Intelligent Multitasking Machines

MULTUS BII series

MULTUS B200II/MULTUS B300II
MULTUS B400II
Intelligent evolution from the future

Okuma’s “multitasking wizard” has evolved and multiplied into a new breed. Always toward higher productivity, seconds faster, and microns more beautiful.
Improved utilization  Better functionality Better operability  Lower cost  Shorter lead times

Suite apps for the visualization of all kinds of information, from workpiece drawings, tooling, and other information needed in machining preparation to information on machining and machine status; suite operation for the full command of those functions. Okuma’s next-generation intelligent CNC “OSP suite” combines intelligent technology to elicit maximum performance from machine tools with evolution of the CNC controller to all aspects of monozukuri, from production preparation to maintenance.

Every aspect of “monozukuri” encompassed with one finger

Suite apps for visualization of all information, from preparation to machining
Suite operation for stress-free operability

CNC—From machine controller to monozukuri controller

Suite apps for the visualization of all kinds of information, from workpiece drawings, tooling, and other information needed in machining preparation to information on machining and machine status; suite operation for the full command of those functions. Okuma’s next-generation intelligent CNC “OSP suite” combines intelligent technology to elicit maximum performance from machine tools with evolution of the CNC controller to all aspects of monozukuri, from production preparation to maintenance.
Steady, high production

**Powerful, compact turret**
- Compactness and high output with PREX motor
- Highly rigid roller bearings for live tool spindle (front bearings) (for MULTUS B300/B400)

**Motor output**
- MULTUS B200: 12,000 min⁻¹: VAC 12 kW
- 20,000 min⁻¹: VAC 9 kW*
- MULTUS B300: 6,000 min⁻¹: PREX 11 kW
- 10,000 min⁻¹: PREX 16 kW
- MULTUS B400: 6,000 min⁻¹: PREX 14 kW
- 10,000 min⁻¹: PREX 20 kW

**B-axis indexing:** 225° (minimum control angle: 0.001°)

**PREX motor**
- High efficiency by reducing roller heat (120% compared with previous model)
- Small rotor with inertia reduced by half significantly reduces acceleration and deceleration times

0 → 10,000 min⁻¹ in 0.8 seconds (MULTUS B300/B400)

**Highly rigid bed and guideways**
- **Bed**
  - Stable machining achieved with wide, rigid bed.
- **Guideway system**
  - Featuring X-Y-Z-axis roller guides designed with high rigidity, antiwear, and vibration damping.
  - Roller guide rigidity 2.6 to 3.0 times that of ball guide.

**Spindle torque/output diagrams**

<table>
<thead>
<tr>
<th>MULTUS B200</th>
<th>Spindle</th>
<th>Spindle speed</th>
<th>Output</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 17.5 kW (20 min/cont)</td>
<td>80/80 N·m (20 min/cont)</td>
<td></td>
</tr>
<tr>
<td>Milling tool spindle</td>
<td>Spindle speed</td>
<td>Output</td>
<td>Torque</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 20.3 kW (5 min/cont)</td>
<td>130/130 N·m (5 min/cont)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MULTUS B300</th>
<th>Spindle</th>
<th>Spindle speed</th>
<th>Output</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 17.5 kW (20 min/cont)</td>
<td>80/80 N·m (20 min/cont)</td>
<td></td>
</tr>
<tr>
<td>Milling tool spindle</td>
<td>Spindle speed</td>
<td>Output</td>
<td>Torque</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 20.3 kW (5 min/cont)</td>
<td>130/130 N·m (5 min/cont)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MULTUS B400</th>
<th>Spindle</th>
<th>Spindle speed</th>
<th>Output</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 17.5 kW (20 min/cont)</td>
<td>80/80 N·m (20 min/cont)</td>
<td></td>
</tr>
<tr>
<td>Milling tool spindle</td>
<td>Spindle speed</td>
<td>Output</td>
<td>Torque</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6,000 min⁻¹</td>
<td>VAC 20.3 kW (5 min/cont)</td>
<td>130/130 N·m (5 min/cont)</td>
<td></td>
</tr>
</tbody>
</table>
The ultimate fusion of turn-mill operations

A divided production line

Lathe, vertical or horizontal machining center, and material handling operations consolidated into one machine...

