



Press release 09/06  
TNX65/42

## Press release

### TRAUB TNX65/42 Turn-Mill Center

#### Modular system allows productivity made-to-order

**Reichenbach. The new turn-mill center TRAUB TNX65/42 allows an increase of the productivity just as required. Depending on the selected configuration, the machine designed as modular system is equipped with two, three or four tool turrets. Thus, a machining with up to 80 fixed or driven tools is possible without any magazine. The symmetrical machine design, the identical main and counter spindle and the powerful drives guarantee optimum cutting results. The machine processes geometrically complex series parts with a diameter of up to 65mm and a length of up to 300mm at costs that are competitive on international level. TRAUB shows the TNX65/42 first on the AMB fair in pavilion 4.0 / stand 221.**

The turn-mill center TNX65/42 is the newest development of the TNX series and completes the successful TNX80/65 in the smaller diameter range. The new machine has also been designed as modular system: It has identical main and counter spindles, two to four (depending on the configuration) turrets with each ten tool stations and provides up to 80 tools when using twin tool holders. The tool mountings with a diameter of 30mm comply with DIN 69880 and allow an exact and rapid positioning of the tool holders thanks to a patented system. Another highlight – already known from the TNX80/65 – are the tool carriers that are traversable in X and Z direction and optionally in Y direction. They allow simultaneous high-productive cutting with four Y axes at main and counter spindle in combination with the powerful tool drives (5.5 kW / 17.5 Nm / 6,000 rpm).

This versatile machine is designed for a broad range of application for bar diameters of up to 65mm. The innovative kinematics allows processing workpieces with a length of up to approx. 300mm simultaneously and independently at each one of the two spindles using up to three tools. This free assignment of the tool carriers guarantees the highest productivity. Thus, the new TNX65/42 reaches cycle times that have been known until now only with multi-spindle automatics. Workpieces machined on the TNX65/42 are produced in the hydraulics sector and medical technology, at sub-suppliers for the automotive industry and in general machine construction, among others.



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The TNX65/42 is controlled using the TRAUB control unit TX8i-s, which is based on the newest development of a worldwide leading hardware manufacturer. The software of the TX8i-s was developed completely in-house at TRAUB – such as all versions developed in more than 25 years. The advantage is obvious: It is not necessary to use standardized software products. The software can be designed optimally adapted to the requirements of the customer or application and that can be considered in the development. Expectedly, the new TX8i-s is compatible with all previous TRAUB control units so that existing programs can still be used.

Unique selling propositions of the TRAUB TNX65/42:

- Four fixed or driven tools on main and counter spindle that are working simultaneously and independently of each other are possible, up to three of them on one spindle.
- The risk of collision is minimum due to large-sized tool spaces for tool change both in Z and in X direction, thus leading to a reduction of setup times.
- Hole patterns with a pitch circle of up to 60mm can be processed without moving the C axis, only with using the X, Z and Y axes.
- Handling of the workpieces (loading and unloading, removal of bar remnants) is completely automated.
- Main and counter spindle are completely identical and provided with hybrid bearings as standard.
- A large tool stock of up to 80 tools is available without additional tool change or magazine (if designed with four turrets).
- All sources of heat – in particular the motors – are located outside of subassemblies that are decisive for precision.
- Free chip fall and good accessibility thanks to the 60-degree inclination of the machine bed.

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**Figure 1:** Working area of the TNX65/42 with four turrets:  
The space for tool change is 250 mm in Z direction and 72 mm in X direction



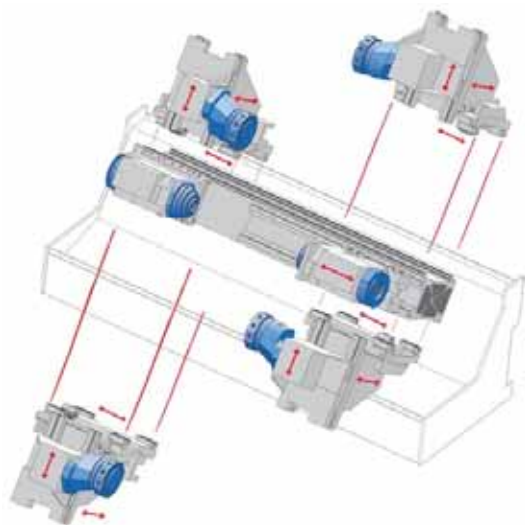
**Figure 2:** In spite of use in a limited space, collisions are almost impossible



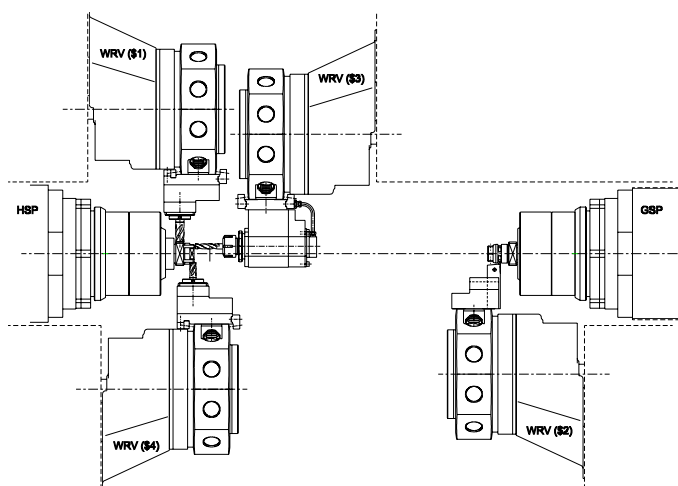
**Figure 3:** Chip congestion impossible: the removed material can fall down freely thanks to the 60-degree inclination of the machine bed



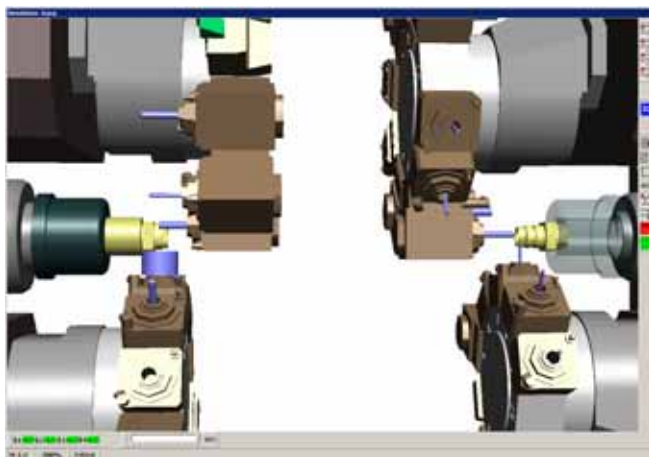
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**Figure 4:** A real modular system – TNX65/42



**Figure 5:** Three tools can work simultaneously and independently of each other on the main and counter spindle at a time



**Figure 6:** 3D simulation and external collision control



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**Figure 7:** Workpiece example TNX65/42 with 2 turrets



**Figure 8:** Workpiece example TNX65/42 with 3 turrets



**Figure 9:** Workpiece example TNX65/42 with 4 turrets



**Figure 10:** Hydraulic block processed on six sides and ready for mounting