

microtec 730 / 731 wheel-balancing computer



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Beissbarth GmbH Automobile Service Equipment

Hanauer Strasse 101, D-80993 Munich, Germany, Telephone + 89/14901-0 Fax + 89/14901246



Introductory report for (microprocessor) stationary wheel balancers

Issue: 29.03.1994

AEI:00

EW-MT.DOC

Customer: Street: Post code/Town: Tel:	No.	Instruction carried out by:
	Name of selling dealer:	
	Order issued by:	

(Please tick appropriate answer)

Machine:	
Serial number:	

1. Checking the wheel-balancing machine for completeness (delivery specification) and damage in transit.

OK

Parts

missing: _____

Damage in transit: _____

2. Checking the machine for serviceability.

Machine shaft cleaned and clamping flange checked.

Mechanical and electrical functions checked

3. Introduction to how to operate and handle the machine.

Informing the operator of the various clamping features and flanges.

Explanation of various balancing methods.

Introducing the operator to the match programme (if provided).

Introducing the operator to the wheel-rim data menu (MT540 upwards).

4. Introduction to the wheel balancer's service functions.

Explanation of flange calibration

Explanation of zero calibration

Explanation of 60-gram calibration

5. Information on operating faults.

Drawing the operator's attention to the fault-code table in the operating instructions.

Specially emphasising potential wheel clamping errors.

6. Comments:

Customer's signature _____ Time in flat-rate units: _____

In block capitals: _____ Date: _____

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BEISSBARTH MT 730/731

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Foreword

For the satisfactory road behaviour of an automobile, the wheels and suspension are a crucial factor.

Unequal distribution of material in wheel rims and tyres, possible residual imbalance in the wheel hub, brake drum or brake disk and today's sensitive suspension systems therefore require ultra-modern computer technology in the tyre service workshop.

Thanks to their high level of measuring accuracy, wheel-balancing computers from Beissbarth help to define wheel imbalance exactly and eliminate it. Depending on the machine model, matching the tyre to the rim is also possible.

High-quality electronic assemblies ensure exact measuring data and excellent service results.

Beissbarth wheel-balancing computers are therefore among the factors that decisively influence your company's competitiveness, customer satisfaction and further progress in the vehicle repair shop.



BEISSBARTH MT 730/731

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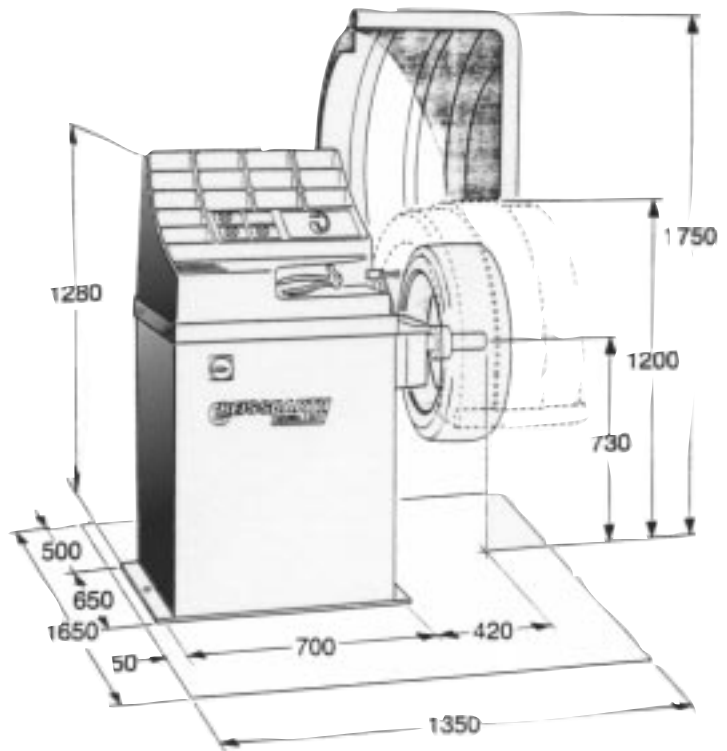
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Technical data

Wheel weight:	up to 65 kg
Rim diameter:	cars from 10" to 20" Light trucks up to 17.5" motorcycles up to 22"
Rim width:	up to 13" (330 mm) motorcycles from 2"
Max. outside diameter of wheel:	900 mm
Motor	0.37 kW 3X220-240V / 380-420V
Balancing speed:	285 rpm at 50 Hz
Balancing speed:	342 rpm at 60 Hz
Measuring period:	3 sec
Noise emission value:	LpA=70 dB (A)
Machine dimensions:	(width x height x depth) 110x1285x700mm (without safety hood)
Required work space with safety hood:	(width x depth) 1350x1650 mm Weight 110 kg
Paint:	blue RAL 5015, black-grey RAL 7021

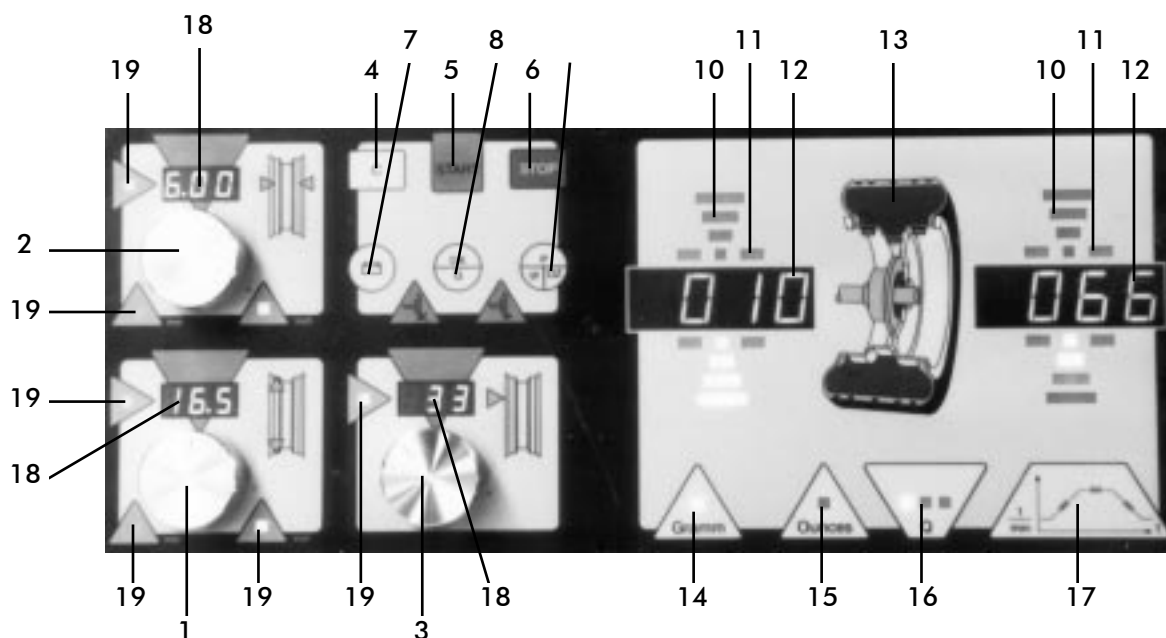
The manufacturer reserves the right to modify designs as necessary

Space required



- 1 = Adjustment knob for rim diameter
- 2 = Adjustment knob for rim width
- 3 = Adjustment knob for rim distance
- 4 = Reset key
- 5 = Start key
- 6 = Stop key
- 7 = Selector key to select balancing method
- 8 = Inhibit key (with additional OK key function for matching program)
- 9 = Selector key (gram/ounces) with additional program-key function for matching program
- 10 = Direction arrows (inner and outer levels)
- 11 = Signal LEDs for balancing position
- 12 = Gram display (inner and outer levels)
- 13 = Wheel-rim graphic display with LED display for weight positions
- 14 = LED display for gram display
- 15 = LED display for ounce display
- 16 = LED display for inhibit function
- 17 = LED display for functional flow
- 18 = Digital display for wheel-rim values
- 19 = Control elements for wheel-rim data adjustment

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The wheel-balancing machine must not be used for purposes other than those for which it was designed. Only trained expert personnel is authorised to operate the machine.

