CB3021

wheel Balancer Operation Manual

catalogue

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1、Preface

Warning

There is a one-year warranty period when machine (including operating system, tools and accessories) is properly used and undamaged.During this period, the manufacturer will repair or replace the returned parts of the machine or the machine itself free of charge.However, it is not responsible for the damage or wear caused by improper use or transportation or failure to maintain.The manufacturer will not inform the customer of any update of the product or improvement of the production line.

introduce

The purpose of this manual is to provide the owner and operator of this machine with a set of safe and practical instructions to facilitate the maintenance and operation of the balancing machine.

If this instruction is carefully followed, the machine will provide you with more efficient and durable service.

The following paragraphs will give you the hazard levels associated with the machine



Danger: direct danger that can cause serious injury or death



Warning: danger and unsafe operation that can cause serious injury or death



Attention: danger and unsafe operation that may cause minor injury or damage

Read this instruction carefully before using the machine.Put this manual in a folder near the operation area, so that the operator can query it at any time

The manual is regarded as a part of the machine and must be put together with the machine when it is sold to a new owner.

The manual is considered valid only if it is the same as the serial number and model on the attached nameplate.



The instructions and information described in this manual must be kept in mind and followed. The operator shall be responsible for the operation not described or approved in this manual.

Some of the instructions in this manual are extracted from the pictures and original drawings, so they are different from the standard machines produced.These instructions are intended to draw the attention of some people with basic mechanical skills.We therefore simplify these instructions by omitting detailed descriptions, such as how to loosen or tighten the fixtures.Do not attempt to perform other non-standard operations unless instructed by an appropriate experienced person.If necessary, please contact an approved service center for help.

install



Unpack, install, lift and install the machine according to the following instructions

Failure to follow these instructions may damage the machine and endanger the safety of the operator.



The choice of the installation site of the machine must comply with all current safety regulations

In particular, the installation and operation of the machine must be protected against moisture.

Important: Use the machine correctly and safely.

The use environment must meet the following requirements:

-The site luminosity shall be at least 300lux

-Relative humidity: 30% - 80% (non condensing);

-Temperature range: 0 ° -+50 ° C



The ground is strong enough to support the maximum weight of the machine.



The machine cannot be used in the environment with potential explosive factors

Safety regulations



Failure to follow this instruction and warning can cause serious injury to the operator and others.

Only operate the machine after fully reading

and understanding all the danger/warning notices in this manual.

Proper use of the machine requires professional licensed operators.The operator must have received appropriate training, be able to understand the manufacturer's written instructions, be familiar with the safety regulations and rules, and not drink alcohol or take medicine to avoid physical and mental impact.

The following conditions must be observed:

-Read and understand the information and instructions in this manual;

-Comprehensively understand the characteristics of the machine.

-Keep unauthorized personnel away from the operation area;

-Ensure that the installation of the machine complies with the current relevant standards and regulations;

-Ensure that all machine operators are properly trained to use the machine correctly and safely.At the same time, it shall be subject to adequate supervision during operation.;

-Do not touch the wires or the inside of the motor or any other electrical equipment before power off machine

-Read this manual carefully to know how to use the machine correctly and safely;

-Always refer to this manual

WARNING

Do not remove or abrade any danger caution or instruction label.Replace the missing or blurred labels.If any labels are missing or damaged, they must be obtained from your nearest reseller.

-Observe the standard accident prevention regulations related to the use and maintenance of high-pressure and rotating machinery components

-The manufacturer will not be responsible for any damage or accident caused by any unapproved changes or modifications

WARNING



Wear gloves



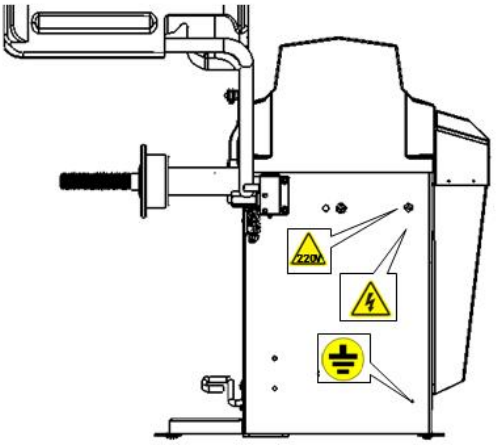
Read the instruction manual



Wear protective glasses



During maintenance, cut off the power supply to ensure the safety.



Nameplate

Meaning of labels (including instructions)



Lightning symbol: this label is placed on the back of the machine, indicating that there is a power wire inserted there, warning the operator to pay attention to his own safety



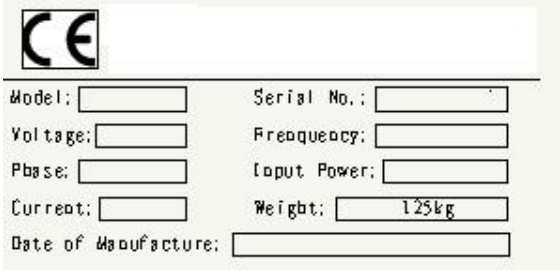
Warning: Rotating machine

This label is adjacent to the balance shaft.Prompt the operator: This is a rotating part, so it is dangerous. Do not touch it with your hands.The arrow indicates the direction of rotation



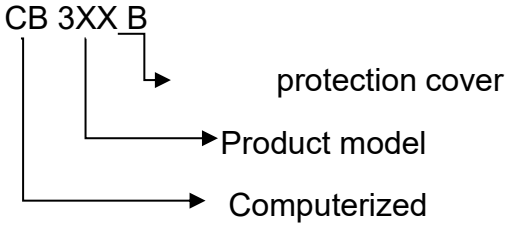
Grounding symbol: This symbol is located at the left rear of the machine, indicating where the grounding wire is connected

Label location map



Note: The following information is obtained from the nameplate.

The nameplate of the machine is pasted on the back of the box near the center of the top. The meanings of each part are as follows:



dynamic balancing machine

B. CE certification mark



This mark indicates that this machine has passed the CE certification.

