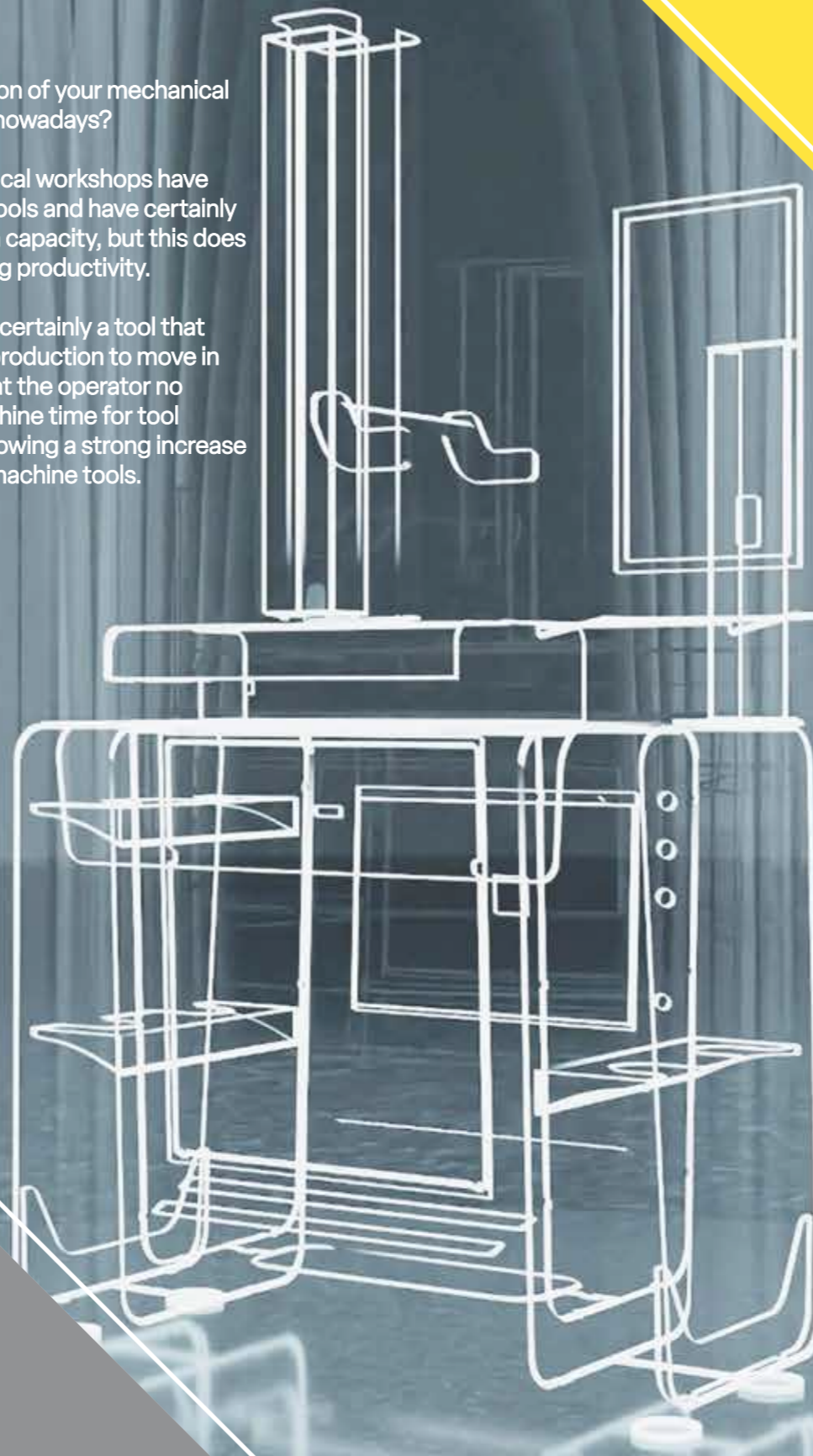


How to make the production of your mechanical workshop more effective nowadays?

In recent years all mechanical workshops have invested in new machine tools and have certainly increased their production capacity, but this does not always mean increasing productivity.

The presetting machine is certainly a tool that helps the organization of production to move in this direction, ensuring that the operator no longer has to "waste" machine time for tool measurement and thus allowing a strong increase in the productivity of the machine tools.



HOW TO MAKE YOUR MECHANICAL WORKSHOP MORE EFFICIENT

The new E46C presetter series bring multiple advantages, significantly improving the production process. While the machine is carrying out a job, the operator, or the toolroom staff, can pre-set the tools for the next job.

But that's not all: with E46C it is possible to analyze all aspects of the tools that are not identifiable with in-machine tool presetting systems. In addition to X and Z values, the presetter can detect angles, radii and much more.

Elbo Controlli NIKKEN provides tools that can make the work of machine operators easier and drastically limit the possibility of errors.

Trust the industry experts!

