OKUMA

OPEN POSSIBILITIES

# LB3000EX II
## SPACE TURN

1-Saddle CNC Lathe

# Transcending the Legendary LB

Okuma's best and long-selling LB Series, the spearhead of a wide range of CNC lathes, now provides new functionality for today's requirements, breakthrough possibilities for the next generation, and more reliability to satisfy greater customer expectations. We are on a mission to "continuously enhance the LB to go beyond itself," and achieve **productivity improvements** linked to new strategic value chains.

The SPACE TURN LB EX II Series.

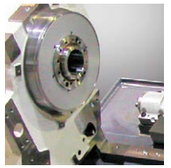
Offering improved machining quality, speed,
power and torque, process-intensive applications, automation . . .
All of the above—driven by the never-ending story of craftsmanship from Okuma.


LB3000 EX II SPACE TURN

Machine photo shows optional specifications.



# The machine against which all others will be measured



## Highest Quality

- **Application of Thermo-Friendly Concept**
- **Slanted-box bed construction**

## Super Fast and Rigid

- **Equipped with new high-power, high-torque motor**
- **Combination of larger and faster spindle**
- **Large through-hole diameter, large working range**

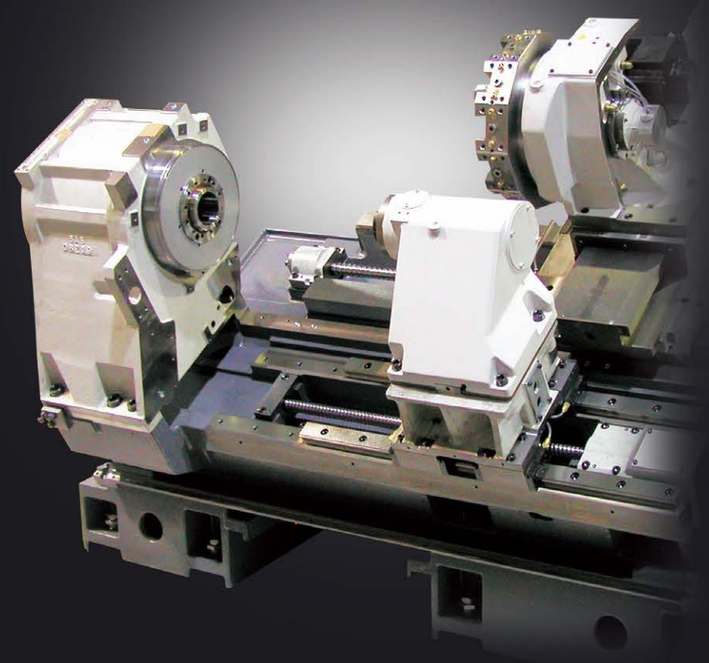
## Extreme Versatility

- **Abundant series variation**
- **NC tailstock standard equipment**


## Easy Operation

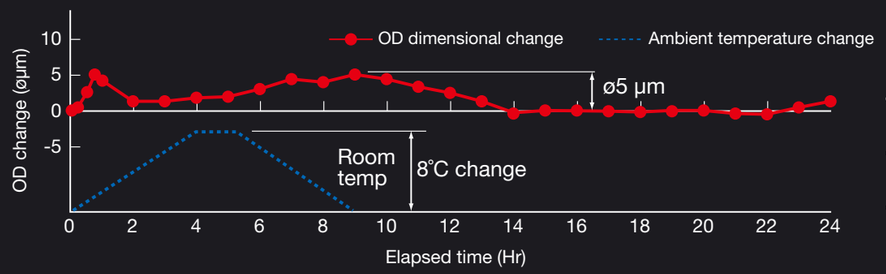
**OSP suite OSP-P300LA**
**The Next-Generation Intelligent CNC**

# Highest Quality



## Machining dimensional change over time: ø5 µm

Actual data [LB3000 EX Ⅱ(L) turning] (ambient temperature: 8˚C change)




- Cycle time: 60 sec
  - X-axis travel: 60 mm
  - 3 repetitions/cycle
- Cutting conditions
  - Spindle speed: 4,000 min$^{-1}$
  - Cutting depth: 0.05 mm
  - Feed: 0.05 mm/rev
- Workpiece material: BsB



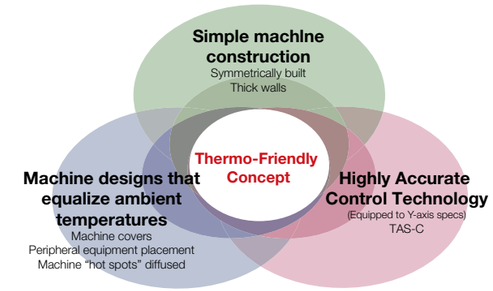
# High accuracy specifications overall assure machining with high dimensional stability

## Thermo-Friendly Concept for unparalleled dimensional stability

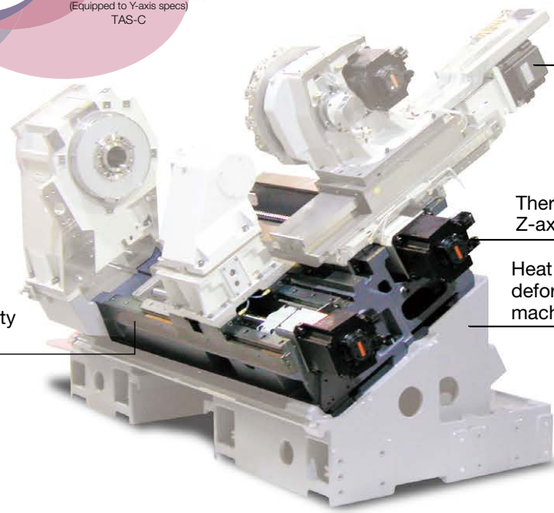
Okuma's Thermo-Friendly Concept is used on all the LB EX machines for extraordinary machining accuracy, using our unique machine design and thermal deformation control technology. Outstanding dimensional stability in long-time continuous operation, multitasking, front and back side machining with a subspindle, and even Y-axis machining without troublesome compensation or warming up.

## Slanted-box bed configuration with superior construction and rigidity

The next evolution of the slanted-box bed construction that has been highly praised as a "rugged, Okuma-like construction" in the SPACE TURN series. The primary units of headstock and turret on a box bed is optimally placed for outstanding dimensional stability and high rigidity. Exhibits stable machining accuracy even in heavy cutting.

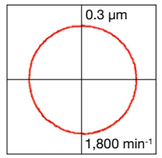



Thermo-Friendly Concept



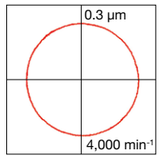

### Roundness [Actual data*]

- Standard spindle
  0.3 µm / 1,800 min$^{-1}$




Standard spindle

- Sub-spindle
  0.3 µm / 4,000 min$^{-1}$

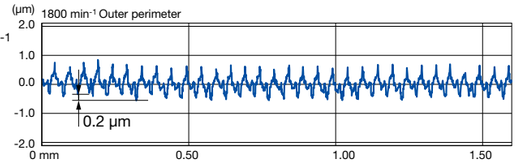



Sub-spindle

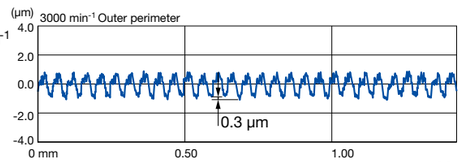
Material: BsB

### Tool nose uniformity (for better surface roughness) [Actual data*]

- Standard spindle:
  0.2 µm / 1,800 min$^{-1}$




- Sub-spindle:
  0.3 µm / 3,000 min$^{-1}$




Material: BsB

* The "actual data" referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, tooling, cutting and other conditions.

# Super First and Rigid

## Improved productivity: 20% shorter cycle time*


* Previous machine comparison



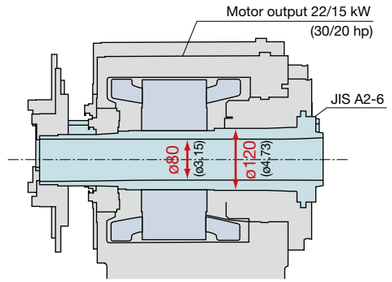



# Huge reduction in machining time with an original high power motor and faster machine movements

## Powerful motor on the spindle gives turning capacity of 4.4 mm²

Spindle with a larger bearing internal diameter of ø120 mm can accommodate larger workpieces, and a turning capacity of 4.4 mm² is achieved with a high-speed, wide-area full power motor. Stable, high quality machining, from heavy to high speed cutting.

| | |
|---|---|
| ● Spindle size | Bearing ID ø120 (bore ø80) |
| ● Spindle speed | 5,000 min$^{-1}$ |
| ● Output | 22 kW (30 hp) |
| ● Torque | 427 N-m (314 ft-lbf) |




Built-in motor—Okuma's own powerful motor—retains full power over a wide area. There are no gears or belts that can cause vibration or bending, for stable machining without chatter.

## Reduced operation time achieved with higher speed machine movements

| | |
|---|---|
| ● Rapid traverse | X: 25 m/min (984 ipm) |
| | Z: 30 m/min (1,181 ipm) |
| ● Spindle start/stop | 3 sec (5,000 min$^{-1}$) |
| ● Turret rotate | 0.1 sec/index |
| ● NC tailstock rapids | 12 m/min (472 ipm) |

## Turning 4.4 mm²

(Workpiece: S45C)

(Actual data*)

**Cylindrical, heavy-duty cutting**

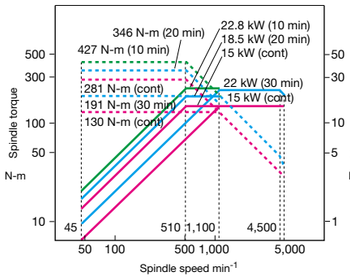
4.4 mm² (0.007 in²)
Cutting speed V: 150 m/min (492 fpm)
Cutting depth t : 8 mm (0.31 in)
Feedrate f : 0.55 mm/rev (0.02 ipr)

**Drilling**

ø59 (ø2.32) carbide insert drill
Cutting speed V: 180 m/min (591 fpm)
Feedrate f : 0.25 mm/rev (0.01 ipr)

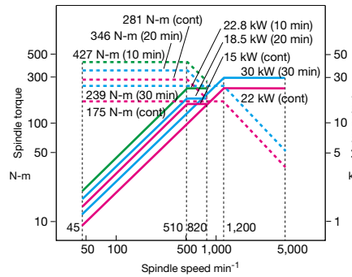
* The “actual data” referred to above for this brochure represent examples, and may not be obtained due to differences in specifications, tooling, cutting and other conditions.

