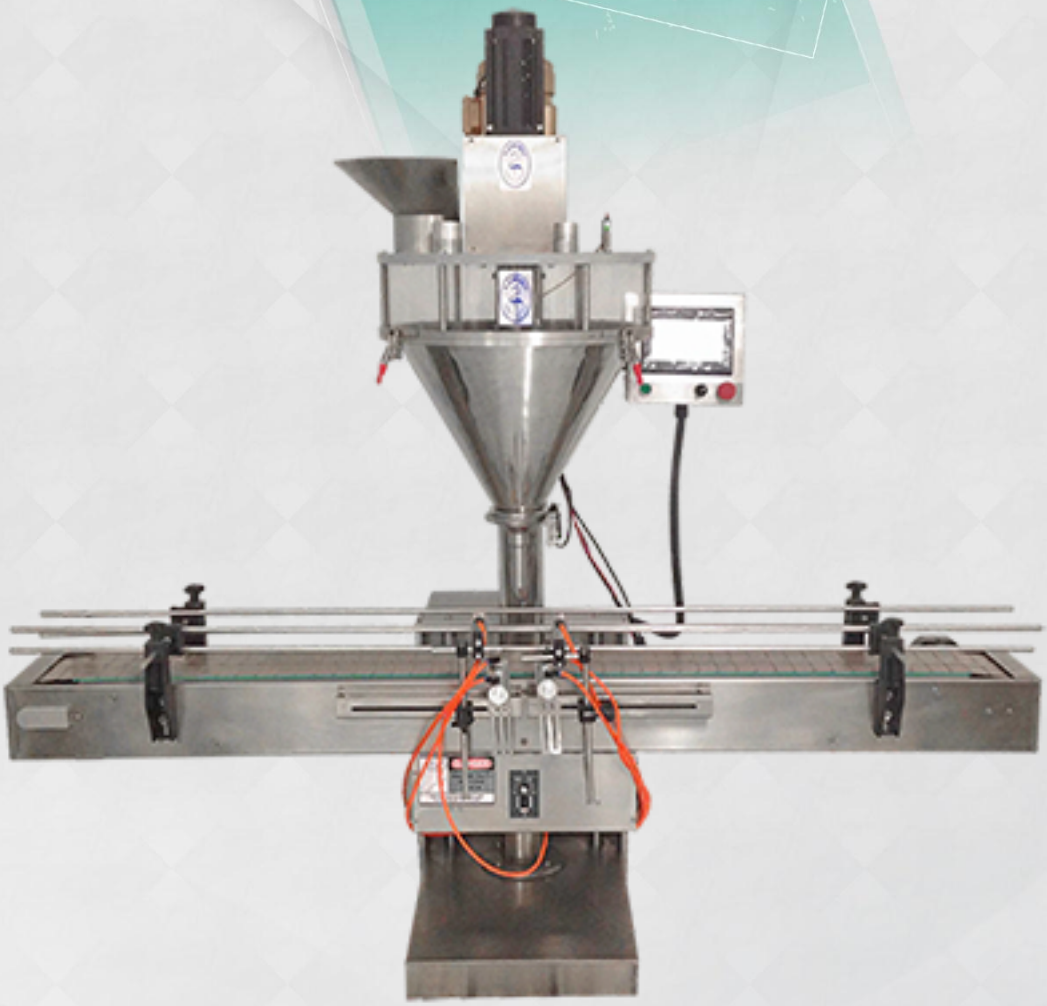
ERNEST FLEMING
MACHINERY & EQUIPMENT Pty Ltd



