



CE

ET 66

ET 66 M

Cod.445972A del 05/06

Italiano

Manuale d'uso

English

Operator's manual

Français

Manuel d'utilisation

Deutsch

Betriebsanleitung

Español

Manual de uso

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Español

Elaborazione grafica e impaginazione

Ufficio **P**ubblicazioni **T**ecniche

ET 66 - ET 66 M

operator's manual

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INTRODUCTION

The purpose of this manual is to furnish the owner and operator of this Corghi machine with a set of practical and safe instructions for the use and maintenance of the ET 66 and ET66M balancer. Follow all the instructions carefully and your balancer will assist you in your work and give lasting and efficient service in keeping with CORGHI traditions.

The following paragraphs define the levels of danger regarding the machine associated with the warning captions found in this manual:

DANGER

Refers to immediate danger with the risk of serious injury or death.

WARNING

Dangers or unsafe procedures that can cause serious injury or death.

ATTENTION

Dangers or unsafe procedures that can cause minor injuries or damage to property.

Read these instructions carefully before powering up the machine. Conserve this manual and all illustrative material supplied with the machine in a folder near the balancer where it is readily accessible for consultation by the machine operator. The technical documentation supplied is considered an integral part of the machine; in the event of sale all relative documentation must remain with the jack. The manual is only valid for the machine model and serial number indicated on the nameplate applied to the machine itself.



WARNING

Adhere to the contents of this manual: Corghi declines all liability in the case of actions not specifically described and authorised in this manual.

NOTE

Some of the illustrations in this manual have been taken from photographs of prototypes; the standard production model may differ slightly in certain respects. These instructions are for the attention of persons with basic mechanical skills. We have therefore condensed the descriptions of each operation by omitting detailed instructions regarding, for example, how to loosen or tighten the fixing devices on the machine. Do not attempt to perform operations unless properly qualified and with suitable experience. In case of need, please contact our nearest authorised Service Centre for assistance.

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TRANSPORT, STORAGE AND HANDLING

- Before installation the balancer must be transported in its original packing by inserting the forks of a pallet truck or lift truck in the relevant channels in the pallet, making sure that the machine is maintained in the position indicated on the outer packing (fig.1).

- Machine packing and shipping weight (with supplied kit):

	length mm	depth mm	height mm	weight Kg
ET 66	1350	930	1150	182
ET 66 M	1350	930	1150	195

- Ambient conditions in the place of storage:

- relative humidity between 20 and 95%
- temperature range from -10° to +60°



ATTENTION

Do not stack other goods on top of the packing or damage may result.

You can move the machine on its built-in wheels, even after it has been installed.

Before moving the machine:

- remove the power plug from the socket
- lower the castor wheel (G fig.4) located on the left side of the machine by turning the two relevant knobs (H fig.4) counter-clockwise.;
- stow the wheel lift in its rest position (locked);
- move the machine using handle B, fig.4.

Note for ET 66

If you need to move the machine frequently you can power it from an external 12V battery. This will require the special kit including the cables and clamps to connect the unit directly to a car battery or a cigar-lighter socket.

To lift the machine insert the forks of a pallet truck or lift truck under it so that the c/c centre is roughly aligned with the right side of the cabinet (fig.2). Alternatively you can place the machine on its original pallet, secure it using the original fixing devices and then lift the pallet, again using a pallet truck or lift truck.



ATTENTION

When moving the machine never apply force to the spin shaft.

INSTALLATION



WARNING

Take the utmost care when unpacking, assembling, and setting up the machine as described in this heading.

Failure to observe these instructions can lead to damage to the machine and injury to the operator or other persons.

Remove the original packing once you have positioned it as shown on the outside and **keep it intact for possible future transport.**

Choose the place of installation in strict observance of local regulations regarding safety in the workplace.

IMPORTANT: for correct, safe use of the equipment, users must ensure a lighting level of at least 300 lux in the place of use.



ATTENTION

If the machine is to be installed outdoors, it must be properly protected by a canopy roof.

Ambient conditions in the place of operation:

- relative humidity from 30% to 95% without condensation.
- temperature range from 0°C to +55°C



WARNING

The machine must not be operated in explosive atmospheres.

Place the machine in the chosen position and make sure the surrounding space is commensurate with the minimum clearances indicated in figure 3.

Main operating components (fig.4)

- A Distance gauge
- B Handle for moving the machine
- C Display panel with keypad
- D Weight holder tray
- E Brake control lever
- F Master switch
- G Castor wheel
- H Castor wheel raising/lowering knob
- I Wheel lift
- L Filter regulator assembly
- M 12V battery connector (**only for ET66**)
- N Battery/mains selector (**only for ET66**)
- O push-button valve for motor actuation (**only for ET66 M**)

During operation the machine must rest stably on the floor. You must therefore disengage the castor on the left side of the machine (G, fig.4) by turning the two knobs (H, fig.4) clockwise until the wheel detaches from the floor.

Fit the threaded hub on the spin shaft using the hex wrench.

NOTE FOR ET 66

If the machine is supplied with a kit for connection to an external 12V power source, fit the relevant connection cable as described below (see fig.5):

- remove the plastic weight tray;
- insert the cable connector from the outside toward the inside through the largest hole on the outside of the cabinet;
- remove connector Jsb from the card and in its place connect the connector from the kit;
- secure the power socket on the cabinet together with the change-over switch;
- refit the weight tray;
- set the change-over switch to either network or battery (N, fig.4), according to intended use;
- if you are using an external power source, connect one of the supplied cables to the socket (M, fig.4) for hook up to a battery or cigar-lighter socket.

To terminate the installation procedures the machine must be calibrated (see calibration heading).

ELECTRICAL HOOK-UP

On request, the balancer can be set up by the manufacturer to operate with the power supply available in the place of installation. The set-up details for each individual machine are given on the machine data plate and on a special label attached to the power supply connection lead.

NOTE FOR ET 66

If the machine is to be used exclusively with the external battery it is not necessary to connect it to the mains network.



WARNING

All electrical hook-up operations must be carried out exclusively by a qualified electrician.

- The electrical supply must be suitably sized in relation to:
 - absorbed power specifications indicated on the machine dataplate;
 - the distance between the machine and the power supply hook-up point, so that voltage drops under full load do not exceed 4% (10% in the case of start-up) below the rated voltage specified on the dataplate.
- The user must equip the machine with the following:
 - a dedicated power plug in compliance with the relevant electrical safety standards;
 - a suitable circuit-breaker (residual current set to 30 mA) on the mains connection;
 - power line fuses in accordance with specifications in the main wiring diagram of this manual.
 - a suitable earthing system installed on the workshop mains line.
- To prevent unauthorised use of the machine, always disconnect the mains plug when the machine is not used (switched off) for extended periods of time.
- If the machine is connected directly to the power supply by means of the main electrical panel and without the use of a plug, install a key-operated switch or

suitable lock-out device to restrict machine use exclusively to qualified personnel.



WARNING

For correct and safe operation, the machine must be suitably earthed.

NEVER connect the earth to a gas pipe, water pipe, telephone line or other make-shift system.

COMPRESSED AIR HOOK-UP



WARNING

Everything involved in the compressed air hook-up should only be done by specialised personnel.

- Hook-up to the shop compressed air circuit should insure a minimum pressure of 8 bar. Lower pressure could compromise the correct performance of pneumatic equipment.
- The machine is fitted with a universal connector and therefore no other special or additional fitting is called for. A high pressure rubber air hose (int. dia.6 mm; ext. dia.14 mm) should be pushed all the way onto the connector and secured with a screw clamp supplied in the machine kit.

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SAFETY REGULATIONS

The equipment is intended for professional use only.



WARNING

Failure to observe these instructions and the relative danger warnings can cause serious injury to the operator and others. Do not power up the machine before you have read and understood all the danger/warning/attention notices in this manual. This machine must be used only by qualified and authorised personnel. A qualified operator is construed as a person who has read and understood the manufacturer's instructions, is suitably trained, and is conversant with safety and adjustment procedures to be adhered to during operations. Operators are expressly forbidden from using the machine under the influence of alcohol or drugs capable of affecting physical and mental capacity.

The following conditions are essential:

- the operator must be able to read and understand the contents of this manual;
- make sure the operator has a thorough knowledge of the capabilities and characteristics of this machine;
- keep unauthorised persons well clear of the area of operations;
- make sure that the machine has been installed in compliance with established legislation and standards;
- make sure that all machine operators are suitable trained, that they are capable of using the machine correctly and that they are adequately supervised during their work;
- do not touch power lines or the inside of electric motors or other electrical equipment until the power has been disconnected and locked out.
- read this manual carefully and learn how to use the machine correctly and safely;
- always keep this user manual in a place where it can be readily consulted when working with the machine and consult it whenever you are in need of confirmation or explanations.



WARNING

Do not remove or deface the safety Danger, Warning or Instruction decals. Replace any missing or illegible Danger, Warning or Instruction decals. Missing or damaged decals can be obtained at your nearest Corghi dealer.

- When using and carrying out maintenance on the machine observe the unified industrial accident prevention regulations for high voltage industrial equipment and rotating machinery.
- Any unauthorised alterations made to the machine automatically release the manufacturer from any liability in the case of damage or incidents attributable to such alterations. Specifically, tampering with or removing the machine's safety devices is a breach of the regulations for industrial accident prevention.



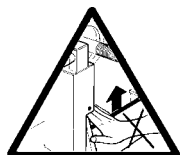
WARNING

When operating or servicing Corghi equipment do not wear ties, loose fitting clothes, necklaces or wristwatches and any other articles that could become entrapped by moving parts. Tie back long hair or cover with a scarf or a cap.

Key to warning and instructions labels



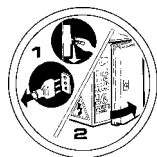
Never apply force to the spin shaft when moving the machine.



Keep hands away from the points indicated to prevent crushing injuries during the wheel raising and lowering operations.



Keep a tight hold on the wheel to prevent it falling during movements with the wheel lift.



Unplug the power supply cable before carrying out maintenance/assistance work on the machine.

GENERAL CHARACTERISTICS

- Single spin, fixed position flange car (in CAR set-up) and truck (in TRUCK set-up) balancing machine
- Wheel-mounted for easy transport
- Built-in pneumatic wheel lift for wheels of up to 150 kg
- Manual spin cycle (**only for ET66**)
- Motorised wheel spin (**only for ET66 M**)
- Low balancing speed
- Unbalance data acquired at variable speeds
- Manually operated pneumatic brake for stopping the wheel at the end of the spin cycle and immobilising the spin shaft
- Wheel guard not essential
- Kit for external 12V battery power source (optional) (**only for ET66**)
- 16 bit microprocessor control unit
- Unbalance values displayed in grams or ounces
- Illuminated digital read-out showing:
 - value and position of unbalance
 - selected programs
- Wide choice of programs for fast and intuitive use of the machine
- Balancing modes:
 - Standard dynamic balancing on both sides of the wheel
 - Static on one side of wheel
 - Alu for aluminium wheels
- General utilities programs:
 - Calibration
 - Diagnostics

TECHNICAL BRIEF

- Power supply voltage:
 - **ET 66** 115/230 V; 50/60Hz; 1ph (12V external battery optional)
 - **ET 66 M** 115/230 V; 50/60Hz; 1ph
- Overall power draw:
 - **ET 66** 10 W
 - **ET 66 M** 160 W
- Resolution:
 - truck wheels 10 gr (0.5 oz)
 - car wheels 1 gr (0.1 oz)
- Average spin cycle time
 - truck wheels (10"x22.5"): 16 sec
 - car wheels (5.5"x14"): 6 sec
- Shaft diameter: 46 mm
- Ambient temperature during operation: from 0 to 55°C
- Noise levels during operation: <70 dB(A)
- Machine dimensions (fig.5a):
 - width with wheel lift in stowed position: 1300mm
 - width with wheel lift fully extended: 1610mm
 - depth: 600 mm
 - height: 985 mm
- Truck wheel parameters:
 - rim width: from 4" to 20"
 - rim diameter: from 12" to 28"
 - max wheel/machine distance: 400mm
 - max wheel width: 800mm
 - max wheel diameter: 1320mm
 - max wheel weight: 150 kg
- Car wheel parameters:
 - rim width: from 1.5" to 16"
 - rim diameter: from 8" to 20"
 - max wheel/machine distance: 400mm
- Compressed air supply pressure: min 8, max 15bar
- Machine weight (without accessories):
 - **ET 66** 133 kg
 - **ET 66 M** 146 kg

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MACHINE KIT

The following parts are supplied together with the machine.