In Germany, motor-driven wheel-balancing machines must not be operated without safety hoods.

Safety installations must not be removed or deactivated.

Repair work must only be carried out by trained service personnel. Damage resulting from unauthorised modifications to the machine is excluded from the Beissbarth warranty.

All electrical installation is to be carried out by electrical experts only.

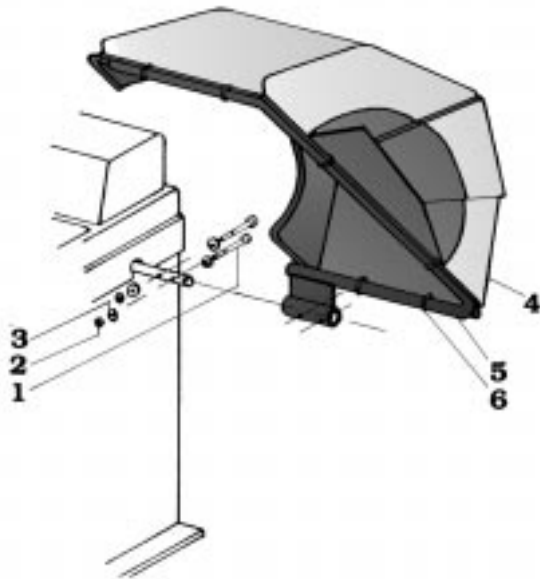
The wheel-balancing machine must not be operated in potentially explosive atmospheres (interiors).

Mounting of the wheel balancer.

The machine must be mounted with dowels on a solid, level concrete floor.

Assembly of safety hood:

Attach safety-hood tube to the machine's axle shaft. Insert both retaining screws M 8x50 (1), screw on and tighten nut and disk (2 and 3). Place plastic-coated safety hood (4) on to tube elbow (5) and fix to tube with the aid of the black cable clips provided (6). Cut-off ends of cable clips.



It is of utmost importance to follow the circuit diagram, since incorrect connection may cause damage to the electronic system. The wheel-balancing machine is suited for connection to three-phase 220-240V / 380-420V (50/60Hz) mains supplies. The machine is factory-preset for 380-420 Volt.

Make sure that the wheel to be balanced rotates clockwise.

(If sense of rotation is wrong, interchange 2 phases at system's power supply line.)

Calibration of the balancing flange must be carried out prior to initial operation. (See page 19.)

Preparatory work

Clean rims and tires.

Remove old balance weights.

Check wheel runout (using accessory meter P 22).

Clamping wheel on to flange

Important:

Dirty or damaged clamping devices and wheels, selection of the wrong clamping devices (see flange selection list EDV 901146001), incorrect application of clamping devices, excessive or irregular torques for tightening the wheel bolts may result in faulty balances of up to 30 g and more!

The best clamping result for each individual wheel is listed in the attached flange selection list.



To clamp the wheels on to the balancing machine use the hub-centering flange for all open-centred wheels - that is 80 % of all wheels.

To avoid clamping faults as far as possible, the tyre valve should face downward when clamping the wheel on to the flange and on to the vehicle.

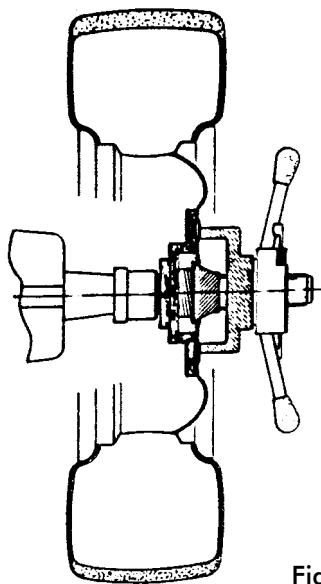


Fig. 1

1. Centering of the wheel with centering cones from the rim back and wheel mounting with clamping cap and quick-clamping ring nut from the rim front:

Push pressure spring over flange shaft. Choose appropriate centering cone (cone must enter the hub centre of the rim) and move cone against pressure spring. Hold the car wheel carefully against the centering cone and at the same time press clamping cap over flange shaft against rim. Tighten wheel with quick-clamping ring nut by hand (see figure 1). Do not use tools such as a hammer.

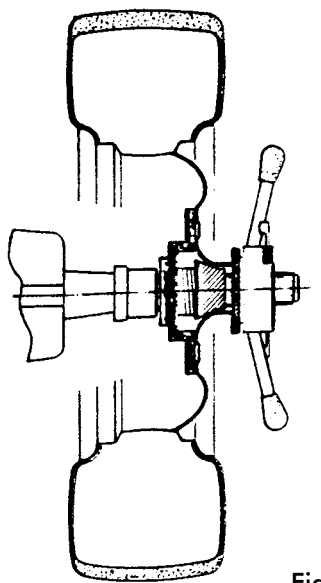


Fig. 2

2. Centering of wheel with centering cones from the rim back and mounting with pressure ring and quick-clamping ring nut from the rim front:

Centering of the wheel is carried out as described in Item 1. For fastening use a pressure ring instead of a clamping cap. This is a suitable method to center light-alloy wheels with a very high rim dome where the clamping cap does not reach the mounting surface or if the rim (because of stiffening ribs) is of irregular shape (see figure 2).

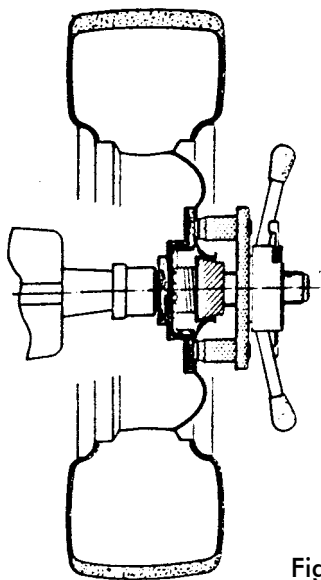


Fig. 3

3. Centering of wheel with centering cones from the rim back and mounting with centering disks and quick-fastening ring nut from the rim front:

Centering from the rim back is as described in Item 1. For fastening use a centering disk for the specific car type instead of a clamping cap. The centering disk's fixed bolts engage in the relevant rim fastening holes and presses the wheel on to the flange mounting surface via the quick-clamping ring nut (see figure 3).

4. Centering of the wheel with car-type-specific centering rings from the rim back and mounting with clamping cap and quick-clamping ring nut from the rim front:

Select appropriate centering ring (the centering ring must exactly enter the machined centre bore of the rim) and move it over the flange shaft. Move the centre bore carefully of the rim over centering ring and press simultaneously clamping cap over flange shaft against rim. Tighten wheel by hand with quick-clamping ring nut (see figure 4). Do not use tools such as a hammer.

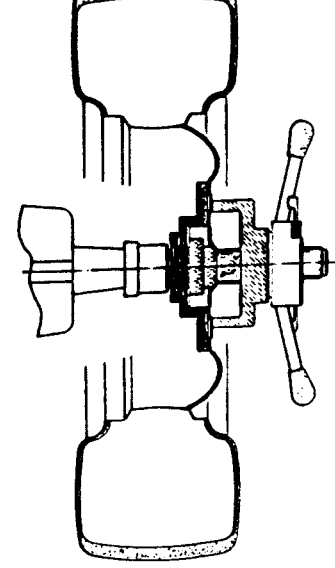


Fig. 4

5. Centering and mounting of wheel with centering disks and quick-clamping ring nut from the rim front:

Centering and mounting of car wheels without machined centre bore can be carried out with centering disks for specific car types. Hold the wheel against the mounting surface of the flange and push the appropriate centering disk - with centering bolt leading - over the flange shaft into the fastening bores of the rim. Tighten wheel by hand with the quick-clamping ring nut (see figure 5). Do not use tools such as a hammer.