# Flamingo Auger Filler

## EFAF

**User Manual**

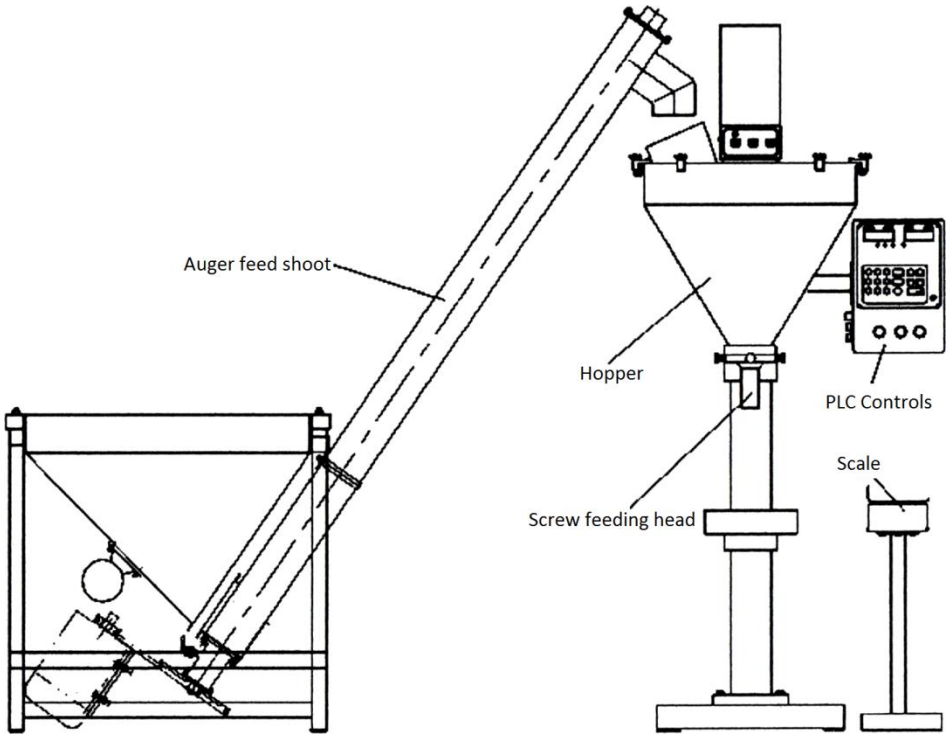
The EFAF Powder Filling Machine is a new generation of quota packing equipment after absorbing and digesting advanced technologies. Its prominent characteristics include: simple structure, low-rate failure, accurate quota, broad adaptation and a flexible combination.

The EFAF Powder Filling Machine uses the modules design; its basic disposition is its main engine and verification feedback electronic scales. The main engine is used to complete the quota backfill and the electronic scale is used to verify quantity, feedback error or a correct quantity. You can choose auto-material-serve equipment, wrap bag equipment, anti-drip material instalment and seal instalment according to your own needs, so that the efficiency, the quota precision and automatic degree can suit your needs.

This machine adopts microcomputer controls and mixed step motor driven technology, allowing its work to be stable and reliable, with high repeat accuracy and low noise. It works at the mode of constant volume or constant quota. Blanking is controlled by electro-optic and not effected by environment. The contacting parts are made of only the highest quality stainless steel material, as it is corrosion resistance and does not pollute the material. Only by replacing the metering screw can you realise the packing of different material and specifications, and the entire process takes less than 10 minutes.

This machine possesses functions of keyboard establishment, automatic quantitative feed, weighing feedback, automatic revision error, out-of-tolerance warning, material position control, automatic clearing material, electronic scale over-load protection, counting, and so on. It is suitable for the quota package of small granulated material, like professions of agricultural chemicals, veterinary medicine, feed, bread flour, chemical additive, seasoning ECT.

**Complete machine contour is as follows:**




The controlling section is mainly run by a control board, sensor, electricity control panel, keyboard, electro-optical switch and the material position switch. The master control board is the core control. The sensor transforms the weight signal into electrical signal and deliver it to the master control board, the drive power is used to drive step motor, the keyboard is used to establish revise and operate all kinds of parameter, the electro-optical switch is used to control the blanking, material position switch is used to control the material position in the hopper and the electrical control panel is used to control the whole machine power source, stir motor and automatic material supply machine.

**Main Technical Parameters**

- *Packing container: Aluminium foil bag, plastic bag, cloth sack, paper bag, wide mouth bottle and so on.*
- *Packing specification: 5g~5000g*
- *Accuracy ：+-2%*
- *AC220V 60Hz 1100W*
- *Mains input: AC220V 60HZ 1100W (feeder exclude)*
- *Packing speed: 1500~2500 bags/h (approximately 600 bags / h by weighing)*
- *Gross weight: 360kg*
- *(L * W * H) ：1980×650×980 mm*

  *870×975×980 mm*

  *2450×350×350 mm*

## Operation requirements

1. The ground should be flat and the surroundings dry.

2. DO NOT place near strong magnetic field, heavy air current or vibration, otherwise the electronic scale will not be stable.