NEW E46C SERIES
THE EVOLUTION OF
THE SPECIES



NATURAL GRANITE: THERMAL STABILITY, HARDNESS, PRECISION

When it comes to measurement and presetting, it's very important to have the lowest possible thermal expansion coefficient and natural granite is the most suitable for this type of application. And not only that: thanks to its low thermal conductivity, granite, a natural hard stone, offers significant advantages compared to other materials in terms of the precision necessary for an instrument such as the presetter machine. These are the properties that leading companies in the mechanical industry sectors rely on when choosing materials for high-precision machine components. **Seeing is believing!**

The first uses of granite date back to ancient Egypt, where this material was already appreciated for its remarkable resistance, second only to that of diamond.

The excellent thermal and vibration damping properties make granite an excellent material for the precision mechanical industry.

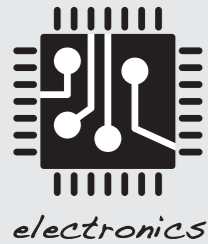
All our spindle holders are interchangeable and are built to have a high level of repeatability. Without the use of adapters, the measurement becomes even more precise, as we avoid introducing coupling errors between the different elements.

Furthermore, the E46C presetter series is equipped with the spindle holder identification system (SP-ID). The system allows the presetting machine to identify the spindle holder and suggests the correct machine origins, every time the spindle holder is changed. Ever easier, designed for you.

OUR COMPONENTS ARE DEVELOPED TO OFFER YOU THE MAXIMUM

Elbo Controlli NIKKEN invests time and resources to develop innovative and cutting-edge solutions, in order to guarantee a superior quality product. In fact, all our components are designed for this type of application, i.e. measurement, inspection and tool data transfer.





A CUSTOMIZED ELECTRONICS GUARANTEE HIGH PERFORMANCE

All the presetters of the E46C series are equipped with Embedded Industrial PCs, i.e. designed specifically for the tool presetting function.

Why do we use this type of PC? Simply because embedded PCs are compact, low-power and powerful in computing operations.

How important is it to have a high-performance monitor?
The tool presetting, measurement and inspection operation requires the use of high-performance and high-tech components.

For this reason, we have chosen a monitor that is perfect for this type of application.

In fact, they are designed to withstand difficult environmental and use conditions, typical of the industrial sector, and for this same reason they stand out for a longer lifespan.

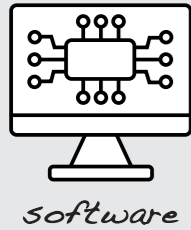
21.5" Full HD touch-screen: tailor-made for you!



THE VISION SYSTEM IS THE KEY ELEMENT OF OUR PRESETTERS

Our vision systems are developed to ensure optimal performance. The high image quality and response speed of the camera are the result of continuous research in the optical field.

The E46C presetter series feature bi-telecentric optics with 25X magnification and up to 4X digital zoom to give you the ultimate viewing experience.



NEW USER INTERFACE INTUITIVE, EASY, POWERFUL

In an era in which data management and their visualization play a predominant role, the development of an easy and intuitive user interface is a priority, in order to offer a product capable of satisfying user requests.

Thanks to this evolution, communication between presetter and operator is improved, and interaction becomes simple, taking advantage of all the software functions.

We at Elbo Controlli NIKKEN believe in ease of use: the interface is designed to be immediately understandable for every user, even the less experienced one. Usability is one of the quality factors of our software and it can be said that, together with functionality, it can be considered one of the pillars on which the other quality factors are based.

The advanced functions are intuitive and simple to use: DXF creation, export and import, custom tool tables, post-processor and much more.



Smartphone-type usability has allowed us to develop software capable of scrolling pages from left to right and vice versa with a simple movement of the fingers on the screen, opening the submenu by pressing the icon, managing and customizing the spaces of the monitor according to your needs.

Limits are made to be overcome! Discover all the power of this incredible software!

WHEN SOFTWARE BECOMES THE HEART OF INNOVATION

Today, companies are looking for technological solutions that adapt to their specific needs to remain competitive in the market. Our new software makes the presetting experience simple and enjoyable, fully developed with smartphone usability.

Why complicate your life with complex software? Choose ease of use. Choose E46C.



AUTOFOCUS FUNCTION: NO MEASUREMENT ERRORS

IE460A

In an industry where automation becomes a constant request a presetter with that provided an autofocus capability becomes a necessity.

This mode is recommended for those who need to carry measurements on multi-edged tools which would be very long if carried out manually and, above all, which reduces the risk of human error to a minimum.

It is very important for us to patent the innovative technological solutions that we study and develop for our products. Through patents we are able to enhance our products which reflect Elbo Controlli NIKKEN's cutting-edge level of technology and proposed solutions.

