

## Press Release

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September 6, 2011

### With 2 Turrets, High-rigidity, High-efficiency Multi-axis Turning Center "NZX2500" Launched!

Mori Seiki Co., Ltd. has started taking orders for the **NZX2500** high-efficiency multi-axis turning center that offers high productivity of shafts and flanges from the **NZX Series** on September 6, 2011. The NZX Series is a new line-up of the "X class".

The NZX2500, a multi-axis turning center with a 10-inch chuck, is equipped with milling functions as standard. The NZX2500 Series machine has incorporated today's market needs and more than 1,000 pieces of users' feedback on the previous models, offering improved machining ability, accuracy and quality. The NZX2500 offers extensive features including (1) High rigidity (2) High precision (3) Reliability (4) A wide variety of specifications (5) High productivity (6) Energy saving (7) MAPPS IV + ESPRIT, and (8) Compliance with safety standards.

#### (1) High rigidity

The NZX2500 uses a bed equipped with three independent slideways for Turret 1, Turret 2 and tailstock. This structure not only allows the Turret 2 to move in the Z-axis direction without being interfered by the tailstock, but also offers highly rigid tailstock structure. Additionally, all the slideways on the NZX2500 machines are 20% wider than those on the previous models, offering 50% greater rigidity than the previous models.

The NZX2500 uses the largest diameter bearing ( $\phi$  140 mm) in the class for its spindle. This highly rigid spindle is equipped with a high output and high torque motor (output: 26/22 kW, torque: 709 Nm) as standard. The Turret 1 is also equipped with a **BMT® (Built-in Motor Turret)** whose milling ability has proven reliable on the NL Series, as standard. The NZX2500 using the highly rigid spindle and machine structure achieves twice the cutting power of the previous models, offering heavy-duty cutting.

#### (2) High precision

The machine uses a spindle in which bolts and pipes for cooling oil are arranged symmetrically relative to the center of the spindle. This allows the machine to minimize the deterioration of accuracy caused by thermal displacement while increasing spindle rigidity. As a result, the NZX2500 achieve 50% reduction in thermal displacement in the spindle, compared to the previous models. The machine is also equipped with core cooling systems for the upper and lower X axes as standard, achieving long-term, high-precision machining. Additionally, the NZX2500 performs machining without chattering thanks to its highly rigid machine structure, achieving 20% improved machining accuracy.

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

### **(3) Reliability**

For the heavy use of the high-pressure coolant, the NZX2500 spindle has an advanced labyrinth structure that coolant hardly enters inside the spindle unit. By adding air purge to BMT® for protecting the milling motor, the durability is enhanced. Even if coolant enters inside the turrets, it doesn't stay inside because it is sucked out.

### **(4) A wide variety of specifications**

The chuck size is available in 10 and 12 inches. The distance between centers is available in 600 mm and 1,000 mm. The Turret 1 is available in two types: a Turret 1 with Y-axis function (Y type), and a Turret 1 that is equipped with no milling function but only with turning functions (L type). A wide variety of specifications allows customers to choose the best one that suits their workpieces.

Additionally, the combination of a wide rear disposal chip conveyor (option) and shower coolant (standard) offers higher chip disposal ability, enabling long-term automatic operation.

### **(5) High productivity**

The number of tool stations for the Turret 1 is twelve, and rotary tools can be mounted on any of the tool stations. The number of tool stations for the Turret 2 that is dedicated to turning functions is eight. Using the Turret 2 simultaneously with the Turret 1 contributes to reduced machining time.

### **(6) Energy saving**

To reduce environmental burden and running costs, the NZX2500 uses an inverter type hydraulic unit. Since the hydraulic unit pump can be stopped during standby mode, the electricity is saved. Additionally, the machine using LED lighting consumes electricity 40% less than the previous models.

### **(7) MAPPS IV + ESPRIT**

The NZX2500 uses the MAPPS IV high-performance operating system for its operation panel. Since a license for ESPRIT CAM software is included as standard in addition to the automatic conversational programming function, the machine allows users to create highly complex machining programs on a PC connected to the machine through a network. Additionally, the machine is equipped with MORI-NET that provides remote maintenance and operating status monitoring, as standard.

### **(8) Compliance with safety standards**

The NZX2500 complies with safety standards all over the world, including IEC Standards, UL Standards and JIS Standards.

The NZX2500 will be exhibited at **EMO Hannover 2011** Machine Tool World Exhibition to be held from September 19 to 24 in Hannover, Germany. We are looking forward to seeing you at our booth.

Mori Seiki will continue to provide highly-functional and affordable machines to meet diversified customer needs.

Type	High-Precision, High-Efficiency Multi-Axis Turning Center
Model	NZX2500
Market	Automobile parts, general machinery parts, etc.
Order start	September 6, 2011
Production	15 units/month

### Major specifications

Item	NZX2500/600Y	
Max. turning diameter (mm)	Turret 1: $\phi$ 370	Turret 2: $\phi$ 260
Max. turning length (mm)	600	
X-axis travel (mm)	Turret 1: 225	Turret 2: 170
Z-axis travel (mm)	Turret 1: 650	Turret 2: 650
Y-axis travel (mm)	Y: +70/-50	
Rapid traverse rate (mm/min)	X: 25,000 Z: 30,000 Y: 15,000	
Max. spindle speed ( $\text{min}^{-1}$ )	4,000 [5,000] <sup>*1</sup> [2,500] <sup>*2</sup>	
Spindle drive motor (30 min./cont.) (kW)	26/22 [22/15] <sup>*1</sup> [30/25] <sup>*2</sup>	
Through-spindle hole diameter (mm)	$\phi$ 91 [73] [111]	
Max. rotary tool spindle speed ( $\text{min}^{-1}$ )	6,000	
Rotary tool spindle drive motor (3 min/5 min/cont) (kW)	5.5/5.5/3.7	
Number of tool stations on the turrets	Turret 1: 12	Turret 2: 8

[ ] Option

\*1 Through-spindle hole diameter  $\phi$  73 mm

\*2 Through-spindle hole diameter  $\phi$  111 mm



Fig.1 Exterior