



Fan and Electric Fan Impeller Balancing Machines



CIMAT specializes in the production and supply of high-precision balancing machines designed specifically for automotive fan and electric fan impellers.

We offer balancing machines specifically designed for ECFA engine cooling fans and HVAC cabin ventilation fans.

Our specialized balancing machines for ECFA cooling fans and HVAC blowers offer the following features:

- ability to control motors in any standard (PWM, LIN, BLDC, Can),
- automated operation of machines,
- in order to support the worker, rotation sensors are installed, allowing to track on the monitor screen any movement of the fan, left or right after the drive is switched off - the so-called electronic angle scale (live angle),
- designed in accordance with ISO 21940-23: 2012,
- high efficiency and high accuracy due to the latest generation measuring system,
- balancing results are presented in a form convenient for the unbalance correction technologies used, unbalance is converted into clips, up to 5 kinds of clip sizes can be used, e.g. 0.1, 0.2, 0.3, etc. on dedicated fan blades,
- optimization of the number of weights used according to the customer's expected strategy,
- recording of results in the database located in the measuring module of the machine including statistical programs,
- possibility of transferring balancing machine results to an external system,
- an automated, lightweight cover for ease of use,
- automatically connected and disconnected power connectors to the fan,
- barcode readers for selecting calibration of machine settings and for recording balancing parameter for a particular piece or series,
- systems for measuring axial and radial runout in automatic mode,
- measurement of electrical parameters of electric fans,
- cooperation with label printers,
- pick-by-light system,
- fast unbalance cycle measurement time due to electric brake,
- vision system for verification of correct assembly of electric fan components,
- possible communication with the production line (MES).

Balancing machines for fan rotors



CMT-2V2FI

Main features and functionalities

- Measurement of static and moment unbalance,
- Optional measurement of axial and radial runout of the rotor,
- Cover that opens automatically,
- Servo motor drive for rotor positioning the rotor for unbalance correction,
- Dedicated program for unbalance correction in electric fan and fan rotors using optimization of the number of clips (distribution can be done on 3 balancing radiuses on the fan rotor blade). Up to five values of weights can be used.
- Automatic rotor gripping system (CMT-2V2FI)
- Barcode readers for selecting calibration of machine settings and for recording balancing parameter for a particular piece or series,
- Recording of results in the database located in the measuring module of the machine.
- Statistical balancing support programs



CMT- 5ECF \ CMT-5ECF-2S

Main features and functionalities

- Measurement of one and two plane unbalance,
- Possibility of motor control via LIN, PWM, BLDC or voltage,
- Possible communication with line (MES),
- Dedicated program to optimize clip installation,
- Contains label printer, barcode reader and laser to indicate where the clip is to be added,
- Optional measurement of axial and radial rotor runout,
- Dedicated program for unbalance correction in electric fan and fan rotors using optimization of the number of clips (distribution can be done on 3 balancing radiuses-on the fan rotor blade). Up to five values of weights can be used,
- Automatic rotor gripping system,
- External electric brake to reduce fan breaking time,
- Measurement of electrical parameters of the electric fan motor,
- Barcode readers for selecting calibration of machine settings and for recording balancing parameter for a particular piece or series,
- Recording of results in the database located in the measuring module of the machine.
- Statistical balancing support programs.



Balancers for electric fan rotors, car radiator rotors with their own drive and for rotors in frames



CMT-5ECFS-2S

Main features and functionalities

- Measurement of static and torque unbalance,
- One- and two-station balancing machines,
- Optional measurement of axial and radial rotor runout,
- Optional detection of incorrect fan installation,
- Dedicated safety cover depending on machine type (also operating in automatic mode),
- Left and right rotation possible,
- Possibility of motor control via LIN, PWM, BLDC or voltage,
- Dedicated program for unbalance correction in electric fan and fan rotors using optimization of the number of clips (distribution can take place on 3 balancing radii on the fan rotor blade),
- Up to five values of weights can be used.
- Automatic rotor gripping system,
- Automatic system for plugging and unplugging the power socket,
- External electric brake to reduce fan coasting time,
- Measurement of electrical parameters of the electric fan motor.

