

***For Immediate Release***

*News From:* Absolute Machine Tools, Inc.  
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*With Art:* Tongtai FV Series Machine with New Colors

**New FV Series Twin Spindle Verticals from Tongtai Triples as a  
Horizontal and 5-Sided Machine**

The NEW FV Series [vertical machining centers](#) by Tongtai (former OEM for Hitachi-Seiki, Japan) are built in both single-spindle and twin-spindle head designs for mass production lines of complicated work pieces and is also suitable for automatic production with the integration of a robot on either a floor-type motion axis rail system or overhead gantry. The fixed twin spindle type is able to process two individual machining tasks simultaneously. With the addition of an A-axis trunnion table, the FV series instantly becomes a horizontal machining center, giving you two machines in one and saving on floor space and additional machinery costs.

Standardly equipped with an automatic pallet changer that can change pallets in as fast as 4.0. The APC is built with triple-point clamping and supporting ensuring stability of the pallet and superior surface finish of the parts. The gear is a planetary type that is superior to a worm-gear type APC because it allows for better position accuracy, zero backlash, long-term durability, and noticeable reduction in overall shop noise. The APC is driven by servo motors rather than traditional hydraulic driven method to save energy and maintenance costs.

Optional built-in tilt rotaries or built-in tilt fixtures turn this machine into a 5-sided or 5 axis machining center. The C-axis rotary table option has a table size of  $\Phi 350\text{mm}$  for single-spindle or  $\Phi 220\text{mm}$  for twin-spindle models, both with a  $360^\circ$  stroke. The A-axis trunnion rotary table design has a stroke of  $-30^\circ$  to  $180^\circ$  for both single and twin models.

The automatic tool changer has a built-in tool carousel. According to the tool's position, the FV series is able to decide whether to move the spindle or the tool magazine to shorten tool change time. Tool capacity is 24 for single-spindle or 48 for twin-type with an 84 tool magazine as an option. Tool to tool change time whether retrieved by the spindle or the magazine is 1.2 seconds. Coolant through the spindle is optional and various chip conveyors, depending upon material and chip size, are also available.

Tongtai Intelligent Manufacturing System, or TIMS, is the newest technology in the machine tool industry. Invented by Tongtai and partnering with FANUC, this system includes four basic management functions for any size manufacturing facility to improve productivity, machine accurately and precisely, facilitate part production as well as protection and maintenance assistance for the machine tool. The Production Management System monitors cutting loads, pallet changing functions, records alarm messages, and assists in troubleshooting and maintenance support. The Intelligent Management System performs motor load monitoring, machining adaptive controls for protecting tooling and ensuring cutting efficiency, and crash protection for real time detection of servo loads during feeding. Tool Management records machining dates, times, and usage for tool life tracking and management, tool compensation,

and tool overload protection. And finally the fourth management function is Workpiece Management. This function incorporates software using a built-in CCD camera to monitor the characteristics of a particular workpiece(s), and will calculate and compensate program coordinates for maximizing machining precision.

1-G Rapid Traverse rates in X/Y/Z for both single and twin-spindle models are at 75m/min. and 50/100 RPMs in both A and C Axes. Travels for the single-spindle type is 710/460/460mm in X, Y, and Z, and for the twin-type model is 300/460/460mm.

For more information, contact Absolute Machine Tools, 800-852-7825, absolutemachine.com.

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### **About Absolute Machine Tools, Inc.**

Absolute Machine Tools, Inc. sells and supports Nexturn [Swiss-type lathes](#); Precihole [gundrilling machines](#); AccuteX EDM wire, sinker, and hole drilling machines; You Ji Vertical Turret Lathes; Johnford Sliding Double Column Machining Centers; and Tongtai Horizontal Machining Centers. The company has worked with several of its principal machine tool partners for 26 years to offer some of the most heavy-duty, accurate, and productive machines in the industry. The company has built its reputation on exemplary applications engineering, service, customer support, comprehensive training, and effective preventive-maintenance programs. In addition to its headquarters in Lorain, Ohio, the company has established direct full-service technical centers in Mason, Ohio; Elgin, Illinois; and Livonia, Michigan.

