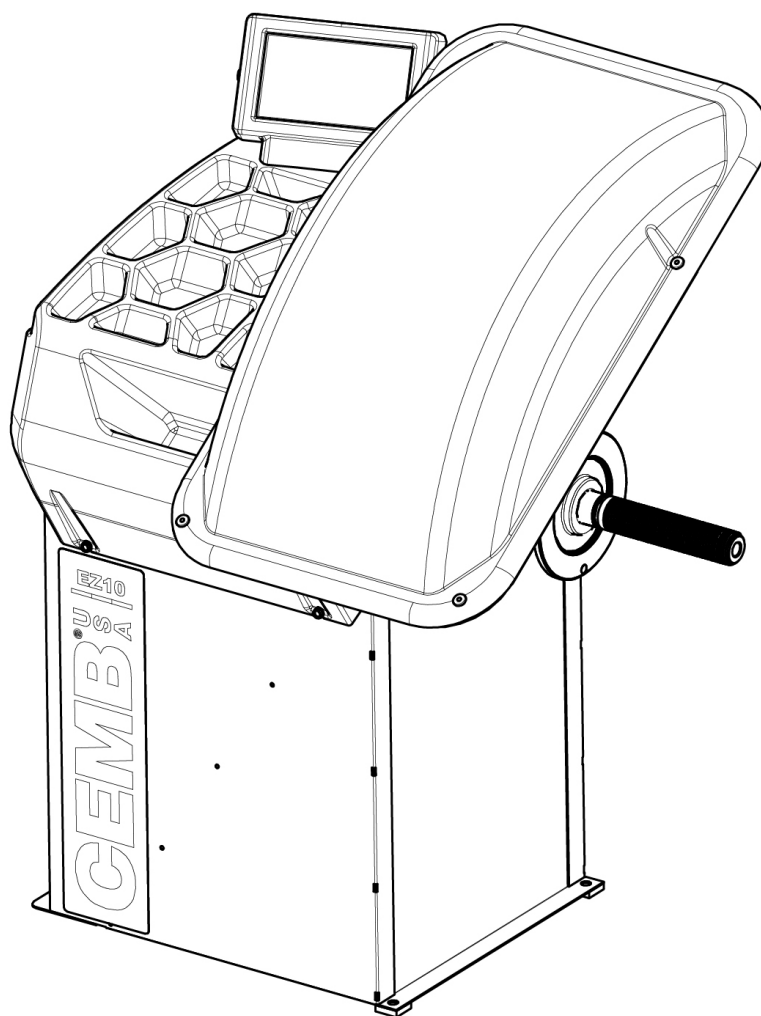


EN *Use and maintenance manual*



EZ10

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The Manufacturer declines all liability for any damage to people or property caused by incorrect use of this product.
Subject to change without prior notice.



Istruzioni originali

Translation of the original instructions

Traduction de la notice originale

Übersetzung der Originalanweisungen

Traducción de las instrucciones originales

Tradução das instruções originais



ENGLISH



EN

Use and maintenance manual

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1. Foreword



THIS MANUAL IS AN INTEGRAL PART OF THE INSTALLATION MANUAL WHICH SHOULD BE CONSULTED CONCERNING STARTING AND USING THE MACHINE SAFELY.
READ CAREFULLY BEFORE CONTINUING.

1.1 GENERAL

The machine has been constructed in conformity with the current EC Directives and the technical standards implementing the requirements, as stated in the declaration of conformity issued by the manufacturer and attached to the manual.

This publication, hereinafter simply referred to as '**manual**', contains all the information required to safely use and service the machine referred to in the Declaration of Conformity.

This appliance, hereinafter is generically referred to as '**machine**'.

The manual addresses operators instructed on the precautions to take in relation to the presence of electric current and moving devices.

This publication is intended for all 'users' who as far as within their competence need to and/or are obliged to give instructions to others or operate on the machine themselves.

These persons can be identified as follows:

- operators directly involved in transporting, storing, installing, using and servicing the machine from when it is put on the market until when it is scrapped
- direct private users.

The original Italian text of this publication constitutes the only reference to resolve any interpretation controversies related to the translation into the European Community languages.

This publication forms an integral part of the machine and must therefore be kept for future reference until final dismantling and scrapping of the machine.

1.2 PURPOSE OF THE MANUAL

This manual, and the installation manual, contains the instructions required to use the machine safely and carry out routine maintenance work.

Any calibrations, adjustments and extraordinary maintenance operations are not considered in this document as they may only be performed by the service engineer who must work on the machine according to the technical and rated characteristics for which it was built.

Though it is fundamental to read this manual, it cannot replace skilled technical staff who must be adequately trained beforehand.

The foreseen use and configurations of the machine are the only ones allowed by the manufacturer; do not attempt to use the machine in a different way.

Any other use or configuration must be agreed in advance with the manufacturer in writing and in this case an annex will be attached to this manual.

For use, the user must also comply with the specific workplace legislation in force in the country where the machine is installed.

The manual also refers to laws, directives, etc., that the user must know and consult in order to accomplish the goals that the manual sets out to achieve.

1.3 WHERE AND HOW TO KEEP THE MANUAL

This manual (and relative attachments) must be kept in a safe and dry place and must always be available for consultation.

Make a copy and keep it in the archive.

When exchanging information with the manufacturer or the technical assistance staff authorised by the former, quote the rating plate information and the serial number of the machine.

This manual must be kept for the entire lifetime of the machine, and if necessary (e.g.: damage making all or some of it illegible, etc.) the user must request another copy exclusively from the manufacturer, quoting the publication code indicated on the cover.

1.4 MANUAL UPGRADES

This manual is an integral part of the machine and reflects the state of the art at the moment it was put on the market. The publication complies with the directives in force on that date; the manual cannot be considered inadequate as a result of regulatory updates or modifications to the machine.

Any manual upgrades that the manufacturer may see fit to send to users will become an integral part of the manual and must be kept together with it.

1.5 COLLABORATION WITH USERS

The manufacturer will be pleased to provide its customers with any further information they may require and will consider proposals for improving this manual in order to more fully satisfy the requirements it was written for.

In case of transfer of ownership of the machine, which must always be accompanied by the use and maintenance manual, the original user must inform the manufacturer of the name and address of the new user in order to allow it to send the new user any communications and/or updates deemed to be indispensable.

This publication is the property of the Manufacturer and may not be fully or partly reproduced without prior written agreement.

1.6 MANUFACTURER

The machine identification data is indicated on the plate mounted on the machine.

The plate below is shown for the sake of example.

MODEL		VER	
SER. N°			
☒ V		CE	KW
☒ A			Hz
PHASE	1	T° [C]	
AIR SUPPLY Kg/cm²			

1.7 MANUFACTURER'S RESPONSIBILITY AND WARRANTY

In order to make use of the manufacturer's warranty, the user must scrupulously observe the precautions contained in the manual, in particular he must:

- never exceed the limits of use of the machine
- always constantly and carefully clean and service the machine
- have the machine used by people of proven capacity and attitude, adequately trained for the purpose.

The manufacturer declines all direct and indirect liability caused by:

- use of the machine in a different way from that indicated in this manual
- use of the machine by people who have not read and fully understood the contents of this manual
- use in breach of specific regulations in force in the country of installation
- modifications made to the machine, software and operating logic, unless authorised by the manufacturer in writing
- unauthorised repairs
- exceptional events.

Transfer of the machine to a third party must also include this manual; failure to include the manual automatically invalidates all the rights of the purchaser, including the terms of warranty, where applicable.

If the machine is transferred to a third party in a country with a different language from the one written in this manual, the original user shall provide a faithful translation of this manual in the language of country in which the machine will operate.

1.7.1 Terms of warranty

The Manufacturer guarantees the machines it manufactures against all manufacturing or assembly faults for 12 (twelve) months from the date of collection or delivery.

The Manufacturer undertakes to replace or repair any part which it deems to be faulty free of charge at its factory, carriage paid.

If a Manufacturer's repairman (or a person authorised by the same) is required to work at the user's facilities, the relative travel expenses and board and lodging shall be charged to the user.

The free supply of parts under warranty is always subject to the faulty part being inspected by the manufacturer (or a person authorised by the same).

The warranty is not extended following repairs or other work done to the machine.

