

## Press Release

---

October 21, 2008

# The SVC Function Becomes Standard, Ideal for Simultaneous 5-axis Machining

**Achieves dramatically reduced cycle time and improved surface quality.**

Mori Seiki will install the SVC Function (Smooth Velocity Control Function) as standard specifications for simultaneous 5-axis machining of the NMV, NMH and NT Series, starting with machines produced in October.

The SVC function achieves smooth feed by automatic compensation, looking ahead of program commands for tool tip control. This will **reduce cycle time** and **improve surface quality**.

Normally, when a program with a rough machining path for control points outputted from the CAM is used for simultaneous 5-axis machining, a speed difference occurs between blocks during program commands, which leads to longer machining time. By installing the SVC function as standard, this problem will be solved and the cycle time will be reduced dramatically. By combining this function with simultaneous 5-axis machines and multi-axis machines using DDM (Direct Drive Motor) for high speed indexing and high precision positioning, it improves surface quality.

Also, the SVC function enables the machining conditions to be chosen from 4 levels (speed-oriented to accuracy-oriented), and limits the compensation angle depending on the shape, in order to avoid interference between tools and workpieces.

Demonstration of machines from the NMV, NMH, and NT series equipped with the SVC function will be performed at JIMTOF 2008, which is to be held at Tokyo Big Sight from October 30. Please come and look at the effects at the exhibition.

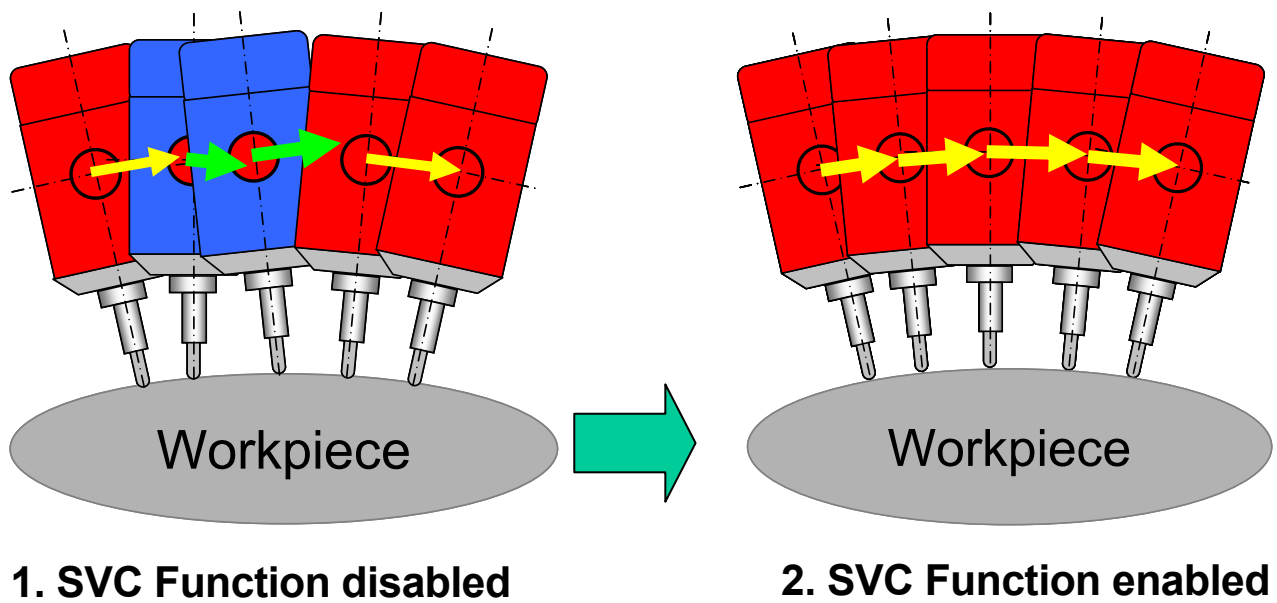
### ■ Tool Tip Control

This is a function that automatically controls the tool tip so that its path and speed will be the same as commanded by the program even when a tool tip direction to the workpieces is changed during machining.

※ DDM is a trademark or registered trademark of Mori Seiki Co., Ltd. in Japan, USA and other countries.

Machines equipped with SVC	Control unit
NMV5000 DCG	MSX-711Ⅲ
NMV8000 DCG	
NMH6300 DCG	
NMH10000 DCG	
NT3100 DCG	
NT3150 DCG	
NT3200 DCG	
NT4200 DCG	
NT4250 DCG	
NT4300 DCG	
NT5400 DCG	
NT6600 DCG	

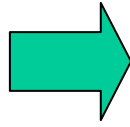
\*Machines produced after October 2008



**Figure 1. Operation Image**

**Reduced by 72%**

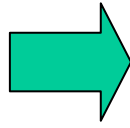
**Cycle time: 1,722 sec**



**Cycle time: 482 sec.**



**Improved  
Surface Quality**



**1. SVC Function disabled**

**2. SVC Function enabled**

**Figure 2. NT 4250 DCG/1000SZ Actual Machining  
Verification**