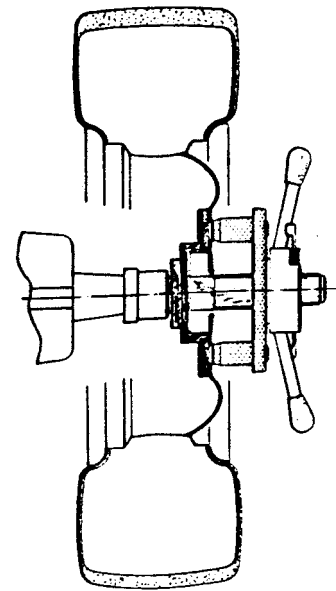


Fig. 5

6. Centering and mounting of wheel with centering cones and quick-clamping ring nut from rim front:

Only rarely used version. Suitable for wheels with low wall thickness in the machined centre bore area. Position wheel against mounting surface of flange and move appropriate centering cone over the flange shaft into the centre bore of rim (cone must enter hole). Tighten wheel by hand with quick-clamping ring nut (see figure 6). Do not use tools such as a hammer.

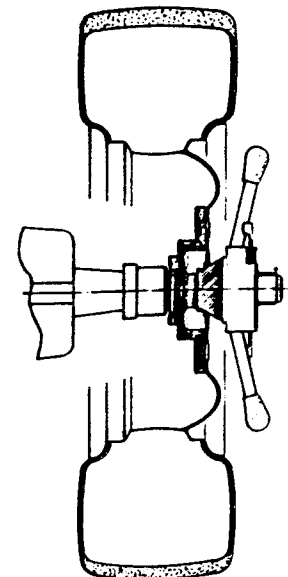
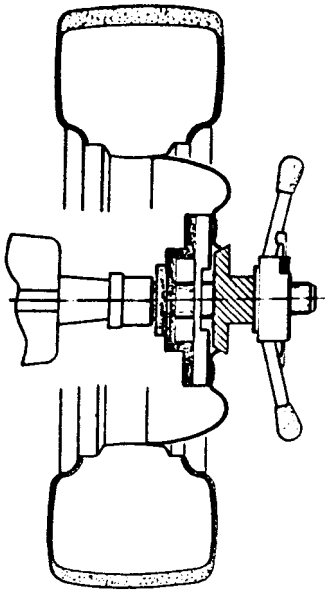


Fig. 6

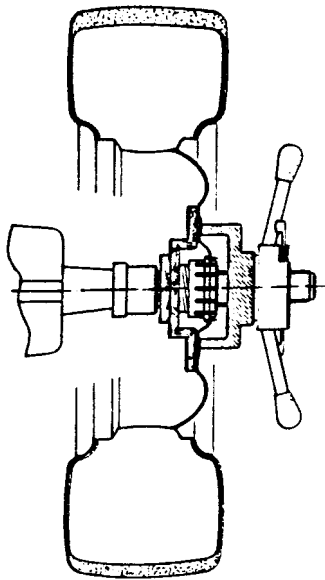
Fig. 7



7. Centering and mounting of light-truck wheel with centering cones and quick-clamping ring nut from rim front and wheel spacers from back side of rim:

since offsets of light-truck wheel rims are very large, the wheel spacer is inserted between flange mounting surface and rim back. Centering and mounting are carried out as described under Item 6 (see figure 7).

Fig. 8 **8. Centering** with self-adjusting centering spreader sleeves from the rim back and fastening with clamping cap or pressure ring and quick-clamping ring nut from rim front:



Optimum centering for all rims with machined centre bore. Push pressure spring over flange shaft. Push basic sleeve into appropriate spreader sleeve (specific type for car) and move it over the flange shaft. The bulge on the spreader sleeve must be at the front. Move the centre bore of the wheel rim carefully over the spreader sleeve and simultaneously press clamping cap or pressure ring over flange shaft against rim. Tighten wheel by hand with quick-clamping ring nut. Do not use tools such as a hammer.

During tightening the spreader sleeves will always adjust without play, so that tolerances between clamping middle shaft and the cylindrically machined rim centre bore will be absolutely zeroed during centering (see figure 8).

Special flanges for closed-centre wheels

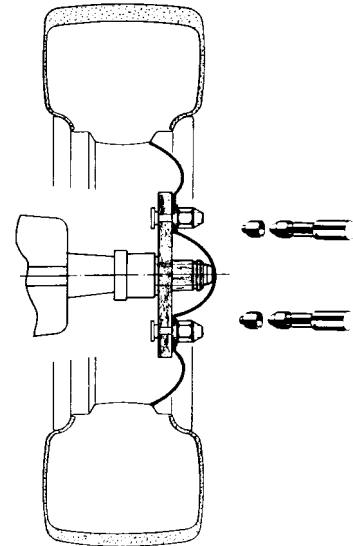
UNI (universal) flanges are used to clamp wheels on to the wheel-balancer for all closed-centre wheels with 3, 4 and 5-hole patterns as well as for all wheels with unmachined centre bores.

To avoid clamping faults as far as possible the tyre valve must be in face-downward position when clamping the wheel on to the flange and on to the car. Make sure that the mounting nut directly located next to the valve is always tightened first; then tighten all other nuts in a crosswise pattern. When the balancing procedure has been completed, fit the wheel to the car according to the same procedure.

9. Centering and mounting of the wheel with locating pins and double-ended conical nuts or quick-clamping cones:

Select required hole pitch circle pattern for the hole centre plate of the flange and insert correct number of locating pins. Secure locating pins from back with knurled nuts. Move wheel with mounting bores carefully over the locating pins up to the mounting surface of the flange. Tighten double-ended conical nuts with box wrench SW 22 on to the locating pins or use quick-clamping cones (see figure 9).

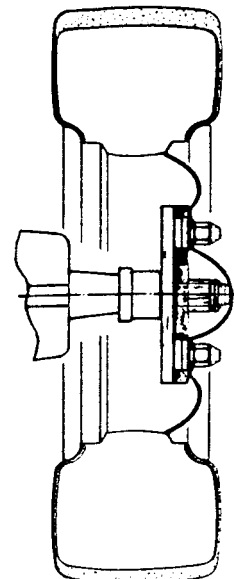
Fig. 9



10. Centering and mounting of the wheel with sliding bolts and double-ended conical nuts or quick-clamping cones:

Insert required sliding bolts into the flange guides and adjust to the desired hole circle pattern. The sliding bolts are fixed via ball-grids into the selected hole circle. Mounting of the wheel on to the flange is carried out as described under Item 9 (see figure 10).

Fig. 10



11. Centering and mounting of wheel with steplessly adjustable swivel pins and double-ended conical nuts or quick-clamping cones:

Unscrew swivel bolts with T-shaped Allen key and, depending on the situation, insert central disk for 3-hole mounting or the combination central disk for 4- and 5-hole-pattern mounting into the flange recess. Fasten loosely the required swivel bolts according to the numerical sequence chosen. For exact adjustment of the flange on the relevant hole-circle pattern measure the fastening bores of the flange with the hole pattern gauge and transfer it to the swivel bolts. Tighten swivel bolts with Allen key. Attaching the wheel to the flange is as described in Item 9 (see figure 10).

