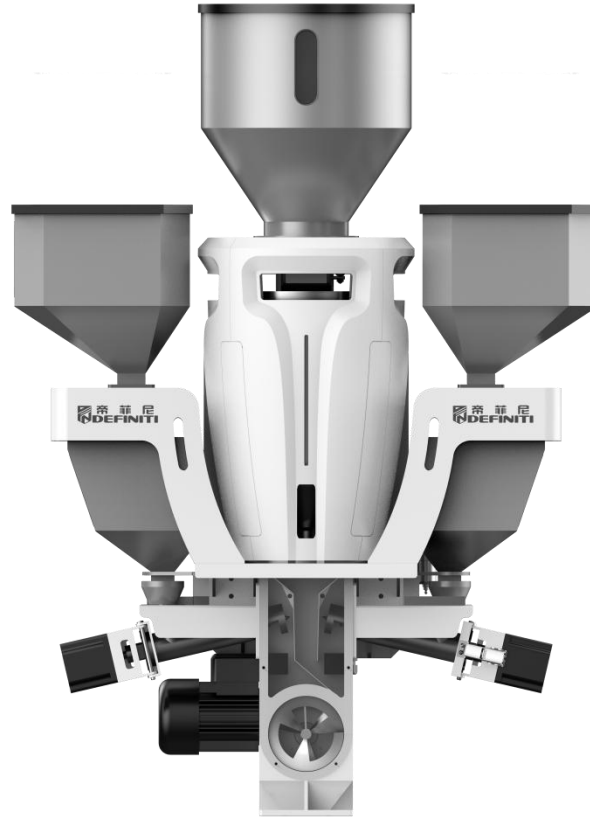




Loss-in-weight Feeder instructions



Thank you for purchasing loss-in-weight feeder. Next, we will explain the installation, use and maintenance of the feeder from these five aspects.

1 Mechanical structure installation	-----3
2 Electrical installation	-----5
3 Parameter setting	-----10
4 Startup operation	-----20
5 Precautions and common alarms	-----24



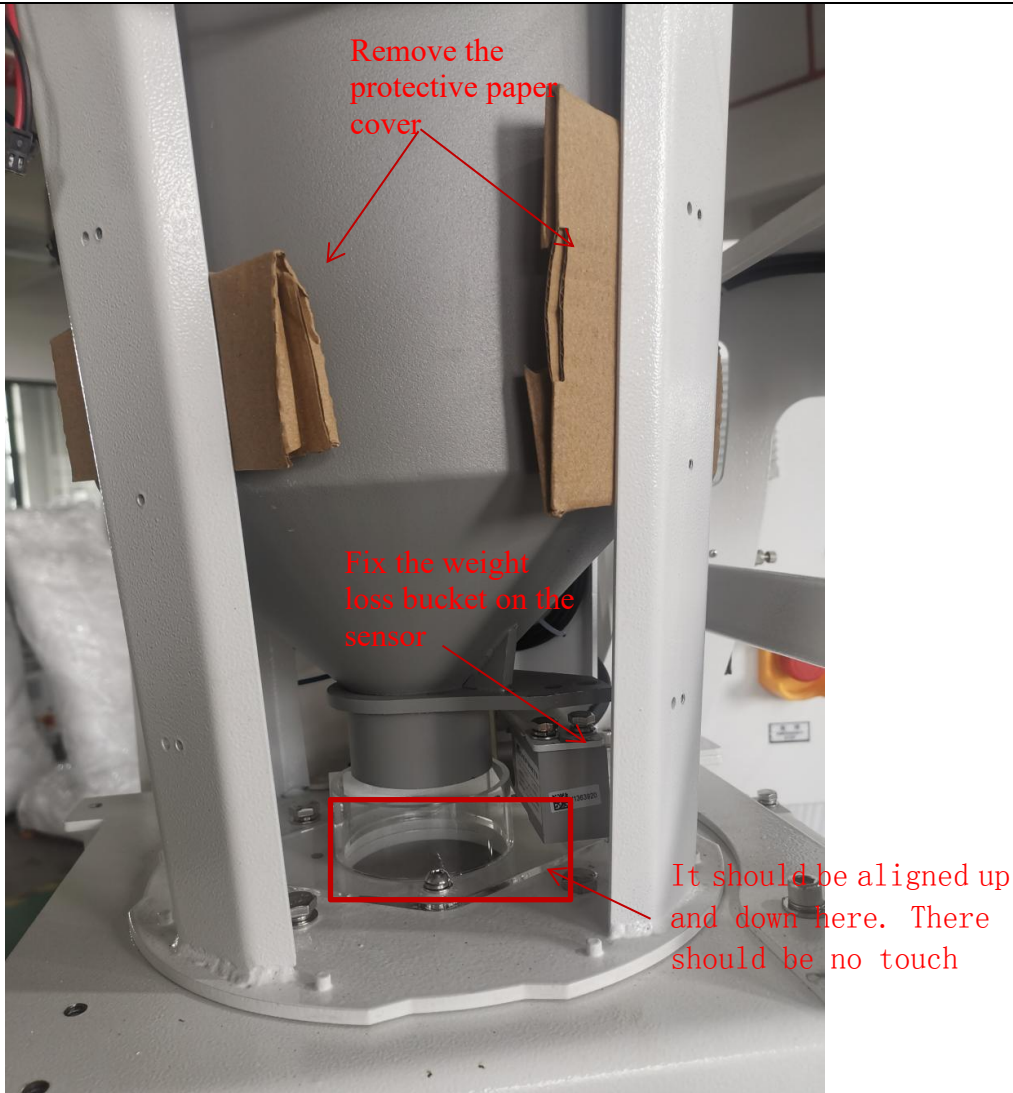
1 Mechanical structure installation

After unpacking

1: Remove the weight loss bucket transport connecting piece



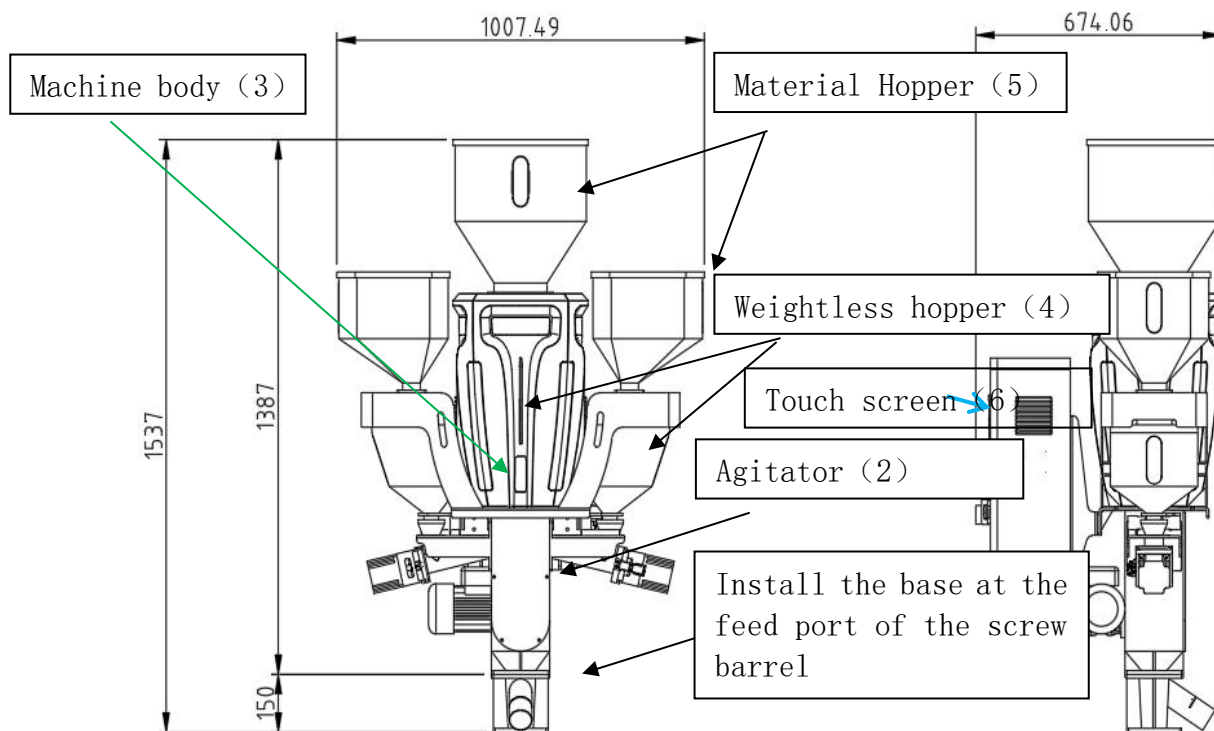
2: After removing the connecting piece, take out the protective paper sheet, fix the weight loss barrel on the sensor, and align the blanking port of the weight loss barrel with the acrylic transparent flange below.



