

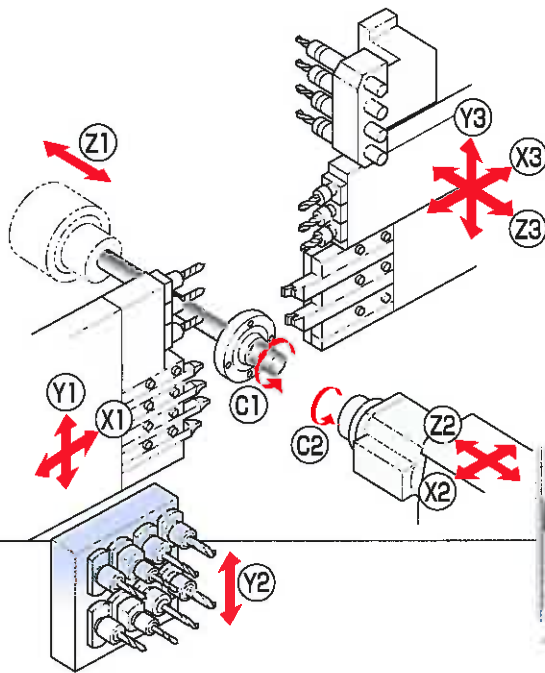
*The mechanical and control systems are designed to minimize non-cutting time to the utmost level.*

*The tool post (with Y-axis control function), exclusively designed for sub spindle working, allows many complex features to be machined independently whilst being overlapped with front end working operations.*

**SWISS TYPE AUTOMATIC LATHE**  
equipped with star motion control system

**SW-20**

*A new model to transform  
the productivity in complex working*



*The Pursuit of reduced idle times both mechanically and electrically through the latest software allow complex components to be manufactured in the fastest possible times to improve both production output & profitability.*

### High Productivity

- Simultaneous machining (turning + drilling, etc.) by opposing plattens leads to shortened machining time.
- The 8-spindle tool post (with Y-axis control function) exclusively designed for back end working. Front and rear end working are independently controlled to greatly reduce machining time.
- The Star Motion Control System ensures an uninterrupted tool path.
- Elimination of hydraulic pressure (by introducing an electric drive) to reduce idle time between each axis operation.
- The collets can be opened and closed even during high-speed operation to again help reduce non-cutting time at the time of spindle acceleration/deceleration.

### Machining Capabilities

- A tool post (with Y-axis control function) exclusively designed for 8-spindle back working is mounted. A cross milling unit, when optionally mounted, ensures diverse complex machining on the back end.
- By supplying the motor on the sub spindle with the same power as the main spindle, the freedom to programme efficiently is improved.
- By combining a high-pressure coolant unit (optional), difficult to machine materials can also be machined whilst still achieving high levels of productivity.

### Operability

- A variety of new functions, such as manual handle retracting, program check, code help, alarm help and others are added to help the operator.

**An opposing gang-type tool post and a tool post (with Y-axis control function) exclusively designed for back end working ensures ultra-quick and flexible machining of complicated components.**

■ **Standard Machine Specifications** OP: Option

| 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+End working stationary tool+Power-driven tool  |
| Tool                            | Number of tools          | Front 4 tools   |
|                                 | Rear                     | 2 tools   |
| Tool shank                      |                          | □12mm OP / □16mm OP   |
| 4-spindle sleeve holder         | Number of tools          | Front 4 tools : OP<br>Rear 2 tools(Max 4 tools) OP          |
|                                 | Max. drilling capability | φ10mm(25/64in)  |
|                                 | Max. tapping capability  | M8×P1.25  |
| Power-driven att.               | Number of tools          | Front 3 tools : OP<br>Rear 3 tools OP                       |
|                                 | 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 <sup>-1</sup>                                 |
| Main spindle motor              |                          | Built-in motor drive 2.2kw(continuous)/3.7kw(1.0min./25%ED) |
| Rapid feed rate                 |                          | 35mm/min(X,Z), 21,22,11,Y3, 20mm/min(X1,Y2,X3,Z3)           |
| Power-driven att. spindle speed |                          | Max.8,000min <sup>-1</sup>                                  |
| Power-driven att. drive motor   |                          | 1.0kw(continuous)/1.2kw(5min./30%ED)                        |
| Coolant tank capacity           |                          | 118ℓ  |
| Dimensions (W×D×H)              |                          | 2,583×1,150×1,765mm   |
| Center height                   |                          | 1,040mm(3.41ft)   |
| Weight                          |                          | 3,500kg   |

■ **Standard Machine 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)  |
| Number of tools                 |  | 8 tools   |
| Back 8-spindle unit             | 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 <sup>-1</sup>                                 |
| Sub spindle motor               |  | Built-in motor drive 2.2kw(continuous)/3.7kw(1.0min./25%ED) |
| Power-driven att. spindle speed |  | Max.8,000min <sup>-1</sup>                                  |

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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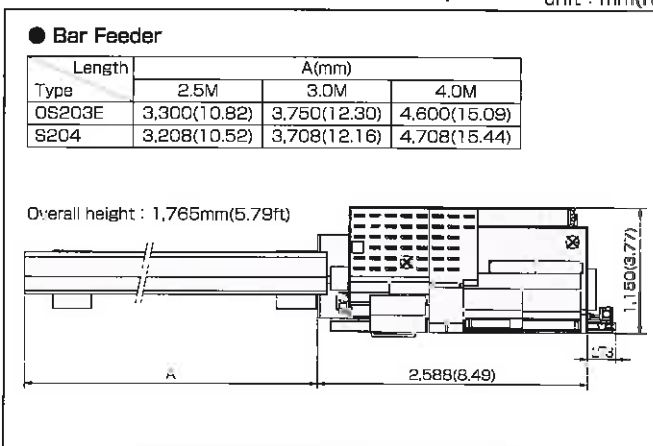
■ **Standard Accessories and Functions**

- CNC unit FANUC 31i-B5
- Operation panel 10.4-inch color LCD display
- Drive unit for revolving guide bush
- C-axis control unit (Main/Sub)
- Spindle clamp unit (Main/ Sub)
- Tool rotation drive unit (for the tool posts 1 and 2)
- 4-Spindle sleeve holder
- Back 8-Spindle unit
- Drive unit for power-driven attachment B
- Automatic centralized lubrication unit
- Door interlock system
- Coolant level detector (lower limit)
- Broken cutoff tool detector
- Leakage breaker
- Air purge for revolving guide bush
- Pneumatic unit
- Sub spindle air purge unit
- Work light
- Parts separator

■ **Optional Accessories and Functions**

- Revolving guide bush unit
- Collet (Main/Sub)
- 2-station tool holder □12mm/□16mm
- 4-station tool holder □12mm/□16mm
- Parts conveyor
- Parts ejector A (Air cylinder type)
- Parts separator unit A
- Barstock gripping unit
- Parts ejector with guide tube
- Parts stopper unit
- Coolant unit 1.5MPa
- Coolant unit 6.5MPa
- Coolant pipings
- Main spindle inner tube
- Coolant flow detector
- Parts ejection detector
- Sub spindle air blow unit
- Warning light
- Water removal unit
- Compliant with the RS-232C interface

■ **External Dimensions and Floor Space** unit : mm(ft)



<http://www.star-m.jp/eng/>