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Swiss Rotary Table Technology

NEWSLETTER

CNC rotary tables – Ready for Industry 4.0



The new pL-iBox installed in the latest CNC rotary tables from pL LEHMANN is ideal for integrating these rotary tables into digital production. Images: pL LEHMANN

Product Innovations at the EMO 2017 (Hall 13, Booth A76)

At the EMO 2017, the Swiss rotary table manufacturer pL LEHMANN presents itself as ready for Industry 4.0 and digital production. This is based above all on the new pL-iBox generation, which is used not only on the well-established Series 500, but also on the new, symmetrical Series 600 rotary tables. Other interesting new developments can also be seen in Hannover at the pL booth.

Since the Series 500, pL LEHMANN has incorporated a so-called pL-iBox into its rotary tables. 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. The values can be read out and allow con-



Communication-capable: Thanks to the new pL-iBox, the latest Lehmann rotary tables provide a Bluetooth interface via which a smartphone and pL app can interrogate the states, functions or malfunctions at any time and make settings as well. In addition a separate web server and an Ethernet interface are included.

clusions to be drawn about damage, condition and service life of the entire system as well as recommended maintenance.

The latest pL-iBox generation being shown at the EMO – which will be ready for delivery as of 2018 – now contains a faster microprocessor and more storage capacity. A 3-D acceleration sensor replaces the previous 2-D sensor. Also new is a Bluetooth interface via which a smartphone and pL app can interrogate the states, functions or malfunctions at any time and make settings as well. In addition to the real-time clock, the new pL-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.

New Series 600 in a symmetrical design

The CNC rotary tables of the new Series 600 feature the new pL-iBox already. They differ from the products in Series 500 above all through their symmetrical design, which allows them to be used on the left or right side of a machine without modification. Being more compact at both ends means better use of the available space. The new Series 600 rotary tables – with a rating of IP 67 – are characterized by their high power density. Seven different motors are available, giving the user a choice ranging from high torque to high speed. Especially service-friendly: the quick-change system from Motorkit, incl. cable harness. It guarantees the shortest downtime in the event of problems.

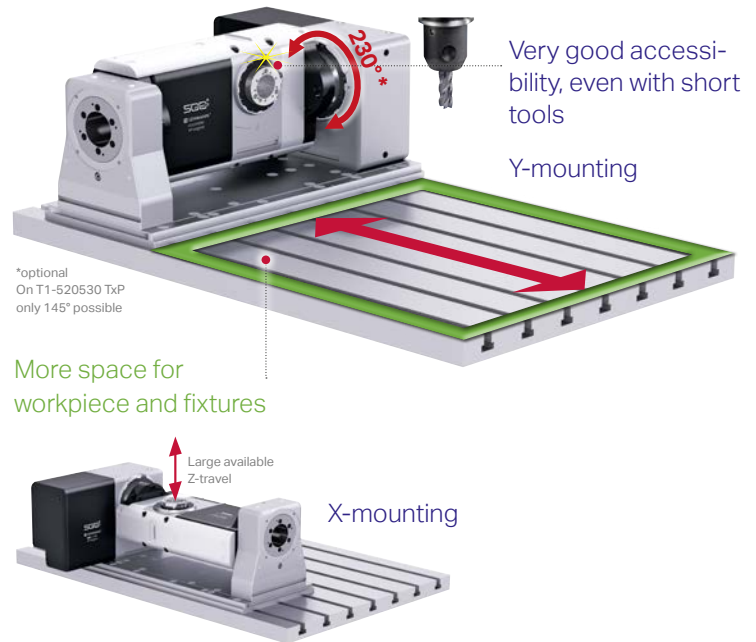
Well-thought-out details such as the large spindle diameter, pressure intensifier with integrated, automatic oil refilling and the stable base plate with large support area ensure reliability as an add-on or integral axis. The «inner» values also contribute in this regard. CNC rotary tables in the Series 600 feature the permanently backlash-free, preloaded PGD gear unit, which allows high-output simultaneous machining. The extremely strong gear teeth make it highly impact-resistant. Thanks to the bubble-free, oil-filled gear compartment, the rotary table can be used in all orientations.