Shorter deliveries, more effective use of floor space–plus the limitation of parts in waiting between operations, fewer setups, less labor, etc–result in higher machine utilization. Customers truly benefit from much less time needed for process control and rastically reduced overall operating costs.

Previous processes

<table>
<thead>
<tr>
<th>Setup</th>
<th>Turn</th>
<th>Work transfer/wait</th>
<th>Setup</th>
<th>Mill</th>
<th>Work transfer/wait</th>
<th>Setup</th>
<th>B axis machining</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTUS BII</td>
<td>process-intensive machining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant lead-time reduction

 Gear Machining Package (Optional)

High accuracy gear machining with a multitasking machine

Gear machining that previously required complex programming can now be done with ease. With GMP, simply input the tool type, gear data, and cutting conditions. Programming time is reduced to about one-tenth that of manual input. Process-intensive machining is achieved, including the gear machining that used to be done on expensive special-purpose machines.

Thermal deformation over time:

less than 10 μm

(MULTUS B300) [actual data]

Contouring accuracy

1.8 μm

(roundness)

(MULTUS B300) [actual data]

Machining Capacity

[Actual data]

<table>
<thead>
<tr>
<th>MULTUS B200</th>
<th>MULTUS B300</th>
<th>MULTUS B400</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Turning</strong></td>
<td><strong>Heavy-duty</strong></td>
<td><strong>Heavy-duty</strong></td>
</tr>
<tr>
<td><em>OD (S45C)</em></td>
<td>2.5 mm² (73 cm³/min)</td>
<td>3.0 mm² (400 cm³/min)</td>
</tr>
<tr>
<td>Cutting speed</td>
<td>135 m/min</td>
<td>150 m/min</td>
</tr>
<tr>
<td>Cutting depth</td>
<td>5 mm</td>
<td>6 mm</td>
</tr>
<tr>
<td>Feed rate</td>
<td>0.5 mm/rev</td>
<td>0.5 mm/rev</td>
</tr>
<tr>
<td><strong>Milling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Chip volume</em></td>
<td>224 cm³/min</td>
<td>360 cm³/min</td>
</tr>
<tr>
<td>7-flute, carbide, ø20 mm and end mill (S45C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting speed</td>
<td>250 m/min</td>
<td>250 m/min</td>
</tr>
<tr>
<td>Cutting depth</td>
<td>2.8 X 20 mm</td>
<td>8 X 20 mm</td>
</tr>
<tr>
<td>Feed rate</td>
<td>1.26 mm/rev</td>
<td>0.56 mm/rev</td>
</tr>
<tr>
<td>Chip volume</td>
<td>224 cm³/min</td>
<td>360 cm³/min</td>
</tr>
<tr>
<td>5-blade ø50-mm face mill (S45C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting speed</td>
<td>300 m/min</td>
<td>300 m/min</td>
</tr>
<tr>
<td>Cutting depth</td>
<td>2.6 X 35 mm</td>
<td>3.3 X 35 mm</td>
</tr>
<tr>
<td>Feed rate</td>
<td>1.25 mm/rev</td>
<td>1.5 mm/rev</td>
</tr>
<tr>
<td>Chip volume</td>
<td>217 cm³/min</td>
<td>330 cm³/min</td>
</tr>
<tr>
<td>TAP (S45C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting speed</td>
<td>0.13 mm/rev</td>
<td>0.11 mm/rev</td>
</tr>
<tr>
<td>TAP</td>
<td>M20 P2.5</td>
<td>M20 P2.5</td>
</tr>
</tbody>
</table>

Note: The "actual data" referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, environmental conditions during measurement, tooling, cutting, and other conditions.
It is a suite of premium applications to increase the efficiency of each manufacturing process by increasing status visibility and digitizing shop floor production instructions, setup information, machining and utilization, machine maintenance information and more. Intelligent, fast machining and efficient “monozukuri” (craftsmanship-based manufacturing) achieved with a control interface that can be operated on a new dimension.

### suite apps

In addition to Okuma’s Intelligent Technology, a rich array of applications is available for visualization and digitization of information needed on shop floors to support high-level “monozukuri”.

### suite operation

A highly reliable touch panel suited to shop floors is used. Suite apps can be started by touching a function key icon on the right side of the screen. They are then displayed in a pop-up window. The icon layout is customizable. Suite apps can be accessed with one touch according to the desired phase of operation.

