Model: DC-B

WEIGHING GRANULE PACKAGING MACHINE

Operational Manual

Thank you for using our products. To make this product can effectively, reliable service for you, before use, please read the manual content.

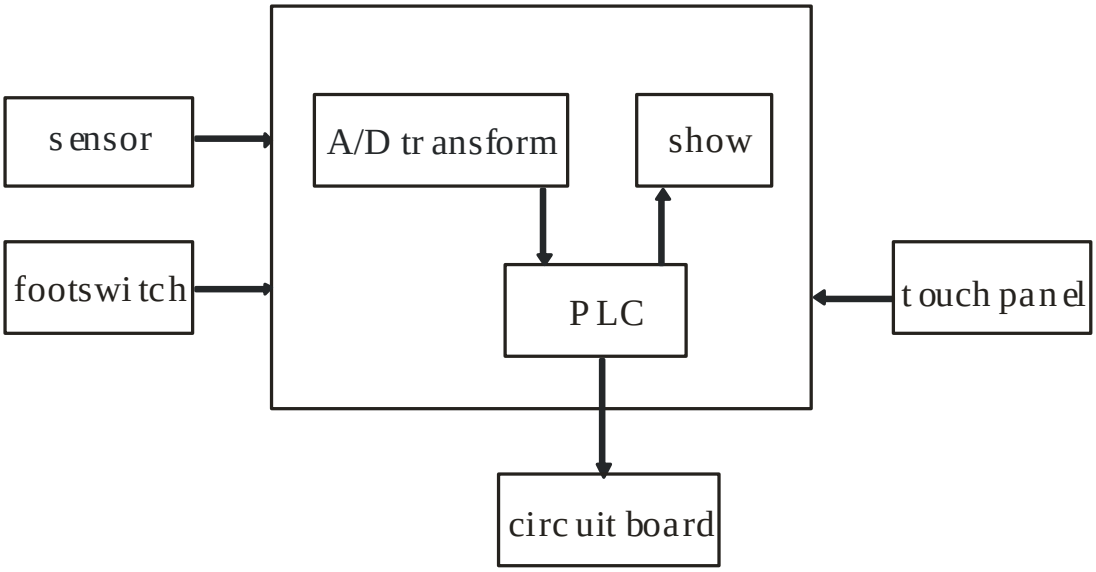
Ⅰ、Summary

DC - B series of automatic quantitative packaging machine is my company in digestion and absorption of advanced foreign technology, on the basis of the new generation of devolope quantitative packaging equipment. Its outstanding characteristic is: accurate quantitative, low failure rate, wide adaptability, combined flexible.

DC - B series packing machine adopt modular design, two levels of vibration of material, weighing measures work alternately. According to need you can also matching automatic material feeding machine, give bag machines, further improve the efficiency and quantitative packaging precision and automation.

This series microcomputer control technology, weighing unit independent control, not interfere with each other. Work is stable and reliable, and repeat precision, lower noise. The machine adopts high-quality stainless steel material production, corrosion resistance is strong, no pollution materials. Change the specification and material through the control panel modification parameter can, need not mechanical adjustments. The machine has a real-time weight display, a dynamic weighing, automatic correction error, out-of-tolerance alarm, material level control, counting, data protection function. Applicable to small granular and irregular quantitative packaging materials such as washing powder, small food, salt, sugar, spices, dried fruit, melon seeds, seeds, etc. The machine shape below the exhibit:

The electrical control part of the diagram shown below:



Ⅱ、Main Technical specifications

packing container: bag、bottle

packing specification: 20~2000g/pcs

Packing speed: 900~2200 pcs/h

Accuracy level: 1.0

Power consumption: AC220V 50HZ 500W

total weight: 100kg

Overall Dim: L890×W730×H1850mm

Ⅲ、operating requirement

1. The ground level, maintain environmental dry.

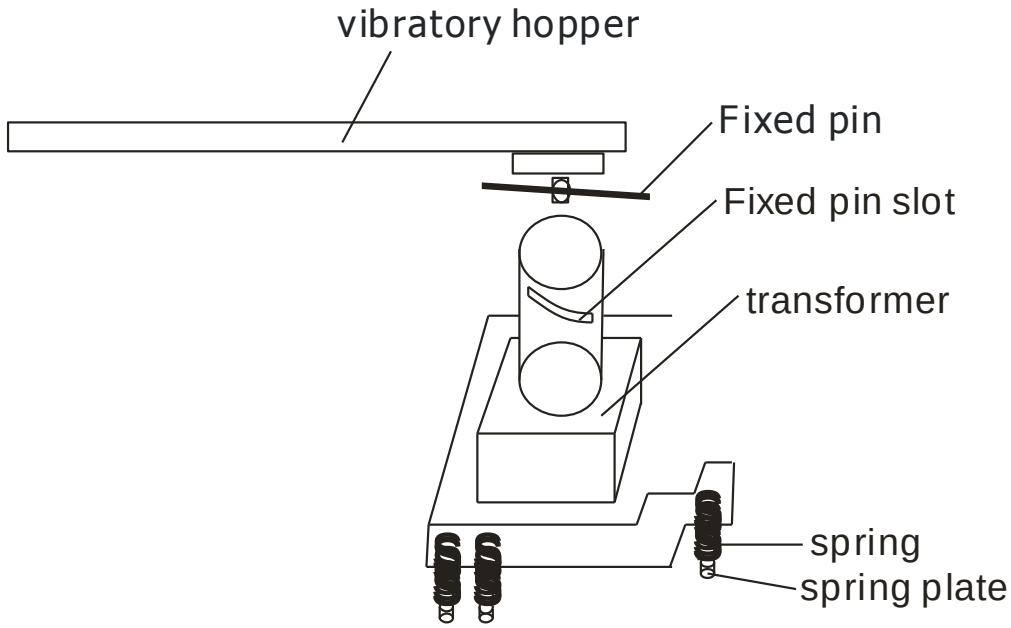
2. Near them without strong magnetic field and vibration, or electronic scale will tend to be unstable.

