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THIS WEEK IN QUALITY: Sectioning, Scanning, CMM Upgrades & More

The Engineer posted on November 03, 2016 | Comment 1322 views

Buehler Precision Cutter

(Image courtesy of Buehler.)

Buehler, a manufacturer of scientific equipment and supplies for use in materials analysis, has introduced the IsoMet High Speed, a precision sectioning machine designed specifically to create consistent and

efficient cuts.

The IsoMet High Speed precision cutter is designed to section samples with efficiency, consistency and precision using diamond or abrasive blades. It has the following key features:

- **Automated three-axis movement** allows precise alignment and quick cutting
- **Automatic Dressing System**maintains consistent cut quality and reduces the frequency of changing the dressing stick. (IsoMet High Speed Pro)
- **Rapid Laser Alignment** saves time with instant visual alignment with laser. (IsoMet High Speed Pro)
- **Intuitive Controls** allow programming for repeatable and consistent single or serial sections.
- **Quick Sample Adjustments** offer adjusting of sample with the Rapid Rail and tool-less vising system.

Product Manager, Chelsea Frid explained, "The IsoMet High Speed is available in two formats–the High Speed and the High Speed Pro. Both provide strength and power to produce quality cut surfaces. In the High Speed Pro version, Buehler has added additional abilities to improve user experience with a laser for visual blade alignment and an automatic dressing system to maintain diamond blade quality throughout the cut."

Buehler offers a selection of IsoMet High Speed accessories, including Rapid Rail Vise Holder, Single Saddle Chuck, Double Saddle Chuck, quick clamp vises, dressing wheels and external recirculation tank.

For more information visit the Buehler website.

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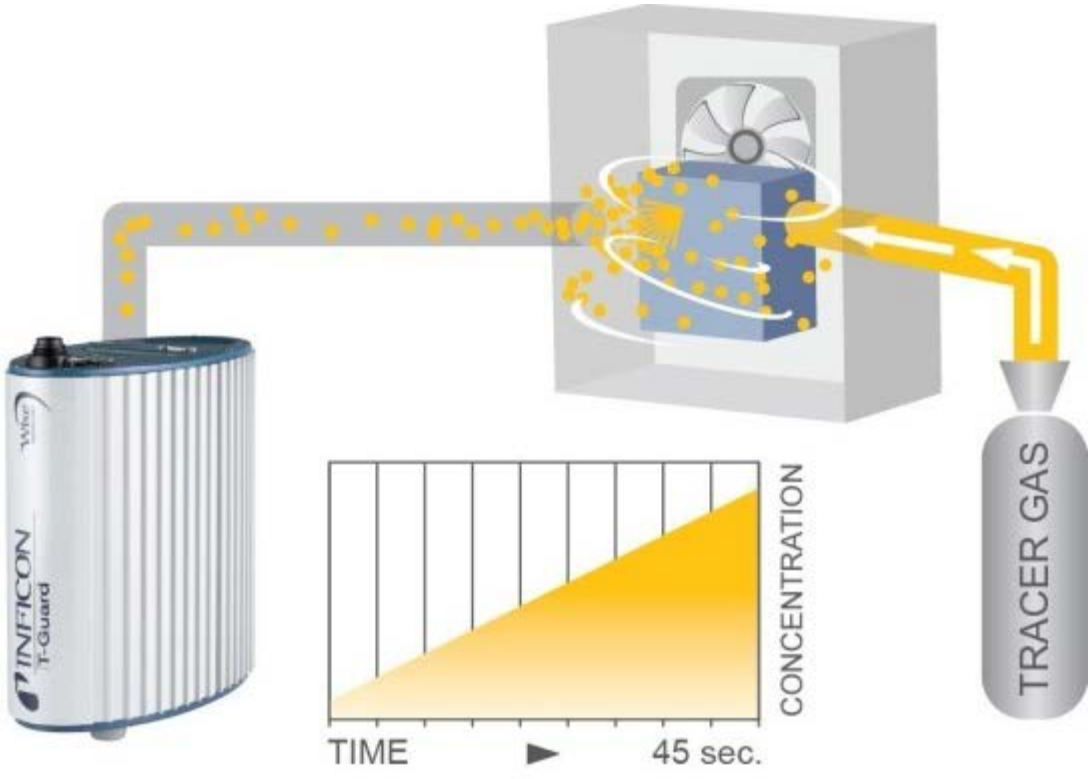
INFICON Fuel-Filler Test System



(Image courtesy of INFICON.)

