Elbo Controlli NIKKEN
E460A Tool Presetting Machine

Our range of standard and advanced tool presetting machines are designed, developed and manufactured by our sister company Elbo Controlli NIKKEN.

All Elbo Controlli NIKKEN tool presetters are designed and manufactured 'in-house' at our two sites in Meda near Milan, Italy. Every single construction material and component is carefully controlled and developed specifically with the function and requirement of measuring tools in mind (from the optics and electronics right through to the glass scales, spindles and structural assemblies).

MAIN FRAME & CONSTRUCTION

Machine structure in high quality structural steel to provide increased stiffness with higher accuracy and rigidity. Solid granite column and base (increased substantially in size over previous generation models) to guarantee and maintain maximum accuracy. This construction ensures durability and offers high levels of thermal stability making the E460A highly suitable for machine shop conditions with no issue of concern in respect of accuracy, repeatability and reproducibility.

SPINDLE SYSTEM

A wide variety of tools can be pre-set utilizing interchangeable spindle cartridges rather than adaptors. This reduces the number of interface connections delivering accuracy across all spindle types. The cartridges supplied for the E460A all feature our unique spindle identification system (SP-ID) which identifies which spindle is loaded and prohibits selection of the incorrect reference from the library (reference automatic spindle functionality).

FUNCTIONALITY

The software is displayed and interacted with via a 15.6" capacitive touch screen mounted vertically for easy viewing and operation. The screen layout and design is split into two distinct sections. The upper half of the display shows visible images of the current tool and profile whilst the lower section, along with our floating menu window, provides access to all the current functions. Simple icons and graphically driven menus enable the operator to quickly and intuitively manage all tool measurement and inspection modes, in addition a range of auxiliary capabilities are available such as creating CNC Machine origins and tool sets.

SERVICE & SUPPORT

NIKKEN have a UK based service and Engineering team offering unrivalled levels of customer support, we are able to offer a comprehensive range of services including: installation, training, technical support, service and calibration. Our team is 'manufacturer' trained and we stock a wide range of spares to facilitate quick response times and a highly efficient service.

TECHNICAL DATA

Measuring range: diameter max 370 mm (radius 185 mm); height max 600 mm

General Features:

- Base and column made of NATURAL GRANITE: linearity max error 2 µm/m
- ELBO CONTROLLI NIKKEN Linear Transducers in optical glass type AS 371 certified by HP laser
- ISO/BT/HSK/polygonal taper... etc. interchangeable rotating spindle-holder (to be specified) max run-out error < 2 µm
- Machine structure in electro-welded and detensioned steel
- Linear slideways: N°2 X axis slideways; N°1 Z axis slideway
- Double re-circulating ball bearing slides (three in total), lubricated for life
- Manual mechanical braking of the interchangeable spindle-holder rotation
- Vision-system for tool measuring and inspection
- C-MOS sensor
- Framed image area 6,4 x 6,4 mm
- Magnifications 25X
- Telecentric lens
- Red light episcopic leds illuminator with ring lens, red light diascopic led puntiform illuminator
- Cutting tool inspection mode
- Vertical TFT 15,6" Full HD Touch Screen Monitor
- 3 USB ports and 1 LAN networking port
- Embedded ECN operating system Linux based
- ECN machine software B version (blue 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 for both Z and X axes
- Fixed and Moveable Area of Interest (AOI)
- Automatic spindle rotation and measurement of tool edges
- Adjustable reticles (axis and circles)
- Profile image capture function
- Automatic geometry (1 geometric entity)
- Geometry by points
- Camera image capture
- DXF files import and comparison with tool

Overall dimensions: L = 950mm, H = 1072mm, P = 430mm Net weight: 100 kg