

IMTS 2016 NEWS – For Immediate Release

News From: Absolute Machine Tools, Inc.

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With Art: Tongtai iVU Machining Center

**Tongtai's NEW Rotary Assisted Ultrasonic iVU-5 Machining Center
to debut at IMTS 2016 Booth S-8536**

[LORAIN, OH – MAY 2016] Tongtai's brand new iVU-5 is a rotary assisted ultrasonic machining center that operates as a dual function [vertical machining center](#) combined with rotary ultrasonic assisted machining of advanced materials. Absolute Machine Tools will be unveiling this new machine in its IMTS 2016 booth S-8536.

Typical applications for this system include microhole drilling and machining of glass, sapphire, silicon carbide, quartz, ceramic, hardened steel, high nickel alloys, and non-ferrous materials. Any material that is softer than the cutting tool can be ultrasonic-assisted. Rotary ultrasonic machining combines high-speed spindle rotation with high frequency vertical vibration of the cutting tool. The diamond tool impacts the material with high contact speed, reducing cutting force and producing ultra-fine finishes while improving cutting efficiency 3 – 5 times faster than conventional machining.

The [Tongtai](#) iVU offers X, Y, Z-axes travels of 500mm (20") x 400mm (15.7") x 350mm (13.8"). It features a Meehanite cast iron frame and roller type linear slideways for rigidity and fast, precise movement. The 25mm (1") diameter ballscrews are class 3 with a double nut pre-loaded design allowing a standard rapid traverse rate of 1890 inches per minute in the all axes with acceleration of 1.2G. The iVU-5 is equipped with a 30-tool arm type automatic tool changing (ATC) system. The fast, high-speed arm type ATC changes tools in only 0.8 seconds and 1.3 seconds chip-to-chip time. The 3 HP,

20,000 RPM direct drive spindle comes standard in dual contact Big Plus 30 taper (BBT-30). A spindle chiller is standard.

For ultrasonic operation, the Tongtai iVU-5 comes standard with automatic frequency search and lock via M-codes. The auto tuning range is from 15-45 kHz. Amplitude range is 1 – 10 microns. The machine has a wide range of standard features for successful ultrasonic machining and long machine life.

The 3-axis machine is equipped with Siemens 828D control with 10.4" TFT with ShopMill and Advanced Surface. The 5-axis version is equipped with Siemens 840D control with 17" IPC, the Sinumerik MDynamics Technology package for 5-axis milling, and ShopMill.

For more information, visit IMTS 2016 booth S-8536, call 800-852-7825, or visit www.absolutemachine.com.

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