3. The power supply voltage and frequency should be stable and good grounding to ensure safe operation.

4. Materials intermingled with foreign body shall be issued within.

5. The vibration hopper all installed in place, and jammed fixed studs.

Below the graphics:



Adjust specification flow chart:

1、Take off the “fixed screw” in Graph 3 - (9) (just need do this in the first time when Machine work, then no need do this.),

Otherwise you won’t work properly.

2、Correctly set the product specification on the work screen.

3、Correctly adjust the height of borad in attachment figure 2.

Experience : below 100gram the board height is less than 1cm.
100-200gram the board height is 1cm-2cm.
200-500gram the board height is 3cm.
Above 500gram the board height can reach is max.

4、Set quick time :In order to make the quick feeding ,the speed quantity should be seize 70%-90% of packing specification. The more of the specification the bigger of the ratio . The sethod as follows :

First set the middle value as “0”, the slowly add value set as “0”, then adjust the quick time and make the feeding seize the 70%-90% of the packing specification.

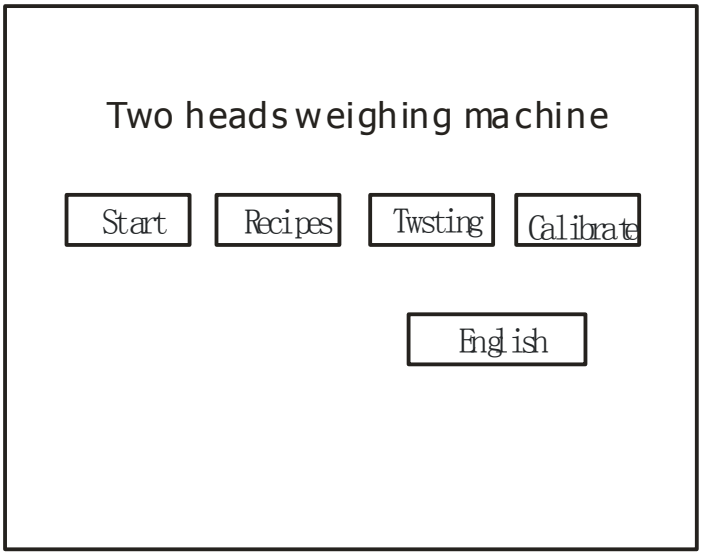
5、The middle add value is transition data. this data usually a little fast than quick quantity.

6、Slowly add value is smaller about 2-10gram than the product specification . If there is positive error, should reduce slowly add value, if there the negative error appear , should increase the slowly add value.

Notes:If need change the packing specification , and didn’ t change the material and didn’ t change the adjust board , just need to set the product specification on the work screen , the system can calculate the quick add value , slow add value automatically, if the quick time changed into 0.2S , just need to change the quick time.

Ⅳ、elementary operation

1. Switch on the power, Will "urgent stop switch" reset, display window display



Press start key, system into the work screen

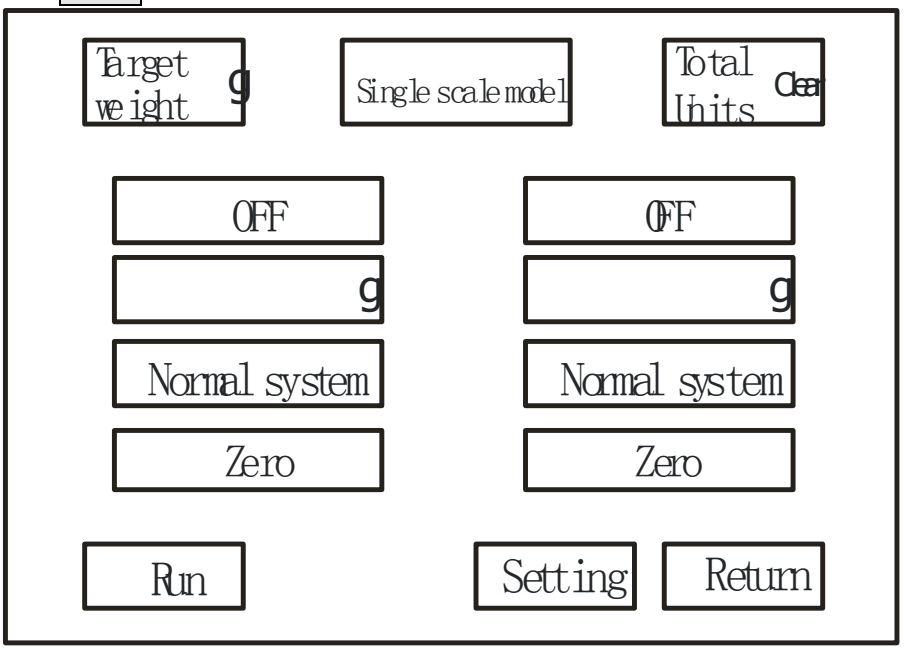
Press recipes key, system into the recipe screen