The mechanical installation must be balanced and firm, and installed from bottom to top.
Please pay attention to protect the load cell from impact and pressure during installation.

1. The mechanical installation sequence is shown in the figure :

- 1) Install the base at the feed port of the screw barrel (1)
- 2) Agitator (2)
- 3) Machine body (3)
- 4) Weightless hopper (4)
- 5) Material Hopper (5)
- 6) Touch screen (6)



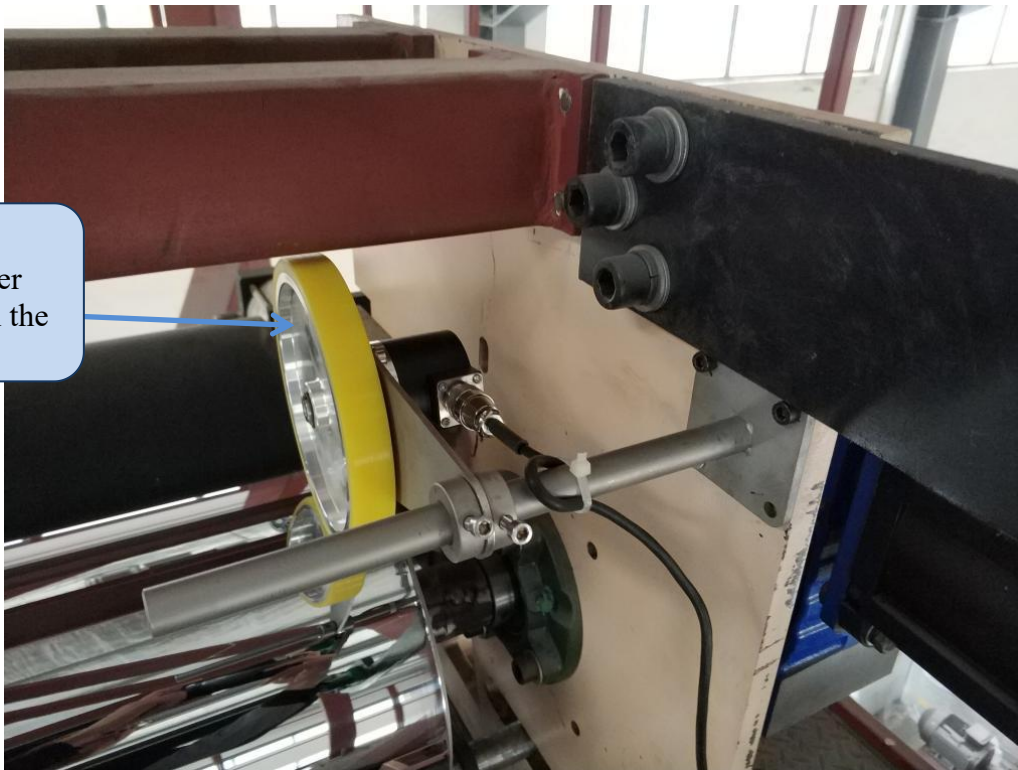
2. Then place the touch screen in a suitable position on or beside the machine.
3. Install the meter wheel at the first traction roller.
4. The installed picture is as follows:



The installed machine is shown in the right figure



The physical installation of meter wheel is shown on the right

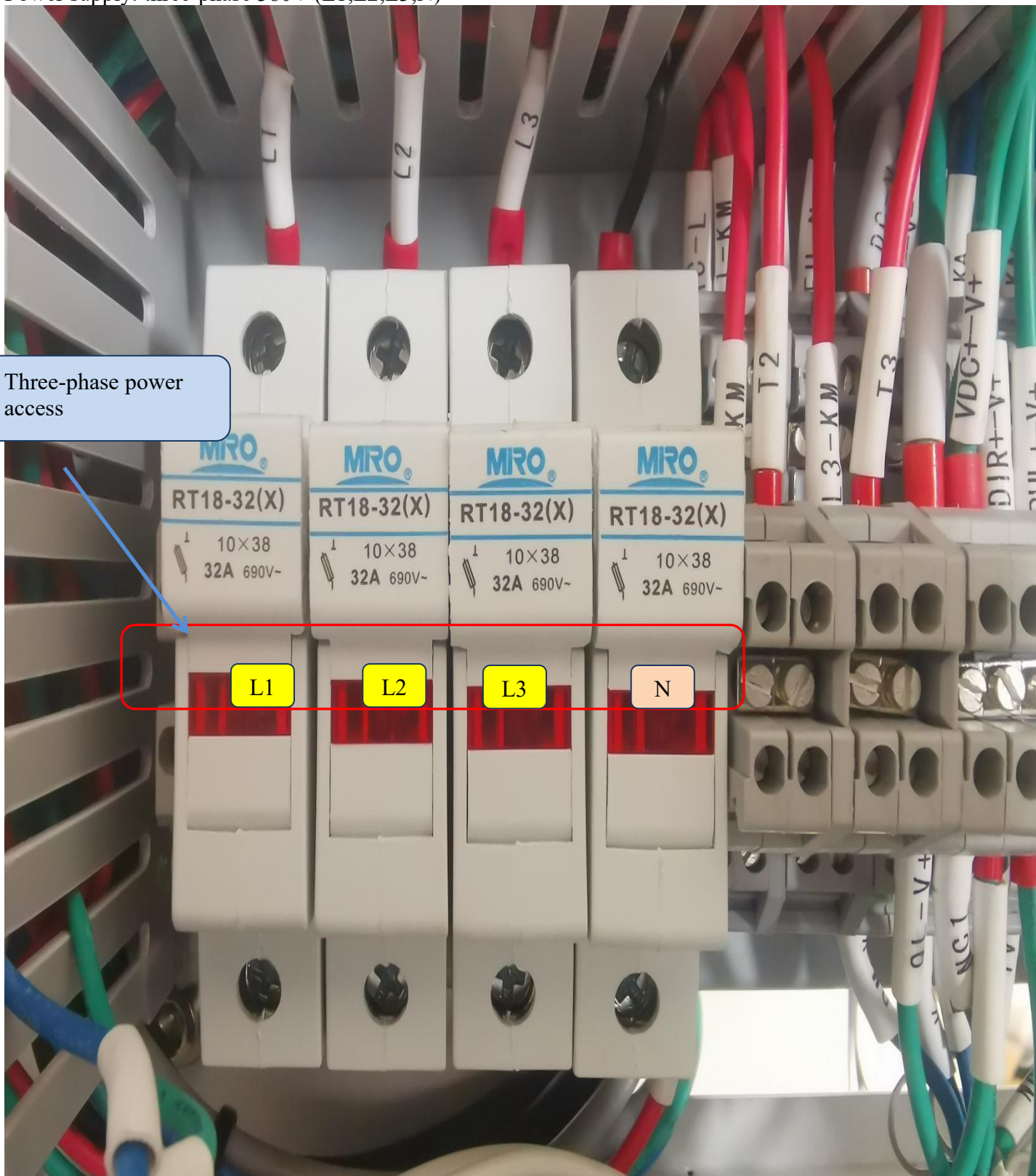


The meter wheel (including encoder) is installed at the first traction position, close to the roll surface