3. The power source is two-phase system. Connect it to the earth to ensure its safety.

**Inspection and adjustment**

All parts have been adjusted before the equipment leaves the factory. But the fastener will possibly become loose and thus cause the position variation during the process of transport, moreover, when replacing the backfill part, related components should be adjusted. Therefore, following inspection and adjustment should be carried out before the use.

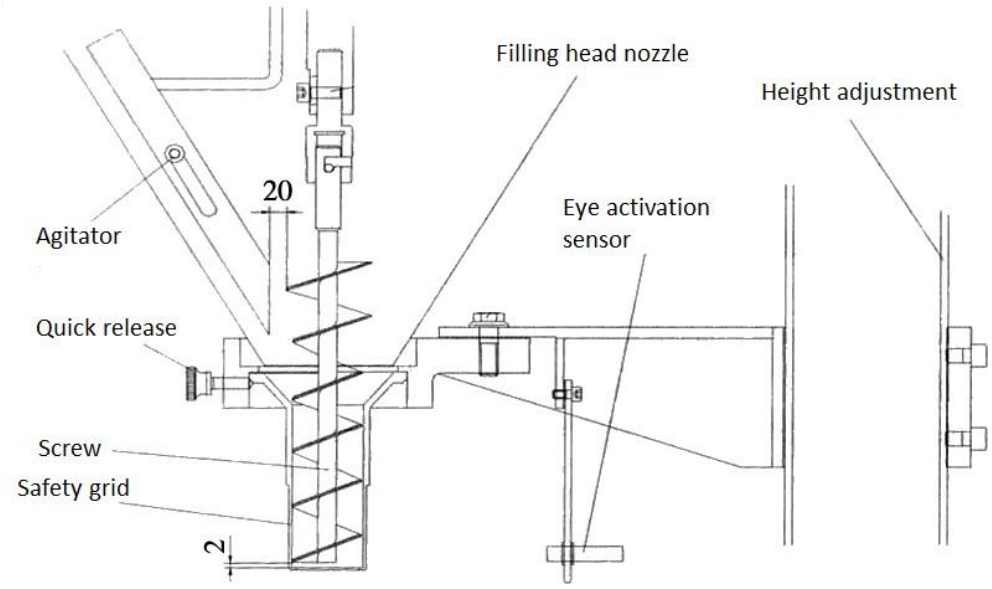
**Content of inspection:**

- Whether various electric appliances peg grafting is reliable,
- Whether various fasteners become loose.
- Whether the hopper has foreign matter.
- Whether various pressed keys are effective.
- Whether the rotation direction of the mix and feeder are correct (clockwise when looking from downward), change two wire of the power source if the direction is error.
- Whether the regulating shaft bolt is loose.
- Whether the material cup and the screw is concentric.

**Inspection method:**

- Loose the material cup clamping screw and takes away the material cup.
- Each time the screw rotate 90°, cover it with material cup, then observe whether it interfere, if not, concentric adjustment is needed.

**Adjustment:**



**Adjustments of the bracket (take the above chart as reference)**

Hang the screw on the regulating shaft (the structure is similar to hangs mouth electric bulb), wrap the cup on the screw and observe the gap between the rim of material cup and the bracket when the screw rotate 90 each time. If the gap is not identical, the bracket should be adjusted. Loosen the bracket bolt first (not completely, it is suitable if the bracket can be moved by a stick). Strike the position that has a bigger bracket gap, when the material cup can warp the screw wherever it rotates, it explains that the position has adjusted, thus you can tighten the bracket.

**Adjustments of the screw height**

Wrap the material cup on the screw to observe the spiral base of the screw, it's normal if the gap between its base and the cup base margin is 2 millimetres when adjusting (above chart). Open the right observation window of the hopper, loose the regulating shaft bolt, and fix the material cup with three material cup bolt, then, move the regulating shaft up and down by hands and tighten the regulating shaft bolt when the height of the screw is appropriate.

**Adjustments of drawknife position**

20 millimetres is the usual distance between the drawknife and the screw (chart above). When adjusting, loose the drawknife bolt and pull or push the drawknife to the appropriate position then tighten the drawknife bolt.

