

**AUTOMATIC
TOOL
IDENTIFICATION
SYSTEM (TID)**

E346 SERIES



E46 SERIES



E68 SERIES

TID: UNIQUE TOOL IDENTIFICATION IN INDUSTRY 4.0

TID is the perfect instrument to manage and control the tool identification in workshop.

With many years of experience in the workshop environment ELBO CONTROLLI NIKKEN have gained the necessary knowledge to be able to develop a versatile system to meet the unique requirements of those who want to work with a tool identification system.

The key consideration to provide tools to meet this requirement is that they are not only simple to use but also that such a system limits the possibility of operator error as much as is possible. TID features an intuitive graphical interface (based on current standards) and minimize the potential for any error by guiding the operator through each step.



Everything identified, no transfer errors

Tools are identified by TID through a unique code (TID code) which is also associated to the respective tools individual measurement data. After measuring the tool the operator can select the correct machine into which the tool is planned to be loaded.

The CNC controller receives the measurement data only when the tool is loaded into the machine thus avoiding transcription errors or changes to the tool table which do not reflect the actual situation. The tool identification system is a two-dimensional bar code matrix called a Data Matrix.

TID allows the configuration of the individual format and mapping of the data necessary for tool identification. Moreover, it is possible to manage multiple different configurations, depending on the machine tool manufacturers specifications.

Our TID application has been developed to meet a need in the market for a solution to provide, easily and at a reasonable price, a tool identification system interface between tool presetting machines and machine tools (FANUC, HEIDENHAIN, MAZAK, SIEMENS, MAKINO, OKUMA and others).

"Simplicity is the essence of universality" Mahatma Gandhi



WHAT ARE THE STRENGTHS?

Let's discover the strengths of this innovative solution and the advantages of using TID in your workshop.

Scan the QR code to discover TID: the revolutionary Elbo Controlli NIKKEN system to manage complete the tool identification in the workshop



DIRECT CONNECTION PRESETTER - CNC

TID allows a two-way communication between the presetter and the CNC. Measurements taken from the presetter can be sent directly to the CNC without downtime. TID can also acquire tool data from the CNC offset table.

NO ADDITIONAL COSTS

One of the key advantages of the solution is that TID eliminates the additional costs normally associated with the purchase of RFID systems (Balluff for example). These costs can include the data carriers themselves, tool holder modification and the application of read/write hardware interfaced with the machine tool.

SAFETY AND RELIABILITY

TID eliminates insertion errors, each tool is uniquely identified, thus guaranteeing the transfer of its individual data to the CNC.

FULL CUSTOMIZATION

TID allows complete customization for management of different configurations depending on the tool data required for the specific machine. Do you have special requirements? Is there a need for integration? *Tool ID manager can be customized according to YOUR needs.*

INDUSTRY 4.0

TID is made more comprehensive with the ability to view the status of the tool inventory and the NC corrector table, making it an essential component for Industry 4.0 production.