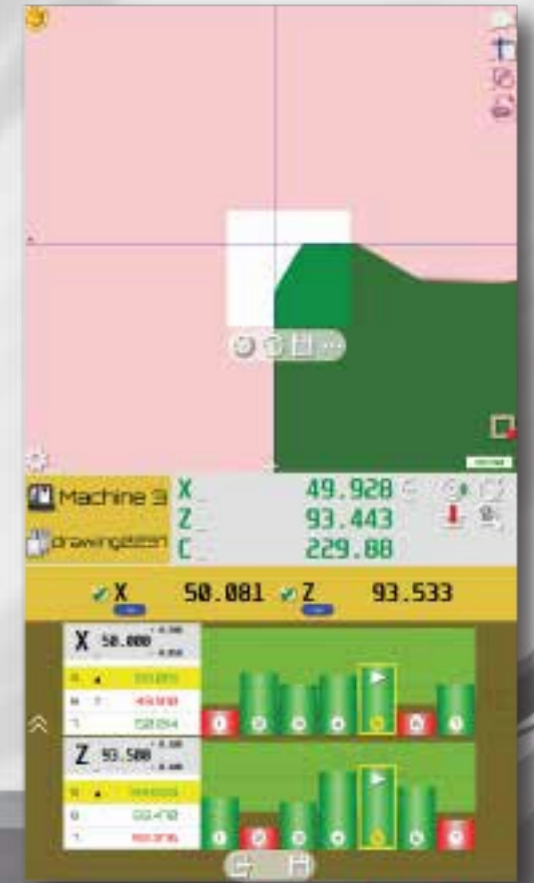
For this reason, the "Research and Development" department is constantly engaged in the study of unique solutions, which sets us apart from all the others.

A UNIQUE AND INNOVATIVE PATENTED SYSTEM

The **AUTOFOCUS** function allows tools to be measured automatically, without the operator intervening manually.

Once the tool has been clamped, the operator will simply have to choose what type of measurement he wants to carry out (single cutting edge or multi-cutting edge) and what to measure (X, Z or both axes) and start the measurement cycle.

Without having to enter the number of cutting edges to measure or any theoretical value, the software will automatically start the cycle and end it once the 360° rotation has been carried out.



Elbo Controlli NIKKEN has developed a system that adapts the peripheral rotation speed of the tool based on the maximum diameter to be measured: the constant peripheral speed avoids the introduction of errors, whether you are measuring a 2 mm diameter tool or a 200 mm one.

As always, Elbo Controlli NIKKEN has developed its own way to automatically measure, inspect and analyze tools, following the company philosophy: making the operators' work simple, reducing human errors to a minimum.

Prepare your measurement program with our new, simple and intelligent interface that allows you to set all measurement points, number of cutting edges, theoretical values and tolerances. You find everything you need in one screen: decide how you want to measure your tools and where you want to export the measurement results (post-processor, TID, RFID chip or simply save and print the report).

With E46CX it is possible to carry out the automatic positioning of the vision system, the measurement of cutting edges with autofocus, the adaptive identification of geometric entities. Data processing functions, a synoptic analysis of the results as well as the possibility of exporting/printing the data are also available. **No complications. The software helps you at every stage.**

AUTOMATION INCREASE PRODUCTIVITY

Automation consists of the use of technologies to reduce manual activities. All sectors that involve repetitive activities can make use of automation, however it is more widespread in the industrial and manufacturing sectors.

The E46CX presetter allows you to improve production processes, the quality of workmanship and consequently of the product, reduces errors and costs and increases reliability.

Why choose the new E46CX presetter? Today we find ourselves competing with innovative companies and offering products and services more and more quickly. Automating is essential to manage, change and adapt the processes through which the company operates. Here comes a machine that helps your company move in this direction.

THE TOOL PRESETTER REVOLUTION IS CALLED E46CX

E46CX



TECHNICAL FEATURES AND CONFIGURATION

LEGEND: ● available ○ optional – not available

	E46C	E46CA	E46CX
GENERAL FEATURES			
Measuring range (diameter and height in mm)	400 x 600	400 x 600	400 x 600
Natural granite base and column	●	●	●
Steel base (3+1 adjustable feet)	●	●	●
Linear guideways (2 X axis, 1 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)	●	●	●
Vertical Touch Screen Monitor	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		
Weight (kg)	230		

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

Bi-telecentric optical lenses	●	●	●
Elbo Controlli NIKKEN camera system measuring range (mm)	10 x 10	10 x 10	10 x 10
Monochromatic C-MOS sensor USB 3.0 Super speed connection	●	●	●
Elbo Controlli NIKKEN camera system resolution	1µm	1µm	1µm
Elbo Controlli NIKKEN camera system magnification	25 x	25 x	25 x
Analogic and digital camera view	●	●	●
Digital zoom (4x)	●	●	●
Tool inspection function	●	●	●
Resizable camera area	●	●	●

E46C E46CA E46CX

SOFTWARE AND MEASURING FUNCTIONS

Embedded Elbo Controlli NIKKEN operating system Linux based	●	●	●
Elbo Controlli NIKKEN machine software B version (blue screen)	–	–	–
Elbo Controlli NIKKEN 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 step)	–	–	●
Software for manual tool presetting and geometry check	●	●	●
Presetter automation software for tool presetting and geometry check (full CN)	–	–	●

GRAPHIC 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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