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Mitsui Seiki Demonstrates New Vertex 100 5-Axis Vertical Machining Center At IMTS 2018, Booth 338519

[FRANKLIN LAKES – JUNE 2018] Mitsui Seiki's new Vertex 100 5-axis vertical machining center will be in action in booth 338519 (McCormick Place South Building) at IMTS 2018. It's engineered to fulfill manufacturers' demands for a compact, high-speed machine capable of high-precision milling of larger parts such as blisks for aircraft engines. The Vertex 100 can machine workpieces 1,250 mm in diameter and 850 mm tall while occupying only 3 m x 4.2 m of shop floor space. X-Y-Z axis strokes are 1000 mm, 900 mm, and 750 mm respectively. Maximum swing diameter is 1480 mm.

From CAT 40 to HSK-A100 taper sizes the Vertex 100 is supplied with multiple spindle options (15,000 rpm, 25,000 rpm and 30,000 rpm). A large 60-tool standard automatic tool changer handles maximum tool lengths of 300 mm and maximum tool diameters of 125 mm (CAT40/HSK A 63) or 160 mm (CAT 50/HSK A 100), offering maximum flexibility for job shop applications. Larger capacity tool changers are an additional option.

The machine's tilt/rotary table, designed and built by Mitsui Seiki and supported by the rigid and robust cast iron base, provides high precision and rotation speed up to 100 rpm. The table's C-axis motors are direct drive while the A-axis has tandem direct drive motors. The machine is capable of workpieces up to 1250 mm (49.25") diameter.

The X- and Z-axes of the Vertex 100 are driven by single ball screws, with dual ball screws on the Y-axis. The linear axes are capable of fast, 1-G acceleration and deceleration. The machine's Fanuc control features a state-of-the-art 375 mm (14.75") LCD HMI.

In addition to providing a large work envelope relative to the machine footprint, the Vertex 100 has numerous features that assure accuracy and consistency. The machine features a proprietary cast iron bed and a solid "box-in-box" design that provide superior rigidity, stiffness and agility. The innovative machine geometry results in positioning accuracy in the X, Y, and Z-axes of 0.001 mm (0.000040°) , ±6 arc seconds in A-axis, and ±4 arc seconds in the C-axis.

Hand-scraped guideways maximize precision. An advanced thermal compensation system assures size consistency, and glass scales provide minimum resolution of 0.001 mm.

For more information, visit IMTS 2018 booth 338519, or call Mitsui Seiki at (201) 337-1300, or browse <u>www.mitsuiseiki.com</u>.

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