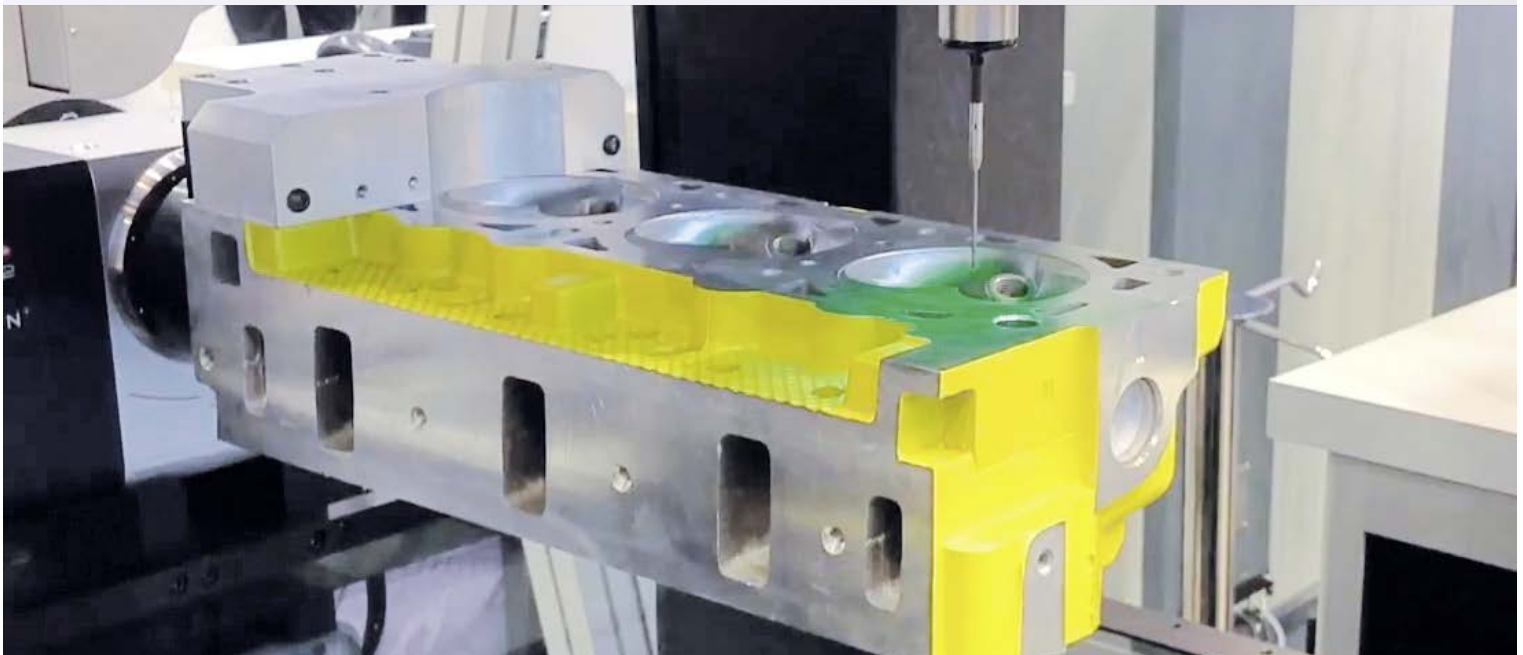May 2019

Swiss Rotary Table Technology

NEWSLETTER

Parallel measurement

EA-507

Fast, flexible and precise measuring of workpieces, close to the production machine

A proven way of increasing productivity is to move measuring out of the metrology lab closer to production – in-line or post-line. This reduces the effort involved in measuring and in turn the turnaround time. For this reason, pL LEHMANN also offers its rotary and tilting axes for use on measuring devices, allowing workpieces to be measured quickly, flexibly and precisely in the production area.
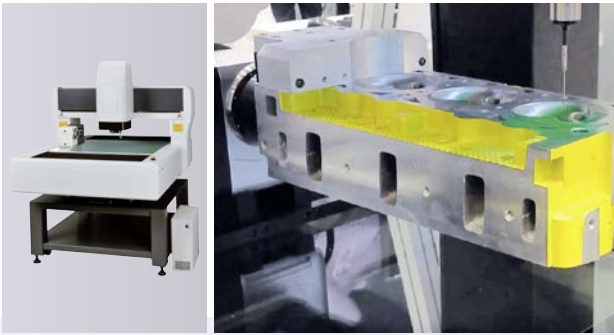
The rotary and tilting axes from pL LEHMANN in Bärau in Switzerland have proven themselves in production for over 40 years. They expand the capabilities of three-axis boring/milling machines and make them more productive four- or five-axis machining centers. Building on the know-how it has gained over the

New EA-508 light with rotary axis oriented vertically, here with mounting plate for use on a transparent glass plate. Images: pL LEHMANN

years, pL LEHMANN now offers solutions for measuring workpieces close to production.

After all, like machine tools, measuring devices can be enhanced through addition of one- or two-axis rotary tables from pL LEHMANN. Moreover, these CNC rotary tables can be operated entirely without compressed air or hydraulics and with maximum repeatability – the clean solution required for measuring. The additional axes expand the capabilities of the measuring device so that two or more measuring tasks can be performed on the same machine, e.g. shaft measurement, coordinate measurement and roundness check – in one operation without having to reclamp.

Rotary and tilting axes from pL LEHMANN enhance the flexibility of various measuring devices. Thanks to precise and fast positioning, workpieces can be measured efficiently and close to production in a single clamping step.

Especially helpful is that the familiar clamping means and devices used on the production machines can be used for clamping on the measuring device and the reference point from the production machine is retained. All pL LEHMANN rotary tables provide fast, flexible and precise positioning. Furthermore, a «light» version developed specifically for measuring applications is available for mounting on measuring devices with a glass plate used for optical measuring tasks. Depending on the model, it weighs approx . 12 kg, but is still strong enough to move entire cylinder blocks freely and easily.

Besides proven technology, high availability and low maintenance costs, pL LEHMANN CNC rotary tables offer the user a wide variety of workpiece clamping possibilities. The have a universal interface with HSK A63 that can accommodate various

optional adapters, whether for ER20 collet or numerous zero point and quick-clamping systems. This facilitates efforts to automate through use of handling systems and robots.

The CNC rotary table model EA-508 light (only approx. 12 kg full equipped) from pL LEHMANN features a universal interface with HSK A63. Adapters for an ER20 collet or a variety of quick-clamping systems are optionally available. The rotary table also features a USB slot for data output or connection of a PC (or Bluetooth), an EMERGENCY STOP switch and a power supply unit for connection to 230 V mains.

Automation made easy

In addition, pL LEHMANN has already equipped its latest rotary and tilting axes for Industry 4.0 and digitized production. The new blackBOX generation – the so-called iBox – is an important element. It continuously monitors and registers, among other things, the internal and clamping pressure, the temperature, humidity, rotational speed and shock. If values exceed or drop below specified limits, this is indicated on the CNC system and a history entry is made. The values can be read out and allow conclusions to be drawn about damage, condition and service life of the entire system as well as recommended maintenance.

A Bluetooth interface allows you to interrogate states, functions or malfunctions and to make settings from a notebook. In addition to the real-time clock, the new iBox provides its own web server and an Ethernet interface. With an optional WLAN or GSM module, additional requests can be implemented, e.g. notification of error messages via e-mail.