## Spindle/motor variations



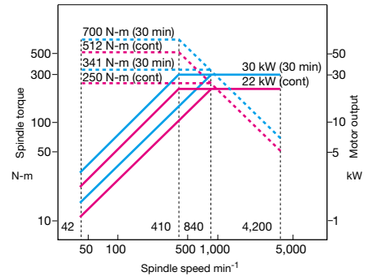

**Standard spindle**

ø120, 5,000 min$^{-1}$
22/15 kW (30 min/cont)
427/346/281 N-m (10 min/20 min/cont)




**High power specs**

ø120, 5,000 min$^{-1}$
30/22 kW (15 min/cont)
427/346/281 N-m (10 min/20 min/cont)




**Big-Bore specs**

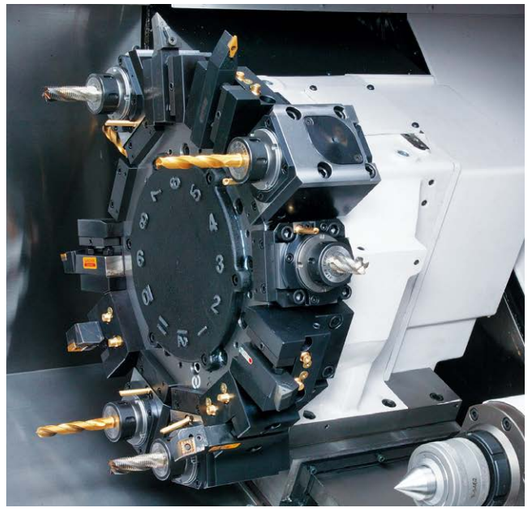
ø140, 4,200min$^{-1}$
30/22 kW (30 min/cont)
700/512 N-m (30 min/cont)

# Greater efficiency with highest milling performance in its class and fast tool change times

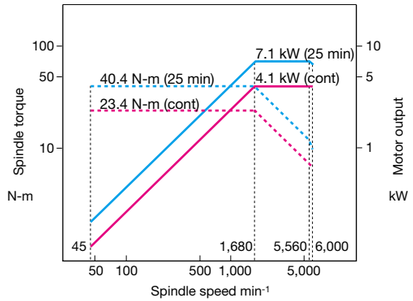
## Compact new PREX motor gives milling performance of 200 cm³/min

Compact, high-power, high-torque PREX motor also used for milling spindle of the multitasking V12 radial turret. This combined with a powerful, highly rigid bolt clamp system greatly increases multitasking speed.

| | |
|---|---|
| ● M spindle | 6,000 min$^{-1}$ |
| ● Output | PREX 7.1 kW (9.5 hp) |
| ● Torque | 40.4 N-m (29.7 ft-lbf) |



### Milling tool spindle




6,000 min$^{-1}$
PREX 7.1/4.1 kW (25 min/cont)
40.4/23.4 N-m (25 min/cont)

## Reduced operation time achieved with higher speed machine movements

| | |
|---|---|
| ● Turret rotate | 0.1 sec/ index |
| ● M-spindle start/stop | 0.3 sec (6,000 min$^{-1}$) |
| ● M-M switch | 0.7 sec |

## Milling capacity 200 cm³/min

(Workpiece: S45C)

(Actual data*)

**End milling**
Chip volume 200 cm³/min (12.2 in³/min)
ø20 7-flute carbide
Cutting speed V: 200 m/min (7,874 ipm)
Cutting depth t : 20 × 2.5 mm (0.79 × 0.10 in)
Feedrate f : 1.26 mm/rev (0.05 ipr)

**Drilling**
ø20 carbide solid drill
Cutting speed V: 135 m/min (4,429 ipm)
Feedrate f : 0.3 mm/rev (0.01 ipr)

**Tapping**
M20 P2.5
(Synchronized tapping)

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## Wide working range, new longitudinal expansion

### Max machining dia: ø410 mm (M turret: ø340 mm)

| | | |
|---|---|---|
| ● Standard spindle | JIS A2-6 | 8-in chuck, 10-in chuck |
| ● Big-Bore spindle | JIS A2-8 | 10-in chuck, 12-in chuck |
| ● Super Big-Bore spindle | JIS A2-11 | 15-in chuck |

### Distance between centers:

| | |
|---|---|
| ● L · M specs | 500 / 1,000 / 1,300 mm |
| ● MY specs | 450 / 950 / 1,200 mm |
| ● W · MW · MYW spec | 500 / 800 mm |

### Spindle thru hole: Bigger

| | |
|---|---|
| ● Standard spindle: | ø80 mm (ø3.15 in) |
| ● Big-Bore spindle: | ø91 mm (ø3.59 in) |
| ● Super Big-Bore spindle: | ø110 mm (ø4.33 in) |

# Extreme Versatility



# Providing rich variation and optimum ease of use

## NC tailstock that shortens setup and automates center work is standard equipment

Up to 10 pairs of tailstock positions can be set, enabling continuous machining of workpieces with 10 different lengths without setup. In addition, thrust can be switched between high and low without resetting the workpiece. (Tailstock thrust high/low switch: Optional)
High accuracy positioning is also possible with a high speed linear guide employing a ball screw guide.

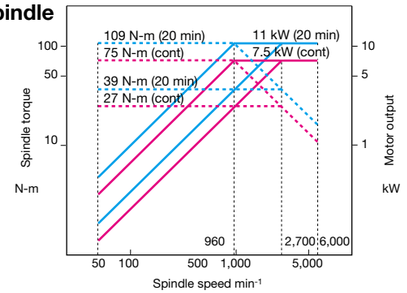
| | |
|---|---|
| ● Tailstock thrust | 0.5 to 5 kN (Opt: 1 to 7.5 kN) |
| ● Rapid traverse | 12 m/min (472 ipm) |
| ● Approach | 10 m/min (394 ipm) |
| ● Retract | 12 m/min (472 ipm) |

Note: Please select a hyrdraulic quill for face driver machining applications.

## Integrated operations with sub-spindle

With these sub-spindle specifications, front and back machining can be done on a single LB3000 EXⅡ. Interference is not a worry even in back face machining with a multitasking V12 radial turret.
(Compatible only with W, MW, MYW specs with distance between centers of 500 mm, 1,000 mm)

**Sub-spindle**

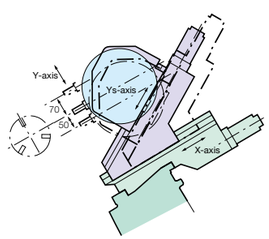



ø100 mm, 6,000 min$^{-1}$
11/7.5 kW (20 min/cont)
109/75 N-m (20 min/cont)

## Complete multitasking with Y-axis functions
## One chuck machining even with irregularly shaped workpieces

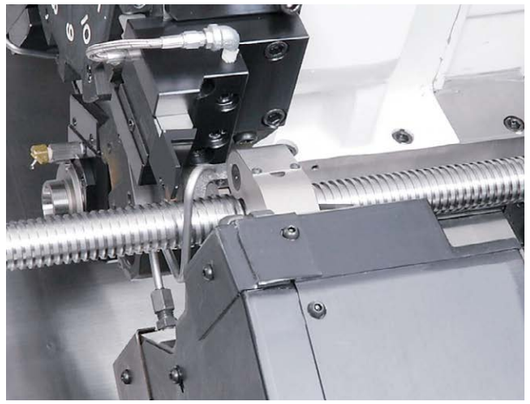
A variety of milling operations can be accommodated with high-accuracy, wide-range Y-axis travel using a double slide system. Achieves complete multitasking with a single chucking (MY, MYW specifications).

| | | |
|---|---|---|
| ● Travel | MY specs: | 120 mm (+70 to -50) |
| | MYW specs: | 115 mm (+70 to -45) |
| ● Y-axis rapid traverse | 12.5 m/min (492 ipm) | |




## More efficient turning of long workpieces with auto follower rest

By synchronizing with turret in NC part program, support is always provided near the place being cut, even with long or cantilevered workpieces (optional for 1300 DBC L/M, 1200 DBC MY specs).



* Auto follower rest requires selection of auto tow-along tailstock and hydraulic tailstock

# OSP suite OSP-P300LA

The Next-Generation Intelligent CNC

## Complete control — always at your fingertips

- With “suite apps” to resolve shop floor problems and maximize productivity
- “Suite operation” provides stress-free, smartphone-like touch control
- Connect Plan allows you to have visual control of your plant
- Okuma smart factories evolving with AI coupled to reliable security applications


## CNC systems have evolved into a new form of cognitive computing

The OSP suite is no longer a CNC that only controls machining. Based on Okuma’s Intelligent Technology and a passion for “craftsmanship service,” each manufacturing process is optimized by digital links to shop floor work orders, setup information, cutting conditions, and operating status. Moreover, connections to plant equipment and maintenance information necessary for efficient factory operations, productivity of the entire manufacturing system improves considerably.

The OSP suite transforms machine tools into smart machines, working together as a team and evolving into a smart factory. And that will open the door to advances in manufacturing that have never before been possible.



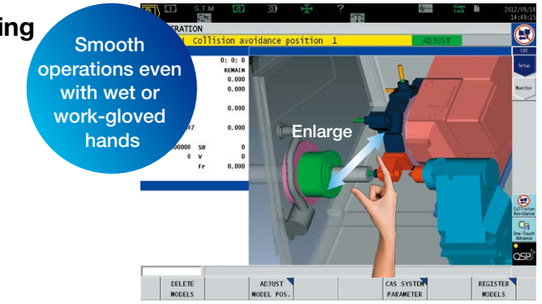
OSP suite OSP-P300LA
The Next-Generation Intelligent CNC

## With revamped operation and responsiveness— ease of use for machine shops first!

Smart factories are using advanced digitization and networking (IIoT) in manufacturing to achieve enhanced productivity and added value. The OSP has evolved tremendously as a CNC suited to advanced intelligent technology. Okuma’s new control uses the latest CPUs for a tremendous boost in operability, rendering performance, and processing speed. The OSP suite also features a full range of useful apps that could only come from a machine tool manufacturer, making smart manufacturing a reality.

## Smooth, comfortable operation with the feeling of using a smart phone

Improved rendering performance and use of a multi-touch panel achieve intuitive graphical operation. Moving, enlarging, reducing, and rotating 3D models, as well as list views of tool data, programs, and other information can be accomplished through smooth, speedy operations with the same feel as using a smart phone. The screen display layout on the operation screen can also be changed to suit operator preferences and customized for the novice and/or veteran machinists.




## “Just what we wanted.”— Refreshed OSP suite apps

This became possible through the addition of Okuma's machining expertise based on requests we heard from real, machine-shop customers. The brain power packed into the CNC, built by a machine tool manufacturer, will “empower shop floor” management.

### Spindle Output Monitor

S11

Increased productivity through visualization of motor power reserve

The specified spindle output (red line: short time rating, green line: continuous rating) and the spindle output in current cutting (blue circle) are simultaneously displayed on the screen, for real-time view of power reserve during cutting. This allows speeding up cutting by increasing the spindle speed or feed rate while monitoring the graph to ensure that the blue circle does not cross the lines.


### Scheduled Program Editor

SDF S10

Easy programming without keying in code

### E-mail Notification

S15

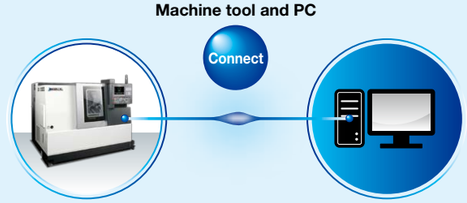
Monitoring utilization status even when away from the machine

### Connect Plan

**Get Connected, Get Started, and Get Innovative with Okuma “*Monozukuri*”**

#### Connect, Visualize, Improve

Okuma’s Connect Plan is a system that provides analytics for improved utilization by connecting machine tools and visual control of factory operation results and machining records. Simply connect the OSP and a PC and install Connect Plan on the PC to see the machine operation status from the shop floor, from an office, from anywhere. The Connect Plan is an ideal solution for customers trying to raise their machine utilization.



# Ensuring smooth machining preparations

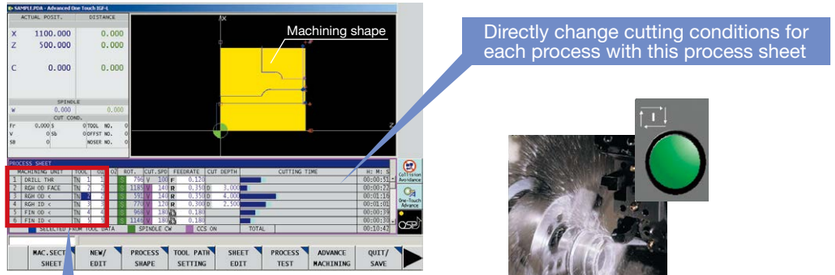
## Interactive operations Advanced One-Touch IGF-L (Optional)

### Part program create

After simple cutting data inputs (interactively), the required machining processes are determined and a part program is created (automatically).

