自动充绒机操作手册

OPERATION MANUAL
of Automatic Velvet Filling Machine

在操作机器前请详细阅读本手册
Please read it before operating the machine

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目　录

一、0.1g 普通精度机型（SCR-1P、SCR-2P）

0.1 克普通精度自动充绒机为机电一体化产品，单侧单充绒头或两侧双充绒头结构，是由触摸屏及 PLC 控制的生产羽绒服饰等产品用的充绒设备，能有效提高生产效率，减轻工人劳动强度，减轻工厂环境压力。

（一）基本要求及安装调试

1、场地要求
● 最小搬运通道：1m（宽）*2.1m（高）
● 最小放置场地：SCR-1P：3m（长）*4m（宽）*2m（高）
　　　　　　　　SCR-2P：5m（长）*3m（宽）*2.1m（高）
● 建议放置场地：SCR-1P：4m（长）*4.5m（宽）*2m（高）以上
　　　　　　　　SCR-2P：6m（长）*4m（宽）*2.1m（高）以上

2、气压要求
● 供气量：SCR-1P：0.5m³/min 以上；SCR-2P：0.8m³/min 以上。
● 气压：不低于 0.58Mpa。
● 若集中供气，要求管道距离 20m 以内，管道直径不小于 1 英寸，若距离长，则相应加粗管道，否则供气量不够，会造成出绒不稳定。
● 若独立供气，则推荐配置 SCR-1P:3.5KW 以上高压气泵（气压 0.6~0.8Mpa）及不小于 0.4m³ 的储气罐；SCR-2P:5.5KW 以上高压气泵（气压 0.6~0.8Mpa），及不小于 0.6m³ 的储气罐。

3、使用环境要求
● 温度：根据 GBT 14272-2011 要求，充绒量测试温度在 20±2 摄氏度。
● 湿度：根据 GBT 14272-2011 要求，充绒量测试湿度在 65±4 度。

4、卸车与搬运
● 使用铲车时注意不要叉到电控箱下的电线或气管。
● 因设备内有精密称重传感器，要轻抬轻放，以防损坏称重传感器。

I. 0.1G PRECISION MACHINE（SCR-1P、SCR-2P）

The 0.1g precisinon Automatic Velvet Filling Machine is a mechanical and electrical integration products, The structure is Unilateral single charge pile structure or dual filling head on both sides, it is velvet filling machine used for production of feather dress controlled by touch screen and PLC, It can effectively improve production efficiency, reduce labor intensity as well as reduce environment pressure of factory.

NO.1　BASIC REQUIREMENTS, INSTALLATION AND DEBUGGING

1. REQUIREMENTS OF SITE
● Minimum transport channel: 1m (width) *2.1m (height)
● Minimum place area: SCR-1P：3m (length) *4m (width) *2m (height)
　　　　　　　　　　SCR-2P：5m (length) *3m (width) *2.1m (height)
● Suggestion to place area: SCR-1P：3m (length) *4m (width) *2m (height) above
　　　　　　　　　　　　　SCR-2P：6m (length) *4m (width) *2.1m (height) above

2. REQUIREMENTS OF AIR PRESSURE
● AIR DEMAND: SCR-1P：0.5m³/min above；SCR-2P：0.8m³/min above.
● AIR PRESSURE: Not lower than 0.58Mpa.
● Central air supply requires the distance of pipeline is within 20m, pipeline diameter is not less than 1 inch, if the distance is too long, should correspondingly thicken the pipeline, or else, the air supply is insufficient to cause instability of out velvet.
● For independent air supply, recommend configure SCR-1P:3.5KW above high-pressure air pump (with air pressure of 0.6~0.8Mpa), as well as air tank of not less than 0.4m³；SCR-2P:5.5KW above high-pressure air pump (with air pressure of 0.6~0.8Mpa), as well as air tank of not less than 0.6m³.