**Adjustment of electro-optical switch**

The Electro-optical switch's sensitivity has been adjusted when leaving the plant. If you feel it may be inappropriate, you can adjust it yourself. Use a screwdriver to revolve the latter part screw of the electro-optical switch, and use your hand to cover the electro-optic switch simultaneously, when done correctly the red instruction light will illuminate, when the distance is suitable.

**Basic operation**

- Connect the power source, turn on the power switch, and open agitation electrical machinery, working status is opened after the display window.
- Select 'MATERIAL SUPPLY'; the feeder starts to feed in raw material, and stops automatically when it reaches its position.

Quantitative criteria

**1**）Press 'MATERIAL CLEAR' and wait approximately 2 seconds for the field to be blinking.

**2)** Put the container on the weighing platform, and press [reset] key to remove the container weigh.

**3**）By the Feeding Setup input window, add the weight to be packed by NET exit

For example, your Filling volume is 100g, so enter is 100.

**4**）Cover the electro-optic switch and accept the material with the container. After the backfill completes, put the material on the electronic scale. The machine revises itself automatically and regular production can be reached when weight is stable.

**Establishment of automatic feed bag number** (neglect this operation if there is no automatic feed bag equipment)

Enter the number automatically by NET exit (Recommended no more than 30) and the automatic number to be completed. This value is usually small package size can be set larger, and vice versa should be set smaller.

Photoelectric switch blocks the flow to complete quantitative filling. Filling weight may not be accurate, you need to check the filling correction by placing containers on electronic scales, electronic scales and automatic calibration correction. Normal operations do not have to bag check.

Note: The number of pulses generated by quantitative may have led to quantitative allowed for electronic scales you can automatically correct a few times.

Stepper motor pulses will not be lost due to power outages. This value will be automatically adjusted, so the next boot may not be your first set of parameters.

**Parameter inquiry**

The operation is mainly used to view or record the current parameters, when you replace the packaging specifications or materials it may be the corresponding value without having to repeat the calibration process. Query parameters include: quantitative scale factor, the weight of the reference value, for automatic, the number of pulse stepper motor and stepper motor operating frequency.

**Reset operation**

The weight displayed should be zero when electrify. If there are goods on the electronic weighing platform, you should take it away and press [reset]

**Special prompt:**

- If the spiral part need to be replaced, please close mixer, and closed switch. Otherwise triggers the electro-optical switch will cause damage to screw rotation.
- Do not let the spiral operate idly as far as possible, long-term idle operation is not allowed.

**Confirm the value obtained endothelial**

Endothelial value: original zero scale calibration value.

Endothelial value is preserved, loss of power is not will not change values.

**Electronic scale calibration**

Calibration: The calibration of electronic scales, electronic scales can only be used after calibration. Replace the sensor or the motherboard must be calibrated. Before the implementation of calibration, you must maintain the empty scale units. Press clear, the weight on electronic scales at the top, enter the calibration value in the weight for weight (g), according to NET exit, press OK.

Calibration values can be durable

**Common Troubleshooting**

1. **No demonstration after starting.**

Check power source to see whether it is put through correctly, whether the grounding wire is used as neutral wire and whether the protective tube is exposed.

2. **Monitor fluxes show confusion**

Reason: The electronic scale is at the overload condition, The electronic scale is not demarcated correctly, or the electronic scale is damaged after undertaking heavy pressure.

Solution: 1) demarcate the electronic scale again 2) replace the sensor.

When the electronic scale is under the overload condition, stop all operation.

3. **Stepper motor out of step**

Reason: It indicated that the pulse quantity of step motor is too small. The quota demarcation and the weight datum value are not processed correctly, or the difference between the packaged goods that have been verified and the tare datum value has been established for too large.

Solution: Use withdraw key to finish it. After the withdrawal, recover pulse quantity of the step motor to 3000, then carry out the quota demarcation again correctly, or reduce the step motor's revolve frequency

4. **The electro-optic switch is not sensitive.**

Reason: It is possibly that the dust on the electro-optical switch's inducing cusp is too thick or its sensitivity is too low.

Solution: wrap the dust of electro-optical switch's surface and raises its sensitivity.