- weight clip pliers	code 900203841
- threaded hub	code 900238304
- caliper for measuring truck wheel width	code 900239556
- jubilee clip for rubber hoses 13 - 15	code 900403751
- 100 gram weight	code 900430573
- 300 gram weight	code 900439516
- hex wrench CH 12	code 900601771

OPTIONAL ACCESSORIES

The following accessories are available as optionals:

- Truck wheel centring flange	code 802239637
- Truck wheel centering cones	code 802245159
- Car wheel centring cones	code 802239638
- Quick-release flange for car wheels	code 802241153
- 20"-22.5" European trilex-unilex flange	code 802441616
- 20"-22.5" Dayton trilex-unilex flange	code 802443948
- 22.5"-24" Dayton trilex-unilex flange	code 802443949
- Hand spinner	code 802245933
- Hand spin knob for quick release car flange	code 802244344
- Hand spin knob for trilex-unilex car flange	code 802245061
- Kit for external 12V battery power source	code 802244796



ATTENTION

**For safety reasons, the Motorised ET66 Balancer must use the GTM lock-nut only.
Any use other than that described herein is considered improper and unreasonable.**

GENERAL CONDITIONS OF USE

The ET 66 balancer must be used **exclusively** to measure unbalance in terms of entity and position on truck and car wheels within the limits specified in the “Technical Brief”.



ATTENTION

Any use of the machine other than the described use is to be considered as improper and unreasonable.



WARNING

It is forbidden to start the machine without the equipment for blocking the wheel.



WARNING

Cleaning or washing the machine with compressed air or jets of water is forbidden.



ATTENTION

It is strictly prohibited to alter the pressure setting of the relief valves or the pressure limiter.

The manufacturer declines all liability for damage if the valves have been tampered with.



ATTENTION

It is advised not to use only CORGHI original tools for the work.



WARNING

Get to know your machine. The best way to prevent accidents and obtain top performance from the machine is to ensure that all operators know how it works. Learn the function and location of all commands.

Carefully check that all the commands on the machine are working properly.

To avoid accidents and injury, the machine must be installed properly, operated correctly and serviced regularly.

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USING WHEEL CENTRING ACCESSORIES

Flanges for centring standard truck wheels

The following components are available:

- Stepped flange with 220 and 280 mm diameter for rear pre-centring of bus and heavy haulage wheels. Stepped flange with 160, 176 and 200 mm diameters for rear pre-centring of truck, trailer and van wheels.
- Counter-flange with holes for installing taper pins.
- Standard set of five taper pins for centring wheels with fixing holes from 18 to 35 mm diameter
- Standard set of five "maxi" taper pins for centring wheels with fixing holes from 28 to 47 mm in diameter.

The procedure for wheel centring using the above components is as follows:

- fit the correct stepped flange for the type of wheel and secure it to the balancer flange by tightening the two screws;
- insert the RFT gauge pins into two adjacent fixing holes on the wheel (fig.6);
- read off the diameter of the hole circle and the number that identifies the corresponding holes on the counter flange (e.g. **225; 6**) on the gauge data plate scale relative to the number of fixing holes of the wheel in question (e.g. **10**);
- insert the correct taper pins (standard or maxi type) for the diameter of the fixing holes into the counter flange. The pins must be fitted so that the nuts are on the numbered size of the counter flange;
- fit the wheel on the spin shaft as described in the next heading (using the wheel lift) making sure that the centre hole of the wheel fits over the correct step on the flange.

Note

The rear fitment of the wheel on the stepped flange is a **pre-centring** operation and it is therefore quite normal to have some free clearance between the rim of the centre hole and the flange step.

Final wheel centring is achieved using the taper pins!

- Fit the counter flange by inserting the taper pins in the wheel fixing holes;
- clamp the wheel and the counter flange by tightening the spinner fully.

The following table shows wheel characteristics with indications of the corresponding pre-centring diameters on the stepped flange.

stepped flange ø (mm)	wheel centre hole ø (mm)	N° and ø of wheel fixing holes (mm)
160	161.1	6x205
	161	6x205
	163.5	6x222.3
	164.3	6x222.3
176	176	10x225
200	202	6x245
220	220.1	10x285.75
	221.4	10x285.75
	221.5	10x285.75
	221	8x275
	221	8x285
280	281	10x335

Flanges for centring TRILEX truck wheels

The following versions are available:

- Adapter flange for centring wheels with Trilex, Monolex and Unilex (tubeless) wheels diameter 20" and 22.5", angle 18°, **typical European standard wheels** (FISCHER triplex).
- Adapter flange for centring wheels with Trilex, Monolex and Unilex (tubeless) rims diameter 20" and 22.5", angle 28°, **typical US standard wheels** (DAYTON) though also present in Europe.
- Adapter flange for centring wheels with Trilex, Monolex and Unilex (tubeless) rims diameter 24" , angle 28°, **typical US standard wheels** (DAYTON).

Note

The diameters specified above refer to the outside circumference of trilex rims; the diameter of the wheel spoke disc is clearly different and may be identical for rims with different diameters (e.g. 20" and 22.5").

The procedure for centring a wheel using the above components is as follows:

- remove the threaded part of the shaft (threaded hub). This restricts horizontal movement of the wheel lift carriage (used to mount the wheel) and avoids possible interference between the wheel lift and the flange arms;
- fit the correct trilex flange for the type of wheel in question and secure it to the balancer flange using the two screws;
- install the wheel on the spin shaft as described in the following heading (using the wheel lift), taking care that the rim is inserted properly over the flange;
- secure the wheel on the flange by positioning the clamps appropriately on the rim edge and fully tightening the clamp screws to the flange spokes.

Note

Because of the assembly imprecision found in this type of rim, the wheel must be centred on the flange very carefully to obtain satisfactory balancing results.

Taper pins for centring truck wheels

The following components are available:

- medium double cone for centring wheels with centre hole:
 - from \varnothing 160 to \varnothing 165 and \varnothing 176 on small side;
 - from \varnothing 200 to \varnothing 202 on large side;
- large double cone for centring wheels with centre hole:
 - from \varnothing 220 to \varnothing 222 on small side;
 - \varnothing 281 on large side;
- double-sided distance ring for use with the above cones.

The procedure for centring a wheel using the above parts is as follows:

- fit the distance ring to the balancing machine so that the outer side is the smaller of the two, if you intend to use the medium cone, or the larger of the two if you are using the large cone;
- secure the distance ring to the balancer flange using the two screws;
- fit the wheel on the spin shaft as illustrated in the next heading (using the wheel lift).

Do not lower the wheel lift!

- fit the cone on the spin shaft with the side suitable for the diameter of the wheel hole facing toward the wheel;
- fit the spinner and tighten it fully so that the wheel is properly clamped;

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- lower the wheel lift.

Note

To obtain accurate wheel centring using the cones the centre hole of the wheel must not be deformed in any way!

Accessories for centring car wheels

The cones are used for balancing van, off-road vehicle and car wheels with centre hole diameter larger than the diameter of the shaft (46 mm). The following components are available:

- small single cone for centring wheels with centre hole from \varnothing 47.5 to \varnothing 64 mm;
- medium double cone for centring wheels with centre hole from \varnothing 60 to \varnothing 115 mm;
- large double cone for centring wheels with centre hole from \varnothing 110 to \varnothing 165 mm;
- adapter disk for centring holes with a rear mating diameter smaller than the flange diameter. This accessory is generally used in conjunction with the small cone;
- distance ring to use with van and off-road vehicle wheels with centre hole requiring the use of the large cone.

The centring procedure for a car wheel using the above components is similar to the procedure indicated for truck cones. Normally it is not necessary to use the wheel lift. The following parts are also available: universal quick release flange for centring car wheels without centre hole or with centre hole of smaller diameter than the spin shaft (46 mm).

This accessory is used as follows:

- remove the threaded part of the shaft (threaded hub);
- fit the flange to the balancer shaft and secure it with the flange fixing screw;
- insert the RFS gauge pins into two adjacent fixing holes on the wheel and measure the distance (fig.7);
- set up the same number of studs on the quick release flange as there are fixing holes in the wheel and at the same distance as the distance measured in the previous step. Use three studs for wheels with six fixing holes.
- Tighten the nuts on the crank mechanism adjuster pins until the cranks are adequately clamped.

To obtain correct centring do not tighten the nuts completely yet. This allows for a certain amount of adjustment during the following stage of clamping the wheel to the flange.

- Fit the wheel on the flange and secure it with the nuts and bushes (if necessary) that are most suitable for the type of hole;
- fully tighten the connecting rod pin nuts.

USING THE WHEEL LIFT

Main operating components (fig.8):

- A Carriage movement handle
- B Lift/lower lever
- C Lift platform

The wheel lift incorporated in the balancing machine serves for fast and fatigue-free mounting/demounting of truck wheels weighing up to 150 kg. For correct operation the compressed air supply pressure must be at least 8 bar. This circuit has a pressure regulator filter (L, fig.4) settable to a maximum value of about 10 bar.



WARNING

It is strictly prohibited to attempt to alter the pressure setting of the relief valves or the pressure limiter.

The manufacturer declines all liability for damage if the valves have been tampered with.



WARNING

The utmost attention is required during horizontal movement and lifting to avoid the risk of crushing hands or feet.



WARNING

During horizontal movements and lifting, hold the wheel in position with one hand to stop it falling.

Wheel mounting

- Fit the correct stepped flange or the distance ring for cones depending on whether you intend to centre the wheel using a flange or a cone;
- push lever E, fig.4, to engage the shaft brake (this will make the successive stages easier);
- set the wheel lift in its fully extended position using the relevant handle (A, fig.8);
- roll the wheel onto the lift platform (C, fig.8);
- raise the wheel by setting the control lever (B, fig.8) to UP, until the centre hole is aligned with the spin shaft;
- push the carriage toward the balancer so that the spin shaft enters the centre hole. If you are using the stepped flange the centre hole must be properly aligned with the most suitable step.

To ensure accurate centring do not lower the wheel lift before the wheel is properly clamped.

- Secure the wheel using the relevant counter flange (or cone) and the spinner;
- release the brake by pulling the brake lever (**only for ET66**),
- remove the brake locking handle (**only for ET66 M**),
- lower the wheel lift by setting the control lever to DOWN and then push it back to its rest position (fully retracted) so that it is well clear of the work area during the spin cycle.

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Wheel demounting

- Bring the wheel lift to its fully extended position by pulling the relevant handle (A, fig.8);
- raise the wheel lift by setting the control lever (B, fig.8) to UP until the lift platform is in contact with the tyre.

Important

At this point raise the lift platform (C, fig.8) a fraction more so that it takes a little of the weight of the wheel to adjust for the slight dropping at the time that the wheel is released from the spin shaft caused by the small amount of give in the pneumatic lift cylinders.

- Release the wheel by removing the spinner and the counter flange or the cone;
- pull the carriage outward until the wheel is clear of the spin shaft (so that it can be lowered);
- completely lower the wheel lift using the DOWN control lever;
- roll the wheel off the lift platform;
- push the wheel lift in so that it is properly stowed (home position).

SWITCHING ON THE BALANCER

Turn on the machine with the master switch on the left hand side of the cabinet (F, fig.4).




After the beep and the lamp test, the machine is ready to receive the wheel data.