3. REQUIREMENTS OF USE ENVIRONMENT
● TEMPERATURE: In accordance with the requirements of GBT 14272-2011, test temperature of filling is 20±2 degrees Celsius.
● HUMIDITY: In accordance with the requirements of GBT 14272-2011, test humidity of filling is 65±4 degrees.

4. UNLOADING AND HANDLING
● Pay attention to not fork wires or air tube under the electric cabinet when using a forklift.
● The equipment includes precision weighing sensor, should handle with care, so as not to damage the sensor.
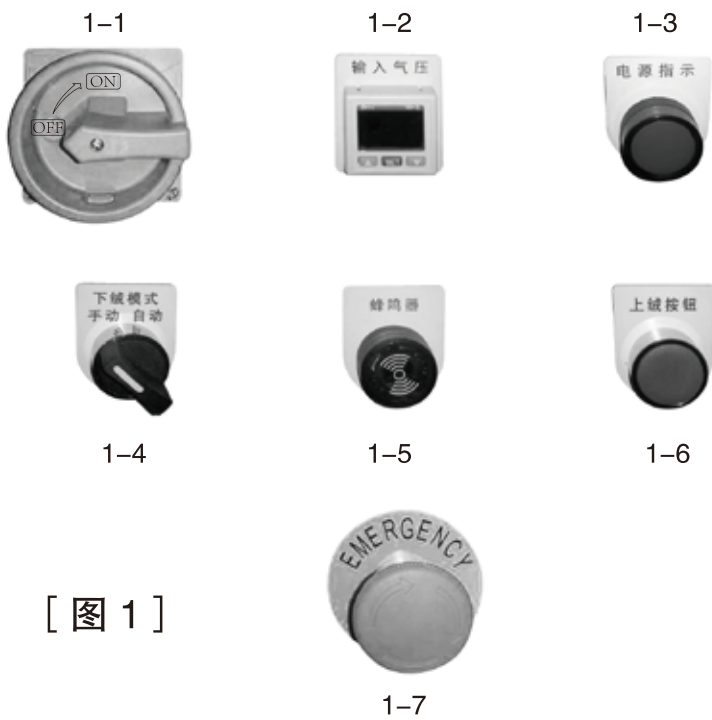
5、安装调试

由本公司或经销商派员到用户安装调试，用户派员协助。

⚠ 警告: 正常情况下，落绒门气缸开关闭速度、光电探头位置、各调压阀所调整的压力、触摸屏高级参数（密码进入的）均由本公司专业人员调整，用户不能随意调节。若由用户调节，必须在本公司专业人员指导下才能调节，否则将导致系统无法正常工作。

（二）、正常操作

1、电器箱控制面板各按钮功能（图 1）

[图 1]

1.1 电源开关（图 1 中 1-1）：ON 为开启状态，OFF 为关闭状态。

1.2 输入气压表(图 1 中 1-2)：显示当前气压，当气压小于设定值时，系统会自动报警。

1.3 电源指示灯（图 1 中 1-3）：灯亮说明当前系统已通电，灯灭说明当前系统已断电。

1.4 下绒模式旋转按钮（图 1 中 1-4），主要用于在第一次上绒时，控制上箱的羽绒下落至下箱的落绒速度，将按钮旋转至手动模式，按压触摸屏手动画面中上落绒按钮，系统会将落绒小门打开，上箱的羽绒很快会下落至下箱，透过箱体观察窗，看下箱绒面达到一定高度时，**将该旋转按钮旋转至自动模式**，系统将自动把绒面保持在一定高度。
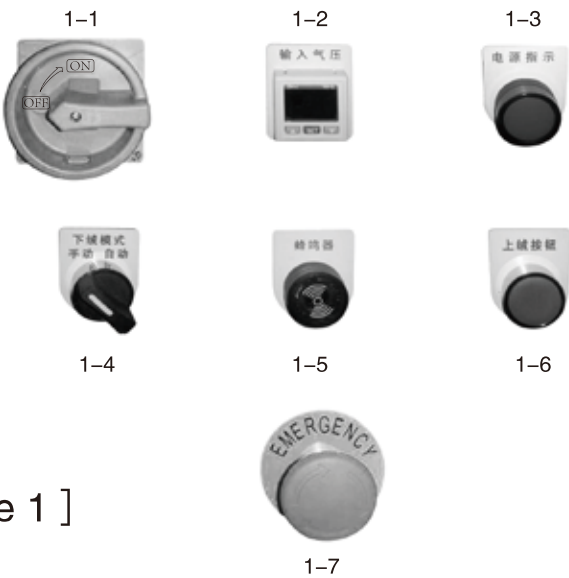
注意：正常操作时必须将该按钮旋转至自动模式，不然会导致下箱很快会无绒，影响正常生产。