The warranty does not cover damage to the machine deriving from:

- transport
- neglect
- improper use and/or use not in compliance with the instructions in the operating manual
- incorrect electrical connections.

The warranty is invalidated in case of:

- repairs made by people who were not authorised by the manufacturer
- modifications that were not authorised by the manufacturer
- use of parts and/or equipment that were not supplied or approved by the manufacturer
- removal or alteration of the machine identification plate.

1.8 TECHNICAL ASSISTANCE SERVICE

For any technical service operation, contact the manufacturer directly or an authorised dealer always quoting the model, the version and the serial number of the machine.

1.9 COPYRIGHT

The information contained in this manual may not be disclosed to third parties. Partial or total duplication, unless authorised by the Manufacturer in writing, through photocopying, duplication or other systems, including electronic acquisition, is breach of copyright and can lead to prosecution.

2. Machine description

It is used to balance the wheels of cars, vans, 4-WD, motorcycles and scooters. The wheels must weigh less than 75 kg. and, when fitted on the balancing machine, must not interfere with any fixed part of the machine, excluding the shaft and support adaptor. The machine is supplied with equipment enabling the vast majority of car wheels available on the market to be fitted. Other wheels with special dimensions, geometry and centring require special adaptors supplied on request (consult the attached sheet **"ORIGINAL ADAPTORS"**). The machine can operate only on flat non resilient floor.

Do not mount anything other than motorbike, car or truck tyres on the wheel balancer.

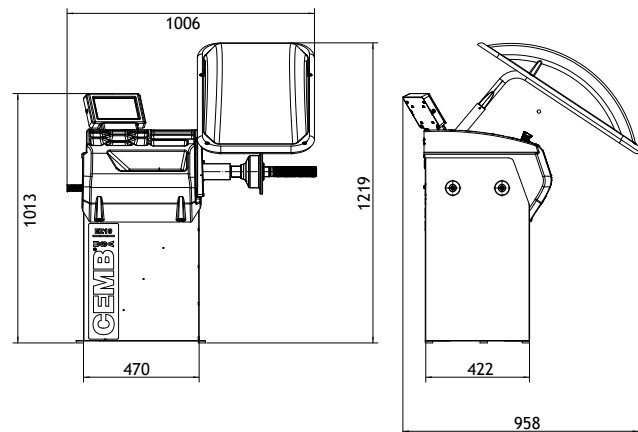
Thanks to the new and exclusive VDD (Virtual Direct Drive) system, reliable unbalance measurements can be made in a short time, almost half the time of the cycle used with respect to other balancers in this range.

2.1 TECHNICAL SPECIFICATIONS

The following data refers to the balancer in its standard configuration.

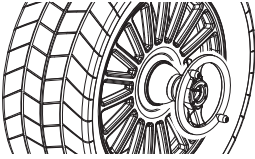
Single-phase power supply	115 / 230 V 50/60 Hz
Protection class	IP 54
Rated power	0,15 kW
Balancing speed	100 min ⁻¹
Cycle time for wheel	4.7 s (5 3/4"x14") 15 kg
Measurement uncertainty	1 g
Average noise	< 70 dB (A)
Rim width setting range	1.5" ÷ 20" or 40 ÷ 510 mm
Diameter setting range	10" ÷ 30" or 265 ÷ 765 mm
Maximum wheel weight	< 75 kg
Machine weight	110 kg

2.2 DIMENSIONS



2.3 COMPONENTS

TOUCH CONTROL PANEL		✓
WEIGHT-TOOL HOLDER		✓
AUTOMATIC GAUGE		✓

LOCK NUT		✓
WHEEL GUARD		✓

3. Starting

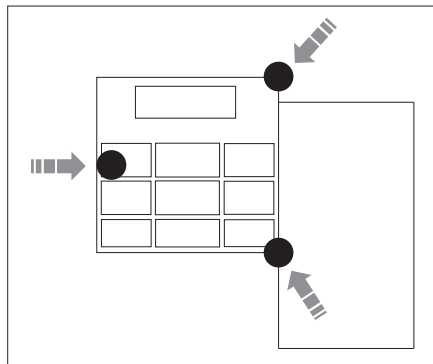


BEFORE SWITCHING ON THE MACHINE, MAKE SURE THAT ALL THE CONNECTIONS DESCRIBED IN THE INSTALLATION CHAPTER HAVE BEEN MADE CORRECTLY.

THE FOLLOWING OPERATIONS INVOLVE A POTENTIAL RISK FOR THE OPERATOR, GIVEN THE PRESENCE OF VOLTAGE ON THE EQUIPMENT. THE PERSONAL PROTECTIVE EQUIPMENT DESCRIBED IN THE INSTALLATION MANUAL MUST BE WORN AND WORK MUST BE DONE WITH DUE CARE AND ATTENTION. OPERATIONS MAY ONLY BE PERFORMED BY A SPECIALISED TECHNICIAN.

Before powering the machine, carry out the following checks:

1. Check that the balancing machine touches the floor at the three support points.

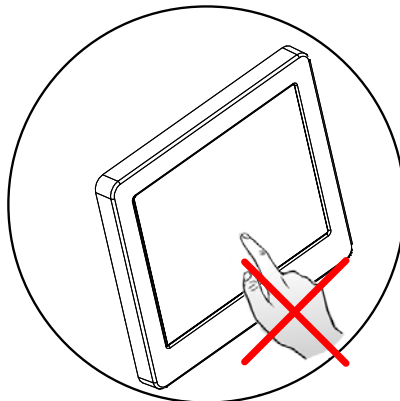


2. Make sure that all the parts of the balancer are correctly connected and fixed.
3. Make sure that the parameters (voltage and frequency) of the mains power supply are compatible with those indicated on the rating plate of the balancer.
4. Make sure the power cable is correctly connected.
5. Make sure the machine shaft and flange hole are clean.



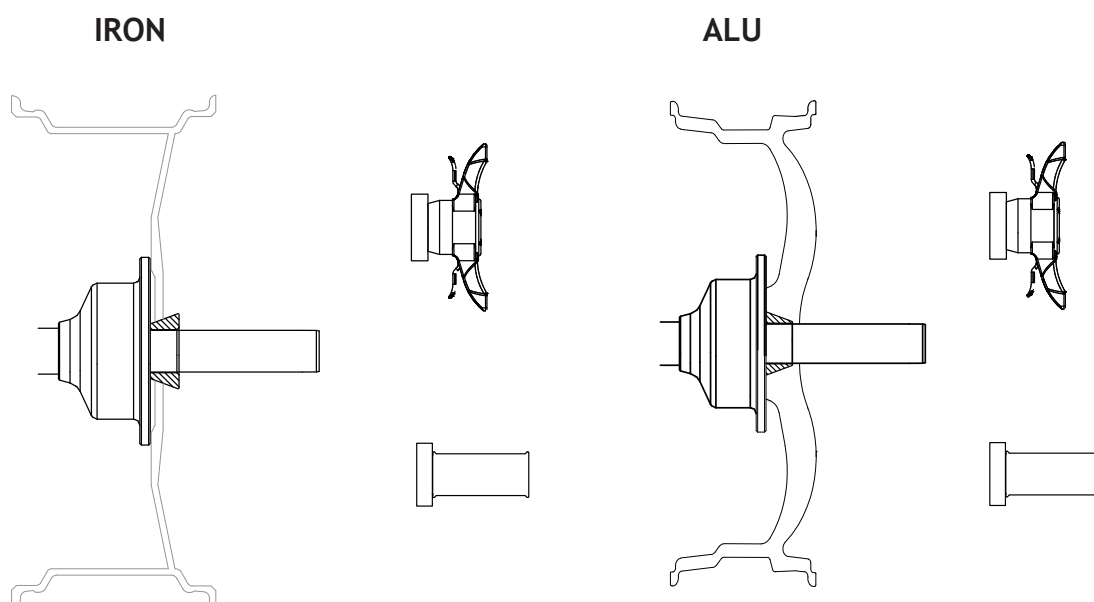
ANY TRACES OF DIRT MAY AFFECT BALANCING ACCURACY.

6. To turn on the wheel balancer press the switch on the side or back of the same; for the models with touchscreen don't touch the screen.