**<u>The electro-optical motor is blocked but there is no blanking.</u>**

Inspection:

1. You should check whether the red instruction light keeps lighting, If so, you can resolve the sensitivity screw anticlockwise.
2. Check whether the red light of electro-optical switch is bright when you block it, if not, you can measure its voltage (should be 12V). Measure the single line voltage of the electro-optic switch to see if it is normal (about 0V when blocked, about 11V when unblocked), replace it if unusual.

**Blanking inaccurate**

Reason: The material is too wet or has agglomerates, or the direction of blanking screw is incorrect, or the screw is entangled with foreign matters, or the position of drawknife in the mixer is improper, or operating procedure is errors (for example: material dripping when accept or the discharge hole is blocked by packing container, which causes the material to enter the vessel unnaturally). Besides that, the vast change of material position in the hopper and unstable voltage can also cause inaccurate of blanking.

The solution:

- The material is too wet or caking. Cup material to absorb moisture or material as a material backlog of bond agglomeration result, massive clean-up materials can be added.
- Cutting spiral turn right. Motor firing phase modulation.
- Spiral wrapped around a foreign body. Material in a foreign body, stuck spiral, steps have been caused by increased weight value is reduced. Foreign body can be clearly resolved.
- Stirrer blade is poorly located. Adjust the mixing blade position to the right location can be resolved.
- The frequency of the stepper motor inappropriate. Frequency is too high. Frequency is too high too fast, too late to promptly fill material into the helix, resulting in lower material are not allowed. Lower frequency can be solved.
- The operation method is wrong. Improper operation (such as material or container is too high then blocked drain cup material, the material did not lead to full access to the container). The correct method of operation can be properly resolved. (Note: There is material under the cutting tray under the spout and tray spacing is too large (spacing): up and down the long axis by adjusting the position, to adjust the feed screw and the material under the cups to the relative position to the best solution.)

- Change of the material within the hopper. Too little material in the silo. Feeding to the appropriate location can be solved. Add feed to add volume and excessive speed caused by the impact of a large number of materials, the density is too large impacts on short-term transient changes measured are not allowed. Increased feeding frequency, feeding rate and reduce the amount you can add to a single solution.
- Grid voltage instability
- Does not match the tare weight. Packaging tare not set result. Re-set tare weight to solve
- Cut off excessive nylon. Shear pin nylon causes excessive wear, leading to random spindle shutdown activities due to the angle. Replace the nylon pin.
- Screw excessive wear. Replace the screw.

**Step motor out of step**

Reason: The frequency of the step motor is too high (you should reduce its frequency) or the driver is damaged (replace driver) or foreign material is mixed in the material that increases the resistance force of the step motor (Remove the foreign matter)

The solution:

- It may be caused by the stepper motor frequency, should reduce the frequency
- Damage caused by the drive, replace the drive.
- There is debris in the hopper, the stepper motor resistance increased, resulting in a loss of step, remove the debris.
- The drive voltage is too low, usually around 100 exchanges. Check the power supply is normal.
- The band is too small. Set up a large number of bands, usually 20 to 40.
- Stepper motor demagnetization. Replace stepper motor
- Inaccurate weighing

Reason: Possibly because the sensor linearity inconsistent (you can divide it into several sections to demarcate); Or the sensor is damaged (replace sensor).

**Zero point of electronic scale unstable**

Reasons: Possibly because weighing platform was placed unsteady, there are foreign matters in the weighing platform , there are air current nearby, or the humidity working conditions causes the control circuit wafer affected by damp greatly. Electric drier's hot blast can drive away circuit water's humidity, the temperature should be controlled at 40~50℃for about 10 minutes.

**Blanking quantity reduce all the time which cause spiral operate idly.**

Reason: Stir motor has stopped revolving or the driving chain has fallen off.

Solution: Check the electrical machine to see if it is damaged, or whether the driving chain has become loose.

**Blanking quantity is extremely few or electronic scale weighing is inaccurate**

Reason: External interference causes the internal demarcate value refurbishing.

Solution: Demarcate electronic scale again.

**The feeder does not supply material.**

Reason: Sensitivity of the material position is too high or the material gluing on the point.

Solution: Lowers its sensitivity (the method is same as the electro-optic switch), take out the material position switch and clean it.

**Stirring motor can not start.**

Reason: start stirring motor contactor is overloaded.

The solution: Start stirring motor contactor controlled by a thermal protection device, when the current is too large thermal protection starting, try disconnecting the AC contactor to protect the stirring motor. This occurs, to be cooled thermal protection, thermal protection device by clicking on the blue button to work properly.