C. Serial number

The first three digits are the abbreviation of the machine model, the middle four digits are the production date, and the last four digits are the company's product serial number.

D. Above the horizontal line is the name and address of the company. Below the horizontal line, in addition to the previous description, other parts also include the rated electrical parameters of the machine (voltage, frequency, power, number of phases, full load current), the weight of the machine and the production date.

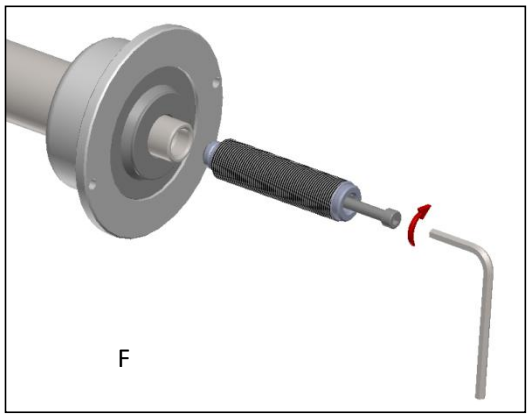
The note "B" after the machine model indicates that the protective cover configuration is selected. Protective cover is optional.Please note that if B is not indicated, this model is not equipped with a protective cover.

2、Balancer installation and operation manual

Please read the Installation and Operation Manual carefully before installing and using the balancing machine.Please keep this book at hand for reference at any time, and make sure that all users have read this manual.To give full play to the best performance of the balancing machine and ensure safety.

2.1 Installation of main shaft body

Installation of main shaft body: before installation, clean the central hole of main shaft and connecting piece with alcohol or compressed air, and fasten the lead screw on the balance shaft with wrench and screw rod.(Figure 2)



2.2 Configure power supply

According to the label at the connection between the power wire and the box, the power wire must be connected to the socket with a reliable grounding wire.All electrical installations must be carried out by professionals.Before installation and connection, check whether the power supply system is consistent with the technical parameters on the nameplate of the machine. The power supply connected to the machine must be equipped with a fuse protection device.It has good shell grounding protection.The automatic leakage control switch shall be installed ,

and it is recommended to configure a voltage regulator in areas with unstable power supply voltage.




Any electrical connection to the workshop should only be made by skilled technicians and should comply with the current regulations

Any electrical connection must be made in accordance with:

• Power on machine data panel;

• The voltage drop shall not exceed 4% of the rated voltage specified on the data panel under the condition of full load (10% when starting)

-Users must:

• Install the plug;

• Electrical connection of the machine: install a suitable 30 mA circuit breaker;

• Install fuse for power wire;

• Provide workshop electrical installation with effective grounding

-Prevent prohibited machine operation.When the machine is not in the shutdown state, unplug the power plug to extend the service life of the machine

-If the machine is directly connected to the power supply through the power panel, instead of using a plug.It should be operated by skilled personnel




Good grounding is necessary for the correct operation of the machine. Do not connect the ground wire of the machine with the air pipe, water pipe, telephone line or other unsuitable objects.

3、Technical performance of wheel balancer

3.1 Performance and characteristics:

3.1 Performance and characteristics:

-This machine adopts high-quality computer components, high intelligence and high stability.

-The mechanical spindle is driven by high-precision bearings with high precision, wear resistance and low noise.

-In case of emergency, pressing the STOP key can make the wheels realize emergency stop-It has automatic dynamic and static balance detection function.

-It has the function of three aluminum alloy rim balancing mode and one kind of motorcycle tire balance function.

-It has self correction and automatic fault diagnosis functions.

3.2 Working principle

The imbalance signal detected by the

balance sensor is transmitted to the microprocessor port through the A/D converter, and the processor calculates the imbalance value through comprehensive analysis of the imbalance signal and the angle signal of the spindle

4、Handling and installation

4.1 Handling

-The machine shall be placed, handled and stored according to the requirements of the "mark" on the packing box.

-Storage environment: relative humidity 20% - 95% temperature 0 ℃ -+50 ℃

-When handling, installing and using the machine, never move the rotating shaft of the machine, or permanent damage will be caused.



Do not use its parts to lift the machine.

4.1.1

On the premise of confirming that your balancing machine package is intact, use a forklift to transport the dynamic balancing machine to the installation site (Figure 3) Selection of installation site: the ambient temperature is 0 ℃ - 50 ℃, the relative humidity is ≤ 85%, and the installation location requirements (Figure 4)

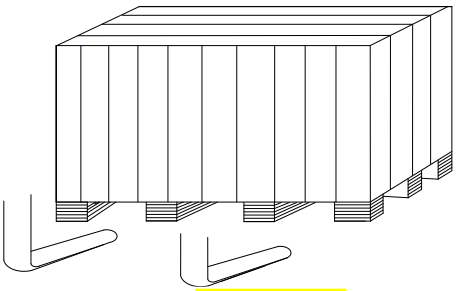
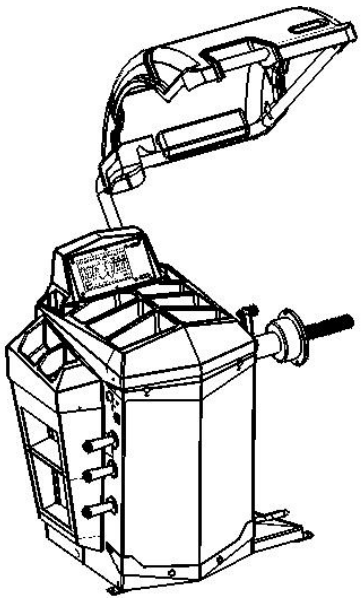
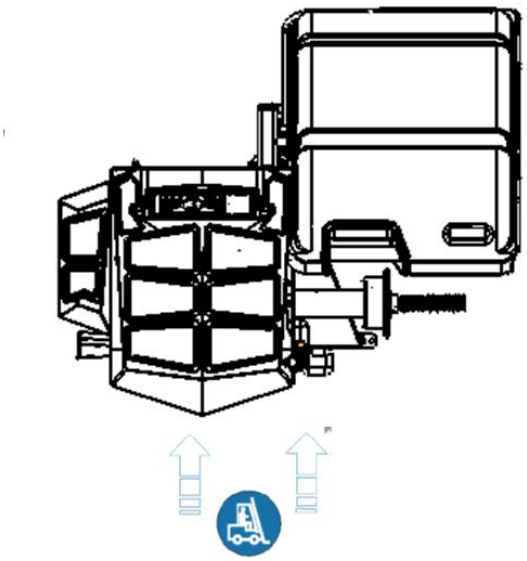
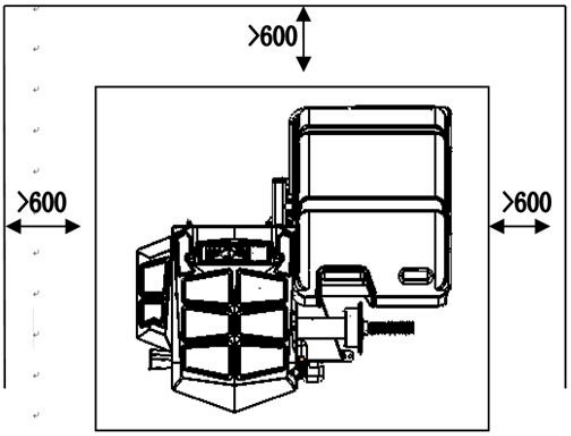