2 Electrical installation

1. Power supply: three-phase 380V (L1,L2,L3,N)

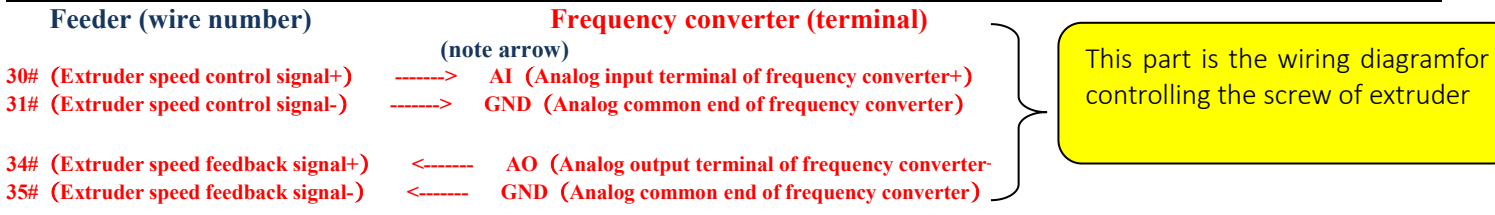


2. Air source: greater than 0.5MPa, and the diameter of air pipe is 8mm. Both a, B and C feeders need air supply.

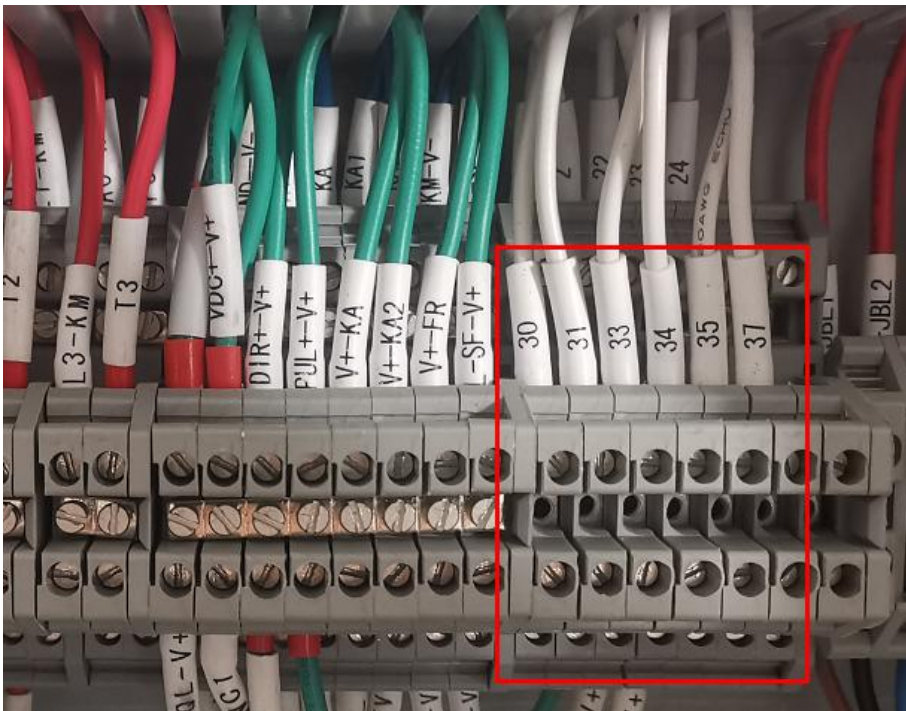
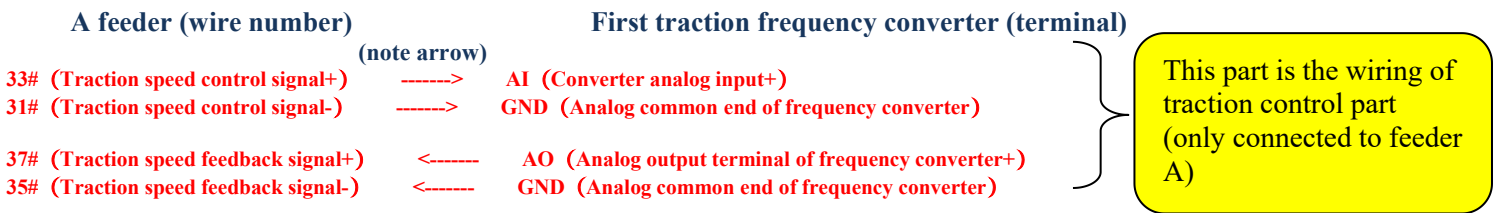


2. Connection of feeder to frequency converter :

Extruder speed control: (used to control the feedback signal of extruder speed and frequency converter)

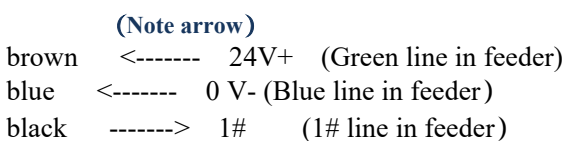


Speed control of the first traction lead: (feedback signal used to control the speed of the first traction frequency converter and the first traction speed)

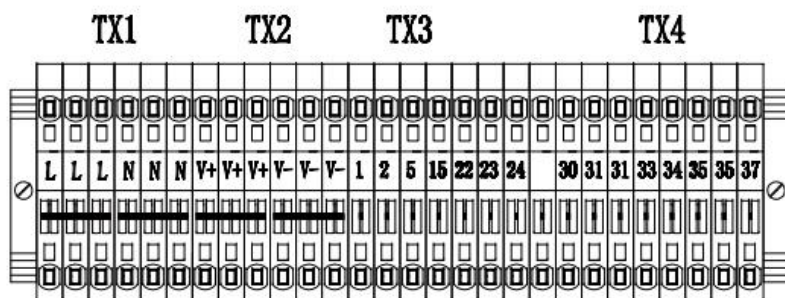


Connection method of using meter wheel as feedback signal of traction linear speed

Encoder: (the encoder of the meter wheel of the first traction roller is connected to the feeder A)



4 Signal position of terminal block



开关量输入 Digital input

- 1: 编码器信号 Encoder signal
- 2: 急停 Emergency Stop
- 5: 搅拌机过载 Mixer Trip

模拟量输出 Analog Output

- 30: 挤出控制信号+ Extruder control signal +
- 31: 挤出控制信号- Extruder control signal -
- 33: 牵引控制信号+ Line speed control signal +
- 32: 牵引控制信号- Line speed control signal -

新驱动接法 Step motor connection

- | | | |
|--------------------------|-----------------|------------------------|
| PUL+: PUL+/24V. | ALM1+:24V | 拨码 PIN |
| PUL-: PUL-/MD | ALM1-:Q1.3(PLC) | QV:S1. S2. S5. S8. S15 |
| DIR+: DIR+/24V | ALM2+:24V | 最高转速100, |
| DIR-: DIR-/0V | ALM2-:Q1.4(PLC) | 电流3.2A;模 |
| PIL: 脉冲信号输入 Impuls input | | 拟量电压控制 |
| DIR: 方向控制信号 Driection | | 转速 |

开关量输出 Digital Output

- 15: 报警 Alarm
- 22: 1#计量阀 Dosing Valve 1#
- 23: 2#计量阀 Dosing Valve 2#
- 24: 3#计量阀 Dosing Valve 3#

模拟量输入 Analog input

- 34: 挤出回馈信号+ Extruder reference signal +
- 35: 挤出回馈信号- Extruder reference signal -
- 37: 牵引回馈信号+ Line speed reference signal +
- 35: 牵引回馈信号- Line speed reference signal -