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5. INSTALLATION AND DEBUGGING

Our company or distributor appoints personnel go to user to install and debug, the user appoints persons to assist.

⚠ **WARNING:** Under normal circumstances, the open and close speed of velvet falling gate cylinder, photoelectric probe location, pressure regulated by regulating valves and senior parameters of touch screen (password entry) should be regulated by professionals of our company, and user cannot regulate them randomly. If the user regulates, must under guidance of professional of our company, or else, the system will not work normally.

NO.2　NORMAL OPERATION

1. FUNCTION OF BUTTONS ON THE CONTROL PANEL OF ELECTRICAL BOX. (Figure 1)

[Figure 1]

1.1　POWER SWITCH (1-1 in Figure 1): ON means open and OFF means close.

1.2　INPUT PRESSURE GAUGE (1-2 of Figure 1): show current air pressure, the system shall automatically alarm when air pressure is less than setting value.

1.3　POWER INDICATOR (1-3 of Figure 1): The light is on, means that current system is on, the light is off, means that current system is off.

1.4　VELVET FALLING MODE ROTATING BUTTON (1-4 of Figure 1) is mainly used for first feeding, to control falling speed of upper box velvet falls down to lower box, rotate the button to manual mode, press touch screen manual menu's falling button, the system will open the falling gate, upper box velvet will quickly fall down to lower box, observe lower box's velvet surface through observation window, when the surface reaches a certain height, rotate the button to automatic mode, then the system will automatically keep the surface in a certain height.

NOTE: Under normal operation, must rotate the button to automatic mode, or else, will cause lower box have no velvet in a very short time, to affect normal production

1.5 蜂鸣器（图 1 中 1-5）：用于系统故障或提示报警用。

1.6 上绒按钮（图 1 中 1-6）：按压该按钮，吸绒风机开启，即可将外界的羽绒吸进箱体内，再次按压该按钮，吸绒风机关闭。（注意：在吸绒过程中，请停止正常充绒操作，否则可能造成称重不准）

1.7 急停按钮（图 1 中 1-7）：此按钮用于出现紧急或突发故障时应急之用，按下为关闭，旋转弹起为开启，正常情况下，请保持该按钮弹起状态请勿随意操作该按钮。

注意：系统在正常运转状态下，请勿随意操作电源开关或急停按钮，正常操作均可在触摸屏上能控制。

2、称重模块的调试校准

在首次装机时或在正常充绒时用户日常检查发现实际出绒重量与触摸屏显示克重不符的状况下应执行以下操作。

首先将称重箱内绒排出干净，清理称重箱外围的羽绒及灰尘等杂物。

1、当前显示称重值，按 MENU 键，显示"FUNC"，按 func 键两次，显示"CAL"

2、按 ZERO 键，显示"000000"，按 TARE 键，显示"000001"

3、按 ZERO 键，显示"CAL1"，按 ZERO 键，显示"C1.DEC1"

4、按 ZERO 键八次，显示"000000"，按 ZERO 键，显示"......"

5、等待几秒后显示"C1.SPAn"，如：放200克标准砝码，再按 ZERO 键，显示"00.0000"

6、按 GR/NT 键两次，再按 TARE 两次，显示"00.2000"，按 ZERO 键，显示"......"

