PRODUCTS

High-Precision, High-Efficiency Integrated Mill Turn Center NT SERIES

Special Contents
DCG® Technology
This is the Mori Seiki approach to "Driven at the Center of Gravity"

Machining centers and lathes. The fusion of two cutting-edge technologies leads us into a new era of multi-axis machines.

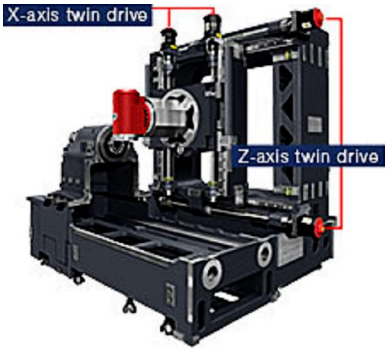
DCG™ DDM™ BMT™ ORC™

DCG®(Driven at the Center of Gravity) X-axis Z-axis

The 24th Technology Development Award from the Japan Society for Precision Engineering

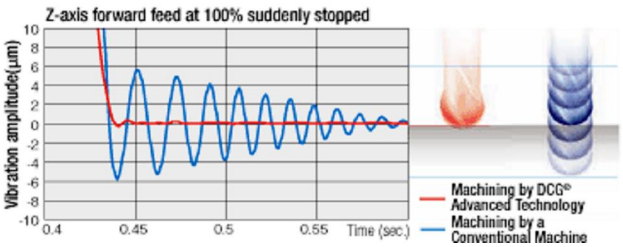
Mori Seiki's original technology, DCG® (Driven at the Center of Gravity). This controls vibration, the main factor preventing high speed and high precision, by pushing structural components at their center of gravity with a twin drive using 2 ball screws.

DCG® : Driven at the Center of Gravity LINK



Restricting vibration

For positioning, machines with DCG® virtually eliminate vibration, while machines without DCG® continue to vibrate for a long time. It controls the rotational vibration which appears at every acceleration start point, and which is proportional to the distance between the drive point and the center of gravity. This prevents deterioration of the quality of the machined surface. achining by advanced



Machining by DCG® Advanced Technology

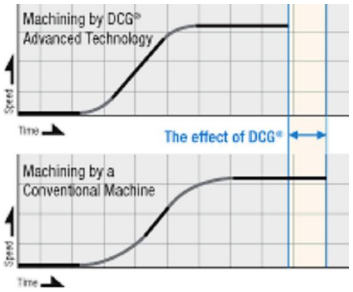
Machining by a Conventional Machine

Outstanding acceleration

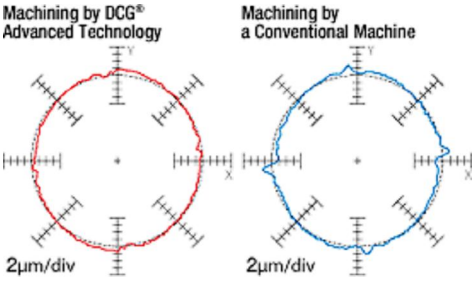
Improved roundness

per□ormance

Machining by advanced DCG® technology generates little vibration at the beginning of acceleration, and it is possible to accelerate with ma□imum force from the very start.

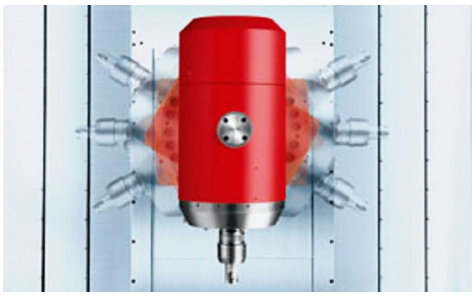


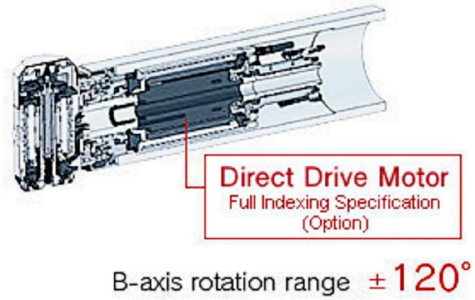
DCG® also minimi□es the vibration that comes from changes in the direction of travel. This significantly improves roundness in circle cutting.



