TOOL PRESETTER

E46L

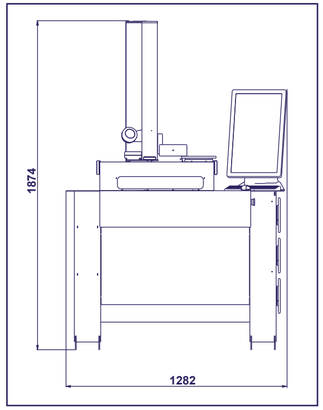


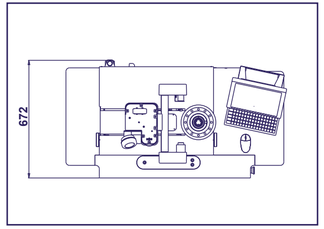
TECHNICAL FEATURES:

- Measuring range: diameter max 400 mm (radius 200 mm); height max 600 mm.
- Machine structure in stainless steel offering high mechanical durability and long life, floor mounted with 3 fixed supports and 1 adjustable support in steel.
- Base and column made of ground granite: linearity max error 2 µm/m certification with Taylor Hobson res.1 µm/m electronic millesimal level.
- ISO/BT/HSK/VDI ..... etc. Interchangeable rotating spindle-holder (to be specified) max run-out error < 2 µm.
- Spindle-holder identification system (SP-ID) with NFC technology to automatically identify the spindle-holder after each replacement.
- Double vault arc prismatic slideways: 2 for X axis slideways, 1 for Z axis slideway.
- Double re-circulating ball bearing slides, lubricated for life (3) (preloading slides/slideways: P/H class).
- Universal mechanical tool clamping managed via software. (ISO/BT tools only).
- Tool-holder taper connection control (run-out test, ISO/BT tools only).
- Pneumatic-mechanic braking of the spindle-holder rotation with radial compensation of the clamping force: no axis angular run error.
- Constant load Archimedean spiral spring (as opposed to a mass counter-balance system).
- Vision-system for tool measuring and cutting inspection consisting of:
  - C-MOS sensor - Framed image area 10 x 10mm. ☑
  - Magnifications 26X
  - Bi-telecentric lens
  - Optical doublets at low F/Number in order to eliminate the error of the clearness circle
  - Red light episcopic leds illuminator with ring lens, red light diascopic led puntiform illuminator
- Machine operator interface through:
  - Full HD LCD 22" colour Touch Screen monitor
  - Intel I3 Quad Core Processor
  - UBUNTU 14.04 LTS LINUX operating system
  - Data storage on solid state disk SSD
  - X and Z axes block management with control maximum speed of translation 2mm/sec.
  - 4 USB ports (keyboard, mouse, Dymo printer and one spare) and 1 LAN port
- Standard software:
  - CNC machine origin management and adapters
  - Tool list creation and/or single tool
  - Automatic change of CNC machine origin allocation
  - Tools set and Post Processor universal generator
  - Magnetic chip code-holders (Balluff for example, hardware not included)
  - Printable tool set report
  - Theoretical measurements and tolerances management
- ELBO CONTROLLI Linear Transducers in optical glass type SLIDE 371 certified HP laser:
  - Axes resolution: X= 1 µm, Z= 1 µm
- Anti-dust cover provided for when not in use.
- Overall dimensions: Length = 1282 mm, Height = 1874 mm, Depth = 672 mm
- Net weight: ~ 255 Kg

OPTIONS:

- Spindle index in four angular positions: 0°-90°-180°-270°.
- C Axis display spindle body and spindle-holder.
- Spindle-holder Identification System (SP-ID) for additional spindle-holder, mounted on the interchangeable spindle.





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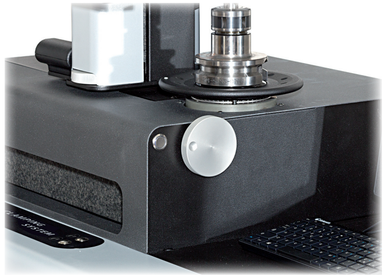
TOOL PRESETTER

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The base and the column, made of ground granite, are increased substantially in size over the previous generation model to guarantee and maintain maximum accuracy. The low coefficient of thermal expansion from this natural material allows the location of the machine directly in the workshop with no issue or concern in respect of accuracy and performance.