PRESS THE BUTTONS WITH YOUR FINGERS. NEVER USE THE COUNTERWEIGHT GRIPPERS OR OTHER POINTED OBJECTS!

7. Position the wheel on the terminal with the inner part facing the balancer.



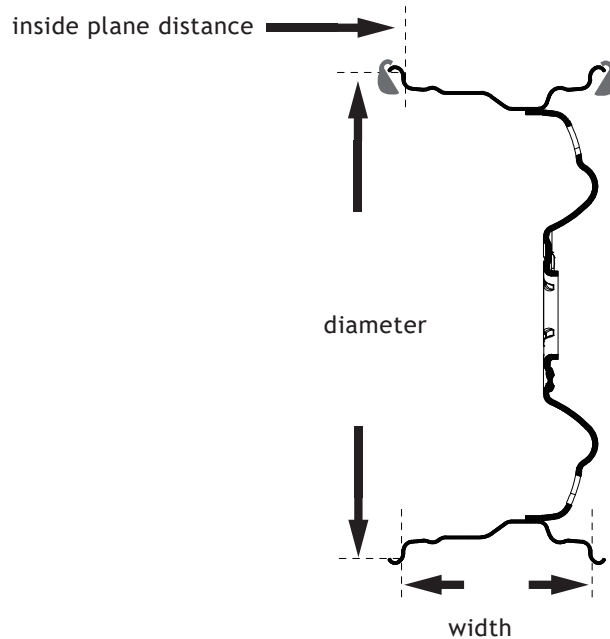
8. Firmly attach the wheel to the balancer shaft using the lock nut. In the pneumatic version, use the specific collar provided. For operation of the spindle with pneumatic locking (constant thrust air spring) connect the wheel balancer to the compressed air mains. The connection fitting is located at the back of the machine. At least 7 kg/cm^2 ($\sim 0.7 \text{ MPa}$; $\sim 7 \text{ bar}$; $\sim 105 \text{ psi}$) pressure is needed for correct operation of the release device.
9. In the pneumatic version, the pedal allows fastening/releasing the wheel on the adapter using the collar.
10. At this point, you can read the tyre measurements and perform balancing.
11. To perform the spin, lower the splash guard, when fitted and, if necessary and available, press the START button.
12. The wheel is automatically locked when reaching the correct angular position for weight application on the inside and outside, turning it slowly by hand. To unlock the wheel, turn it hard to move it from the correct correction position. If the unbalance is within tolerance, the wheel is locked automatically.



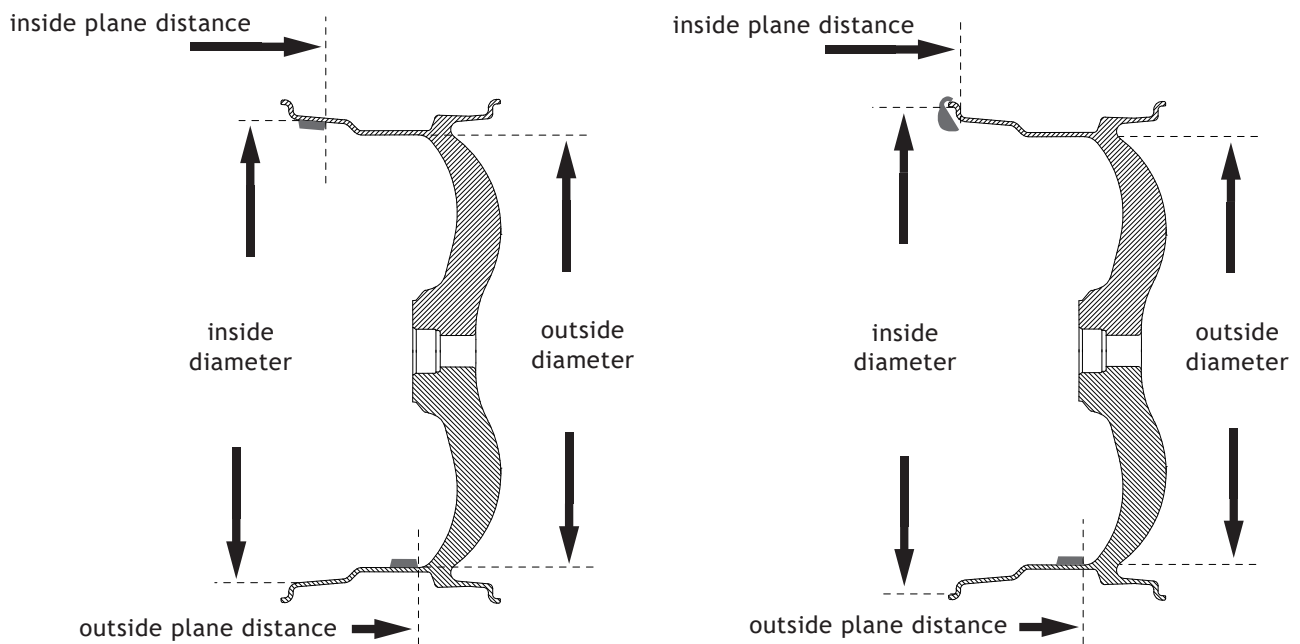
IT IS PROHIBITED TO TOUCH ANY PART OF THE MACHINE DURING THE BALANCING CYCLE.

4. Correction plane identification

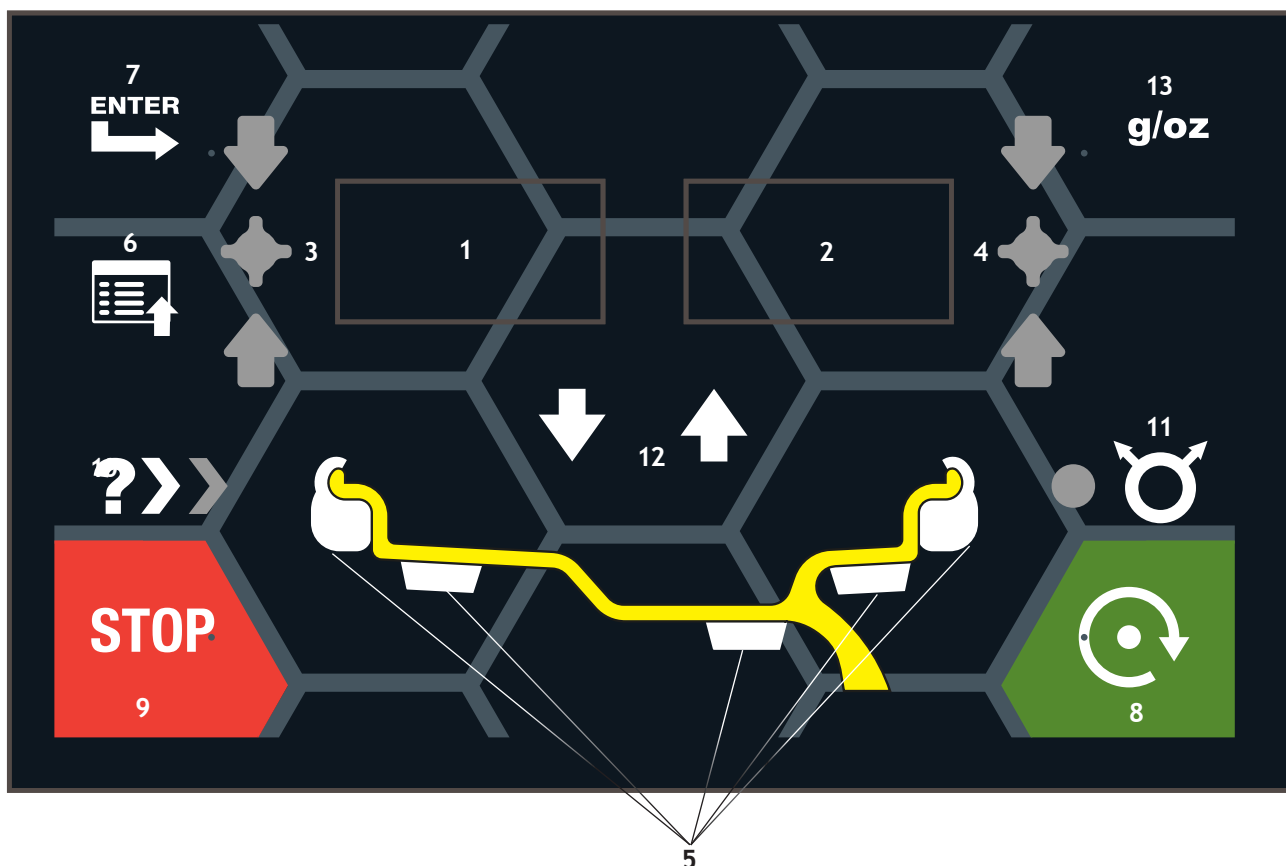
- Standard dynamic balancing using only clip-on weights:



