Increased flexibility in response to Market demands for greater capability for large diameter machining
The SR-32JII series offers a choice of layouts to give the User even more capability to help meet their manufacturing requirements.

Star Micronics has again listened to Customers’ requirements and produced this flexible machine to help them respond to ever-changing needs for part machining in the global arena. The SR-32JII series enables medium complex to complex components to be produced whilst still offering unrivalled high rigidity and accuracy.

There are two types of the latest model “SR-32J II” - type A with a back working 6 spindle unit and type B with back working 8 spindle unit

**SR-32JII**

**type A**

CNC SWISS TYPE AUTOMATIC LATHE

Machine composition:
- Main spindle
- Sub spindle
- Gang type Tool post
  - 6-spindle type cross drilling unit or
  - 5-spindle type cross drilling unit
- Backworking 6-spindle unit

**type B**

CNC SWISS TYPE AUTOMATIC LATHE

Machine composition:
- Main spindle
- Sub spindle
- Gang type Tool post
  - 6-spindle type cross drilling unit or
  - 5-spindle type cross drilling unit
- Backworking 8-spindle unit with Y-axis control

**TOOLING SYSTEM**

<table>
<thead>
<tr>
<th>Tool holder</th>
<th>Turning tool</th>
<th>6 tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle sleeve holder</td>
<td>Front end stationary tool</td>
<td>5 tools</td>
</tr>
<tr>
<td>Rear end stationary tool</td>
<td>Power driven tool</td>
<td>Special tool for cross drilling : 3 tools + Cartridge type : 2 tools</td>
</tr>
<tr>
<td>Tool post specially designed for back working unit</td>
<td>type A</td>
<td>6 tools</td>
</tr>
<tr>
<td>type B</td>
<td>8 tools (with Y-axis control)</td>
<td></td>
</tr>
</tbody>
</table>
Achievement in High Rigidity and High Accuracy

A rigid tool post with a slant-type slide guideway structure

The Y axis guideway of the tool post employs a slant-type slide guideway. This structure allows the X and Y axis guideways to be arranged radially around the cutting point in order to further improve machine rigidity. In addition, a linear line passing the bell screw center and in parallel with the Y axis guideway can be close (a 1) to the cutting point and therefore further increases rigidity and helps improve both accuracy and surface finish on your mill/tum components.

A highly rigid spindle sleeve structure when using N.G.B. mode

The N.G.B type introduces a spindle sleeve slide guideway structure. By supporting the cutting force on the guideway, the headstock rigidity is maximized and therefore spindle deflection is minimized to ensure machining accuracy is maintained.

A built-in spindle for high indexing accuracy

The main and sub spindle employ a built-in structure to enhance spindle indexing speed and accuracy with a built-in sensor.

Work holding pressure increased by hydraulic cylinder

The hydraulic cylinder helps to improve the workpiece gripping force and allows high machining accuracy by reducing workpiece deflection even under extreme load.

A high rigid tool post specially designed for back working

A dovetail structure is incorporated in the YZ slideway on the type B back working tool post. Type A also improves tool post rigidity by increasing the casting thickness.

Stronger casting implemented

The base casting thickness is increased by 25% compared to the previous model SR-32J. This improves the frame rigidity and demonstrates remarkable effect on suppression of vibration during machining and thermal displacement during continuous operation.

Accuracy, functionality and productivity upgraded from every perspective.
Improvement in High Functionality and Machining Ability

**The G.B. / N.G.B. switching mechanism**
The guide bush type and non-guide bush type are switched over according to the total length of machining parts to realize most suitable machining.

**Enlarged tool-to-tool pitch of the back working tool post**
The back working tool post has an increased pitch between two tools for OD turning so that large-diameter (max. φ32mm) turning is possible without restriction of neighboring tools. Details on page 7 and 8.

**Back working tool post for a broader range of complex machining**
A back working tool post is mounted, which can accommodate a maximum of 8 static and/or power tools (type B) with Y axis control and a maximum of 6 static and/or power tools (type A). Various power tools for slotting, milling, etc. are available to meet versatile complex machining on the rear side. *1 When selecting the power tool drive unit B (optional).