### ECO suite

ECO suite provides a suite of energy-saving functions that can be used on machines
- Intermittent/continuous operation of chip conveyor and mist collector during operation
- Energy-saving hydraulic unit using Servo contro technology
- “ECO Hydraulics” (optional)

**ECO Idling Stop**

**Accuracy ensured, cooler off**

**ECO Idling Stop**

Intelligent energy-saving function with the Thermo-Friendly Concept

The machine itself determines whether or not cooling is needed and cooler idling is stopped with no loss to accuracy.

(Standard application on machines with Thermo-Active Stabilizer—Spindle)

**On-the-spot check of energy savings**

**ECO Power Monitor**

Power is shown individually for spindle, feed axis, and peripheral equipment on OSP operation screen. The energy-saving effect from peripheral equipment stopped with ECO Idling Stop can be confirmed on the spot.

**“Working with temperature changes”**

**Manageable Deformation—Accurately Controlled**

**Thermo-Friendly Concept**

*Thermo-friendly* concept that enables remarkable machining accuracy through original structural design and thermal deformation control technology. Free from troublesome dimensional compensation and warm-up. Exhibits excellent dimensional stability even during consecutive operation over long periods and environmental temperature change in the plant.

**Machine tool idling stop**

**ECO Idling Stop**

Only the necessary unit operates

**Accuracy ensured, cooler off**

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World’s first “Collision-free machine”

Collision prevention

Collision Avoidance System

Allowing operators to focus on making parts

NC controller (DSP) with 3D model data of machine components—workpiece, tool, chuck, fixture, headstock, turret, tailstock—performs real-time simulation just ahead of actual machine movements. It checks for interference or collisions, and stops the machine movement immediately before collision. Machinists (novice or pro) will benefit from reduced setup and trial cycle times, and the confidence to focus on making parts.

Collision prevention during automatic operation

NC program is read in advance and axial travel commands are checked for interference with consideration of zero point and tool compensation values set in NC. Axial travel movement is stopped temporarily before collision occurs.

Collision avoidance in manual operation

Especially useful for machine operators setting up a job, collision avoidance in manual mode provides collision-free confidence and faster machining preparations.

Improved spindle utilization

Conventional trial cutting

Cutting checks and adjustments

Rapid travers

Manual

Time lost for interference checks per approach

Program corrections

Tooling corrections

Trial cutting with CAS

Cycle time per CAS

Cut time

Rapid traverse

Reduced time

Case example

Significant reduction in machining preparation time

Previous multitasking machine

MULTUS B300II

Machine prep

120 min

100 min

40% reduction

Machining Navi

Find the best cutting condition for your application

Cutting conditions search

Machining Navi (Optional)

Cost reduction—shorter cycle times and higher productivity—is required to compete in today’s global market. Machining Navi, with clear visuals of complex cutting conditions, is a breakthrough tool that enables the machine operator to navigate the machine and tool capabilities to their best performance levels.

Chatter-free applications for lathes

"Machining Navi” L-g (guidance)

Chatter in a lathe can be suppressed by changing spindle speeds to the ideal amplitude and wave cycle.

Efficient, small OD shaft turning without steadyst

Boring bar with 5 times the extension for chatter-free internal diameter boring

Tool: Boring bar (steel)

Diameter: ø20 mm

Extension: 100 mm

Cutting speed: 180 m/min

Workpiece material: S45C

For tuning

Chatter-free applications for lathes

"Machining Navi” L-g (guidance)

Machining Navi

For milling

Simple, auto-mode—leave it to the machine

Finding optimum cutting conditions quickly

"Machining Navi” M-i (intelligently optimized spindle speed control)

Chatter vibration is measured by built-in sensors, and spindle speed is automatically changed to the optimum speed. In addition, advanced graphics of the optimal cutting conditions represent effective alternatives to suppress various chatter characteristics throughout the low to high speed zones.

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Adjust cutting conditions while monitoring the data

"Machining Navi” M-gII+ (intelligently optimized spindle speed control)

From chatter noise picked up by the microphone, Machining Navi will display the best options for chatter-free spindle speed. The operator can select a recommended speed and immediately confirm the result.