Figure3







chart

4.1.2 Dismantle the upper cover of the balancing machine's packing case, count and confirm the balancing machine, accompanying accessories and data according to the packing list. If you have any questions, please contact the dealer.Packaging materials, such as plastic products, polystyrene, nails and screws, wood, cartons, etc.It must be put into a waste box and disposed of according to local regulations.

4.2 Installation

Remove the connecting bolts between the balancing machine and the bottom bracket of the packing case, lift the balancing machine down and place it on a flat and solid ground.Keep indoors and try to avoid long-term direct sunlight and humid environment.

5、Safety and protection

5.1 Before operating the machine, please make sure that you read all warning signs and instructions and that they do not comply with the appropriate safety instructions, which may cause injury to the operator or bystanders.

5.2 Keep the hand and other parts of the body away from all dangerous places, and check whether there are damaged parts before the machine runs.If any part is broken or damaged, the machine cannot be used.

5.3 In the emergency state, if the tire does not lock and shake, press the "STOP" emergency stop button to stop the balancing machine.The instrument is equipped with a high strength tire protective cover. The machine with the protective cover can prevent the balance weight from flying out in any direction when the tire rotates, and can only fall on the ground to ensure the safety of the operator.

5.4 Before tire balancing, the operator should check all tires and wheels to find possible defects. Do not balance the defective tires and wheels.

5.5 Never exceed the load bearing capacity of the balancing machine, and do not try to balance wheels larger than the machine design.

5.6 Wear proper clothing, such as gloves, glasses, work clothes, etc. Do not wear ties, comb long hair, and wear loose clothes. When the tire rotates, the operator should stand at the side of the machine.Non operators shall not approach.

5.7 Before balancing, confirm whether the wheel is properly installed and firmly fastened on the main shaft.

General rules for use

The balancing machine in this manual is specially used to measure the unbalanced value and position of tires. See the technical data section for the measurement range.



Any instructions other than those in this manual are considered inappropriate and unreasonable



Do not start the machine without a tire locking device



The protective cover plays the role of safety protection



Do not use compressed air or water spray pipe to clean and clean the tires installed on the machine.



Know your machine.The premise to ensure that your machine has top performance and avoid accidents is to ensure that the operator understands the machine



Know the function and location of all controls



Carefully check whether all control devices on the machine work normally



The machine must be installed properly, operated correctly and maintained regularly to avoid accidents and injuries

6、Machine overview

Poor dynamic balance of wheels will make the wheels jump during driving, and the

steering wheel vibrates, affecting the driver's driving, leading to increased clearance at the junction of the steering system, damaging the shock absorber and steering components, and increasing the probability of traffic accidents.These problems can be avoided after dynamic balancing of wheels.

Read this manual carefully before using this equipment to ensure safe operation and normal operation of dynamic balance detector.

Unauthorized disassembly or replacement of instrument parts shall be avoided;

When repair is required, contact the technical maintenance service department; Before wheel dynamic balancing,confirm that the wheel is reliably locked on the connector flange;

Operators shall wear tight work clothes to prevent being caught by rotating parts, and non operators shall not start the instrument;

The dynamic balance detector cannot be used beyond the functional range specified in the manual.

1. Technical indicators and performance characteristics

1.1 Technical indicators:

- Maximum wheel weight: 70kg;
- Motor power: 250w;
- Power supply voltage:~220v 50hz;
- Balance accuracy:±1g;
- Balance speed: about 200r/min;
- Position accuracy: 1.5 °;
- Balance period: about 8s;
- Rim diameter: 10 ″~24 ″ (256mm~610mm);
- Noise: less than 70db;

1.2 Performance characteristics:

- Multiple balance operation modes, which can realize clamping and pasting of unbalanced weights;
- Intelligent automatic calibration function;
- Automatic fault diagnosis and protection function;
- Applicable to various rims of steel structure and aluminum alloy structure;

1.3 Working environment:

- Ambient temperature: 5~50 ℃;
- Altitude: ≤ 4000m;
- Relative humidity: ≤ 85%

2. Composition of dynamic balance detector

The dynamic balance detector is composed of mechanical and electrical parts:

2.1 Mechanical part:

The mechanical part is composed of a support frame, a swing frame and a rotating spindle, which are jointly fixed on the shell.

2.2 Main links of the electrical part of the dynamic balance detector:

(1) A microcomputer system composed of large-scale integrated circuits such as new ARM microprocessors, diode displays and keyboards;

(2) A speed measuring and positioning system composed of a photoelectric coupler and a toothed disc;

(3) Power supply and control circuit of two-phase asynchronous motor;

(4) Horizontal and vertical pressure sensors;

(5) Wheel housing protection link.

