Elbo Controlli NIKKEN
E346BV 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 E346BV 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 E346BV 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.

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.

NIKKEN

TECHNICAL DATA

Measuring range: diameter max 360 mm (radius 180 mm); max height 460 mm

General Features:

- Base and column in natural granite: max linearity error 8 µm/m
- Steel base with 3 fixed and 1 adjustable feet
- Linear guideways (2 X axis, 1 Z axis) with double recirculating ball bearings slides
- Manual gross movement
- Manual fine adjustment
- ECN AS371 certified optical scales (resolution 1µm)
- Vertical TFT 15,6" Touch Screen Monitor
- Interchangeable spindle (ISO,BT,CAT, HSK, Polygonal taper, etc.)
- Pneumatic spindle brake
- Tool holders clamping with VACUUM system (DIN69872, ISO7388, MAS403)
- Manual tool holder clamping (HSK, Polygonal taper)
- Bi-telecentric optical lenses
- Elbo Controlli NIKKEN camera system measuring range (mm) = 7,6 x 7,2 mm
- Monochromatic C-MOS sensor USB 3.0 Super speed connection
- Elbo Controlli NIKKEN camera system resolution = 1 µm
- Elbo Controlli NIKKEN camera system magnification = 25x
- Analogic and digital camera view
- Digital zoom = 4x
- Tool inspection function
- Resizeable camera area
- 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
- Adjustable Area of Interest (AOI)
- Software for manual tool presetting and geometry check
- Adjustable reticles (axis and circles)
- Profile image capture function
- Automatic geometry (1 geometric entity)
- Geometry by points
- Camera image capture
- DXF files import of the tool profile
- USB ports (4)
- LAN connection
- A range of standard post processors

Overall dimensions: L = 958 mm, H = 974 mm, D = 441 mm Net weight: ~ 105 kg