- Standard dynamic balancing using adhesive weights or a mix of adhesive and clip-on weights:



5. Control panel



- | | |
|-----|--|
| 1-2 | Digital readouts, AMOUNT OF UNBALANCE, inside/outside/static
Push button, unbalance reading below the threshold |
| 3-4 | Digital readouts, POSITION OF UNBALANCE, inside/outside/static |
| 5 | Push button, selection of correction mode |
| 6 | Push button, FUNCTIONS MENU |
| 7 | Push button, menu selection confirmation |
| 8 | Push button, cycle start |
| 9 | Push button, emergency/home |
| 10 | Push button, position repeater |
| 11 | Push button, SPLIT (hidden weight) |
| 12 | Manual width setting buttons |
| 13 | Push button, g/oz measuring unit selection |



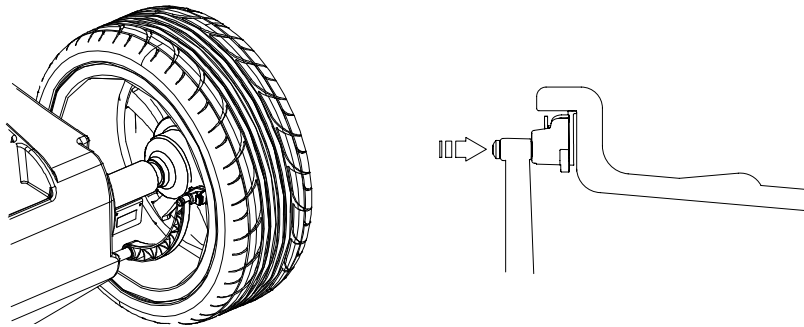
PRESS THE BUTTONS WITH YOUR FINGERS. NEVER USE THE COUNTERWEIGHT GRIPPERS OR OTHER POINTED OBJECTS!
IF THE ACOUSTIC SIGNAL IS ENABLED, PRESSING OF ANY PUSH BUTTON IS ACCOMPANIED BY A “BEEP”.

6. Use of the wheel balancer

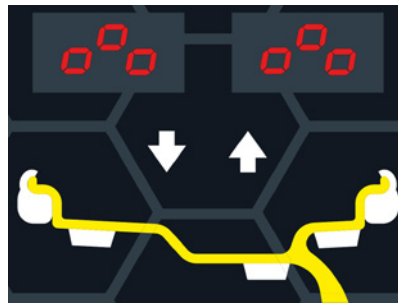
6.1 STANDARD BALANCING (clip-on counterweights)

6.1.1 Wheel dimensions setting

Using the special grip, move the end of gauge against the rim as shown in the figure:



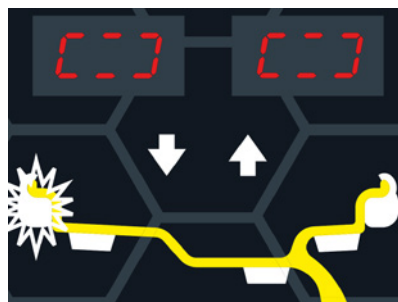
While the gauge is moving the following appears:



Hold the gauge in position for at least 2 seconds.

If the acoustic signal is enabled (👉 MENU - ACOUSTIC SIGNAL), the acquisition of the dimensions is accompanied by a “beep”.

Measurement stored:



Set the distance and diameter gauge to the rest position.

The balancing machine automatically interprets the presence of a rim with clip-on weight correction:



In the standard machine setting as VIRTUAL SONAR (AWA and AUTOADAPTIVE enabled), at the end of the automatic distance and diameter measurement, perform a measuring spin.

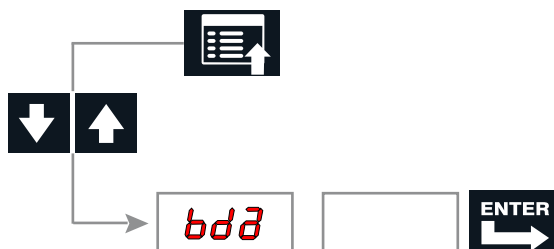
In the case of particular rims, the wheel balancer may ask you to set the tyre width value in mm.



Set the width value shown on the tyre and proceed with balancing the wheel.

If the wheel dimensions have been entered incorrectly, the parameters can be modified without repeating the balancing spin:

1. Press:



2. Set the value of the dimensions in sequence:

b=width
d=diameter
a=distance

using the buttons   .

3. Press the button  to confirm the setting and go to the next dimension.

Press the button  at any time to interrupt dimension setting and return to the main screen.

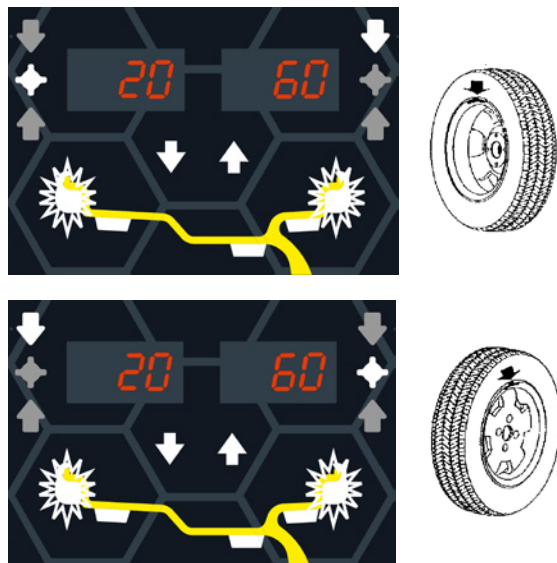
6.1.2 Result of the measurement and weight application

If the unbalance is out of tolerance:

1. When the spin is complete, bring the unbalance into correction position by turning the wheel by hand. The spindle is automatically locked in correction position (if not disabled the wheel lock and for rotation speeds less than 20 rpm).

If the acoustic signal is enabled (🔊 MENU - ACOUSTIC SIGNAL), a beep will sound when the correction position has been reached.

2. The symbol  is shown on the display 3/4 on the side corresponding to the active correction plane.



3. Manually apply the number of weights shown on the display on the rim at 12 o'clock using clip-on weights:



IF THE OUT-OF-BALANCE IS LESS THAN THE CHOSEN THRESHOLD VALUE, "📄" APPEARS INSTEAD OF THE OUT-OF-BALANCE VALUE TO INDICATE, ON THAT PARTICULAR SIDE, THAT THE WHEEL IS IN TOLERANCE.

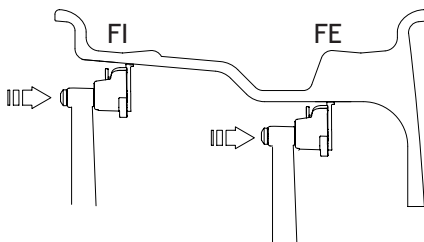
IF AUTOADAPTIVE IS DISABLED, PRESS IN CORRESPONDENCE TO THE UNBALANCE INDICATORS TO VIEW THE RESIDUAL UNBALANCE BELOW THE CHOSED TOLERANCE THRESHOLD.

4. After applying the weights, spin the wheel to check the correction made checking that both planes are within tolerance.

6.2 BALANCING WITH ADHESIVE WEIGHTS (ALU)

6.2.1 Wheel dimensions setting

Using the dedicated grip, move the gauge tip up against the inside of the rim and make two consecutive measurements starting from the inside (FI) as shown in the figure. The two preselected positions coincide with the point where the counterweight is to be applied.



If the acoustic signal is enabled (👉 MENU - ACOUSTIC SIGNAL), the acquisition of the dimensions is accompanied by a “beep”.