- AIN: 调速端口+ Speed adjust +
- BERD: 调速端口- Speed adjust -
- +VDC: 24V
- GND: 0V

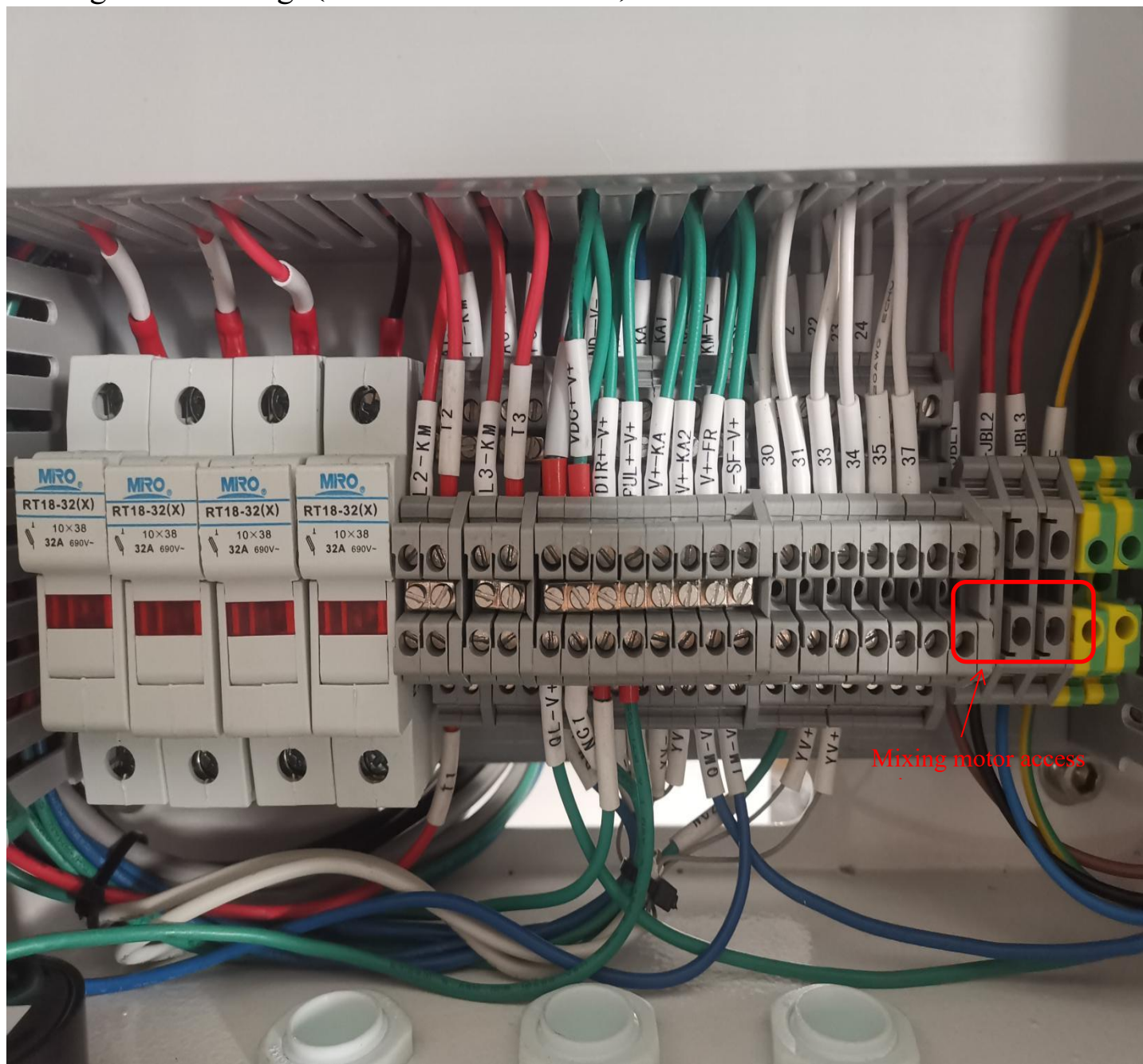
Note: 1: Only feeder A needs to control the traction frequency converter and access the meter wheel. Other auxiliary machines only need to control the extruder frequency converter

2: Although the meter wheel and traction frequency converter AO are traction feedback, they all need wiring

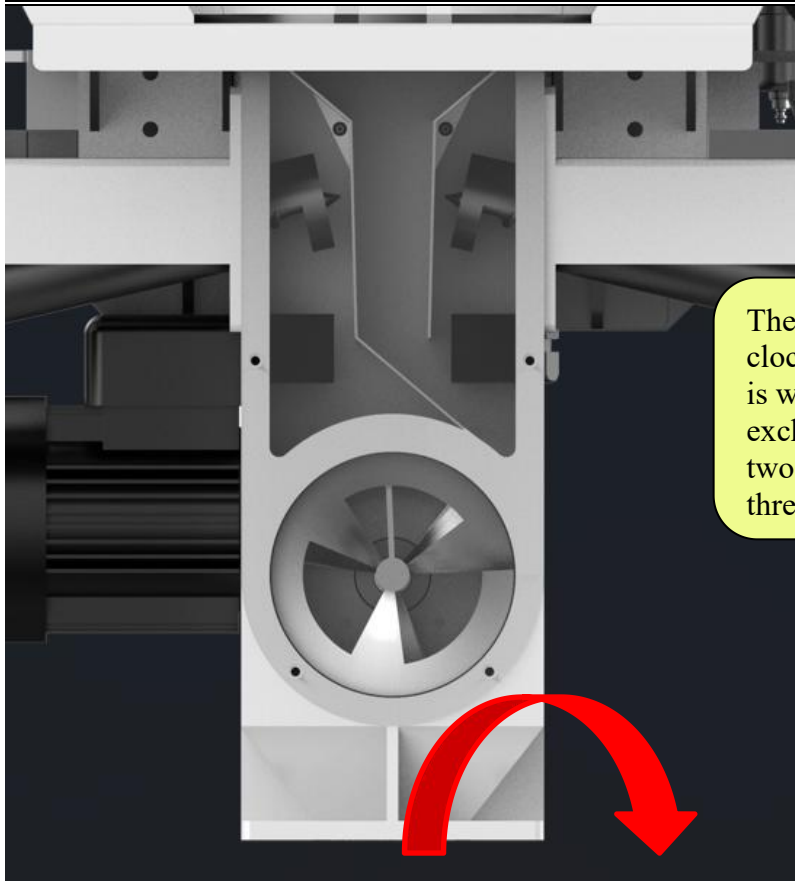
3: The meter wheel must be installed on the driving roller, not on the clamping rod



Mixing motor wiring (JBL1 JBL2 JBL3 PE)



Rotation direction of agitator



The mixing blade rotates clockwise. If the direction is wrong, you only need to exchange the positions of two phases in the three-phase electricity

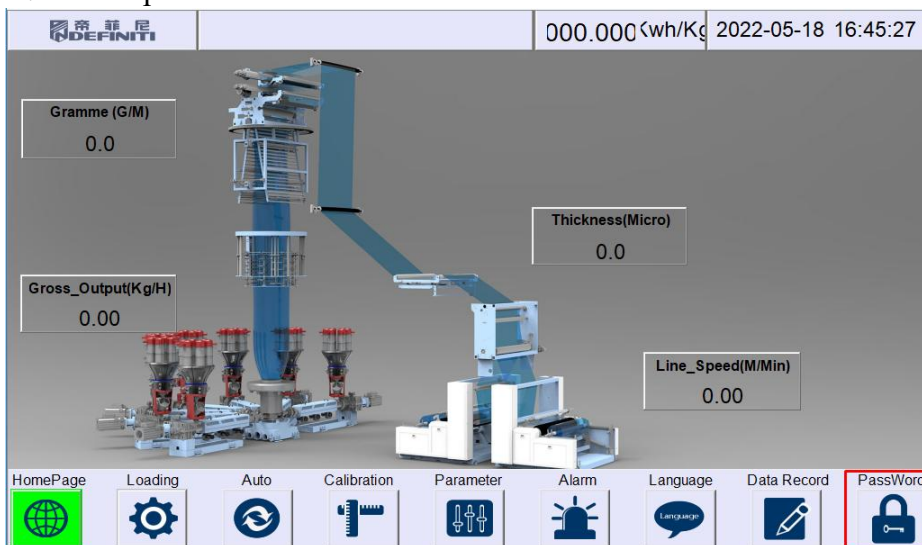
3 Parameter setting

Select model and calibration

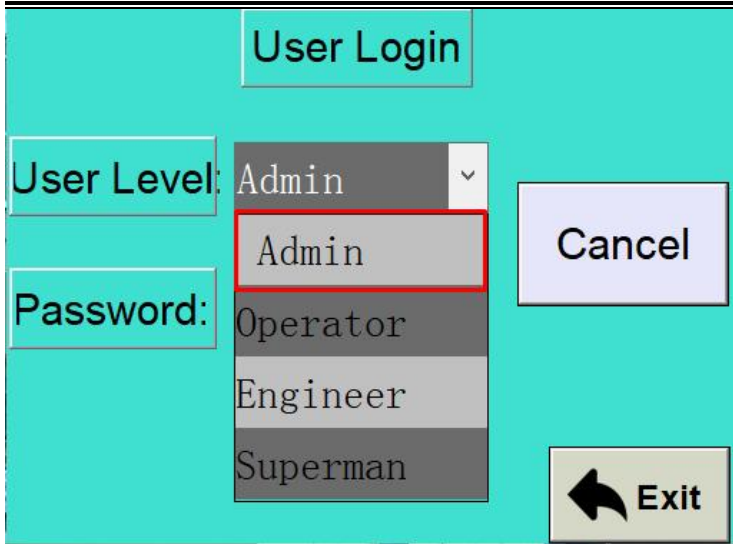
3.1 System settings

3.1.1 Enter administrator privileges

1: Click "password"