7、Installation of equipment

1. Unpacking inspection

Remove the package and check whether

the accessories are missing or damaged according to the packing list. If you have any questions, please contact the supplier in time.

2. Mechanical installation

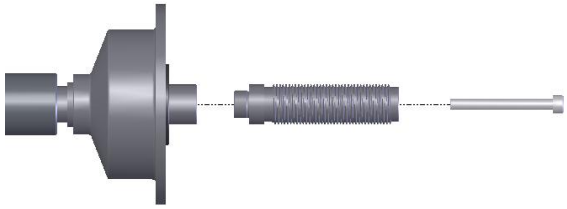
2.1 The dynamic balance detector must be installed on a solid cement ground or similar ground. If the ground is not solid, measurement errors will be caused.

2.2 A space of 5 ㎡ shall be reserved around the dynamic balance detector to facilitate operation.

2.3 The mounting hole of instrument base shall be fixed with anchor screws.

3. Transmission shaft stud installation

Use M14 140provided with the instrument long hexagonal socket bolt is used to install the transmission shaft stud on the main shaft and tighten the bolt (see Figure 2-1).



chart

(Note: When tightening the bolt, first install a wheel on the main shaft, and hold the wheel by hand to prevent the main shaft from rotating with the bolt)

4. Wheel installation

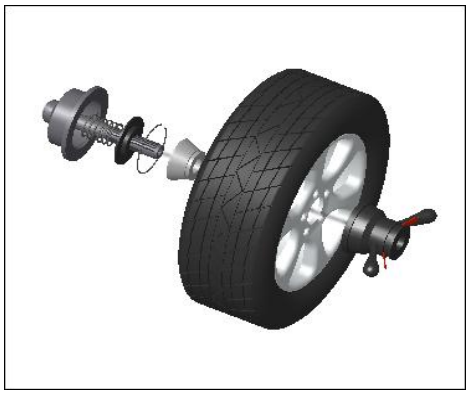
The wheels shall be cleaned and free of sand and dust, the original additional weight on the wheels shall be removed, the tire pressure shall be checked for compliance with the specified value, and the rim locating surface and mounting hole shall be checked for deformation.

Positive positioning mode



Spindle - wheel (the mounting surface of the rim faces inward) - fit the cone (the small end faces inward) - quick clamp

Reverse positioning mode

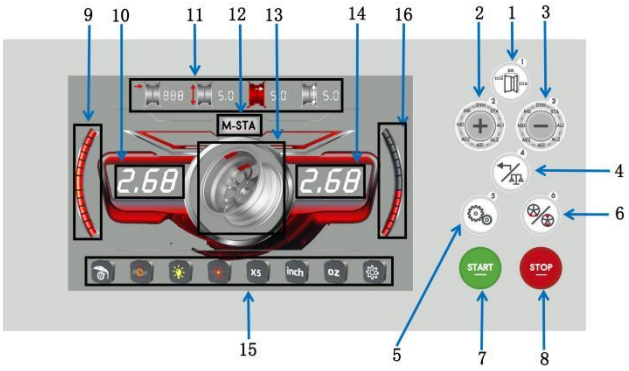


Main shaft - spring release (the spring has been installed at the factory) -
Fit the cone (the big end faces inward) - wheel - quick clamp

Note: When installing and removing the wheel, do not make the wheel slide on the lead screw of the spindle to avoid scratches.

8、Display panel and keys

8.1, display panels and key functions



1. A/B/D parameter keys
2. Value +key
3. Value - key
4. Return key (precise value)
5. Menu key (confirm key)
6. Segment function
7. Start key
8. Stop key
9. Left unbalanced position indication
10. Left numerical display
11. Rim size
12. Weight applying mode display
13. Weight position indication in selected mode
14. Right numerical display
15. Function menu bar options
16. Right unbalanced position indication

8.2. Menu bar options

8.2.1, Protective cover switch.

Turn on  Turn off 

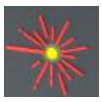
8.2.2. buzzer switch



8.2.3. light switch



8.2.4. laser light switch



8.2.5 1g and 5g display conversion

1g display 

5g display 

8.2.6. Conversion of weight units

Oz 

g 

8.2.7 Conversion of units of length

Millimeters 

inches 

8.2.8. Entering the setup menu



8.3. Combination keys functions.

8.3.1. (No. 8) 

and (No. 2)  are pressed simultaneously for 3 seconds to enter calibration mode, recover measuring accuracy.

8.3.2. (No. 8) 

and (No. 3)  are pressed simultaneously for 3 seconds to go directly to the calibration of the ruler.

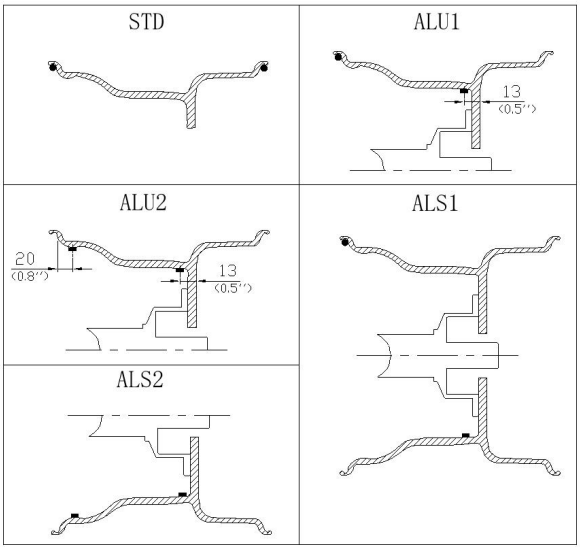
9、wheel balancing operations

9.1. Balance mode selection

Select different modes according to different types of tires. Press (No. 2)  or (No. 3)  button to select different balancing modes, (No. 13) displays in current balancing mode the position of the weight on the rim, and every time you power on the machine automatically enter the dynamic

balancing mode, this is the default mode.

