

In recent years, machine shops have invested in new machine tools, increasing production capacity, but not always efficiency.

The presetting machines offered by Elbo Controlli NIKKEN, allow you to preset, measure and manage tools, reducing downtime by ensuring a continuous, uninterrupted flow and optimising workshop organisation.

Our passion for our work is what has enabled us to offer the market advanced yet easy-to-use solutions.

EXPRESSION OF TECHNOLOGY AT THE HIGHEST LEVEL

NEW MULTI-CAMERA PRESETTERS: QUALITY WITHOUT COMPROMISE

WHAT CHARACTERISES US?

The natural granite structure and certified optical scales with interferometric laser guarantee accuracy and repeatability over time.
The integral and interchangeable spindle holders guarantee a concentricity error of less than 1µm.

What are the strengths of our presetters?

- **Operational Efficiency:** the measurement and inspection process is fast and efficient, allowing for optimised processing times and reduced costs
- **Intuitive Interface:** the presetter is equipped with user-friendly software that simplifies operation, making it accessible even to less experienced operators
- **Reliability:** they meet the highest quality standards, making them indispensable allies in your workshop.

Using state-of-the-art technology, these solutions offer a unique combination of versatility, reliability and performance, ensuring accurate measurements and optimised tool management.



E46BT1, E46BAT1 AND E46CAT1: INSPECT YOUR LATHE TOOLS

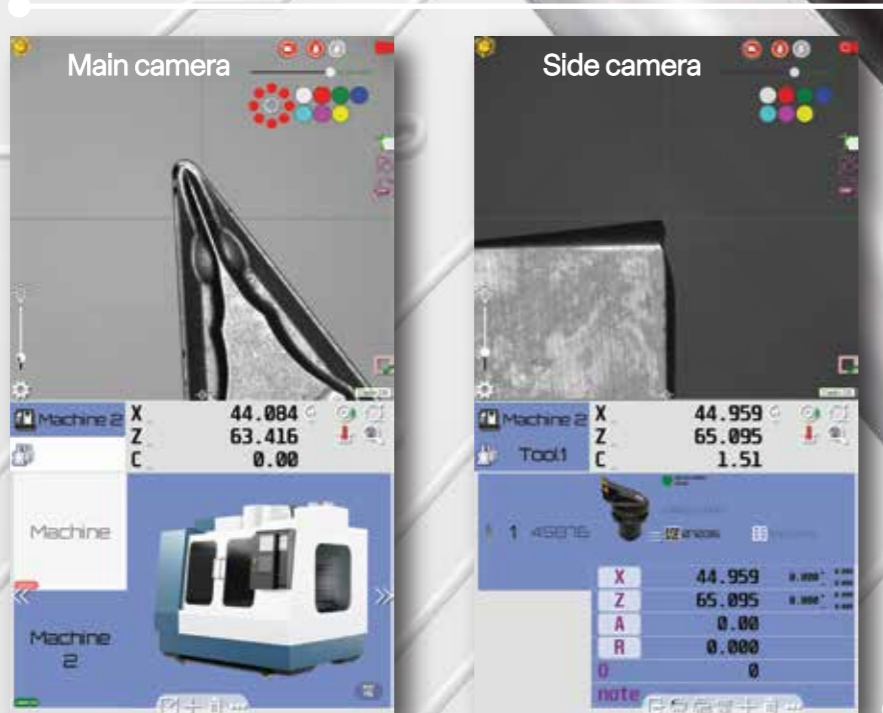
Elbo Controlli NIKKEN has been dedicating time and resources to innovation for years, bringing state-of-the-art products to the market.

The new “multi-camera” models have additional cameras that facilitate measurement and inspection of characteristic tool geometries.

In this context, the integration of an additional camera provides a considerable advantage by offering the possibility of performing a detailed inspection of the tool side, allowing distances and geometries to be calculated using software.

Another aspect is the calculation of the offset, a fundamental parameter for compensating for any displacement relative to the reference point for machining.

The adoption of tool presetting systems equipped with a lateral camera represents a significant step forward: it is suitable for presetting lathe tools working under or above centre, in combination with a spindle holder equipped with a Y-direction slide.