Micrometric movement of the axes are made, for the X axis with two wheels on the right and left of the machine, for the Z axis with one placed at the base of the column. This precise micrometric adjustment is indispensable for the final collimation of the cutting edge of the tools.



Great attention has been paid to the size and strength of the machine base which is totally produced from structural steel and is welded with both TIG and continuous welding. This concept allows the whole machine a very high stiffness the result of which guarantees high accuracy and rigidity.



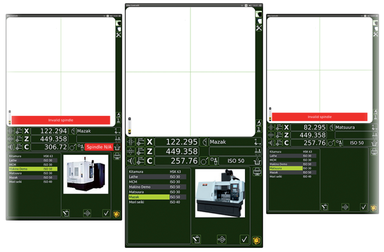
The rotating spindle is interchangeable with cartridges available for all types of machine tapers: HSK, ISO, VDI, BT, CAPTO, etc. ISO/BT spindles feature automatic tool clamping. Within the base, to the right side of the presetter spindle storage is provided for up to six cartridges. To the left also incoporated are practical shelves for additional storage capability.



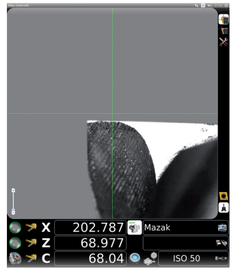
The presetter E46L is equipped with a 22" capacitive touch-screen monitor,mounted vertically for easy viewing. The screen layout and design is split into two distinct sections. The upper half of the display shows visible images of the current tool and profile. The lower half shows and allows access to all the current software functions. The operation is very intuitive and logical to allow the operator to interact with the machine and software without having to attend complex trainings sessions.



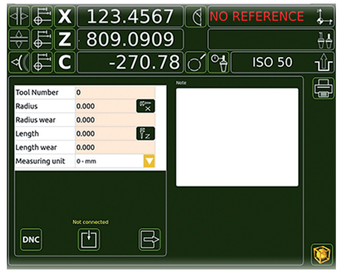
The ergonomic design and location of manual axis movements and controls allow for fatigue-free working. Simultaneous unlocking of both axes is activated by a single button. This operation for locking/unlocking of the axes is pneumatic. Bronze internal sectors act on the screw itself for both axes and have been designed to obtain high-precison fine adjustments.



The new software also includes automatic recognition of the spindle via SP-ID (Spindle Identification System).
This system allows the presetter to identify each spindle cartridge as it is loaded and suggest the correct machine origins, whenever the spindle is changed.



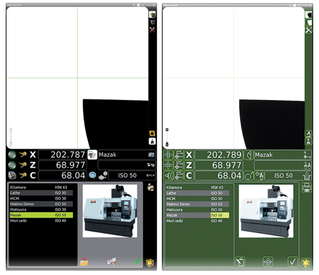
New electronics: a powerful PC running Ubuntu 14,04 LTS for the integrated management and control of the all the functions of measurement/tool inspection, machine origins and tool tables. Ease of use thanks to the integrated touch-screen.



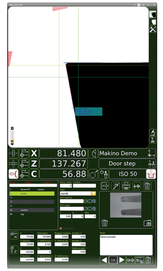
Also included is DNC connection software that allows the transfer of the tool offset data directly into the tool table of the Numerical Control (depending on CNC controller capability).



Fully customizable tool tables to handle all measurements and tool features required of the cutting edge. Capability for individual customization of the printed report.



The new software provided the operator the choice of two different graphical layouts: the first provides icons similar to ISO 7000 and the second allows the familiar 'ELBO CONTROLLI' graphical interface.



Also included for the first time is the capability for multi-measurement directly on the screen. So during tool inspection it is possible to make more than one measurement at a time on the same tool profile.