### Advanced run

To run the machine directly from the interactive part program screen.
When a problem is detected it can be quickly corrected and checked, speeding up first part machining.




| PROCESS SHEET | <CONTINUO | |
|---|---|---|
| | MACHINING UNIT | TOOL |
| 1 | DRILL THR | TN 1 |
| 2 | RGH OD FACE | TN 2 |
| 3 | RGH OD < | TN 2 |
| 4 | RGH ID < | TN 3 |
| 5 | FIN OD < | TN 4 |
| 6 | FIN ID < | TN 5 |

Continuous run

| PROCESS SHEET | <CONTINUO | |
|---|---|---|
| | MACHINING UNIT | TOOL |
| 1 | DRILL THR | TN 1 |
| 2 | RGH OD FACE | TN 2 |
| 3 | RGH OD < | TN 2 |
| 4 | RGH ID < | TN 3 |
| 5 | FIN OD < | TN 4 |
| 6 | FIN ID < | TN 5 |

Mid-cycle start
(finishing repeated)

| PROCESS SHEET | <SINGLE F | |
|---|---|---|
| | MACHINING UNIT | TOOL |
| 1 | DRILL THR | TN 1 |
| 2 | RGH OD FACE | TN 2 |
| 3 | RGH OD < | TN 2 |
| 4 | RGH ID < | TN 3 |
| 5 | FIN OD < | TN 4 |
| 6 | FIN ID < | TN 5 |

Individual run
(machining repeated with this tool only)

## Easy to operate

### Operation screen split into four displays

Simultaneous display includes setup work, current position needed in confirming movement in trial machining, NC program, and graphic simulation.

### Tool registration

Register data for all of your tools.
Since the registered tool data is also used by Okuma auto programming (Advanced One-Touch IGF) and a collision check function (Collision Avoidance System), this screen will complete the entire registering process.
When loading a tool in the machine, simply select it from among the registered tools.
ATC manual operation does not require inputting the tool number. Just select the tool from the list and press the function key.

### Forming soft jaws

Templates like this make it easy to set required jaw shape, tool, and cutting conditions.
Part programming not required to do this.

### Zero offsets

A simple function key operation is all it takes to shift a zero offset to either the left or right end of a workpiece. The required zero offset will be calculated automatically based on jaw and workpiece lengths. (when the tool offset is set with reference to the turret tool mounting surface)



# Okuma's Intelligent Technology reduces operator burden

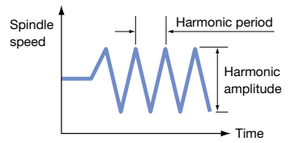
Intelligent Technology

### Machining Navi L-*g*Ⅱ (guided, harmonic spindle speed control)

**Cutting condition search function for turning**

(Optional)

Varying the spindle speed in accordance with the best amplitude and period makes it possible to suppress chatter during turning operations. Tool life can be extended and machining time reduced with use of the optimum cutting conditions, producing significant effects in drilling/boring bar, threading, and grooving applications.

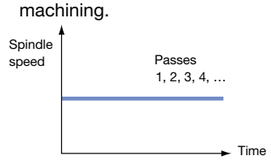



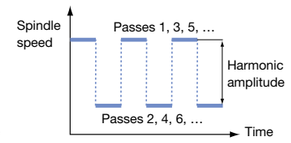

### Machining Navi T-*g* Threading

**Cutting condition search in threading**

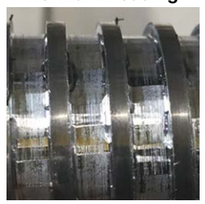
(Optional)

When chattering occurred during threading, it was common to lower the cutting conditions or use special tools that resist chattering. Okuma's Machining Navi T-*g* (Threading) breaks the vibration periodicity with a different spindle speed for each threading pass, and suppresses chatter growth. The machining capacity of your normally used tools can be maximized for stable machining.



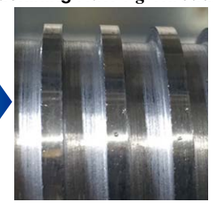




Normal threading



Chatter marks

Machining Navi T-*g* Threading



Smooth surface, clean finished threads

## ECO suite Next-Generation Energy-Saving System

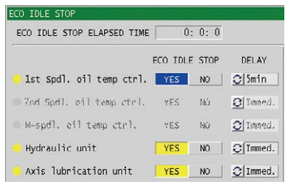
A suite of energy saving applications for machine tools

### ECO Idling Stop

Operation only for the time required for each unit

Idling time can be stopped for individual spindle, feed drives, and peripheral equipment. By reducing the idling time, power consumption can also be reduced.

● Example of equipment that can use Idling Stop

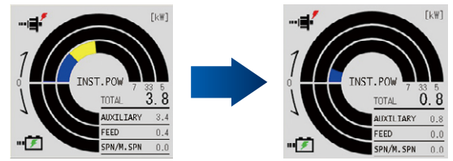



### ECO Power Monitor

On-the-spot check of energy savings

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

● Example of Power Monitor check




Before ECO Idling Stop

After ECO Idlling Stop

The displayed values are one example.

## Machine Specifications

| Item | Model | LB3000 EX Ⅱ (L) | | | | LB3000 EX Ⅱ (M) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | T | C × 500 | C × 1000 | C × 1300 | T | C × 500 | C × 1000 | C × 1300 |
| Capacity | Swing over bed mm (in) | ø580 (ø22.83) | | | | | | | |
| | Swing over saddle mm (in) | ø470 (ø18.5) | | | | | | | |
| | Distance between centers (W specs: DBN) mm (in) | – | 520 (20.47) | 1,020 (40.16) | 1,335 (52.59) | – | 520 (20.47) | 1,020 (40.16) | 1,335 (52.59) |
| | Max turning dia mm (in) | ø410 (16.14) | | | | ø340 (13.39) | | | |
| | Max work length mm (in) | 250 (9.84) | 500 (19.69) | 1,000 (39.37) | 1,300 (51.18) | 250 (9.84) | 500 (19.69) | 1,000 (39.37) | 1,300 (51.18) |
| Travels | X axis mm (in) | 260 (10.24) | | | | | | | |
| | Z axis mm (in) | 565 (22.24) | | 1,065 (41.93) | 1,380 (54.33) | 565 (22.24) | | 1,065 (41.93) | 1,380 (54.33) |
| | Y axis mm (in) | – | | | | – | | | |
| | C axis (minimum control angle) deg | – | | | | 360 (0.001) | | | |
| Spindle | Speed $min^{-1}$ | 45 to 5,000 {42 to 4,200} <28 to 2,800> | | | | | | | |
| | Speed ranges | 2 auto ranges (2 range motor coil switching) | | | | | | | |
| | Nose | JIS A2-6 {JIS A2-8} <JIS A2-11> | | | | | | | |
| | Bore dia mm (in) | ø80 {ø91} <ø110> (ø3.15 {ø3.58} <ø4.33>) | | | | | | | |
| | Front bearing dia mm (in) | ø120 {ø140} <ø150> (ø4.72 {ø5.51} <ø5.91>) | | | | | | | |
| Sub-spindle | Speed $min^{-1}$ | – | | | | | | | |
| | Speed ranges | – | | | | | | | |
| | Nose | – | | | | | | | |
| | Bore dia mm (in) | – | | | | | | | |
| | Front bearing dia mm (in) | – | | | | | | | |
| Turret | Type | V12 NC turret | | | | M-V12 NC turret | | | |
| | No. of tools | L: 12 | | | | L / M: 12 | | | |
| | OD tool shank mm (in) | □25 (1) | | | | | | | |
| | ID tool shank dia mm (in) | ø40 (1.57) | | | | | | | |
| | Turret rotation sec/index | 0.1 | | | | | | | |
| Milling tool | Spindle speed $min^{-1}$ | – | | | | 45 to 6,000 | | | |
| | Speed range | – | | | | Infinitely variable | | | |
| Feed rates | Rapid traverse m/min (ipm) | X: 25, Z: 30 (984, 1,181) | | | | | | | |
| | Tailstock rapids m/min (ipm) | – | 12 (472) | | | – | 12 (472) | | |
| | Rapid traverse (W) m/min (ipm) | – | | | | – | | | |
| | Rapid traverse (C) $min^{-1}$ | – | | | | 200 | | | |
| Tailstock | Tapered bore type | – | MT No. 5 (revolving center) | | | – | MT No. 5 (revolving center) | | |
| | Travel mm (in) | – | 515 (20.28) | 1,015 (39.96) | 1,330 (52.36) | – | 515 (20.28) | 1,015 (39.96) | 1,330 (52.36) |
| Motors | Main spindle (30 min/cont) kW (hp) | 22/15 (30/20) {30/22 (40/30)} [30/22 (40/30)] <22/15 (30/20)> | | | | | | | |
| | Sub-spindle kW (hp) | – | | | | – | | | |
| | Milling tool spindle kW (hp) | – | | | | 7.1/4.1 (9.5/5.5) (25 min/cont) | | | |
| | Axis drive kW (hp) | X: 2.8/Z: 3.5 (3.8/4.7) | | | | | | | |
| | Tailstock travel kW (hp) | – | 2.9 (3.92) | | | – | 2.9 (3.92) | | |
| | Sub-spindle travel kW (hp) | – | | | | – | | | |
| | Coolant pump kW (hp) (60 Hz / 50 Hz) | SD: 0.25/0.25 (0.34/0.34) RD: 0.75/0.55 (1/0.73) | | | SD: 0.82/0.52 (1.09/0.69) | SD: 0.25/0.25 (0.34/0.34) RD: 0.75/0.55 (1/0.73) | | | SD: 0.82/0.52 (1.09/0.69) |
| Machine size | Height mm (in) | 1,824 (71.81) | | 1,975 (77.76) | 1,975 (77.76) | 1,824 (71.81) | | 1,975 (77.76) | 1,975 (77.76) |
| | Floor space*1 mm (in) (side discharge L type tank) | 2,764 × 1,790 (108.82 × 70.47) | | 3,844 × 2,065 (151.34 × 81.30) | 4,344 × 2,185 (171.02 × 86.02) | 2,764 × 1,790 (108.82 × 70.47) | | 3,844 × 2,065 (151.34 × 81.30) | 4,344 × 2,185 (171.02 × 86.02) |
| | Floor space*1 mm (in) (side discharge I type tank) | 2,340 × 1,790 (92.13 × 70.47) | | 3,420 × 2,065 (134.65 × 81.30) | – | 2,340 × 1,790 (92.13 × 70.47) | | 3,420 × 2,065 (134.65 × 81.30 | – |
| | Mass (w/ CNC) kg (lb) | 4,250 (9,350) | 4,400 (9,680) | 6,000 (13,200) | 6,700 (14,740) | 4,350 (9,570) | 4,500 (9,900) | 6,100 (13,420) | 6,800 (14,991) |
| CNC | | OSP-P300LA | | | | | | | |