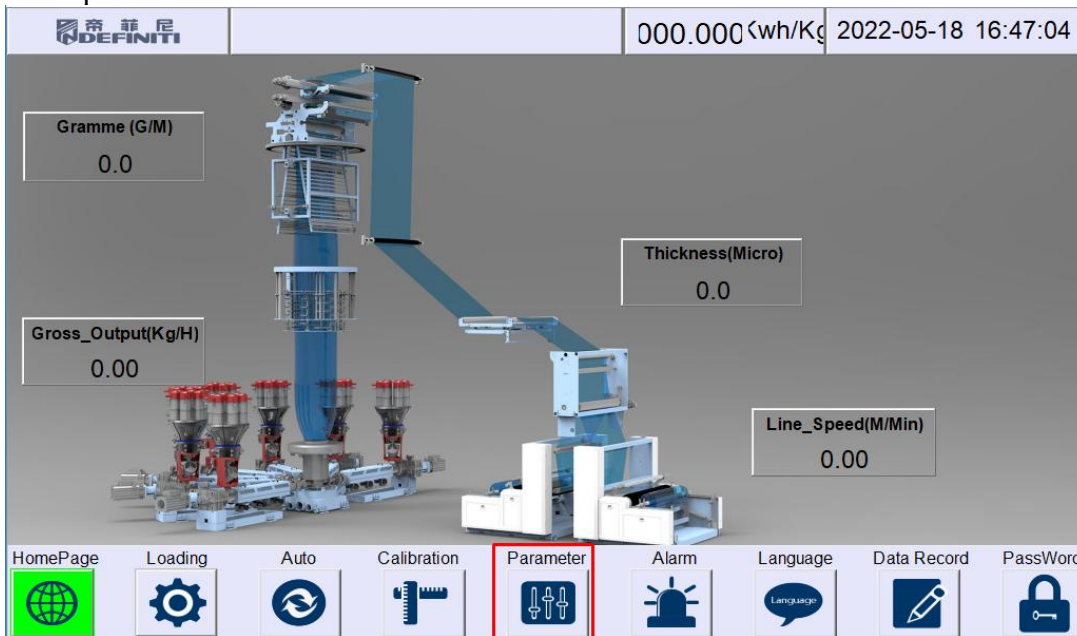


2: Click password and select "Administrator" for permission. Enter the password 134073 to have administrator authority and operate all screens. Click "return" after the password is correct

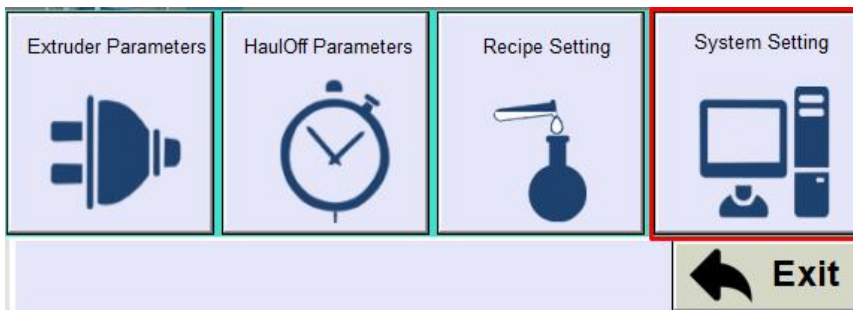


3.2 : Select machine model

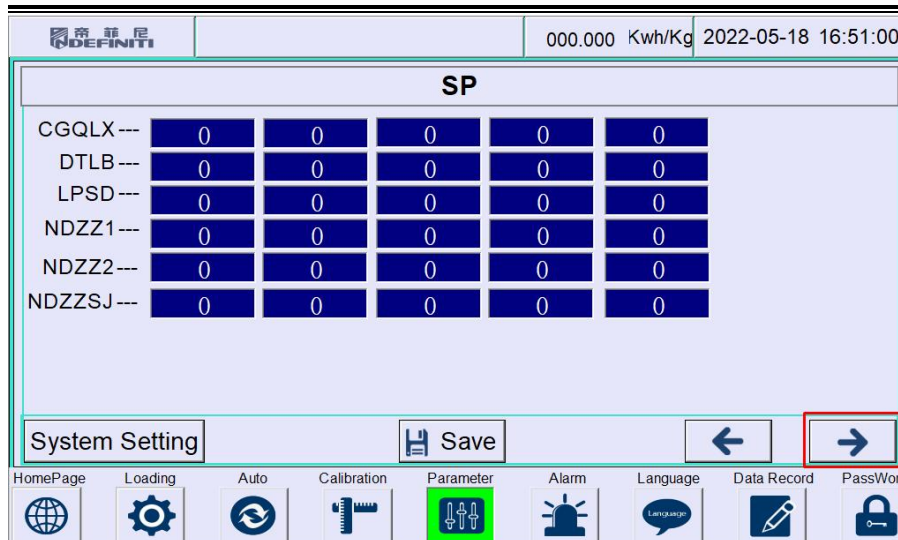
Click parameters



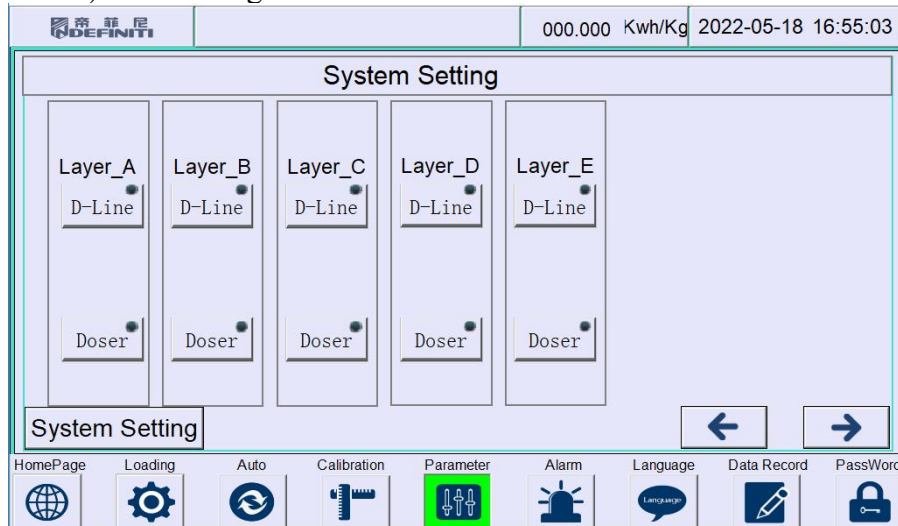
1. Enter the parameter interface and select system settings



2. Click the arrow in the lower right corner to enter the next page

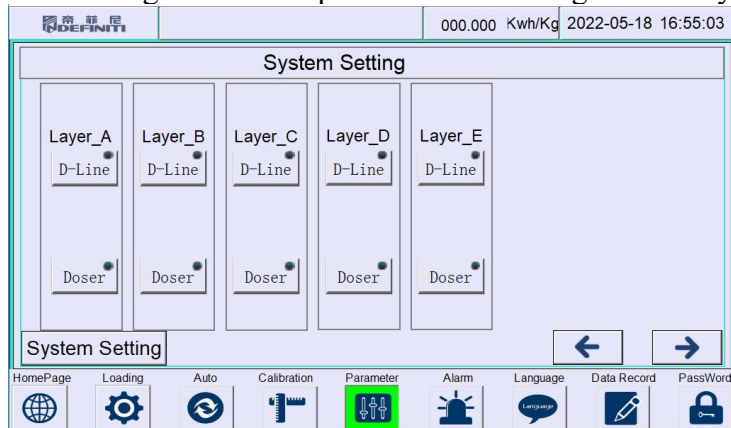


3. Click the corresponding button to complete the model selection. (see the equipment nameplate for specific model) it will be light after successful selection



4. Click the arrow in the lower right corner to enter the next page, and click to select the calibration screen according to the actual model. So far, the system setting is completed.

This setting will be completed before leaving the factory.



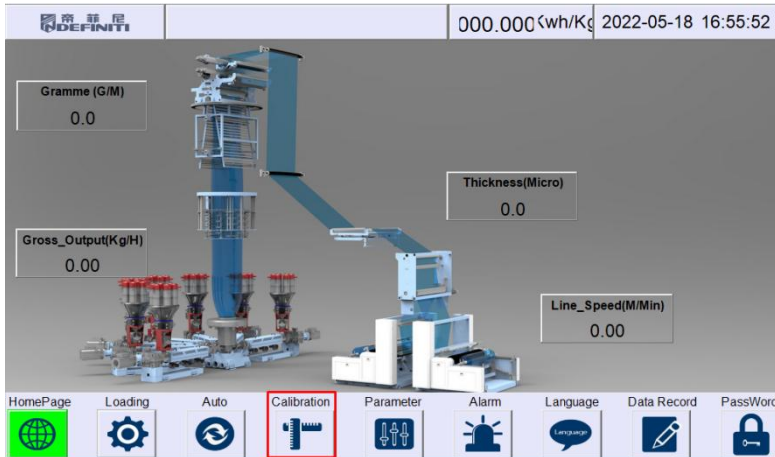
3.2 Calibration (the most important step)

Once every six months. Or if it's not right, calibrate it.