Press twsting key, system into the debug screen

Press calibrate kay ,system into the calibration screen.

Enter the system:

Press the start key display as follows:



Target weight: Press Target weight key, and the interface will appear a digital frame, used to set weight data, and then press "ENT" to confirm.

Single scale model : The two weighing bunker work by turns, when single weighing bunker can't meet the requirements of the packing specifications can adjust the single scale model into double scale model.

Double scale model: Open the weighting bunker at the same time , for example: each scale measures capacity is 3 kgs, and now need to packing 5KG material ,the method is as follows: first change the weight bunk specification into 2.5kgs ,and change the single scale model into double scale model.

The details see page 12 of system parameter setting, click on the " Single scale model", to set up.

Total units: is use to check the packed bags quantity.

Clear: Key is use to delete the packed bags.

OFF: If always use a weighing hopper work, click the button, will be closed this weighing hopper work, and then click the namely open work.

0000 g: Shown here stem on job weighing hopper in weight, from 0 to set the target weight, and constantly increased, until the target set weight.

Note: just began to work, possible meeting appears and set target weight don't agree with the weight of the error, can through the change "setting" frame, some functions of data, the machine will automatically change every time appear error, until the most accurate weight.

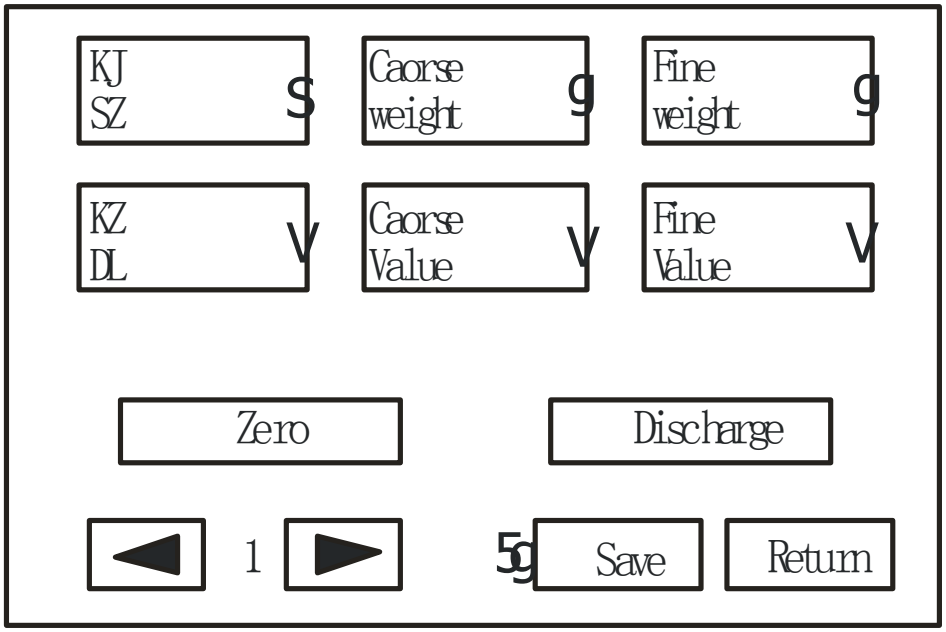
Normal system: Is used to display and clue the current state and failure warning.

If there are any related hint showing on the screen , the equipment will not do any work.

zero: Click the, will reset the current display weight.

run: Press, into the machine running state, click again, namely "stop" state.

Press setting key display as follows:



KJ SZ: (Quick time) The level 1 feeding time(The Unit is 0.01 Sec.)

KZ DL: (Fast vibration) The level 1feeding speed.(Reference Value: 200V)

Caorse weight: (Middle add value) The level 2 feeding target value.

Coarse value: (Middle vibration) The level 2 feeding speed(Reference Value: 160V)

Fine weight: (Slowly add value) The level 3 feeding target value.

Fine value: (Slow vibration) The level 3 feeding speed(Reference Value: 135V)

Prompt: Level 1 feeding speed > Level 2 feeding speed > Level 3 feeding speed
Fast vibration > Middle vibration > Slow vibration

Each weighing hopper work process points three steps:

Level 1 feeding → Level 2 feeding → Level 3 feeding

Level 1 feeding:The system turn into the level 2 feeding after click the “Fast Vibration” and “Quick Time”. Correctly set the “Quick Time ”can increase

the work efficiency. Change the ‘Specification Parameter’ on work screen, the Quick time will change into 0.2s automatically. Set the Quick Time value at 0, the system into the level 2 feeding, at this condition the 50gram packing will appear.

