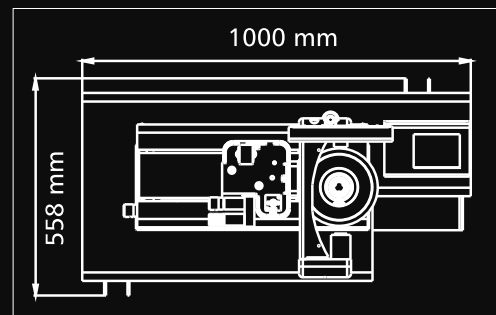
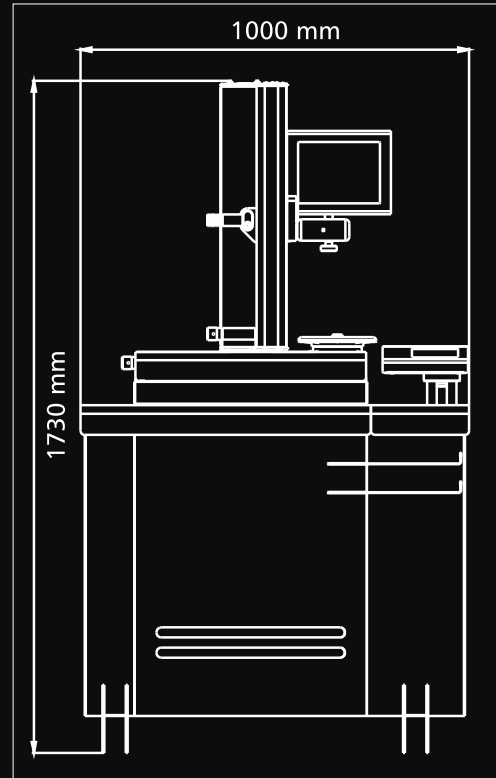


## TECHNICAL FEATURES

- Measuring range: diameter max 400 mm (radius 200 mm); height max 500 mm.
- Machine structure in stainless-steel offering high mechanical and long life, floor mounted with self-levelling supports in non-deformable steel.
- Base and column made of natural granite: linearity max error  $2 \mu\text{m}/\text{Mt}$  certification with Taylor Hobson res.  $1 \mu\text{m}/\text{Mt}$  electronic millesimal level.
- ISO/BT/HSK/VDI ..... etc. Interchangeable rotating spindle-holder (to be specified) max run-out error  $< 2 \mu\text{m}$ .
- Double vault arc prismatic slideways: n°2 X axis slideways, n°1 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.
- Control via software with sensor of empty for the exact position between the tool-holder axis and the machine spindle axis, no error of concentricity.
- 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 a mass counter-balance system).
- Vision-system for tool measuring and cutting inspection including:
  - TFT screen - colours  $\square 212 \times 160 \text{ mm}$ , magnifications about 35X.
  - C-MOS sensor - Framed image area  $6,4 \times 4,8 \text{ mm}$  VGA System.
- Machine operator interface through:
  - TFT 5,7" colour Touch Screen.
  - Technology with FLASH® 32 bit microprocessor.
  - LINUX operating system.
  - Data storage on SD card.
  - X and Z axes block management with control maximum speed of translation 2mm/sec.
- Standard software:
  - CNC machine origin management and adapters.
  - Tool list creation and/or single tool.
  - Automatic change of CNC machine origin allocation.
  - TOOLINGUP to manage:
    - tools set and Post Processor universal generator;
    - magnetic chip code-holders (Balluff for example, hardware not included);
    - multi-cutting tools.
- Optical Equipment:
  - 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; diasopic illuminator with red, puntiform light led.
- ELBO CONTROLLI Linear Transducers in optical glass type SLIDE 371 certified HP laser:
  - Axes resolution: X =  $1 \mu\text{m}$ , Z =  $1 \mu\text{m}$ .
- Anti-dust cover provided for when not in use.
- Overall dimensions: Length = 1000 mm, Height = 1730 mm, Depth = 558 mm



**elbo controllli** 

Via S. Giorgio, 21 - 20036 Meda (MI) - Italy  
Tel. +39.0362.342745 - Fax +39.0362.342741  
info@elbocontrolli.it - www.elbocontrolli.com

SPECIFICATIONS SUBJECT CHANGE WITHOUT PRIOR NOTICE

# Hathor

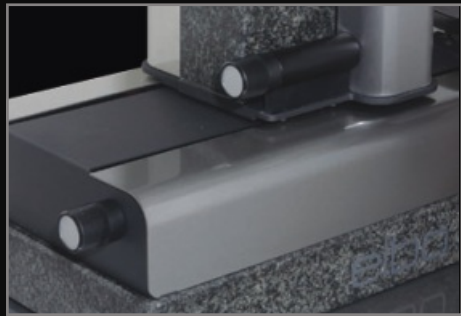


Tool Presetter





Manual axes movement. Axis unclamping by means of a single pneumatic control system. Approach speed controlled via software: 2 mm/sec.



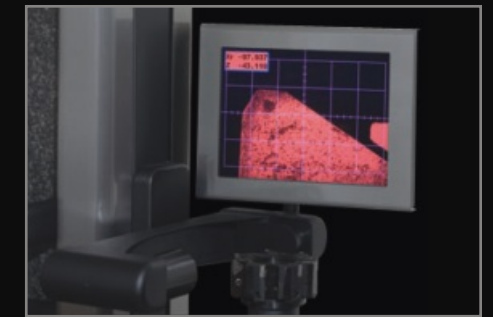
Micrometric registration of X and Z axes by means of two wheels which are essential for the collimation of the measure both with a fixed target function and in self-collimation.



Interchangeable revolving spindle with mechanical rotation brake. Two preloaded ball cages allow a concentricity accuracy within 2  $\mu$ m.



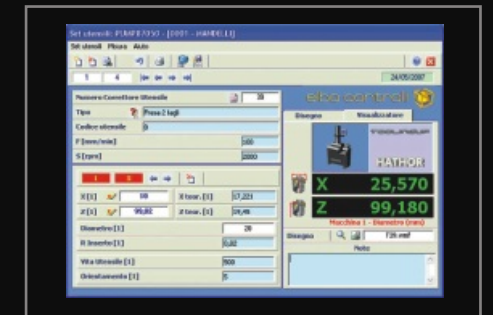
Base and column made of ground granite. The thermal inertia of this material allows the machine to be placed directly in the shop. Mechanical elements manufactured from stainless steel.



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



LCD touch panel display and software on a LINUX platform for a quick and easy operation of the machine and measuring functions.



TOOLINGUP software for post processing and tool table management. An intuitive, flexible and powerful software which allows adapting the format of the measured values to those of a CNC for their subsequent transmission.

MECHANICS  
ELECTRONICS  
OPTICS  
SOFTWARE

by

elbo controllii