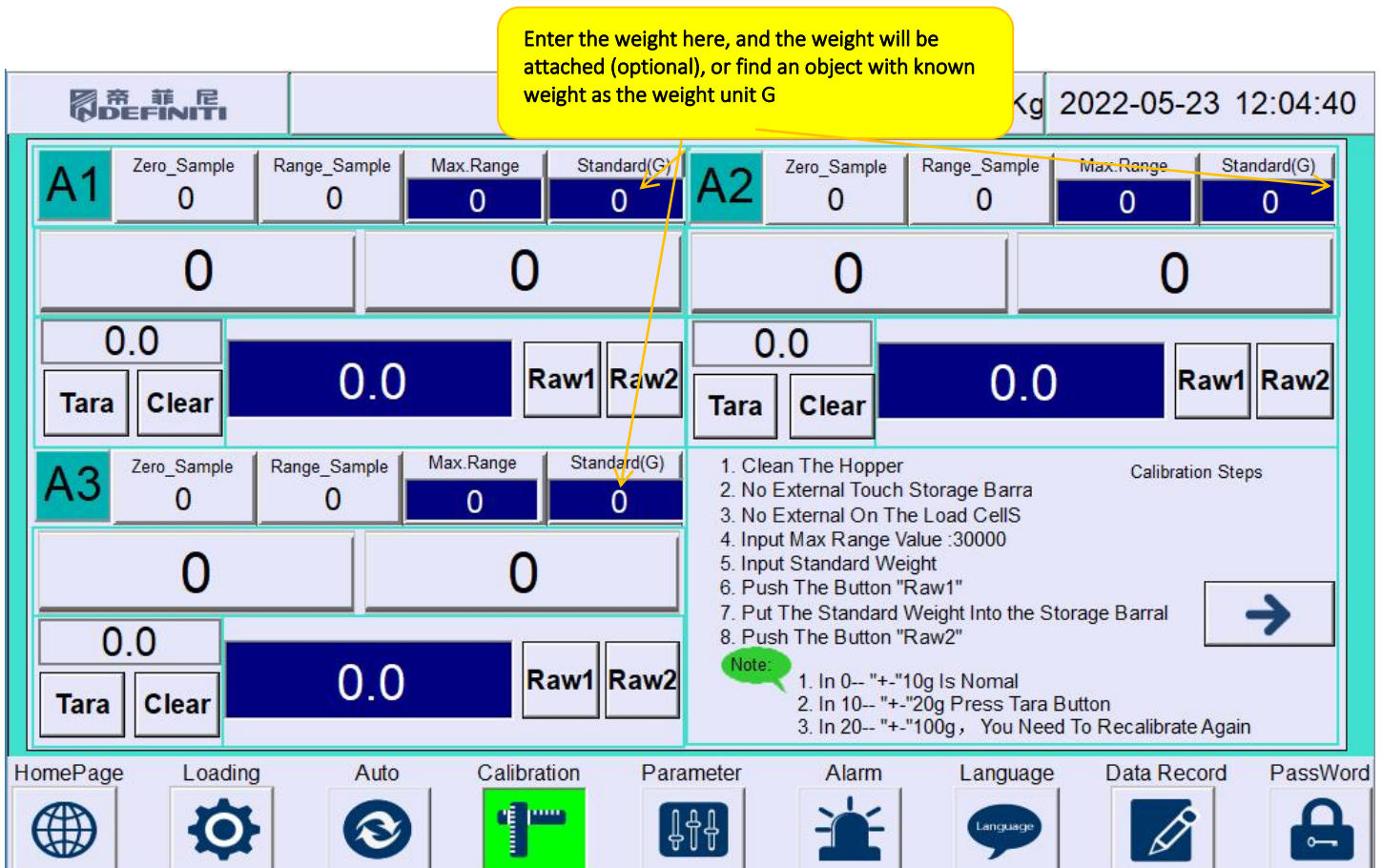
1: Ensure that the weight loss barrels of one component, two component and three component are clean and free of foreign matters; And there is no contact with the surrounding



2: Click "calibration"



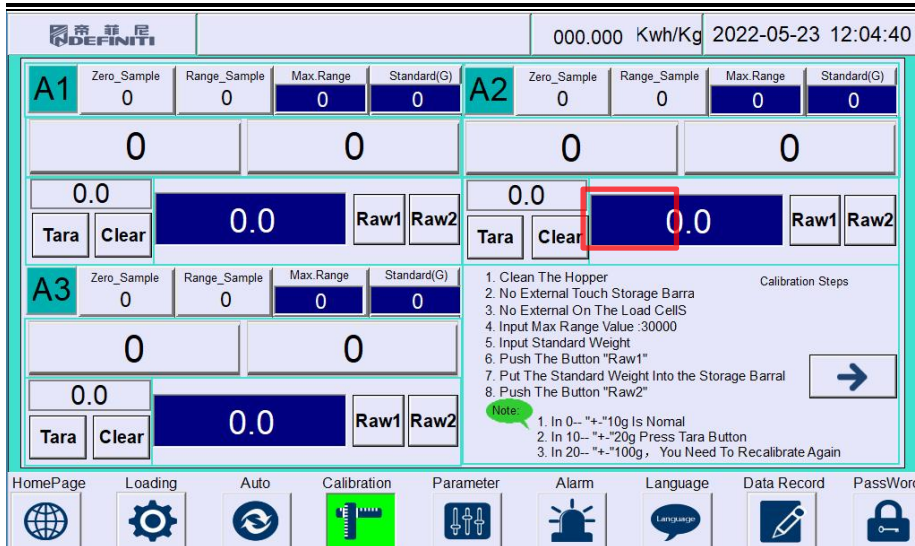
3: Enter the weight, and the actual weight shall prevail; Enter the maximum range (30000)



4: When ensuring that there is no raw material in the weight-loss barrel and it touches the surrounding by



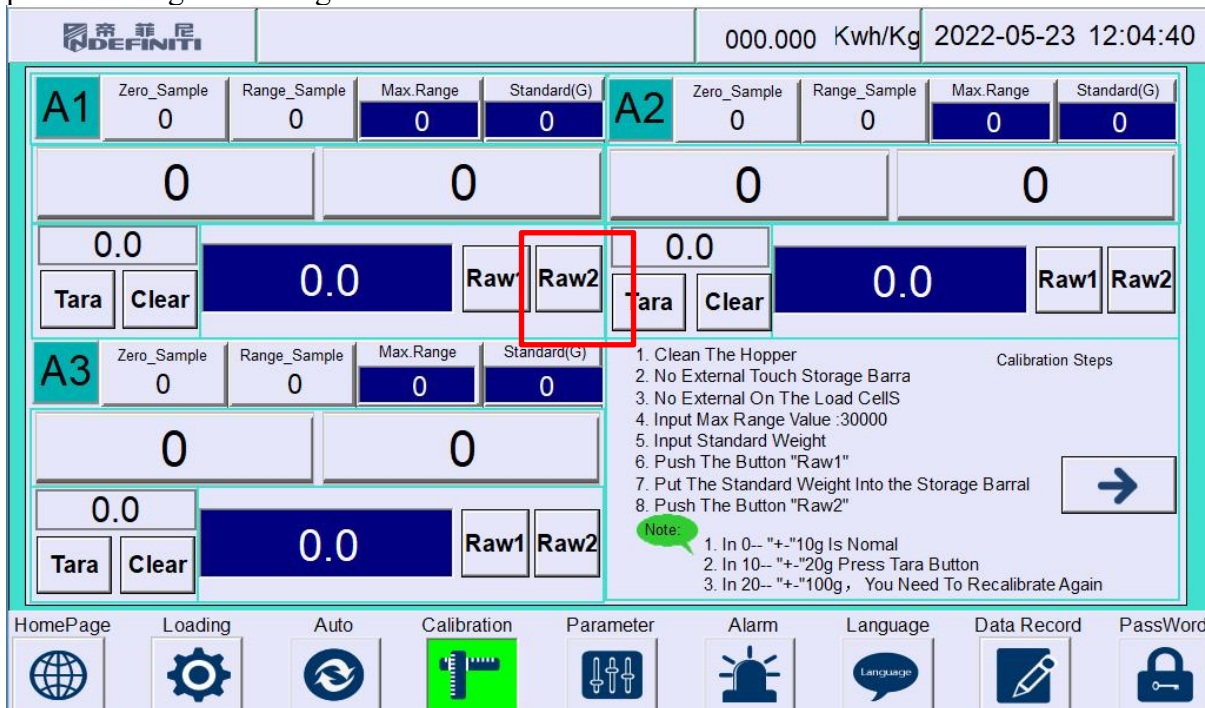
mistake, press and hold the zero point



5: Hang the weight (see article 7 below for the specific position of hanging the weight). After the value is stable,



press the range for a long time



6: Calibrate other components and equipment in the same way

Note: after pressing zero point, the actual weight is displayed as 0g; The actual weight after measuring range is the weight of the input weight. 0.0g