Chatter disappeared after changing the tool rotation by only 7 revolutions

Workpiece: S45C

Tool: ø63-mm face mill

Spindle speed: Chattering at 400 min⁻¹ → smooth cutting at 407 min⁻¹

Cutting conditions

Cutting depth: 0.1 mm

Feedrate: 0.12 mm/rev

Spindle speed: Chattering at 400 min⁻¹, smooth cutting at 407 min⁻¹

Workpiece material: S45C

Workpiece: Drive shaft

Diameter: ø17 mm

Length: 400 mm

Feeding rate: 0.12 mm/rev

Cutting speed: 170 m/min

Efficient, small OD shaft turning without steadyst

Boring bar with 5 times the extension for chatter-free internal diameter boring

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Workpiece material: S45C

Workpiece: Drive shaft

Diameter: ø17 mm

Length: 400 mm

Feeding rate: 0.12 mm/rev

Cutting speed: 170 m/min

Efficient, small OD shaft turning without steadyst

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Tool: Boring bar (steel)

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Extension: 100 mm

Cutting speed: 180 m/min

Workpiece material: S45C

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Cutting speed: 180 m/min

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Cutting conditions

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Feedrate: 0.12 mm/rev

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Workpiece material: S45C

Workpiece: Drive shaft

Diameter: ø17 mm

Length: 400 mm

Feeding rate: 0.12 mm/rev

Cutting speed: 170 m/min

Efficient, small OD shaft turning without steadyst

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Tool: Boring bar (steel)

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Extension: 100 mm

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Spindle speed: Chattering at 400 min⁻¹, smooth cutting at 407 min⁻¹

Workpiece material: S45C

Workpiece: Drive shaft

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Length: 400 mm

Feeding rate: 0.12 mm/rev

Cutting speed: 170 m/min

Efficient, small OD shaft turning without steadyst

Boring bar with 5 times the extension for chatter-free internal diameter boring

Tool: Boring bar (steel)

Diameter: ø20 mm

Extension: 100 mm

Cutting speed: 180 m/min

Workpiece material: S45C
Ease of use that stirs the senses and the thrill of “monozukuri”
(making things better than ever — manufacturing at its best)

Small footprint

NC tailstock
- Tailstock thrust
  MULTUS B200: 0.5 to 3 kN
  MULTUS B300: 1 to 5 kN
  MULTUS B400: 1.5 to 7 kN
  (High thrust specs: to 10 kN)

W-axis travel
- MULTUS B200: 1,500 mm (59.06 in.)
- MULTUS B300: 1,550 mm (61.02 in.)
- MULTUS B400: 2,050 mm (80.71 in.)
  (High thrust specs: to 10 kN)
- Tailstock positions and thrust settings can be set and changed by program

Drastically reduces setup times

Tailstock positions and thrust settings can be set and changed by program

Opposing spindle (W specs)

Machining Capacity [Actual data]

MULTUS B200
- Heavy-duty: 2.0 mm²
  Cutting speed: 100 m/min (393.7 fpm)
  Cutting depth: 5 mm (0.197 in.)
  Feedrate: 0.4 mm/rev (0.02 ipm)

MULTUS B300
- Heavy-duty: 2.5 mm²
  Cutting speed: 100 m/min (393.7 fpm)
  Cutting depth: 5 mm (0.197 in.)
  Feedrate: 0.5 mm/rev (0.02 ipm)

MULTUS B400
- Heavy-duty: 3.0 mm²
  Cutting speed: 100 m/min (393.7 fpm)
  Cutting depth: 6 mm (0.236 in.)
  Feedrate: 0.5 mm/rev (0.02 ipm)

