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Press Release

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DMG MORI Technology Cycle
Volumetric Compensation System “VCS Complete”

Technology Cycles are new machining solutions that DMG MORI CO., LTD. (hereinafter called “DMG MORI”) offers. Technology Cycles are comprised of four key factors: (1) Machine tools (2) Cutting tools and peripheral equipment as open innovation (3) Embedded software and (4) HMI (Human Machine Interface) such as CELOS.

Technology Cycles enables anyone to quickly and easily set up processes, conduct machining and measurements which used to require dedicated equipment, programs and special tools, on a general-purpose machine using standard tools and jigs, and achieve high quality results.

At IGA INNOVATION DAYS 2019, we will present a live demonstration of the “VCS Complete” mounted on the DMU 85 FD monoBLOCK 5-axis machine.

The VCS Complete is one of the Technology Cycles to achieve easy correction of spatial errors. “VCS” is short for Volumetric Calibration System, and “Complete” indicates all areas of machining or all aspects of machinery precision (pitch, angle, straightness).

The VCS Complete conducts measurements using a tool kit comprised of two measurement spheres connected with special carbon fiber, automatically determines an algorithm for correcting volumetric deviations in the work area and compensates them with micrometer-level accuracy.

■ Main features

- Measures machine tool geometric tolerance and automatically compensates volumetric deviations in the work area
- Compensations can be made quickly by simple operations following guidance
- Regular compensation of pitch errors, angle deviations, straightness and other areas
- Data recording function for recording or analyzing measurement results
- Compensates deviations caused by wear or interference
- Includes the Quick Check function for displaying measurement results in an easily understandable format
  - + Comparison measurements with measured values
  - + Displays the measured value of each indexed position for A/C axes
  - + Color coding of measurement results Green → Yellow → Red

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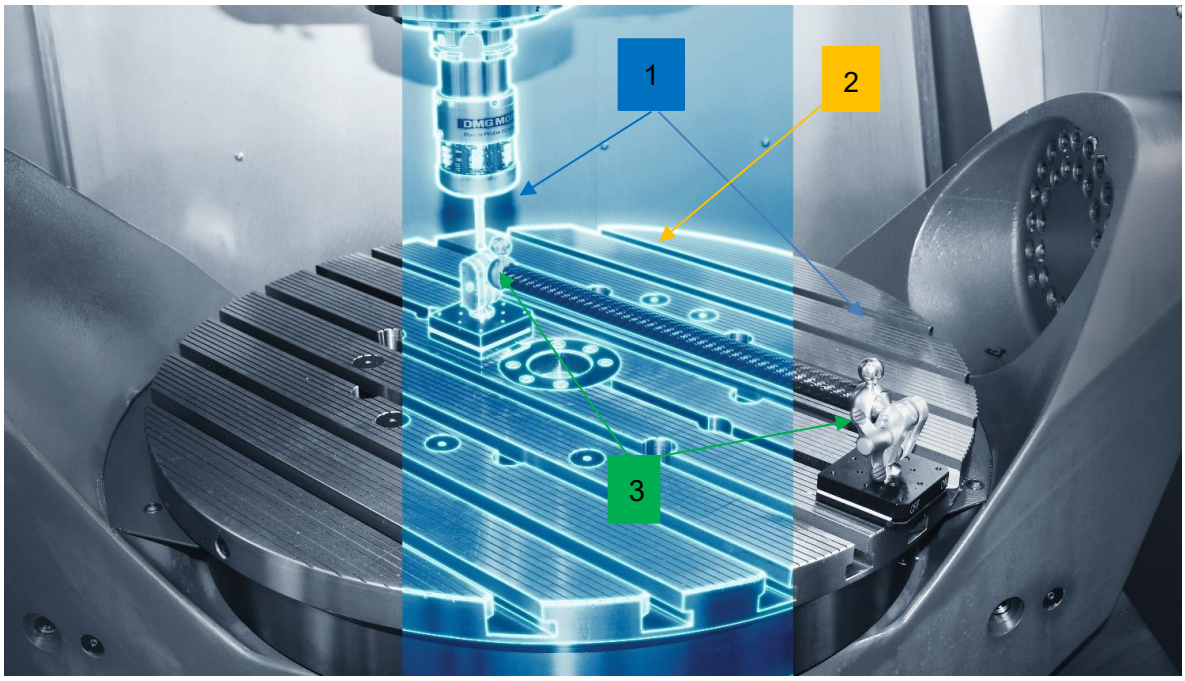

1. Measurement spheres

2. Carbon fiber tube

3. Magnet

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