Placement of the weight in each mode:

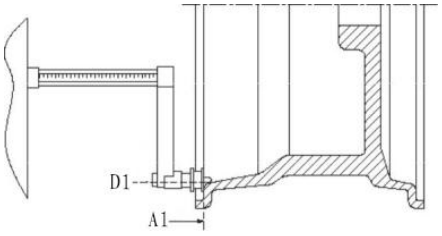


9.2. Enter the dimensions of the wheel.

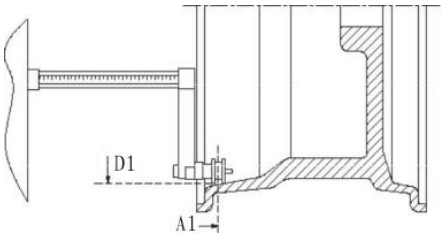
This equipment can automatically measure the A (or A1, A2) value of the wheel and the D (or D1, D2) value of the wheel. The B value needs to be entered manually.

9.2.1 Automatic input method of A (or A1, A2) value and D (or D1, D2) value:

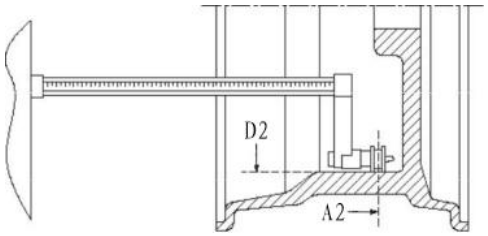
Pull out the ruler, and the equipment will automatically measure the A (or A1) value and D (or D1) value. Pull the ruler to the measurement position and turn it to make the ruler rest against the wheel rim. After maintaining the position of the ruler for about 1 second, the A (or A1) value and D (or D1) value will be confirmed and automatically entered. If the current mode still needs to input the values of A2 and D2, the equipment will automatically enter the measurement status of A2 and D2, pull the ruler to the measurement position of A2 in the following figure and turn it to make the ruler rest against the wheel rim, and after maintaining the position of the ruler for about 1 second, A2 and D2 values will be confirmed and automatically entered.



Automatically acquire the distance value inside in ALS1 mode



Automatically acquire the distance value inside in ALS2 mode



Automatically acquire the distance value outside in ALS1 and ALS2 modes

9.2.2 Manual input method of A (or A1, A2) value and D (or D1, D2) value:

Pull the ruler to rest against the measured rim, press (No. 1)  A value input is displayed, and press (No. 2)  or (No. 3)  to enter the A value.

We can acquire the tire diameter by data marked on the rim.Press (No. 1)  to display the d value for input, and press (No. 2)  or (No. 3)  to enter the D value.

Measure the tire with the width ruler to acquire the tire width value. Press (No. 1)  to display the b value for input. Press (No. 2)  or (No. 3)  to enter the B

value.

(When pressing the keys, you need to hear the machine sound beep)

When we use the ALS1 and ALS2 modes.

Pull the ruler rest against the rim edge or the position on the inner side of the rim where you want to adhere the balance weight (the pull ruler in ALS1 mode is rest against the inner side of the rim, any position on the inner side of ALS2 mode), press (No. 1)  to select the A1 value , and according to the value of the pull ruler, press (No. 2)  or (No. 3)  to enter. Press (No. 1)  to enter D1  (inner diameter of rim), and press (No. 2)  or (No. 3)  to enter.

At this time, we will pull the ruler again to select the position where we want to adhere the weight on outer side of the rim. Press (No. 1)  to select A2 value , and press (No. 2)  or (No. 3)  according to the value of the ruler to enter A2. Then select D2 value  by pressing (No. 1) , press (No. 2)  or (No. 3) , and enter the value D2 (rim outer side diameter)

D1, D2 Manual measurement acquisition method

Method 1: Manual direct measurement

Programme Type	Internal diameter da1	External diameter da2
ALS1	Enter the nominal diameter of the rim	Enter the actual diameter **da2** measured with the aid of a measuring tape. The measurement must be performed on the balancing plane chosen for **da2**.
ALS2	Enter the actual diameter **da1** measured with the aid of a measuring tape. The measurement must be performed on the balancing plane chosen for **da1**.	Enter the actual diameter **da2** measured with the aid of a measuring tape. The measurement must be performed on the balancing plane chosen for **da2**.

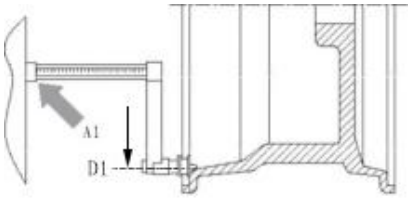


Method 2: It is obtained by slightly adjusting the actual diameter.This method is based on a slight adjustment of the rim diameter.

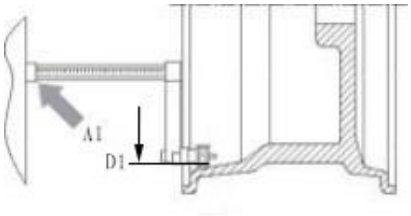
If manual measurement is not used, this method is more convenient, but the results will have a little deviation.

Programme Type	Internal diameter da1	External diameter da2
ALS1	**da1** = nominal rim diameter	**da2**=nominal diameter−2.0inches(or50mm)
ALS2	**da1**=nominal diameter−1.0inch(or25mm)	**da2**=nominal diameter−2.0inches(or50mm)

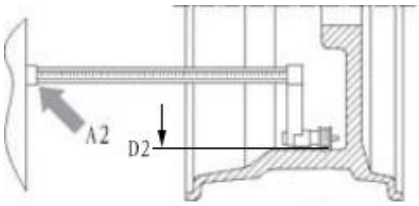
Manually measure the rim distance in ALS1 mode



Manually measure the distance (inner side) in ALS2 mode



Manually measure the distance (outer side) in ALS1 and ALS2 modes



9.3 Input method of B value:

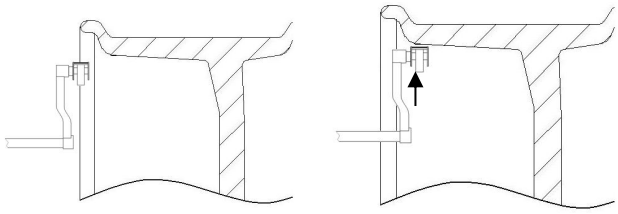
Continue to press (No. 1)  to display  to stop, and press (No. 2)  or (No. 3)  to enter the B value. (other modes except for ALS1 and ALS2, the A, B and D dimensions of wheels need to be input)

9.4 After entering the wheel size, press the START key or put down the protective cover to run the balancer. After the wheel stops, the screen displays the unbalanced mass.