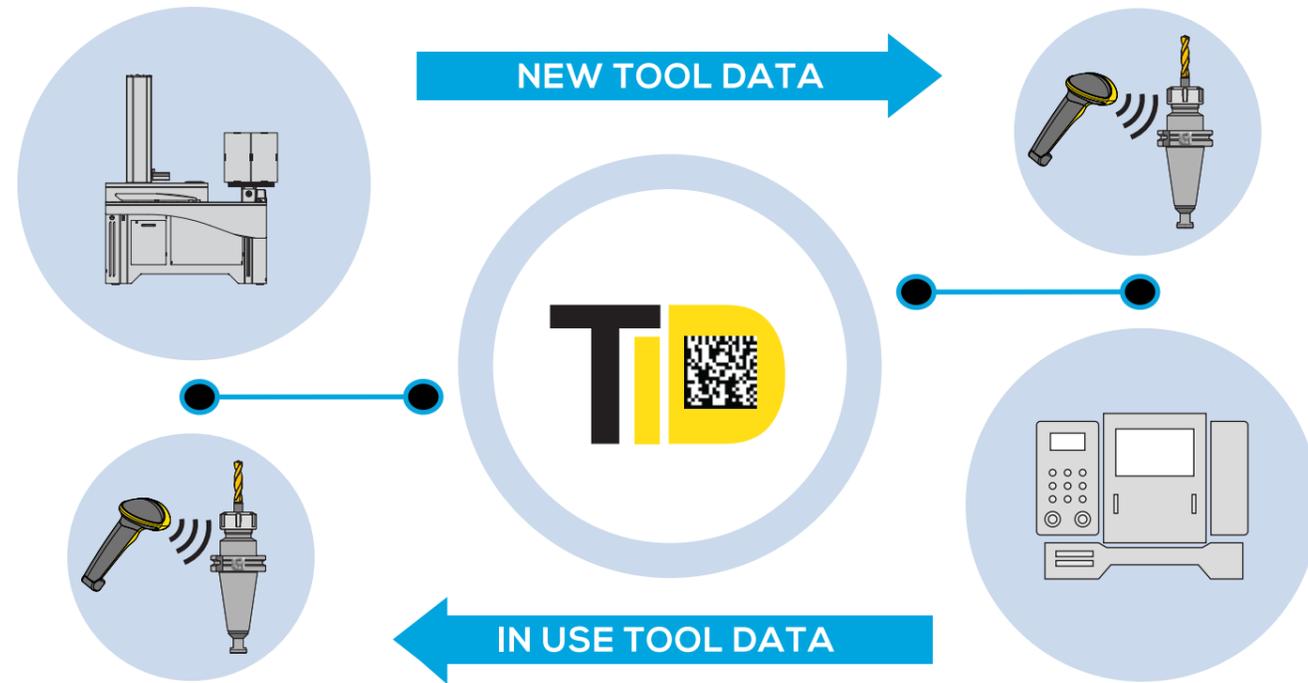
"Without deviation from the norm, progress is not possible." Frank Zappa

THE ELBO CONTROLLI NIKKEN WORLD **TOTALLY CONNECTED**

Using a tool presetter to measure tool assemblies normally always necessitates an additional requirement to provide some means for transfer of the measured data to the respective numerically controlled machine.

High risks can be exposed if the tool measurements either sent or entered into the numerical control are not correct and exact?

The possibility for the collision of a tool during processing can result in total tool failure, damage to the part/fixture, machine or spindle issues or even for the machine to totally alarm out. This of course ultimately could lead to an entire sequence of production being compromised or significantly held up whilst reworking or rectification takes place.



Reduction of preparation times and costs: with TID you can do it!

Thanks also to the recent technological push and innovation to increase the automation of production processes and data, extensively promoted recently in the name of 'Industry 4.0', the means to transfer tooling and other data are now more readily available to everyone.

Using a simple computer network, typically required nowadays to carry out the majority of operations within a company, the optimum system can be designed and installed to place tool presetters and production centers in communication.

In the extensively promoted Industry 4.0 era Elbo Controlli NIKKEN offers its own solution for interfacing machine tool presetters: our TID Solution!