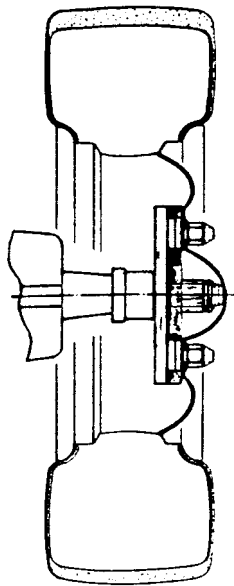


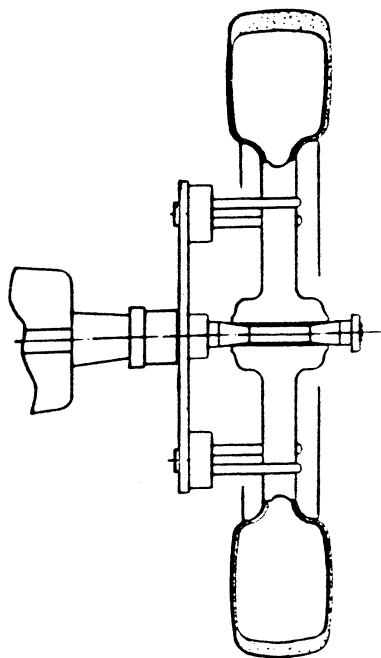
Fig. 10

12. Centering and mounting of the wheel with synchronous adjustable bolts and double-ended conical nuts or quick-clamping cones:

Open the flange as far as possible by twisting the rear cam plate against the front guide pulley and insert the required threaded bolts into the numbered guides. Synchronous adjustment of hole circles takes place when twisting the cams. The circles can be read from a dial mounted to the end face. Mounting of the wheel on to the flange is carried out as described under Item 9 (see figure 10).

Motorcycle Pro Bike flange

For all motorcycle wheels from 2" rim width with a centre bores from 14mm to 25mm (with special accessories also for centre bores from 10- and 12 mm).



12. Centring of wheel with centring sleeves or centring cones and mounting with knurled nut.

The two sprung driving-plate pin tighten and push the wheels running surface from outside.

Put a accuracy in fitting centring sleeve in the wheel hub and mount them on the outer wheels running surface. Make sure that the wheel rests on the centring sleeve shoulder, and not against the driving plate. If necessary, fit intermediate spacing sleeve. Insert second centring sleeve over centre shaft into wheel hub and secure wheel with large knurled nut.

For special wheel hubs, use the two centring cones instead of the centring sleeves.

Turn on master switch.

Adjust wheel-rim data with adjusting knobs (1 and 2) according to rim dimensions.

(If engraved rim dimensions are missing, use accessory rim width gauge W4/59.)

Move rim distance sensor head against rim flange; read off figure at sensor head and adjust with adjusting knob (3).

Read adjustments on digital displays (18).

Control lights (19) will flash.

For confirmation, press OK key (8).

Control lights (19) will go out.

Note:

"Inch" or "mm" display:

By turning the adjustment knobs clockwise or anti-clockwise (1,2) as far as the limit stop, digital rim setting displays (18) will either appear in "inch" or in "mm". Rim distance is always displayed in "mm".

Static wheel balancing (motorcycles) only requires adjustment of rim diameter (1) and wheel distance (3).

In this case rim width has no effect.

Wheel-rim data input protection:

If wheel-rim data input is changed after adjustment of rim data and confirmation of input with OK key (8), control lights (19) will flash as warning, and the drive of the wheel-balancer is shut down.

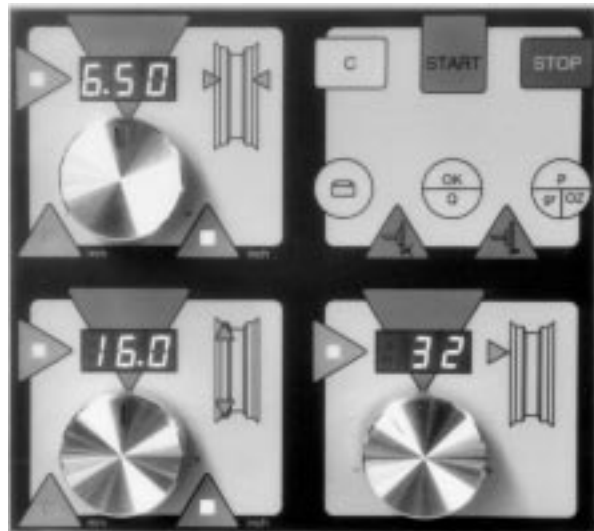
Correct rim data input or modify data in accordance with new rim dimensions and press OK key (8).

The machine is then ready for a new wheel-balancing run.

Activating and deactivating wheel-rim data input protection:

Keep pressing start key (5) and at the same time press reset key (4) briefly.

Rim data input protection is activated if digital display (12) indicates "1", - it is deactivated when display is "0".



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For weight positioning, select fastening points for balance weights on the rim with selector key (7).

After switching on the machine at the master switch, weight positioning is automatically programmed for attachment of drive-on weights on both sides of the rim flange.

Press selector key (7) once:

Computer program to attach adhesive weights on both sides of the rim flange.

Press selector key (7) twice:

Computer program for concealed attachment of adhesive weight on the outside of the wheel nave (front edge of adhesive weight flush with rear edge of flange disc).

Press selector key (7) three times:

Computer program for static wheel-balancing work only.
(Balance weight attached to half of the rim width.)

Press selector key (7) four times:

Computer program to attach the adhesive weight on the inside (rim shoulder) and the drive-on weight on the outside (rim flange).

Press selector key (7) five times:

Computer program to attach the adhesive weight on the outside (rim shoulder) and the drive-on weight on the inside (rim flange).

Press selector key (7) six times:

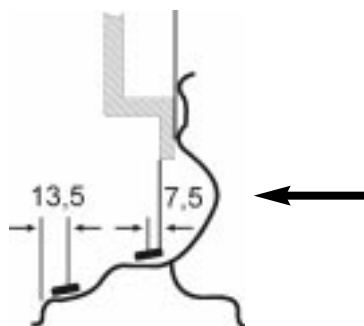
Computer program for concealed attachment of adhesive weight on the outside of the wheel nave (front edge of adhesive weight flush with rear edge of flange pulley) and of drive-on weight on the inside of the rim flange.

If selector key (7) is pressed again, the machine is re-set to the basic program - attachment of drive-on weights on both sides.

(Most frequently applied balancing method.)

Note:

Weight positioning

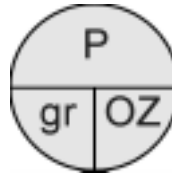


A rest imbalance may occur if weights are not attached as illustrated.



Selector key for gram or ounce display (9) and additional program-key function for matching program

Pressing the key enables you to read the display either in grams or ounces. For operator control the relevant LED will appear in the display field (14 or 15).



Inhibit key (8) and OK key

If this key is pressed continuously (app. 3 s), gram inhibit is deactivated and the machine is set ready for precision wheel-balancing.

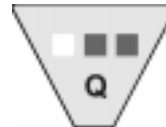


To set the gram inhibit threshold to 5g shutdown, press this key briefly; press the key again to set the threshold to 10 g deactivation.

At the same time, at any gram inhibit selected, the rounding-off program with display stages rounded up or down to 5 grams or 0.25 ounces is activated.

The relevant LEDs will appear to show the inhibit stages in the display field (16).

red	green	green
Precision wheel balancing without inhibit	5 g inhibit + rounding-off	10 g inhibit + rounding off



When any key is pressed, this is accompanied by an acoustic feedback signal.

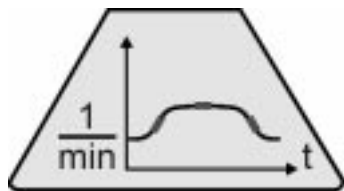
Position brake:

To facilitate identification of balancing positions, switch on the position brake. When turning the wheel to the balancing position it will be automatically decelerated briefly before reaching the exact balancing-position point. The wheel must then only be turned by a minimum amount until the green balancing-position signal LEDs flash.

Switching the position brake on and off

Continuously press stop key (6) and at the same time press the reset key (4) briefly.

The position brake is switched on if digital display shows "1", and switched off if display shows "0".



Close safety hood.

The machine starts automatically.

In display field (17) the function sequence is shown by LEDs.

The wheel-balancing process takes app. 3 s. After this period the machine automatically brakes and stops.

Note:

In Germany, regulations require a wheel safety hood with electric interlock.

The safety hood has to be closed before the machine drive can be switched on.