THE SIDE CAMERA MAKES EVERYTHING EASIER

Accurate inspection of lathe tools, which are often complex and difficult to check using traditional methods, represents a significant challenge.

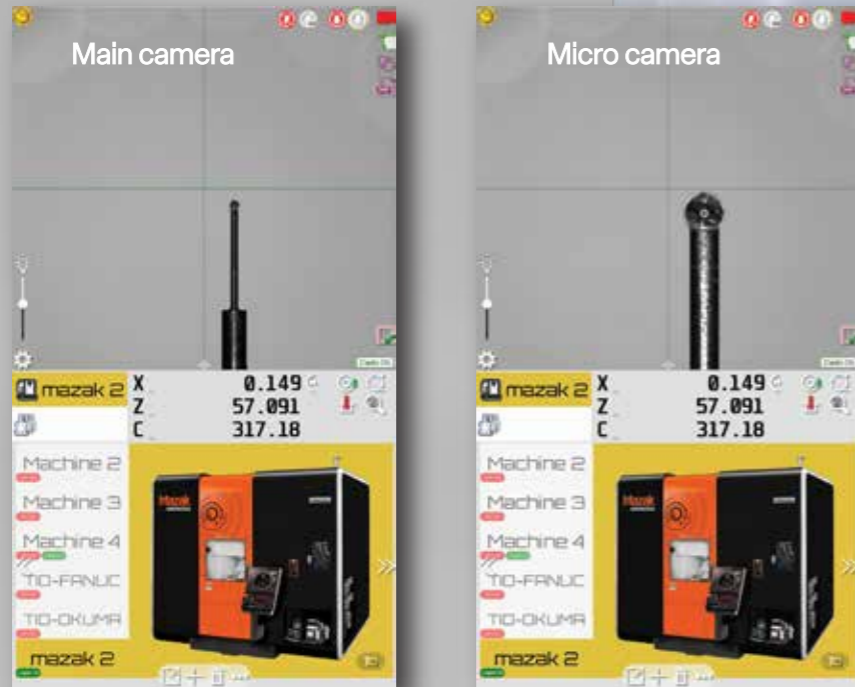
With the new T1 model series, we offer an ideal solution for those requiring tool inspection in the turning industry.



THE IDEAL SOLUTION FOR MEASURING AND INSPECTING VERY SMALL TOOLS

The E46CAT2 tool presetter represents technology for measuring and inspecting micro-tools.

The E46CAT2 is the ideal choice for those looking for an innovative tool presetter that guarantees precision, reliability and ease of use.



MICRO-TOOLS WILL HAVE NO MORE SECRETS WITH THE E46CAT2 PRESETTER

The measurement and inspection of micro-tools is a crucial activity to ensure the precision and efficiency of micro machining in industries such as micromechanics, watchmaking, electronics and medical.

The quality and accuracy of micro-tool presetting directly affect performance, which is why we at Elbo Controlli NIKKEN offer a presetter equipped with an additional camera with a 90x magnification factor telecentric lens.

Sharp images enable detailed and reliable inspection, improving efficiency and reducing errors.

Elbo Controlli NIKKEN is a brand that stands out for the quality and reliability of its products in the field of industrial control and automation systems. Here is the ideal solution for your workshop: E46CAT2.



E46CAT3 PRESETTER: SIMPLICITY AND PRECISION OF THE THREE CAMERAS

Research and development, those are the key words!
In fact, thanks to its three-camera technology, Elbo Controlli NIKKEN offers the ability to visualise every detail of the tool with maximum accuracy. Reliability and innovation at the service of your industry: Elbo Controlli NIKKEN, the right choice for the control of the future.

The two cameras, side and top, have a magnification of 60x and a very low distortion coefficient, which makes it possible to inspect cutting edge surfaces and to assess and measure wear or breakage. The lenses and illuminators have been specially designed to have a very high level of image quality and sufficient focal distance to avoid collisions with tools.