Level 2 feeding :After level 1 finished feeding material and click middle vibration of fast vibration make it slowly to add the level 2 feeding .When the data add to middle numerical then change into the level 3 feeding .The level 2 parameter is very important for the whole system’s speed and accuracy.

Level 3 feeding: After level 2 add feeling material and click the slow vibration of middle vibration make it slowly to add the level 3 feeding. When the data add to slow add value then stop add material.

Caution:

① Quick time add material quantity is no bigger than the specification data on the work screen.

② Fast vibration is usually between 180-240, the max data is 250 (Reference Value: 200V).

③ Middle add value can’t bigger than Finishing numerical

④ Middle vibration value : usually between140-200, should smaller than quick time vibration (Reference Value: 160V)

⑤ Slowly add value:is better than middle numerical ,but smaller than the specification data on the work screen.

⑥ Accurate add vibration: usually between120-140,should smaller than middle vibration value . (Reference Value: 130V)

⑦ If the packing less than 50gram, the quick time should set 0 sec.

⑧ If don’t need much accurate but quick speed should set quick time bigger and then short the level 3 add material time.

zero: Press Clear key ,the scale show 0 position.

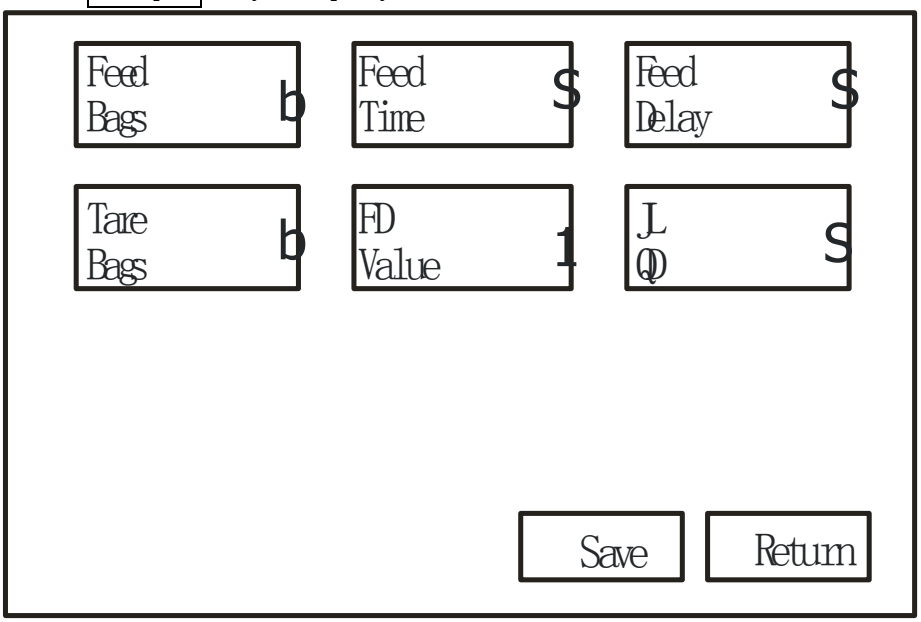
discharge: Press the key the scales will change into the one time feeding model.

: press this key can choose the related scales ,1 stand for the first scale ,2 stand for the second scale.(the machine from left to right are the first scale and second scale.)

save: Every time the set, must according to "save" button to save a set of data.

Prompt: Press numeric place will pop up a digital box, enter the Numbers according to "ENT" after confirmation.

Press the recipes key display as follows:



Feed bags: (Feeding package numbers) long many bags did the system packing when the charging machine start work.

Tare bags: (Peeling bags number) when working for a period, the scales will deposit some materials , and the scale not at the clear position. Through set the peeling bags numbers the system will back to reset condition automatically.

Note: Doing this will influence the work efficiency, if packing the granular materials the parameters can be set as “0”, so can improve the efficiency.