LeakMaster of Evansville, Indiana, has worked with INFICON, a provider of leak-detection equipment for the auto industry, to develop a system that accurately tests filler pipes quickly and efficiently, while at the same time using much lower concentrations of tracer gas than more expensive vacuum-chamber systems.

The move to capless fuel fillers has been driven by the auto industry's need to meet stricter LEV II clean air regulations for passenger cars and light trucks that go into effect in 2017.

In the new LeakMaster system, a technician places the filler pipe into a test station. Position sensors then automatically guide connections to the component.

Pressurized helium gas is pumped into the test piece and an INFICON T-Guard sensor is used to test for leaks by measuring gas that escapes into a two-foot by five-foot test chamber. The cycle time for each test is 40 seconds or less.

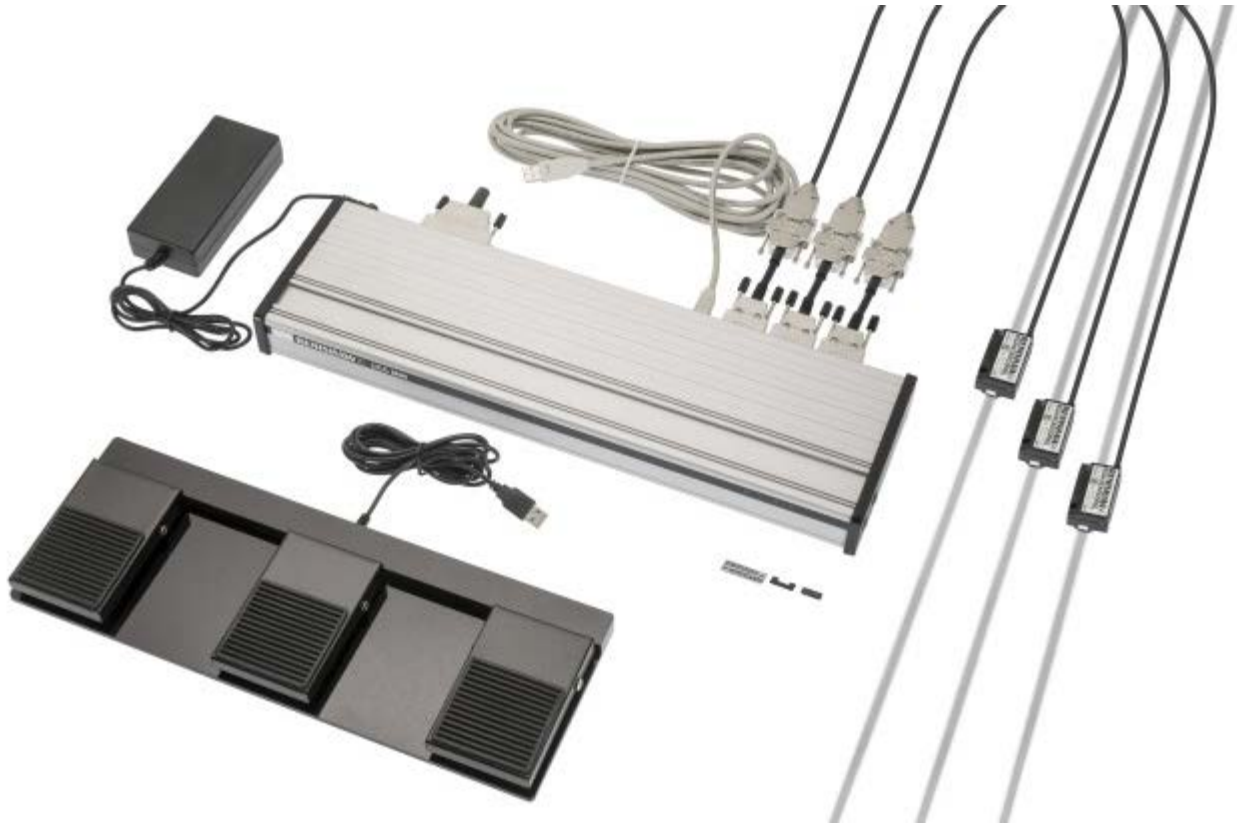
"The LeakMaster's test system is completely automated and provides cycle times and reliability equal to more elaborate vacuum-chamber testing at half the cost," noted Thomas Parker, INFICON's automotive sales manager for North America. "The smaller size of the system's test chamber also reduces the amount of pressure and helium required for each test."