The two large red digital figures (12) for the interior and outside levels indicate the imbalance values.

The direction is indicated by large, red direction arrows (10) which become shorter during screwing-in towards the balancing point.

The red direction arrows will go out and the four green balancing-point signal LEDs (11) will come on as soon as the balancing point has been reached.

Make sure that the balance weight for both levels is attached in the 12-o'clock-position.

The wheel-balancing result can be checked by a test run.

The digital displays indicate "000" if wheel balancing is correct.



Stop key (6)

This key is used to interrupt the wheel-balancing process at any time.



Start key (5)

This key is used to re-start wheel balancing.

Balancing several wheels of same type

In this case rim data must only be selected once, after which an unlimited number of wheels of the same type can be balanced

If a measuring run was carried out with the wrong wheel-rim data, wheel-rim data correction is possible without making another measuring run necessary. Correction is carried out as follows:

Set the correct values for rim diameter, width or distance at the relevant adjusting knobs.

The recalculated correct balancing values are automatically shown on the display, without another measuring run being necessary.

Machine self-test

When switching on the machine or when pressing the reset key (4) all LEDs and the digital displays (8888) in the display field will light up for app. 2 s. This is accompanied by an acoustic signal indicating that the microprocessor is carrying out an electronic self-test.

The display lights go out when the electronic self-check is completed and the machine is ready for operation.

If faults are identified, a fault-code display on the digital display tells the operator that servicing is required.

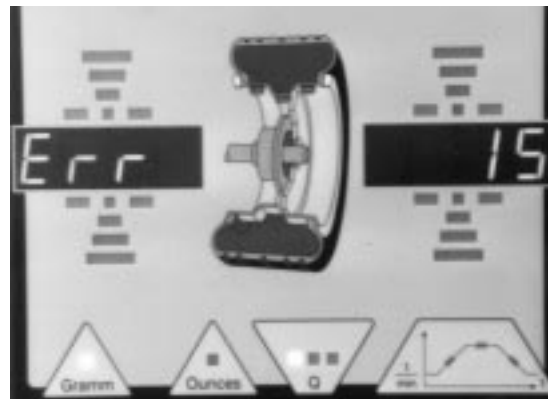
The fault-code display

- Error 1: Drive/photoelectric barrier defective (service)
- Error 2: Wheel speed unstable (service)
- Error 3: Incorrect direction of rotation
- Error 4: Residual imbalance too large (for zero alignment only) (service, if necessary)
- Error 5: Sensor/adjustment weight out of tolerance (for alignment with weight only) (service, if necessary)
- Error 6: Amplification channel out of tolerance or A/D converter defective (service)
- Error 7: NV-RAM defective (single circuit board) (service)
- Error 9: RAM defective (single circuit board) (service)
- Error 12: Safety hood not closed

Important:

Make sure that in case of repair or exchange work that only spare parts or standardized parts from the relevant **BEISSBARTH** spare parts list are used.

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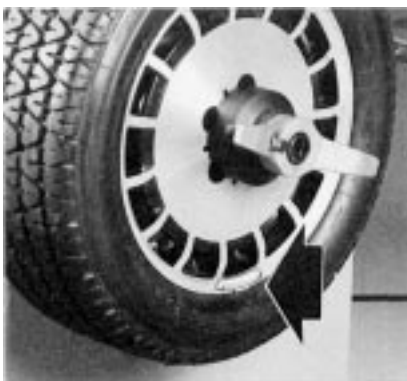
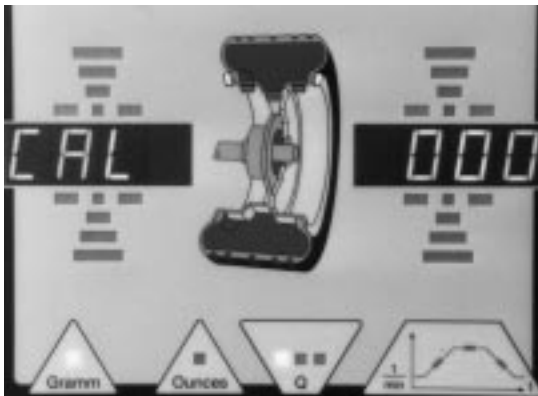
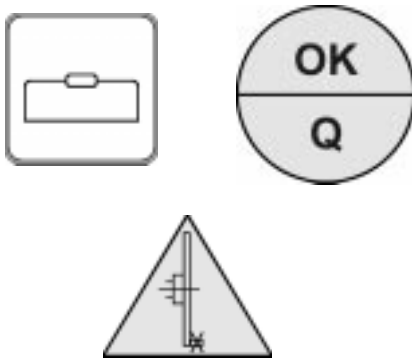


- Error 13: Potentiometer not in alignment position or defective (for potentiometer alignment only) (service, if necessary)
- Error 14: Wheel-rim data input unacceptable for alignment (for alignment with weights only)
- Error 15: Wheel-rim data input protection

Calibration of machine

Machine calibration with drive-on weight carried out on a regular commercial wheel (rim width 4" to 7", rim diameter 12" to 16").

Calibration of the machine is only required if display faults (direction or size) occur, and can be carried out by the operator without outside help.



1. Wheel-rim data input.
2. Zero-balancing of wheel. Residual imbalance must be below 10 g, otherwise fault-code display Error 4 is displayed during calibration.
3. Zero-calibration of wheel (without adjustment weight): Simultaneously press both keys 7 + 8 for app. 5 s until CAL 000 is displayed on the digital display. Close safety hood and start machine with start button (5). The digital display goes out when the run has been completed (app. 15 s).

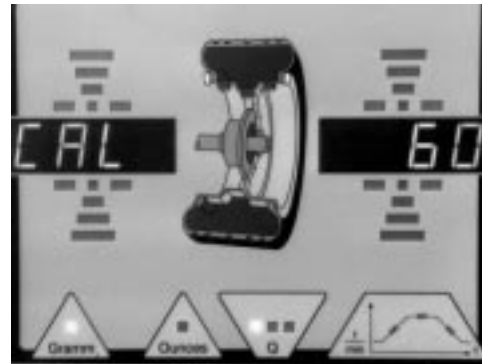
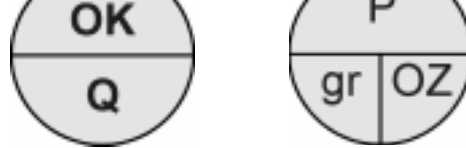
Open safety hood.

4. 60 g calibration with wheel. Check wheel data, (distance, rim width, rim diameter). Drive 60 g calibration weight into the rim's outer level and turn to precisely the 6-o'clock position.

Press keys 8 + 9 simultaneously for app. 5 s until CAL 60 is displayed on the digital display. Close safety hood and press start key (5). The digital display goes out after the run has been completed (app. 25 s).

This completes machine calibration.

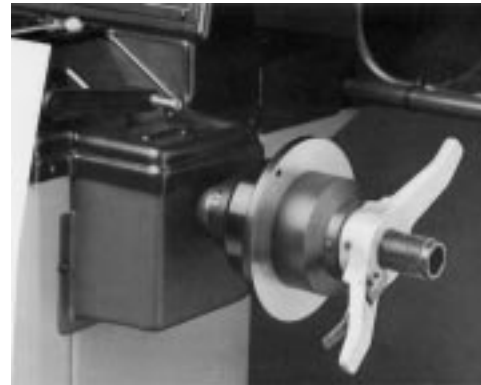
Important: After machine calibration, calibration of the wheel-balancing flange is also required.



Calibration of wheel-balancing flange

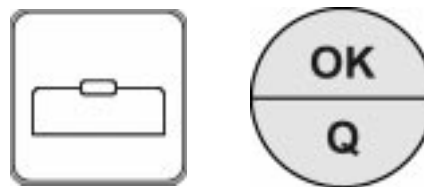
Calibration of the wheel-balancing flange is required in the following cases: initial operation, exchange of wheel-balancing flange or after machine calibration. Calibration can be carried out by the operator himself.

