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New products: INDEX B400 and TRAUB TNA400 universal turning machines with counter spindle

**Universal, powerful, and flexible**

**The new INDEX B400 and TRAUB TNA400 CNC universal turning machines, which are based on a common platform, are ideal for the precise and powerful machining of customized flange and shaft parts. Both are also available with a counter spindle for even more flexibility and high-precision machining.**

The INDEX B400 and TRAUB TNA400 are almost identical in design, with their only difference being the CNC control they use. While the INDEX B400 is equipped with the latest generation of the Siemens Sinumerik 840D sl controller, the TRAUB TNA400 uses the CNC TX8i-s V8 – as usual based on Mitsubishi controls. The iXpanel operating concept developed by INDEX, which opens up access to networked production, ensures that the use of both controllers is extremely convenient.

The two universal turning machines are designed traditionally with a tailstock that is located on generously dimensioned roller guides. The entirely electrical assembly can be freely positioned from within the NC program.

To meet the needs of users who may, for example, want to carry out concentric rear-end machining on parts machined on the main spindle, the INDEX B400 and TRAUB TNA400 are optionally available with a counter spindle.

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

The belt-driven main spindle is equipped with an A8 short taper and 24 kW of power (bar clearance 82 mm; speed 4,000 rpm; torque 520 Nm). The counter spindle, which is also powered by a belt drive, is one size smaller with its A6 interface. Head of Development Ulrich Baumann: “Many users want it purely to improve the accuracy of the rear end and thus boost the precision of the further machining steps. They can rotate over the cylinder and face, and may place a locating hole aligned exactly with the front side.” The counter spindle was therefore designed to generally accommodate smaller bar and chuck parts. The automatic part removal is also designed along these lines and can accommodate workpieces up to the size of the main and counter spindles corresponding to the bar clearance.

In the versions with a counter spindle, both universal machines are equipped with the radial turret typically used in INDEX machines, with a VDI30 mounting in accordance with DIN 69880 and the patented W-serration. The latter contributes to the consistently repeatable setup of the twelve tools. That is because the W-shaped profile ensures that the basic holders on the tool turret can be aligned reliably and quickly. The repeatability achieves results in the micron range.

The interface for the radial turret is now also available for other TRAUB models, including the turn-mill centers in the TNX series, for example.

When it comes to the tailstock design of the TNA400, customers can now choose between a radial turret or a disk-type turret, as is currently used on TRAUB machines. The latter does not have a W-serration, but features advantages such as the capability to use of large solid drills/boring bars, as the forces are directly conducted to the turret.

**Options extend the range of applications**

The universal nature of the INDEX B400 and TRAUB TNA400 is not restricted to small batches, but also aids the economic turning of medium batch sizes. There is, for example, an optional bar package for use in attaching a bar loader, which consists of the required hollow clamping cylinder and a workpiece removal unit.

As a further option for universal machines, INDEX offers an electrically positioned, hydraulically operated NC steady rest, which can be useful for external machining of long shafts. Positioning can be carried out via the CNC controller.

**User-friendly down to the last detail**

Whether it’s the standard version or one of the optional variants, all varieties of both universal machines excel with their consistently ergonomic design that enables easy operation and quick setup. This begins with the clearly structured enclosure that is wholly without breaks or edges, a design that is typical for INDEX and TRAUB.

Like the exterior, the interior also impresses with its smooth appearance, lacking pockets and corners in which chips could get caught and thereby enhancing process safety and reliability. A slant machine bed made of mineral cast and inclined by 45 degrees provides vibration-damping properties and forms the basis for high-precision machining. It is designed as a monoblock, on which all of the large-scale guides and components are installed. The slim overall cross-section allows the operator to carry out all setup work in comfortable proximity.

The integrated tool measurement system with optical ATC is another user-friendly feature. Ihas been established on TRAUB machines for many years and is now also available on INDEX models such as the B400.

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