9.5. Manually rotate the wheel until the inner or outer imbalance position indicator light up and the buzzer sounds, indicating that the adhesive weight position.

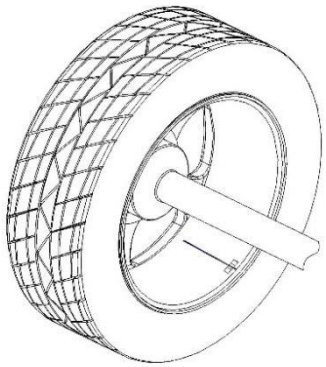
9.6 There are two methods of applying the weight.

9.6.1 If applying clip weight or the weight is adhered on the outside of the wheel spoke (such as the outer side of ALU2 balance mode), apply the balance weight at the 12 o'clock position of the wheel



9.6.2 If the weight are adhered to the inner side of the wheel spokes, they can be positioned using the laser indicator line. If the laser indication function is set to on, the laser indicator line is used as follows.

Manually rotate the wheel to make all the inner imbalance position indicators light up. At this time, the laser indicator will light up automatically, keep the position of the wheel still, and apply the balance weight at the position where the ruler resting on the rim when measuring A1 according to the of the indicator line.



9.7 After placing the balance weight, press the START key again to run the balancer. After the wheels stop, the balanced results will be displayed.

10、Weight hidden function

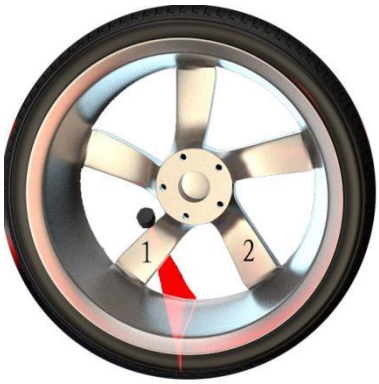
The hidden function of the balance weight can divide weight between two spokes into two parts, so that the divided two unbalanced weights fall behind the adjacent two spokes, hiding the unbalanced weight,

which will not affect the beauty of the wheels.

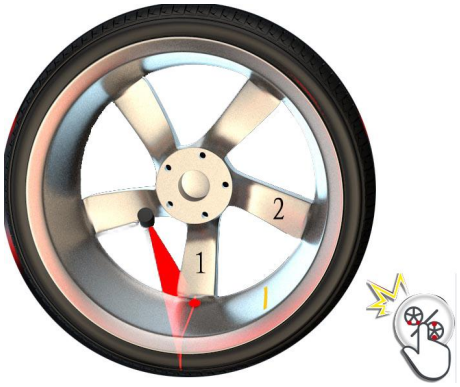
This function is applicable to several balance modes such as ALS1 and ALS2 (press  icon when hiding operation is possible). The operation method of hiding function is illustrated by taking ALS2 mode as an example.

In the ALS2 mode, enter the A1, D1, A2, D2 values of the wheels, run the balancer to get the test results, and if the external balance weight falls between the two spokes, the hidden function of the balance weight can be used.The operation steps are as follows:

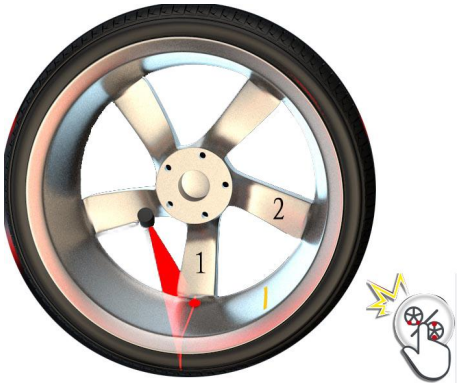
10.1. After obtaining the unbalance result, the weight position of the outer side is between spoke 1 and spoke 2, you can then access the hiding function by pressing the number 6 key.



10.2. operate as guide on the display, align the laser line with spoke 1 and confirm by pressing the segmentation key "number 6".



10.3. Operate as guide of the video on the display, align the laser line with spoke 2 and confirm by pressing the segmentation key " number 6".



10.4. At this point, the outer side balance weight is divided into two balance weight behind the spokes of the wheel. spin the wheel allows you to switch weight pasting operation between the two spoke , and in accordance with the method of adhering the balance weight described in the previous chapter, adhere the inner one and the outer two balance weight to the rim respectively.

10.5. After applying the balance weight, press the START key again to run the balancer. After the wheels stop, the balanced results will be displayed.

11、OPT optimization function of balancer

The weight optimization (OPT) mode can solve the problem of inaccurate balance

result due to large grams of weight, and can also reduce the number of balance weight used.
The procedure is as follows.

11.1 Press and hold (number 8) 

+ (number 6)  and let go after the screen displays the optimization interface.
11.2. spin the tire so that the valve core is oriented at the 12 o'clock position, then press (number 6) .



11.3. Mark the on the outer sidewall of the tire at the location of the valve core.



11.4. Use the tire changer to assist in turning the tire 180 degrees to make yellow marking on tire sidewall opposite to the valve core,press number 7 key to spin.



11.5. When the tire stops, erase the marking at step 4.
11.6. spin the tires until the energy bars on both sides indicator are fully light up.



11.7. Mark on the outer sidewall of the tire at 12 o'clock.



11.8. Use a tire changer to assist in turning the marking aligned with the rim valve core.





11.9. Press number 7 to spin the tires and the balancing result will be displayed after the wheel stop.

12、calibration operations

Pressing the START to run the machine. (For machines equipped with a protective cover, the machine is started up with the protective cover lower down.)