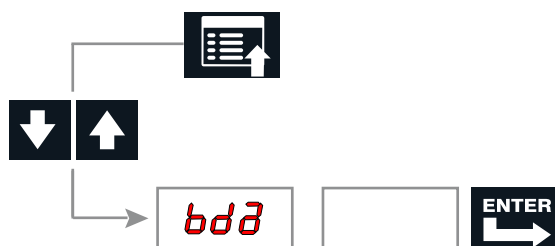
Set the gauge to the rest position.

The balancing machine automatically interprets the presence of a rim with adhesive weight correction:



If the wheel dimensions have been entered incorrectly, the parameters can be modified without repeating the balancing spin:

1. Press:



2. Set the value of the dimensions in sequence:

dI=inside weight distance

dE=outside weight distance

aI=inside weight distance

aE=outside weight distance

b=width (only with AUTOADAPTIVE enabled)

using the buttons  .

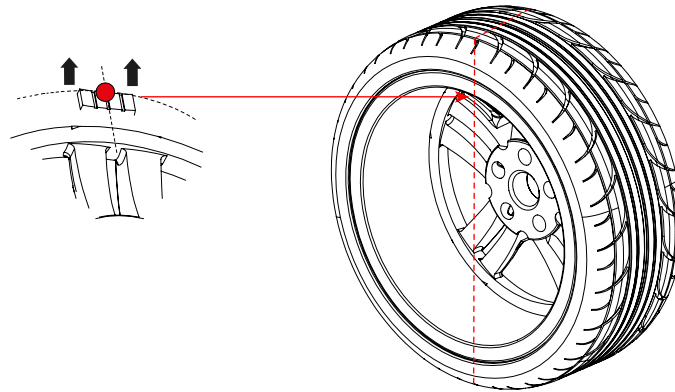
3. Press the button  to confirm the setting and go to the next dimension.

Press the button  at any time to interrupt dimension setting and return to the main screen.

6.2.2 Result of the measurement and weight application

If the unbalance is out of tolerance:

1. When the spin is complete, bring the unbalance into correction position by turning the wheel by hand.
The spindle is automatically locked in correction position (if not disabled the wheel lock and for rotation speeds less than 20 rpm)
If the acoustic signal is enabled (👉 **MENU - ACOUSTIC SIGNAL**), a beep will sound when the correction position has been reached.
2. The symbol  is shown on the display 3/4 on the side corresponding to the active correction plane
3. Manually apply on the rim, at 12 o'clock, the amount of weight shown on the display, by using adhesive weights:



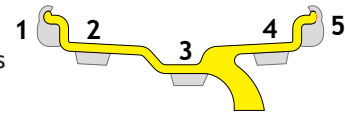
IF THE OUT-OF-BALANCE IS LESS THAN THE CHOSEN THRESHOLD VALUE, "0" APPEARS INSTEAD OF THE OUT-OF-BALANCE VALUE TO INDICATE, ON THAT PARTICULAR SIDE, THAT THE WHEEL IS IN TOLERANCE.

IF AUTOADAPTIVE IS DISABLED, PRESS IN CORRESPONDENCE TO THE UNBALANCE INDICATORS TO VIEW THE RESIDUAL UNBALANCE BELOW THE CHOSED TOLERANCE THRESHOLD.

4. After applying the weights, spin the wheel to check the correction made checking that both planes are within tolerance.

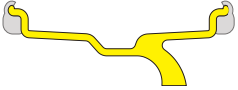
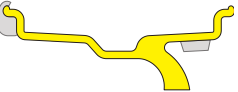
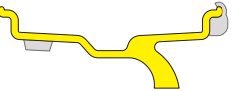
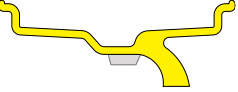
6.3 BALANCING WITH A MIX OF ADHESIVE AND CLIP-ON WEIGHTS AND STATIC BALANCING

After dimension acquisition in standard balancing mode, pressing the buttons

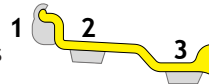


, you

can select one of the following correction modes.

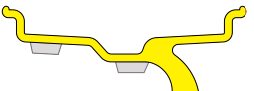
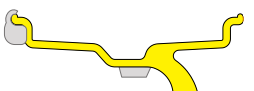
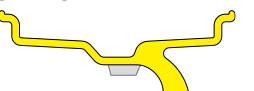
 WEIGHT APPLICATION POSITION		
Correction type	Inside	Outside
	Clip-on weight at 12 o'clock	Clip-on weight at 12 o'clock
	Clip-on weight at 12 o'clock	Adhesive weight at 12 o'clock
	Adhesive weight at 12 o'clock	Clip-on weight at 12 o'clock
	Adhesive weight at 12 o'clock	Adhesive weight at 12 o'clock
STATIC 	Adhesive weight at 12 o'clock	

After dimension acquisition in ALU mode, pressing the buttons



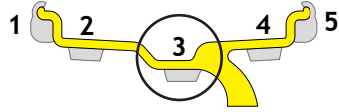
, you can select one of the fol-

lowing correction modes. The adhesive weight application distance and diameter are measured by means of the automatic gauge, except for the static unbalance where the dimensions acquired are modified following some fixed parameters.

 WEIGHT APPLICATION POSITION		
Correction type	Inside	Outside
	Adhesive weight at 12 o'clock	Adhesive weight at 12 o'clock
	Clip-on weight at 12 o'clock	Adhesive weight at 12 o'clock
STATIC 	Adhesive weight at 12 o'clock	

6.4 STATIC UNBALANCE

The static unbalance is shown on display 1 and the relative correction position on the LED display 3

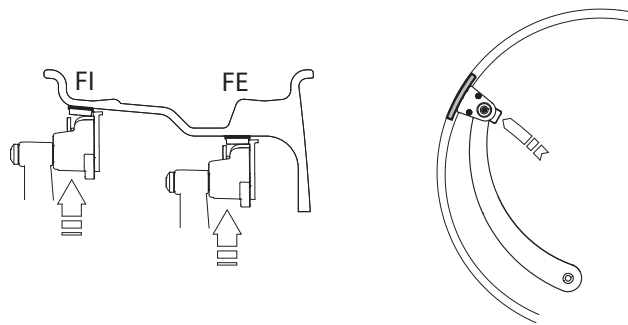


. The correction weight application diameter cannot be set, but is deduced from the

dimensions acquired in standard or ALU mode through interpolation algorithms and the use of fixed parameters. Tolerance control is the same as for standard balancing, only that it refers to a single correction plane.

6.5 EXACT POSITIONING OF THE ADHESIVE WEIGHT BY MEANS OF THE GAUGE WITH CLIPS

- Press  if using the correction method with adhesive weights on the inside of the rim



- Fit the correction weight in the specific gauge seat with the adhesive part facing upwards
- Bring the wheel into correct angular position for the plane to be corrected
- If the wheel clamp option is enabled ( **MENU**) the wheel is automatically clamped in the correction position.
- Pull out the gauge until the leds 5 light up next to the correction weight.
If the buzzer is enabled ( **MENU**), the attainment of the weight application distance is accompanied by a beep.

- INSIDE CORRECTION POSITION



- OUTSIDE CORRECTION POSITION



- Rotate the gauge until the correction weight adheres to the rim
- The fact that the weight application position is no longer vertical is automatically compensated.

To cancel the function, press the  button again.

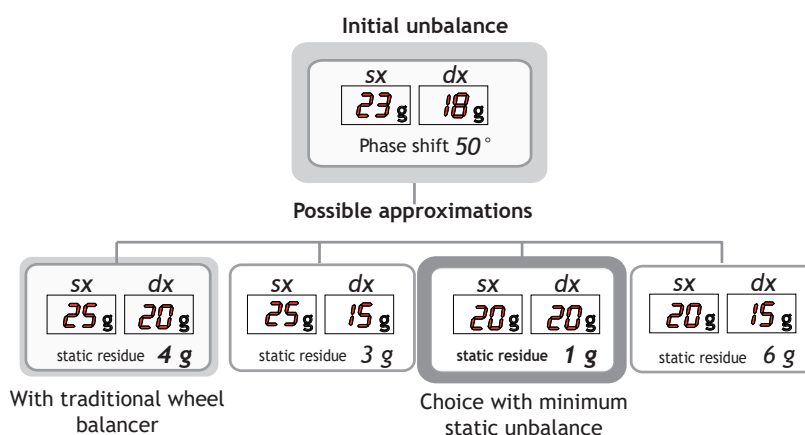
6.6 HIDE THE ADHESIVE WEIGHTS (SPLIT)

SPLIT is only possible in the event of static unbalance or ALU external side and is used to hide any adhesive weights correcting unbalance behind the rim spokes.