Figure 9 shows the display panel with reference letters:

- | | |
|---|---|
| A | Inside plane display (left) |
| B | Outside plane display (right) |
| C | Inside plane position indicator |
| D | Outside plane position indicator |
| E | Keys and leds for selecting and displaying available programs |
| F | Key and led for input of wheel data |

TRUCK OR CAR WHEEL BALANCING

The machine can handle truck and car wheels. Since the balancing procedure is quite different for the two types of wheel (e.g. the number of spin revs), the machine should be set for the type of wheel to be balanced.

- Press the   keys until the LED next to TRUCK or CAR lights.
- Press  to confirm your selection.

The LED will stay lit as set and thus tell you at any time what type of wheel the machine is set up for.


The default setting when the machine is switched on is TRUCK.



WARNING



AS A SAFETY PRECAUTION DO NOT SPIN A TRUCK WHEEL WHEN THE MACHINE IS SET UP FOR "CAR"

WHEEL DATA INPUT

- Press key .

The machine is ready to receive the **WIDTH** (the corresponding LED will light)

- Measure rim width with the caliper (fig.10).


- Change the number shown on the right hand display using the   keys until the correct number is set.

WIDTH can be input in millimeters or a previous input can be converted from millimetres to inches. To do this press ENTER. To return to input in inches press






again.

A LED on the panel will light to identify the current unit of measurement (mm or inch).


- Press  again to confirm the input and to set up the machine for DIAMETER (the corresponding LED will light).

- Read the rim diameter on the tyre.





- Change the number of the right hand display with the  and  keys until the correct number is shown.

DIAMETER can be input in millimetres or a previous input can be converted into inches. To do this press ENTER. To return to input in inches press  again.


A LED on the panel will light to show the current unit of measurement (mm or inch).

- Press  a third time to confirm the input and set up the machine for **DISTANCE** (the corresponding LED will light).
- Move the distance gauge until it touches the edge of the inside rim channel as shown in fig.11.
- Read the machine/rim distance on the ruler.


GB

- Change the number shown on the right hand display by pressing the  and  keys until the correct setting is shown.
- If you hold down the  and  keys the numbers will spool up or down quickly and make data input faster.

Once the wheel data have been input correctly:

- press  to display the unbalance (recalculated for the new wheel data) or
- execute a new spin cycle.

UNBALANCE DISPLAY IN GRAMS OR OUNCES


Set up the machine for data display in grams or ounces by keeping key  pressed for approximately 5 seconds.

ROUNDING OFF

When the machine is switched on its default setting is for truck wheels. In this mode unbalance is displayed in units of 50 grams rounded up or down to the multiple of 50 nearest to the actual figure (or in ounces if the default setting has been changed to this).

When the machine is set up for car wheels, normally the unbalance will be displayed in units of 5 grams rounded up or down to the multiple of 5 nearest to the real figure (or in quarter ounces if the default setting has been changed to this).

In these instances the effective threshold is signalled by the "x5" LED lighting up on the display panel.

Press  to eliminate the threshold (the "x5" LED goes out) and the unbalance figures are displayed:

- in units of 10 grams (or half ounces) if the machine has been set up for truck wheels;
- in units of 1 gram (or tenths of an ounce) if the machine has been set up for car wheels.

 can be used to toggle between the two display modes.

WHEEL SPIN

- FOR ET 66 -

When the wheel is correctly clamped with the spinner the operator causes it to rotate by applying force to the spinner knobs (fig.12).

Car wheels installed using the quick release flange and trilex type truck wheels fitted with the special trilex flange are spun by first fitting the relevant spin handle over one of the wheel nuts (fig.13).

The correct direction of rotation, observing the wheel from the spin position, is **clockwise**. If the wheel is spun counter- clockwise the message "Rot Err" will be displayed.

During spin acceleration the position indicators will illuminate progressively to inform the operator that the wheel is approaching unbalance measurement speed; when the speed is reached the unit will emit a beep.

Once balancing speed has been reached stop spinning the wheel and allow it to coast so that the unbalance values can be read.

If the wheel is spinning too fast the message "Spd Hi" will be displayed and the machine will start measurements only when the message disappears.

To ensure the maximum precision of results do not subject the machine to mechanical stress while it is processing unbalance signals.

Wait for the beep that indicates the termination of measurement computations.

Brake the wheel using the brake lever (E, fig.4) located at the front of the machine.

Now clamp the wheel in the position indicated by the machine to facilitate the application of weights.

Pull the lever to release the brake.



WARNING

To avoid the risk of clothing or fingers getting caught up in the spinner arms during acceleration, move clear of the spin position as soon as you have released the spin knob.

Special conditions

- If the machine acquires incorrect signals during the spin cycle the message "GO Err" will be displayed indicating that the spin cycle must be repeated.
- If unbalance is greater than 1000 grams, the display will show only the part in excess of the first kilogram with three decimal points. For example: 1250 g is shown .2.5.0
- If calculated unbalance values are greater than the maximum permitted (999 in CAR mode and 1990 in TRUCK mode) the message "CCC" will be shown on the display.
- You can stop the spin during the data measurement stage by pressing F. In this case the message "ALt" will appear on the display.

GB

WHEEL SPIN

- FOR ET 66 M -

- Secure the wheel using the special device.
- Keep brake lever E fig. 4 lifted (brake disengaged).
- At the same time, keep motor actuation button M fig. 4 pressed.
- During the acceleration phase, the position indicators will progressively light up as the measurement speed is approached; a beep will signal when this speed has been reached.
- Once the speed has been reached, release motor actuation button M fig. 4, keeping brake lever E fig. 4 lifted.
- The completion of processing is signalled by a beep.
- Release the brake lever (brake engaged) situated in the front part of the machine.
- Using the brake lever, place the wheel in the position indicated by the machine.
- Apply the balance weights indicated by the machine.

If an excessively high speed is reached, the machine will display the message "Spd Hi"; acquisition will begin only when this message has disappeared.



WARNING

To obtain results of maximum precision, do not subject the machine to improper stress during processing of the unbalance signals.

Special conditions

- If the machine acquires incorrect signals during the spin cycle the message "GO Err" will be displayed indicating that the spin cycle must be repeated.
- If unbalance is greater than 1000 grams, the display will show only the part in excess of the first kilogram with three decimal points. For example: 1250 g is shown .25.0
- If calculated unbalance values are greater than the maximum permitted (999 in CAR mode and 1990 in TRUCK mode) the message "CCC" will be shown on the display.
- You can stop the spin during the data measurement stage by pressing F. In this case the message "ALt" will appear on the display.



WARNING

Before carrying out the "WHEEL SPIN" procedure, the operator must make sure that there are no exposed persons, in area A in fig. 17, at risk of:




- blows from any foreign bodies on the tyre, flung out during wheel spin;
- tangling and contact with the wheel clamping device and the wheel itself.

BALANCING PROGRAMS

Before starting a balancing cycle:

- mount the wheel on the shaft using the appropriate flange;
- remove any balancing weights, stones, dirt or other foreign bodies from the wheel;
- input wheel data correctly.

Dynamic balancing (standard)

- Press the   keys until the LED next to DYN lights.
- Press  to confirm the selection

This is the default balancing mode when the machine is switched on.

- Input the wheel data correctly.
- Spin the wheel.




For best balancing results do not subject the machine to mechanical stress while it is processing the unbalance signals.

- Wait until the wheel is automatically braked and displays A and B (fig.9) will show the unbalance values for the inside and outside of the wheel respectively.
- Choose the side you intend to balance first.
- Disengaging the brake, place the wheel in the position signalled by the corresponding indicator (C or D fig. 9).
- Brake the wheel by releasing the lever (E fig. 4), to facilitate subsequent application of the balance weight.
- Fit the specified weight at the 12 o'clock position.
- Disengage the brake by lifting the lever.
- Repeat this process for the other side of the wheel.
- Make a test spin to check the accuracy of balancing. If you do not find it completely to your satisfaction, change the amount of the weight and its position following the suggestions given in the "balancing check diagram" (fig.14).

Don't forget that especially when the unbalance is large, a slight error (a degree or two) in positioning the balancing weight can produce high residual unbalance (5-10 g for car wheels and 100 g for truck wheels).

Static balancing

A wheel can also be balanced with a single weight placed on one of its sides or at the centre of the channel. This is known as **static balancing**. Some dynamic out-of-balance may still be present (shimmy), and the wider the tyre, the more noticeable this will be.

- Press the   keys until the LED next to ST lights.
- Press  to confirm.
- Input the diameter (**static balancing does not require width and distance data**).
- Spin the wheel
- Wait until you hear the beep indicating that signal processing has been terminated and then brake the wheel. The static unbalance value is shown on display B (fig.9).
- Place the wheel in the position signalled by indicator D fig.9, disengaging the brake.
- Brake the wheel by releasing the lever (E fig. 4) to facilitate subsequent application of the balance weight.




GB

- Place the weight as indicated at the 12 o'clock position on either side or at the centre of the rim channel.
If you decide on the rim channel, remember that the diameter is less than the nominal and for good results, when you input the diameter value make it 2 or 3 inches less than the nominal value.
- Release the brake by pressing the lever.
- Make a test spin following the same procedures as for standard balancing.

Balancing aluminium wheels




To balance aluminium wheels we usually use self-adhesive weights and these are positioned differently from the clip weights used in standard balancing.

The 5 ALU programs for cars and the 3 for trucks consider the various positions for the weights (fig.15) and provide correct unbalance values using the **nominal** wheel data input for aluminium rims.

- Press the   keys until the LED next to ALU lights.
 - Press  as needed to scroll through the ALU programs available (the weight positions will be highlighted on the rim illustration on the display).
 - Input the **nominal** wheel data.
If the WIDTH you input is less than 4" or the DIAMETER less than 11", the message "Alu Err" may appear. This means that the width and diameter input on the basis of the positions of the weights, are insufficient for the ALU program selected.
 - Follow the procedures explained under the sections on Standard Balancing.
- Some slight residual unbalance may remain at the end of the test spin due to the considerable difference in shape found in rims with the same nominal diameters. To counter this change the value and position of the weights in accordance with the "balancing check diagram" (fig.14) until you have as accurate a balance status as you can get.

CALIBRATION PROGRAM FOR TRUCK WHEELS

This operation must be performed when you feel that the machine is out of tolerance or when it calls for self-calibration by displaying the message Err CAL on the display when it is set up for truck wheels.

- Set the machine in truck balancing mode (LED next to TRUCK is lit).
- Mount **an average size and balanced truck wheel (or one with fairly limited out-of-balance)**
- Input all the wheel data accurately
- Press the   keys until the LED next to CAL lights.
- Confirm with .
- Lift the brake lever.
- Rotate the wheel to the point denoted by the position indicator and by the appearance of the value "300" (or 10" if 'ounce' mode is selected) in the display.
- Release the brake lever.
- Attach a 300 g (or 10 oz) sample weight to the OUTSIDE of the wheel rim, positioning at 12 o'clock exactly.
- Make a first spin and wait for the message "End Sp1" to appear before braking the wheel.

Important: spins may take longer in the calibration program than during normal operation.

The wait can be reduced by starting the spin gently, accelerating gradually and interrupting as soon as the correct data acquisition speed is reached.

- Once the wheel is at standstill, remove the sample weight and rotate the wheel to the point denoted by the position indicator and by the appearance of the value "300" (or 10") in the display.
- Attach the 300 g (or 10 oz) sample weight once again to the OUTSIDE of the wheel rim, at 12 o'clock exactly.
- Make a second spin and wait for the message "End CAL" to appear before braking the wheel.

At the end of this spin you will get a beep as a calibration OK signal; otherwise one of the following error messages will be displayed:


- "**Er3 CAL**" if the calibration procedure has been performed incorrectly. In this case repeat the procedure making sure that the standard weight is applied correctly.
- "**Er4 CAL**" if calibration has been performed with a wheel with excess unbalance. In this case reduce the unbalance of the wheel and then repeat the calibration procedure
- "**Err 13**" if calibration has been performed with the inside wall of the wheel positioned at a distance from the machine that is not sufficient to provide accurate calibration.