SD: side discharge, RD: rear discharge, DBN: Distance between noses

| LB3000 EX Ⅱ (MY) | | | | LB3000 EX Ⅱ (W) | | LB3000 EX Ⅱ (MW) | | LB3000 EX Ⅱ (MYW) | |
|---|---|---|---|---|---|---|---|---|---|
| T | C × 450 | C × 950 | C × 1200 | ×500 | ×800 | ×500 | ×800 | ×450 | ×800 |
| ø580 (ø22.83) | | | | | | | | | |
| ø470 (ø18.5) | | | | | | | | | |
| – | 470 (18.5) | 970 (38.19) | 1,220 (48.03) | 785 (30.91) | 1,085 (42.72) | 785 (30.91) | 1,085 (42.72) | 785 (30.91) | 1,085 (42.72) |
| ø340 (13.39) | | | | ø410 (16.14) | | ø340 (13.39) | | ø340 (13.39) | |
| 250 (9.84) | 450 (17.72) | 950 (37.4) | 1,200 (47.24) | – | | – | | – | |
| 260 | | | | | | | | | |
| 510 (20.08) | | 1,010 (39.76) | 1,255 (49.41) | 565 (22.24) | 1,065 (41.93) | 550 (21.65) | 995 (39.17) | 510 (20.08) | 1,010 (39.76) |
| 120 (+70 to -50) (4.72 (+2.76 to –1.97)) | | | | – | | – | | 115 (+70 to -45) (4.53 (+2.76 to –1.77)) | |
| 360 (0.001) | | | | – | | 360 (0.001) | | | |
| 45 to 5,000 {42 to 4,200} <28 to 2,800> | | | | | | | | | |
| 2 auto ranges (2 range motor coil switching) | | | | | | | | | |
| JIS A2-6 {JIS A2-8} <JIS A2-11> | | | | | | | | | |
| ø80 {ø91} <ø110> (ø3.15 {ø3.58} <ø4.33>) | | | | | | | | | |
| ø120 {ø140} <ø150> (ø4.72 {ø5.51} <ø5.91>) | | | | | | | | | |
| – | | | | 50 to 6,000 | | | | | |
| – | | | | 2 auto ranges (2 range motor coil switching) | | | | | |
| – | | | | ø140 flat | | | | | |
| – | | | | ø62 (2.44) | | | | | |
| – | | | | ø100 (3.94) | | | | | |
| M-V12 NC turret | | | | V12 NC turret | | M-V12 NC turret | | | |
| L / M: 12 | | | | L: 12 | | L / M: 12 | | | |
| □25 (1) | | | | | | | | | |
| ø40 (1.57) | | | | | | | | | |
| 0.1 | | | | | | | | | |
| 45 to 6,000 | | | | – | | 45 to 6,000 | | | |
| Infinitely variable | | | | – | | Infinitely variable | | | |
| X: 25, Z: 30, Y: 12.5 (984, 1,181, 492) | | | | X: 25, Z: 30 (984, 1,181) | | X: 25, Z: 30 (984, 1,181) | | X: 25, Z: 30, Y: 12.5 (984, 1,181, 492) | |
| – | 12 (472) | | | – | | | | | |
| – | | | | 30 | | | | | |
| 200 | | | | – | | 200 | | | |
| – | MT No. 5 (revolving center) | | | – | | | | | |
| – | 515 (20.28) | 1,015 (39.96) | 1,330 (52.36) | – | | | | | |
| 22/15 (30/20) {30/22 (40/30)} [30/22 (40/30)] <22/15 (30/20)> | | | | | | | | | |
| – | | | | 11/7.5 (15/10) (20 min/cont) | | | | | |
| – | 7.1/4.1 (9.5/5.5) (25 min/cont) | | | – | | 7.1/4.1 (9.5/5.5) (25 min/cont) | | | |
| X: 3.5/Z: 4.6, Ys: 3.5 (4.7/6.1/4.7) | | | | X: 2.8 / Z: 3.5 (3.8/4.7) | | X: 2.8 / Z: 3.5 (3.8/4.7) | | X: 3.5 / Z: 4.6, Ys: 3.5 (4.7/6.1/4.7) | |
| 2.9 (3.92) | | | | – | | | | | |
| – | | | | 2.8 (3.75) | | | | | |
| SD: 0.25/0.25 (0.34/0.34) RD: 0.75/0.55 (1/0.73) | | | SD: 0.82/0.52 (1.09/0.69) | SD: 0.25/0.25 (0.34/0.34) RD: 0.82/0.52 (1.09/0.69) | | | | | |
| 2,250 (88.58) | | 2,455 (96.65) | 2,455 (96.65) | 1,824 (71.81) | 1,975 (77.76) | 1,824 (71.81) | 1,975 (77.76) | 2,250 (88.58) | 2,455 (96.65) |
| 2,764 × 1,785 (108.82 × 70.28) | | 3,844 × 2,065 (151.34 × 81.30) | 4,344 × 2,185 (171.02 × 86.02) | 3,164 × 1,790 (124.57 × 70.47) | 3,844 × 2,065 (151.34 × 81.30) | 3,164 × 1,790 (124.57 × 70.47) | 3,844 × 2,065 (151.34 × 81.30) | 3,274 × 1,790 (128.90 × 70.47) | 3,844 × 2,065 (151.34 × 81.30) |
| 2,340 × 1,785 (92.13 × 70.28) | | 3,420 × 2,065 (134.65 × 81.30) | – | 2,740 × 1,790 (107.87 × 70.47) | 3,420 × 2,065 (134.65 × 81.30) | 2,740 × 1,790 (107.87 × 70.47) | 3,420 × 2,065 (134.65 × 81.30) | 2,850 × 1,790 (112.20 × 70.47) | 3,420 × 2,065 (134.65 × 81.30) |
| 4,850 (10,692) | 5,000 (11,022) | 6,600 (14,520) | 7,400 (16,280) | 4,650 (10,230) | 6,250 (13,750) | 4,750 (10,450) | 6,350 (13,970) | 5,250 (11,550) | 6,850 (15,070) |
| OSP-P300LA | | | | | | | | | |

{ }: Big-Bore specs < >: Super Big-Bore specs [ ]: With high power spec

*1: Includes standard spindle, side discharge specs; tank

## Standard Specifications & Accessories

| Model | LB3000 EX Ⅱ | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Specifications | L | | | | M | | | | MY | | | | W | | MW | | MYW | |
| | T | C×500 | C×1000 | C×1300 | T | C×500 | C×1000 | C×1300 | T | C×450 | C×950 | C×1200 | ×500 | ×800 | ×500 | ×800 | ×450 | ×800 |
| Spindle (30 min/cont) | A2-6 45 to 5,000 min$^{-1}$ 22/15 kW (30/20 hp) | | | | | | | | | | | | | | | | | |
| Sub-spindle (20 min/cont) | – | | | | | | | | | | | | ø140 flat, 50 to 6,000 min$^{-1}$ 11/7.5 kW (15/10 hp) | | | | | |
| Turret | NC indexing | | | | | | | | | | | | | | | | | |
| | V12 bolt clamp | | | | M-V12 radial | | | | | | | | V12 bolt clamp | | M-V12 radial | | | |
| Milling tool (25 min/cont) | – | | | | 45 to 6,000 min$^{-1}$ 7.1/4.1 kW (9.5/5.5 hp) | | | | | | | | – | | 45 to 6,000 min$^{-1}$ 7.1/4.1 kW (9.5/5.5 hp) | | | |
| Tailstock (dead quill) | – | NC travel * MT No.5 | | | – | NC travel * MT No.5 | | | – | NC travel * MT No.5 | | | – | | | | | |
| Standard accessories | Coolant system (water soluble) | | | | | | | | | | | | | | | | | |
| | Work lamp | | | | | | | | | | | | | | | | | |
| | Full enclosure shielding | | | | | | | | | | | | | | | | | |
| | Jack screws, foundation washers | | | | | | | | | | | | | | | | | |
| | Hand tools | | | | | | | | | | | | | | | | | |
| Standard accessories | Door interlock (standard) | | | | | | | | | | | | | | | | | |
| | Lube monitor (A-1) + hydraulic source pressure detector | | | | | | | | | | | | | | | | | |
| | – | | | | | | | | | | | | Chuck auto open/close confirm (main/sub) | | | | | |
| | – | | | | | | | | | | | | Chuck air blow (main/sub) | | | | | |
| CNC | OSP-P300LA | | | | | | | | | | | | | | | | | |
| | NC operation panel, 15-in color TFT (touch panel) | | | | | | | | | | | | | | | | | |
| | Program storage; 4 GB | | | | | | | | | | | | | | | | | |
| | Operation buffer; 2 MB | | | | | | | | | | | | | | | | | |
| | – | | | | | | | | | | | | Chuck open/close during spindle rotation | | | | | |

* Auto follower rest not available.

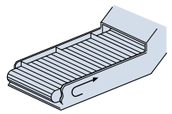
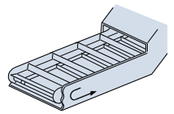
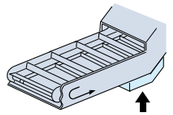
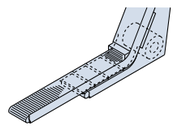
## Optional Specs & Accessories

| | | | |
|---|---|---|---|
| Headstock | Big-Bore spindle:<br>Bearing inside diameter ø140 JIS A2-8 42 to 4,200 min$^{-1}$<br>30/22 kW (30 min/cont)<br>Super Big-Bore specs<br>Bearing inside diameter ø150 JIS A2-11 28 to 2,800 min$^{-1}$<br>22/15 kW (30 min/cont)<br>High power spindle specs: 30/22 kW (30 min/cont) | Coolant | Shower coolant A,B<br>Spindle ID coolant A,B<br>Pump motor: 0.75 kW/0.55 kW (60 Hz/50 Hz)<br>Sludge control<br>Flow / Level detection<br>Mist collector<br>Workpiece wash gun |
| Chucking | Chuck auto open/close confirm<br>Chuck high/low pressure switch<br>Work stopper in spindle | Air | Air blow (blast; chuck, center, spindle ID, turret) |
| Gauges | In-process gauging system<br>Touch Setter M (manual), A (auto) | Cover | Front door auto open/close |
| Tailstock | Revolving center: MT No.5<br>Tailstock taper: Built-in center MT No.4<br>Threaded center MT No.4<br>High thrust specs | Chip handling | Chip pan side or rear<br>Chip conveyor side or rear discharge* L, H<br>Chip bucket L, H |
| Steadyrests | Rollers (fixed position)<br>Auto steadyrest (self-centering) | Dustproofing | Air purge, double wiper |
| Lubrication | Lube monitor B-2, C-1, C-2 | Automation | Bar feeder<br>Bar puller<br>NC robots<br>NC loaders |

* 1,300 mm distance between centers available with side discharge only

## Various chip conveyors

### Chip conveyor types and application

| Type | Hinge | Scraper | Magnet scraper | Hinge + Scraper (with drum filter) |
|---|---|---|---|---|
| Application | ● For steel | ● For castings | ● For castings | ● For steel, castings, nonferrous metal |
| Features | ● General use | ● Magnet scraper more effective for sludge disposal<br>● Easy maintenance<br>● Blade scraper | ● Effective with sludge<br>● Not suited for nonferrous metals | ● Filtration of long and short chips and coolant |
| Shape |  |  |  |  |

Note: Machine platform may be necessary depending on the type of conveyor.



