Press release dated October 12, 2020

The quartet is complete

INDEX completes its range of universal turning machines with the TRAUB TNA500

**Powerful and precise machining of customized flange and shaft parts from a batch size of one is the key feature of the current INDEX CNC universal turning machine series. This includes the INDEX B400 and B500 models, as well as the TRAUB TNA400, and – the newest member of the family – the new TRAUB TNA500. Compared to the TNA 400, it is primarily distinguished by larger, more powerful spindles. Offering an outstanding price/performance ratio, it is a promising general machine.**

The new TRAUB TNA500 universal turning machine is equipped with an A11 main spindle with 102 mm spindle clearance, 400 mm chuck diameter, and 750 mm turning length. The belt-driven 37.5 kW spindle provides a maximum speed of 3,150 rpm and a torque of up to 1,020 Nm – around 40 percent more power than the TNA400.

The four universal turning machines have a lot in common: they use the same machine bed, cover, inner cover, and slide systems. A fundamental difference between the INDEX and TRAUB machines can be found in their installed control technology. While the INDEX B400 and B500 are equipped with the latest Siemens Sinumerik 840D sl, the TRAUB TNA400 and TNA500 incorporate the TRAUB TX8i-s V8 controller based on Mitsubishi controls.

**Counter spindle for precise rear-end machining**

To support long workpieces, the TRAUB TNA500, like the TNA400, offers the possibility of using a tailstock mounted on generously dimensioned roller guides. As an option, however, the machine is also available with an A8 counter spindle, which allows the operator to use the parts machined on the main spindle for rear-end machining with precise positioning and concentricity.

In this counter spindle version, the TNA500 is equipped with a VDI40 radial turret. Its 12 stations use the patented INDEX W-serration. Their profile ensures that the basic holders on the tool turret can be aligned quickly and easily. The repeatability of the system achieves results in the micron range.

Instead of the radial turret, an alternative option is the installation of a VDI40 disk-type turret. Its main strong points come to the fore, in particular, when using large solid drills or boring bars, since this design principle means that forces are transmitted vertically into the turret.

**High efficiency through automation**

The TRAUB TNA500 universal turning machine, like its platform siblings, is not only suitable for small batch production. Options are also available for machining medium-size batches. For example, there is an optional bar package for use in attaching a bar loader, which consists of the required hollow clamping cylinder and a remnant/workpiece removal unit. This handling device can accommodate workpieces up to a main and counter spindle size corresponding to the bar clearance and place them on a conveyor belt.

The universal turning machines are now also available with an integrated iXcenter robot cell, which supports fully-automated operation. It is located on a platform equipped with linear guides and is fixed in front of the machine’s working area during production. The 6-axis robot offers up to 12 kg load capacity and accesses the machine’s working area via the machine door, which opens automatically behind the robot cell. The iXcenter features a space-saving vertical storage system with up to 22 stacked pallets (600 x 400 mm). Downstream processes, such as cleaning, measuring, and deburring, can also be integrated in the robot cell.

**TRAUB TNA500 – the right machine for tough production applications**

* Rigid mineral cast bed in 45˚ block design for high accuracy
* A11 working spindle with belt drive for high torques
* Spindle clearance Ø 102 mm, chuck up to Ø 400 mm
* Generously designed bed guides
* Radial turret for 12 tools with VDI 40 mounting and W-serration for high process reliability or disk-type turret for 12 tools with VDI 40 mounting
* Orthogonal, linear Y-axis for high accuracy
* Large axis traverse paths X= 245 mm / Y= ±60 mm / Z = 750 mm
* iXpanel – i4.0 ready operating system

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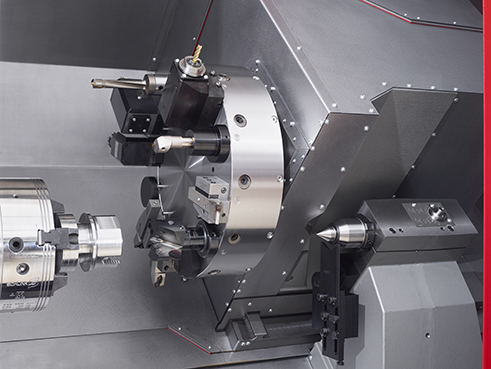
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**Photos:**



# Figure 001: TNA500 CNC universal turning machine - The right machine for use under toughest production conditions



## **Figure 002:** Counter spindle with a VDI40 radial turret