In this case you must perform the calibration routine with a different wheel or using a suitable distance ring to alter the wheel-machine distance.

The self-calibration program ends by displaying the unbalance value for the wheel (disregarding the 300 g standard weight).




GB

NOTES

- At the end of the calibration routine **remove the reference weight from the wheel.**
- If you wish to interrupt the self-calibration program at any time simply press  and you will return to the previously selected program.
- **THE ABOVE CALIBRATION PROCEDURE IS VALID FOR ALL TYPES OF TRUCK WHEELS.**

CALIBRATION PROGRAM FOR CAR WHEELS

This operation must be performed when you feel that the machine is out of tolerance or when it calls for self-calibration by displaying the message Err CAL on the display when it is set up for car wheels.

- Set the machine in car balancing mode (LED next to CAR is lit).
- Mount **an average size and balanced car wheel (or one with fairly limited unbalance)**
- Input all the wheel data accurately
- Press the   keys until the LED next to CAL lights.
- Confirm with .
- Proceed as described above for truck wheel calibration but in this case **use a 100 g (3.5 oz) standard reference weight.**
- **THE ABOVE CALIBRATION PROCEDURE IS VALID FOR ALL TYPES OF CAR WHEELS.**

DISPLAY MESSAGES

The machine is able to recognise various error states and machine statuses, which it communicates to the operator by means of display messages.

Error messages

Err CAL	Calibration error. Run the calibration program.
Err3 CAL	An error has been generated during execution of the calibration program. Make sure you have fitted the correct standard weight and then repeat the program.
Err4 CAL	Attempt to calibrate the machine using a wheel with excess unbalance. Balance the wheel (or at least reduce the unbalance) and repeat the calibration program.
Err 7	The machine cannot currently activate the program requested. Run a spin cycle and repeat the request.
Err 13	Attempt to perform calibration with incorrect wheel- machine distance. Repeat calibration after fitting a spacer ring to alter the distance or use a different wheel.
Err 28	Encoder error. If this message appears frequently contact your service centre.
GO Err	Acquisition of non-repetitive signals during a spin. Make sure that the machine is resting properly on the floor and repeat the spin taking care not to jolt the machine during signal acquisition.
Err 16	Motor temperature too high. Wait before attempting to perform another wheel spin operation (do not turn off the machine) (only ET66M).
Alu Err	Incorrect wheel data have been input for an ALU program. Correct the data.
Spd Hi	Spin speed is too high. Allow the wheel to decelerate and the message will automatically disappear.
Rot Err	Wheel has been spun in counter-clockwise direction.

Status messages

CAL [GO]	Calibration spin
GO Alu	Spin with ALU program selected
St Alu	Static balancing selected
CCC CCC	Unbalance values are greater than 999 grams for a car wheel or 1990 grams for a truck wheel.
End Sp 1(2)	End of 1st (2nd) calibration spin.
End CAL	End of calibration routine (end of 3rd spin)
ALt ALt	Key F has been pressed to interrupt signal acquisition.

GB

BALANCING ACCESSORY EFFICIENCY

This check permits you to make sure that wear and tear has not altered the mechanical tolerances of flanges, cones, etc. beyond certain specific limits.

A perfectly balanced wheel, removed and remounted in a different position, must not give unbalance greater than 10 grams for a car wheel or 100 grams for a truck wheel.

If the unbalance is higher check all the accessories carefully and renew any items that are dented or worn such as bent flanges and so forth.

Always remember that if you are using a cone to centre the wheel on the shaft, perfect results can never be obtained if the centre hole in the rim is not perfect, i.e. off-centre or out of round; in such cases better results will be obtained when the wheel is centered with the rim holes.

A last important point: any difference between the way the wheel is mounted on the car and on the balancing machine will result in a degree of unbalance. This can only be corrected by on-vehicle balancing with a finishing balancer to complement the work of the fixed balancing machine.

TROUBLE-SHOOTING

The following list indicates a series of possible faults that the user can remedy if the cause is among the various alternatives suggested. In all other cases it will be necessary to request the intervention of your nearest Corghi service centre.

The machine fails to switch on and the master switch indicator lamp is not lit

No power at electrical socket

- ➡ Check that mains power is present
- ➡ Check the efficiency of the electrical system in the tyre shop

The plug on the machine power cord is faulty

- ➡ Check the plug and renew it if necessary

The mains/battery selector is set to "battery" but the battery is either disconnected or discharged (only for ET66)

- ➡ Connect the battery to the balancer with the cable supplied and check that the battery is properly charged

The machine fails to switch on but the master switch indicator lamp is lit

One of the fuses on the circuit board is blown (F1, F2 or F3)

- ➡ Renew the fuse

The mains/battery selector is set to battery but the battery is not connected (only for ET66)

- ➡ Set the selector to "mains" or connect the battery and check that it is properly charged.

The machine is on, but when the levers are operated the wheel does not move (only ET66M)

Failure of supply to pneumatic system

- ➡ Check that there is air in the pneumatic circuit, and that the pressure is correct.

Motor breakdown

- ➡ Call in CORGHI technical service.

Microswitch incorrectly positioned

- ➡ Call in CORGHI technical service.

The balancing machine gives non-repetitive unbalance data

The machine was jolted during a spin

- ➡ Repeat the spin taking care not to jolt the machine during data reading

The machine is not resting stably on the floor

- ➡ Check that the machine is located stably and shim to level it if necessary

The wheel is not clamped properly

- ➡ Tighten the spinner properly

Multiple spins are needed to balance a wheel

The machine was jolted during a spin

- ➡ Repeat the spin taking care not to jolt the machine during data reading

The machine is not resting stably on the floor

- ➡ Check that the machine is located stably and shim to level it if necessary

The wheel is not clamped properly

- ➡ Tighten the spinner properly

The wheel data input are incorrect

- ➡ Enter the correct wheel data

The machine is out of calibration

- ➡ Perform the calibration procedure



WARNING

The “Spare parts” handbook does not authorise the user to carry out work on the machine with the exception of those operations explicitly described in the user's manual, but enables the user to provide the technical assistance service with precise information, in order to reduce delay.

GB

MAINTENANCE



WARNING

Corghi declines all liability for claims deriving from the use of non-original spares or accessories.



WARNING

Before making any adjustments or performing maintenance, disconnect the electrical supply from the machine and make sure that all moving parts are suitable immobilised.

Do not remove or modify any parts of this machine except in the case of service interventions.



ATTENTION

Keep the work area clean

Do not clean the machine with compressed air or jets of water.

When cleaning the area take steps to avoid raising dust as far as possible.

- Keep the balancer shaft, the spinner, the cones and centring flanges clean. These components can be cleaned using a brush soaked in environmentally friendly solvents;
- Handle cones and flanges with care to avoid the risk of dropping them and causing damage that would affect centring precision.
- When not in use store cones and flanges in a place where they are protected from dust and dirt.
- Keep the wheel lift ways clean to facilitate sliding and lifting movements. Do not oil or grease the ways.
- The pressure limiter/filter has a semi-automatic condensate drain system. This device opens automatically whenever the compressed air supply to the machine is interrupted.
Condensate must be drained off manually (button A, fig.16) when the level is higher than the mark X (fig.16).
- Use ethyl alcohol to clean the level window.
- Calibrate the machine at least once every six months.

DEMOLITION

If the machine is to be scrapped, remove all electrical, electronic and plastic components and dispose of them separately as provided for by local legislation.

RECOMMENDED FIRE-EXTINGUISHING DEVICES

When choosing the most suitable fire extinguisher consult the following table:

	Dry combustibles	Inflammable liquids	Electrical fires
Water	YES	NO	NO
Fuam	YES	YES	NO
Dry chemical	YES*	YES	YES
CO ₂	YES*	YES	YES
YES*	<i>Use only if more appropriate extinguishers are not on hand and when the fire is small.</i>		



WARNING

The indications in this table are of a general nature. They are designed as a guideline for the user. The applications of each type of extinguisher will be illustrated fully by the respective manufacturers on request.

GLOSSARY

Balancer FLANGE

Disk that mates with the disk of the wheel mounted to the balancer. The flange also serves to keep the wheel perfectly perpendicular to its axis of rotation.

BALANCING CYCLE

Sequence of operations performed by the user and the machine, starting from the start of the wheel spin to the time that the wheel is braked to a standstill after the unbalance signals have been acquired and the relative values calculated.

CENTRING

Procedure for positioning the wheel on the spin shaft with the aim of ensuring that the rotational axis of the wheel is aligned with the centre of the shaft.

Centring FLANGE (accessory)

Device serving to support and centre the wheel. Also keeps the wheel perfectly perpendicular to its axis of rotation.

The centring flange is mounted to the balancer shaft by means of its centre hole.

CONE

Conical components with centre hole which, when inserted on the spin shaft, serves to centre wheels with centre holes whose diameter is between maximum and minimum values.

DYNAMIC BALANCING

Operation in which unbalance is corrected by the application of two weights, one on each side of the wheel.

GB

SELF-CALIBRATION

A procedure whereby suitable correction coefficients are calculated by starting from known operating conditions. Self- calibration improves the measurement precision of the machine by correcting, within limits, calculation errors that may arise due to alteration of the machine's characteristic over the course of time.

SPIN

Procedure starting from the action that causes the wheel to rotate and the successive free rotation of the wheel.

SPINNER

Device for clamping the wheel to the balancer. The spinner features elements for engaging to the threaded hub, and lateral pins that are used to tighten it.

STATIC BALANCING

In static balancing only the static component of unbalance is corrected. This is achieved by fitting a single weight - usually at the centre of the rim channel. The accuracy of this system increases as the width of the wheel decreases.

THREADED HUB

Threaded part of the shaft that is engaged with the spinner to clamp the wheel. This component is supplied disassembled from the machine.

UNBALANCE

Non-uniform distribution of the wheel mass that results in the generation of centrifugal force during rotation.

GENERAL ELECTRICAL LAYOUT

Fig.18

AP1	Main electronic card
AP2	Search card
BP1	Internal pick-up
BP2	External pick-up
FU1 (AP1)	F 1A fuse
FU2 (AP2)	T 0.1 A fuse
M1	Motor
QS1	Main switch
SA1	Mains/battery selector
SQ1	START microswitch
XS1	Power plug
XS2	Battery connector

PNEUMATIC LAYOUT

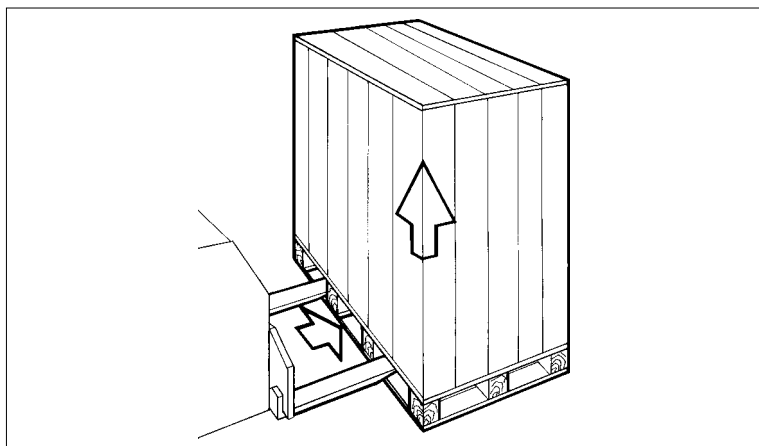
ET 66 - Fig.19

ET 66 M - Fig.20

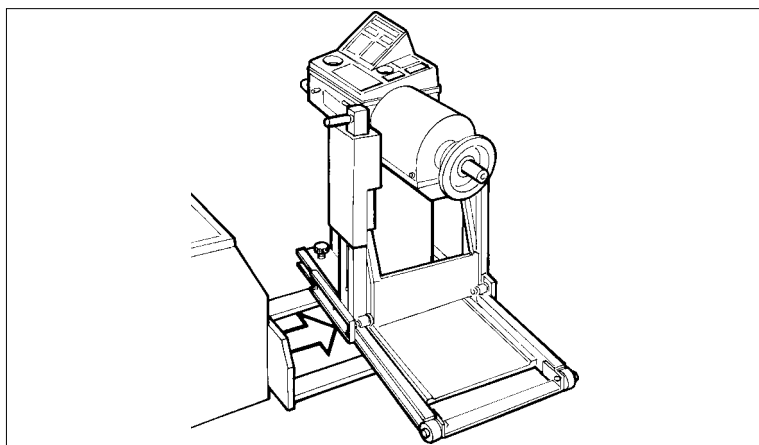
1	Female quick coupling
2	Regulator filter
3	Pressure gauge \varnothing 40 - 12 bar 1/8" rear attachment
4	5-way - 3 position valve
5	Silencer filter
6	WL device single acting cylinder
7	Silencer filter
8	3-way (5-way ET 66 M) - 2 position valve
9	Brake device single acting cylinder
10	Throttle connection \varnothing 0.65 mm
12	3-way - 2 position valve

