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1 - GENERAL

1.1 - GENERAL SAFETY REGULATIONS

- The machine should only be used by authorized and suitably trained personnel.
- Do not use the machine for purposes other than those specified in this manual.
- The machine should not be modified in any way except for those modifications explicitly carried out by the Manufacturer.
- Never remove the safety devices. Any work on the machine should only be carried out by specialist personnel.
- Avoid using strong jets of compressed air for cleaning.
- Use alcohol to clean the plastic panel or shelves (AVOID LIQUIDS CONTAINING SOLVENTS).
- Before starting the wheel balancing cycle, make sure that the wheel is securely locked on the adapter.
- The machine operator should avoid wearing clothes with flapping edges. Make sure that unauthorized personnel do not approach the machine during the work cycle.
- Avoid placing objects inside the base as they could impair the correct operation of the machine.

1.1.1 - STANDARD SAFETY DEVICES

- Low rotation speed
- Stop key that stops the motor when an emergency arises.
- Highly shock resistant plastic guard whose shape and size are designed to avoid the danger of counterweights spinning off in any direction except downwards.
- A microswitch will not let the machine start up if the guard is not down and stops the motor whenever the guard is raised.
- Protection system on LIFT control

1.2 - FIELD OF APPLICATION

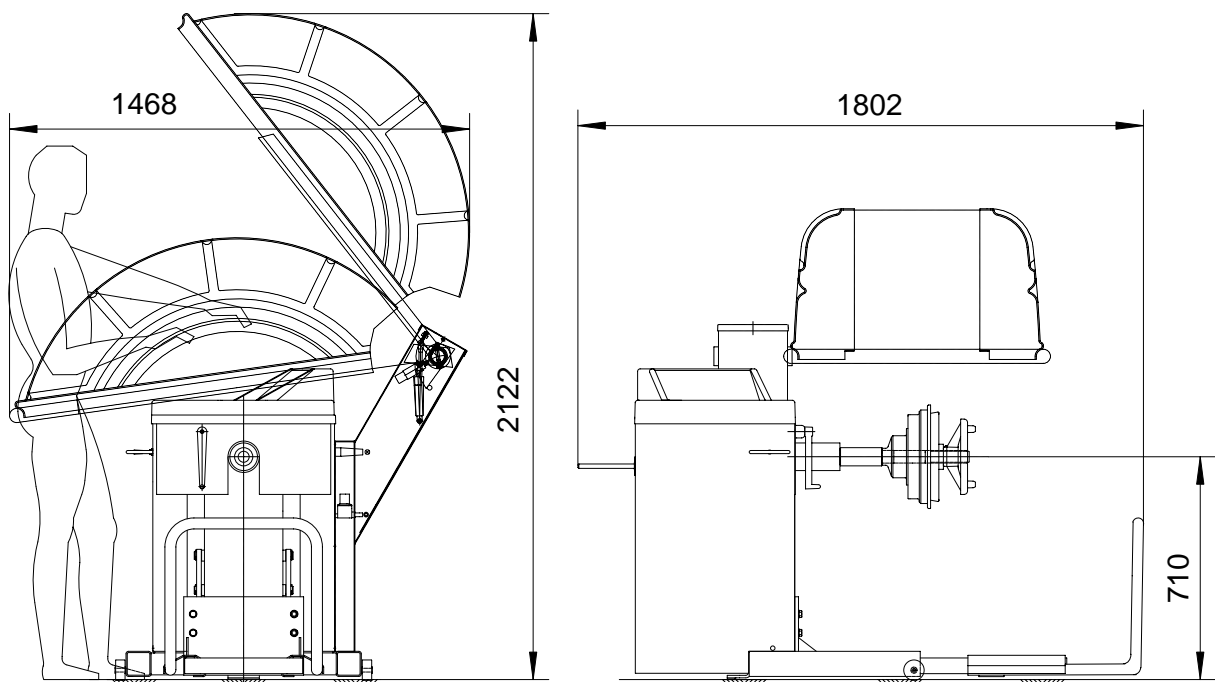
The machine is designed for balancing wheels of heavy vehicles and cars up to 200 kg.

It can be used within an operating temperature range between 0°C and +45° C.

It is provided with the following functions: Double operator; automatic ALUM; SPLIT; Unbalance optimization; Self diagnostics; Self-calibration.

1.3 - OVERALL DIMENSIONS

1



1.4 - TECHNICAL DATA

Single-phase power supply	115 - 230 V 50/60 Hz	
Protection class	IP 54	
Max.power consumption.....	1,1 Kw	
Balancing speed	70 min ⁻¹ TRUCK	
Balancing speed	100 min ⁻¹ CAR	
Cycle time.....	8-20 seconds	
Balancing accuracy	1 gram (car) - 10 grams (truck)	
Position resolution	± 1.4 °	
Average noise.....	< 70dB (A)	
Rim-machine distance.....	0 - 300 mm (400 with extension)	
Rim width setting range	1.5" ÷ 20" or 40 ÷ 510 mm	
Diameter setting range	10" ÷ 28" or 265 ÷ 715 mm	
Max. wheel diameter	1300 mm	
Min/Max air compressed pressure.....	8 ÷ 10 Kg./cm ²	0.8 ~1MPa
.....		8 ~10 BAR;
.....		115 ~145 PSI

- Provision for setting the balancing machine in car or truck mode

by pressing button  ; LED  lights up when the machine set to car mode.

- Unbalance display pitch

Car = 1/5 g (.1/0.25 Oz) Truck = 10/50 g (.25/1 Oz)

When **FINE** is pressed, the unbalance is displayed with pitch:

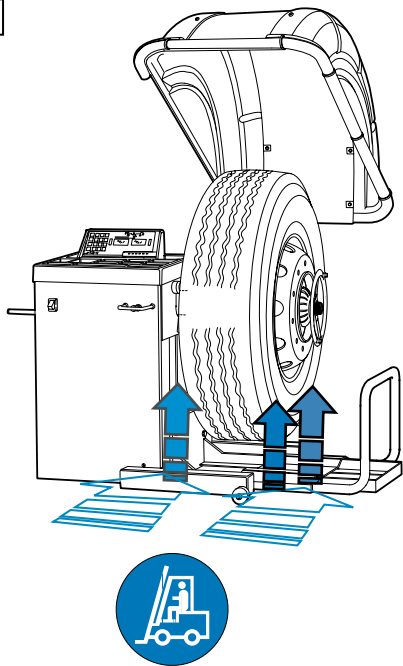
Car = 1 g Truck = 10 g
 .1 Oz .25 Oz

- Unbalance display threshold

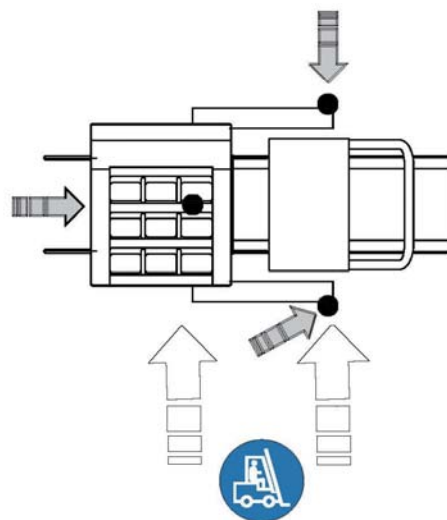
Car = 5 g (.4 Oz) Truck = 50 g (2 Oz)

2 - HANDLING, LIFTING

2



2a



**N.B.: NEVER HOIST THE MACHINE USING OTHER LIFTING POINTS.
 THE BALANCING MACHINE FITS A REMOVABLE DEVICE FOR ITS DISPLACEMENT.**

3 - COMMISSIONING

3.1 - ELECTRICAL CONNECTION

WARNING: The electrical connection must be made by specialized personnel. Connection to the single phase mains must be made between phase and neutral, and never, under any circumstances, between phase and earth (ground). Efficient earthing (grounding) is essential for correct machine operation. The Manufacturer declines all responsibility and warranty in the event of incorrect connection.