## Chucking Kit / Tooling Kit

| Model | LB3000 EX Ⅱ | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Specifications | L | | | | | | M | | MY | | | | W | | | | MW | |
| | Std Chucking Kit | Std Tooling Kit | Chucking Kit | | | | Chucking Kit | | | Chucking Kit | | | Std Chucking Kit | Sub Chucking Kit | Std Tooling Kit | | Tooling Kit | |
| Chuck | Solid 8-in N-08A6 | | BB kit *1 | E kit *2 | D kit *3 | | BB kit *1 | E kit *2 | D kit *3 | BB kit *1 | E kit *2 | D kit *3 | Solid 8-in N-08A6 | | | | | |
| Sub-spindle chuck | | | | | | | | | | | | | | Hollow 6-in B206 | | | | |
| Soft jaws, A | | | 5 | | | | 5 | | | 5 | | | | | | | | |
| Soft jaws, B | | | 3 | | | | 3 | | | 3 | | | | | | | | |
| Hard jaws | | | 1 | | | | 1 | | | 1 | | | | | | | | |
| OD-Ⅰ | | 4 | 6 | | | | 6 | | | 4 (T specs: 3) | | | | | | | | |
| OD-Ⅱ | | 2 | 3 | | | | 2 | | | 2 | | | | | | | | |
| OD-Ⅰ-S | | | | | | | | | | | | | | | 2 | | 3 | |
| OD-Ⅱ-S | | | | | | | | | | | | | | | 2 | | 1 | |
| OD-Ⅲ-S | | | | | | | | | | | | | | | 2 | | | |
| ID-H40 | | 6 | 6 | | | | 3 | | | 3 | | | | | | | | |
| ID-Ⅰ-S | | | | | | | | | | | | | | | 4 | | | |
| ID-Ⅱ-S | | | | | | | | | | | | | | | 2 | | | |
| ID-Ⅲ-S | | | | | | | | | | | | | | | 1 | | | |
| ID-H40-S (main) | | | | | | | | | | | | | | | | | 3 | |
| ID-I-S (H40) (sub) | | | | | | | | | | | | | | | | | 2 | |
| DS MT No. 1-H40 | | | 1 | | | | | | | | | | | | | | | |
| DS MT No. 2-H40 | | | 1 | | | | | | | | | | | | | | | |
| DS MT No. 3-H40 | | 1 | 1 | | | | 1 | | | 1 | | | | | 1 | | | |
| DS MT No. 4-H40 | | | 1 | | | | | | | | | | | | | | | |
| BS 10-H40 | | | 2 | | | | 2 | | | 2 | | | | | | | | |
| BS 12-H40 | | | 2 | | | | 2 | | | 2 | | | | | | | 1 | |
| BS 16-H40 | | | 2 | | | | 2 | | | 2 | | | | | | | 2 | |
| BS 20-H40 | | 2 | 2 | | | | 2 | | | 2 | | | | | | | 2 | |
| BS 25-H40 | | 2 | 2 | | | | 2 | | | 2 | | | | | 2 | | 2 | |
| BS 32-H40 | | | 2 | | | | 2 | | | 2 | | | | | 2 | | | |
| BS 12-H20 | | | | | | | | | | | | | | | 1 | | | |
| BS 16-H20 | | | | | | | | | | | | | | | 2 | | | |
| Axial mill/drill unit | | | | | | | 2 | | | 2 | | | | | | | 2 | |
| Radial mill/drill unit | | | | | | | 2 | | | 2 | | | | | | | 2 | |
| Dummy holder | | | | | | | 3 | | | 3 | | | | | | | 3 | |
| Revolving center* MT No. 5 | | | | | | | 1 | | | 1 | | | | | | | | |

* Tailstock, MT 5; not for T specs

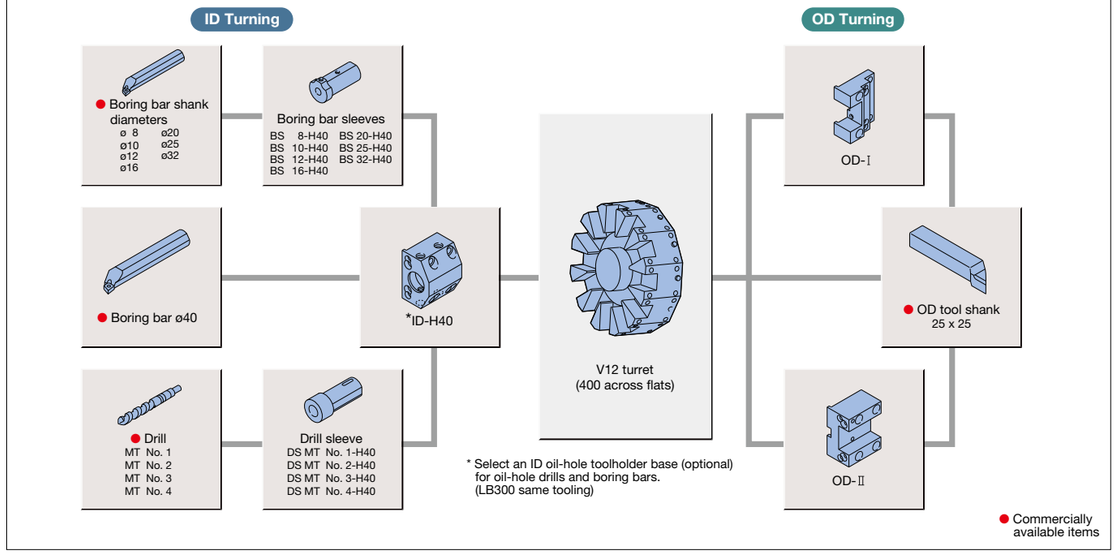
## Chucking Kit

| | BB Kit *1 | E Kit *2 | D Kit *3 |
|---|---|---|---|
| Chuck | Hollow 8-in BB208A6 | Hollow 8-in B-208A6 | Hollow 10-in B-210A6 |

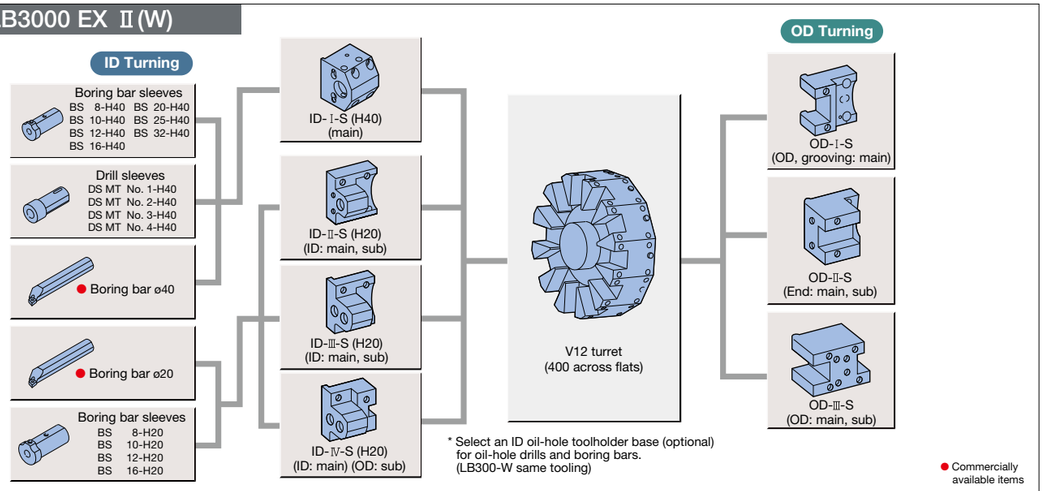
*1, *2, *3 cross-referenced for these two tables.

## Tooling System

### LB3000 EX Ⅱ (L)

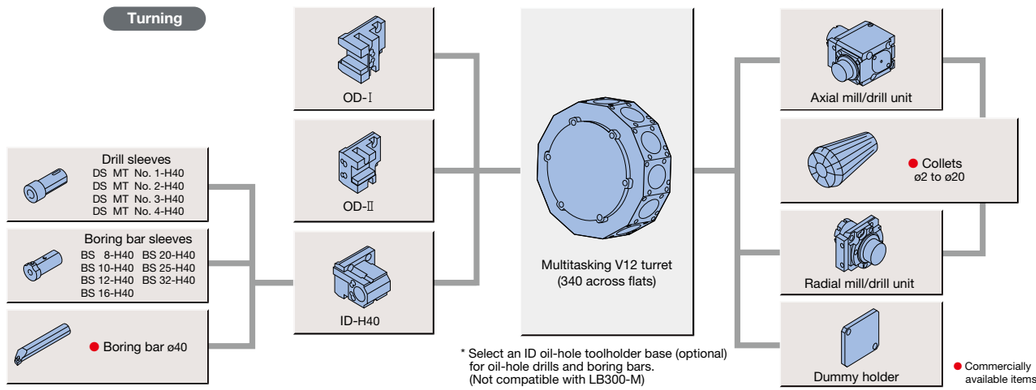


## LB3000 EX Ⅱ(W)



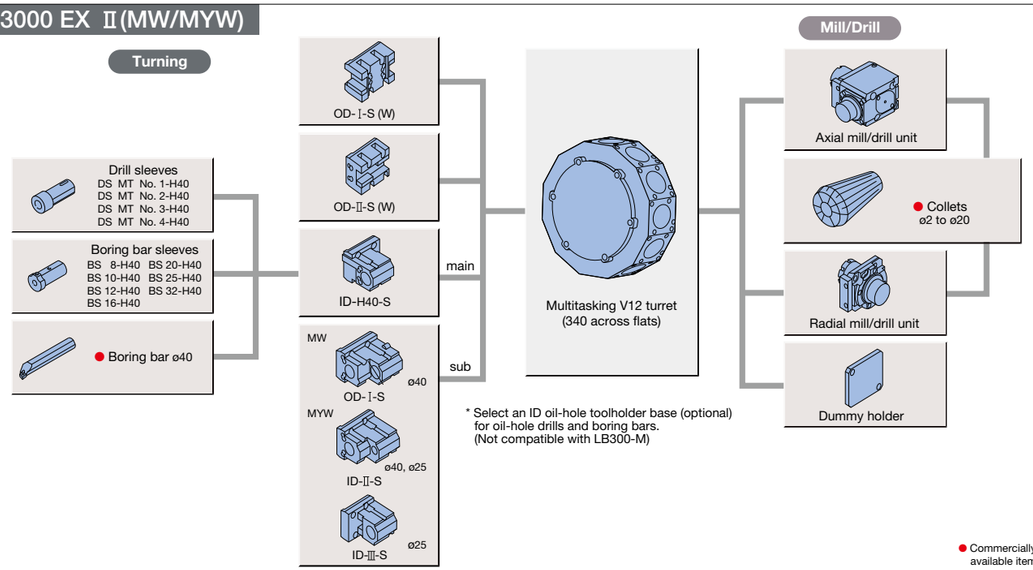

* Select an ID oil-hole toolholder base (optional) for oil-hole drills and boring bars. (LB300-W same tooling)

## LB3000 EX Ⅱ(M/MY)




* Select an ID oil-hole toolholder base (optional) for oil-hole drills and boring bars. (Not compatible with LB300-M)

## LB3000 EX Ⅱ(MW/MYW)



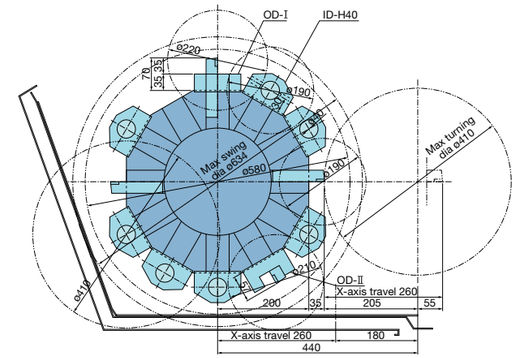

* Select an ID oil-hole toolholder base (optional) for oil-hole drills and boring bars. (Not compatible with LB300-M)