DDM™(Direct Drive Motor) B-axis

A DDM□ (Direct Drive Motor) has been adopted for arbitrary inde□ing specifications (□ption), making high precision and smoothness of movement possible due to the high speed it produces and the elimination of backlash.

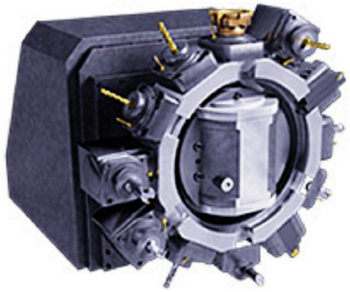




BMT™(Built-in Motor Turret)

(Optional setting for Z, SZ specifications) Awarded the 2004 JSME Medal for New Technology

A □built□in□milling motor structure has been used, with the motor located in the turret, reducing heat generation and vibration to a minimum level and improving transmission efficiency. Cutting ability, speed, surface quality and precision have all been.

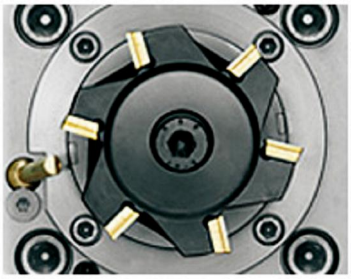


Milling capacit□

It boasts milling capabilities virtually indistinguishable from that of □o. □□ taper machining centers. □ hen milling with Turret 2, the tool spindle does not lose power even during heavy□duty cutting, improving productivity and achieving integration of processes.

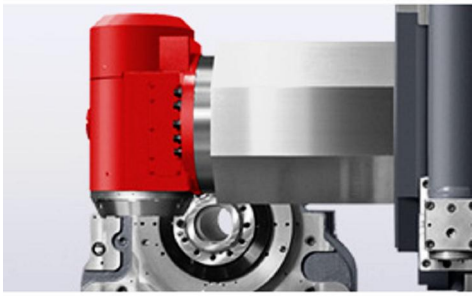
Rotar□□tool □olders □Option□

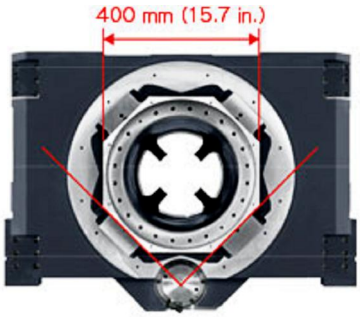
□ e have adopted a rotary tool holder with high rigidity. In conventional machines, an increase in depth of cut commonly causes vibration, but by using a construction where the load is dispersed equally on the left and right sides of the tool tip, a depth of cut of 2□ mm (□.□ in.), equal in si□e to the tool diameter, has been made possible.



ORC™(Octagonal Ram Construction)

The opposing side length of □□□ mm (□□.□ in.) surpasses bridge□type machining centers. In addition, by making the ram a perfect octagonal shape, a □□shaped guideway produces superior straightness.



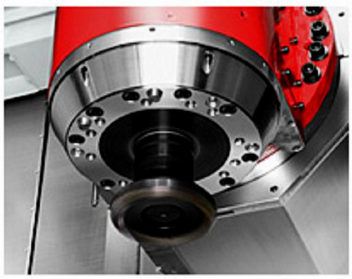


DDS (Direct Drive Spindle) motor

A DDS (Direct Drive Spindle) motor has been adopted for both the tool spindle and the rotary tool spindle. This system directly rotates the spindle without requiring gears and belts, reducing vibration while displaying high output.

Tool Spindle

□y building the spindle motor into the turret, the weight and si□e of the entire spindle has been reduced. Additionally, a ma□. spindle speed of □2,□□□ min⁻¹, significantly faster than that of conventional machines, has also been made possible.



Rotar□ tool spindle

The rotary tool spindles also employ the DDS (Direct Drive Spindle) motor, which does not require gears or belts, making high□speed and high□ efficiency machining possible. A ma□imum spindle speed of □,□□□ min⁻¹ significantly surpasses that of conventional models, and spindle acceleration time is □ to □,□□□ min⁻¹ in □.2□ seconds, greatly reducing non□cutting time.

□Ma□. spindle speed: Depending on restrictions imposed by the workpiece clamping device, fi□ture and tool used, it may not be possible to run at the ma□imum spindle speed.

□□hotos and values indicated are for the □T□2□□ DCG□□□□S□

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