1. Perform an unbalance measurement spin.
2. Position the static unbalance or outside ALU in the correction position .
3. Bring one of the spoke at 12 o'clock and press .
4. Turn the wheel in the unbalance rotation direction indicated on the display until the second spoke is at 12 o'clock and press the  button.
5. Turn the wheel to the correction positions indicated by the LEDs and correct the value displayed.

To return to the normal unbalance indication press .

6.7 AUTOMATIC MINIMIZATION OF STATIC UNBALANCE



This program is designed to improve the quality of balancing without any mental effort or loss of time by the operator. In fact by using the normal commercially available weights, with pitch of 5 in every 5 g, and by applying the two counterweights which a conventional wheel balancer rounds to the nearest value, there could be a residual static unbalance of up to 4 g. The damage of such approximation is emphasized by the fact that static unbalance is cause of most of disturbances on the vehicle. This new function, resident in the machine, automatically indicates the optimum entity of the weights to be applied by approximating them in an “intelligent” way according to their position in order to minimize residual static unbalance.

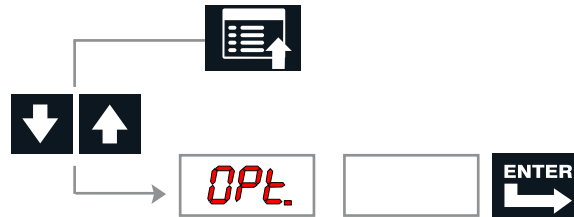
6.8 AUTOADAPTIVE CORRECTION METHOD

The innovative tolerance calculation system AutoAdaptive Mode is based on the evaluation of the residual imbalance limit value corresponding to an acceptable perceived vibration. For each wheel that is balanced, the software AutoAdaptive Mode detects weight and dimensions and calculates the tolerance value that will cancel any vibration perceived on the steering wheel. AutoAdaptive Mode grants the highest comfort when driving.

6.9 UNBALANCE OPTIMIZATION

The program allows total wheel out-of-balance to be reduced by compensating, when possible, tyre and rim out-of-balance values. It is suitable for static unbalance values in excess of 30 grams. It requires two runs, rotating the tyre on the rim on the second run.

1. Press:



If no unbalance was measured before, START appears on the display. Press this button to proceed.



Close the guard (and press the button  if start from the guard is disabled,  MENU) to perform a spin.

2. Make a reference mark on the flange and the rim (using a piece of chalk, for example). With the aid of a tyre remover, turn the tyre on the rim by 180°. Refit the wheel in such a way that the reference marks on the rim and the flange coincide.

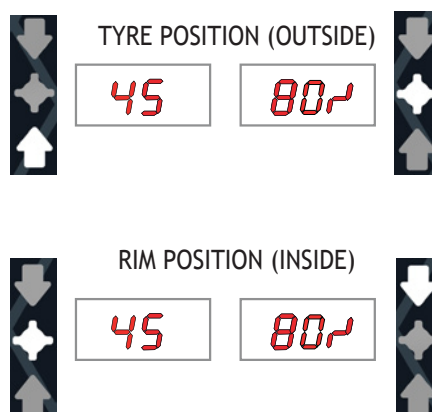


Close the guard (and press the button  if start from the guard is disabled,  MENU) to perform a spin.

3. RH display: percentage reduction value
LH display: actual static unbalance value which can be reduced by rotation



4. Mark the two positions of the rim and tyre, and turn the tyre on the rim until the positions coincide to achieve the optimisation shown on the display



When optimisation is complete, perform a new spin or press  to return to the measurement screen.

7. Setup

7.1 MENU ACCESS DIAGRAM

This is used to personalise some balancer functions and to perform calibrations.

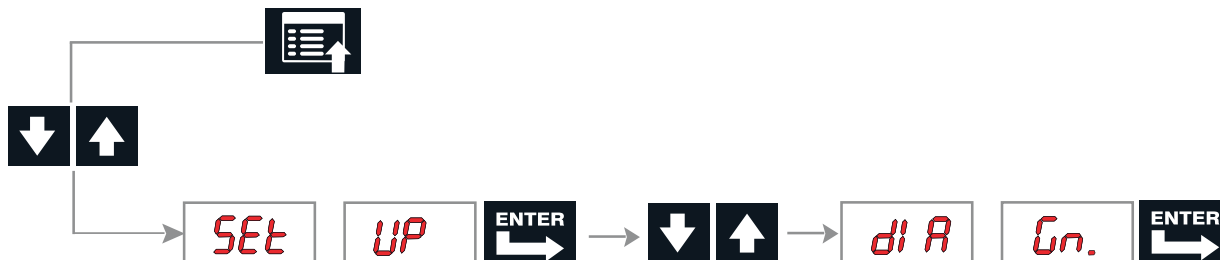
To access this section, press the  button.



7.2 SELF-DIAGNOSTICS

The machine can perform self-diagnostics to check the LED's on the control panel and make sure the encoder reads correctly.

To perform this operation, view the SETUP menu.



In the self-diagnostics sequence, all the LED's on the panel light up for a few seconds in order to check operation. When the LED's go out, the machine automatically moves on to the encoder reading phase. When the wheel is turned manually (forwards and backwards), the display shows its exact position. The value lies between 0 (zero) and 255. *(Consult the extraordinary maintenance manual or contact Technical Service).*

7.3 BALANCING MACHINE CALIBRATION

To calibrate the balancing machine, use a wheel with steel rim of average dimensions, e.g. 6" x 15" (± 1 ").

To properly perform the procedure:

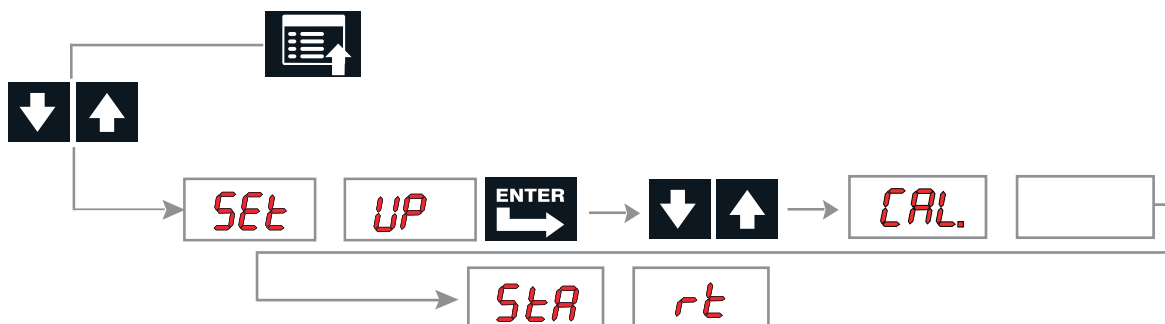
- Mount a wheel on the machine, even unbalanced, and very carefully set its dimensions.



SETTING INCORRECT MEASUREMENTS WILL RESULT IN THE MACHINE NOT BEING CORRECTLY CALIBRATED, AND BALANCING OF SUBSEQUENT WHEELS WILL HENCE BE INCORRECT UNTIL THE MACHINE IS RECALIBRATED WITH THE CORRECT MEASUREMENTS!!

IF ERR. 241 OCCURS, MANUALLY SET THE WIDTH VALUE BEFORE ACCESSING THE WHEEL BALANCER AUTOCALIBRATION FUNCTION.

1. Display the CALIBRATION function from the SETUP menu



Close the guard and press the  button to perform a spin.

2. Add a standard weight of 60 g (2.00 oz) to the outer side, in any position (failing a weight of 60g (2.00 oz) press   to change the calibration weight).

Add. · 60

Close the guard and press the  button to perform a spin.