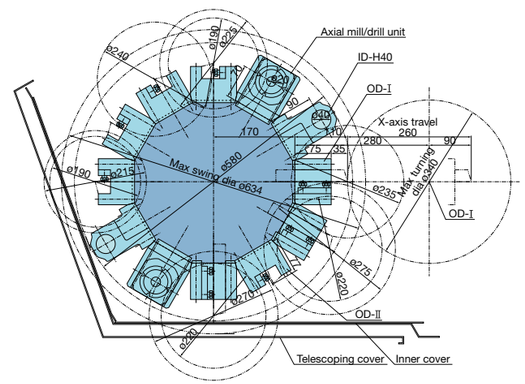
## Tool Interference Drawings

Unit: mm

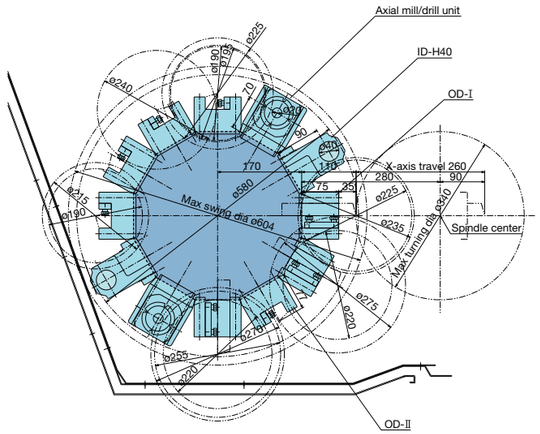
### LB3000 EX Ⅱ(L)