7、等待几秒后显示"CAL1"，按 MENU 键两次，显示称重值，拿走砝码，校准完毕。

注意：在操作的时候不要晃动称重箱及桌面，以免校正错误。

3、触摸屏操作

确认电源与气源通好后旋转电源旋钮，电源指示灯亮，机器进入通电状态，面板气压表显示数据，触摸屏进入如下主画面：

〔图 2 〕

1.5 BUZZER (1-5 in Figure 1): Used for system failure or prompt alarm.

1.6 FEEDING BUTTON (1-6 in Figure 1): Press it, the suction velvet fan is opened to suck outside velvet into the box, press it again, the fan is closed. (Note: during suction process, please stop normal filling operation, or else, maybe cause inaccurate weighing.)

1.7 EMERGENCY STOP BUTTON (1-7 of Figure 1): It is used for emergency or unexpected accident, press for close, rotate and upspring for open, under normal circumstance, please keep at upspring state and don't operate it randomly.

NOTE: Please don't randomly operate power switch or emergency stop button when the system is under normal operation condition, all normal operations can be controlled in touch screen.

2. DEBUGGING AND CALIBRATION OF WEIGHING MODULE

The following operations should be done when first assembly, or actual velvet not meet the weight (g) displayed in touch screen detected by user in daily check under normal filling condition.

First, empty the velvet of weighing box, clear up velvet and dust, etc. around the weighing box.

1, the current display weighing value, press MENU key, show "FUNC", press func key two times, show "CAL"

2, press ZERO key, show "000000", press TARE key, show "000001"

3, press ZERO key, display "CAL1", press ZERO key, show "C1.DEC1"

4, press ZERO key eight times, show "000000", press ZERO key, show"......"

5, waiting for a few seconds after the show "C1.SPAn", such as: put 200 grams of standard weight, and then press ZERO key, show "0"

6, press GR/NT button two times, and then press TARE two times, show "0.2000", press ZERO key, show"......"

7, waiting for a few seconds after the show "CAL1", press MENU button two times, showing the weighing value, take the weight, the calibration is completed.

NOTE: Don't sway weighing box and desk when operating, in order to avoid calibration error.

NO.3 OPERATION OF TOUCH SCREEN

Rotate power knob after confirmation of power and air supply are connected, the power indicator is on, machine is under electric state, panel pressure gauge displays data, touch screen enters the following main menu:
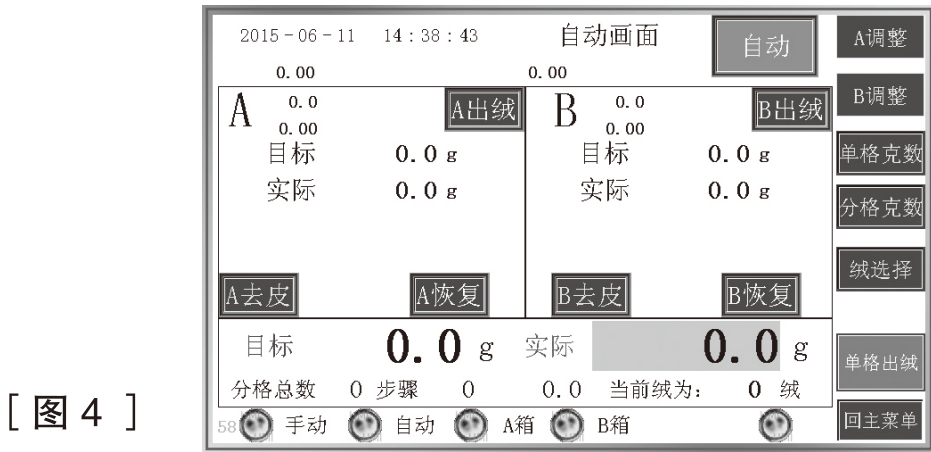