**Press the sensor without the weight display.**

**Reasons:**

- The photoelectric switch sensor plug and air is reversed. Plug in correctly
- Air plug in the sensor wire or cable in the fall due. Re-welding off-side can be solved.
- Hang the wire inserted in the wrong position due to the sensor. Re-wire in the correct way to weld a solid solution.
- Tighten the air broadcast is not done. Tighten the aviation plug to solve.
- Weighing sensor signal is off-line. Can be re-welded.
- The sensor is damaged. Replace sensor.

**Feeder does not feed**

Reason: Level Switch ends bonded materials or poor material position controller sensitivity position; stirring motor did not start or enhance the machine out of the thermal overload relay.

The solution:

- The end of the bonding material switch. Cut off the power switch will remove the material bonding material to wipe clean.
- The location of poor material position controller sensitivity. Check the material level when no material light is lit on the controller, as always, along with a flat screwdriver bit counter-clockwise button on the controller, check the lights off until the transfer.
- Stirring motor did not start. Start stirring motor.
- To enhance the machine out of the thermal overload relay. Hand the electrical box corresponding to the blue reset button pressed.

(Note: accompanied by feeder only.)

**Maintenance**

## Pay attention to each item bellow:

- Voltage of power supply is 220V±15%, and supply frequency is 60Hz±2%. Connect earth reliably.
- Electronic scale cannot overload, forbid pressing weighing platform.
- Electronic scale must be used in a no vibration, dry environment.
- Supplement the stir motor's speed reducer with lithium base lubricant from the filling-station every 10 months.
- Replenish the shaft bearing on the top of the feeder every 3 months.
- Do not put sundry goods in the feeder.
- Clean the machine when you do not use it, and put it in a dry and well ventilated room.
- Cut the electricity immediately when unusual sounds are heard.

**Brief Instructions**

If you are a first time boot, your basis having the following steps:

**1.** Press the power switch to turn on mixing spaces.

**2**. As previously described, to take the tare value.

**3.** Followed by setting the weight of the reference value, the upper limit and lower limit. (After setting the reference value, the system automatically calculates the required number of pulses and then set the pulse operation; experience can also be entered manually.)

**4.** Set automatically for Liaodai number (no automatic feeding device without the operation).

**5.** Complete the above steps, you can now normally operate. Note: the beginning is not accurate because the number of pulses, resulting in cutting allowed, after a few times in the quasi-scale platform feedback.

Power-down after the above data can be automatically saved. For the same material, if the package specification does not change, it will work again; for different materials, you need to re-fill calibration.

Note: The work must first open the stirring motor, after the new power cord, check the motor rotation is correctly mixing (clockwise looking down), if not remove the power of any two fire must end swap.

## Equipment commissioning procedures and precautions

**1.** Power supply: power supply wiring for the two-phase wire. External power supply access equipment must be preceded by circuit breakers, electrical box access to keep in mind by the power cord connection terminal label. As this equipment has micro-circuit, the power required to bring the zero line. Note: Supply voltage fluctuations have 10%!

**2.** The mixing of the motor rotation adjustment: After power on the host computer, start the stop button to move the hand, turned to see the stirring motor, steering motor was looking down from the clockwise direction. Otherwise, cut off the external power supply, you can either tune the two-phase line of fire.

**3.** Cups of matching material and installation: According to the test specifications and characteristics of packaging materials, selected the appropriate screw, material cup. After selecting, installing spiral into the long axis of the coil spring to let the card slot, up to the top screw slot end, the counter-clockwise rotating spiral, so screw the pin into the card slot for the installation of spiral is completed. On top of screw loosen up after completing, a slight rebound to a downward spiral in place!