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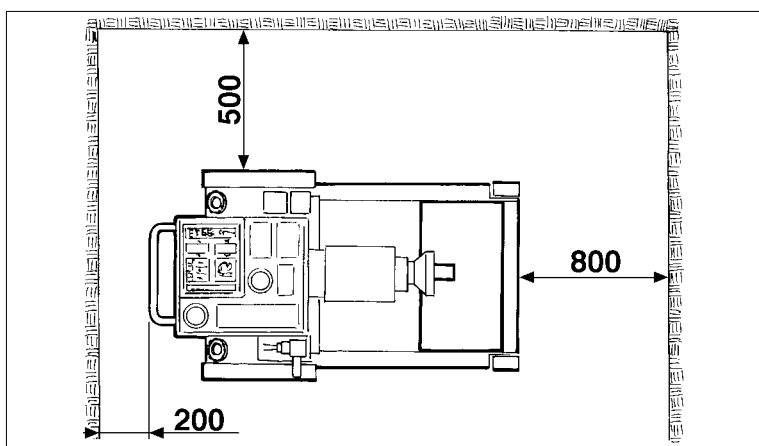
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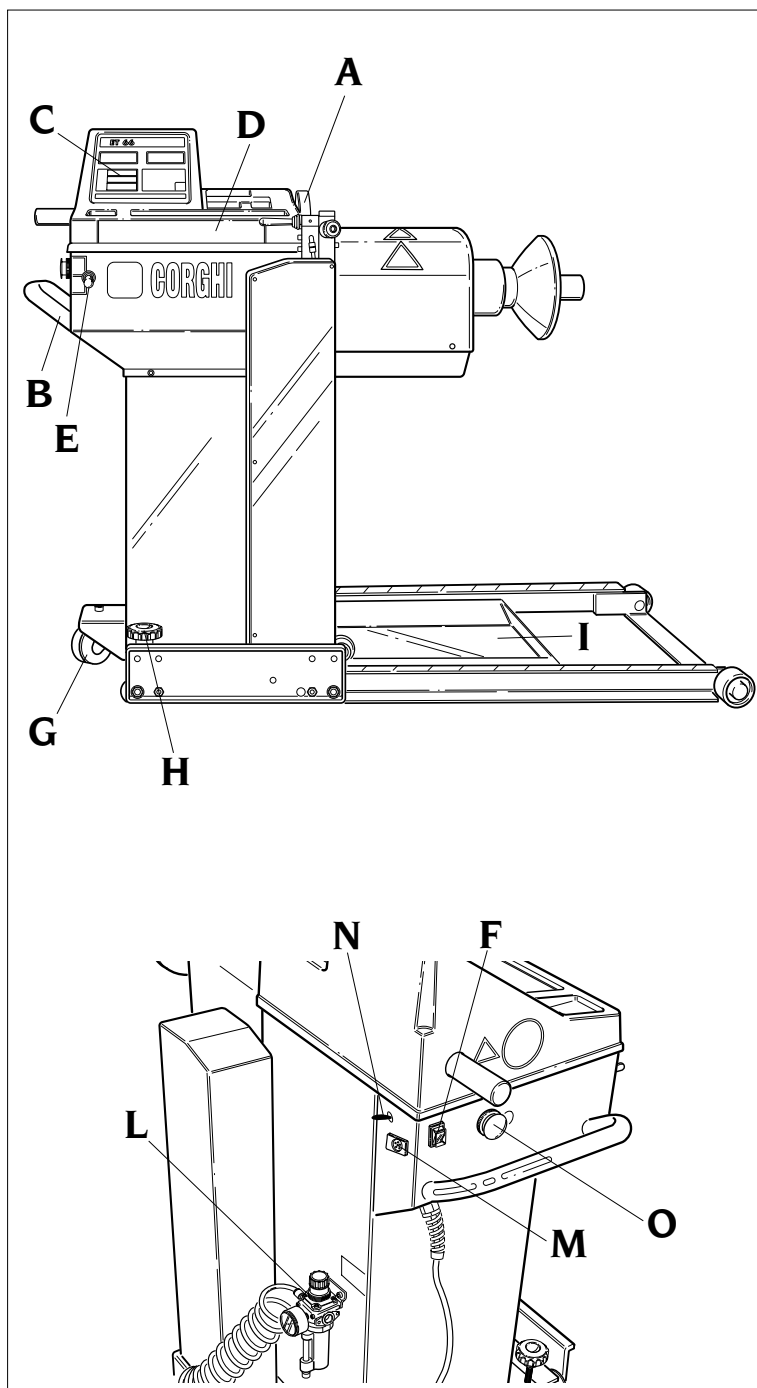


2



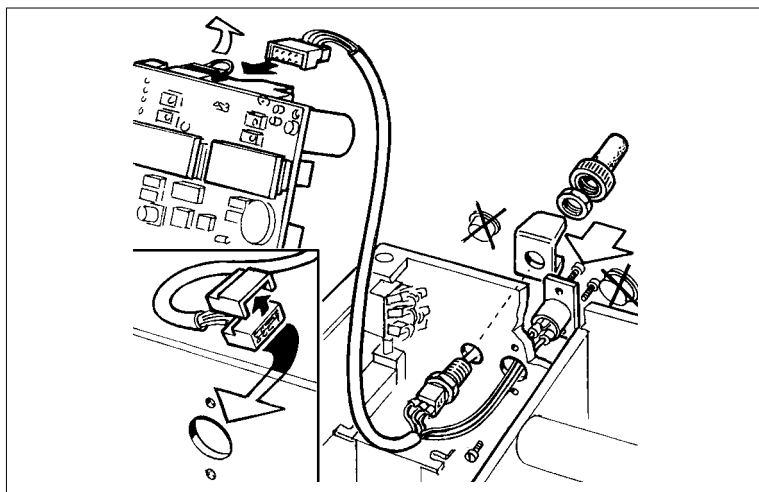
3



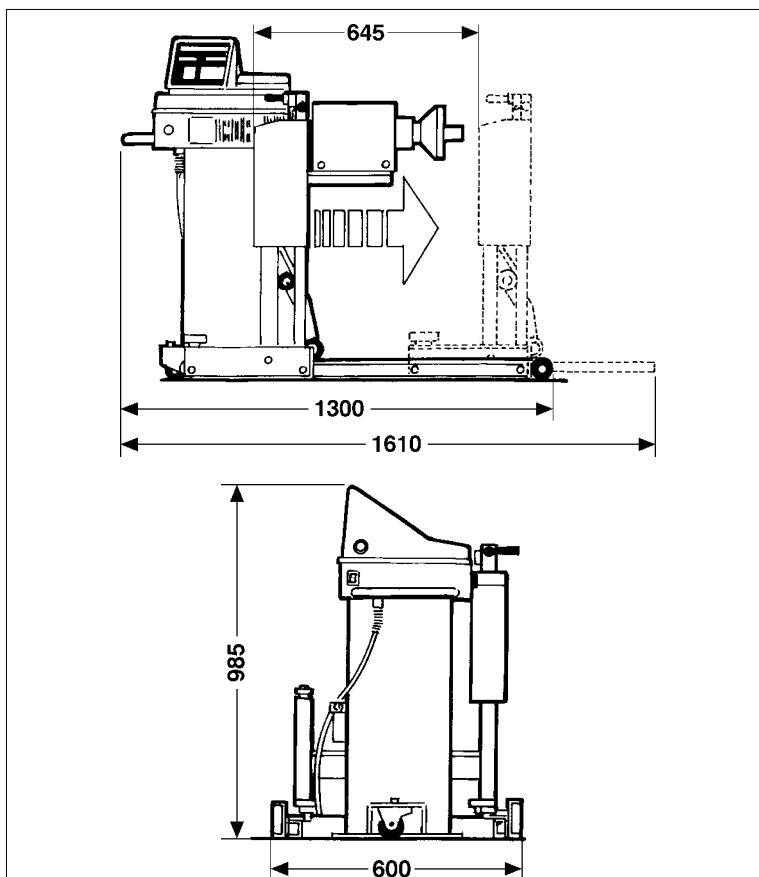


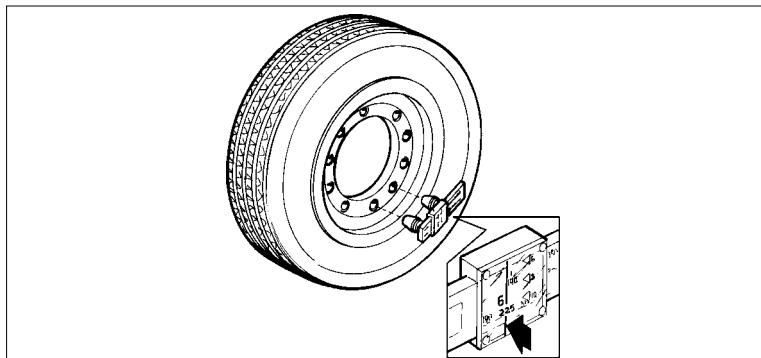
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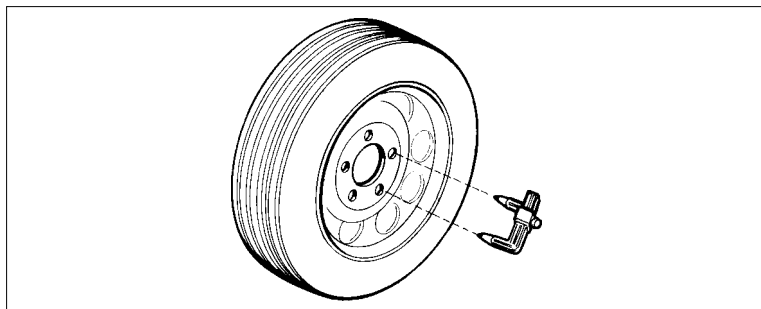


