0M
OS45RE-42	φ42	3,910(12.82)	4,410(14.46)	5,410(17.74)
ASR X-32P N3	φ42	3,815(12.51)	4,315(14.15)	5,315(17.44)

Overall height : 1,430mm (4.69ft)



Standard Accessories and Functions

1. CNC unit FANUC 31i-B5
2. Operation panel 10.4-inch color LCD display
3. Manual pulse generator
4. Hydraulic unit
5. Pneumatic unit
6. Automatic lubrication unit
7. Coolant level detector
8. Door interlock system
9. Broken cutoff tool detector
10. Drive unit for revolving guide bush
11. Revolving guide bush unit
12. Air purge for revolving guide bush
13. Main / Sub collet
14. C-axis control (Main / Sub)
15. Spindle clamp unit
16. Gang-type tool holder for fixed 4 tools (□ 20 mm : 1 tool, □ 16 mm : 3 tools)
17. 4-spindle counter face milling unit with B-axis control function
18. B-axis clamp unit
19. 10-position turret-type tool post
20. Turret-type tool post tool drive unit (type B: one-position tool drive mechanism)
21. Sub spindle air purge unit
22. Drive system for power-driven attachment (8-spindle back working unit)
23. 8-spindle back working unit tool drive unit
24. spindle cooling unit
25. Parts conveyor
26. Automatic bar feeder interface
27. LAN/RS-232C interface
28. Work light

Optional Accessories and Functions

1. Coolant flow detector
2. Parts ejection detector
3. Water removal unit
4. Beacon
5. Non-guide bush type
6. Rotary magic guide bush unit
7. For pneumatic unit rotary magic guide bush
8. Parts receptacle in the machine
9. Parts ejector (Spring type rotary ver.)
10. Parts ejector (Air cylinder type)
11. Parts ejector with guide tube
12. Parts catcher
13. Product separator
14. Parts receptacle
15. Chip conveyor, hinge-type
16. Coolant tank, large-capacity type
17. Coolant unit (6.9MPa / 2.5MPa / 0.7MPa)
18. Coolant unit signal cable
19. Coolant unit power cable
20. Coolant valve(6.9MPa / 2.5MPa)
21. Coolant pipings
22. Relocation detection device
23. I / O module extension unit
24. Transformer CE marking version
25. CE marking
26. Tool Presetter

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.

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