**Installation of cup material:**

Material before installing the cup three stainless steel screws to release the hand bracket in the hopper, clean contact with the feed hopper above the cup above the contact with plastic frame within the hopper, turn the hand screw 45 degrees, and then install the material cup, easily put into continuous rotation a week, all of this, you can install the material cup, cup with screws lock material. Otherwise, the hopper release the two captive screws on the bracket straight preload state, with a rubber hammer tap cup holder can be easily transferred into the feed hopper can be within the bracket, locking fixation screws. If bias is still large, release the hopper after the fixation screws, adjust the relative position of the hopper to the right position locking fixation screws. After adjustment by the aforementioned steps. Note: The locking material cup, the three stainless steel screws of preload force to be consistent, the same locking strength also! Before locking material in the cup feeding cup and screw the bottom to see the relative position, and screw the bottom of the cup material shall not contact or spacing is too large! If the bottom of the cup

material with stairs, spiral stairs and the bottom of the relative spacing of 1-2 mm is the best. Otherwise, relieved screws on the panel, remove panel, release the long axis of the hexagonal screws, adjust the position up and down the long axis of the cup with the screw at the bottom to feed the best pitch, tighten the screw axis of the hexagon , mounted on panel.

**3.** The adjustment of stirring blade: Blade location of suitable packaging materials Packaging of precision of a great relationship. The role is to make the mixing process in the packaging, packaging materials during the next spiral filling evenly, and the spiral cutting the material inside the hopper can not afford after the dome arch. General mixing blade and the screw position is appropriate spacing of 10 mm or between the material during the next spiral is not collide with the best. Excellent mobility packaging materials away from the spiral blade to avoid dripping of materials increased, affecting measurement accuracy. Adjust scraper can be expected to switch from a fixed plate at the adjustment, remove the material at the fixed plate switch, with a hexagon wrench to loosen the fastening screw fixed blade, adjust the blade along the direction of the position of the hopper to the appropriate location.

**5.** Adjusting the optical switch: As the operator and people are more mixed, to avoid the chaos dimming reflective sensing distance is used

The optical switch is not adjustable. Adjusted along the optical switch photoelectric switch fixation to the packaging workers comfortable position, to avoid incorrect cutting.

**6.** To adjust the position of switch material: with automatic feeding system for users who switch to adjust the position of material accuracy of the packaging there is a certain relationship. In the right place to stop feeding the accuracy of packaging can guarantee a certain continuity. Reaction distance adjustment level switch level switch can be adjusted to the installation location and distance to complete reflection. Adjusted according to the specific location of the actual situation.

**7**. The feeder adjustment: adjust the mechanical assembly drawings in accordance with can. Circuit components: access to electrical power supply inside the left inside the second

terminal of the contactor. Manual feed, see the motor turning, the motor turned clockwise from the top down. Otherwise, you can either tune the two-phase line of fire. Discharge door and locking clamping flexible connection to work.

## Notes on the use of equipment

**1.** Loading at starts mixing, while more than one side to avoid the material appeared less evenly distributed in the hopper.

**2.** Points must be installed according to instructions the first steps in setting steps 1 and 2 should not be spared. Otherwise, packaging accuracy and error correction can not be, or adjust, however. Let the machine before the first formal packaging material next time, so full of material feed screw cup.

**3.** If the feeding machine, according to the characteristics of packaging materials and packaging specifications set the appropriate number for Liaodai to ensure smooth feeding, feeding to reduce the impact caused by the weight change measurement accuracy.

**4.** The packaging operation of the workers must be standardized! Do not take material to let the material under the cup in the bag material and packaging material squeezing each other, or because of changes in the adhesion of the material could easily lead to drip or drain materials known, resulting in a large measure are not allowed to float or measurement.

**5.** The packaging operation, if the access number or part of the material received after the bobble, do not put weight on stage, otherwise the computer will think its an exact cutting data will be adjusted. Affect the accuracy of continuous follow-up and speed.

**6.** After packaging, the material inside the silo unloading clean, and the feed screw cup clean, so the next work outstanding material as the previous work (due to the characteristics of chemical raw materials and easy to absorb moisture) caused agglomeration surplus materials affect the packing accuracy.

**7.** Maintaining Optical switching head clean to prevent dust adhesion caused by photoelectric action as insensitive, resulting in incorrect or non-cutting moves, affecting their life. Note: The misuse of a hard brush cleaning optical sensor head!

**8**. The material found in the work process of a foreign body when the mouth cup, stop out. Note: Do not use hands to pick up foreign objects before shutdown to avoid file photoelectric spiral rotation resulting in bodily harm!

**9.** Packaging materials do not have hard and soft foreign objects! So as not to affect the measurement accuracy and hurt spiral.

**10.** Non-management staff not to set arbitrary transfer management level, so as not to modify the memory process parameters affect the accuracy of the packaging.

