



## **Product Information**

### **Completely reworked TRAUB TNK/TNL series**

#### **CNC short and long turning machines of the TNK/TNL series Now featuring a new generation of TX8i-s control units and centrifugal compensation of the guide bush**

Reichenbach. TRAUB Drehmaschinen GmbH & Co. KG completely reworked their CNC short and long turning machines of the innovative TNK/TNL series. The most prominent feature is the new generation of TX8i-s control units which is distinguished by an absolute upward compatibility with the previous version TX8i regarding the user interface and the programming. A philosophy that has tradition within the company TRAUB: Since the introduction of the basic version TX8 into the market nearly 30 years ago, this philosophy of user-friendly compatibility has been rigorously implemented, despite the continually increasing performance. The most conspicuous features are the control panel display which was enlarged from 10.4" (640x480 pixels) to comfortable 15" (1024x768 pixels), the integrated USB and network interfaces, as well as the sub-systems which were increased from four to six. It has thus now become possible to control complete handling or automation systems even in the case of maximum machine configuration.

The installed computer performance features a significant boost. The clock frequency of the PC CPU has been increased by the factor 5, a practical advantage which manifests itself in the optimization and programming of the machine. The performance of the new NC CPU has been increased by the factor 2.3. This results in a drastic reduction of all non-productive NC times. Another advantage of the fast NC CPU is the increased indexing precision for all operations requiring the axes to communicate with each other, such as for tapping or contour turning.

The control software is still created from the same source files (source programs), but has been enhanced with additional functions. The hardware has been completely replaced, including PC, NC, drive amplifier and the 28 controllable axis and spindle drives. The PC and the CNC/PLC are separated and the new control is now equipped with a faster drive bus offering a transfer rate which, thanks to the optical waveguide, was increased nine times to 50 MB. The record read-in time has been halved through an NC interpolation cycle of only 3.5 ms.



Furthermore, the new control is equipped with a “visual diagnosis” with error probability analysis. The direct displaying of the components involved in the fault reduces the error diagnosis time considerably. Result: Increased machine utilization time thanks to reduced down times.

Another innovation strengthens the unique selling propositions of the TRAUB machines: For the first time, a sliding headstock automatic has been fitted with a guide bush unit with automatic centrifugal compensation. This mechanical solution compensates the so-called “opening of the guide bush” and guarantees a constant and speed-independent guiding quality of the material. The result: considerably improved tool tolerance of the turned workpiece.

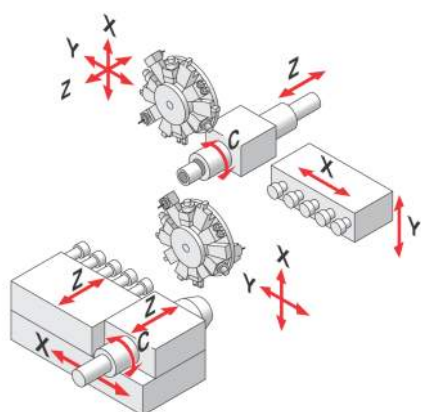
The „machine hardware“ of the TNK/TNL series, as well, has been consistently optimised in terms of user friendliness, especially the workpiece removal unit, the coolant recirculation and the machining of bars. For example, the part removal unit has been relocated to the user side to improve the ergonomics. Thus, more space is available in the interior and the ejection height is reduced. The bar feeder systems have been located close to the spindle guides which makes the roller steady redundant. This, too, represents another constructive contribution to improving the machining quality.

In terms of energy efficiency, the company TRAUB is also at the cutting-edge of mechanical engineering. All drives offer recovery capability, i.e. the braking energy is fed back to the system. The low-energy temperature equalization of the switch cabinet divided in two parts is another cutting-edge feature, which makes an additional active switch cabinet air-conditioning redundant.

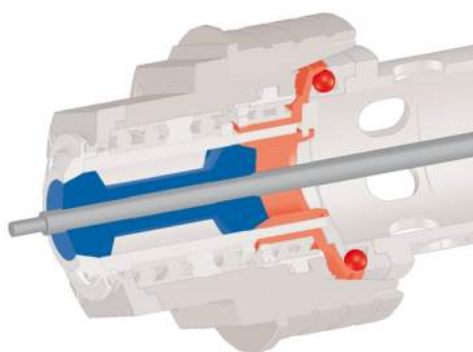
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**Figure 1:**  
TRAUB TNL26  
Sliding headstock  
automatic with  
automatic centrifugal  
compensation of the  
guide bush  
and new generation  
of TX8i-s control  
units



**Figure 2:**  
Maximum  
configuration of the  
modular system  
TNL26



**Figure 3:**  
Guide bush with  
centrifugal  
compensation



**Figure 4:**  
The new TX8i-s  
control unit now  
with a 15" display