

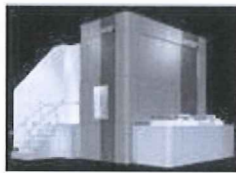


Large Turn-Mill's Tool Adapter Promotes Reliable Precision

Burkhardt+Weber's multitasking MCT machining center series includes five machine sizes for parts requiring vertical or horizontal CNC-turning tasks ranging in size from 300 to 2,000 mm (11.8" to 78.74") in diameter.

New Product Announcements From: 9/21/2015 Modern Machine Shop, [Edited by Jedd Cole](#), Assistant Editor

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All MCT-series machines are equipped with high-speed torque tables, which compensates for temperature fluctuations with a controlled cooling system that ensures table frame stability and precise machining. In addition, the table design uses a contact-free rotary sealing system for high speeds to avoid wear from friction. An

automatic balance control system addresses the problem of load distribution for nonsymmetrical parts. Integrated balance sensors measure the forces and display them on the CNC with data for correction measures.

The main milling spindle uses an HV swivel design for powerful, precise and reliable machining with rotating tools and rigid support for stationary turning toolholders. According to the company, the spindle can automatically orient from horizontal to vertical work position in less than 2 sec. while running at 8,000 rpm. A master-slave axis drive concept ensures precision performance, with automatic clamping via hydraulic brake system. It supplies 6,500 Nm (4,800 foot-pounds) of holding torque. The two-step, geared spindle unit is cooled by four individual cooling circuits for continuous operation at maximum speed. Turning table speeds range to 600 rpm.

To counter any defects from shock loads to stopped spindle bearings, the machine exchanges the turning tools automatically from the tool magazine using a turning-tool adapter. The adapter completely isolates the spindle bearing system from turning loads. Four symmetrically arranged clamping cylinders, working like a zero-point clamping system, are located 250 mm (9.84") apart from each other, supplying 12 tons (26,400 lbs) of clamping force to securely lock the turning-tool adapter in place. After completion of turning operations, the adapter automatically retracts into the standard magazine.