Zero_Sample

0

Zero sampling value after calibration must be smaller than the range sampling

Range_Sample

0

value

7: Hanging weight position



3.3 Parameter setting (There is no need to change after setting. The parameter settings of A, B and C machines are the same)



The parameters to be set for extrusion parameters are:

- 1 Maximum screw speed
- 2 Maximum material level in weight loss barrel
- 3 Lowest material level in weight loss barrel
- 4 Blanking time
- 5 Maximum material level of auxiliary bucket
- 6 Lowest material level of auxiliary bucket
- 7 Blanking time of auxiliary bucket

The specific operations are as follows:

Parameters > extrusion parameters

The screenshot shows the Definiti control panel interface. At the top, it displays '000.000 Kwh/Kg' and the date/time '2022-05-24 10:50:48'. The main area is divided into sections for parameter A1, A2, and A3, each with 'Zero_Sample', 'Range_Sample', 'Max.Range', and 'Standard(G)' fields, all currently set to 0. Below these are buttons for 'Tara' and 'Clear'. The central part of the screen features four large icons representing 'Extruder Parameters', 'HaulOff Parameters', 'Recipe Setting', and 'System Setting'. To the right, there are 'Raw1' and 'Raw2' buttons. At the bottom, there is an 'Exit' button and a 'Calibration Steps' section with a right-pointing arrow. A note box contains the following instructions:

- 7. Put The Standard vweight into the Storage Barral
- 8. Push The Button "Raw2"

Note:

1. In 0-- "+-"10g Is Normal
2. In 10-- "+-"20g Press Tara Button
3. In 20-- "+-"100g, You Need To Recalibrate Again

At the bottom of the screen, there is a navigation bar with icons for 'HomePage', 'Loading', 'Auto', 'Calibration' (highlighted in green), 'Parameter', 'Alarm', 'Language', 'Data Record', and 'PassWord'.

3.1: Input the maximum frequency of frequency converter or the maximum speed of screw according to the actual situation

ZDZS 0.0

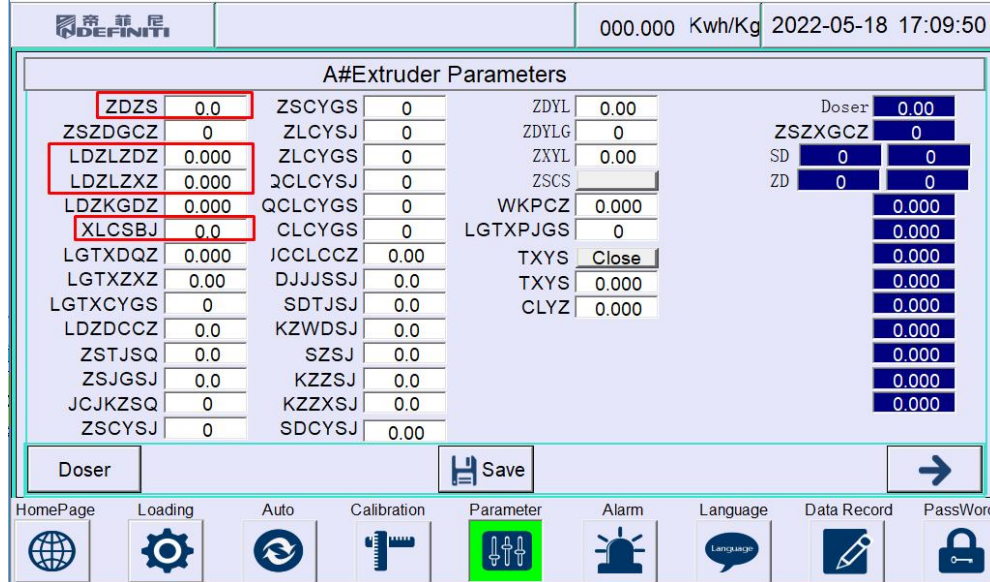
3.2: Input the upper limit of material level according to the actual raw material density and the size of weight loss barrel

LDZLZDZ 0.000

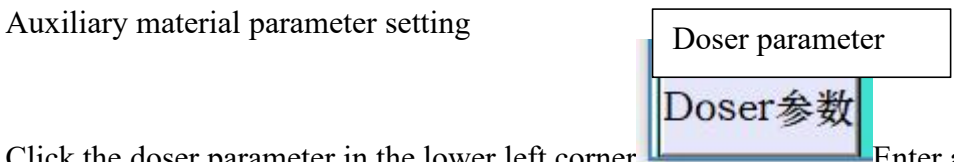


3.3 Lower limit of material level **LDZLZXZ 0.000** (the density of raw materials is about 0.925, the upper limit of raw materials is generally set at 6 and the lower limit is 2; the smaller the density is, the smaller the upper limit value should be input to prevent too many raw materials from filling the barrel)

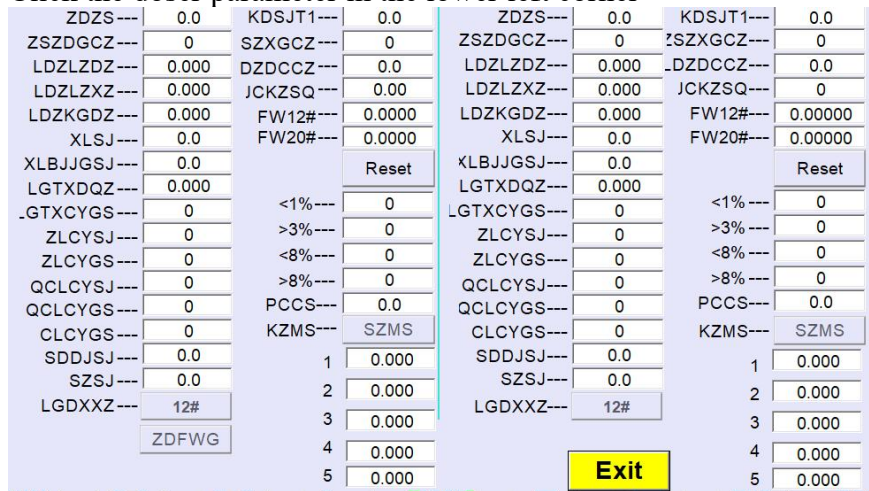
3.4 Set blanking time **XLCSBJ Unit:S** (if the raw material does not reach the highest material level within the specified time, an alarm will be given: blanking timeout)



Auxiliary material parameter setting



Click the doser parameter in the lower left corner Enter auxiliary material parameter setting



3.5 Upper limit of material level **LDZLZDZ 0.000** is the upper limit of replenishment. When the raw material is insufficient, start feeding, and stop feeding after reaching the upper limit level;

3.6 Lower limit of material level **LDZLZXZ 0.000** When the material level reaches the lower limit, start replenishing.

(after the completion of feeding, the raw materials cannot be pushed too much onto the feeding valve. If the material level is relatively low after feeding, the upper limit can be adjusted appropriately)

3.7 Feeding time **XLSJ 0.0** When the raw material is not higher than the upper limit of the material level within the specified time, an alarm will be given.

Follow the above steps to set the third component



Traction parameter setting

following parameters shall be set for traction parameters

- 8.Traction control type
- 9.Traction signal selection
- 10.Maximum traction speed
- 11.Encoder resolution
- 12.Gramme roller circumference
- 13. Minimum starting frequency of mixing

In the main screen > operation screen > common parameters

3.8 Select thickness control or Gramme control according to the actual situation

3.9 If equipped with meter wheel, select channel B for traction signal in common

牵引信号选择 **通道B相**

Traction signal selection **channel phase B**

parameters

3.10 Input the maximum traction speed (maximum traction linear speed)

Where does the maximum traction speed come from? The specific operation methods are as follows :

Use the meter wheel (channel phase B) as the traction feedback signal: start the traction in the manual screen, and then enter 200 in the traction input box. You will get an actual traction speed, which is the maximum traction speed.

Use the traction frequency converter (channel phase a) as the feedback signal: turn the traction frequency converter to the maximum frequency, and then put a speed measuring wheel on the driving roller of the traction roller. The measured linear speed is the maximum traction speed.