〔 Figure 2 〕

3.1 按 [手动画面] ，触摸屏进入如下画面：

［图 3 ］
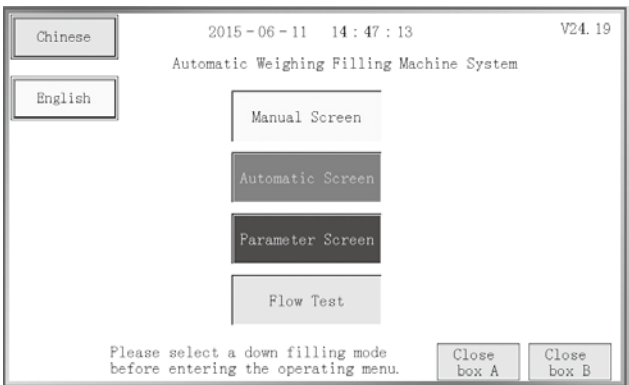
3.1.1、按"手动"，"手动指示"灯由红变绿。

3.1.2、按"A 吹气"或"B 吹气"，系统会对 A 箱或 B 箱内吹气搅散箱内的羽绒，便于将 A 箱或 B 箱内的羽绒排出。

3.1.3、按"A 出绒"或"B 出绒"，系统会将 A 箱或 B 箱内羽绒排出，以便于执行正确的自动充绒操作。

3.2 按 [自动画面] ，触摸屏进入如下画面：

此画面为自动充绒时的监视画面，并可执行以下操作：

［图 4 ］

3.2.1 按 [A 去皮]、[B 去皮]，系统会将 A 箱、B 箱称重清零，以使称重定量正确。

正确的去皮方式很重要，如去皮方式不正确，将造成充绒时定量不准，甚至无法正常充绒，以下为正确的去皮方式：

3.1 Press [Manual Screen] , the touch screen enters the following menu:

［ Figure 3 ］
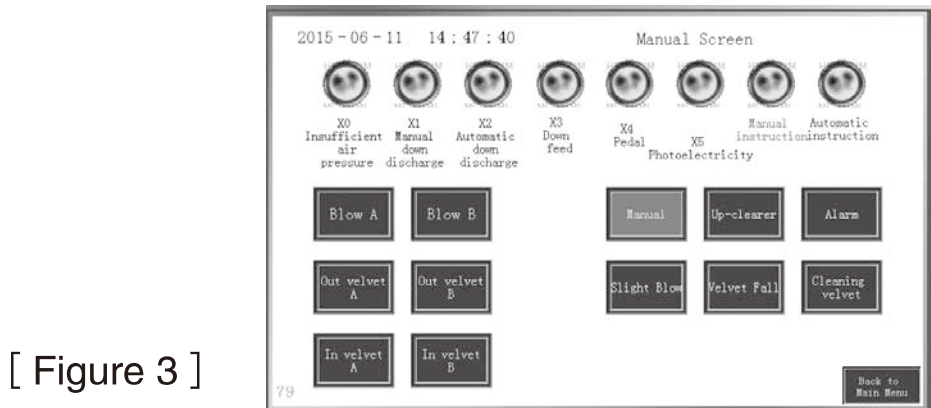
3.1.1 Press "manual", "manual" light from red to green.

3.1.2 According to "blowing a" or "B blowing", the system will in a box or the B box blowing stirring powder box down, to facilitate the discharge of the A or B box down.

3.1.3 According to the "A" or "B", the system will be Released down from the A box or B box , in order to facilitate the implementation of the right automatic velvet operation.