12.1, spindle calibration

12.1.1. Press (No. 5) to enter Menu Mode .

12.1.2 Press (No. 2) to adjust to the calibration mode , press (No. 5) to enter, display the psd setting password, and enter "+,+, -".

12.1.3. Press (No. 2) adjust to , press (No. 5) to enter, and press (No. 7) START to start up the machine.

12.1.4.Spin the tire valve core to the 12 o'clock position then keep the spindle unmoved ,spin the tire 180° to make the valve core at the 6 o'clock position.



12.1.5 Press (No. 7) START to run the machine ,complete spindle calibration.

12.2, Weight calibration (50g weight)

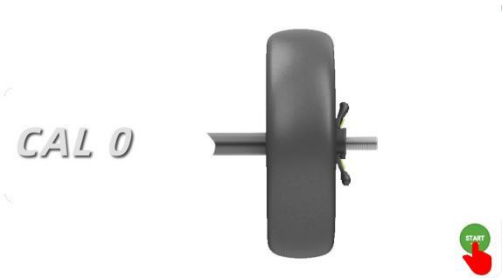
12.2.1 Install a wheel that can clip weight on the rim, and input rim data (A, B, D values)

12.2.2. Press (No. 5) to enter the menu mode.

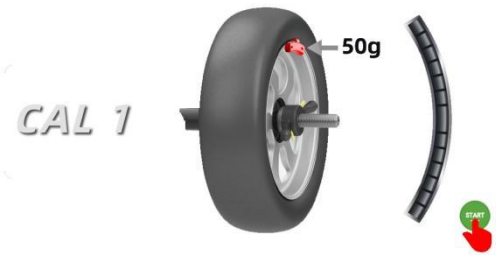
12.2.3 Press (No. 2) to calibration mode , press (No. 5) to enter, display psd setting password, and enter "+,+, -".

12.2.4. Adjust to by pressing (No.2) , and press (No. 5) to enter.

12.2.5 When the display screen shows "CAL 0", press (No. 7) START to run the machine.

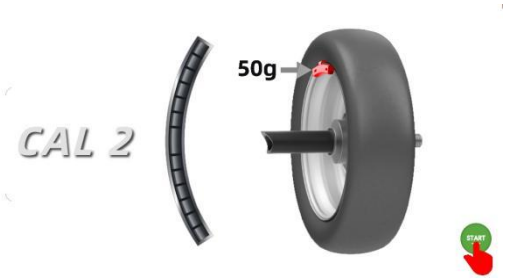


12.2.6 After the tire stops spinning, the screen displays "CAL 1", push the tire to the place where all the indicator light up , apply 50g clip weight on the outer side, and press (No. 7) START to run the machine



12.2.7 After the tire stops spinning, the screen displays "CAL 2", push the tire to the place where all the indicator light up, apply 50g clip weight on the inner side, and press

(No. 7)  to run the machine.



12.2.8 When the machine stops and the calibration is completed, press the stop key to return to the main interface directly.



12.3, distance ruler calibration

12.3.1. Press (number 5)  to enter the menu mode.

12.3.2 Press (No. 2)  to adjust to calibration mode , press (No. 5)  to enter, display psd setting password, and enter "+,+, -".

12.3.3. Press (No.2)  to adjust to , and press (No.5)  to enter.

12.3.4. Press (No.2)  to adjust to the following figure.



12.3.5. Press (No.5)  to enter Step 1 of the ruler calibration. The ruler is at the origin, and press (No.5)  to confirm.



12.3.6 Enter the calibration step 2 of the ruler, pull out the ruler 200mm, and confirm by pressing (No. 5) .



12.3.7 Enter step 3 of the ruler calibration, pull out the ruler (more than 0mm), turn the handle of the ruler to contact the main shaft, and confirm by pressing (No. 5) .



12.3.8. Enter the step 4 of ruler calibration, and the ruler rest on the calibrated rim.

Press (No.5) to confirm.



12.3.9 After the calibration of the ruler is completed, press the stop key to return to the main interface directly.

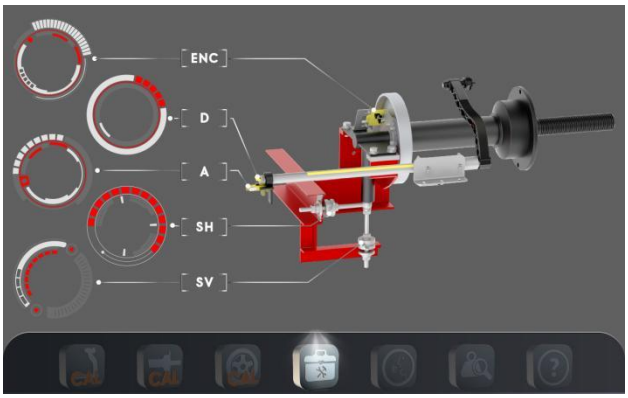


13、parameter testing

13.1. Press (No. 5) to enter Menu Mode.

13.2 Press (No. 2) to adjust to calibration mode , press (No. 5) to enter, display psd setting password, and enter "+,+, -".

13.3. Press (No. 2) to adjust to and press (No. 5) to enter.



13.4 [ENC] Photoelectric panel testing: 0-255
Test method: slowly push the spindle by hand, and the [ENC] values are continuous variable within 0-255
13.5. [D] D value display
Test method: when the distance ruler is pulled out more than 0mm,turn ruler handle in the circumferential direction , [D] value is changing.
13.6 [A] A value display
Test method: when the ruler is pulled out, the [A] value is changing.
13.7 [SH] Horizontal sensor value
Test method: touch the spindle by hand, and the [SH] value is changing.
13.8 [SV] Vertical sensor value
Test method: touch the spindle by hand, and the [SV] value is changing.
13.9 Press the stop key to return to the main interface directly.

14、language switching

14.1. Press (No. 5)  to enter Menu Mode.

14.2 Press (No. 2)  to adjust to calibration mode , press (No. 5)  to enter, display psd setting password, and enter "+,+, -".