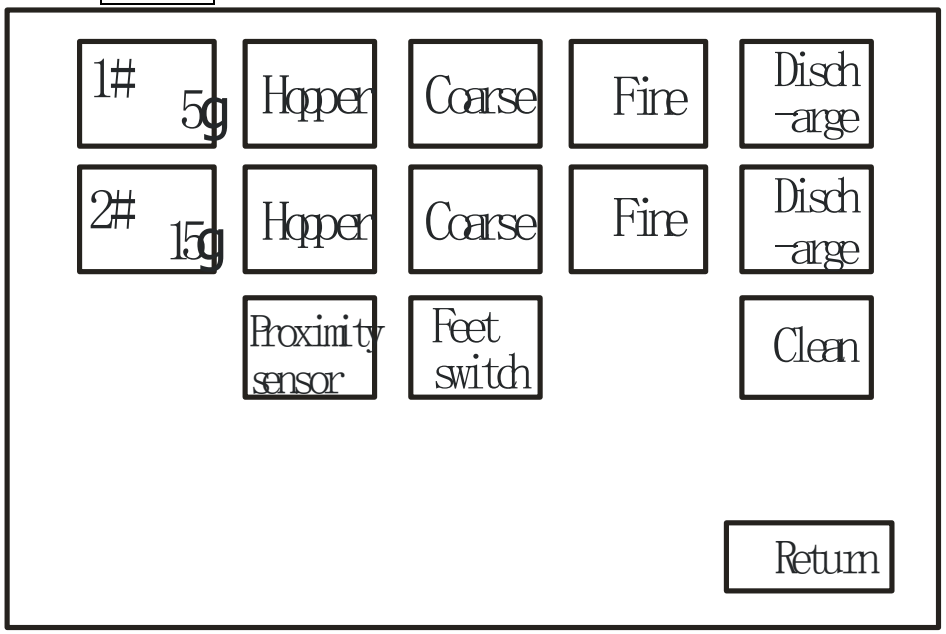
Feed time: (Feeding time) How long did the charging machine work in one time (it just effective when when feeding package number is not zero)

FD value: (Dividing value) the last number on the scale.

Feed delay: (Feeding delay) How long times the charging machine start work after the material detector indicator put off.

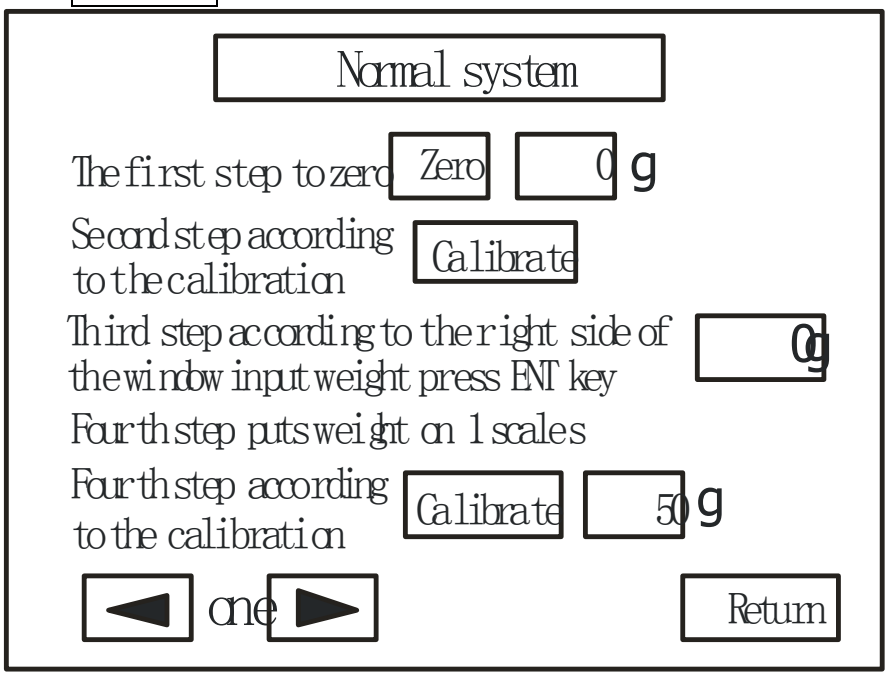
JL QD: (Charging start) 0.48 s (the Default)

Press the twsting key display as follows:



The switches on screen are the testing switch, Hopper is the signal of input ,the light will bright when the related switches have the signal output, have signal ,to test if the machine work position is normal or not .
Others are output signal, when press button, the button related machine will action ,and test the each action is normal .If the related machine didn’t action or action normal , just check the wiring line is connect correctly.

Press the calibrate key display as follows:



See the Screen Calibrate flaw chart.

Through the bottom left corner 

key to choose the scale calibration of the No.1 and No.2 scales .

calibrate Key used to revise the accuracy of scales.

Generally divided into two steps to calibrate, the first time for false calibrate, the second time, in order to really calibrate.

Assume that there is now a 500 g weight, the first false calibrate:

① Keep the scales platform in empty state.

② Press zero Key, the screen shows "0".

③ press calibrate key, the screen shows "8888" says in calibration process.

④ Nominal process please ensure that says in a stable state.

⑤ In the third step of the digital input box below 500 g of any one of the figures.

⑥ The 500 g weight in the said in the bucket.

⑦ press calibrate key, then shows the error value.

Then the second really calibration:

① Take weight, weighing hopper in empty said state.

② Press zero Key, the screen shows "0".

③ press calibrate key, the screen shows "8888" says in calibration process.

④ Nominal process please ensure that says in a stable state.

⑤ In the third step of the digital input box 500.

⑥ The 500 g weight in the said in the bucket.

⑦ press calibrate key,then shows the 500 value.

