



MITSUMI SEIKI

New, Award-Winning Universal Vertical Thread Grinder from Mitsui Seiki

Mitsui Seiki has developed the world's first universal vertical thread grinder, offering many important benefits for customers making precision lead screw type parts. The new "VGE60A High Precision Universal Vertical Thread Grinder" recently won the coveted Grand Prize in Japan's 43rd Machine Design Awards competition. This prestigious award ceremony, sponsored by Japan's Ministry of Economy, Trade & Industry, was held on July 25, 2013.



According to Tom Dolan, Vice President of Mitsui Seiki USA, Inc., "There's been a long trend of switching over from hydraulic to electrical power actuation in a variety of important industries such as automotive, aerospace, and robotics. As such, lead and feed screw actuators for electrical power steering, flight control actuators, and automation systems are in increased demand. Along with these market drivers, highly accurate and efficient machining methods for various screws, such as ballscrews, have also been on the rise. Typically, thread grinders have been made the same way for the last 50 years. This new technology changes everything."

Addressing these market forces, Mitsui Seiki developed a completely new, industry-first universal thread grinder design configuration. It offers improved accuracy, speed, performance, and multi-functionality over conventional horizontal thread grinder designs. By granting the Grand Prize, METI acknowledges that Mitsui Seiki has developed a noteworthy machine.

The new VGE60A is categorized as a "universal" machine because different grinding operations can be performed. In addition to thread grinding, the machine can now perform spline, gear, OD, surface, and edge grinding operations in a single setup. This can save customers significant production time while improving overall part accuracy. Newly

designed features such as an automatic grinding wheel changer, automatic wheel guard, a CNC-controlled wheel dresser (to accommodate various shaped wheels) vastly improve productivity. Infinitely programmable grinding wheel tilt angles from +45 to -90-degrees provide increased grinding application opportunities. The vertical orientation of the work enhances overall precision. Elimination of workpiece "sag" is the principle contributor to increased precision.

As with any industry today, the value of floor space and operator ergonomics are important design influences. The new vertical configuration requires 33% less floor space than a similar capacity horizontal grinder, and allows for improved human interface with the complete work zone. The VGE60A accommodates a maximum grinding length of 600mm and an overall shaft size of 80mm diameter (with the largest dia. wheel) and 700mm long. The machine is compatible with both oil and water-based coolants.

For more information, contact Mitsui Seiki USA, Inc., (201) 337-1300, www.mitsuseiki.com.