14.3. Press (No. 2)  to adjust to and press (No. 5)  to enter.

14.4. Press (No. 2)  to select the language.

14.5 Press the stop key to return to the main interface directly.



15、Error list

Code	Description	Remarks
0	Display error	Contact technical support
1	Memory card error	Replace computer board, contact technical support
2	Miscalculations or interrupted calculations	Perform calculations according to the procedure in the manual
3	Automatic ruler calibration error	Re-calibrate
4	weight calibration error	Re-calibrate
5	Motor speed error	The speed is dropping too fast，check the motor belt tightness
6	segmentation point is not at 6'clock	The segmentation point is not in the right position. Follow the instructions in the manual
7	Weight hide Function - Wrong Angle Selection	Select the spoke on Nearby sides of the unbalance point, follow the instructions
8	Spindle calibration error	Re-calibrate
12	There are no brakes	Check the power supply board or replace the brake resistor
14	Start up error	Check the photoelectric board or motor, and the wiring.
15	Optimization function error	The static balance weight is too small to support optimization
16	optimization computation error or interrupted	Follow the operating instructions and do not press the stop button during the calculation
17	incorrectly saved factory setting data	The weight calibration or ruler calibration has not been executed and cannot be saved
18	Restore factory setting data error	No factory settings have been saved
21	Missing machine calibration	Re-calibrate
26	piezoelectric sensor error	1. Excessive tire bias 2. Check the sensor wiring or replace the sensor
32	Missing ruler calibration	Re-calibrate
39	Protective cover function error	Check wiring, replace magnetic switch
46	Diameter ruler sensor data error	Check the D value connection or replace the D value circuit board

16、Maintenance

 warning

If non original spare parts or accessories are used, the manufacturer will not bear any responsibility.

 warning

Unplug the power plug.Before performing any adjustment or maintenance, make sure that all moving parts are locked.

 warning

Do not remove and improve any parts of the machine (except for maintenance)

 look out

Keep the working area clean

Never use compressed air and/or water jets to remove dust or debris from the machine.Prevent dust from entering buildings and cleaning operations.

. Keep the balance shaft, nut, cone and flange clean.To clean these parts, use a brush soaked in neutral solution

Use cones and flanges carefully to avoid accidental falls and damage.The result is to affect the accurate centering

After use, place the cone and flange in a dust-proof space.

Conduct calibration every 6 months

lubrication

Balancing machine lubrication

The only rotating parts of the balancing machine are the motor and the balancing shaft.Therefore, the bearings of these elements must be regularly checked and lubricated by the operator.If the machine is used frequently (more than 2 hours per day), annual inspection shall be carried out for the bearing.If it is not used frequently, check it every two years.Do not open the bearing during the test, just insert a screwdriver to check the sound.Since the role of bearing is clamping and supporting, it is not suitable to replace or remove grease;In addition, the speed of the machine is not high, so it is unnecessary to replace the grease.If you notice that the bearing is abnormal or noisy, replace the bearing.If the customer confirms that the bearing has not been replaced, just replace the grease: remove the bearing, open the dust seal ring, and add XHP103 grease.These operations should be carried out under the guidance of professionals.Adjust the machine after changing the grease.If the lubrication is replaced incorrectly, the accuracy of the machine will be affected.In this case, reinstall the seal ring, reinstall the machine,

and repeat the adjustment.

Technical safety card for balancing machine lubrication Scrap

If the machine is scrapped, all electrical, electronic, plastic and metal components shall be separated according to the current local regulations.

Mobil lubricating oil XHP	103
NLGI grade	3
Thickener type	Lithium compound
Color, shape	Dark Blue
Penetration at 25 °, ASTM D 217, mm/10	235
Dew point, ° C, ASTM D 2265	280
Viscosity oil base, ASTM D 445, cSt @ 40 ° C	100
Change in permeability, ASMT D 1831, mm/10	10
4 Ball test, ASTM D 2266, mm	0.5
4 Ball test, ASTM D 2509, kg	315
Load test ASTM D 2509, lb	45
Oxidation stabilization ASTM D 942, 100 hour pressure reduction, kPa	35
Corrosion protection, ASTM D 1743	adopt
Anti rust, IP 220, wash away with acid water	0
Rust proof, IP 220 mod, do not wash with distilled water	0
Corrosion to copper, ASTM D 4048	1A
Waterproof spray, ASTM D 4049,% spray	15
Wash with water, ASMT D 1264, loss (weight%), @ 79 ° C	5

environmental information

When  is on the data disk, the following processing program must be used.

This product may contain substances that will endanger the environment and human health if handled improperly.

Electrical and electronic equipment must not be treated as daily municipal waste, but should be collected separately for proper treatment.

 The purpose of the product and this page is to remind the user that the product must be disposed at the end of its service life.

Such non specialized or improper treatment of many substances in this product may cause damage to the environment and people's health.Moreover, it helps to recycle and reuse many materials contained in this product.

Electrical and electronic manufacturers and dealers shall establish appropriate collection and treatment systems for treatment.

Contact your local dealer to get

information about the products

When you purchase this product, your dealer will also notify you that you can recycle it for free as long as it has the same function and type as the product you purchased

The above methods of treating waste products in different forms depend on the punishment of the current national regulations on waste.

Other environmental protection methods are suggested: inner and outer packaging of recycled products.Properly dispose of used batteries (batteries in products are prohibited)

Your help will reduce the natural resources used for the production of electronic and electrical equipment;Minimal floor area of waste products;It is critical to improve the quality of life and prevent potentially harmful substances from existing in the environment.

Fire prevention method used

Use the following table for reference to select the most suitable extinguishing device

11 Fire extinguish material:

Dry material

Water YES

Powder YES*

Foam YES

CO2 YES*

Yes * means it can only be used when there is no suitable fire extinguishing material or the fire is small.

Water No

Powder YES

Powder YES

CO2 TES

Electrical equipment

Water No

Foam No

Powder YES

CO2 YES

 warning

17、attach protective cover installation