The front camera is used to measure and inspect the breast of the cutting edge, the side camera to inspect the side and finally the top camera the head. The upper camera assembly is designed to be repositioned in a position to facilitate the measurement of bulky tools.

The E46CAT3, with reference to the 'main' camera, is also equipped with the AUTOFOCUS function, which allows measurements to be taken automatically, without manual operator intervention.



PRESETTING TECHNOLOGY AT THE HIGHEST LEVEL

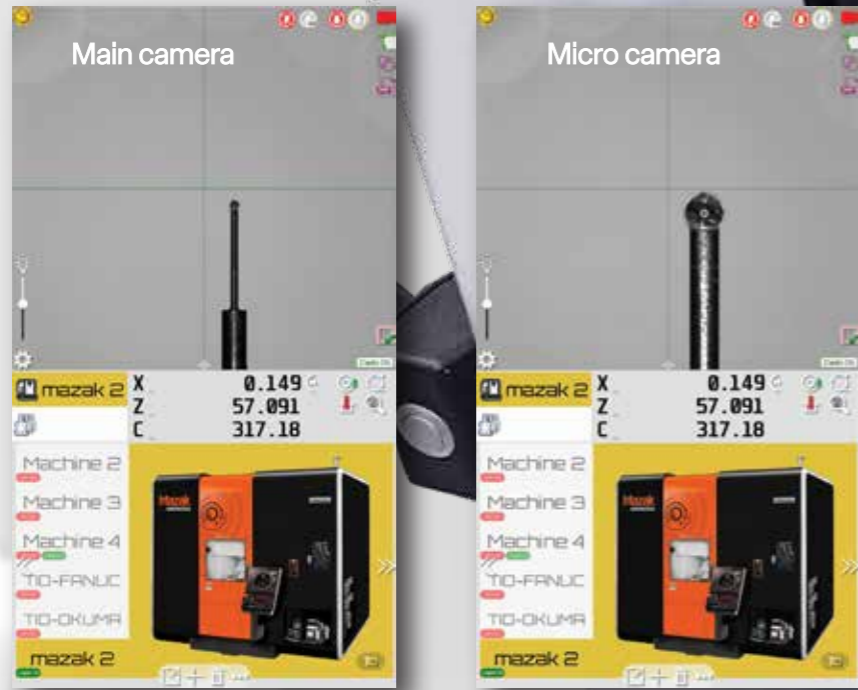
Tool manufacturers and sharpeners often require a more detailed inspection of the tool, which is why, with two additional cameras dedicated exclusively to inspection, we guarantee flawless results with maximum accuracy.



WHEN VERSATILITY MAKES A PRESETTER UNIQUE

This system provides detailed control, which is essential for builders and sharpeners or anyone who needs to carry out accurate control to achieve impeccable results.

Advanced technology, outstanding performance: choose Elbo Controlli NIKKEN for precise and safe control. Let yourself be won over by the quality of this incredible solution!



ALL THE POWER OF THE E46CAT4 IS PACKED INTO THE 4 CAMERAS

Designed to meet the most demanding requirements Elbo Controlli NIKKEN offers the E46CAT4, a product that represents technological excellence. Equipped with 4 cameras, it is a solution that is used in a wide range of sectors due to its flexibility of use.

The E46CAT4 combines the features of the 3-camera machine with the additional front lens with 90x magnification factor for measuring micro-tools.

The four cameras provide a detailed view and analysis of three directions, allowing for complete control and more in-depth inspection

The two frontal cameras measure and inspect the breast of the cutter, the lateral camera the side and the upper camera the head.