Before connecting the machine to the mains through relative cable, check that the mains voltage matches the one shown on the nameplate at the back of the balancing machine. Rating of the electrical connection should be on the basis of the machine electrical power consumption (see nameplate).

- The machine mains supply cable should be fitted with a plug conforming to current regulations.
- It is recommended to provide the machine with its own electrical connection through a slow acting safety switch rated at 4 A (230 V) or 10 A (115 V).
- When connection is made directly to the main control panel without using any plug, it is advisable to padlock the main switch of the balancing machine in order to limit its use to authorized personnel only.

3.2 - PNEUMATIC CONNECTION

Connect the machine to the compressed air main. Do not use the machine if there is no pressure. Max. permissible inlet pressure is 10 kg/cm² (approx. 10 bar or 145 PSI or 1Mpa). Make the connection to the pressure limiting unit at the back of balancing machine. The pneumatic circuit is designed to give the Lift considerable "flexibility" of movement in any position of its stroke; thanks to this the wheel position can be adjusted according to requirements with minimum manual effort.

3.2.1 - PRESSURE ADJUSTMENT FOR SPIN AND BRAKING DEVICE

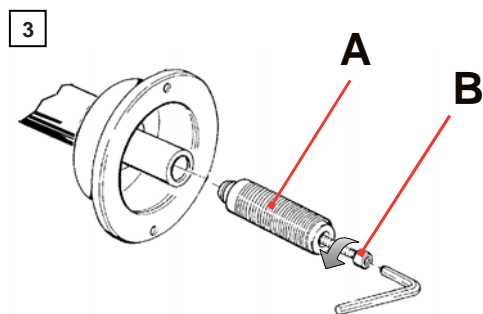
Use relative knob on the compressed air preparation unit to adjust the pressure. Average pressure setting is 4 to 5 kg/cm² (approx. 4 to 5 BAR or 60 to 75 PSI or 0.4 to 0.5MPa).

N.B.: An excessively high pressure could lead to rapid wear on the rubber on the driving pulley.

Lubrication is essential for correct machine operation. Oil flow rate is adjustable via relative screw on the oil tank. Tighten or loosen the screw until a drop of oil falls per every 10 consecutive spins.

CAUTION! Only use mineral oil with average viscosity (30 cST at 40°C - WAIRSOL, LXOL grade).

3.3 - ADAPTER MOUNTING



The wheel balancer is supplied complete with cone type adapter for fastening wheels with central bore. Other optional adapters can be mounted:

- Remove threaded end piece A after backing off screw B.
- Mount the new adapter (see enclosed brochures)

3.4 - WHEEL MOUNTING

The wheels should be fastened with one of the numerous adapters manufactured by the Manufacturer (see enclosed brochures). **N.B.:** Incorrect centering inevitably causes unbalance.

3.5 - GUARD MOUNTING AND ADJUSTMENT (OPTION)

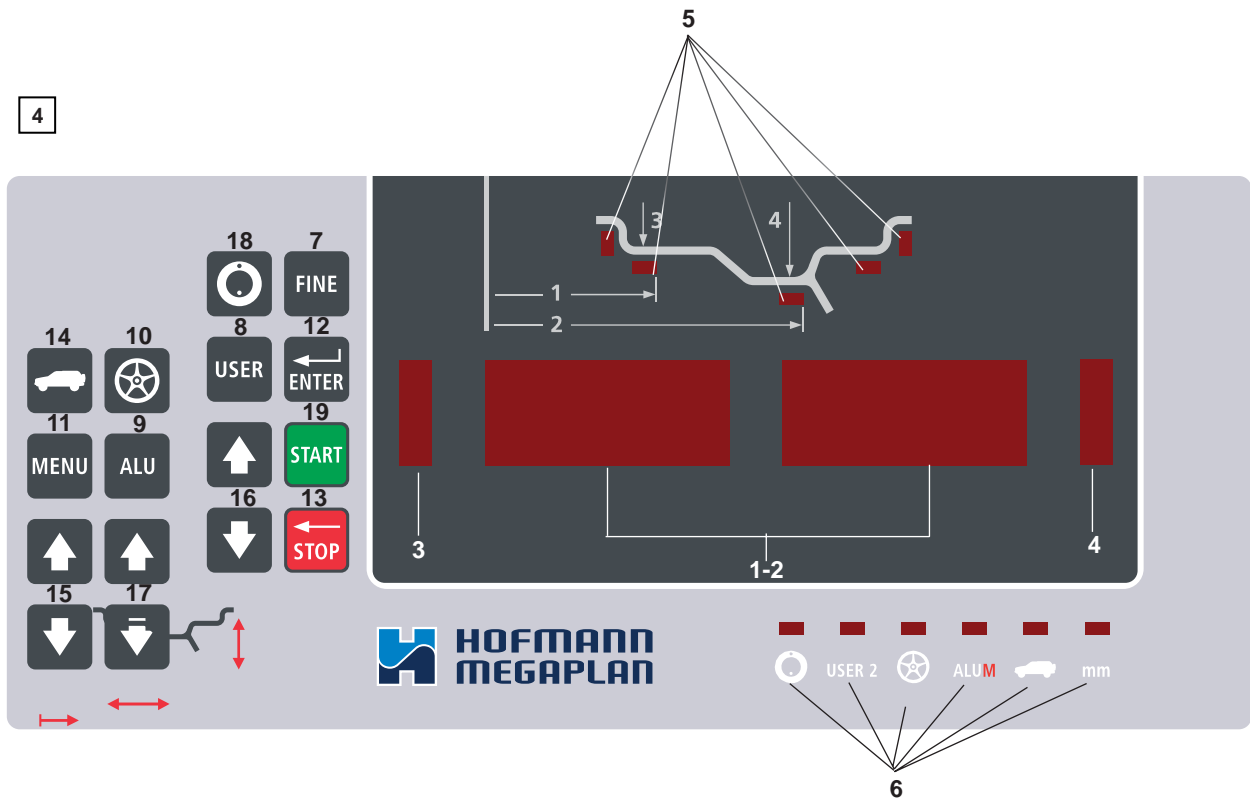
- Fasten the components to the base as illustrated in specific exploded view.
- The positions of these guards can be adjusted using the special screws accessed from inside the main support.
- Check that the microswitch is operated when the guard is closed.
- Adjust the angular position of microswitch control.

4 - CONTROLS AND COMPONENTS

4.1 - AUTOMATIC DISTANCE AND DIAMETER GAUGE

This gauge allows measurement of the distance of the wheel from the machine and the wheel diameter at the point of application of the counterweight. It also allows correct positioning of the counterweights on the inside rim by using the specific function (see **INDICATION OF EXACT CORRECTION WEIGHT POSITION**) which allows reading, on the displays, the position used for the measurement (see **ALUM WHEEL**) .