As LeakMaster's partner in the development of the new fuel-filler-pipe test system, INFICON provided input on tracer gas and tracer-gas accumulation in leak testing to LeakMaster system designers. INFICON application experts also provided additional detailed machine design assistance for the testing station.

"We determined that a vacuum system would have been much more expensive in terms of procurement costs alone, and this filler-tube test-system solution also provides some added savings in energy consumption and cost-of-machine ownership," said Barry Money, president of LeakMaster.

For more information, visit the websites for INFICON and LeakMaster.

Renishaw Manual CMM Upgrade Kit



(Image courtesy of Renishaw.)

Renishaw recently announced the launch of its MODUS 2 manual CMM upgrade kits. These are designed to enable users of manual CMMs to increase productivity, reduce inspection lead times and optimise the operation of their manual machine with a retrofit supplied and supported directly by Renishaw.

The MODUS 2 MMI (Manual Machine Interface) is intended to provide an easy-to-use tool to access sophisticated measurement capability. The software, which supports the complete range of Renishaw's CMM touch trigger probes, displays the full virtual environment, including the CMM, the probe head and the part fixture, if present.

A series of prompts guide the user through the inspection sequence if an inspection program exists for the part. If there is no existing program, MODUS 2 offers a choice of measurement methods: selecting the feature either from the CAD model or the Inspection toolbox, or taking points on the feature and allowing the software to automatically detect the feature type.

To complement the software, Renishaw has compiled a number of kits that include controller, software, 3 axes of encoder components and footswitch. The manual upgrade boosts the CMM's capability and usability, allowing quicker and easier machine operation.

To optimise interaction MODUS 2 supports a touch-screen monitor that provides a more convenient alternative to using a mouse. Additionally, the 3-way footswitch included in the kits allows hands-free interaction for many frequently used functions.

For more information, visit the Renishaw website.

ShapeGrabber 3D Scanhead

(Image courtesy of ShapeGrabber.)

ShapeGrabber, a developer of 3D scanners for industrial measurement and inspection, has announced the availability of its most accurate scanhead to date.

The SG46 scanhead delivers accuracy improvements over the SG42 it is replacing, with a scanning speed gain of up to 10 times. It also provides a larger sensing range and greater stability in temperature variations.

Pierre Aubrey, CEO at ShapeGrabber said: "We're excited to be introducing yet again a faster and more accurate scanhead. The SG46 features an improved laser, lens, and imager that captures finer detail and enables cleaner, more accurate scans. Existing customers can upgrade their existing ShapeGrabber scanner with this new scanhead and enjoy significant accuracy and speed improvements, while new customers will enjoy the most advanced 3D scanning technology platform on the market today."

Optical Gaging Singapore, one of ShapeGrabber's partners, has been testing the new SG46 scanhead with a ShapeGrabber Ai310 scanner. Elton Tan, assistant manager, sales & applications, had this to say: "I have been using ShapeGrabber scanners since 2007 and this is definitely their best scanhead to date! The scans are fast, sharp, and accurate. A significant improvement over the SG42 it replaces."

The new scanhead design features these enhancements:

- Greater accuracy and tolerance to temperature changes
- Up to 10 times faster scanning speed than its predecessor, the SG42
- Variable field of view in addition to depth of field
- Larger dynamic sensing range to scan a wider range of part types and surface finishes
- Positive lock mounting mechanism for ease of installation and switching with SG156, as well as greater precision
- Backwards-compatible with most existing ShapeGrabber scanners

For more information, visit the ShapeGrabber website.

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