Press release dated October 12, 2020

**New TRAUB TNL 12 launched**

**The small TRAUB TNL12 sliding headstock lathe with 13 mm spindle clearance has represented premium performance in its class for many years. Where its predecessor model set standards, the second generation of the TNL12 reinforces its claim as a pioneer. INDEX has succeeded in further increasing productivity and flexibility, while at the same time reducing space requirements.**

Calling the new INDEX TNL12 a “further development” is something of a misnomer. The small sliding headstock automatic lathe – which, like its larger siblings, can also be quickly converted to a fixed headstock – has undergone so many improvements that “new development” would be a more fitting description.

The top priority was to offer even further benefits to the customers. At the same time, much consideration was given to making the switch easy for users of the earlier version of the TRAUB TNL12. This means they can continue to use existing tool holders for the turret and the front and back working attachments, as well as supplement them with new, more powerful models. The work area has also been designed in such a way that all workpieces produced on a first-generation TRAUB TNL12 can continue to be produced on the new machine.

Even at first glance, it is clear that the machine is more compact and the control cabinet is no longer located under the bar loader, as the developers have succeeded in completely integrating the control cabinet within the machine. The machine itself has thus become a little taller and now measures 1,600 mm. Since the control cabinet and the machine are now one unit, cable ducts are no longer necessary and the TRAUB TNL12 can be moved more easily, whether on heavy-duty wheels, via forklift, or with a crane.

**More productivity in less space**

Buying a new machine usually comes from a desire for greater productivity. The original TRAUB TNL12 already has four tool carriers which ensure highly productive machining through simultaneous use. In order to improve these even further, the developers have made significant changes to the kinematics. Where the front working attachment and counter spindle were previously arranged on a common slide, they are now each on separate slides. The separation of these components means that front-end and counter spindle machining no longer influence each other and programming is much easier due to increased flexibility. With lower masses, the machine is also more dynamic, and users benefit from greater programming freedom.

Just as important, INDEX significantly upgraded the rear-end machining of the new TRAUB TNL12, resulting in an improved cutting pass and a huge increase in productivity. Whereas only one movement in the X direction was previously available on the rear end, three-axis machining on the counter spindle is now possible. The new back working attachment comprises six tool stations (4x live, 3x IKZ) including a flushing unit. The tool capacity has increased. With double and triple holders, a total of up to 40 tools can be set up in the machine, opening up additional possibilities for complex machining operations.

In addition, INDEX now provides both six-station tool turrets with a servomotor and an interpolated Y-axis, which contributes to shorter chip-to-chip times of only 0.3 s and a more free division of cuts.

A further measure to ensure even greater productivity is the redesign of the high-speed movements. Improved dynamics was at the fore of the developers’ minds, and this is ensured by fluid-cooled motor spindles with rotational speeds of up to 12,000 rpm that replace the belt drive in the main and counter spindles. Details such as low-mass clamping cylinders and a carbon sleeve for the guide bushing drive also make the TRAUB TNL12 more dynamic. The machine’s guide bushing is freely selectable, live or programmable, with the latter meaning that the guide bushing adjusts itself via a pneumatic servo valve.

The gear trains were minimized for the tools, whether in the turrets or in the front and rear working attachments. By including no belts, no intermediate shafts, and only one tooth engagement in the crown wheel, the new design not only increases the dynamics but also ensures quiet operation.

**Increased precision**

The optimization team also focused on accuracy. The non-hydraulic design, a gray cast iron bed instead of the previous welded steel construction, and the thermo-symmetrical design ensure increased thermal accuracy combined with reduced pause jumps and shorter warm-up times. As short a power flow as possible increases the stability of the machine and thus leads to improved overall accuracy as well as higher cutting values, which in turn benefits the machining times.

Up to three pumps are available for optimum cooling lubricant management. An 8 bar pump is included as standard, and can be optionally supplemented with one or two adjustable 20-120 bar pumps. For special applications, a 250 bar pump is also available as an option. The cooling lubricant is cleaned by a compact belt filter with a filter fineness of 50 µm, and coolant cooling is optionally available. Users can choose between a chip tray or a chip conveyor for chip disposal.

Three automation options are currently available for the TRAUB TNL12: rinsing (minimal setup), a small gripper that can deposit the components in a tray or on a small conveyor belt, and – of interest for long parts – removal through the counter spindle. All the elements are also in place for a robot solution, which is then responsible for feeding chuck parts.

**Efficient production of both simple and complex parts**

Due to its outstanding performance and flexibility, the TRAUB TNL12 is predestined for various sectors such as medical technology, where it is used for the production of implants, devices for minimally invasive surgery, and bone screws. With the right application, even simple parts can be manufactured highly productively. The range of available options includes, for example, a whirling unit with a ±30° swivel angle that is suitable for high-speed whirling and offers a whirling length of 75 mm. It can be used either in the front or rear working attachments.

Easy operation is ensured by the current TRAUB TX8i-s controller, which is ready for direct integration of the TNL12 in the digital iXworld. The folding and swiveling operating panel includes a 19" touchscreen, which is ideal for iXpanel functionalities and provides easy access to a networked production environment.

**Contact:** INDEX-Werke GmbH & Co. KG Hahn & Tessky

Rainer Gondek

Global Marketing Director

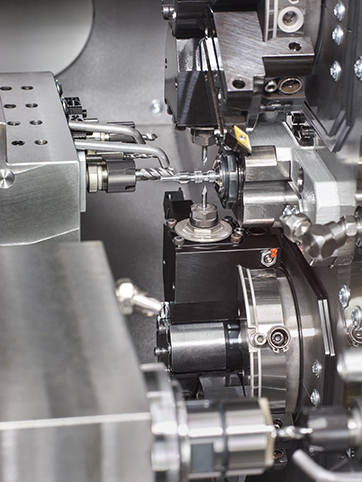
Phone: +49 (711) 3191-1286

[rainer.gondek@index-werke.de](mailto:rainer.gondek@index-werke.de)

**Photos:**



**Figure 1**: Significant increases in productivity for small high-precision turned parts with the new TRAUB TNL12 sliding and fixed headstock automatic lathe



**Figure 2:** The work area concept - Simultaneous and highly productive machining with two tool turrets and front and back working attachments.



**Figure 003:** With iXpanel, your staff always have all relevant information for efficient production right at the machine.