**Selectable cross drilling unit**
The cross drilling unit includes two types; a 6-spindle type (ER16 × 6 tools) and a 5-spindle type (ER20 × 3 tools + 2-pos. cartridge).

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Pursuit of High Productivity

**Machining time reduction (mechanical)**
Front-end/rear-end overlap machining is optimized and cutting time is minimized by numerous back working variations.

**Machining time reduction (control system)**
With a smart overlap function, a path between NC command blocks is overlapped to reduce non-cutting time.

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Improvement in Operability and Workability

**The movable operation panel**
A movable operation panel with 10.4-inch color display is mounted. It allows machine operation from the best position.

**Enhanced support software for various operations and tasks**
1. The "counter screen function" is improved to display the number of required components, remaining machining time and machining finish time for the pre-set number of parts.
2. A maintenance timer is increased and a maintenance counter is added to display a message when the counter finishes counting.
3. A step to follow next blinks on the operation display for switching between the G.B type and N.G.B type to enable speed of changeover.

**A flip-up door**
Both the headstock chamber and the cutting chamber use a large-opening, flip-up door to give the user plenty of room to work.

**Discharge of machining parts during operation stop**
The ON/OFF switch is mounted outside the product conveyor. Machining parts can be manually discharged even while the machine is stopped.
Two types of models, A and B, so the User can choose the optimum functions to meet their needs.
TOOLING SYSTEM

Cross drilling unit 5-spindle type

Station for mounting tools for more evolved complex machining. The 2 cartridge stations accommodate tools for milling, front drilling, thread whirling, slotting, polygon machining, etc. These positions further increase the flexibility of the machine.

VARIATION 01
Cartridge (2 pos.)

VARIATION 02
Cartridge (2 pos.)

VARIATION 03
Cartridge (2 pos.)

VARIATION 04
Cartridge (2 pos.)

VARIATION 05
Cartridge (1 pos.)

VARIATION 06
Cartridge (1 pos.)
TOOLING SYSTEM  6-spindle back working unit

- Max. 6 power tools accommodated
- Various power tool units available
- Coolant-through tool compliant

**case01**

Mounting of slotting unit
- Mounting is possible onto T21/T22/T24/T26 positions.

*The above photo shows a quad-speed milling unit for back working.*

**Coolant-through type compliant**

- Tool unit only for coolant-through tools
- Discharge port: 1 section

**Tool-to-tool pitch**
TOOLING SYSTEM  Backworking 8-spindle unit with Y-axis control

- Max. 8 power tools accommodated
- Various power tool units available
- Coolant-through tool compliant

case01
Mounting of cross drilling unit
- Mounting is possible onto T21-24 positions.
- Continuous mounting to neighboring positions

case02
Mounting of slotting unit
- Mounting is possible onto T21-24 positions.
- Continuous mounting to neighboring positions