E68CXT3 PRESETTER: THREE CAMERAS, ONE RESULT

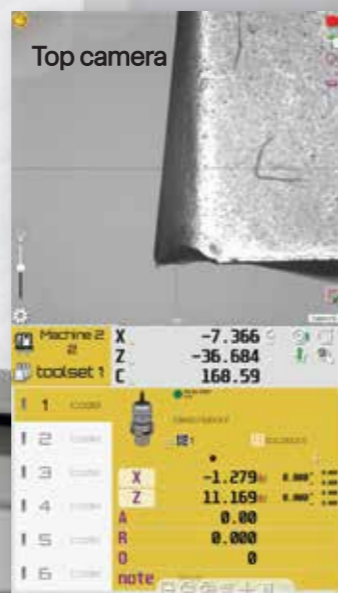
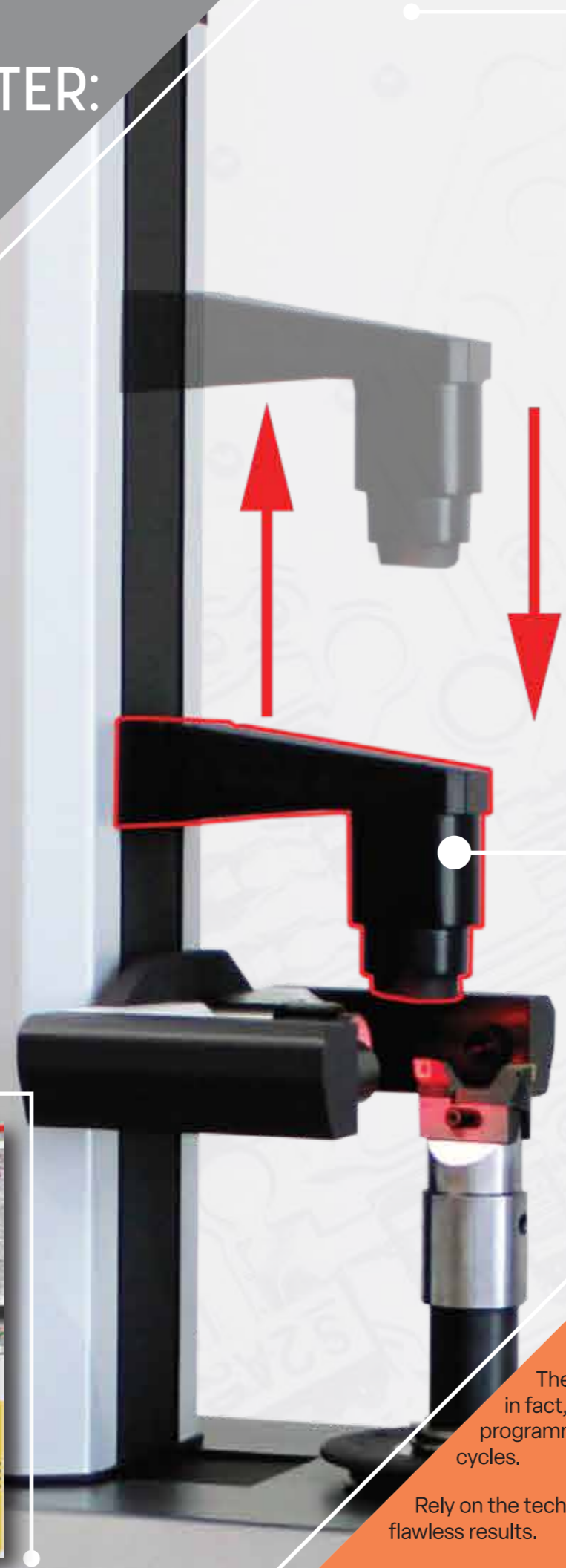
The new E68CXT3 tool presetter is equipped with three cameras: the first for front view with 25X magnification, the second and third for side and top view of the tool with 60X magnification. The system enables tool manufacturers and resharpeners to measure all geometric characteristics of the tool.

To facilitate the measurement of bulky tools, the vertical camera can be placed in the maximum Z position with an automatic cycle, avoiding interference with the tool. After the operation, a click allows the camera to be moved to the home position to safely resume standard operations.

This solution is not just a tool presetter, but an indispensable ally in improving machining quality, extending tool life and reducing waste.

With Elbo Controlli NIKKEN, every control is a guarantee of quality: choose the technology that works for you.

SIMPLY E68CXT3.



ENGAGE AND RETRACT IN TOTAL AUTONOMY: CHOOSE THE MAXIMUM

The E68CXT3 is the only automated multicamera presetter: in fact, it is equipped with motorised axes and, once programmed, is able to perform automatic measurement cycles.

