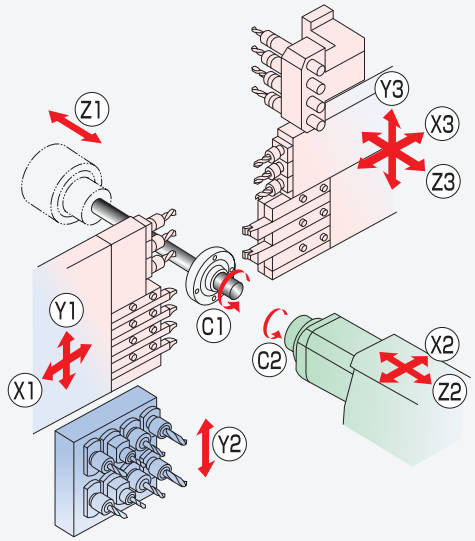
# SW-20

## SWISS TYPE AUTOMATIC LATHE





View machine demo >

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## High productivity

» Opposing gang-type tool post
Thanks to simultaneous machining (turning + drilling) by independently controlled opposing gang-type tool posts, machining time is drastically reduced.

» Back working tool post (with Y-axis control) exclusively designed for 8-spindle capability
The machine employs a tool post (with Y-axis control) which is exclusively designed for 8-spindle back working. It enables efficient separation division through enhanced simultaneous machining on both the front and rear sides.

» Star Motion Control System
The unique control technology known as the Star Motion Control System achieves a smooth and uninterrupted tool path and achieves shortened non-cutting time.

» Electric Drives
By eliminating hydraulically driven equipment and introducing electrically-driven equipment, idle time between each axis operation is reduced and energy saving is achieved.

» Chucking unit
The collet can be opened/closed without decreasing the spindle rotation speed, thus reducing the non-cutting time at the time of spindle acceleration/deceleration.

## Strengthened machining capability

» A tool post (with Y-axis control) exclusively designed for 8-spindle back working
The tool post designed for back working can accommodate a maximum of 6 power-driven tools to allow versatile complex machining (cross milling, slotting, etc.) on the rear side.

» High-power sub spindle
The sub spindle employs a spindle motor with the same power as the main spindle. This improves the machining capability on the back side and accommodates the machining of a range of difficult materials.

» Machining of demanding materials
In combination with a high-pressure coolant unit (optional), this model is suited to the machining of a range of exotic materials.

ECO

STAR Environmental Standards Conformity models

"A new model to transform the productivity in complex working."

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## Standard Machine Specifications

| Item | | | Specifications |
|---|---|---|---|
| Max. machining diameter | | | φ20mm(25/32in) |
| Max. headstock stroke | Standard | | 205mm(8in) |
| Tool post configuration | | Front | Turning tool + Power-driven tool |
| | | Rear | Turning tool+4-spindle sleeve holder+Power-driven tool |
| Tool | Number of tools | Front | 4 tools |
| | | Rear | 2 tools |
| | Tool shank | | □12mm ／ □16mm |
| 4-spindle sleeve holder | Number of tools | | Front 4 tools<br>Rear 2 tools(Max.4 tools) |
| | Max. drilling capability | | φ10mm(25/64in) |
| | Max. tapping capability | | M8×P1.25 |
| Power-driven att. | Number of tools | Front | 3 tools |
| | | Rear | 3 tools |
| | Max. drilling capability | | φ8mm(5/16in) |
| | Max. tapping capability | | M6×P1.0 |
| | Max. milling capability | | φ10mm(25/64in) |
| | Max. slotting capability | | 1.5mm(W)×4mm(D) |
| Main spindle indexing angle | | | C-axis control |
| Main spindle speed | | | Max.10,000min$^{-1}$ |
| Main spindle motor | | | Built-in motor drive 2.2kw(continuous)／3.7kw(10min./25%ED) |
| Rapid feed rate | | | 35m/min(X2,Z1,Z2,Y1,Y3)、20m/min(X1,Y2,X3,Z3) |
| Power-driven att. spindle speed | | | Max.8,000min$^{-1}$ |
| Power-driven att. drive motor | | | 1.0kw(continuous)／1.2kw(5min./30%ED) |
| Coolant tank capacity | | | 150ℓ |
| Dimensions (W×D×H) | | | 2,588×1,300×1,765mm |
| Center height | | | 1,040mm(3.41ft) |
| Weight | | | 3,400kg |
| Power consumption | | | 4.8KVA |
| A-weighted sound pressure : note-1 | | | Max.70dB (A) |

## Standard Accessories and Functions

1. CNC unit FANUC 31i-B5
2. Operation panel 10.4-inch color LCD display
3. Drive unit for revolving guide bush
4. C-axis control unit (Main／Sub)
5. Spindle clamp unit (Main／Sub)
6. Drive system for power-driven tool (for the tool posts 1 and 2)
7. 4-Spindle sleeve holder
8. Back 8-Spindle unit
9. Drive system for power-driven tool (for Back 8-spindle unit)
10. Automatic centralized lubrication unit
11. Door interlock system
12. Coolant level detector (lower limit)
13. Broken cutoff tool detector
14. Leakage breaker
15. Air purge for revolving guide bush
16. Pneumatic unit
17. Sub spindle air purge unit
18. Sub spindle air blow unit
19. Work light
20. Parts separator

## Optional Accessories and Functions

1. Revolving guide bush
2. Collet (Main／Sub)
3. 2-station tool holder (□12mm/□16mm)
4. 4-station tool holder (□12mm/□16mm)
5. Parts conveyor
6. Parts ejector A
7. Parts separator unit A
8. Barstock gripping unit
9. Parts ejector with guide tube
10. Parts stopper unit
11. Coolant unit 1.5MPa
12. Coolant unit 6.9MPa
13. Coolant pipings
14. Main spindle inner tube
15. Coolant flow detector
16. Parts ejection detector
17. Warning light
18. Water separator
19. Compliant with the RS-232C interface

## Backworking Attachment Specifications

| Item | | | Specifications |
|---|---|---|---|
| Max. chucking diameter | | | φ20mm(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 | Max.8 tools |
| | | Power driven tool | Max.6 tools |
| | Max. drilling capability | Stationary tool | φ10mm(25/64in) |
| | | Power driven tool | φ8mm(5/16in) |
| | Max. tapping capability | Stationary tool | M8×P1.25 |
| | | Power driven tool | M6×P1.0 |
| 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) |
| Power-driven att. spindle speed | | | Max.8,000min$^{-1}$ |

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.

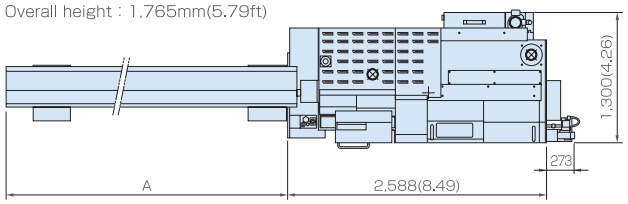
note-1 : ● Measures conforming to EN standard.
● A-weighted sound pressure is a general assessment standard characteristic that corrected the sound level to human acoustic sense.

## External Dimensions & Floor Space

unit: mm(ft)

● Bar Feeder

| Type \ Length | A(mm) | | |
|---|---|---|---|
| | 2.5M | 3.0M | 4.0M |
| OS203E | 3,300(10.82) | 3,750(12.30) | 4,600(15.09) |
| S204 | 3,208(10.52) | 3,708(12.16) | 4,708(15.44) |

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## Star Micronics GB Limited

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