5a

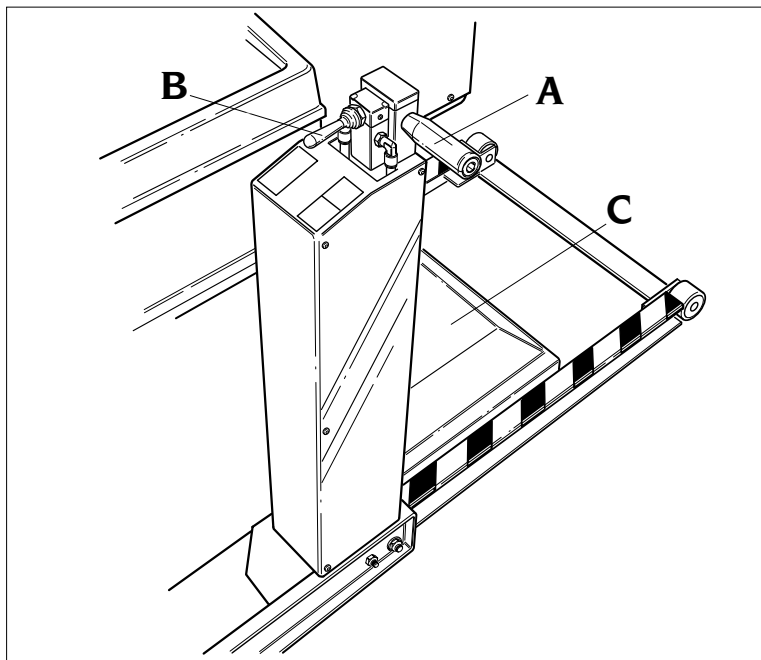




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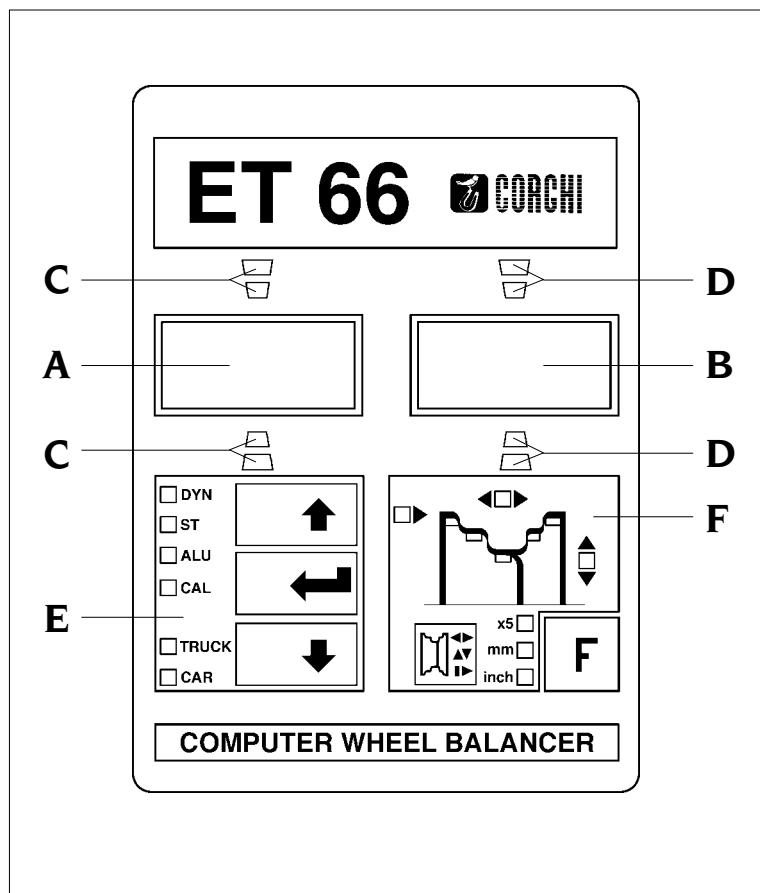


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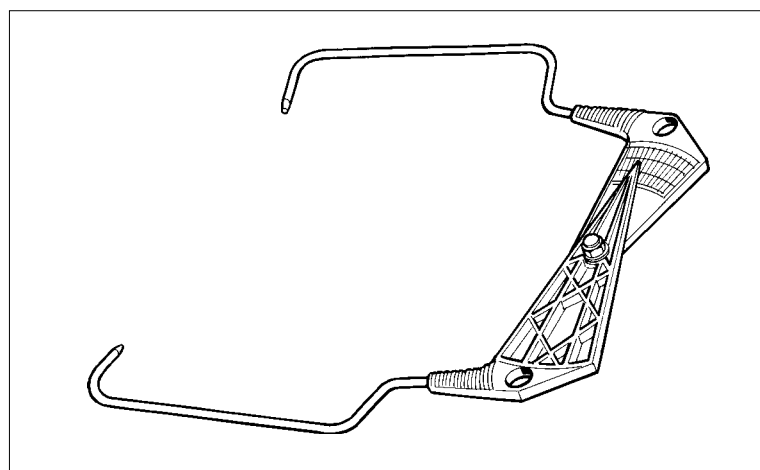


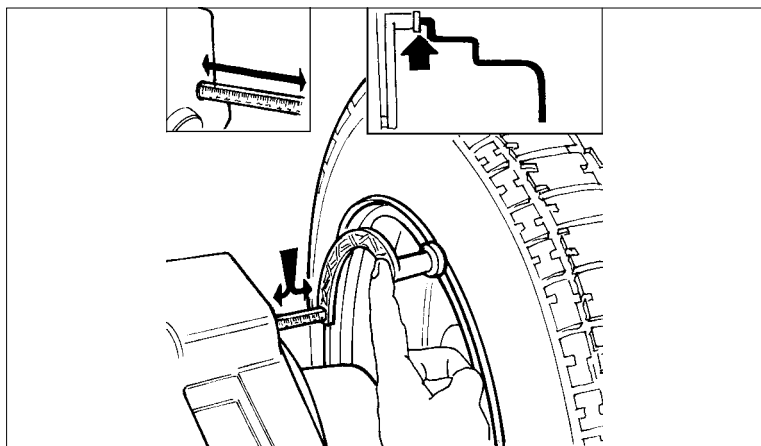
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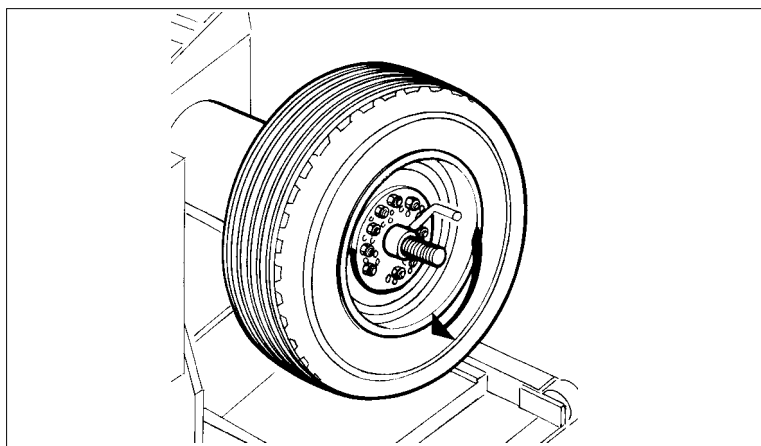


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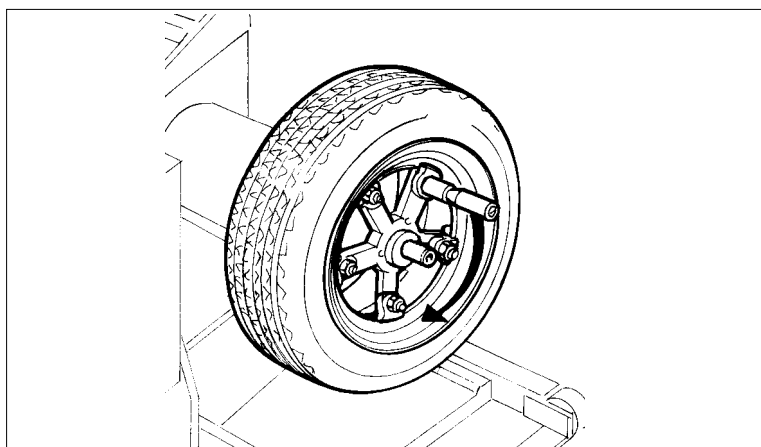




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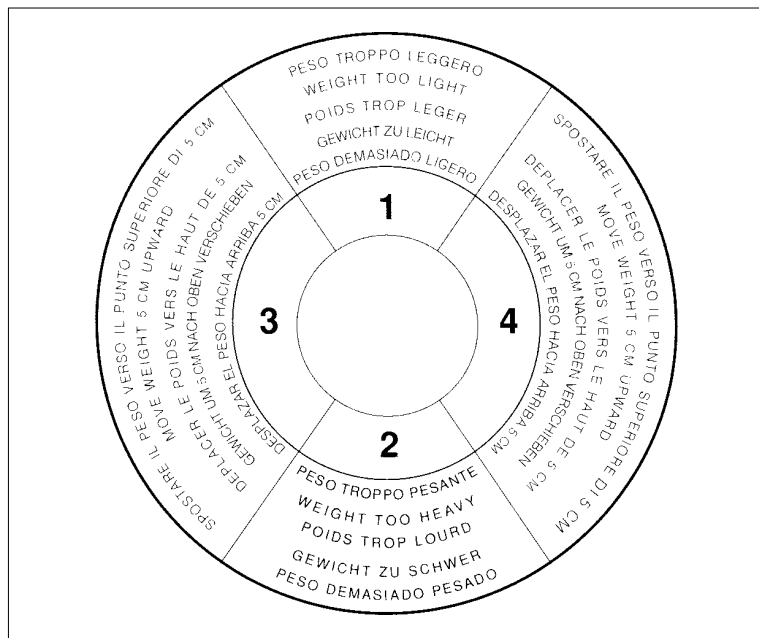


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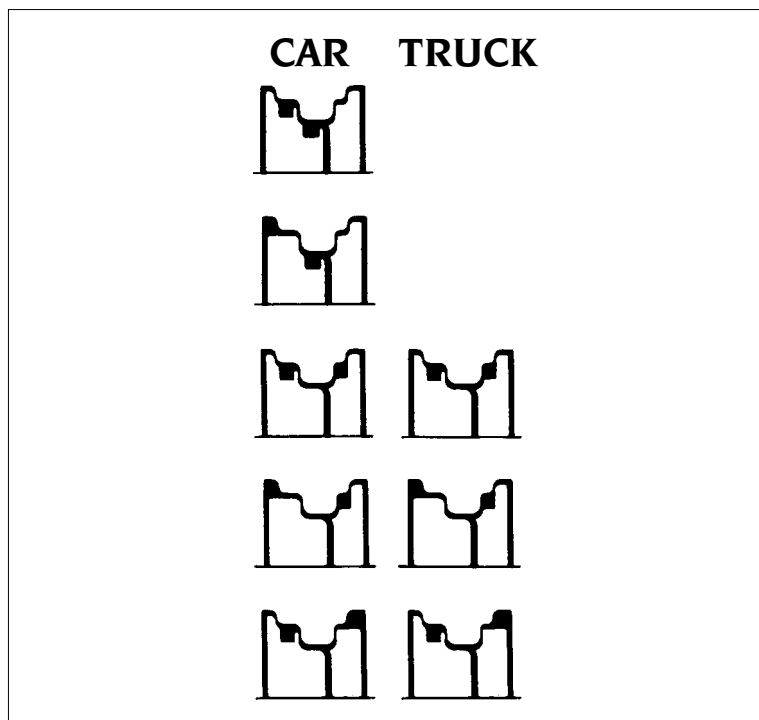