Mount complete wheel-balancing flange on the machine shaft.



Press keys 7 + 8 for app. 5 s until CAL 000 is displayed on the digital display. Close safety hood and start by pressing start key (5). The digital display goes out after the run has been completed (app. 25 s).

Any possible residual imbalance from the wheel-balance flange is then stored and compensated.

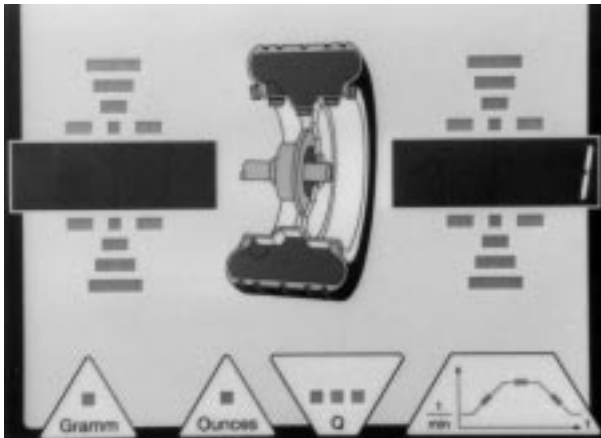


Matching program

From a static wheel component exceeding 30 gram, matching is highly recommended to compensate for radial runout and irregularity.

To activate matching stand-by, simultaneously press the matching key (9) and the reset key C briefly (4). Activation is confirmed when "1" comes up in the right-hand side digital display.

In this mode the machine signals during the normal wheel-balancing operation by flashing of the gram display that it is ready to carry out a matching procedure.

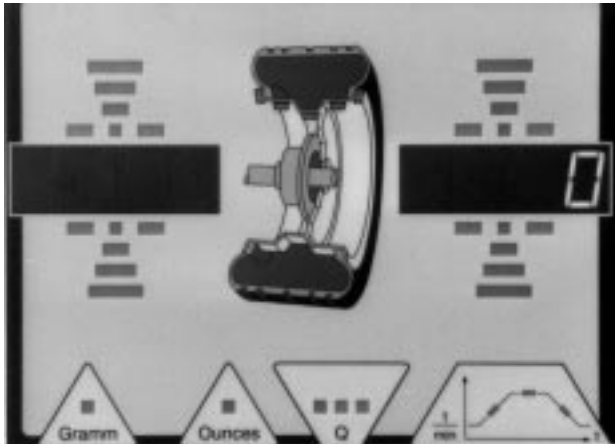


To cancel the matching stand-by, press the above keys again. This is confirmed by "0" appearing in the right-hand side digital display.

To call up the matching process immediately, press matching key (9).

Note:

Keys 8 and 9 are double-function keys: The OK function of key 8 is reserved for the matching program. During regular wheel-balancing it is used only for the inhibit function. To initiate the matching program, press key 9 briefly. The regular gram-ounce conversion for wheel-balancing requires operation of the key for app. 5 s.



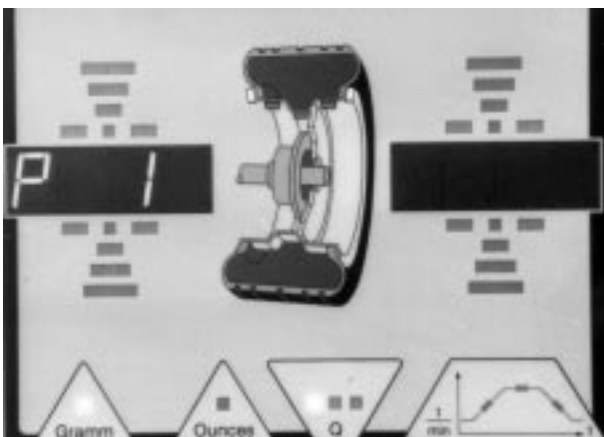
Matching procedure

Press matching key (9).

"P1" appears in the left-hand side digital display.

Clamp the empty rim on to the basic flange.

1. Screw in rim with the tyre valve vertically below wheel-balancing shaft (6 o'clock position).



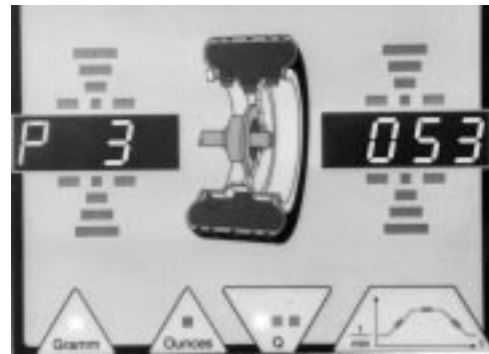
2. Press OK key (8).

"P 2" appears in the left-hand side digital display.

Start machine.

After machine has been braked, the right-hand

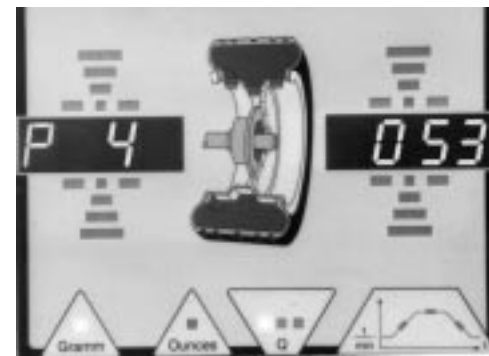
side digital display shows the static imbalance value of the rim, and "P3" is shown in the left digital display.



3. Mount tyre on rim and re-attach to wheel-balancing flange.
4. Screw in the wheel with the valve vertically below the wheel-balancing shaft (six o'clock position).

5. Press OK key (8).

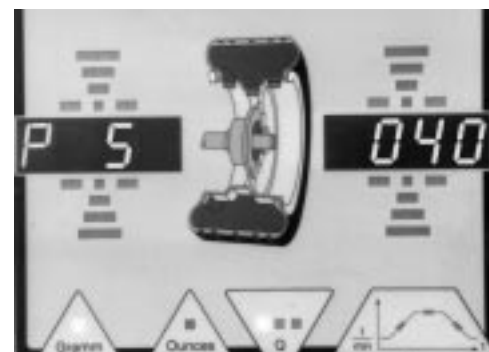
"P 4" appears in the left-hand side digital display.



Start machine.

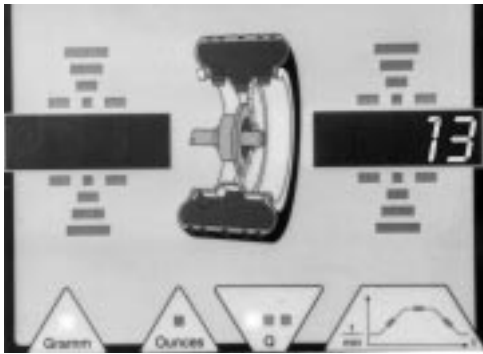
After braking, "P 5" appears on the left-hand side digital display. The static imbalance value is shown on the right digital display.

6. Screw in the wheel as indicated by the red arrow until the green signal LEDs appear.
Affix mark on the tyre, in perpendicular position over the wheel-balancing shaft.
Screw in tyre on to the rim so that the mark is flush with the rim's valve
7. Screw in the wheel, with valve vertically below the wheel-balancing shaft (6 o'clock position).





