

B10/2

Measuring unit
for balancing machines



CEMB

BALANCING MACHINES



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The B10/2 is an unbalance measuring instrument for hard bearing or soft bearing balancing machines, either with vertical or horizontal axis. It is designed to solve the most demanding problems related to measurement and correction of unbalances and can easily be connected to complex systems, PLC or computer networks.



Main features

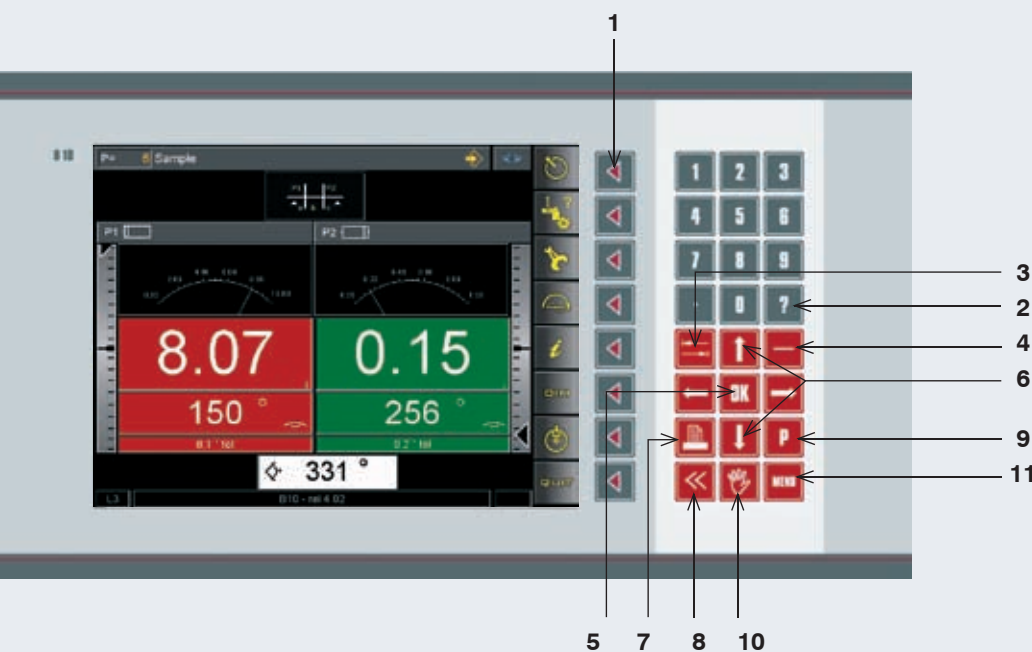
- Easy and intuitive use.
- Reliable in operation with passwords to the various levels (operator, supervisor or technical specialist).
- Expandable with specialized programs which simplify balancing correction (drilling, milling, addition of rivets, etc.).
- Recognition and execution of the main functions through selectable icons.
- Icons can be programmed for frequently used functions.

Hardware characteristics

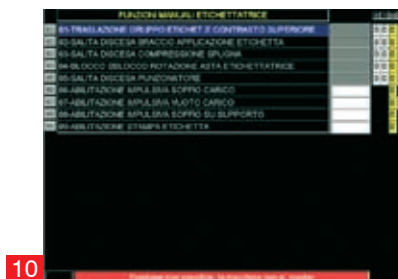
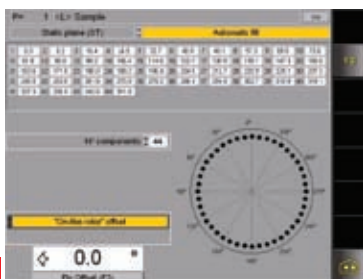
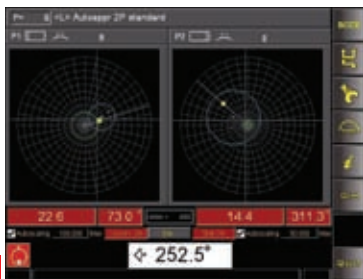
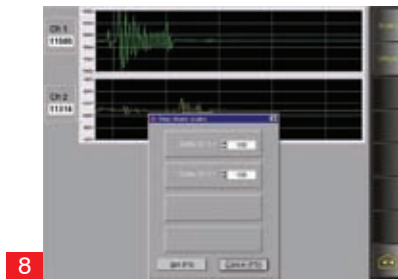
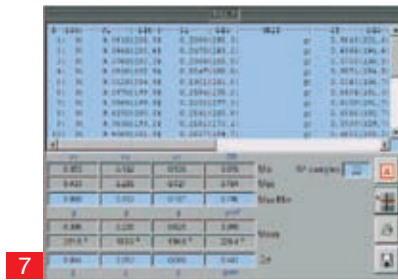
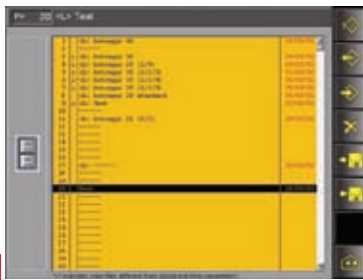
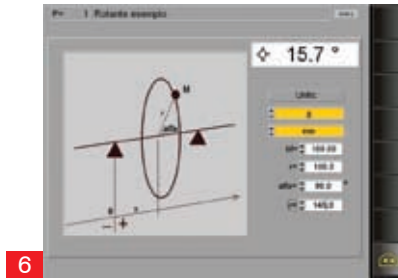
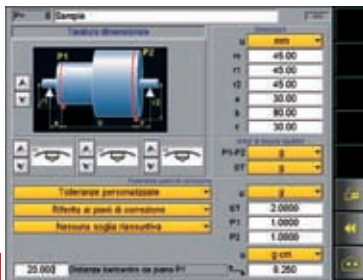
- Digital wattmetric filter connected to an industrial PC bus.
- Electrical interface by means of an opto-insulated board.
- Industrial PC with provision for program back-up.
- Output for printer and 4 USB ports.
- Panel mounted keyboard with 32 key's, alphanumeric push-button strip and mouse to facilitate various functions.
- TFT liquid crystal flat colour screen, backlit, 12"
- Resolution 800 x 600 pixels.
- Windows operating system.
- Possibility of Ethernet interface, field bus interface (ex. Profibus) for connecting to PLC.
- Balancing speed between 70 and 200,000 rpm.
- 2 simultaneous measuring channels as standard (3 or 4 simultaneous channels (optional) for measuring with more pedestals, eccentricity vibration or other)
- CPU fanless.
- No hard disk but DOM (disk on module).