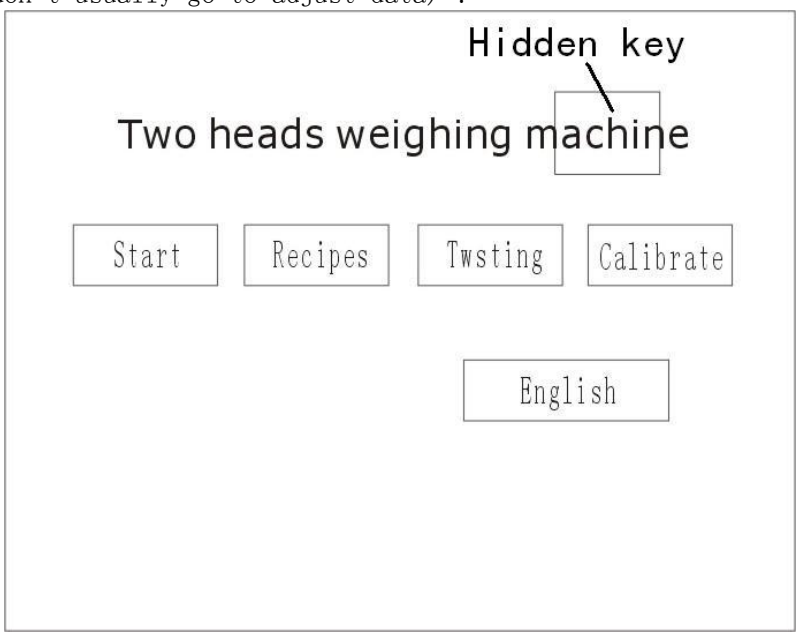
⑧ Calibration work is finished.

Note: 1, calibration process in general to 2-5 seconds process.

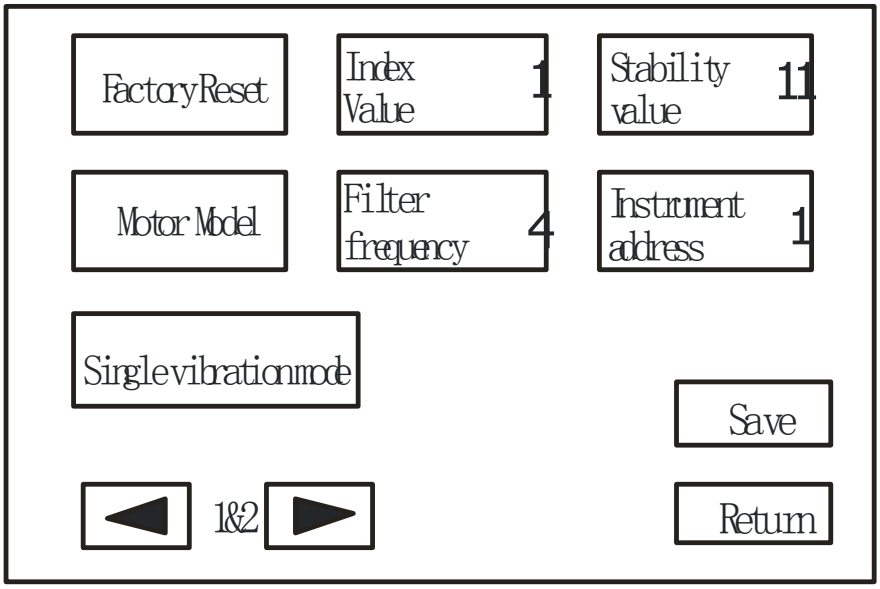
2, according to the calibration key, reset the weight of the window shows "8888" said balance in calibration process, in the standard balance process.

System parameters setting:

(this picture for hidden pictures, before they leave the factory has set up success, don't usually go to adjust data) :



Click on the "hidden key" position, can appear the password screen, click the box input "888888", the screen appears below "system" words, click on the following screen appears after:



V. Common fault solution and Cautions

- ¬ After get through the electricity, and then into the start menu. If show "PLC no response", means the controller and touch screen not connect normally. Please check the line of controller and touch screen is well connect, or check the controller model if match with the touch screen software.
- ¬ No repeat connect electricity in 30 sec after outage.
- ¬ After turn on electric, operate the machine after 10 min.
- ¬ During using , don't put the over quantity material into scales bucket is forbidden.
- ¬ Hiting and overload scales bucket are forbidden.
- ¬ avoiding the equipment characteristic or safety affairs , change electric lines are forbidden.
- ¬ For humans safety , make sure the equipment firmly on the group.

¬ For the equipment accuracy ,don’ t put the equipment in the wet and easy corroded environment .

¬ Suggesting take out the scales bucket if moving equipment for make sure the safety of sensor.

¬ Should pay attention to the equipment maintenance regularly check the screw loose or not, and tighten them from time to time.

1、The showing of bucket not as Zero ,after press reset key the showing of weight is not stable .

① Check the bucket if touch other material,especially the spindle of motor door.

② Readjust (See the adjust menu)

③ The sensor of scale is broken ,change a new one .

2、The system show not stable ,can’ t work correct.

① Check the division value if too small ,make it bigger.

② Check the system parametric of filtering time if too small, change the No.6

③ Readjust

④ Restart the system.

⑤ Check the appearance if broken.

3、Readjust if the scale bucket weight show different put on other scales .

4、Readjust if there is no material in the scales bucket but the screen showing big quantity .