*Data listed in the catalog are actual data. These values may not be obtained depending on specifications, tools, and cutting and other conditions.
# Machine Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>MULTUS B200g</th>
<th>MULTUS B300g</th>
<th>MULTUS B400g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (with CNC)</td>
<td>1,588 (3,490)</td>
<td>2,065 (4,550)</td>
<td>2,520 (5,585)</td>
</tr>
<tr>
<td>Swing over saddle (mm)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
</tr>
<tr>
<td>Spindle (ø24)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
</tr>
<tr>
<td>Spindle speed (min⁻¹)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
</tr>
<tr>
<td>Spindle torque (N•m)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
<td>1,585 (62.95)</td>
</tr>
<tr>
<td>Spindle taper</td>
<td>HSK-A63</td>
<td>HSK-A63</td>
<td>HSK-A63</td>
</tr>
<tr>
<td>C-axis control</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Y-axis range</td>
<td>±22.05 (±8.69)</td>
<td>±30.48 (±12.00)</td>
<td>±30.48 (±12.00)</td>
</tr>
<tr>
<td>X-axis range</td>
<td>±30.48 (±12.00)</td>
<td>±45.72 (±18.00)</td>
<td>±45.72 (±18.00)</td>
</tr>
<tr>
<td>Z-axis range</td>
<td>±30.48 (±12.00)</td>
<td>±45.72 (±18.00)</td>
<td>±45.72 (±18.00)</td>
</tr>
</tbody>
</table>

## Tooling System (HSK-A63)

### Turning

- OD tool shank (main spindle)
  - OD turning HSK-A63
- Boring bar shank dia
  - ø10 ø12 ø16 ø20 ø25 ø32
- OD turning OS 80° unit (HSK-A63)

### Milling

- OD turning OS 50° unit (HSK-A63)
- Milling spindle torque/output diagrams (Optional)

### Boring bar

- MULTUS B200g: ø32
- MULTUS B300g: ID-H40 (HSK-A63)
- MULTUS B400g: ID-H40 (HSK-A63)

### Commercial parts

<table>
<thead>
<tr>
<th>Commercial parts</th>
<th>MULTUS B200g</th>
<th>MULTUS B300g</th>
<th>MULTUS B400g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy</td>
<td>HSK-A63</td>
<td>HSK-A63</td>
<td>HSK-A63</td>
</tr>
<tr>
<td>Collet holder</td>
<td></td>
<td></td>
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<tr>
<td>Collet holder</td>
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<tr>
<td>Collet holder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axial facing arbor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Standard Specifications and Accessories

- Standard specifications and accessories
- Tooling system
- High-speed milling spindle
- Feed system
- Coolant system
- Chip conveyor
- Single-end milling
- Synchronous tapping

## Tooling System (HSK-A63)

- OD tool shank (main spindle)
- Boring bar shank dia
  - ø10 ø12 ø16 ø20 ø25 ø32
- OD turning OS 80° unit (HSK-A63)

### Milling spindle torque/output diagrams (Optional)

<table>
<thead>
<tr>
<th>Milling tool spindle torque/output diagrams (Optional)</th>
<th>MULTUS B200g</th>
<th>MULTUS B300g</th>
<th>MULTUS B400g</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle speed (RPM)</td>
<td>30,000 (1 min)</td>
<td>10,000 (1 min)</td>
<td>10,000 (1 min)</td>
</tr>
<tr>
<td>Torque</td>
<td>23 N•m (3 min)</td>
<td>57 N•m (3 min)</td>
<td>68 N•m (3 min)</td>
</tr>
</tbody>
</table>

*Some commercial live tools, based on DIN68931-1 HSK-A63, can also be used.

### Turning

- OD tool shank (main spindle)
- Boring bar shank dia
  - ø10 ø12 ø16 ø20 ø25 ø32
- OD turning OS 80° unit (HSK-A63)

### Milling

- OD turning OS 50° unit (HSK-A63)
- Milling spindle torque/output diagrams (Optional)

<table>
<thead>
<tr>
<th>Milling tool spindle torque/output diagrams (Optional)</th>
<th>MULTUS B200g</th>
<th>MULTUS B300g</th>
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</tbody>
</table>
### Max tool dimensions

<table>
<thead>
<tr>
<th>MULTUS B200II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std tool</td>
<td></td>
</tr>
<tr>
<td>Super big bore tool</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MULTUS B300II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std tool</td>
<td></td>
</tr>
<tr>
<td>Super big bore tool</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MULTUS B400II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Std tool</td>
<td></td>
</tr>
<tr>
<td>Super big bore tool</td>
<td></td>
</tr>
</tbody>
</table>

### Working Ranges

### MULTUS B200II

#### Main spindle [550 distance between centers]

- OD-A (B axis 90°)
- ID-H32 (B axis 0°)
- HSK-A63 (B axis 180°)
- End mill toolholder (B axis 90°)
- End mill toolholder (B axis 0°)