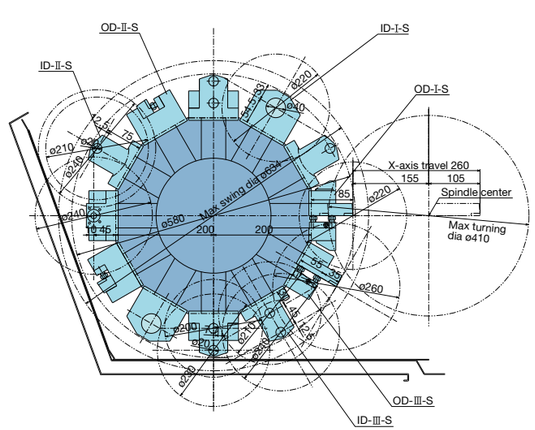

### LB3000 EX Ⅱ(M)



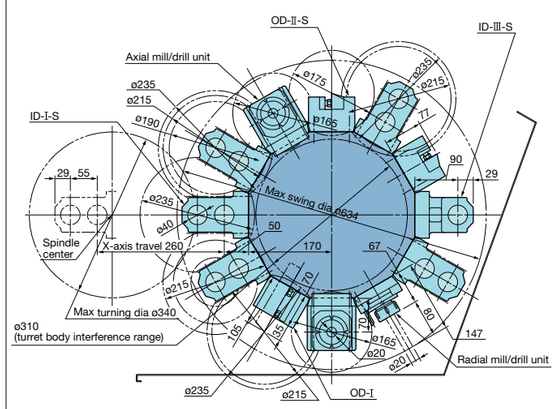

### LB3000 EX Ⅱ(MY)



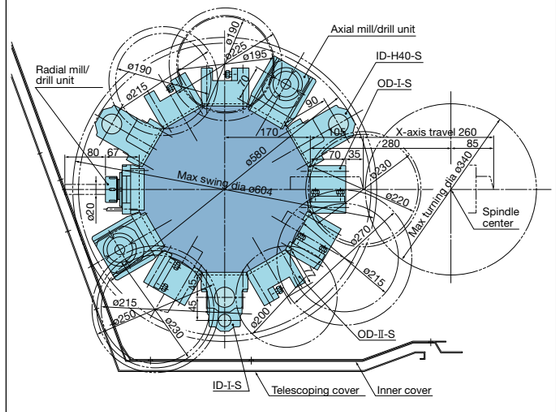

### LB3000 EX Ⅱ(W)




### LB3000 EX Ⅱ(MW)




### LB3000 EX Ⅱ(MYW)

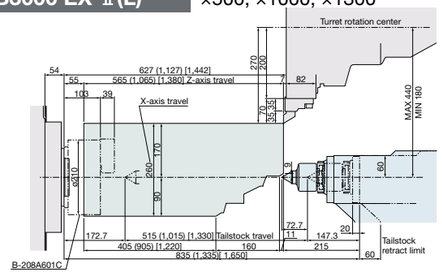


## Working Ranges

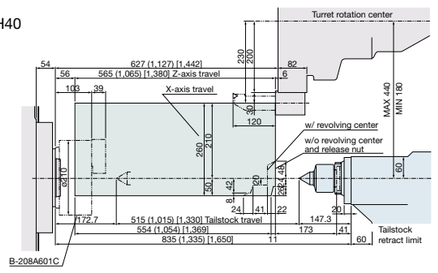
Unit: mm

### LB3000 EX Ⅱ(L) ×500, ×1000, ×1300

OD-I



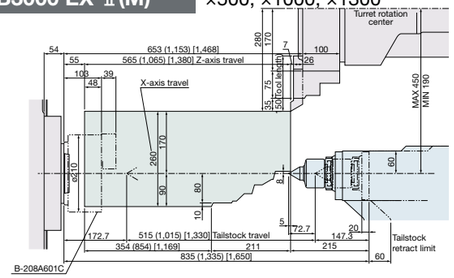

ID-H40



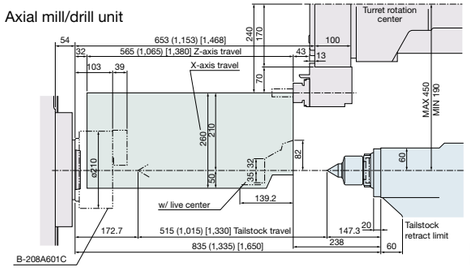

( ): C × 1000
[ ]: C × 1300

### LB3000 EX Ⅱ(M) ×500, ×1000, ×1300

OD-I



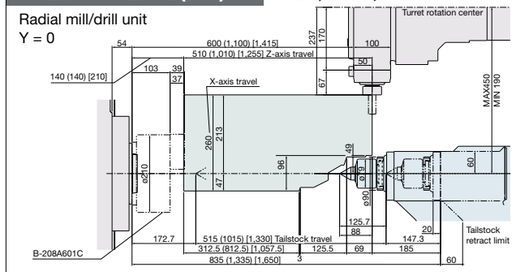

Axial mill/drill unit



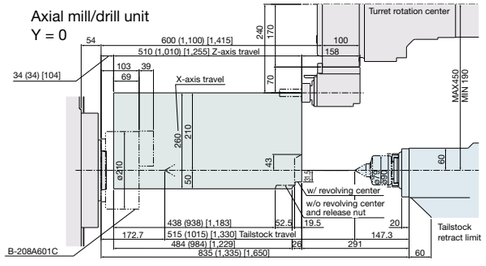

( ): C × 1000
[ ]: C × 1300

### LB3000 EX Ⅱ(MY) ×450, ×950, ×1200

Radial mill/drill unit
Y = 0



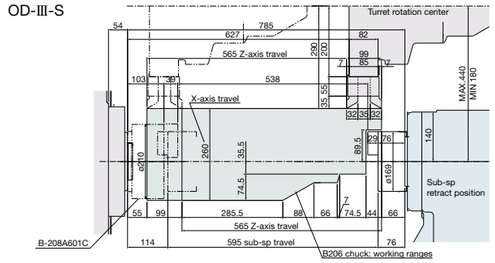

Axial mill/drill unit
Y = 0



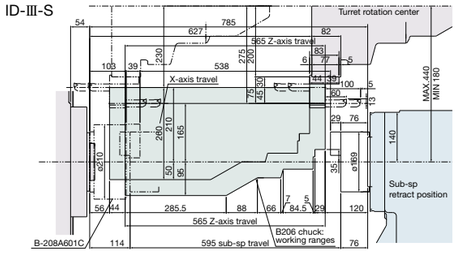

( ): C × 950
[ ]: C × 1200

### LB3000 EX Ⅱ(W) ×500

OD-Ⅲ-S

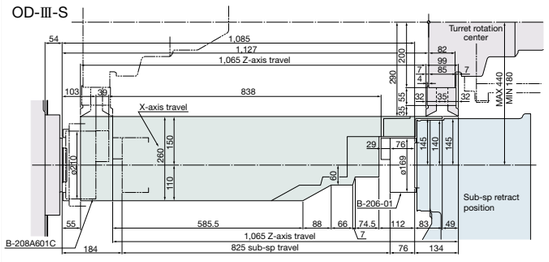



ID-Ⅲ-S

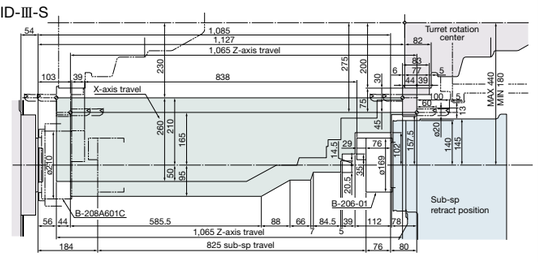



### LB3000 EX Ⅱ(W) ×800

OD-Ⅲ-S




ID-Ⅲ-S



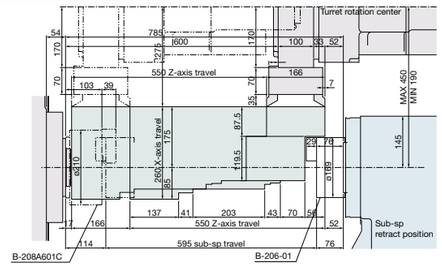



## Working Ranges

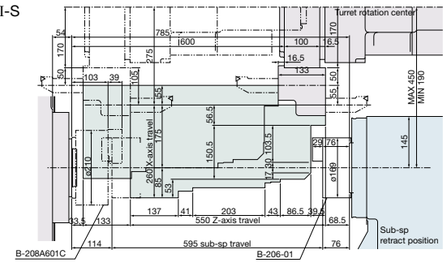
Unit: mm

### LB3000 EX Ⅱ(MW) ×500

OD-I

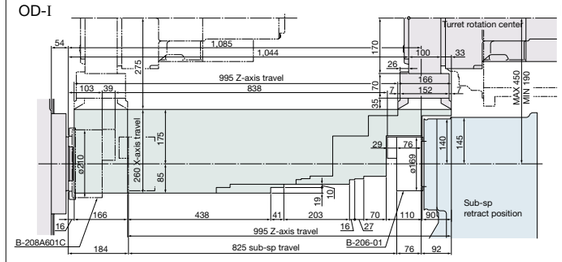



ID-I-S

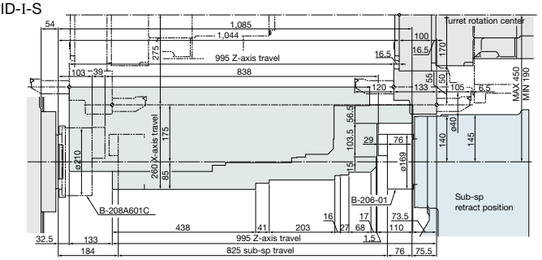



### LB3000 EX Ⅱ(MW) ×800

OD-I

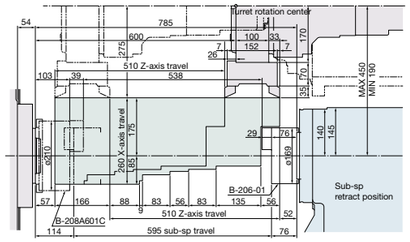



ID-I-S

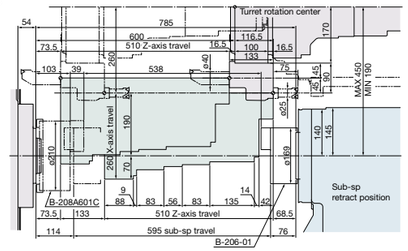



### LB3000 EX Ⅱ(MYW) ×450

OD-I-S

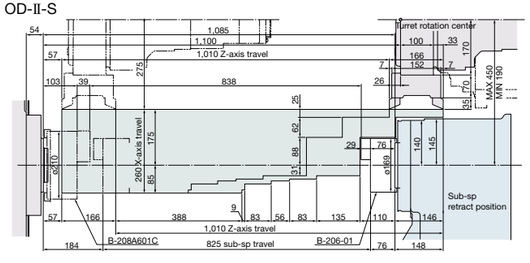



ID-Ⅱ-S

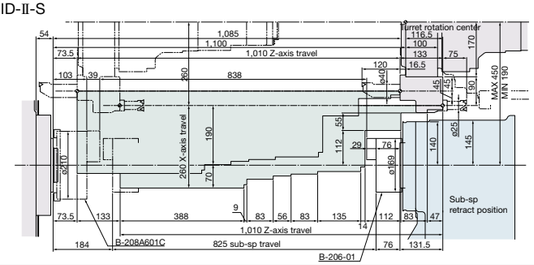



### LB3000 EX Ⅱ(MYW) ×800

OD-Ⅱ-S




ID-Ⅱ-S

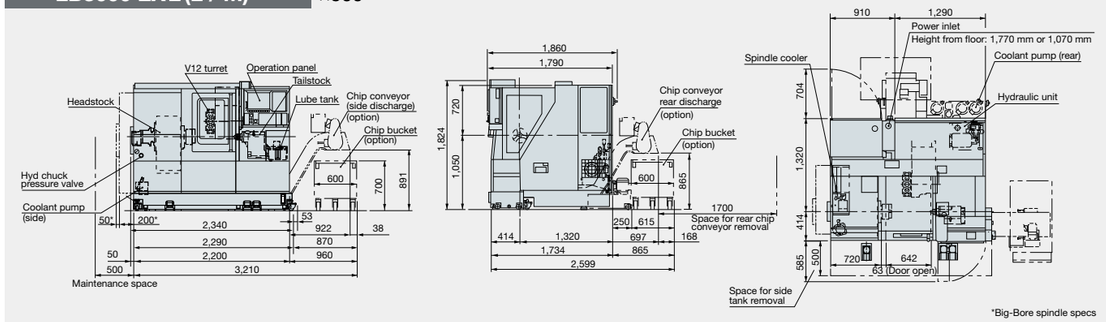



All travel range drawings shown are with standard spindle specs.
This will differ with Big-Bore and Super Big-Bore specs.

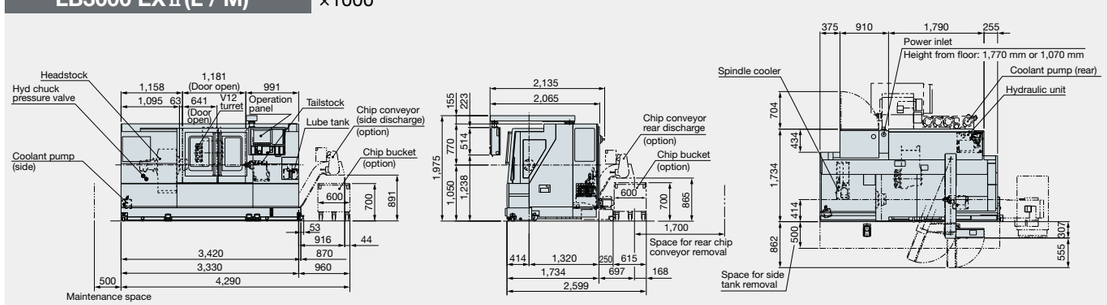
# Dimensional Installation Drawings

Unit: mm

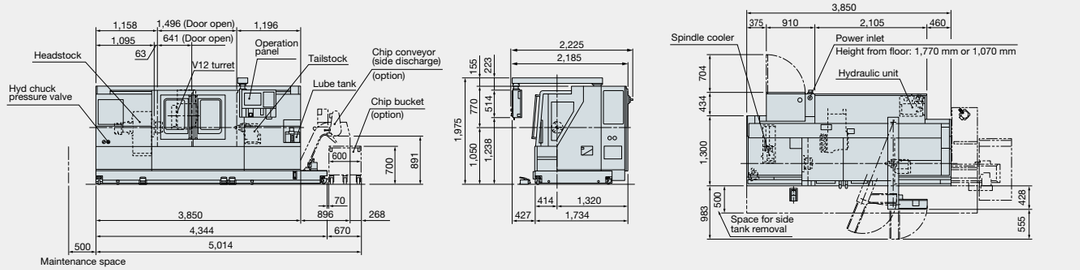
## LB3000 EXⅡ(L / M) ×500




## LB3000 EXⅡ(L / M) ×1000




## LB3000 EXⅡ(L / M) ×1300



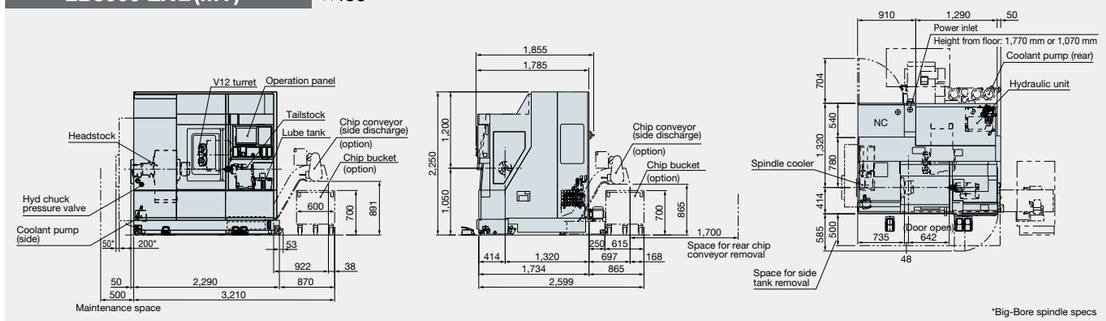

Drawings shown are with standard spindle specs.



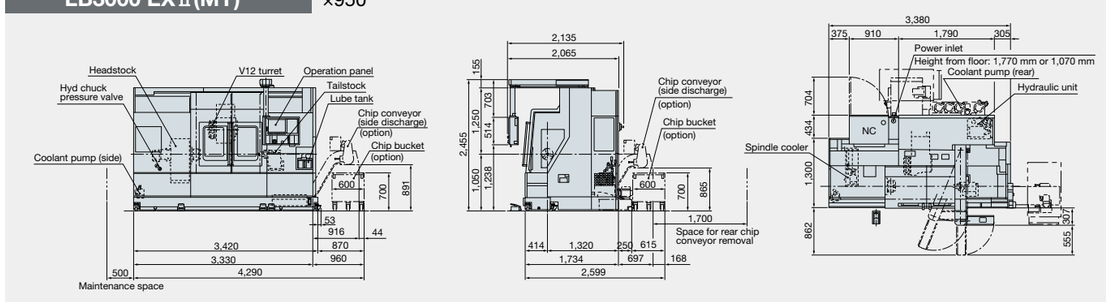
# Dimensional Installation Drawings

Unit: mm

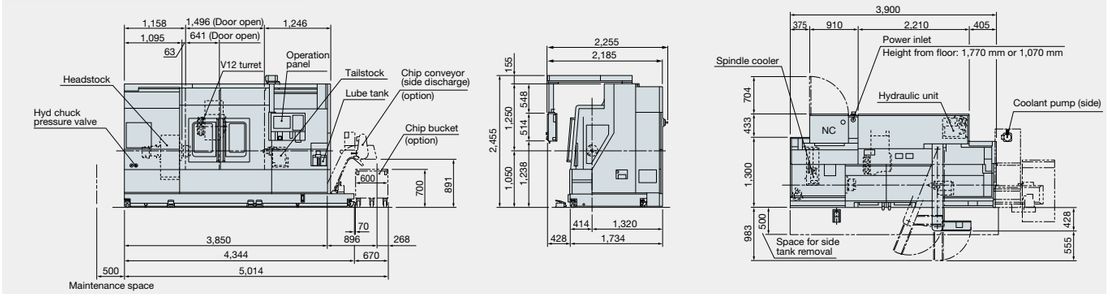
## LB3000 EXⅡ(MY) ×450




## LB3000 EXⅡ(MY) ×950




## LB3000 EXⅡ(MY) ×1200

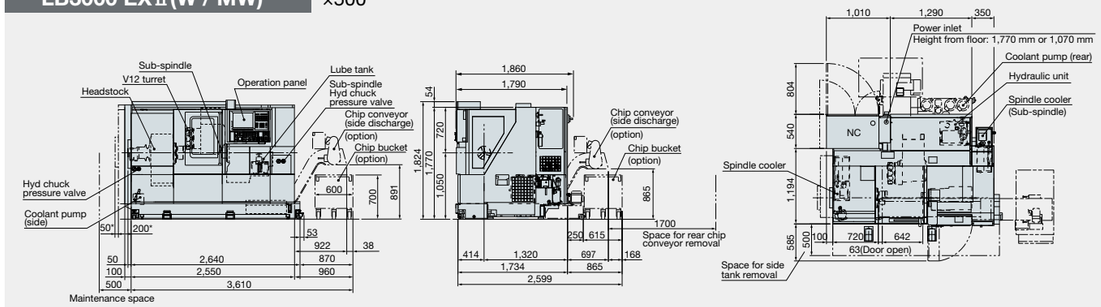



Drawings shown are with standard spindle specs.