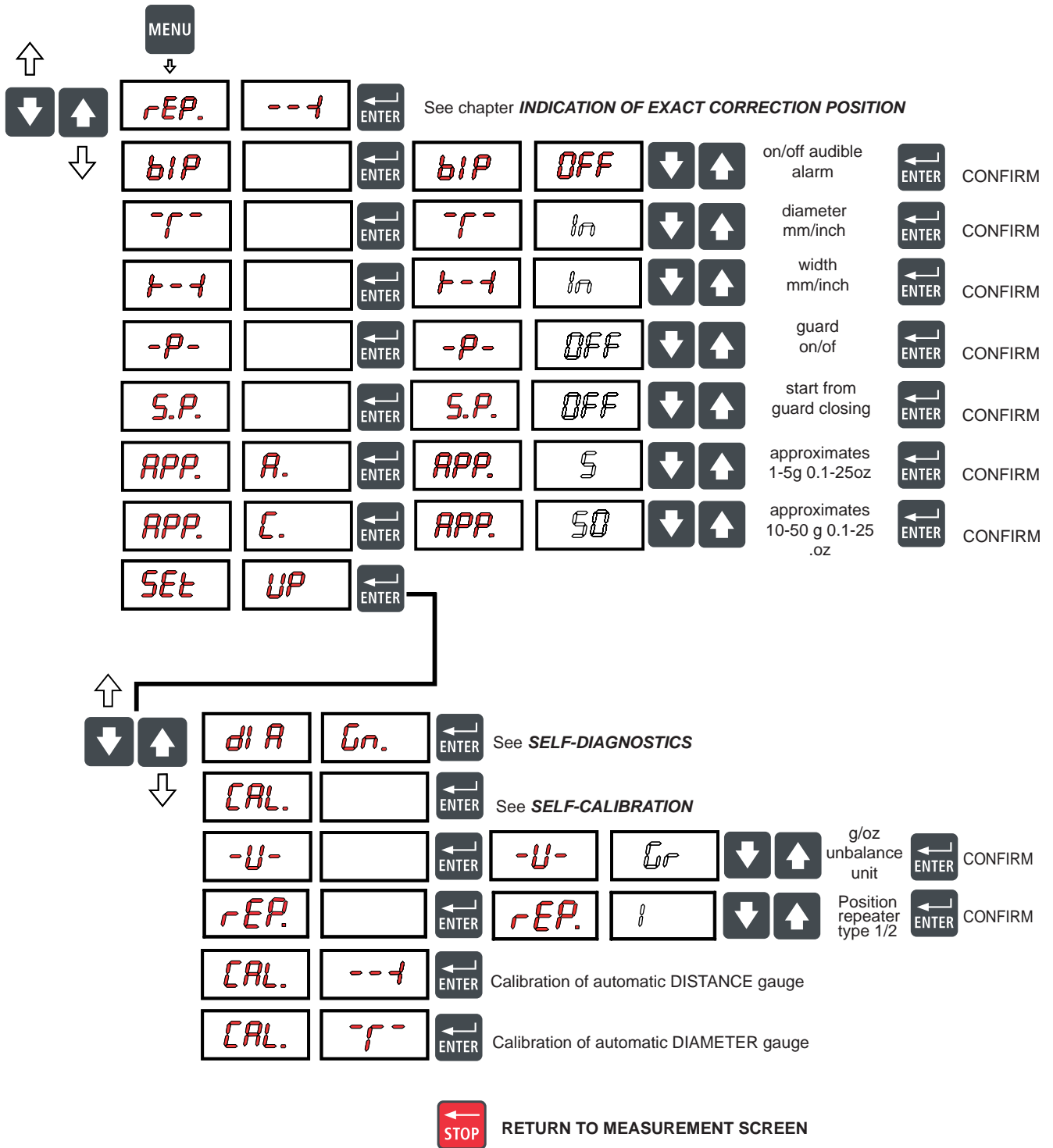
4.2 - CONTROL PANEL AND DISPLAY



- 1-2 Digital readouts, AMOUNT OF UNBALANCE on inside/ outside
- 3-4 Indicators, UNBALANCE POSITION on inside/outside
- 5 Indicators, correction mode selected
- 6 Indicators, selection made
- 7 Push button, unbalance reading < 5 g (0.25 oz)
- 8 Push button, operator selection
- 9 Push buttons, selection of correction mode
- 10 Push button, SPLIT (resolution of unbalance)
- 11 Push button, FUNCTIONS MENU
- 12 Push button, MENU selection confirm
- 13 Home/Stop push button
- 14 Push button, car/truck selection
- 15 Push buttons, manual DISTANCE setting
- 16 Push buttons, manual DIAMETER setting
- 17 Push buttons, manual WIDTH setting
- 18 Push button, unbalance optimization control
- 19 Push button cycle start

Note: - Only use the fingers to press the push buttons. Never use the counterweight pincers or other pointed objects. In case of audible alarm connected (see par. **OPERATION FUNCTIONS MENU**), any push button operation sounds with a "beep" alarm.

4.2.1 - OPERATION FUNCTIONS MENU



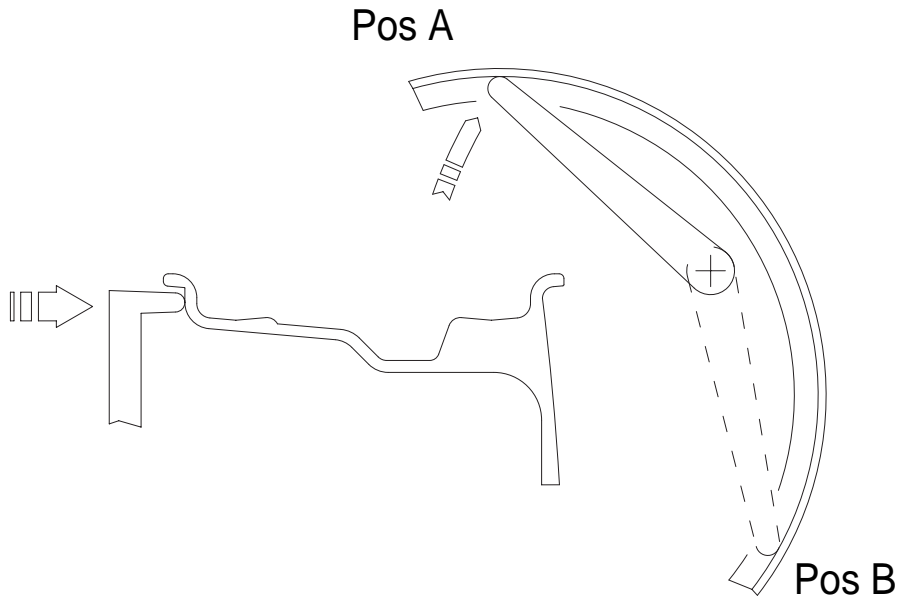
5 - INDICATION AND USE OF THE WHEEL BALANCER

5.1 - PRESETTING OF WHEEL DIMENSIONS

5.1.1 - AUTOMATIC PRESETTING

5.1.1.1 - Standard wheels (calibration necessary also for modes ALU 1, 2, 3, 4, Static)

5



Move the gauge tip into contact against the rim keeping it in position for at least 2 seconds.

Note: Position of the gauge has a different meaning depending on the type of repeater set (see par.

OPERATION FUNCTIONS MENU):

TYPE 1: the measurement is possible only in Position B.

In case of correction modes ALU, STATIC, ALU2, ALU3 move the distance + diameter gauge in Position A to obtain the automatic start of the function of position repeater (see par. *INDICATION OF EXACT CORRECTION POSITION*).