3.11 Encoder resolution (resolution is generally 600, subject to the actual encoder brand)

3.12 Enter the perimeter of the meter wheel



3.13 Set the minimum starting frequency of mixing. (the mixing will be started only when the actual speed exceeds the set minimum frequency. When the actual speed is less than the minimum frequency, the mixing will stop automatically. There is no need to start manually repeatedly)

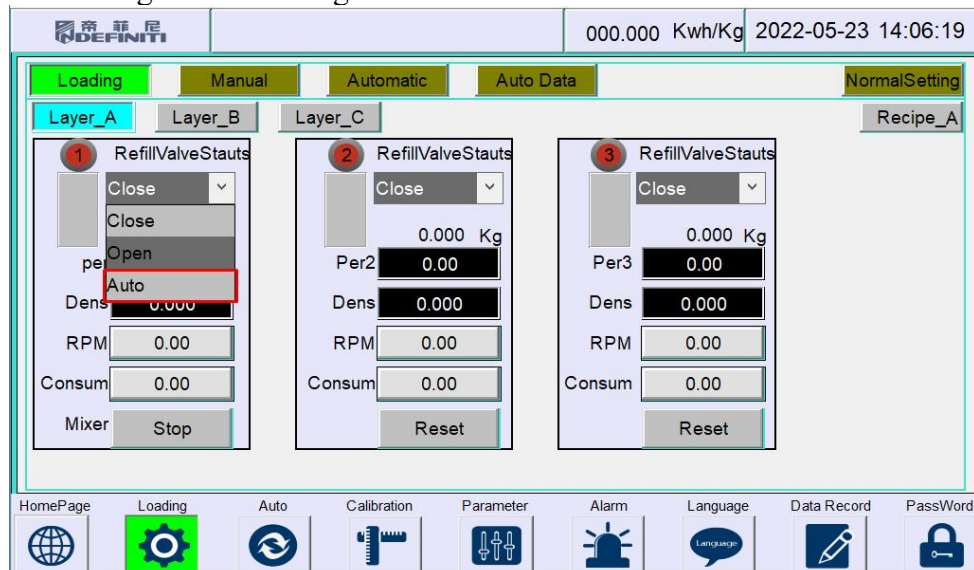
4 Startup operation

Follow the order from left to right on the touch screen to complete the operation

- 1 Feeding (feeding information)
- 2 Film pulling (manual screen)
- 3 Input product parameters (set interlayer ratio)
- 4 Machine automatic (automatic screen)

4.1 Feeding

The settings in the feeding information are as follows



4.1.1 Set the blanking valve to the automatic state (the blanking valve has three states: open; close; automatic. In the open state, the blanking valve is always open, which is applicable to unloading; in the closed state, the blanking valve is always closed; in the automatic state, the blanking valve is supplemented in case of lack of material and stopped when it is full of material)

4.1.2 Input the proportion of auxiliary materials (PS: input 20 when the calcium carbonate is 20%);

Note: if you do not use the scale, enter 0; Proportion 1 will automatically change according to the setting of component 2 and 3 without input; The density is input according to the raw materials used

4.1.3 start mixing. 搅拌 停止 (after starting, it will not work until the actual speed reaches the set minimum starting frequency)



4.2 Pull film

4.2.1 Start the main engine and traction

- 1 Press and hold the main engine and traction switch for 1 second to make them start
- 2 Input the speed to pull up the membrane



Note: Input the speed. After the frequency converter is started, the actual

Speed PV (Rpm) 0.00 0.00 0.00 shall be speed basically the same as the set speed (it is normal if the error is within \pm

Speed SP (Rpm) 0.00 0.00 0.00

2-3). If the difference is huge or there is no actual speed, please check the wiring
3. When the membrane bubble is stable and the screw characteristics appear, it can enter the automatic

Yield(#) 0.000 0.000 0.000 state

000.000 Kwh/Kg 2022-05-18 17:16:55

	Layer_A	Layer_B	Layer_C
Extruder Starts(#)	Stop	Stop	Stop
Control Mode(#)	Single	Single	Single
Speed SP (Rpm)	0.00	0.00	0.00
Speed PV (Rpm)	0.00	0.00	0.00
Layer Per(%)	0.00	0.00	0.00
Output PV(Kg/H)	0.0	0.0	0.0
Thickness PV(μ m)	0.0	0.0	0.0
Yield(#)	0.000	0.000	0.000
HaulOff Starts(#)	Stop	HaulOff Speed SP(M/Min)	0.00
Shrinkage(%)	0.0000	HaulOff Speed PV(M/Min)	0.00

HomePage Loading Auto Calibration Parameter Alarm Language Data Record PassWord

4.3 Enter product parameters

4.3.1 Input the inter layer ratio and set the inter layer ratio according to the product requirements (layer A will change automatically according to the input of layer B and C)

000.000 Kwh/Kg 2022-05-18 17:21:00

	Layer_A	Layer_B	Layer_C
Layer SP(%)	30.00	40.00	30.00
Layer PV(%)	0.00	0.00	0.00
Speed PV(Rpm)	0.00	0.00	0.00
SP (Kg/H)	0.0	0.0	0.0
Output PV(Kg/H)	0.0	0.0	0.0
Consumption(Kg)	0	0	0
Thickness PV(μ m)	0.0	0.0	0.0
Yield(#)	0.000	0.000	0.000

HomePage Loading Auto Calibration Parameter Alarm Language Data Record PassWord



4.4 Automatic startup

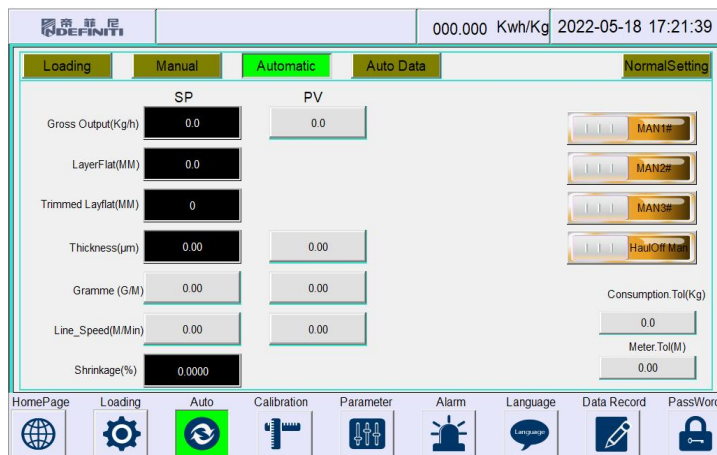
4.4.1 Input total output

4.4.2 Input film thickness (thickness control mode) or Gramme (Gramme control mode)

4.4.3 Enter the width (if there is trimming, enter the real width after trimming, that is, the actual width on the received roll. If there is only trimming but no edge strip, enter 0 or enter the actual width)

Very important: wait for the screw characteristics of the manual screen to come out, and then you can turn it on automatically

4.4.4 Press extruder a, B, C and automatic traction (long press for 1 second)



5 Notes and common alarms

5.1 Note

- 5.1.1: Before the screw characteristics come out, the host cannot enter the automatic state.
- 5.1.2: Before the screw characteristics come out, the two or three component screw will not work.
- 5.1.3: The second and third components are currently used for calcium carbonate. If other raw materials need to be replaced, the feeding parameters of the second and third components need to be adjusted.
- 5.1.4: The calibration must be operated in strict accordance with the process, otherwise it will be invalid.
- 5.1.5: It is strictly prohibited to change any data in the parameter setting without permission
- 5.1.6: When entering the password, the password is correct. You can exit directly without clicking OK
- 5.1.7: Under the automatic state, it is strictly prohibited for anything to touch the weightless bucket
- 5.1.8: Do not touch the emergency stop switch without reason

5.2 Common faults, alarms, causes and Solutions :

5.2.1: Blanking timeout: there is no material in the storage barrel, and the raw materials can be supplemented in time; Or the valve is stuck



5.2.2: Low limit of raw materials: the raw materials in the weight-loss barrel reach the lowest level.

There is no raw material in the storage barrel, just supplement the raw material

5.2.3: Excessive vibration of feeder A: external instantaneous interference generally does not need to be handled

5.2.4: Too much blanking: the data acquisition of the weighing sensor is wrong, and the weighing shall be re calibrated; Or valve leakage; Low raw material density, change the highest material level

5.2.5: Emergency stop of feeder A: when the emergency stop switch is photographed, reset the emergency stop switch

5.2.6: The screw speed of the main engine suddenly increases, and the screw characteristics decrease: too much blanking; Valve leakage