

Press Release

March 17, 2006

Pre-Release Display of the High-Precision Vertical Machining Center for Die and Mold Machining “NVD6000 DCG” at INTERMOLD®2006.

The DCG™ (Driven at the Center of Gravity) Series now has a new model with Y-axis travel of 600 mm

Mori Seiki Co., Ltd. is going to exhibit the **NVD6000 DCG** high-precision vertical machining center for die and mold machining using **DCG™ (Driven at the Center of Gravity) Theory** as a pre-release display at INTERMOLD®2006, which starts on April 12.

Recently there has been a sharp increase in demand from the LCD and automobile part die and mold machining industries for a medium-size machining center which can deliver high-speed machining with no tool tip vibration and high surface quality.

The NVD6000 DCG can dramatically improve surface quality, contouring accuracy and tool life by adopting DCG™ (Driven at the Center of Gravity) theory, which is already widely trusted by customers. The machine has a **Y-axis travel of 600 mm**, and axis travels are set to best suit die and mold machining. The spindle is No. 40 taper, and a maximum spindle speed of 30,000 min⁻¹ is also available as an option.

AI nano high-precision contour control, direct scale feedback and ball screw core cooling are standard. The machine will realize high-precision machining in any conditions.

We are adding a new vertical machining center from the DCG™ Series to the Mori Seiki line-up, which will double our customers' productivity in the precision die and mold machining field.

Name	Vertical Machining Center
Model	NVD6000 DCG
Market	Die and Mold
Sales from	June 2006

■Main Features

1. Equipped with DCG™ (Driven at the Center of Gravity)
2. Achieves roundness of 1.6µm.
3. Maximum spindle speed of 20,000 min⁻¹, with an option of 30,000 min⁻¹.

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■Features

1. Equipped with DCG™ (Driven at the Center of Gravity)

The NVD6000 DCG is equipped with DCG™ (Driven at the Center of Gravity), and reduces machining time, extends tool life and improves machining accuracy, quality of the machined surface and contouring accuracy. It uses 2 ball screws in both the Y and Z axis directions, so it is possible to push moving objects at their notional center of gravity. This results in little vibration during acceleration or deceleration, excellent accuracy and high-speed axis travel.

2. Achieves roundness of 1.6μm

The NVD6000 DCG is equipped with DCG™ (Driven at the Center of Gravity), and achieves roundness of 1.6μm in contouring, approximately 40% better than conventional machines, by reducing vibration to the absolute minimum. (Actual values may differ)

3. Maximum spindle speed of 20,000 min⁻¹

The NVD6000 DCG is equipped with a BT40 tool shank. A 20,000 min⁻¹ spindle is standard, and 30,000 min⁻¹ is also available as an option.

■Main Specifications (NVD6000 DCG/40)

Travel (X, Y, Z axes)	900 mm, 600 mm, 450 mm
Table working surface	1,000 × 600 mm
Max. spindle speed	20,000 [30,000] min ⁻¹
Rapid traverse rate	20,000 mm/min
Tool storage capacity	20, [40], [60] tools
Tool changing time (tool-to-tool)	1.2 sec.
Tool shank	BT40

[] Option

■Main Standard Equipment (NVD6000 DCG/40)

AI nano high-precision contour control function
Direct scale feedback (X, Y, Z axes)
Least input increment 0.0001 mm

■ Other

1. A pre-release display can be seen at INTERMOLD®2006 at Intex Osaka from 12-15 April 2006.
2. DCG™ theory (Driven at the Center of Gravity) received the 24th Technology Development Award from the Japan Society for Precision Engineering.



NVD6000 DCG