TYPE 2: the measurement in position A or B is the same. In case of correction modes ALU, STATIC, ALU2,

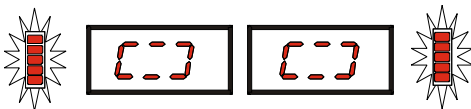
ALU3 to obtain the function of position repeater it is necessary to press button **MENU** (see Par. *INDICATION OF EXACT CORRECTION POSITION*).

5a



Indication of gauge in movement

5b



Indication of dimensions acquired

Note: In case of audible alarm connected (see par. *OPERATION FUNCTIONS MENU*), the acquisition of the dimensions sounds with a “beep” alarm.

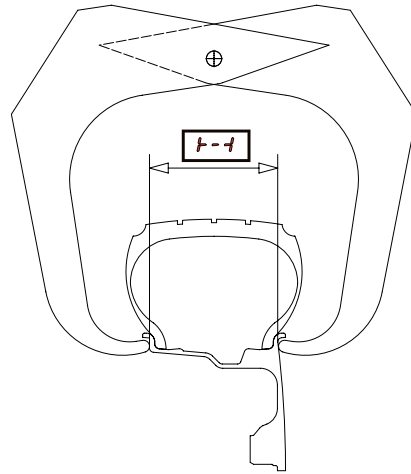
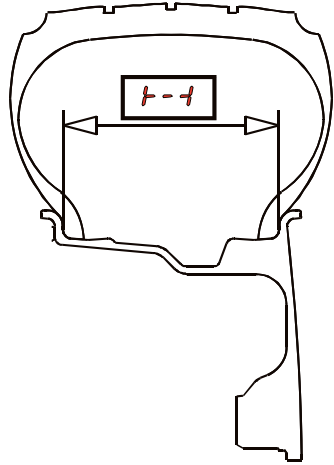
Return the gauge to position 0.

The system automatically switches to WIDTH position.

t-t 5.7



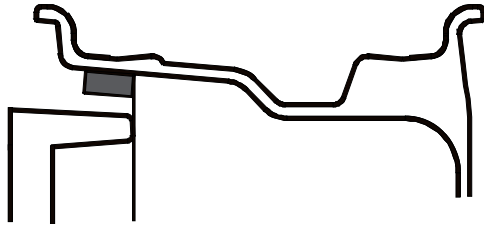
- The nominal width is normally stamped on the rim; if not, proceed to measure the nominal width with the calibre gauge (supplied as standard).



5.1.1.2 - WHEEL ALUM

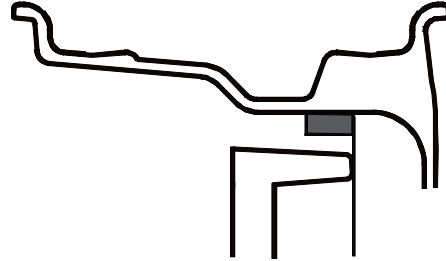
(correction from inside for two balancing planes with direct calibration):

7a ALUS FI



COUNTERWEIGHT
OUTER LIMIT

7b ALUS FE



COUNTERWEIGHT
OUTER LIMIT

After measurement for inside FI as shown in fig. 7a, again remove the gauge in order to memorize the data for the outside FE (7b); keep the position for at least 2 seconds.

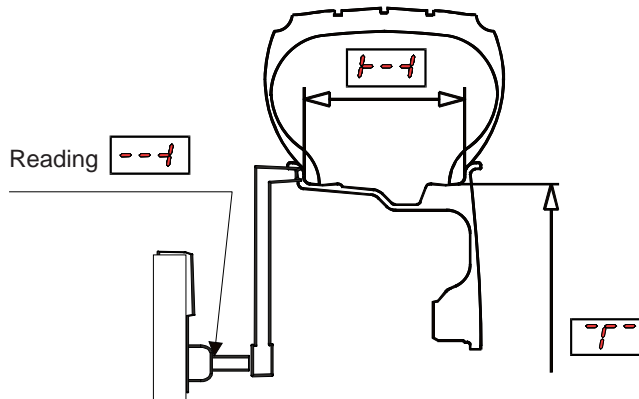
In case of repeater type set at 1 (see par. **OPERATION FUNCTIONS MENU**), always choose only position B. Otherwise, choose position A or B at your choice.

Manual presetting is possible by using the push buttons as for detailed hereunder.

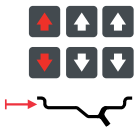
5.1.2 - MANUAL PRESETTING (Use only in particular cases or for test)

5.1.2.1 - STANDARD WHEEL

8



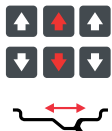
- Preset the distance of the wheel from the machine (in mm.)



- Preset the nominal diameter indicated on the tyre



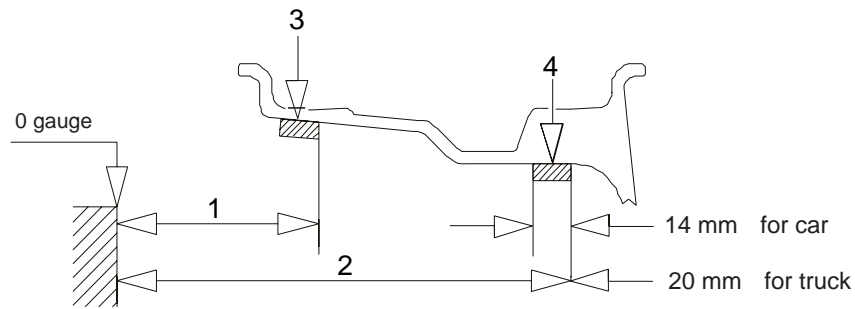
- Preset the nominal width which is normally stamped on the rim; if not, measure width with the calibre gauge (supplied as standard)



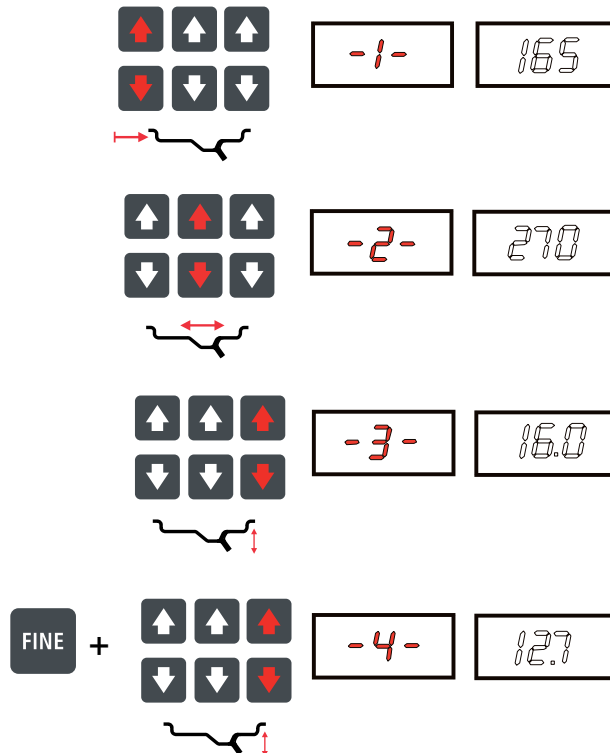
5.1.2.2 - ALUM WHEEL

- Measure the dimensions as shown in the following diagram:

9



SETTING:



N.B.: if the outside diameter is not preset (**-4-**) the system automatically calculates the following outside diameter (**-4-**) = inside diameter (**-3-** - 1").