3. Shift the standard weight from the outside to the inside keeping the same position.

60 Add.

Close the guard and press the  button to perform a spin.

4. Turn the wheel until the standard weight is at the top (12 o'clock) and press .



5. Turn the wheel until the sample weight is in correspondence to the centre-line of the weight clip and press



Pressing the button  a default value is set.

CALIBRATION COMPLETE

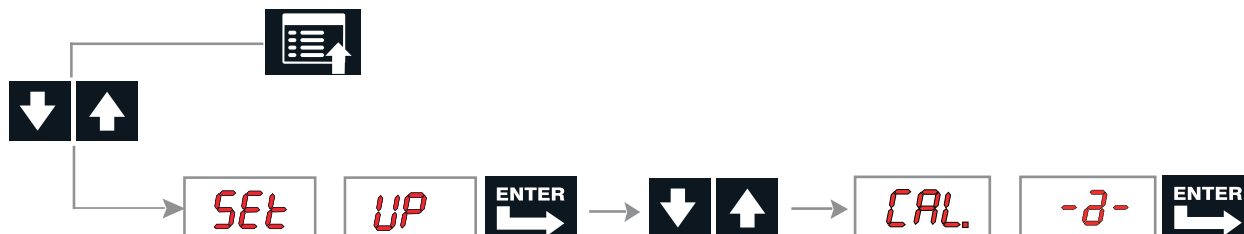


To cancel calibration at any time, press .

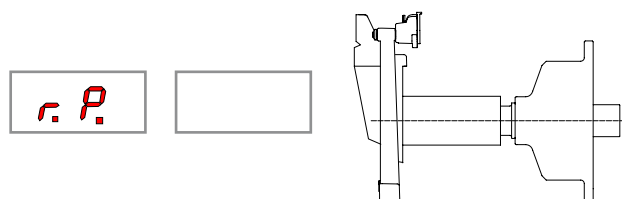
7.4 AUTOMATIC GAUGES CALIBRATION

7.4.1 Distance gauge calibration

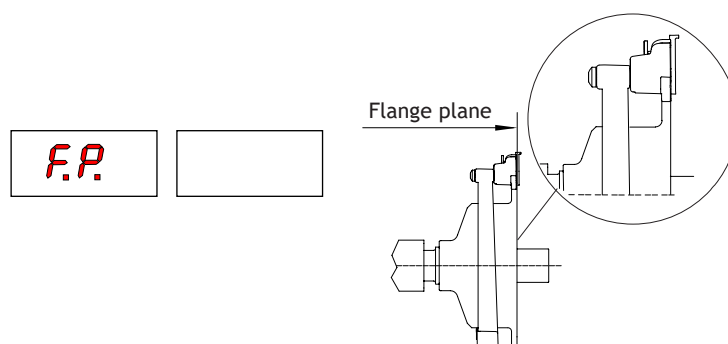
1. Display the distance gauge CALIBRATION function from the SETUP menu



2. Leave the distance gauge in rest position and press .



3. Move the distance gauge pusher in line with the adapter surface and press .



CALIBRATION COMPLETE

- Return the gauge to rest position.
- The wheel balancer is ready for operation.

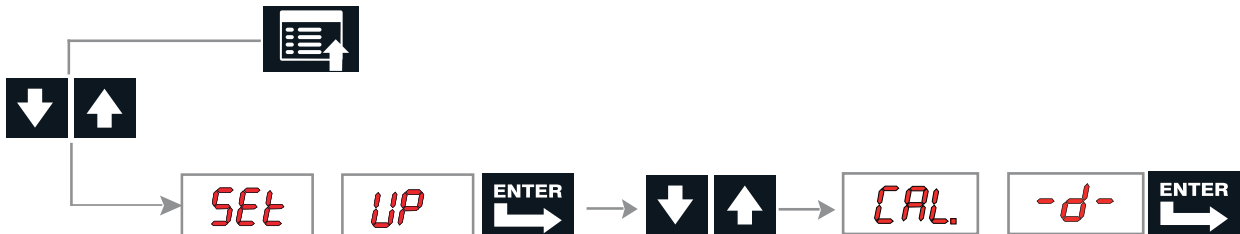


IN THE EVENT OF ERRORS OR FAULTY OPERATION, THE WRITING "R.P.": APPEARS ON THE DISPLAY : SHIFT THE GAUGE TO THE REST POSITION AND REPEAT THE CALIBRATION OPERATION EXACTLY AS DESCRIBED ABOVE. IF THE ERROR PERSISTS, CONTACT THE TECHNICAL

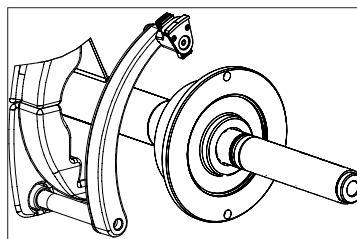
SERVICE DEPARTMENT. IN THE EVENT OF INCORRECT INPUT IN THE RIM DISTANCE GAUGE CALIBRATION FUNCTION, PRESS **STOP** TO CANCEL IT.

7.4.2 Diameter gauge calibration

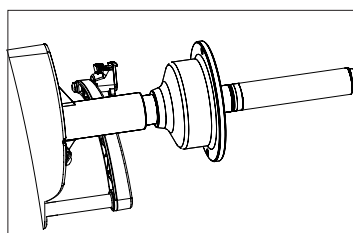
- Display the diameter gauge CALIBRATION function from the SETUP menu



- Place the gauge rod on the spindle shell as shown in the figure and press



- Turn the gauge downward positioning the gauge rod in contact with the spindle sleeve as shown in the figure and press



CALIBRATION COMPLETE

- Return the gauge to rest position.
- The wheel balancer is ready for operation.



IN CASE OF ERRORS OR MALFUNCTIONS, THE INDICATION OF THE SAME STEP [P.1] OR [P2], ALWAYS REAPPEARS ON THE DISPLAY. MOVE THE GAUGE BACK INTO REST POSITION AND REPEAT THE CALIBRATION OPERATION AS DESCRIBED ABOVE; IF THE ERROR PERSISTS, CONTACT TECHNICAL SERVICE.

IF ERRONEOUSLY ACCESSING THE DIAMETER GAUGE CALIBRATION FUNCTION, PRESS **STOP** TO CANCEL IT.

7.5 ADHESIVE WEIGHT WIDTH

Indicates the average width of the adhesive weights on the market.

Change ONLY if the width of the adhesive weights used for unbalance correction differ +/- 3 mm with respect to that shown on the display (default=19mm).

8. Diagnostics

8.1 INCONSISTENT UNBALANCE READINGS

In some cases, when a wheel that has just been balanced is repositioned on the balancer, the machine can detect an unbalance.

This is not a machine problem but is due to faulty mounting of the wheel on the flange. In other words, when mounting the wheel after initial balancing, it has taken another position with respect to the balancer shaft axis.

If the wheel has been mounted on the flange with screws, the screws may not have been tightened correctly (criss-cross sequence) or the tolerances of the holes drilled in the wheel may be too large. Small errors, up to 10 grams (0.4 oz), are to be considered normal in wheels locked with the relative cone: The error is normally greater for wheels locked with screws or studs.

If, after balancing, the wheel is still unbalanced when refitted on the vehicle, this could be due to an unbalanced brake drum or, very often, the tolerances of the holes drilled in the rim and drum are too large. In this case, balancing should be performed using a balancer with the wheel mounted on the vehicle.

8.2 ALARM SIGNAL

The machine has a self-diagnostics cycle which identifies the most frequent malfunctions during the normal work cycle. These malfunctions are processed by the system and shown on the display.



THE INFORMATION IN THE POSSIBLE REMEDY COLUMN REQUIRES WORK TO BE PERFORMED BY SPECIALIST TECHNICIANS OR OTHER AUTHORISED PEOPLE WHO MUST ALWAYS WORK USING THE PERSONAL PROTECTIVE EQUIPMENT INDICATED IN THE INSTALLATION MANUAL. IN SOME CASES, THIS WORK CAN BE PERFORMED BY A NORMAL OPERATOR.