3.2 Press [Automatic] Menu , the touch screen enters the following menu:

It is monitoring menu of automatic filling, and can implement the following operation:

［ Figure 4 ］
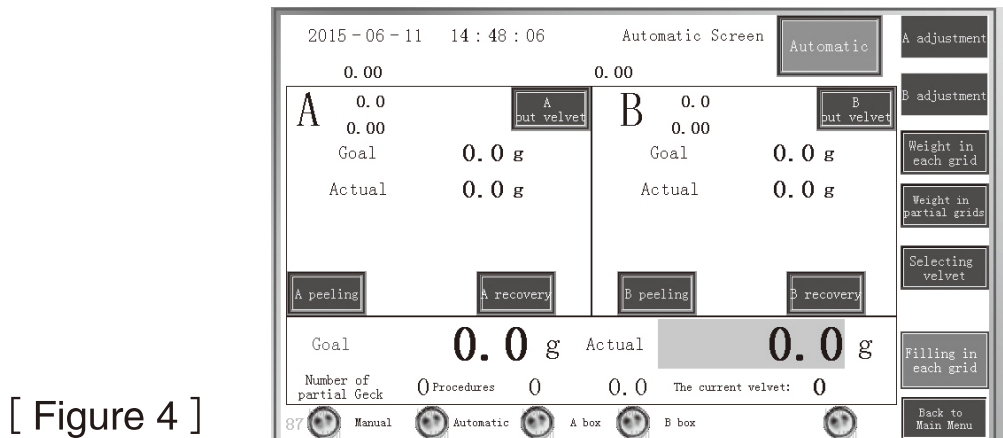
3.2.1 Press [A Peeling] , [B Peeling] , the system will do zero clearing to weighing of A or B box, to make weighing is quantitative and correct.

Correct peeling way is very important, the inaccurate way will cause inaccurate weighing, even not normal filling, the following ways are correct:

- 每次打开电源及气源后，清空 A 箱羽绒，并对 A 箱 去皮 ；清空 B 箱羽绒，并对 B 箱 去皮 。

- 机器在通电及通气状态下长时间不操作，也应 去皮 。

- 正常充绒过程中，如发现 A 箱、B 箱有 "0" 点漂移现象（确认 A 箱或 B 箱羽绒已清空，但显示数值不在 "0" 点附近，如显示数值大于 "0.2" 或小于 "-0.2"），也应 去皮 。

- 一旦对称重箱外围进行了清理，也应 去皮 。

⚠️ 警告：在去皮之前必须将称重箱内的羽绒清空，否则如果箱内有绒未清空而 去皮 ，将造成称重不准，甚至无法正常充绒。

3.2.2　按 A 调整 或 B 调整 ，触摸屏进入如下画面：

FFFF－FF－FF　FF：FF：FF	A调整
流量　[减] 000.0 [加]　自动流量	
误差范围g　000.0	
误差上限g　-000.0	
00	返回

［ 图 5 ］

　　此画面由操作员可根据实际情况分别对 A 箱或 B 箱的参数进行调整，以使本机器的称重准度与充绒效率发挥至最佳。

对该画面内的流量及出绒时间等的具体调节方法如下：

- Every time after open the power supply and air supply, empty A box's velvet and peeling ; empty B box's velvet and peeling ;
- Peeling should also be done if the machine is not operated for a long time under the state of connecting to electricity and air.
- Peeling should also be done during normal filling if finds '0' point drift phenomenon of A or B box (confirm that the velvet of A or B box have been emptied, but the display value is not near '0' point, such as: value is more than '0.2' or less than '-0.2').
- Peeling should also be done once have emptied the surrounding of weighing box.

⚠️ WARNING: Before Peeling , must empty the velvet of weighing box, or else, the weighing shall be not accurate, even cannot normally fill.

