## E460N



NIKKEN



Manual axes movement. Axis unclamping by means of a single pneumatic control system. X and Z axes block management with control maximum speed of translation 2mm/sec.



Micrometric registration of X and Z axes by means of two wheels which are essential for the collimation of the measure both with a fixed target function and in self-collimation.



Interchangeable revolving spindle with mechanical rotation brake.

Two preloaded ball cages allow a concentricity accuracy within 4 µm.



Base and column made of ground granite. The thermal inertia of this material allows the machine to be placed directly in the shop.

Mechanical elements manufactured from stainless steel.





Camera system for measuring and inspection procedures. C-MOS sensor, punctiform and toroidal red light double illuminator. Telecentric optic system with low F/Number.



Large 15" touch screen for the best visualization of the tools and simple management functions to operate the measuring machine.



New electronic control: a powerful fanless PC with Linux operating system for the integrated management of the functions of measurement / inspection tools, machine origins and toolsets. Ease of use thanks to the integrated touch screen.

MECHANICS
ELECTRONICS
OPTICS
SOFTWARE

by

elbo controlli

## **TECHNICAL FEATURES**

- o Measuring range: diameter max 400 mm (radius 200 mm); height max 600 mm.
- o Machine structure in stainless-steel offering high mechanical resistance and long life.
- o Base and column made of natural granite: linearity max error 4 μm/Mt certification with Taylor Hobson res.1 μm/Mt electronic millesimal level.
- o ISO/BT/HSK/VDI ..... etc. Interchangeable rotating spindle-holder (to be specified) max run-out error < 4 μm.
- o Double vault arc prismatic slideways: n°2 X axis slideways, n°1 Z axis slideway.
- o Double re-circulating ball bearing slides, lubricated for life (3) (preloading slides/slideways: P/H class).
- o Manual mechanical braking of the interchangeable spindle-holder rotation.
- o Constant load Archimedean spiral spring (as opposed a mass counter-balance system).
- o Vision-system for tool measuring and cutting inspection including:

  - Magnifications about 30X.
  - Telecentric lens.
  - Doublet lenses at low F/Number in order to eliminate the error of the clearness circle.
  - Episcopic illuminator with ring lens and red leds; diascopic illuminator with red, puntiform light led.
- o Machine operator interface through:
  - TFT 15" colour Touch Screen.
  - Intel Atom D.C. fanless motherboard.
  - UBUNTU LINUX operating system.
  - Data storage on solid state disk SSD.
  - X and Z axes block management with control maximum speed of translation 2mm/sec.
- o Standard software:
  - CNC machine origin management and adapters.
  - Tool list creation and/or single tool.
  - TOOLINGUP to manage:
    - tools set and Post Processor universal generator;
    - magnetic chip code-holders (Balluff for example, hardware not included);
    - multi-cutting tools.
- o ELBO CONTROLLI Linear Transducers in optical glass type SLIDE 371 certified HP laser:
  - Axes resolution: X =1 μm, Z= 1 μm.
- o Anti-dust cover provided for when not in use.
- o Overall dimensions: Length = 1070mm, Height = 1140mm, Depth = 595 mm

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