

## Press Release

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November 9, 2010

### The new standard for 4-axis control CNC lathe, “NZL2500” makes its debut!

Mori Seiki Co., Ltd. has launched the 4-axis control CNC lathe **NZL2500** that realizes high productivity of shaft and flange workpieces.

The NZL2500 4-axis lathe with a 10-inch chuck is designed to reflect current market needs and 1,000 feedback comments from our customers. The NZL2500 machine offers improved machining capabilities, accuracy and quality compared to those of its predecessor, ZL Series, which boasts orders of about 2,500 units. We would like to introduce the highlights of the NZL2500 in terms of (1) high rigidity, (2) high accuracy, (3) a wide variety of specifications, (4) high productivity, (5) energy saving, (6) MAPPS IV + ESPRIT, and (7) compliance with safety standards.

#### (1) High rigidity

This model has adopted a bed with three independent guideways so that Turret 1, Turret 2 and a tailstock can move independently. This structure contributes to better operability because Turret 2 can move in the Z-axis direction without restriction from the tailstock, realizing high rigidity of the tailstock. Also, by using slideways for all axes, the machine has improved rigidity by 50 % compared with conventional machines.

Moreover, **BMT (Built-in Motor Turret)** is used for Turret 1 in the MC or Y types, offering milling capability that has proven results in our NL series.

#### (2) High accuracy

The spindle, which is a major heat source, uses the heat-symmetrical structure to reduce the thermal displacement by 50 % compared with conventional machines. The upper and lower X axes are equipped with core cooling as standard, realizing high accuracy machining for long hours.

#### (3) A wide variety of specifications

The machine can handle turning workpieces that require 10 or 12-inch chuck size, milling machining (MC type), and Y-axis machining (Y type) which the ZL Series has not offered, realizing complicated machining at a higher level. For distance between centers, customers can choose 600 mm or 1,000 mm.

\*BMT is a trademark or registered trademark of Mori Seiki Co., Ltd. in Japan, the USA and other countries.

With regard to collecting chips, the machine is equipped with a wide rear-discharge chip conveyor (optional) and shower coolant (standard), making long-term automatic operation possible. Also there is a variety of steady rests (optional) in order to handle shaft workpieces flexibly.

(4) High productivity

Twelve tools can be mounted on Turret 1. Built-in Motor Turret (BMT) used in the MC or Y types can mount rotary tools at all stations. Eight tools can be mounted on Turret 2, exclusively for turning. Turning with Turret 1 and Turret 2 at one time can shorten machining time.

(5) Energy saving

With the aim of reducing the environmental burden and running costs, we have also focused on energy saving. Lubricating oil consumption is reduced by about 33% by stopping oil supply during standby.

(6) MAPPS IV + ESPRIT

The NZL2500 uses the MAPPS IV high-performance operating system for its operation panel. The combination of automatic programming software (standard) and ESPRIT CAM software (standard) allows the machine to handle complex machining programming and to flexibly meet customer needs.

(7) Compliance with safety standards

The NZL2500 conforms to safety standards of all over the world, including CE marking, UL Standards and ANSI.

Mori Seiki will continue to respond to customers' various needs with the industry's largest lineup.

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|-------------|--|
| Type        | High-Precision, High-Efficiency 4-axis Control CNC lathe |
| Model       | NZL2500Y/600   |
| Market      | Automobile, General parts                                |
| Order start | November 9, 2010   |
| Sales       | 15 units/month   |

■Major specifications

| Item                                    | NZL2500Y/600                       |
|---|------------------------------------|
| Max. turning diameter (mm)              | Turret 1:φ370 , Turret 2:φ260      |
| Max. turning length (mm)                | 600                                |
| Axis travel (mm)                        | X1:225 X2:170 Y:+70/-50 Z1, Z2:650 |
| Max. spindle speed (min <sup>-1</sup> ) | 4,000                              |
| Rapid traverse rate (X/Z) (mm/min)      | X1,X2:25,000 Y:15,000 Z:30,000     |
| Number of tool stations                 | Turret 1: 12 , Turret 2: 8         |
| Spindle drive motor (30 min/cont) (kW)  | 26/22                              |



Figure 1. NZL2500Y/600 Exterior



Figure 2. NZL2500Y/600 Turret

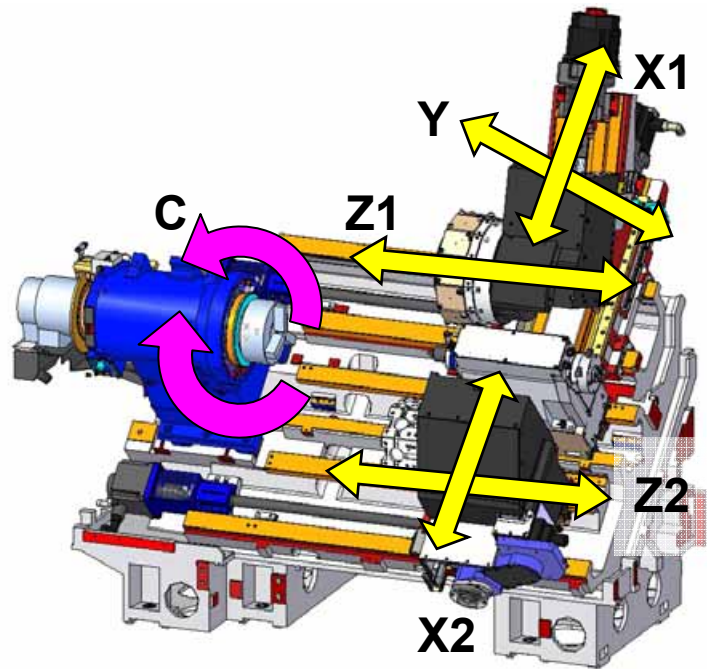


Figure 3. NZL2500Y/600 Axis structure



Figure 4. Machining example (crank shaft)