Warning :adjust by putting a big weight and input a smaller quantity than the weight, after the scales showing stable then readjut.

5、Inaccuracy is big.

① Adjust the height of material in vibrating chute by actuator plate(See Graph 2)

② Correct set the work menu parametric , see the setting menu.

③ Check the power supply voltage is stable ,match a constant voltage regulator

④ If the bunker have material.

6、The Speed is slow.

① Correct set the work menu parametric , see the setting menu.

② Checking Graph 3 fixed screw if move off.

④ Checking Graph 3, and confirm the vibrating chute and bakelite plate if have a condition of loose and shatter .

7、The Motor door running all the time.

Checking the Graph 2, the position of Motor positioning photoelectric magnet or Motor positioning photoelectric switch is broken.

8、Can't make the bunker clean.

① Check the material is too wet.

② Change the system parametric mote model into cylinder model and correct set the open and off time.

Ⅵ、maintenance

This equipment in use should pay attention to the following items:

1. ±10% for 220V power supply voltage, power frequency 50Hz ± 2%. And should be reliable grounding.

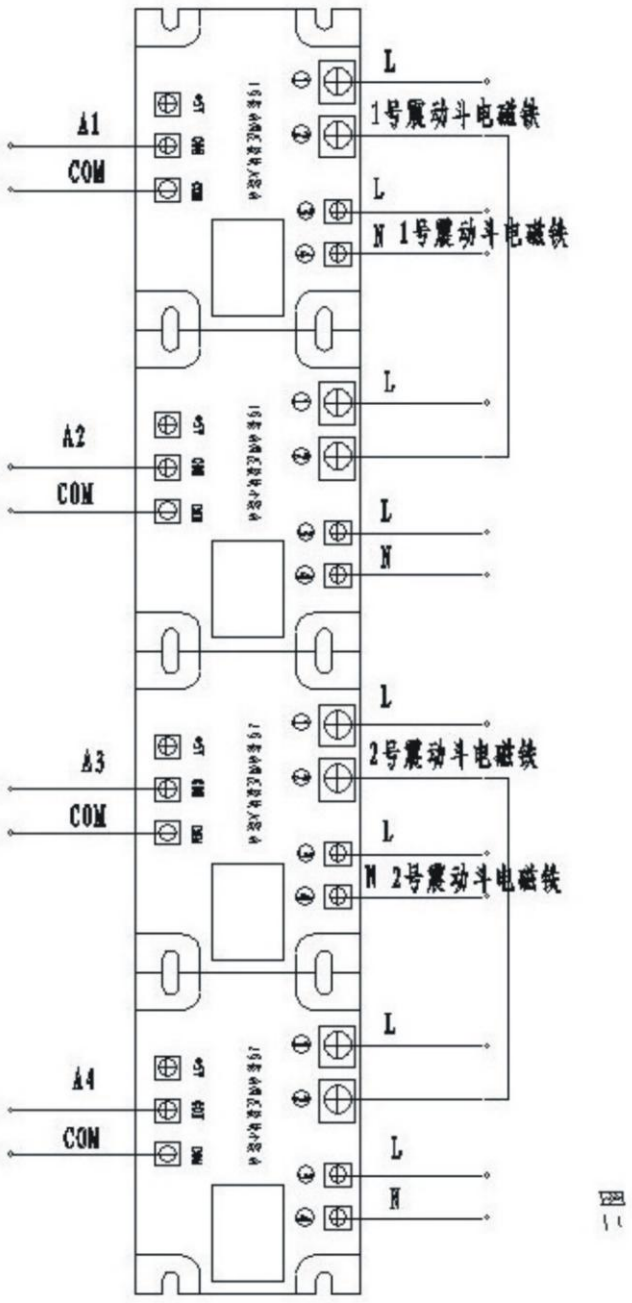
2. Electronic scales can't overload impact, banned YaCheng Taiwan heavy.