Keyboard

- 1 Direct access keys.
- 2 Simplified path access page.
- 3 [TAB] for moving among parametric fields
- 4 Backspace for deleting previously edited characters.
- 5 [OK] for confirming.
- 6 For editing the field selected (numeric increase or change in submenu option).
- 7 Print.
- 8 Return to previous screen.
- 9 Access to programs folder.
- 10 Access to PLC manual functions panel (optional).
- 11 Access to main menu.



Standard software characteristics



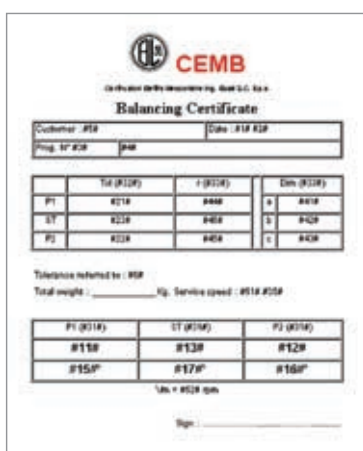
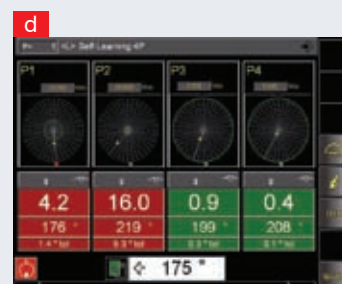
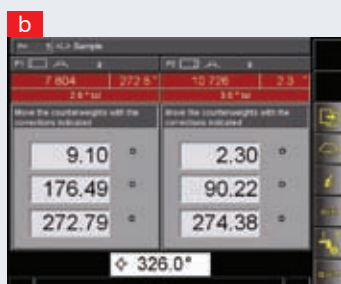
- Calculation of unbalance in dimensional (1) or self-learning calibration mode (2).
- Setting measurement units, including different types for each unbalance reading.
- Setting direct tolerances or according to ISO and API standards, referring to real or fictitious planes.
- 999 balancing programs memory (3) (expandable on request) with quick search database system.
- Indications in digital, analogue or polar form (4) (4a).
- Indication of dynamic, static and couple unbalance.
- Indication of unbalance position with analogue indicator, provided the machine is fitted with an encoder.
- Unbalances indication from 0,0001 g to 200 kg (or equivalent values for any other unit).
- Indication of unbalance position with 0,1° resolution.
- Possibility to split the vectors of unbalance for different correction planes (5) (5a).
- Electronic compensation of mounting fixture eccentricity.
- Electronic compensation of systematic unbalance errors such as keyways etc. (6).
- Indication and storing of values obtained from multiple measurements in order to check rotor deformation or variations during balancing (7).
- Autotest and self-calibration (8).
- Possibility of changing all operating characteristics, for instance more or less selective filtering, motor control, controlled axes, markers, stationary brake, etc...
- Interface with PLC (if used) for manual functions and plant diagnostics (10).
- Diagram amplitude - speed (9).
- Provision for connection to any local or remote printer through Ethernet.
- Management of clockwise and counter clockwise rotation for each rotor type.
- Management of dual transmission (belt and coupling) for each rotor type.
- Management of measurement back up as a text file and insertion of data relevant to the rotor type (e.g. production batch, rotor serial number, etc.)



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Optional software

- Resolution with discrete weights (rivets) and optimization of the unbalance.
- Correction by axial or radial drilling, with re-calculation of the effective centre of gravity position for compensation.
- Correction by contour milling (a).
- Correction by radial milling.
- Correction with 2 or 3 fixed weights and angular displacement (b).
- Rotation speed controlled by the instrument (programmable).
- Automatic indexing with axis drive motor.
- FFT signal analysis.
- Guided standard ISO test and measurement data analysis.
- Statistic program for audit machines or machines with automatic correction (c).
- Measurements on 3 or 4 pedestals at the same time (d).
- Rotor runout measurement by means of specific transducers.
- Measurement possible without making a reference mark.



Print program

Program for printing a customised graphic certificate in HTML format and with the possibility to include graphs or complete measurement screens.

◀ Example of a certificate layout.



Printer features

- Max. dimensions 440 x 405 x 200 (for inserting inside the drawer).
- Black & white / colour, ink jet, paper size A4.



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