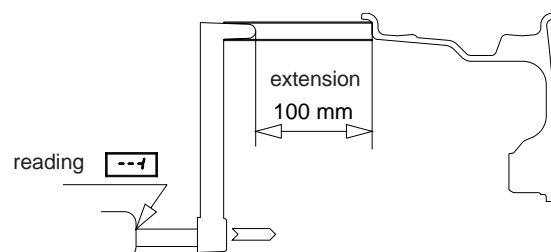
5.2 - PRESETTING WITH GAUGE EXTENSION

The extension increases the distance measuring range of the gauge by 100 mm (fig. 10).

Proceed as follows:

- Insert the extension on the distance gauge.
- Measure the distance as already described in the above procedures.
- After reading value **--f** on the scale, return the gauge to 0 and preset the value **--f** + 100 mm in manual mode.
- Manually set the diameter and the width, as already described.

10

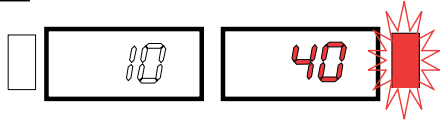


5.3 - MEASUREMENT RESULT

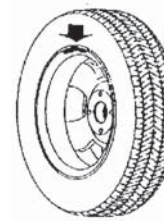
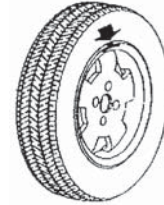
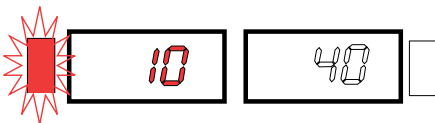
To perform a measuring spin, close the guard (press  if the "Start with guard close" function is not enabled: see section **OPERATION FUNCTIONS MENU**).

- In a few seconds, the wheel is brought up to speed and again braked; the unbalance values remain memorized on instruments 1 and 2.
- The displays with the LED's lit up indicate the correct angular position where to mount the counterweights (12 o'clock position).

11 CORRECTION ON OUTSIDE





12 CORRECTION ON INSIDE




: performs the wheel locking/release: useful for fixing the unbalance correction weights.

At the end of a measuring spin:

- search for the unbalance position on the outside.
- press  to lock the wheel.
- Apply the correction weight shown on the right display.
- press  to release the wheel.
- Proceed in the same way for the inside.

5.4 - RECALCULATION OF THE UNBALANCE

- Preset the new dimensions following the above described methods.

- Without repeating the spin, press 

The new recalculated unbalance values are displayed.


5.5 - DOUBLE OPERATOR PROGRAM

This program allows memorizing the dimensions of two types of wheels. Thus two operators can work simultaneously on two different cars using the same balancing machine. The system memorizes two programs with various present dimensions.

1 - Press  to select operator (1 or 2). Selection of USER 2 is confirmed by the LED on the panel.

2 - Enter the dimensions (see **PRESETTING OF WHEEL DIMENSIONS**).

3 - Carry out the balancing normally

With  program 1 or 2 is called for subsequent balancing operations without having to newly enter the dimensions.

5.6 - INDICATION OF EXACT CORRECTION POSITION

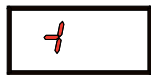
In correction mode ALUM/ALU2/ALU3 /STATIC it is possible to cancel approximations in the mounting of the counterweights by proceeding as follows:

A) TYPE OF REPEATER = 1 (see par. OPERATION FUNCTIONS MENU)

1A) Always remove the gauge only in position A (Fig. 5) .

Note: If the correction type is different from those indicated here, there is no effect. Move the gauge in pos. B (Fig. 5) so to have the automatic step to the function "dimensions" (see par. **PRESETTING OF WHEEL DIMENSIONS**).

2A) The display shows:

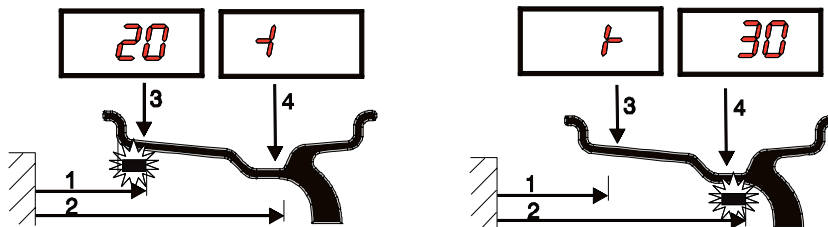


to indicate that the gauge should be pulled further out



to indicate that the gauge should be returned to rest position

13



The left display gives the indications for reaching the position regarding the inside, while the right display that of the outside.

3A) Bring the wheel into correct angular position as indicated in the setting for each side.

4A) Insert the counterweight rotating the gauge tip outwards until the pincers touch the wheel in position A. The position of application of the weight is no more vertical (Fig. 13a), but it is automatically compensated.

B) TYPE OF REPEATER = 2 (see par. OPERATION FUNCTIONS MENU)

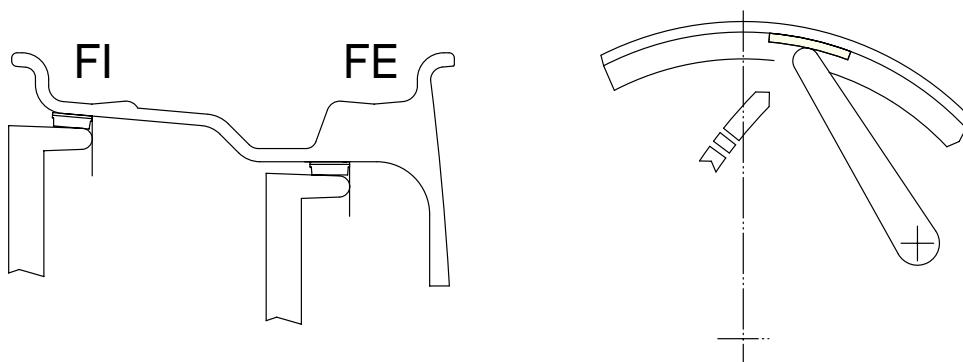
1B) Press button **MENU** + **ENTER**

2B) Remove the gauge in Pos. A of Fig. 5 considering that on the display the indications of point 2A are shown.

- Follow points 3A and 4A.

Note: the position repeater works only in Pos. A of Fig. 5.

13a



5.7 - SPLIT FUNCTION (unbalance spread)

The SPLIT function is used to position the adhesive weights behind the wheel spokes so that they are not visible. This function should be used only in the case of static unbalance or where the hidden adhesive weight is to be applied on the outside. Input the wheel dimensions and do a spin. Start the SPLIT function as follows:



Example of display prior to SPLIT function

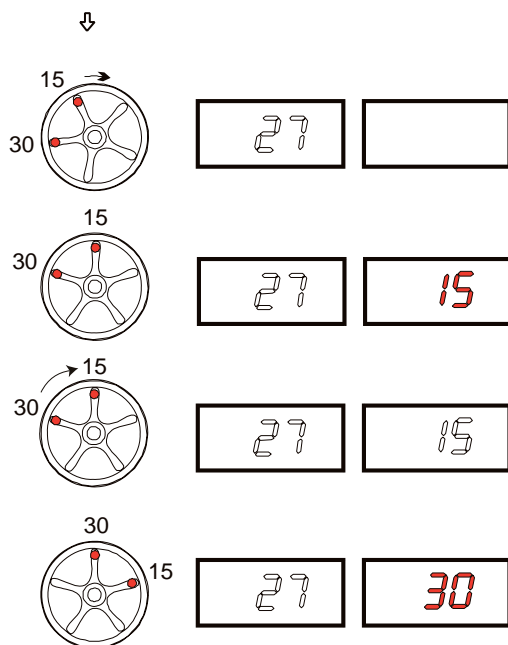
- Place the wheel in the outside unbalance correction position.
- Set one of the top spokes (preferably the one to the left of the unbalance) to 12 o'clock.