**11.** An abnormal sound heard silo should immediately stop checking the material inside the hopper; remove the foreign body before starting work.

**12.** Never leave the machine, turn off the machine power to leave. Ensure that the machine has intermittent work, heat, avoid

Continuous working temperature caused a sustained, increased equipment wear and tear, reduce machine and component life.

**13.** Replacement, cleaning materials, avoid horizontal swing cup spiral screw, to avoid breaking the screw slot mouth crooked, affecting the next work with the material after the spiral fixed side glass wear and tear, impact measurement accuracy. Remove the screw up and down activity. Remove the difficulties can release the long axis of the spiral together and then take out. After repair light card slot and internal foreign objects or materials.

**14.** The device is not stable if there is abnormal noise, immediately stop checking, troubleshooting, before starting work. Avoid: In order to progress, more non-stop to avoid equipment damage and wear and tear, affecting the life of the follow-up measurement and packaging.

**15.** The same kinds of packaging materials for packaging specifications to just change the packaging of its potential value.

**16**. Packing the small size, do not make the weighing platform in the air flow through large areas, because the wind can affect the sensor's minimum graduation show. Balance the power of the wind sensitive, resulting in measurement display instability.

**17.** The device in use for some time, as a result of the intermittent nature of the impact of local parts with nature, will produce some noise. Note: The balance of the sound as long as no noise, is normal.

**18.** No gland weight sensor on the table, no pressure to sit. Maximum load should not be greater than the maximum weighing range. Vibration sensor placed away from the large source areas.

**19.** The replacement of the tensioner pulley and adjust the direction of the attention of its installation and gasket thickness of the upper and lower two locations, tensioner pulley fixed plate narrow inward, up and down the location of the gasket according to two main driven sprocket position to adjust the level of installation.

**The automatic feed equipment for supplying material**

It can realize the function of supplying the material automatically. The opening and stopping of supplying the material equipment are controlled by the upper and lower material position. The lower material position is determined by the sack number and the upper position is determined by the material position. That is to say, after packing certain bags, the supplying material equipment begin to serve material, and the material controller stop serving material after receiving signal. You should set up the number of the feeding bag before using it.

**1.**Connect power supply: open the lower part of the electrical box cover packaging machine, the power of the two lines from the reserved holes penetration, respectively, L, N, respectively, then the 1.2 terminals; the feeder line from the two pre-leave holes penetration, respectively, U2, V2, respectively, then the 8.9 terminals; the mixing of two motor cable penetration from the reserved holes, respectively, U1, V1, respectively, then the 5.6 terminals; will three-wire stepper motor penetration hole from the reserve, respectively, U3, V3, W3, respectively, then 11. 12.13 terminals.

Click open the "power" on "mixed", according to the starting rotation observed for the feeder from above pulley should rotate clockwise.

**2.** Adjust the sensitivity : revolve sensitivity knob and at the same time, use the hand to approach the end to make sure the examination distance is approximately 100 millimetres (Our company has adjust it when leaving the plant).

**3.** Install the material position machine on the observation shutters. Cover observation shutter and then compact them by using strips.

The lower part of the feeder is sealed with the wool felt. If the material leaks at the lower part, it means that the gasket is worn and must be replaced. When replacing, you should take down the leather belt, loose the gasket lap bolt and take out the attrition gasket. Then press a new gasket and fix it.

**Attention:**

**1**. Do not smuggle sundry goods in the material.

**2**. Whether various fasteners are loose or not

**3**. Replenish upside rotates every 1 month with butter.

**4.** When working, operators should not wear skirt, long gown and so on. Please be safety-conscious when the electrical machine is working. If the machine crashes, cut the power when overhauling.

**Safety instruction**

This product is precision equipment, following items should be noticed when using or transporting:

**1.** The power source must be used in the prescribed limitation:

Rated voltage value 220V -15%~10%

Rated frequency value 60Hz -2%~2%

Neutral wire must be well-connected and should not have voltage excursion.

**2.**The equipment must be on the earth

**3.**overloading is not allowed when using electronic scale, forbid pressing weighing platform and exert pressure to the weighing platform reversely

**4.**Vibrating is avoided when using the electronic scale

**5.** Forbid inverting or dashing when transport, forbid drenching by rain.