ERROR	PROBLEM	POSSIBLE SOLUTIONS
Black	The wheel balancer does not switch on	- Verify correct connection to the mains - Verify and eventually replace the fuses on the power card - Verify monitor function - Replace the computer board
Err. 1	No rotation signal	- Check in self-diagnostics that the encoder functions properly - Replace the phase pick-up board - Replace the computer board
Err. 2	Speed too low during detection During the unbalance measurement revolutions, the wheel speed has fallen to below 42 rpm	- Make sure that a vehicle wheel is mounted on the wheel balancer - Use the self-diagnostics function to check the encoder - Disconnect the piezo connectors from the board and do a spin (if no error is detected, replace the piezo sensors) - Replace the CPU board
Err. 3	Unbalance too high	- Verify wheel dimension settings - Check detection unit connections - Perform machine calibration - Mount a wheel with more or less known unbalance (less than 100 grammes) and verify the response of the machine - Replace the computer board
Err. 4	Rotation in opposite direction After pressing [START], the wheel starts turning in the opposite direction (anticlockwise)	- Check in self-diagnostics that the encoder functions properly - Check the bearing/spring of the phase generator
Err. 5	Guard open	- Reset the error - Close the guard - Verify the function of the protection Switch
Err. 7/ Err. 8/ Err. 9	NOVRAM parameter read error	- Switch off the machine and wait for at least ~ 1 min.; re-start the machine and check it works properly - Repeat machine calibration - Replace the computer board

Err. 11	Speed too high error During unbalance measurement rotation, wheel speed is more than 270 rpm	- Check in self-diagnostics that the encoder functions properly - Replace the computer board
Err.14 / Err.15 / Err.16 / Err.17 / Err.18 / Err.19	Unbalance measurement error	- Check in self-diagnostics that the encoder functions properly - Check detection unit connections - Verify machine earth/ground connection - Mount a wheel with more or less known unbalance (less than 100 g) and verify the response of the machine - Replace the computer board
Err. 20	Wheel still. The wheel must remain still for more than one second after START	- Use the self-diagnostics function to check the encoder - Check the connections on the power board - Replace the computer board
Err. 21	Motor on for more than 15 seconds	- Use the self-diagnostics function to check the encoder - Check the connections on the power board - Replace the computer board
Err. 24	Distance between the spokes less than 18 degrees	- The minimum distance between the spokes where the unbalance is to be split must be greater than 18 degrees - Repeat the SPLIT function increasing the distance between the spokes
Err. 25	Distance between the spokes greater than 120 degrees	- The maximum distance between the spokes where the unbalance is to be split must be less than 120 degrees - Repeat the split function increasing the distance between the spokes
Err. 26	First spoke too far from the unbalance	- The maximum distance between the unbalance position and the spoke must be less than 120 degrees - Repeat the split function increasing the distance between the spokes and the unbalance
Err.230÷238	Operating touch monitor errors	- Restart the balancing machine - Calibrate the touch monitor - Check touch monitor connections - Replace the touch monitor
Err. 240	Machine setting error	Execute the initialization function
Err. 241	Estimated width dimension	Manually set the correct rim width value before calibrating the machine
Unbalance incorrect with back centring cones	Mount the wheel in vertical position and push the sleeve up against the wheel. If necessary, repeat locking/unlocking/locking and perform the procedure again	Mount the wheel in vertical position and push the sleeve up against the wheel. If necessary, repeat locking/unlocking/locking and perform the procedure again.

9. Maintenance

9.1 GENERAL



BEFORE PERFORMING ANY MAINTENANCE OPERATIONS, MAKE SURE THE MACHINE HAS BEEN DISCONNECTED FROM THE MAINS POWER SUPPLY. ALWAYS USE THE PERSONAL PROTECTIVE EQUIPMENT INDICATED IN THE INSTALLATION MANUAL.

9.1.1 Introductory notes

This machine has been designed so as not to require routine maintenance, apart from accurate periodic cleaning. It is important to keep the machine perfectly clean in order to prevent dust or impurities from compromising the operation of the balancer.



THE PEOPLE RESPONSIBLE FOR CLEANING THE AREA WHERE THE MACHINE IS INSTALLED MUST WEAR PERSONAL PROTECTIVE EQUIPMENT IN ORDER TO WORK IN SAFETY AND ACCORDING TO THE CURRENT OCCUPATIONAL HEALTH AND SAFETY REGULATIONS. IN ANY EVENT, THE MAINTENANCE MUST BE CARRIED OUT EXCLUSIVELY BY A SPECIALISED TECHNICIAN TRAINED TO OPERATE ACCORDING TO CEI EN 50110-1 (NFPA70E-2004 SECTION 400.11).

As extraordinary maintenance must be performed by service staff or, in any case, by specifically authorised and trained people, is not dealt with in this manual.

9.1.2 Safety rules

Performing specialist activities on the equipment, particularly if the guards need to be dismantled, exposes people to serious danger due to the presence of potentially live parts.

The rules shown below must be scrupulously followed.

People must always use the Personal Protective Equipment indicated in the Installation Manual. During activities, unauthorised people may not access the equipment and WORK IN PROGRESS signs will be erected in the department in such a way that they are visible from every place of access.

Specialist staff must be authorised and especially trained concerning the dangers that may arise during operation and the correct methods for avoiding them.

They must always work with great care and pay full attention.

If, exceptionally, the staff removes the guards to carry out a particular specialist technical maintenance, inspection or repair job, they are required to put them back after work.

After work, staff must make sure that foreign objects, in particular mechanical pieces, tools or devices used during the operative procedure that could cause damage or malfunctions are not left inside the balancer.

For safety, before starting work, maintenance, inspection and repair staff must disconnect all power sources and take all the necessary preventive safety measures.

As well as operating frequencies, the operations described below indicate the qualifications that staff must possess in order to perform the operation.

9.1.3 Replacing fuses

Some protection fuses are located on the power board (see wiring diagrams) accessible by dismantling the weight shelf). If fuses require replacement, use ones with an identical current intensity.

9.1.4 Cleaning the screen

Use a soft cloth and NON-ABRASIVE commercial glass/plastic cleaning spray or ethanol or natural detergents.

DO NOT USE:

- Organic solvents type nitro thinner
- Turpentine
- Petrol
- Trichloroethylene
- Acetone

10. Disposal



THE INSTRUCTIONS IN THIS CHAPTER ARE INDICATIVE. REFER TO THE REGULATIONS IN FORCE IN THE COUNTRY WHERE THE EQUIPMENT IS USED.

10.1 DISPOSING OF THE BALANCER

The balancer must be disposed of after dismantling the various parts.

For disposal operations, as well as wearing the Personal Protective Equipment indicated in the INSTALLATION MANUAL, refer to the instructions and diagrams in this manual. If necessary, request specific information from the manufacturer.

Once you have removed the various parts and components, separate them into the different types of materials according to the differentiated waste disposal regulations in force in the country where the machine is dismantled.

If the various components must be stored before being taken to the dump, make sure to keep them in a safe place protected from atmospheric agents in order to prevent them from contaminating the ground and the water table.

10.2 DISPOSING OF ELECTRONICS COMPONENTS



Community directive 2002/96/EC, assimilated in Italy with legislative decree n° 151 of 25th July 2005, requires electrical and electronic equipment manufacturers and users to comply with a number of obligations concerning the collection, treatment, recovery and disposal of this waste.

Please scrupulously comply with these waste disposal regulations.

Remember that abusive dumping of this waste leads to the application of the administrative penalties established by current law.

11. Spare parts

11.1 IDENTIFICATION AND ORDERING METHOD

The various parts can be identified using the exploded drawings, the electrical drawings and diagrams in the machine technical file which is archived by the Manufacturer to which a request can be made.

For off-the-shelf parts, the technical manuals or the supplier's original documents can be provided if the Manufacturer deems this to be useful.

If not supplied, this documentation is also included in the machine Technical File, archived by the Manufacturer, as regards by Ministerial Decree 2006/42/CE.

In this case, contact the Technical Service to identify the required piece.

If the required pieces are not in any position or they cannot be identified, contact the Technical Service, specifying the type of machine, its serial number and year of construction.

This information is indicated on the machine identification plate.

12. Attached documentation

If not supplied, this documentation is included in the Technical File of the machine, archived by the Manufacturer.

In this case, contact the Technical Service for detailed information concerning the machine.