The new CNC rotary tables of the Series 600 (EA-640 shown) are symmetrical in design. They feature the permanently backlash-free, preloaded PGD gear unit, which allows high-output simultaneous machining.

Proven products improved further

pL LEHMANN was also able to improve the performance characteristics of the Series 500 products. All two-axis rotary tables were optimized in terms of space requirements. This means that greater Z- and X- or Y-travel is available on the machine in conjunction with a smaller interfering contour, providing more free space for workpiece and fixtures.



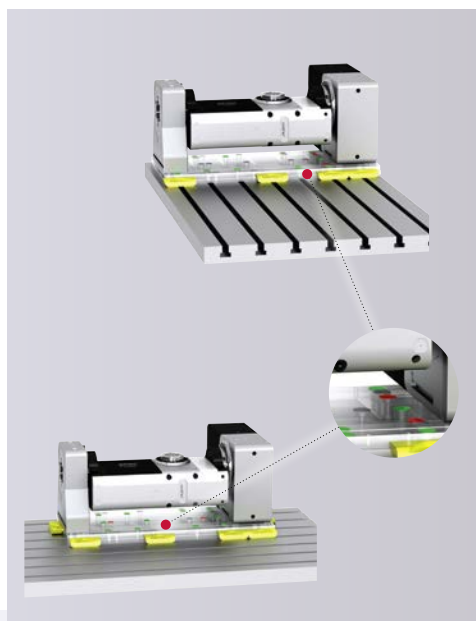
On the E-Series, the Swiss succeeded in increasing the rotational speeds by up to 30 percent to a maximum of 210 rpm now. The same applies to the feed torque, which can now be as high as 850 Nm. An increase of up to 150 percent was achieved for the pneumatic clamping of the tilting axis on the CNC rotary tables of the T-Series, which can now be as high as 7000 Nm.

New mounting system shortens installation time

Everyone who wishes to reduce non-productive time can use special mounting aids from pL LEHMANN for aligning and securing the CNC rotary table on the machine table. The zentriX eccentric pin system, which fits all tailstocks, longFLEX and rotoFIX versions, is a proven solution. At the EMO, pL LEHMANN is introducing an additional alignment system: lineFIX. It was developed for the two-axis rotary tables (T-models), which in the future will come standard with two lineFIX pins for slot widths of 14 or 18 mm. With these, the rotary table can be adjusted very easily using the hole pattern provided on the base plate.

pL LEHMANN customers can also save time in the future when clamping workpieces. From now on, the rotary table manufacturer will be offering Capto, Hainbuch, Vischer & Bolli, TG Co-

lin and FTool systems with which a wide variety of very different parts can be changed in seconds.



The lineFIX alignment system from pL LEHMANN was developed for the two-axis rotary tables (T-models). It simplifies aligning and securing on the machine table with an X- and Y-arrangement (red: position of the lineFIX pins; green: hole pattern for 100 and 125 mm; yellow: clamping claws).

CNC rotary tables with Swiss quality

Founded in 1960 strictly as a contract manufacturer, pL LEHMANN has been developing and producing CNC rotary tables for over 40 years. With innovations and Swiss quality, the family-owned company in the Swiss town of Bärau (Emmental) succeeded in opening up new opportunities for its customers and developing lean machining solutions characterized by high productivity through use of additional NC axes. One of the highlights of the company's history is the powerful and flexible Series 500 - developed in 2009 - which is ideal for the most demanding tasks thanks to its modular design. With the backlash-free, preloaded PGD gear unit - developed in 2014 - pL LEHMANN reached another milestone. At the EMO 2017, the Swiss rotary table manufacturer will be introducing, among other items, a new pL-iBox generation ready for Industry 4.0 and digital production.

The pL LEHMANN booth is located in Hall 13 / A76

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