- Press the  button

- Follow the UP/DOWN indication of the positioning LEDs and set the second top spoke to 12 o'clock.

- Press  button

- Set the first split unbalance to correction position 1




- Correction position 1

- Set the second split unbalance to correction position 2

- Correction position 2

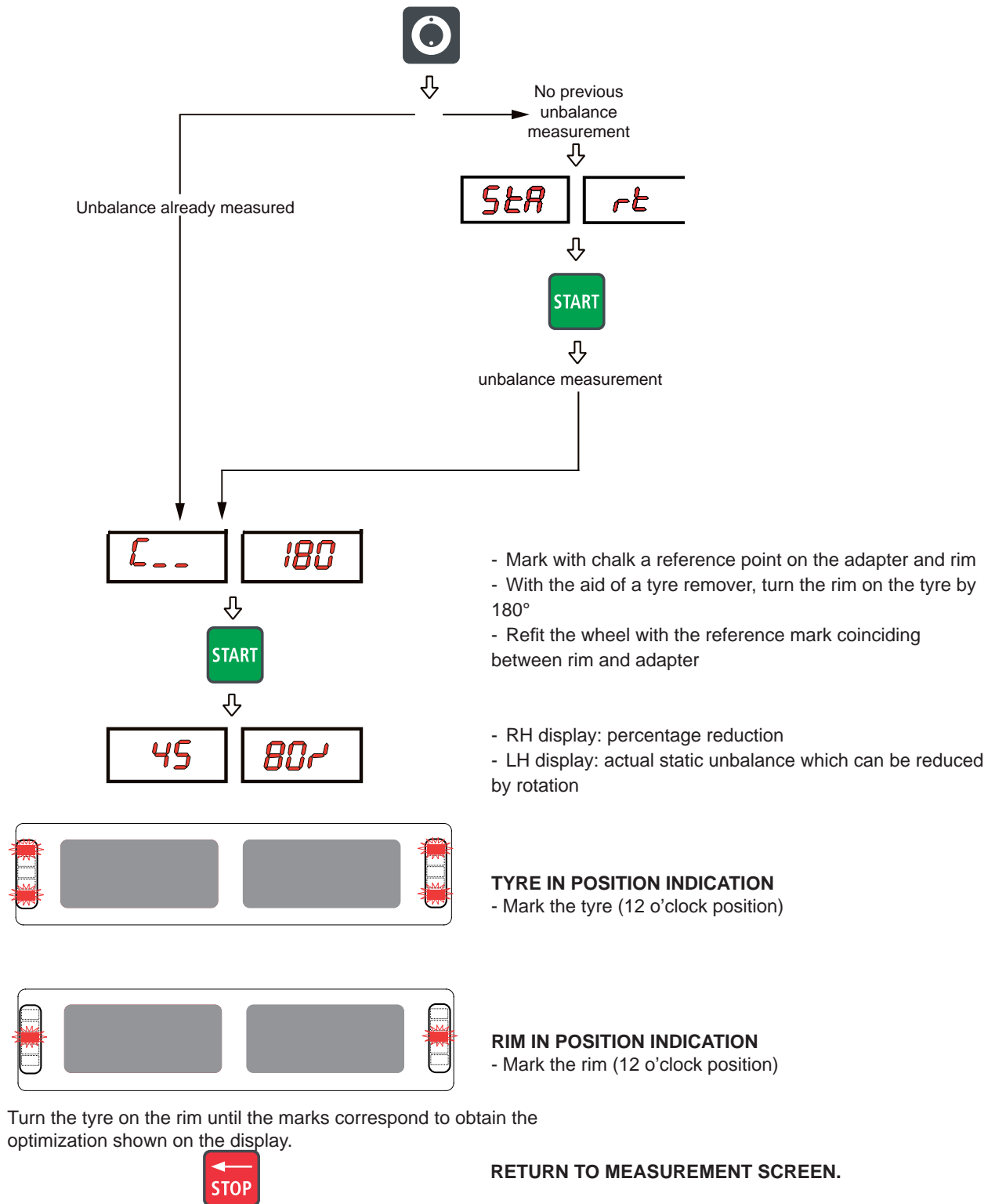
N.B.: If error 24 is displayed, repeat the SPLIT function ensuring that the minimum distance between the spokes is greater than 18 degrees. If error 25 is displayed, repeat the split function ensuring that the maximum distance between the spikes is smaller than 120 degrees.

To return to normal unbalance display, press any button.

To carry out a new spin, press the  button.

5.8 - UNBALANCE OPTIMIZATION

- This function serves to reduce the amount of weight to be added in order to balance the wheel
- It is suitable for static unbalance exceeding 30 gr. for vehicles and 300 gr. for trucks
- It improves the residual eccentricity of the tyre.



5.9 - ALU AND STATIC MODES

From the measurement screen, press **ALU** button to select the type required. The 5-LED displays show the position where to apply the weights. If a spin has already been performed, the processor automatically recalculates, for each change of mode, the amounts of unbalance according to the new calculation.

14



DYNAMIC

Balancing of steel or light alloy rims with application of clip-on weights on the rim edges.



STATIC

The static mode is necessary for motorcycle wheels or when it is not possible to place the counterweights on both sides of the rim.



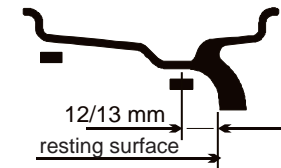
ALU M

Balancing of light alloy rims with hidden application of adhesive weights. The position of the weights can be set automatically on both sides.



ALU 1

Balancing of light alloy rims with application of adhesive weights on the rim shoulders.



ALU 2

Balancing of light alloy rims with hidden application of the outer adhesive weights. Outer weight position is fixed.



ALU 3

Combined application: clip-on weight inside and hidden adhesive weight on outside (Mercedes). Outer weight position is the same as ALU 2.



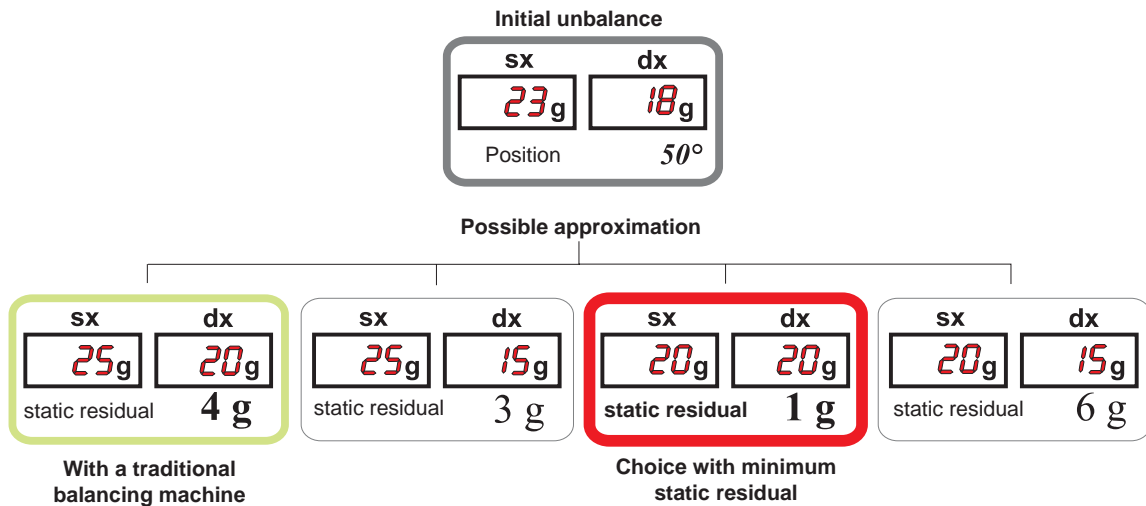
ALU 4

Combined application: adhesive weight outside and clip-on weight inside.