Balancing machine for rotors of parking heating systems



CMT-5H2EFPH

Main features and functionalities

- Capable of one and two plane balancing,
- Has a special rotor weight correction system (material cutting),
- Automatic rotor locking system on the machine,
- Manual setting of the position of the mass correction tools,
- Automatic rotor gripping system,
- Barcode readers for selecting calibration of machine settings and for recording balancing parameters of a particular piece or series,
- Recording of results in the database located in the machine measurement module including statistical programs,
- To support the worker, rotation sensors are installed, allowing to track on the monitor screen any movement of the fan, left or right after the drive is switched off - the so-called electronic angle scale (live angle),
- Works with label printers.



Radial fan balancing machines



CMT-5EFAC \ CMT-5EFAC-2S

Main features and functionalities

- Measurement of one and two plane unbalance,
- Possibility to control the motor via LIN, PWM, BLDC or voltage,
- Possible communication with the line (MES),
- Dedicated program to optimize clip installation,
- It has a label printer, barcode reader and a laser to indicate where the clip is to be added,
- Optional axial and radial rotor runout measurement,
- Dedicated program for unbalance correction in electric fan and fan rotors using optimization of the number of clips (distribution can be done on 3 balancing radiuses on the fan rotor blade). Up to five weights values can be used,
- Automatic rotor gripping system,
- External electric brake to reduce fan breaking time,
- Measurement of electrical parameters of the electric fan motor,
- Barcode readers for selecting calibration of machine settings and for recording balancing parameters of a particular piece or series,
- Recording of results in the database located in the machine measurement module including statistical programs.





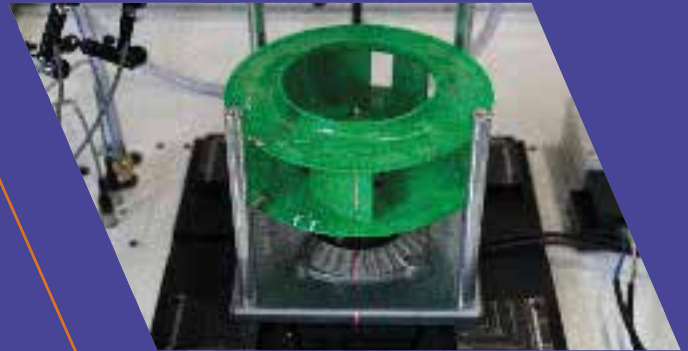
CMT-5H2EFAC / CMT-15H2EFAC / CMT-30H2EFAC

Main features and functionalities

- One and two plane balancing,
- Laser to indicate where the clip is added,
- Left and right rotations possible,
- Possibility to control the motor via LIN, PWM, BLDC or voltage,
- Optional label printer,
- Barcode reader,
- Non-contact "live angle" measurement system,
- Blade detection and blade count measurement,
- Dedicated program for unbalance correction of blower fan in a assembly with the ability to add up to five predefined weights.



Balancing machines for air handling units and electric fans in assembly with motor



CMT-15EF / CMT-30EF / CMT-75EF

Main features and functionalities

- Machines designed for air handling units and electric fans (assembly of motor plus fan),
- Mounting of the assembly through a pneumatic jaw chuck,
- Left and right rotation can be measured,
- Manual opening of workspace cover
- Pneumatic braking system to reduce breaking time,
- Dedicated program for unbalance correction in electric fan and fan rotors using optimization of the number of clips (distribution can take place on 3 balancing radiuses on the fan rotor blade). Up to five values of weights can be used.



