MORI SEIKI
THE MACHINE TOOL COMPANY

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Press Release

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The NZ2000 T3Y3 multi-axis machine with 3 turrets for mass production machining will be displayed at JIMTOF2006 as a pre-release display machine.

The international debut of the NZ Series, equipped with 3 turrets with built-in milling motors™ for 3 times the machining ability.

Mori Seiki will show our multi-axis machine, the **NZ2000 T3Y3**, incorporating many of our original technologies, as a pre-release display machine at **JIMTOF2006,** which will be held from November 1.

The **NZ Series** is the world's first multi-axis machine to be equipped with 3 turrets with built-in milling motors™ and the Y-axis function. It will achieve high-efficiency machining for mass production of bar material, flanges and shafts, and for mass production of precision parts in various fields such as the automobile parts, electric equipment, hydraulic/pneumatic equipment industries, etc. The NZ Series has 10 variations, in order to respond to our customers' diverse needs. There are 2 models in the Series, the NZ1500 with a 6-inch chuck and the NZ2000 with a 8-inch chuck, and customers can choose from 2 turrets with no Y-axis function to 3 turrets all with the Y-axis function. 16 tools can be mounted on 1 turret, and a **maximum of 48 tools** can be installed, allowing long-term unmanned operation with few setup changes.

With its **structure designed for excellent chip disposal** and the **3-D interference checking function,** customers can do continuous operation and setups with piece of mind.

The **NZ2000 T3Y3**, which will be displayed as a pre-release display machine at JIMTOF2006, has **2 spindles and 3 turrets**, and all 3 turrets have the **Y-axis function and built-in milling motors**. This not only allows synchronized machining using 3 turrets, but also achieves heavy-duty cutting and high-speed machining using rotary tools thanks to the built-in motor turrets. What's more, due to its outstanding process integration, the machine with the 2-turret, 2-spindle specifications will reduce machining time by approximately 30% compared with conventional machines. Please come to the Mori Seiki booth at JIMTOF2006 and see for yourself the innovations achieved by the multi-axis machine for mass production machining.

Type	Multi-axis machine for mass production machining
Model	NZ2000 T3Y3
Market	Automobile parts, electric equipment, hydraulic/pneumatic equipment, etc
Orders from	January 2007

■ Main features (NZ2000 T3Y3)

1. 3 turrets equipped with built-in milling motors
2. Dramatically reduced machining time
3. Improved chip disposal
4. 3D interference checking function by the MAPPS Ⅲ next-generation operating system
5. 10 variations in the Series

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■ Features

1. 3 turrets equipped with built-in milling motors

All the turrets are equipped with a built-in motor as a standard feature. The rotary tool spindle has a maximum output of 7.5 kW, the largest in its class, with a maximum spindle speed of 6,000 min^{-1} (12,000 min^{-1}as an option), achieving both heavy-cutting ability and high speed. Also, a total of 48 tools can be installed on the 3 turrets (16 tools per turret), dramatically improving productivity.

2. Dramatically reduced machining time

The machine allows not only synchronized machining on 3 turrets, but also achieves greatly reduced machining time by shortening workpiece delivery times between Spindle 1 and Spindle 2 and workpiece unloader operation time, and by speeding up the feedrate and the rotary tools.

3. Improved chip disposal

The wires and pipes for Turret 2 are located inside the machine cover, achieving higher chip disposal ability. Turret 2 is built with our unique high-rigidity ram structure, solving the problem of chips accumulating inside the machine.

4. 3D interference checking function by the MAPPS Ⅲ next-generation operating system

With the 3D interference checking function, the complex movements of the 3 turrets are checked in real time, allowing customers to operate it with peace of mind. We also paid a lot of attention to the operability of control units, greatly contributing to high-efficiency machining without putting any pressure on the operator.

5. 10 variations in the Series

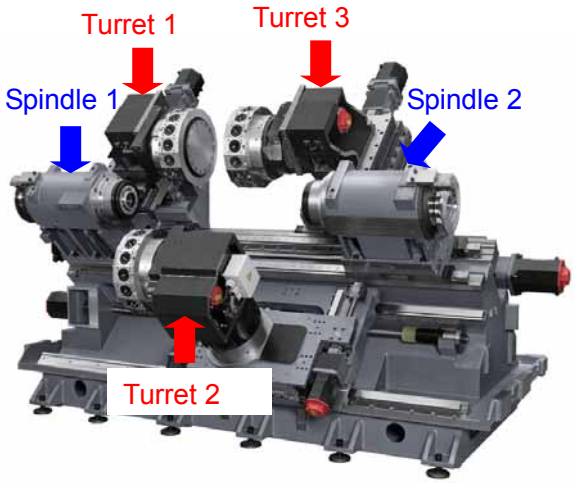
The NZ Series has a wide variety of machines available in order to meet the needs of our customers. We have 10 variations ready which allow customers to select the chuck size (6 inch or 8 inch), and whether they need Turret 3 or the Y-axis function or not.

■ Main Specifications (NZ2000 T3Y3)

Max. machining diameter	φ200 mm
Max. machining length	260 mm
Bar machining capacity	φ65 mm
Axis travel	X-axis: 210 mm Z-axis: 300/810 mm Y-axis: 110 mm B-axis (Spindle 2): 920 mm
Max. spindle speed	5,000 min^{-1}
Max. rotary spindle speed	6,000 [12,000] min^{-1}
Rapid traverse rate	X-axis: 30 m/min Z-axis: 50 m/min Y-axis: 20 (Y1, Y3), 16 (Y2) m/min B-axis (Spindle 2) : 50m/min
Spindle drive motors (30 min/cont.)	25/22 [25/22 high torque specifications] kW
Rotary tool drive motor	7.5/5.5 kW

[ ] Option

NZ2000



Machine structure