#### Opposing spindle

- OD-A (B axis 180°)
- ID-H32 (B axis 180°)
- HSK-A63 (B axis 90°)
- End mill toolholder (B axis 180°)
- End mill toolholder (B axis 90°)

### Working Ranges

### Main spindle [750 distance between centers]

- OD-A (B axis 90°)
- ID-H32 (B axis 0°)
- HSK-A63 (B axis 180°)
- End mill toolholder (B axis 90°)
- End mill toolholder (B axis 0°)

### Opposing spindle

- OD-A (B axis 180°)
- ID-H32 (B axis 180°)
- HSK-A63 (B axis 90°)
- End mill toolholder (B axis 180°)
- End mill toolholder (B axis 90°)
### Optional Specifications and Accessories

**Big-bore specs**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**High-power spindle motor**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Milling tool speeds**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Coolant gun**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Big-bore specs**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Spindle torque/output diagrams (Optional)**

### Optional Specifications and Accessories

**Touch setter**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**In-process work gauging**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Workpiece stand**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Multiple tool ATC magazine**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Tooling**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Chip conveyor**
- MULTUS B200
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B300
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW
- MULTUS B400
  - Spindle speed: 5,000 min⁻¹
  - Output: PRX 10/11 kW

**Various chip conveyors (Optional)**

**Application**
- For steel
- For castings
- For castings
- For steel, castings, nonferrous metal

**Features**
- Easy for maintenance
- Blade scraper
- Suitable for sludge
- Filtration of long and short chips and coolant

**Shape**
- Magnet
- Magnet

**Remarks**
- Filter unit included with the selected conveyor (set).
- The machine may need to be raised depending on the type of conveyor.
<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions/Installation Drawings</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTUS B200</td>
<td>550 with drum filter conveyor</td>
</tr>
<tr>
<td>MULTUS B300</td>
<td>900 with drum filter conveyor</td>
</tr>
<tr>
<td>MULTUS B400</td>
<td>750 with drum filter conveyor</td>
</tr>
<tr>
<td>MULTUS B400</td>
<td>750 with hinge scraper conveyor</td>
</tr>
<tr>
<td>MULTUS B400</td>
<td>1500 with drum filter conveyor</td>
</tr>
<tr>
<td>MULTUS B400</td>
<td>1500 with hinge scraper conveyor</td>
</tr>
</tbody>
</table>
The Next-Generation Intelligent CNC