3. Material feeding machine may not mix within sundry.

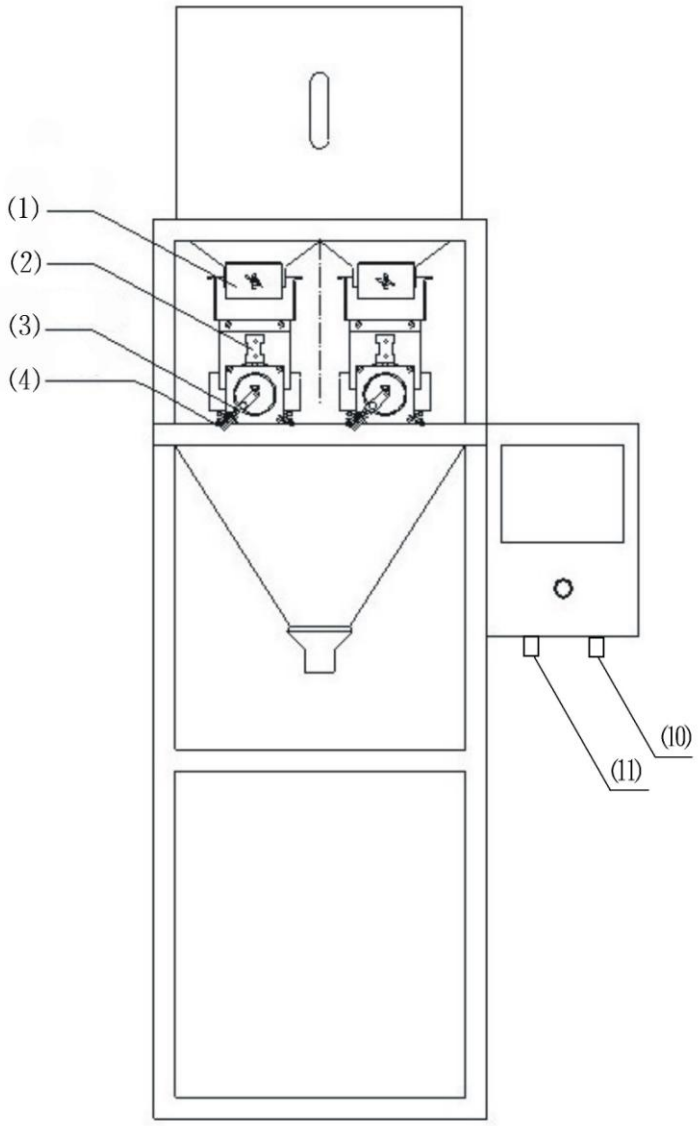
4. Need not when please will wipe clean, and put it into the dry and airy interior.

5. When the machine to work if there are abnormal sound shall immediately cut off power supply.

6. Fastener have loosened.



Graph 1 (circuit diagram)



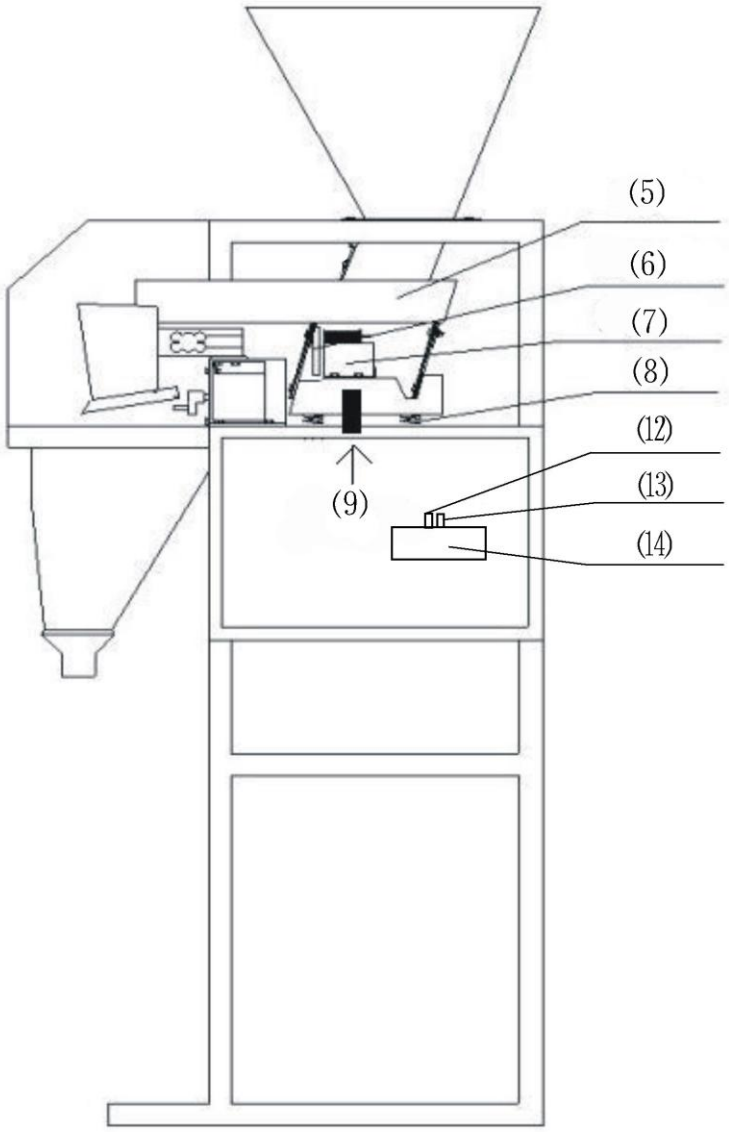
Graph 2

(1) actuator plate (2) sensor (3) Motor positioning photoelectric magnet

(4) Motor positioning photoelectric switch

(10) hopper - level control photoelectric switch （four core） （Need to be fixed in the hopper） （The switch and the material level control functions need to buy another feeder）

(11) Foot switch / photoelectric switch （three core）



Graph 3

(5) vibrating chute (6) Electromagnet iron (7) vibration electromagnet (8) spring (9) fixed screw

(12)&(13) N socket / 107 socket : The power cord connection "feeder", The "feeder" power cord respectively inserted into the socket at the bottom of the two socket. To control the level control photoelectric switch is installed, Can automatic control "feeder" open and stop.

(14) socket : socket in electrical box inside.

Need to buy another "feeder".