# Dimensional Installation Drawings

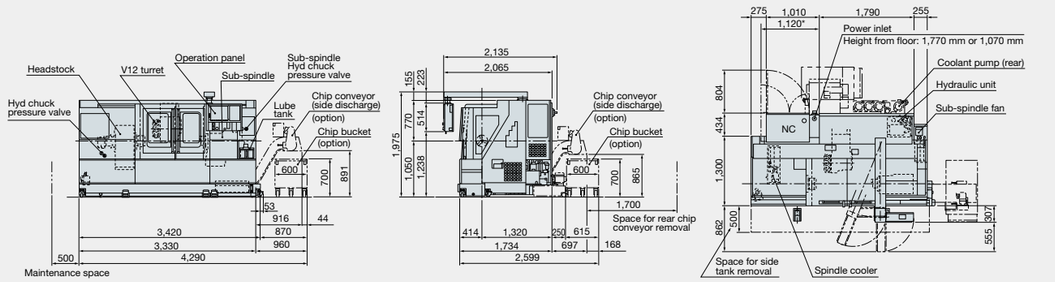
Unit: mm

## LB3000 EXⅡ(W / MW) ×500



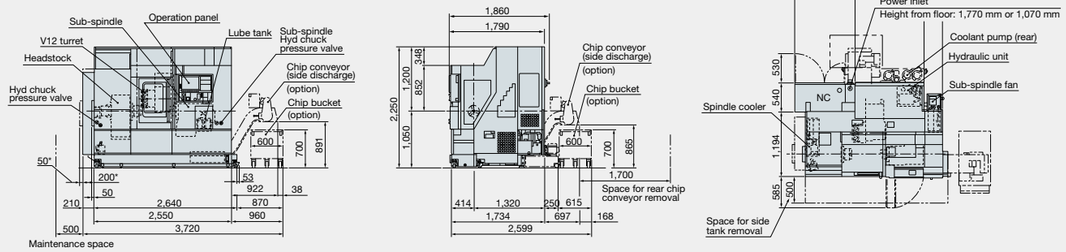

*Big-Bore spindle specs

## LB3000 EXⅡ(W / MW) ×800



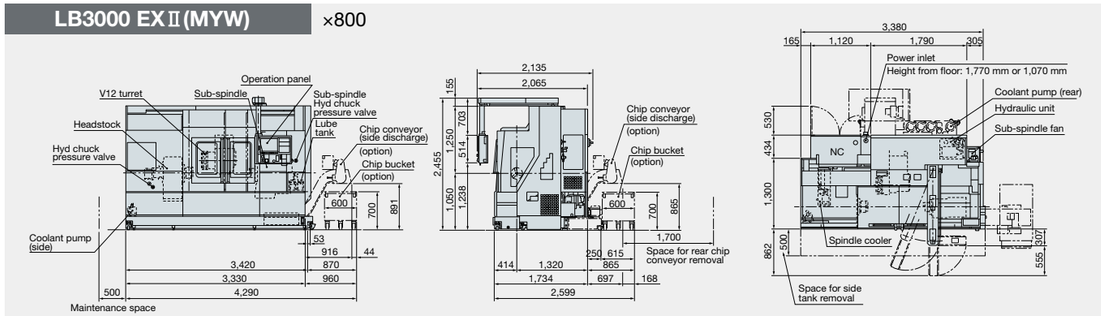

*MW, Big-Bore spindle specs

## LB3000 EXⅡ(MYW) ×450




*Big-Bore spindle specs

## LB3000 EXⅡ(MYW) ×800




Drawings shown are with standard spindle specs.



# OSP suite OSP-P300LA The Next-Generation Intelligent CNC

## Standard Specifications

| | | |
|---|---|---|
| Basic Specs | Control | Turning: X, Z simultaneous 2-axis, Multitasking: X, Z, C simultaneous 3-axis |
| | Position feedback | OSP full range absolute position feedback (zero point return not required) |
| | Min / Max command | ±99999.999 mm, 99,999.999° 8-digit decimal, command units: 0.001 mm, 0.01 mm, 1 mm, 0.001°, 0.01°, 1° |
| | Feed | Override: 0 to 200% |
| | Spindle control | Direct spindle speed commands, override 50 to 200%, constant cutting speed, optimum turning speed designate |
| | Tool compensation | Tool selection: 32 sets, tool offset: 32 sets |
| | Display | 15-inch color display operational panel, Multi touch panel |
| | Self-diagnostics | Automatic diagnostics and display of program, operation, machine, and NC system problems |
| | Program capacity | Program storage: 4 GB, operation buffer: 2 MB |
| Operations | "suite apps" | Applications to graphically visualize and digitize information needed on the shop floor |
| | "suite operation" | Highly reliable touch panel suited to shop floors. One-touch access to suite apps. |
| | Easy Operation | "Single-mode operation" to complete a series of operations. |
| | Programming | Program management, edit, scheduled programs, fixed cycles, special fixed cycles, tool nose R compensation, M-spindle synchronized tapping, fixed drilling cycles, arithmetic functions, logic statements, trig functions, variables, branch statements, auto programming (LAP4), programming help |
| | Machine operations | MDI, manual (rapid traverse, pulse handle), load meter, operations help, alarm help, sequence restart, manual interrupt & auto return, data I/O, oriented spindle stop (electric), easy setting of cycle time reduction |
| | MacMan | Machining Management: machining results, machine utilization, fault data compile & report, external output |
| Communications/Networks | | USB ports, Ethernet, DNC-T1 |
| High speed/accuracy | | Hi-G control |
| Energy-saving function | ECO suite | ECO Idling Stop, ECO Power Monitor |

## Optional Specifications

| Item | | Kit specs*1 | NML E | NML D | 3D E | 3D D | OT-IGF E | OT-IGF D | OTM E | OTM D |
|---|---|---|---|---|---|---|---|---|---|---|
| New Operations | | | | | | | | | | |
| Advanced One-Touch IGF-L *2 | | | | | | | ● | ● | | |
| Advanced One-Touch IGF-L Multitasking *2 | | | | | | | | | ● | ● |
| Programming | | | | | | | | | | |
| Circular threading | | | | ● | | ● | | ● | | ● |
| Program notes | | | | ● | | ● | | ● | | ● |
| User task 2 I/O variables, 8 each | | | | | | | | | | |
| Work coordinate system select | 10 sets | | | | | | | | | |
| | 50 sets | | | | | | | | | |
| | 100 se | | | | | | | | | |
| Tool compensation (Std: 32 sets) | Tool compensation 64 sets | | | | | | | | | |
| | Tool compensation 96 sets | | | | | | | | | |
| | Tool compensation 200 sets | | | | | | | | | |
| | Tool compensation 999 sets | | | | | | | | | |
| Common variables 1,000 sets (Std: 200 sets) | | | | | | | | | | |
| Thread matching | | | | | | | | | | |
| Threading slide hold (G34, G35) | | | | | | | | | | |
| Variable Spindle Speed Threading (VSST) | | | | | | | | | | |
| Inverse time feed | | | | | | | | | | |
| Spindle Synchronized Tapping (rigid tapping) | | | | | | | | | | |
| Milling machine specs | Coordinate convert | | ▲ | ▲ | ▲ | ▲ | | | ● | ● |
| | Profile generate | | ▲ | ▲ | ▲ | ▲ | | | ● | ● |
| | Flat turning | | | | | | | | | |
| | 3-dimensional coordinate conversion | | | | | | | | | |
| | Coordinate calculate (w/NYCL commands) | | | | | | | | | |
| | Shift, rotate, copy coordinates | | | | | | | | | |
| | Profile helical cutting | | | | | | | | | |
| | C-axis torque skip function | | | | | | | | | |
| Helical cutting (within 360 degrees) | | | | | | | | | | |
| Monitoring | | | | | | | | | | |
| Real 3-D Simulation | | | | | ● | ● | ● | ● | ● | ● |
| Cycle time over check | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Load monitor (spindle, feed axis) | | | | | ● | ● | ● | ● | ● | ● |
| Load monitor no-load detection (load monitor ordered) | | | | | | | | | | |
| AI machine diagnostics (feed axes) | | | | | | | | | | |
| Machine Status Logger | | | | | | | | | | |
| Tool life management | | | | ● | | ● | | ● | | ● |
| Tool life warning | | | | | | | | | | |
| Operation end buzzer | | | | | | | | | | |
| Chucking miss detection | | | Included in machine specs | | | | | | | |
| Work counters | Count only | | | | | | | | | |
| | Cycle stop | | | | | | | | | |
| | Start disabled | | | | | | | | | |
| Hour meters | Power ON | | | | | | | | | |
| | Spindle rotation | | | | | | | | | |
| | NC operating | | | | | | | | | |
| NC operation monitor (counter, totaling) | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Status indicator (triple lamp) Type C [Type A, Type B] | | | ● | ● | ● | ● | ● | ● | ● | ● |
| ECO suite (energy saving function) | | | | | | | | | | |
| ECO Operation | Chip conveyor intermittent/ linked operation | | | | | | | | | |
| | Mist collector intermittent/ linked operation | | | | | | | | | |
| | Spindle Power Peak Limiter | | | | | | | | | |

| Item | | Kit specs*1 | NML E | NML D | 3D E | 3D D | OT-IGF E | OT-IGF D | OTM E | OTM D |
|---|---|---|---|---|---|---|---|---|---|---|
| External Input/Output and Communication Functions | | | | | | | | | | |
| RS-232C connector | | | | | | | | | | |
| DNC link | DNC-T3 | | | | | | | | | |
| | DNC-C/Ethernet | | | | | | | | | |
| | DNC-DT | | | | | | | | | |
| USB (additional) | 2 additional ports possible | | | | | | | | | |
| Measuring | | | | | | | | | | |
| In-process work gauging | | | Included in machine specs | | | | | | | |
| Z-axis automatic zero offset by touch sensor | | | | | | | | | | |
| C-axis automatic zero offset by touch sensor | | | | | | | | | | |
| Y-axis gauging | | | | | | | | | | |
| Gauge data output | File output | | | | | | | | | |
| Post-process work gauging interface | Set levels (5-level, 7-level) | | | | | | | | | |
| | BCD | | | | | | | | | |
| | RS-232C (dedicated channel) | | | | | | | | | |
| Touch Setter [M, A] | | | Included in machine specs | | | | | | | |
| Automation/Untended Operation | | | | | | | | | | |
| Auto power shutoff M02, alarm | | | | | | | | | | |
| Warm-up function (by calendar timer) | | | | | | | | | | |
| Tool retract cycle | | | | | | | | | | |
| External program selections | A (pushbutton) 8 types | | | | | | | | | |
| | B (rotary switch) 8 types | | | | | | | | | |
| | C (digital switch) BCD, 2-digit | | | | | | | | | |
| | C2 (external input) BCD, 4-digit | | | | | | | | | |
| Okuma loader (OGL) interface | | | Included in loader specs | | | | | | | |
| Third party robot and loader interface *3 | Type B (machine) | | | | | | | | | |
| | Type C (robot and loader) | | | | | | | | | |
| | Type D | | | | | | | | | |
| | Type E | | | | | | | | | |
| Bar feeders | Interface | | | | | | | | | |
| Cycle time reduction *3 | Operation time reduction | | ● | ● | ● | ● | ● | ● | ● | ● |
| | Spindle rotating chuck open/close | | | | | | | | | |
| | Spindle rotating tailstock advance/ retract | | | | | | | | | |
| High-Speed/High-Accuracy Functions | | | | | | | | | | |
| 0.1 µm control *3 | | | | | | | | | | |
| Pitch error compensation | | | | | | | | | | |
| AbsoScale detection *3 | | | | | | | | | | |
| Hi-Cut Pro | | | ▲ | ▲ | ▲ | ▲ | | | ● | ● |
| Other Functions | | | | | | | | | | |
| Collision Avoidance System (CAS) | | | | | | | | | | |
| One-Touch Spreadsheet | | | | | | | | | | |
| Machining Navi L-*g*Ⅱ | | | | | | | | | | |
| Machining Navi T-*g* (Threading) | | | | | | | | | | |
| Harmonic Spindle Speed Control (HSSC) | | | ● | ● | ● | ● | ● | ● | ● | ● |
| Spindle dead-slow cutting | | | | | | | | | | |
| Spindle speed setting | | | | | | | | | | |
| Manual cutting feed | | | | | | | | | | |
| Y-axis alignment compensation | | | | | | | | | | |
| Short circuit breaker | | | | | | | | | | |
| External M signals [2 sets, 4 sets, 8 sets, 16 sets] | | | | | | | | | | |
| Edit interlock | | | | | | | | | | |
| OSP-VPS (Virus Protection System) | | | | | | | | | | |

*1. NML: Normal, 3D: Real 3D simulation, OT-IGF: One-Touch IGF, OTM: One-Touch M
E: Economy, D: Deluxe
*2. Including 3-D simulation
*3. Engineering discussions required.
*Note: ▲Triangle items for M function (milling tool) machines only.

LB3000 EX II
SPACE TURN

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 are subject to change without notice.
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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.

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