Rely on the technological innovation of the three cameras flawless results.

TECHNICAL FEATURES AND CONFIGURATION

LEGEND: ● available ○ optional – not available

E46BT1 E46BAT1 E46CAT1 E46CAT2 E46CAT3 E46CAT4 E68CXT3

GENERAL FEATURES

Measuring range (diameter and height in mm)	320 x 600	320 x 600	320 x 600	280(120) x 600	320 x 600	200(80) x 600	600 x 800
Natural granite base and column	●	●	●	●	●	●	●
Steel base (3+1 adjustable feet)	●	●	●	●	●	●	●
Linear guideways (2 for X axis, 1 for Z axis) with double recirculating ball bearings slides	●	●	●	●	●	●	●
Pneumatic axis movement unlock	●	●	●	●	●	●	●
Motorized axis movement	–	–	–	–	–	–	●
Manual gross movement	●	●	●	●	●	●	–
Manual fine adjustment	●	●	●	●	●	●	–
Motorized fine adjustment	–	–	–	–	–	–	●
ECN AS371 certified optical scales (resolution 1µm)	●	●	●	●	●	●	–
ECN GS371 certified granite optical scales (resolution 1µm)	–	–	–	–	–	–	●
Vertical touch-screen monitor	TFT 15,6" Full HD	TFT 15,6" Full HD	TFT 21,5" Full HD	TFT 21,5" Full HD	TFT 21,5" Full HD	TFT 21,5" Full HD	TFT 21,5" Full HD
Keyboard and mouse	●	●	●	●	●	●	●
Label printer	○	○	○	○	○	○	○
Label printer side support	●	●	●	●	●	●	–
Spindles side support (1 for 2 spindles)	●	●	●	●	●	●	●
Additional spindles side support	○	○	○	○	○	○	○
Overall dimensions (mm)	L1179xH1935xP568						1748x2217x717
Weight (kg)	230						575

SPINDLE FEATURES

Interchangeable spindle (ISO, BT, CAT, HSK, Polygonal taper, etc.)	○	○	○	○	○	○	○
Spindle identification system (SP-ID)	–	●	●	●	●	●	●
Spindle mechanical index (0°-90°-180°-270°)	●	–	–	–	–	–	–
C axis visualization	○	●	●	●	●	●	●
Automatic spindle rotation and electronic index	–	●	●	●	●	●	●
Pneumatic spindle brake	●	●	●	●	●	●	●
Motorized mechanical tool holder clamping (standard pull stud DIN69872, ISO7388, MAS403)	●	●	●	●	●	●	●
Motorized mechanical tool holder clamping (HSK, Polygonal taper)	●	●	●	●	●	●	●

CAMERA SYSTEM FEATURES

Digital zoom (4 x)	●	●	●	●	●	●	●
Resizable camera area	●	●	●	●	●	●	●
MAIN CAMERA	●	●	●	●	●	●	●
Bi-telecentric lens	●	●	●	●	●	●	●
Elbo Controlli NIKKEN camera system measuring range (mm)	10 x 10	10 x 10	10 x 10	10 x 10	10 x 10	10 x 10	10 x 10
Elbo Controlli NIKKEN camera system magnification	18 x	18 x	25 x	25 x	25 x	25 x	25 x
Tool measurement function	●	●	●	●	●	●	●
Tool inspection function	●	●	●	●	●	●	●
MICRO CAMERA	–	–	–	●	–	●	–
Elbo Controlli NIKKEN camera system measuring range (mm)	–	–	–	2,8 x 2,8	–	2,8 x 2,8	–
Elbo Controlli NIKKEN camera system magnification	–	–	–	90 x	–	90 x	–
Tool measurement function	–	–	–	●	–	●	–
Tool inspection function	–	–	–	●	–	●	–
SIDE CAMERA	●	●	●	–	●	●	●
Elbo Controlli NIKKEN camera system measuring range (mm)	4 x 4	4 x 4	4 x 4	–	4 x 4	4 x 4	4 x 4
Elbo Controlli NIKKEN camera system magnification	44 x	44 x	60 x	–	60 x	60 x	60 x
Tool measurement function	–	–	–	–	–	–	–
Tool inspection function	●	●	●	–	●	●	●

THE COMPANY RESERVES THE RIGHT TO MAKE PARTIAL OR TOTAL CHANGES TO THE PRODUCTS WITHOUT PRIOR NOTICE AND DECLINES ALL LIABILITY.