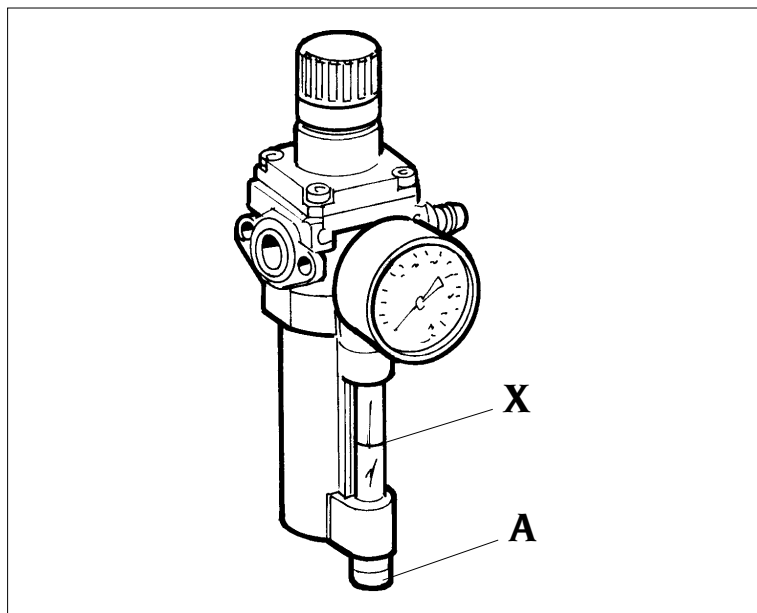
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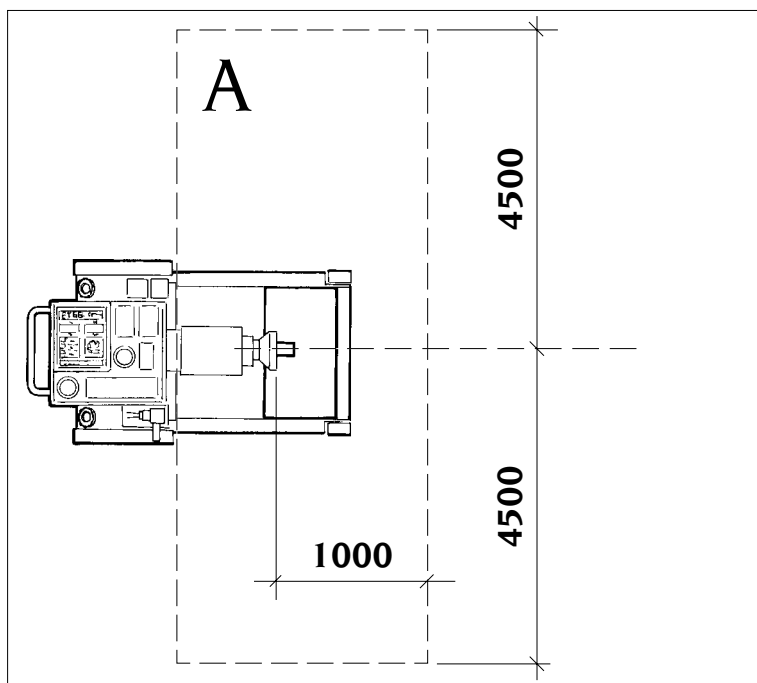


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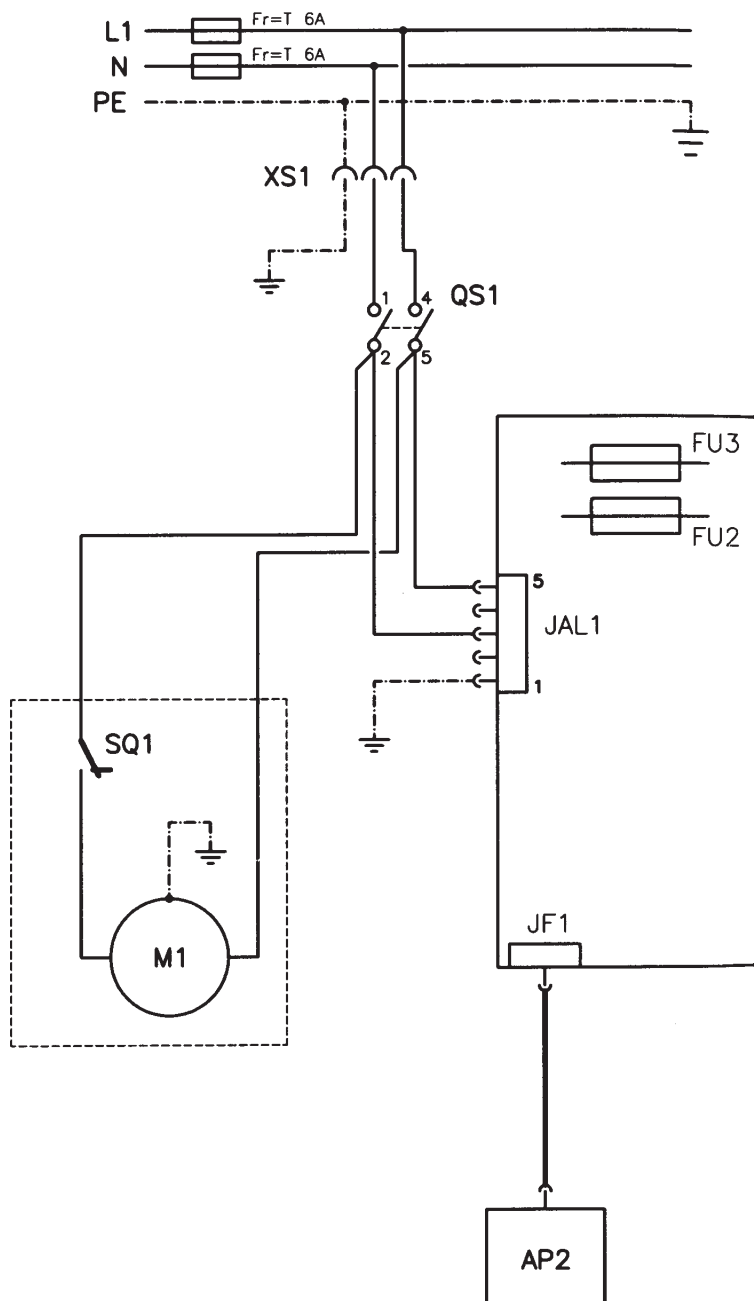


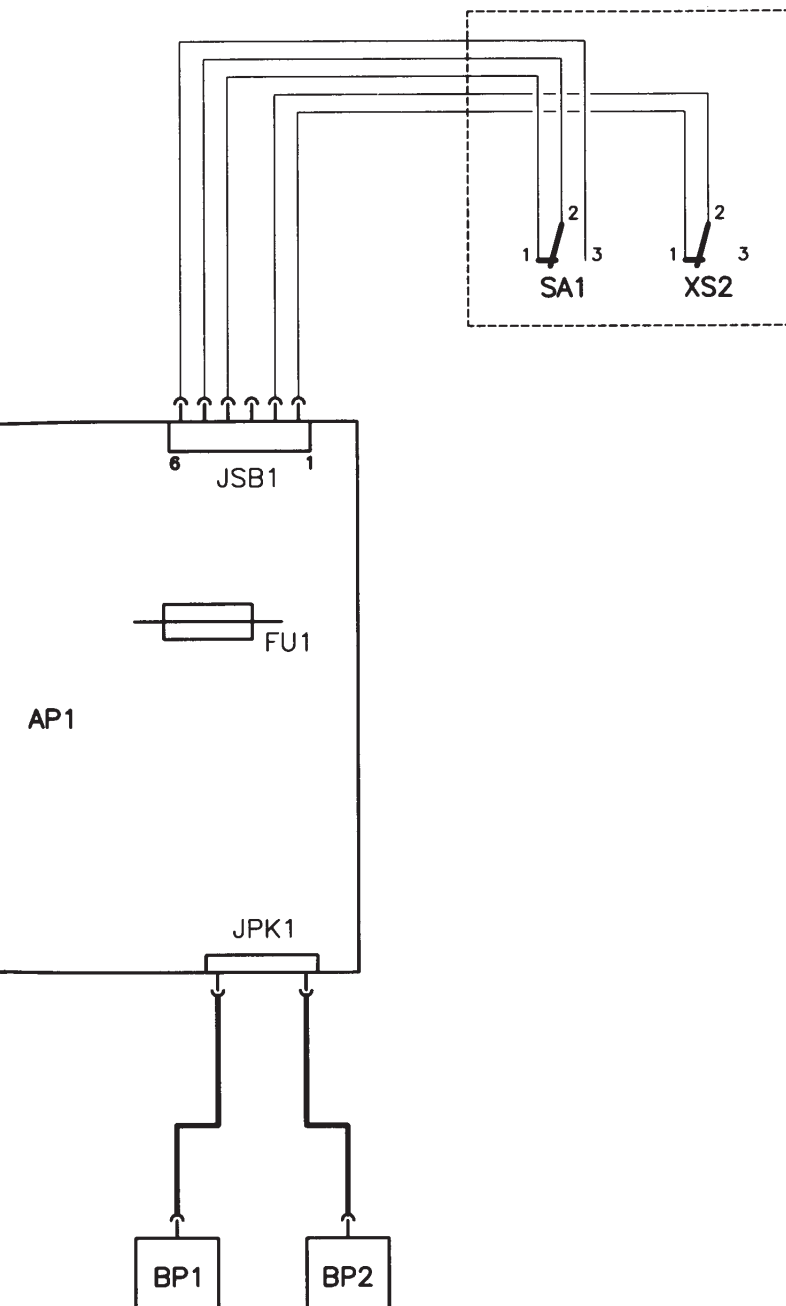


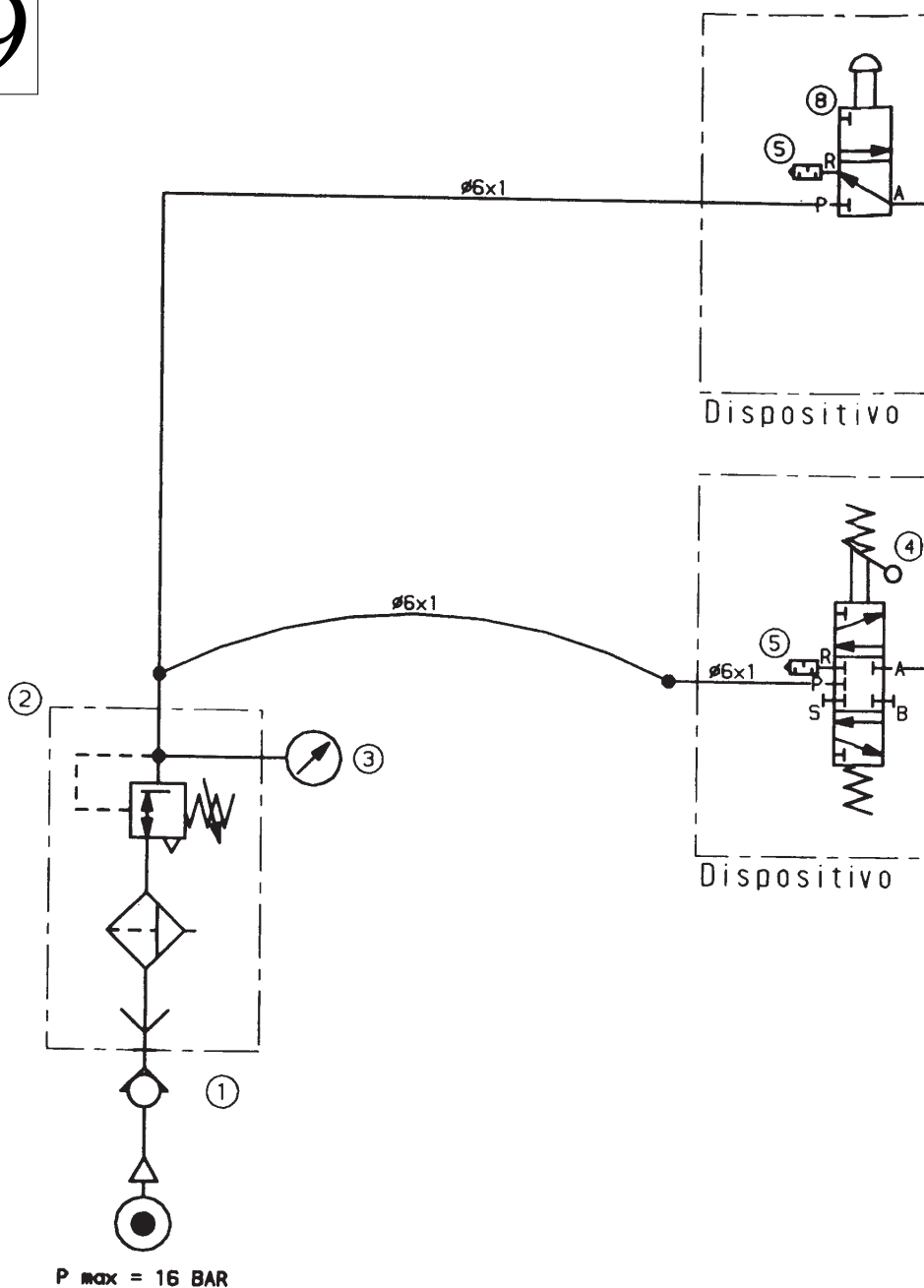
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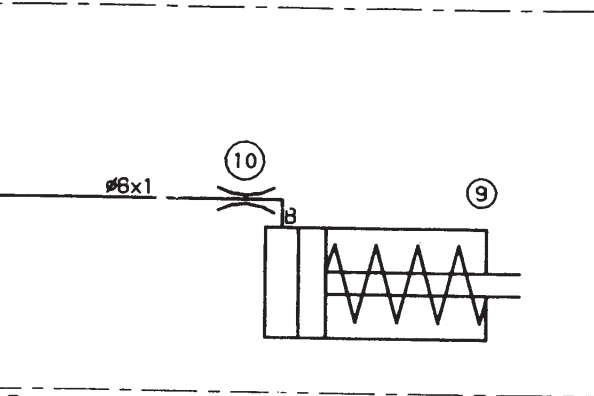


