

Press Release

May 17, 2006

We start accepting orders for the world's fastest, most accurate vertical machining center, the "NV6000 DCG" A new model line-up with a 600 mm Y-axis travel is added to the DCG™ (Driven at the Center of Gravity) Series.

From May 15, Mori Seiki will start accepting orders for our high-precision vertical machining center, the **NV6000 DCG**, which uses **DCG™ (Driven at the Center of Gravity) theory**.

Recently there has been an increase in demand from the LCD-related die and mold, automobile part and high-speed aluminum aircraft part machining industries for a medium-size machining center which can travel in small increments with high-speed acceleration and deliver high-speed machining with no vibration in the tool tip or moving parts.

By adopting DCG™ (Driven at the Center of Gravity) theory, which is already widely trusted by customers, the NV6000 DCG can dramatically improve high-speed machining surface quality, contouring accuracy and tool life. With a **Y-axis travel of 600 mm**, the machine boasts the longest axis travel of the DCG™ vertical machining centers. The spindle is No. 40 taper, and a maximum spindle speed of 20,000 min⁻¹ is also available as an option. We will also start accepting orders for machines with No.50 taper specifications, which are capable of heavy-duty cutting.

We are also going to release the **NVD6000 DCG, which specializes in die and mold machining**, at the same time. The NVD6000 DCG has a maximum spindle speed of 20,000 min⁻¹ (30,000 min⁻¹ as an option), AI nano high-precision contour control, direct scale feedback and ball screw core cooling as standard features. The machine will realize high-precision machining in any conditions.

The NVD6000 DCG was exhibited as a pre-release display at INTERMOLD®2006, which was held from April 12, and received high praise from many customers. Mori Seiki are adding a new line-up of vertical machining centers to the DCG™ Series, which will double our customers' productivity in the high-speed machining and precision die and mold machining fields.

Name	Vertical Machining Center
Models	NV6000 DCG NVD6000 DCG
Market	Die and mold, aircraft, automobile parts, etc.
Sales from	May 15, 2006

■ Main features (NV6000 DCG/40)

1. Equipped with DCG™ (Driven at the Center of Gravity)
2. Achieves roundness of 1.59µm.
3. Travel: 900 × 600 × 450 mm (X, Y, Z axes)
4. Maximum spindle speed of 12,000 min⁻¹, with an option of 20,000 min⁻¹.

■ **Features (NV6000 DCG/40)**

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

The NV6000 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 two ball screws with synchronized control 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 1.59µm

The NV6000 DCG is equipped with DCG™ (Driven at the Center of Gravity), and achieves roundness of 1.59µm in contouring, approximately 40% better than conventional machines, by reducing vibration to the absolute minimum. (The test result indicated here is provided as an example. It may differ from the actual value.)

3. Travel: 900 × 600 × 450 mm (X, Y, Z axes)

Axis travels are set at 900 mm for the X-axis and 600 mm for the Y-axis. The rapid traverse rate is 42,000 mm/min.

It offers high-speed machining of parts and medium-size dies and molds.

4. Maximum spindle speed of 12,000 min⁻¹

The NV6000 DCG is equipped with a BT40 tool shank. A 12,000 min⁻¹ spindle is standard, and 20,000 min⁻¹ is also available as an option.

■ **Main Specifications (NV6000 DCG/40)**

Travel (X, Y, Z axes)	900 mm, 600 mm, 450 mm
Table working surface	1,000 × 600 mm
Max. spindle speed	12,000 [20,000] min ⁻¹
Spindle drive motor	18.5/15/11kW (10 min/30 min/cont.)
Rapid traverse rate	42,000 mm/min
Tool storage capacity	20, [40], [60] tools
Tool shank	BT40

[] Option

■ **Main Standard Equipment (NV6000 DCG/40)**

Tool storage capacity: 20 tools
Tool tip air-blow unit
Automatic power-off function

■ **Other**

The machine will be displayed at the “Summer Productivity Show 2006” at our Iga Campus from June 22 to June 24, 2006.



NV6000 DCG