**Optional Specifications**

<table>
<thead>
<tr>
<th>Specifications/Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine Size</strong></td>
<td><strong>OSP suite</strong></td>
</tr>
<tr>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
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<tr>
<td>X</td>
<td>X</td>
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<tr>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td><strong>Optional Specifications</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>High-speed, High-accuracy Functions</td>
<td>Improve the efficiency of machine tools and achieve high-speed, high-accuracy machining through precision control of the CNC system and machine tools.</td>
</tr>
<tr>
<td><strong>Kits Specifications</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Machine Data</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td><strong>Error checking</strong></td>
<td><strong>Error checking</strong></td>
</tr>
<tr>
<td>Full vision error checking</td>
<td>Full vision error checking ensures accurate machine operation and reduces the risk of errors in machining processes.</td>
</tr>
<tr>
<td><strong>Threading</strong></td>
<td><strong>Threading</strong></td>
</tr>
<tr>
<td>High-speed threading</td>
<td>High-speed threading allows for improved machining efficiency and reduced cycle times.</td>
</tr>
<tr>
<td><strong>CNC Operation</strong></td>
<td><strong>CNC Operation</strong></td>
</tr>
<tr>
<td>CNC operation</td>
<td>CNC operation enables the control and monitoring of machine tools, allowing for precise and efficient machining.</td>
</tr>
<tr>
<td><strong>Operational Data</strong></td>
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</tr>
<tr>
<td>Operational data</td>
<td>Operational data provides valuable insights into machine performance and helps in optimizing processes.</td>
</tr>
<tr>
<td><strong>System Specifications</strong></td>
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</tr>
<tr>
<td>System specifications</td>
<td>System specifications specify the essential characteristics and requirements of the CNC system.</td>
</tr>
<tr>
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</tr>
<tr>
<td>Specifications</td>
<td>Specifications are detailed requirements that guide the design and operation of the CNC system.</td>
</tr>
<tr>
<td><strong>Software Specifications</strong></td>
<td><strong>Software Specifications</strong></td>
</tr>
<tr>
<td>Software specifications</td>
<td>Software specifications outline the capabilities and features of the software used in the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Specifications</strong></td>
<td><strong>Machine Specifications</strong></td>
</tr>
<tr>
<td>Machine specifications</td>
<td>Machine specifications define the physical and performance characteristics of the CNC system.</td>
</tr>
<tr>
<td><strong>Size Specifications</strong></td>
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</tr>
<tr>
<td>Size specifications</td>
<td>Size specifications determine the dimensions and layout of the CNC system.</td>
</tr>
<tr>
<td><strong>Performance Specifications</strong></td>
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</tr>
<tr>
<td>Performance specifications</td>
<td>Performance specifications assess the technical capabilities and operational performance of the CNC system.</td>
</tr>
<tr>
<td><strong>Function Specifications</strong></td>
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</tr>
<tr>
<td>Function specifications</td>
<td>Function specifications detail the various functionalities and operations that the CNC system can perform.</td>
</tr>
<tr>
<td><strong>Machine Setup Specifications</strong></td>
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</tr>
<tr>
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<td>Machine setup specifications guide the setup and configuration of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Environment Specifications</strong></td>
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</tr>
<tr>
<td>Machine environment specifications</td>
<td>Machine environment specifications define the operating conditions and environmental requirements for the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Safety Specifications</strong></td>
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</tr>
<tr>
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<td>Machine safety specifications ensure the safety and reliability of the CNC system and its operations.</td>
</tr>
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<td><strong>Machine Performance Specifications</strong></td>
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<tr>
<td><strong>Machine Maintenance Specifications</strong></td>
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<tr>
<td>Machine maintenance specifications</td>
<td>Machine maintenance specifications provide guidelines for the routine inspection, maintenance, and repair of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Efficiency Specifications</strong></td>
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</tr>
<tr>
<td>Machine efficiency specifications</td>
<td>Machine efficiency specifications measure the effectiveness and productivity of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Cost Specifications</strong></td>
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</tr>
<tr>
<td>Machine cost specifications</td>
<td>Machine cost specifications evaluate the financial aspects and cost-benefit analysis of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Availability Specifications</strong></td>
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</tr>
<tr>
<td>Machine availability specifications</td>
<td>Machine availability specifications determine the operational uptime and downtime of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Reliability Specifications</strong></td>
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</tr>
<tr>
<td>Machine reliability specifications</td>
<td>Machine reliability specifications assess the dependability and predictability of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Repair Specifications</strong></td>
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<tr>
<td>Machine repair specifications</td>
<td>Machine repair specifications outline the procedures and practices for repairing and maintaining the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Troubleshooting Specifications</strong></td>
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</tr>
<tr>
<td>Machine troubleshooting specifications</td>
<td>Machine troubleshooting specifications guide the identification and resolution of issues and malfunctions in the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Specifications Report</strong></td>
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</tr>
<tr>
<td>Machine specifications report</td>
<td>Machine specifications report provides a comprehensive summary of the machine specifications and relevant data.</td>
</tr>
<tr>
<td><strong>Machine Specifications Chart</strong></td>
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<tr>
<td>Machine specifications chart</td>
<td>Machine specifications chart visually represents key specifications and performance metrics of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Specifications Spreadsheet</strong></td>
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</tr>
<tr>
<td><strong>Machine Specifications Diagram</strong></td>
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</tr>
<tr>
<td>Machine specifications diagram</td>
<td>Machine specifications diagram illustrates the layout and components of the CNC system.</td>
</tr>
<tr>
<td><strong>Machine Specifications Table</strong></td>
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</tr>
</tbody>
</table>

Note: * Requires technical consultation and confirmation with machine specifications.
This product is subject to the Japanese government Foreign Exchange and
Foreign Trade Control Act with regard to security controlled items, whereby
Okuma Corporation should be notified prior to its shipment to another country.

When using Okuma products, always read the safety precautions
mentioned in the instruction manual and attached to the product.

The specifications, illustrations, and descriptions in this brochure vary in different markets and
models.