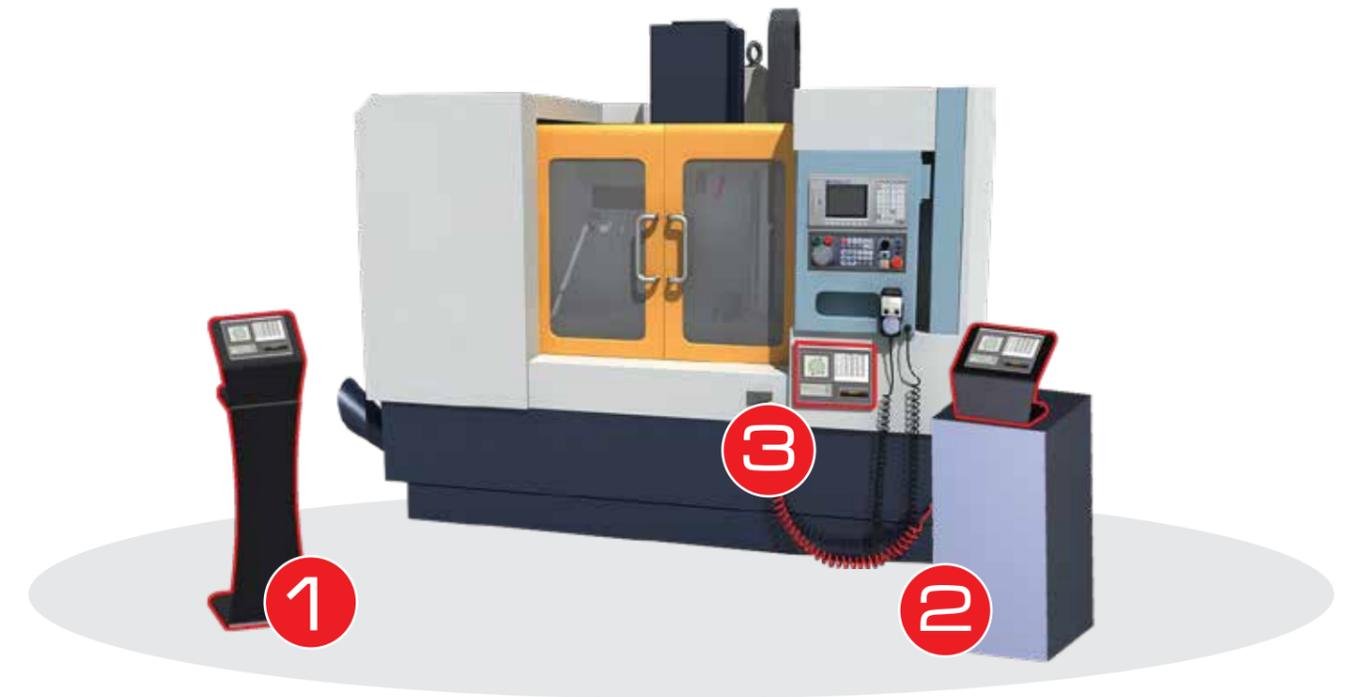


By identifying tool assemblies with a simple Data Matrix code and equipping the machine tools with the necessary electronics (barcode scanner and touchscreen panel/PC) it is possible to improve both the performance and the robustness of your production process.

With TID it is simply a matter of:

1. Identify the tool at the presetter by scanning its code
2. Perform a new measurement and update the tool data within the TID system
3. When loading into the machine, scan the tool code (the NC values are then loaded and set within the tool table automatically).

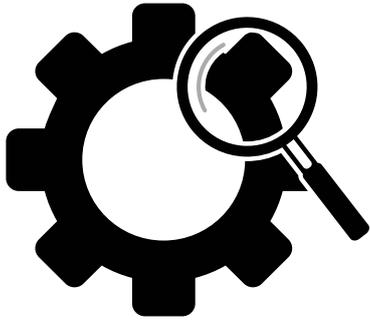
Ease of use, information integration, data flow management are the guidelines that characterize the design of Elbo Controlli NIKKEN's software: for clients who choose to partner with us, the result is the creation of integrated systems, which in turn can deliver a substantial increase in corporate productivity.



3 ways to install your IPC

Elbo Controlli NIKKEN offers you the possibility to choose how to install your IPC inside your workshop. Customize and make your tool identification experience unique and tailor-made to your needs.

- 1 Pedestal IPC support: an ideal solution if you want to integrate the IPC close to the machine tool without making further changes
- 2 Benchtop IPC support: the IPC is recessed inside its support to be subsequently positioned on a secondary structure (table, bench, ground base, etc.)
- 3 IPC installation through its fixing support or applied directly on the machine tool. It's your decision!



TECHNICAL FEATURES

- INTERFACE THE TOOL IDENTIFICATION SYSTEM WITH TOOL PRESETTER UNIT AND MACHINE TOOL NC
- USE OF A DATA MATRIX BIDIMENSIONAL BARCODE
- DATA MATRIX 2D READER
- NO MEMORY SUPPORT TO BE APPLIED ON TOOLS
- COMPLETE CUSTOMIZATION ACCORDING TO THE TOOL DATA REQUIRED FOR THE SPECIFIC MACHINE
- TWO-WAY COMMUNICATION BETWEEN PRESETTER AND CNC
- INDUSTRY 4.0 READY

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