N.B.: ALU 1/2/3/4 are not available for machines set for trucks.

To return from any type of correction to **DYNAMIC**, simultaneously press the buttons **FINE** + **ALU**.

5.10 - AUTOMATIC MINIMISATION 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 when using the normal commercially available weights, with pitch of CAR: 5 grams to 5 grams / 25 ounces to 25 ounces e TRUCKS: 50 grams to 50 grams / 1 ounce to 1 oz; in the event of cars in grams) and applying the two counterweights which a conventional balancing machine 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 the disturbances on the vehicle. This new function automatically indicates the optimum entity of the weights to be applied by approximating them and putting them out of phase in a "smart" way to clear the residual static unbalance (theoretical zero).

- Press **FINE** to display the actual unbalance (pitch 1 gram/0.1 ounce for cars, 10 grams/25 ounces for trucks)
- The instruments indicate "0" for unbalance less than 5 grams/0.4 for cars and 50 grams/2 ounces for trucks; to display the residual unbalance press **FINE** .

6 - SET UP

6.1 - SELF-DIAGNOSTICS

di R *Un.*



POS. []



POS. *UP*



POS. []



POS. *UPD*



inc. *359*



dis. *100*



di R. *200*



di R *Un.*



DISPLAY TEST

All displays, readouts and Led's should light up in sequence

- Turn the wheel in direction of rotation.

It appears:

- Turn the wheel in reverse direction of rotation.

It appears:

- In one complete rev. of the wheel (in direction of rotation) this should appear once:

- Test parameter

- Displays values of rim DISTANCE sensor

- Displays values of DIAMETER sensor

END OF SELF-DIAGNOSTICS

CANCEL SELF-DIAGNOSTICS IN ANY PHASE.

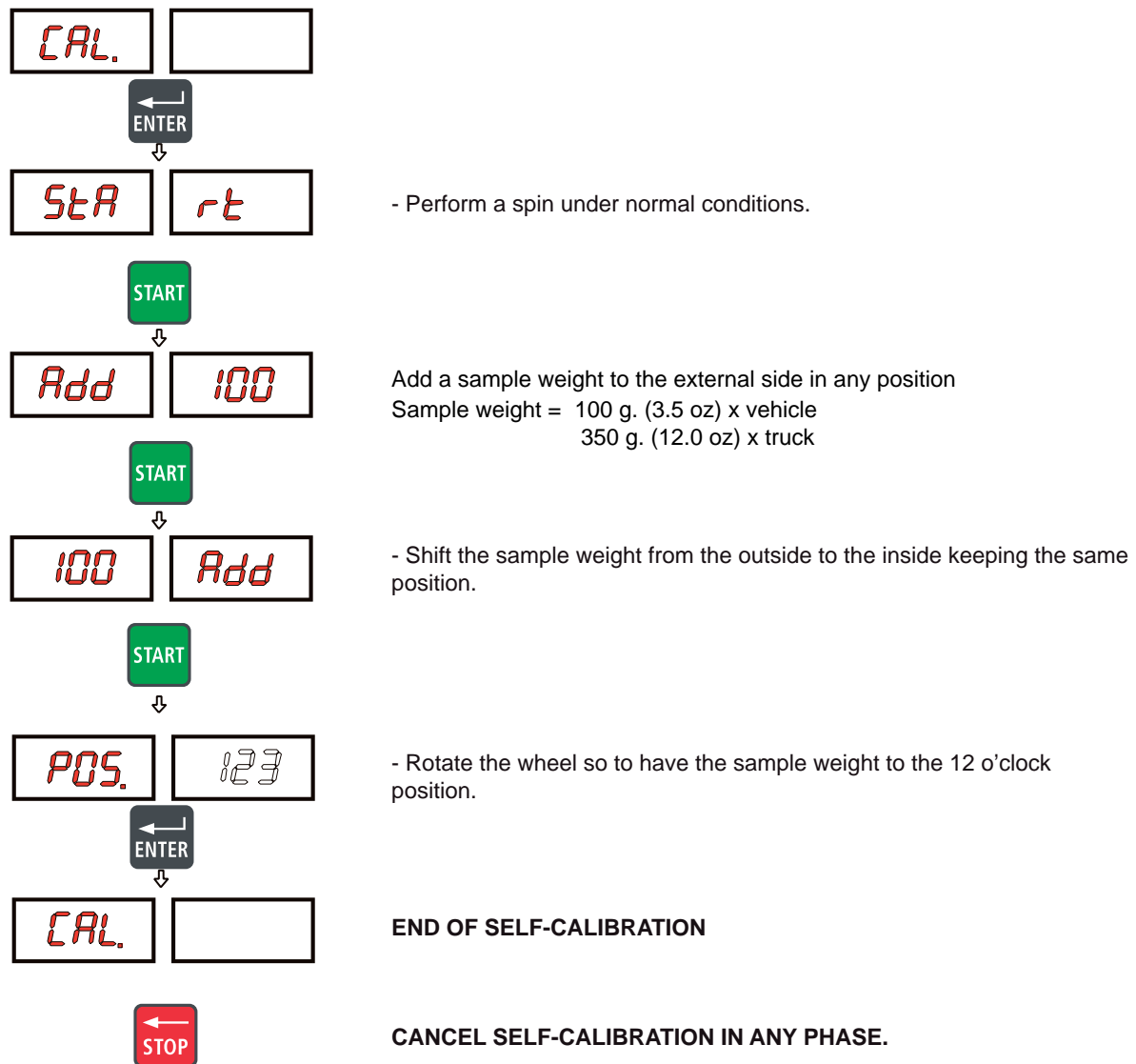
6.2 - SELF-CALIBRATION

N.B.: It is very important during self-calibration spins that the wheel is not knocked. Preferably perform calibration with the wheel balancer set to vehicle mode with a wheel with steel rim 6" x 14" (± 1 ").

For machine self-calibration proceed as follows:

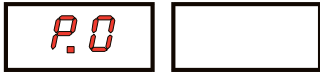
- Fit a medium-sized wheel with steel rim on the shaft and preset the exact dimensions of the wheel mounted.


CAUTION!! Presetting of incorrect dimensions would mean that the machine is not correctly calibrated, therefore all subsequent measurements will be incorrect until a new self-calibration is performed with the correct dimensions!!




6.3 - AUTOMATIC GAUGES

6.3.1 - RIM DISTANCE GAUGE



- Pull out the distance gauge to position  and holding it tight, press 





- Move the distance gauge to position 15 and press 




CORRECT CALIBRATION

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

N.B.: In the event of errors or malfunctioning the message reappears on the display: 

return the gauge into position  and repeat the calibration operation as described above;
if the error persists, contact Technical Service. In the event of incorrectly accessing the distance

gauge calibration function, press  to cancel it.