E46BT1 E46BAT1 E46CAT1 E46CAT2 E46CAT3 E46CAT4 E68CXT3

CAMERA SYSTEM FEATURES

TOP CAMERA	–	–	–	–	●	●	●
Elbo Controlli NIKKEN camera system measuring range (mm)	–	–	–	–	4 x 4	4 x 4	4 x 4
Elbo Controlli NIKKEN camera system magnification	–	–	–	–	60 x	60 x	60 x
Tool measurement function	–	–	–	–	–	–	–
Tool inspection function	–	–	–	–	●	●	●

SOFTWARE AND MEASURING FUNCTIONS

Embedded ECN operating system Linux based	●	●	●	●	●	●	●
ECN machine software B version (blue screen)	●	●	–	–	–	–	–
ECN machine software C version (yellow screen)	–	–	●	●	●	●	●
Number of machine origins / number of tool sets	∞ / ∞	∞ / ∞	∞ / ∞	∞ / ∞	∞ / ∞	∞ / ∞	∞ / ∞
Multi-origin function for multitasking machines	●	●	●	●	●	●	●
Manual measure function with fixed reticle	●	●	●	●	●	●	●
Autotargeting measure function	●	●	●	●	●	●	●
Autotargeting measure function with dimension freeze	●	●	●	●	●	●	●
Collimation indicators for fixed reticle measure	●	●	●	●	●	●	●
On-screen automatic measure of tool corner radius & theoretical centre point	●	●	●	●	●	●	●
On-screen automatic measure of tool corner angle & theoretical intersection	●	●	●	●	●	●	●
Chamfer measuring function	●	●	●	●	●	●	●
Adjustable Area of Interest (AOI)	●	●	●	●	●	●	●
Automatic spindle rotation and measurement of tool edges	–	●	●	●	●	●	●
Presetter automation software for tool presetting (1 step)	–	–	–	–	–	–	●
Presetter automation software for tool presetting (unlimited steps)	–	–	–	–	–	–	●
Software for manual tool presetting and geometry control	●	●	●	●	●	●	●
Presetter automation software for tool presetting and geometry check (full CN)	–	–	–	–	–	–	●

GRAPHICAL FUNCTIONS

Adjustable reticles (axis and circles)	●	●	●	●	●	●	●
Profile image capture function	●	●	●	●	●	●	●
Automatic geometry (1 geometric entity)	●	●	–	–	–	–	–
Automatic geometry (multiple geometric entity)	–	–	●	●	●	●	●
Geometry by points	●	●	●	●	●	●	●
Camera image capture	●	●	●	●	●	●	●
DXF files import of the tool profile	●	●	●	●	●	●	●
Manual DXF acquisition of the revolution profile	–	–	●	●	●	●	●
Automatic DXF acquisition of the revolution profile	–	–	●	●	●	●	●

CONNECTION AND INTEGRATION FUNCTIONS

USB ports (4)	●	●	●	●	●	●	●
LAN connection	●	●	●	●	●	●	●
Wi-Fi connection	–	–	●	●	●	●	●
Standard post processor	●	●	●	●	●	●	●
Customized post processor	○	○	○	○	○	○	○
TID (Tool identification system)	○	○	○	○	○	○	○
TTS (Tool Tracking System)	○	○	○	○	○	○	○
RF-ID tool identification	○	○	○	○	○	○	○
TP32 software ready (double monitor and dedicated PC)	○	○	○	○	○	○	○

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20821 MEDA (MB) - Italy - Via San Giorgio, 21
T. +39 0362 342745 - **F.** +39 0362 342741
www.elbocontrolli.it - info@elbocontrolli.it

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