8. Press OK key (8).
"P 6" appears on the left-hand side digital display.

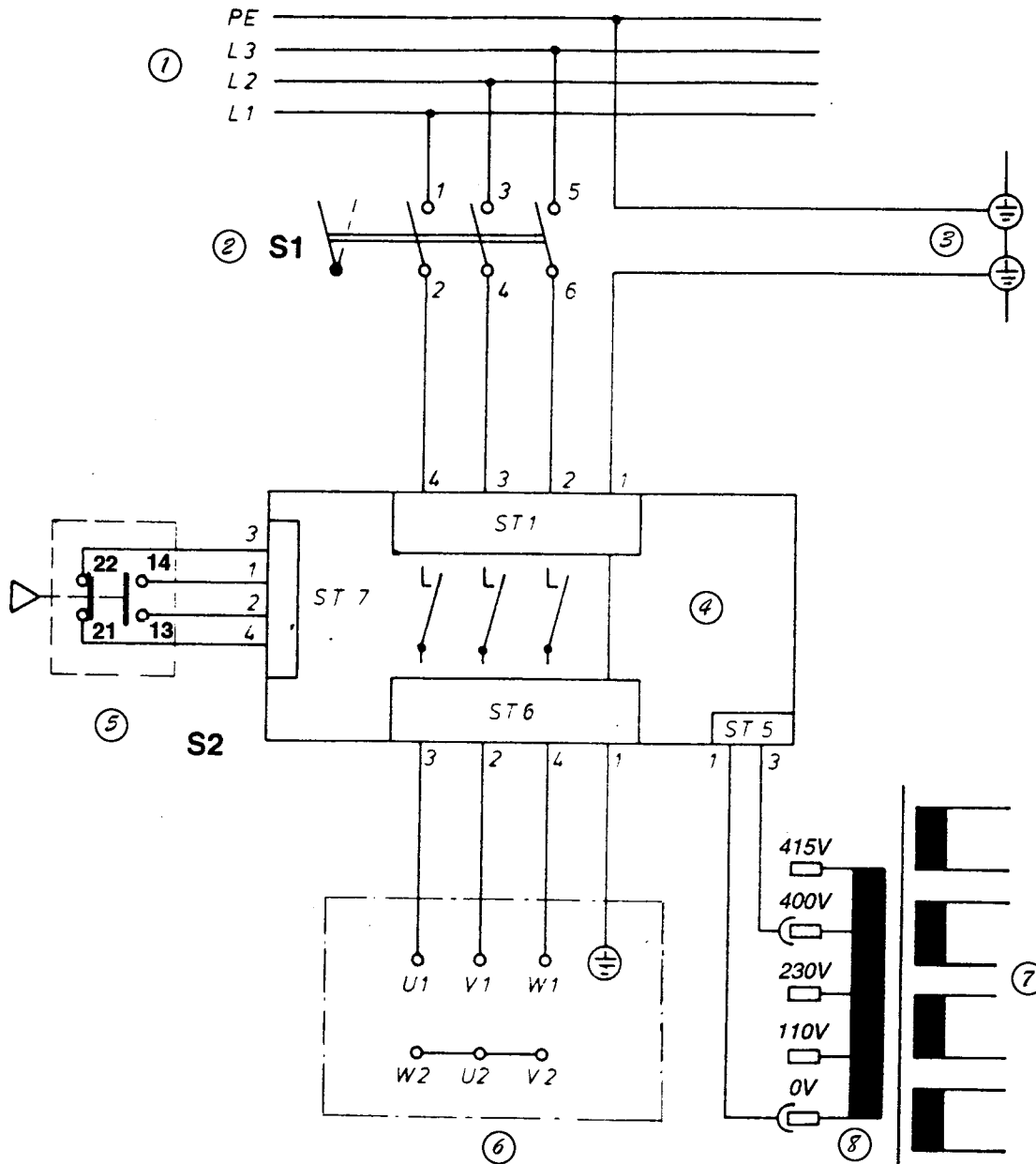


- Start machine.
After braking the wheel, the reduced matching static wheel component appears on the right-hand side digital display.



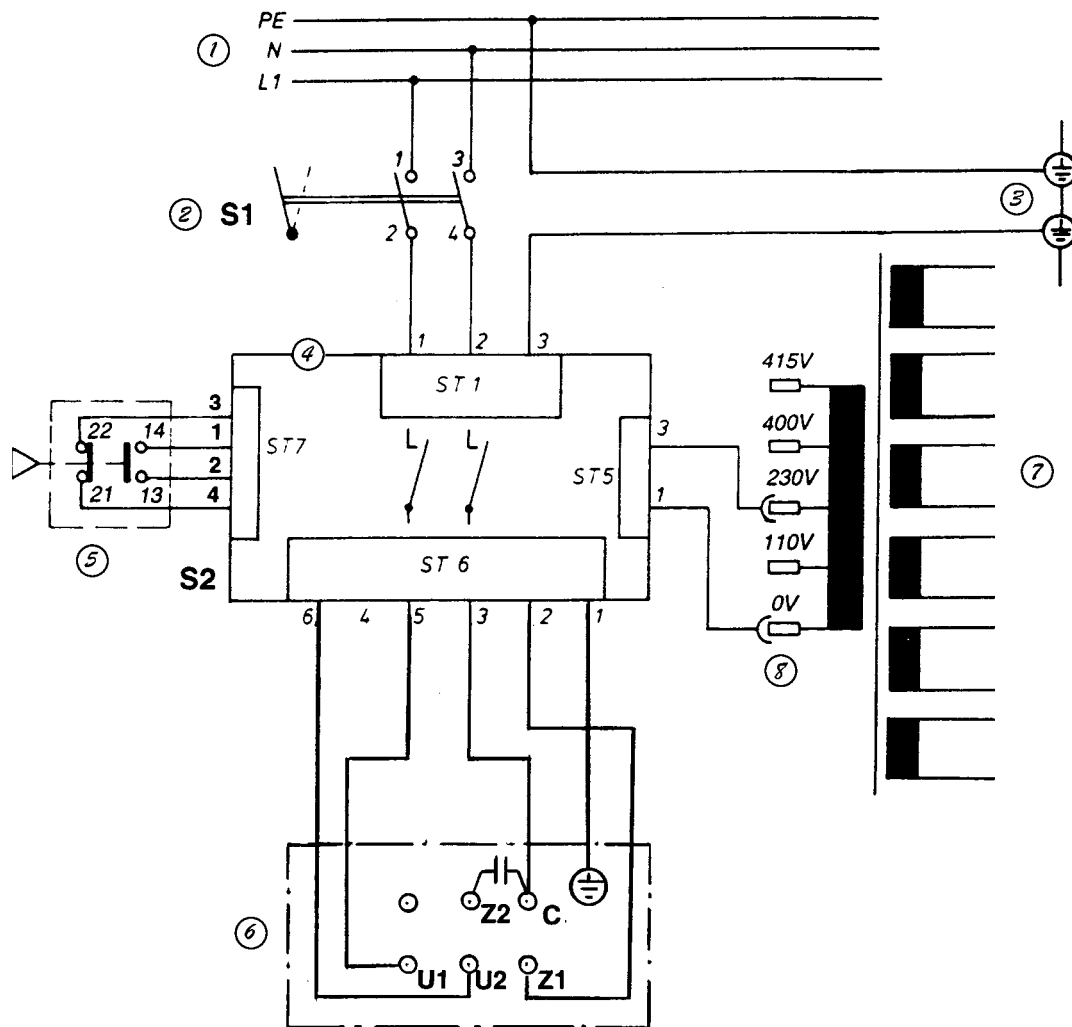
- Important:**
If correct alignment of the static imbalance components of wheel and rim has not been achieved, the machine automatically goes back to programme stage "P 5". Turning the tyre on to the rim will be required again.

- Note:**
By pressing key (9), matching can be interrupted at any time in order to call up the regular wheel-balancing program.



1. 3-phase mains supply
2. Master switch
3. Ground (earth) bar
4. Motor control board
5. Switch for safety hood (closed)
6. Motor terminal board
7. Power supply unit and electronics
8. Transformer

- a. Machine is factory-preset to 3-phase, 400 V.
- b. In start function the shaft rotates clockwise.
- c. At the power stage the power circuit to the mains transformer is to be plugged in according to the supply voltage.
- d. For 3-phase 230 V supply, switch to motor to Δ (delta), for 3-phase 400 V or 415 V to star.
- e. If direction of rotation is incorrect, exchange 2 phases at main supply.