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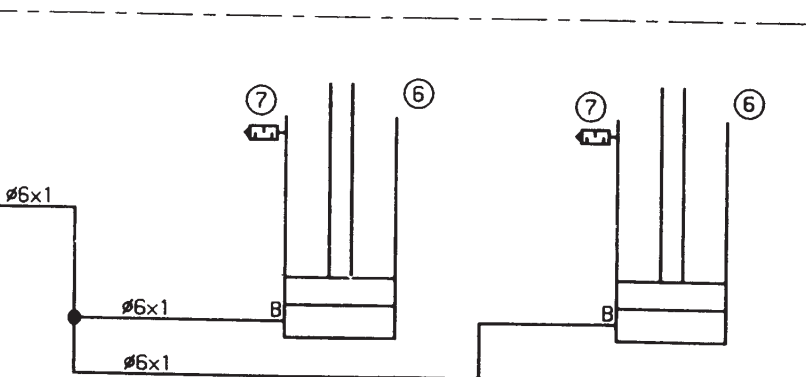




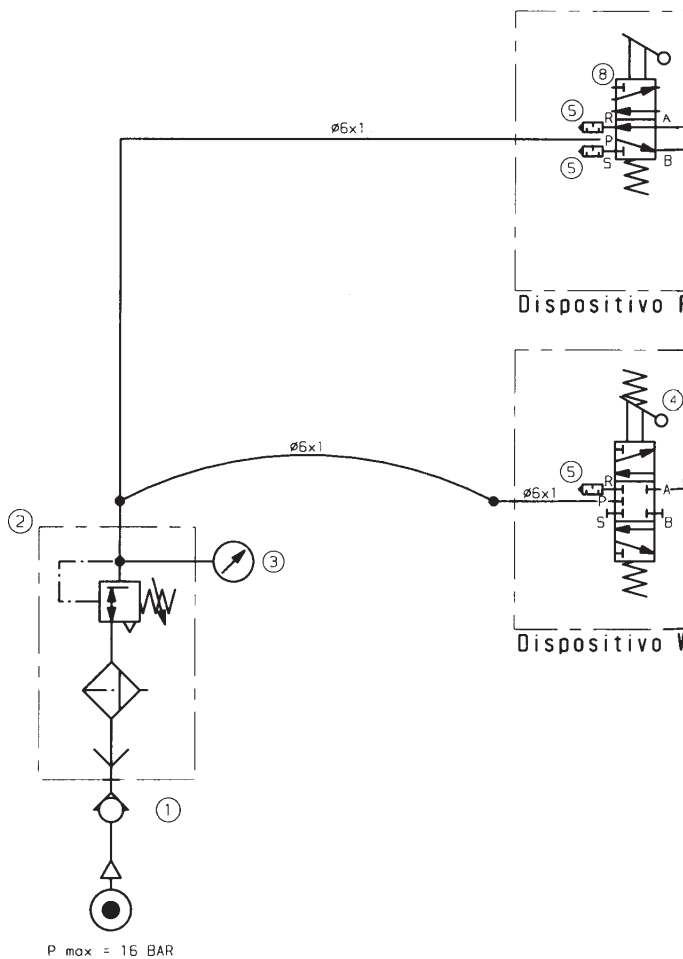




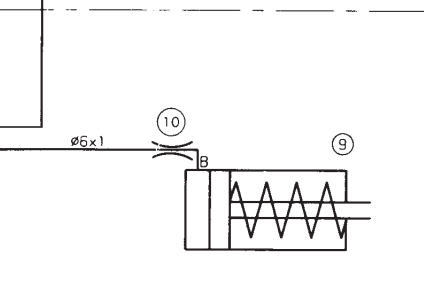
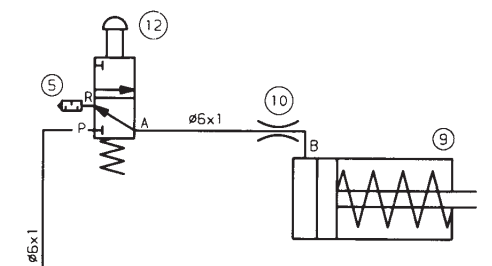
Freno



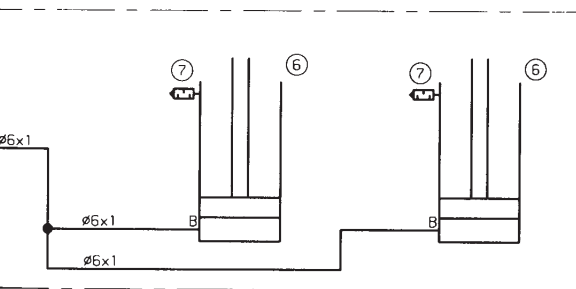
W.L.



positivo azionamento motore



Freno



V.L.

ENVIRONMENTAL INFORMATION

This product may contain substances that can be hazardous to the environment or to human health if it is not disposed of properly.

We therefore provide you with the following information to prevent releases of these substances and to improve the use of natural resources.



Electrical and electronic equipments should never be disposed of in the usual municipal waste but must be separately collected for their proper treatment.

The crossed-out bin symbol, placed on the product and in this page, remind you of the need to dispose of properly the product at the end of its life.

In this way it is possible to prevent that a not specific treatment of the substances contained in these products, or their improper use, or improper use of their parts may be hazardous to the environment or to human health. Furthermore this helps to recover, recycle and reuse many of the materials used in these products.

For this purpose the electrical and electronic equipment producers and distributors set up proper collection and treatment systems for these products.

At the end of life your product contact your distributor to have information on the collection arrangements.

When buying this new product your distributor will also inform you of the possibility to return free of charge another end of life equipment as long as it is of equivalent type and has fulfilled the same functions as the supplied equipment.

A disposal of the product different from what described above will be liable to the penalties prescribed by the national provisions in the country where the product is disposed of.

We also recommend you to adopt more measures for environment protection: recycling of the internal and external packaging of the product and disposing properly used batteries (if contained in the product).

With your help it is possible to reduce the amount of natural resources used to produce electrical and electronic equipments, to minimize the use of landfills for the disposal of the products and to improve the quality of life by preventing that potentially hazardous substances are released in the environment.

EC statement of conformity

We, CORGHI SPA, Via per Carpi n°9, Correggio (RE), ITALY, do hereby declare, that the product

ET 66 M - ET 66 wheel balancer

to which this statement refers, conforms to the following standards or to other regulatory documents:


EN 292, 09/91

with reference to directives:

- 98/37/EEC;

- 89/336/EEC amended with directives 92/31/EEC

Correggio, 10 / 01 / 03



CORGHI S.p.A.
M. Frattesi

IMPORTANT: The EC Conformity Declaration is cancelled if the machine is not used exclusively with CORGHI original accessories and/or in observance of the instructions contained in the user's manual.

The form of this statement conforms to EN 45014 specifications.

Déclaration CE de conformité

Nous, CORGHI SPA, Via per Carpi n° 9, Correggio (RE) Italy, déclarons que le matériel

équilibruse ET 66 M - ET 66

sur lequel porte la présente déclaration est conforme aux normes et/aux documents légaux suivants:

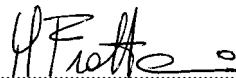
EN 292, 09/91

Sur la base de ce qui est prévu par les directives:

- 98/37/EEC;

- 89/336/CEE modifiées par la directive 92/31/CEE.

Correggio, 10 / 01 / 03



CORGHI S.p.A.
M. Frattesi

IMPORTANT : La déclaration CE de conformité est considérée comme nulle et non avenue dans le cas où la machine ne serait pas utilisée exclusivement avec des accessoires originaux CORGHI et/ou, dans tous les cas, conformément aux indications contenues dans le Manuel d'utilisation.

Le modèle de la présente déclaration est conforme à ce qui est prévu par la EN 45014.

CE - Konformitätserklärung

CORGHI SPA, Via per Carpi Nr. 9, Correggio (RE), ITALY, erklärt hiermit, daß das Produkt

Auswuchtstand ET 66 M - ET 66

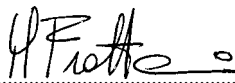
worauf sich die vorliegende Erklärung bezieht, den Anforderungen folgender Normen und/oder normativer Dokumente entspricht:

EN 292, 09/91

auf Grundlage der Vorgaben durch die Richtlinien:

- 98/37/EWG;
- 89/336/EWG mit Änderung durch die Richtlinien 92/31/EWG.

Correggio, 10 / 01 / 03



CORGHI S.p.A.
M. Frattesi

WICHTIG: Die CE-Konformitätserklärung verliert ihre Gültigkeit, falls die Maschine nicht ausschließlich mit CORGHI-Originalzubehör und/oder unter Mißachtung der in der Betriebsanleitung aufgeführten Gebrauchsanweisungen verwendet wird.

Das Modell der vorliegenden Erklärung entspricht den Anforderungen der in EN 45014 aufgeführten Vorgaben.

Declaración CE de conformidad

La mercantil CORGHI SpA abajo firmante, con sede en Via per Carpi n° 9, Correggio (RE), Italia, declara que el producto:

equilibradora ET 66 M - ET 66

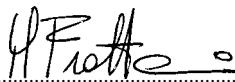
al cual se refiere la presente declaración, se conforma a las siguientes normas y/o documentos normativos:

EN 292, 09/91

a tenor de lo dispuesto en la Directiva:

- 98/37/EEC;
- 89/336/CEE, modificada por la Directiva 92/31/CEE.

Correggio, 10 / 01 / 03



CORGHI S.p.A.
M. Frattesi

IMPORTANTE: La declaración de conformidad CE deja de tener validez en el caso en que la máquina no sea utilizada exclusivamente con accesorios originales CORGHI y/o, en cualquier caso, con arreglo a las indicaciones contenidas en el Manual de Empleo.

El modelo de la presente declaración se conforma a lo dispuesto en la EN 45014.

Dichiarazione CE di conformità

Noi CORGHI SPA, Via per Carpi n°9, Correggio (RE), ITALY,
dichiariamo che il prodotto

equilibratrice ET 66 M - ET 66

al quale questa dichiarazione si riferisce è conforme alle seguenti
norme e/o documenti normativi:

EN 292 del 09/91

in base a quanto previsto dalle direttive:

- 98/37/CE;
- 89/336/CEE modificata con la direttiva 92/31/CEE.

Correggio, 10 / 01 / 03



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CORGHI S.p.A.
M. Frattesi

IMPORTANTE: La dichiarazione CE di conformità decade nel caso in cui
la macchina non venga utilizzata unicamente con accessori originali CORGHI
e/o comunque in osservanza delle indicazioni contenute nel Manuale d'uso.

Il modello della presente dichiarazione è conforme a quanto previsto nella EN 45014.



CORGHI S.p.A. - Via per Carpi n.9
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