Coolant-through type compliant

Tool-to-tool pitch

Tool unit only for coolant-through tools

Discharge port: B section
Machining variations for wider needs

**Variation 01**
Machining by front working drilling unit

**Variation 02**
Machining with cross drilling unit

**Variation 03**
Front hole drilling
Variation 01
Rear eccentric drilling

Variation 02
Rear cross milling * type B

Variation 03
Rear OD machining
Standard Machine Specifications

<table>
<thead>
<tr>
<th>item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. machining diameter</td>
<td>Ø32mm(1-1/4) Inner, Ø34mm(1-1/2) Inner</td>
</tr>
<tr>
<td>Max. headstock stroke</td>
<td>Standard 320mm±12/10.32</td>
</tr>
<tr>
<td>N.G.B. type</td>
<td>286.5mm(11.26/2)</td>
</tr>
<tr>
<td>N.G.S. type</td>
<td>286.5mm(11.26/2)</td>
</tr>
<tr>
<td>Tool</td>
<td>78mm</td>
</tr>
<tr>
<td>Number of tools</td>
<td>6 tools</td>
</tr>
<tr>
<td>Tool Shank</td>
<td>78mm</td>
</tr>
<tr>
<td>Number of tools</td>
<td>5 tools</td>
</tr>
<tr>
<td>Number of tools</td>
<td>5 tools</td>
</tr>
<tr>
<td>Max. drilling capability</td>
<td>Ø13mm(2-1/4)</td>
</tr>
<tr>
<td>Max. tapping capability</td>
<td>M12x1.75</td>
</tr>
<tr>
<td>Power driven attachment</td>
<td>Cross milling 2 tools(ER25) + Cartridge type 2 positions</td>
</tr>
<tr>
<td>Spindle speed</td>
<td>2.7kw/continuous/3.0kw/1min/30%/ED</td>
</tr>
<tr>
<td>Light weight</td>
<td>64kg</td>
</tr>
<tr>
<td>Power consumption</td>
<td>13.6kVA</td>
</tr>
<tr>
<td>Rapid feed rate</td>
<td>35m/min (X, Y, Z, A, J)</td>
</tr>
<tr>
<td>Main spindle indexing angle</td>
<td>0.001</td>
</tr>
<tr>
<td>Main spindle motor</td>
<td>255</td>
</tr>
<tr>
<td>Main spindle speed</td>
<td>5000/min</td>
</tr>
<tr>
<td>Main spindle motor</td>
<td>11.5kW/continuous/21.0kW/1min/25%/ED</td>
</tr>
<tr>
<td>Dimensions 46x46x111</td>
<td>2.690x1.385x1.780mm</td>
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<tr>
<td>Weight</td>
<td>4.11kg</td>
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<tr>
<td>A-weighted sound pressure</td>
<td>77dBA</td>
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</tbody>
</table>

Backworking Attachment Specifications

<table>
<thead>
<tr>
<th>item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. chucking diameter</td>
<td>Ø32mm(1-1/4) Inner, Ø34mm(1-1/2) Inner</td>
</tr>
<tr>
<td>Max. length for front ejection</td>
<td>125mm(4-15/32)</td>
</tr>
<tr>
<td>Max. parts projection length</td>
<td>450mm(17-3/4)</td>
</tr>
<tr>
<td>Number of tools</td>
<td>8 (pollutype A)</td>
</tr>
<tr>
<td>Unit swivel for backworking</td>
<td>Stationary tool</td>
</tr>
<tr>
<td>Max. drilling capability</td>
<td>Ø13mm(2-1/4)</td>
</tr>
<tr>
<td>Max. tapping capability</td>
<td>Ø6mm(1/4)</td>
</tr>
<tr>
<td>Power-driven att. spindle speed</td>
<td>1.0kw/continuous/1.2kw/1min/30%/ED</td>
</tr>
<tr>
<td>Power-driven att. drive motor</td>
<td>C-axis control</td>
</tr>
<tr>
<td>Overall height</td>
<td>1.780mm(6.61/34)</td>
</tr>
</tbody>
</table>

External Dimensions and Floor Space

<table>
<thead>
<tr>
<th>Length</th>
<th>Max. Width</th>
<th>Max. Depth</th>
<th>Max.高度</th>
</tr>
</thead>
<tbody>
<tr>
<td>0230FE</td>
<td>3.380x1.40x1.2</td>
<td>3.380x1.40x1.2</td>
<td>0.600</td>
</tr>
<tr>
<td>0230EE</td>
<td>3.380x1.40x1.2</td>
<td>3.380x1.40x1.2</td>
<td>0.600</td>
</tr>
<tr>
<td>0330EE</td>
<td>3.760x1.40x1.2</td>
<td>3.760x1.40x1.2</td>
<td>0.600</td>
</tr>
<tr>
<td>0430EE</td>
<td>4.200x1.40x1.2</td>
<td>4.200x1.40x1.2</td>
<td>0.600</td>
</tr>
<tr>
<td>0530EE</td>
<td>5.200x1.40x1.2</td>
<td>5.200x1.40x1.2</td>
<td>0.600</td>
</tr>
<tr>
<td>0630EE</td>
<td>6.300x1.40x1.2</td>
<td>6.300x1.40x1.2</td>
<td>0.600</td>
</tr>
</tbody>
</table>

Note:
- The specifications apply to SUS304 materials. 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.
- The data shown is measured using the ISO standard.
- The overall length includes the clamping unit for each tool.

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