6.3.2 - DIAMETER GAUGE

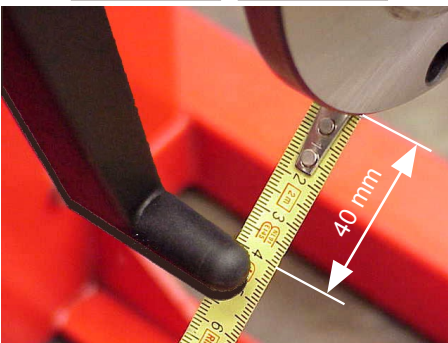
CAL. T-



CAL. P.F.



2 P.F.




278 0

Place the round part of the gauge terminal on the flange as shown in the figure.

- The number $2 \pm 1^\circ$ appears on the left display .

- Turn the gauge downward
Position the round part of the gauge terminal at 40 mm (radial distance) from the flange as indicated in the figure.

- The number $278 \pm 3^\circ$ should appear on the left display.

- If not, press the  button holding the gauge still at 40 mm: the number 278 appears on the left display.

- Return the gauge to rest position.

In the event of incorrectly accessing the diameter gauge calibration

function, press  to cancel it.

7 - ERRORS

During machine operation, various causes of faulty operation could occur. If detected by the microprocessor, they appear on the display as follows:



ERRORS	CAUSES	CONTROLS
Black	The wheel balancer does not switch on.	<ol style="list-style-type: none"> 1. Verify correct connection to the mains. 2. Verify and eventually replace the fuses on the power card. 3. Verify monitor function. 4. Replace the computer board.
Err. 1	No rotation signal.	<ol style="list-style-type: none"> 1. Verify belt tautness. 2. Verify the function of the phase pick-up board and, in particular, the reset signal. 3. Replace the phase pick-up board. 4. Replace the computer board.
Err. 2	Speed too low during detection. During unbalance measurement rotation, wheel speed is less than 42 rpm.	<ol style="list-style-type: none"> 1. Make sure that a vehicle wheel is mounted on the wheel balancer. 2. Verify belt tautness. 3. Verify the function of the phase pick-up board and, in particular, the reset signal. 4. Replace the computer board.
Err. 3	Unbalance too high.	<ol style="list-style-type: none"> 1. Verify wheel dimension settings. 2. Check detection unit connections. 3. Perform machine calibration. 4. Mount a wheel with more or less known unbalance (less than 100 grammes) and verify the response of the machine. 5. Replace the computer board.
Err. 4	Rotation in opposite direction. After pressing [START], the wheel begins to rotate in the opposite direction (anticlockwise).	<ol style="list-style-type: none"> 1. Verify the connection of the UP/DOWN – RESET signals on the phase pick-up board.
Err. 5	Guard open The [START] pushbutton was pressed without first closing the guard.	<ol style="list-style-type: none"> 1. Reset the error by pressing pushbutton [7]=End. 2. Close the guard. 3. Verify the function of the protection uSwitch. 4. Press the [START] pushbutton.
Err. 7 / Err. 8	NOVRAM parameter read error	<ol style="list-style-type: none"> 1. Repeat machine calibration 2. Shut down the machine. 3. Wait for a minimum time of ~ 1 Min. 4. Re-start the machine and verify correct operation. 5. Replace the computer board.
Err. 9	NOVRAM parameter write error.	Replace the computer board.
Err. 11	Speed too high error. During unbalance measurement rotation, wheel speed is more than 270 rpm.	<ol style="list-style-type: none"> 1. Check if there is any damage or dirt on the timing disc. 2. Verify the function of the phase pick-up board and, in particular, the reset signal. 3. Replace the computer board.
Err. 12	Unbalance measuring cycle error.	<ol style="list-style-type: none"> 1. Verify phase pick-up board function. 2. Verify correct motor operation. 3. Verify belt tautness. 4. Replace the computer board.
Err.13/ Err.14/ Err.15/ Err.16/ Err.17/ Err.18	Unbalance measurement error.	<ol style="list-style-type: none"> 1. Verify phase pick-up board function. 2. Check detection unit connections. 3. Verify machine earth/ground connection. 4. Mount a wheel with more or less known unbalance (less than 100 grammes) and verify the response of the machine. 5. Replace the computer board.
Err. 24	Distance between the spokes smaller than 18 degrees.	<ol style="list-style-type: none"> 1. The minimum distance between the spokes where to split the unbalance must be greater than 18 degrees 2. Repeat the SPLIT function increasing the distance between the spokes.
Err. 25	Distance between the spokes greater than 120 degree	<ol style="list-style-type: none"> 1. The minimum distance between the spokes where to split the unbalance must be smaller than 120 degrees 2. Repeat the SPLIT function increasing the distance between the spokes.

7.1 - INCONSISTENT UNBALANCE READINGS

Sometimes after balancing a wheel and removing it from the balancing machine, it is found that, upon mounting it on the machine again, the wheel is not balanced.

This does not depend on incorrect indication of the machine, but only on faulty mounting of the wheel on the adapter, i.e. in the two mountings the wheel has assumed a different position with respect to the balancing machine shaft centre line. If the wheel has been mounted on the adapter with screws, it could be possible that the screws have not been correctly tightened, i.e. crosswise one by one, or else (as often occurs) holes have been drilled on the wheel with too wide tolerances.

Small errors, up to 10 grams (0.4 oz) are to be considered normal in wheels locked by a cone; the error is normally greater for wheels fastened with screws or studs.

If, after balancing, the wheel is found to be still out-of-balance when refitted on the vehicle, this could be due to unbalance of the car brake drum or very often due to the holes for the screws on the rim and drum sometimes drilled with too wide tolerances.

In such case a readjustment could be advisable using the balancing machine with the wheel mounted.

8 - ROUTINE MAINTENANCE (SEE EXPLODED DRAWINGS) (Non specialized personnel)

Before carrying out any operation, disconnect the machine from the mains.

8.1 - TO REPLACE THE DRIVING PULLEY

- Remove the head and the weight shelf being careful not to pull away the electrical cables.
- Unscrew the pulley mounting screw in order to replace the pulley.
- Check supply pressure of the spinner device (see *PRESSURE ADJUSTMENT FOR SPIN AND BRAKING DEVICE*).
- Excessive pressure will cause premature damage of the rubber.

8.2 - TO REPLACE THE BRAKE PAD

Back-off the two screws fastening the worn brake pad to the motor mounting brake. Securely fix the new brake pad by tightening the screws.

8.3 - TO REPLACE THE FUSES

Remove the weight shelf in order to gain access to the power supply board on which two fuses are installed. If the fuses need replacement, use ones of the same current rating. If the fault persists, contact the Technical Service Department.

8.4 - MAINTENANCE OF THE SPECIAL PNEUMATIC CIRCUIT

It is important to periodically clean the compressed air filter and check that there be sufficient lubricating oil. The bowl should be filled 3/4; to top up, use mineral oil of medium viscosity (30 cSt at 20° C) (WAIRSOL, LXOL grade). Normal oil flow rate is one drop every 10 operations.

N.B.: DRAIN FREQUENTLY ANY CONDENSATE BUILT UP IN THE FILTER BOWL VIA RELATIVE VALVE.

NONE OF THE OTHER MACHINE PARTS REQUIRE MAINTENANCE.