Balancing machines for electric fans of air handling units with housings



CMT-700H2EF

Main features and functionalities

- High load capacity of the machine, up to 700 kg,
- Ability to measure left and right rotation,
- One and two plane balancing,
- Possibility of mounting flange motors in special frames.



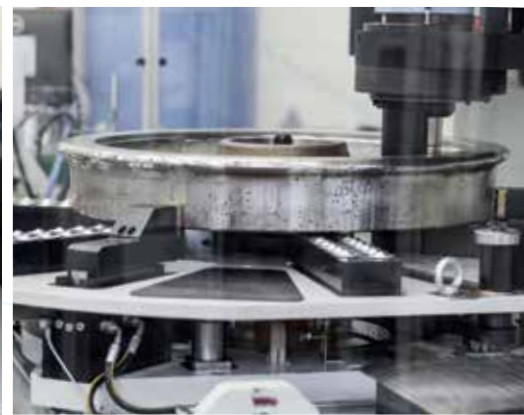
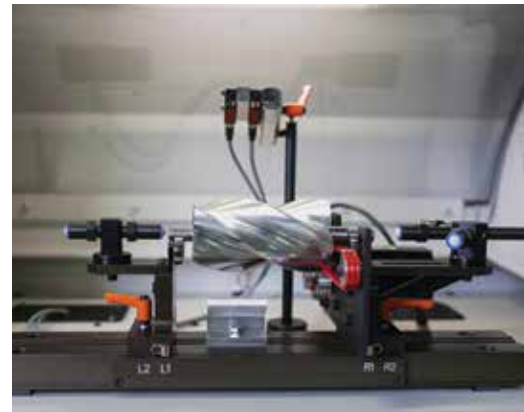
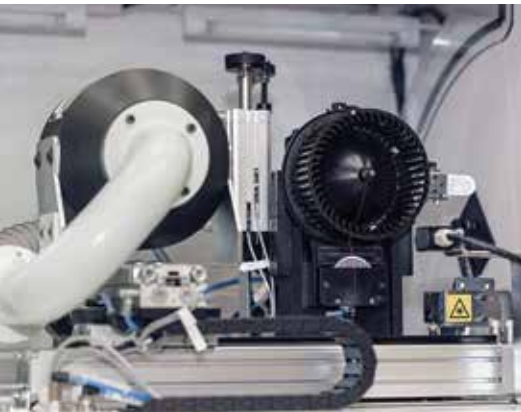
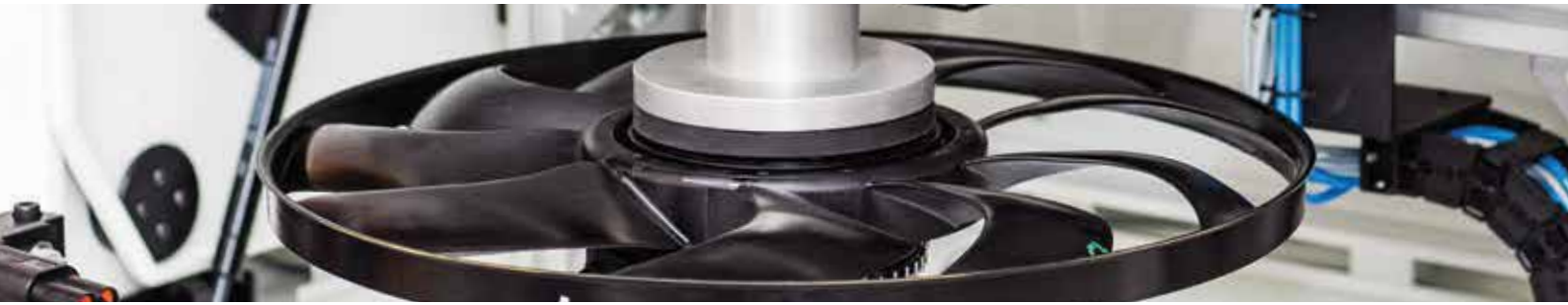
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