1. 1-phase mains supply
2. Master switch
3. Ground (earth) bar
4. Motor control board
5. Switch for safety hood (closed)
6. Motor terminal board
7. Power supply unit and electronics
8. transformer

- a) Machine is factory-preset to single phase 230 V.
- b).In **start** function the shaft rotates clockwise.
- c) At the power stage, the power circuit to the mains transformer is to be plugged in according to the supply voltage.
- d) The motor's direction of rotation can be changed by interchanging connections 2 and 3 at the plug 6 (ST6) on the motor control board. (**Make sure first that the motor condenser is discharged**).

BEISSBARTH MT 730/731

EC-Declaration of Conformity



EG-Konformitätserklärung / EC-Declaration de Conformité
CE-Dichiarazione di conformita (CE-Declaration de conformidad
CE-Declaração de conformidade / EG-Conformiteitsverklaring
EC-försäkran om överensstämmelse

Hiermit erklären wir, daß die nachfolgend bezeichnete Maschine/Ausrüstung aufgrund Ihrer Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der betreffenden EG-Richtlinie(n) entspricht. Bei einer nicht mit uns abgestimmten Änderung der Maschine/Ausrüstung verliert diese Erklärung ihre Gültigkeit.

We hereby declare, that the following described machine/equipment as a result of its conception and construction in all our distributed versions, meets the relevant fundamental health and safety requirements of the respective EC guidelines. This declaration will lose validity if changes to the machine/equipment are made without our consent.

Nous déclarons par la présente que les machines et équipements décrits ci-après, sont conçus et construits pour l'ensemble de la production, au regard des règles fondamentales du cahier des charges européen. Cette déclaration perd sa validité si des changements sont opérés sur ces machines ou équipements sans notre consentement.

Con la presente dichiariamo che la seguente macchina/attrezzatura e il risultato della sua concezione e costruzione in tutte le sue versioni distribuite. E conforme ai fondamentali criteri di sicurezza e salute delle rispettive normative CEE. Questa dichiarazione perderà validità se la macchina/attrezzatura subirà modifiche senza il nostro consenso.

Por la presente, declaramos que la máquina/equipo descrito a continuación, como resultado de su concepción y construcción, en todas las versiones que distribuimos, cumple con las normas de salud y seguridad descritas en la guía de la CE. Esta declaración perderá validez si se realizan cambios en el equipo/máquina sin nuestro consentimiento.

Pelo presente declaramos que o equipamento/máquina abaixo descrito foi concebido e construído em todas as versões disponíveis, de acordo com as normas de segurança exigidas da CE. Esta declaração perderá validade se o equipamento/máquina forem alterados.

Hiermede verklaren wij dat de navolgende machine/apparatuur beantwoordt aan de EG-richtlijnen inzake eisen voor veiligheid en gezondheid zowel op grond van constructie en samenstelling als op grond van de door ons in het gelodigheidsindien zonder overleg met ons wijzigingen in de machine/apparatuur worden aangebracht.

Vi härmed intygar att följande maskin/utrustning överensstämmer med var ritning och konstruktion i alla var distribuerade typer, möter alla de krav på hälso- och säkerhetskrav i enlighet med EC-Riktlinjer. Denna deklaration gäller ej om maskinen/utrustningen ändras utan var vetskap.

Bezeichnung der Maschine/Ausrüstung: Machine/Equipment description: Description de la machine/équipement: Descrizione macchina/attrezzatura: Descripción máquina/equipo: Descrição máquina/equipamento:
Aanduiding van de machine/apparatuur:
Maskin/utrustning Beskrivning:

Radauswuchtmaschine / Wheel balancer / Equilibreuse de roues / Equilibratrice / Equilibradora
Equilibradora de rodas / Balanceermachine / Hjulbalancering

Typ.: microtec 730/ 731 (mt 730/ 731)

Hersteller-Nr.: Production No.: No. de série: Produzione No.: Producción No.: Número série: Fabrikaatnr.:
Tillverkningsnummer:

Fab.Nr.:

Gemäß den Bestimmungen der EG Richtlinien:

- **EG Maschinenrichtlinie (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG**
- **EG Richtlinie Elektromagnetische-Verträglichkeit (89/336/EWG) i.d.F. 93/68/EWG**
- **EG-Niederspannungsrichtlinie (73/23/EWG) i.d.F. 93/68/EWG**
- **EG-Richtlinie CE Kennzeichnung 93/68/EWG**

In conformance with the requirements of the following EC Guidelines:

- EC-Machine Standard (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG
- EC Guidelines for Electro-Magnetic Compatibility (89/336/EWG) - 93/68/EWG
- EC Low Voltage Guidelines (73/23/EWG) - 93/68/EWG
- EC Guidelines for CE Certification 93/68/EWG

En concordance avec les exigences des directives CE:

- **EC-Standard machine (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG**
- **Directive CE pour la compatibilit, electro-magnetique (89/336/EWG) - 93/68/EWG**
- **Directive CE pour la basse tension (73/23/EWG) - 93/68/EWG**
- **Directives pour la certification CE 93/68/EWG**

In conformita con le seguenti normative CE:

- CE-Macchina Standard (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG
- Normativa ce per compatibilita elettromagnetica (89/336/EWG) - 93/68/EWG
- Normativa per bassa tensione (73/23/EWG) - 93/68/EWG
- Normativa ce per certificazione 93/68/EWG

Conforme con los requerimientos de las siguientes Guías de la CE:

- **CE-Maquina estandar (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG**
- **Guía EC para compatibilidad electro magn,tica (89/336/EWG) - 93/68/EWG**
- **Guía EC para bajo volaje (73/23/EWG) - 93/68/EWG**
- **Guía EC para certificaciçn de la CE 93/68/EWG**

Em conformidade com os seguintes Regulamentos CE:

- CE-Maquina estandar (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG
- Regulamento CE para compatibilidade electro-magn,tica (89/336/EWG - 93/68/EWG
- Regulamento CE para a baixa voltagem (73/23/EWG) - 93/68/EWG
- Regulamento CE para o certificado CE 93/68/EWG

Conform de Bepaligen van de EG-Richtlijnen:

- **EG-Machinerichtlijn (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG**
- **EG Richtlijn elektromagnetische storings gevoeligheid (89/336/EWG) - 93/68/EWG**
- **EG Laagspannings-Richtlijn (73/23/EWG) - 93/68/EWG**
- **EG Richtlijn CE-Markering CE 93/68/EWG**

I enlighet med EC följande väglednings föreskrifter:

- EC Maskindirektivet (89/392/EWG) i.d.F. 91/368/EWG, 93/44EWG, 93/68/EWG 73/23/EWG
- EC vägledning för electro-magnetisk förenlighet med (89/336/EWG) - 93/68/EWG
- EC lag volts vägledning (73/23/EWG) - 93/68/EWG
- EC vägledning för CE certifikat CE 93/68/EWG

Angewandte harmonisierte Normen, insbesondere: Applied harmonious norms, in particular: Application de l'harmonie d'une norme: Norme particolari applicate: Normas aplicadas, en particular: Normas de harmonia particulares aplicadas: Toegepaste geharmoniseerde normen, in het bijzonder: Tillverkad i följande harmoniserande normer:

**EN 60204-1; EN 292-1; EN 292-2, EN 294
EN 50081 Teil 1; EN 50082 Teil 1; EN 55022 Kl.B**

Datum: Date: Data: Fecha:

09.08.1997

Hersteller-Unterschrift: Signature of the manufacturer: Signature du constructeur: Firma del costruttore: Firma del fabricante: Assinatura do fabricante: Handtekening van de fabrikant: Tillverkares signatur:

BEISSBARTH



ppa. D. Eberhartinger

Angaben zum Unterzeichner: Particulars of the undersigned: Fonction du signataire: Particolarità della contra-firma: Detalles del firmante: Cargo do responsável: Details van de ondertekenaar: Namnförtydligande

Prokurist