3.2.2　Press A Adjustment or B Adjustment , the touch screen enters the following menu:

FFFF－FF－FF　FF：FF：FF	A adjustment
Flow　[Less] 000.0 [More]　Automatic Flow	
Error Range g　000.0	
Error Upper Limit g　-000.0	
00	Back
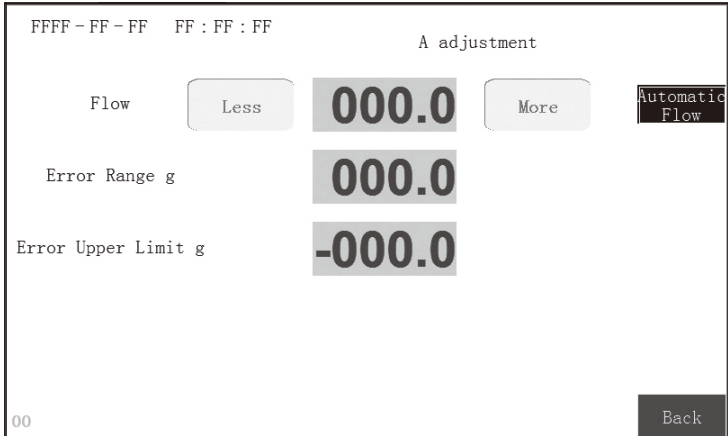
［ Figure 5 ］

The menu is operated by operator to adjust the parameters of A or B box based on actual situations, in order to make the weighing accuracy and filling efficiency of machine best.

The specific adjustment method of flow and out velvet time in the menu as follows:

举例：对"A 箱"进行调节（B 箱的调节方法相同）

在 A 调整 画面中：

● 按"流量"对应的 加 或 减 ，就可以对流量进行调节。也可直接按方框内的数据，对其直接更改。（该画面中有一个 自动流量 与 固定流量 的切换按钮，只要确认本机在 自动流量 状态下，系统对流量有自动调节功能，操作员一般无须调节。正常操作时，该按钮应保持在 自动流量 状态，而本公司服务人员或用户工厂管理人员在做流量测试时才将其保持在 固定流量 状态，一旦流量测试工作结束，应立即将其切换至 自动流量 状态）

● 按"误差范围"可以设定目标值的允许误差值

● 按"误差上限"可以设定目标值的允许最大误差值，根据"误差范围"与"误差上限"系统会自动计算出允许误差下限值

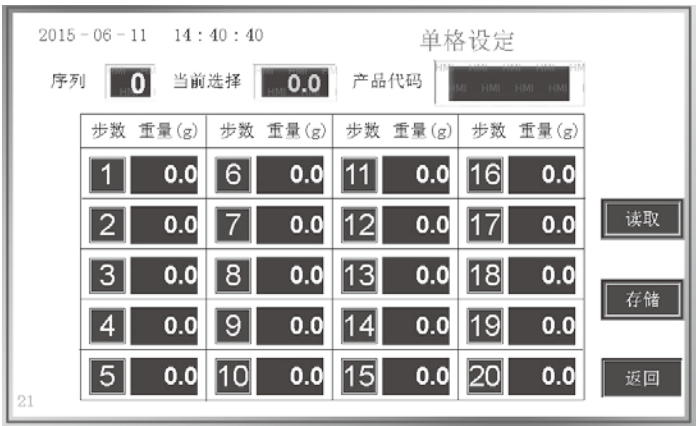● 按"出绒时间"对应的方框内数据，就可以对出绒时间进行调节。（本机的出绒时间有出厂默认参数，操作员一般无须调节）

FOR EXAMPLE: Adjust 'A box' (the adjustment method of B boxes is similar with it)

In 'A Adjustment' menu:

● Press More or Less corresponded by 'Flow' to adjust the flow. Can also directly change according to the data in square frame. (In the menu, there is one switch button between Automatic Flow and Fixed Flow , the system owns automatic adjustment function to flow as long as you confirm the machine under Automatic Flow state, generally, not need to be adjusted by operator. Under normal operation, the button should be kept at Automatic Flow

state and it will be kept at Fixed Flow state when our service personnel or user factory's management personnel carries out flow test, should immediately switch to Automatic Flow

state once the test is over)

● Press 'Error Range' to set permissible error value of goal value.

● Press 'Error Upper Limit' to set permissible maximum error value of goal value, the system will automatically calculate permissible error lower limit in accordance with 'Error Range' and 'Error Upper Limit'.

● According to the "Out Velvet Time" corresponding to the box data, you can adjust the time of out velvet (the machine of the factory default parameters, the operator is generally not required to adjust)
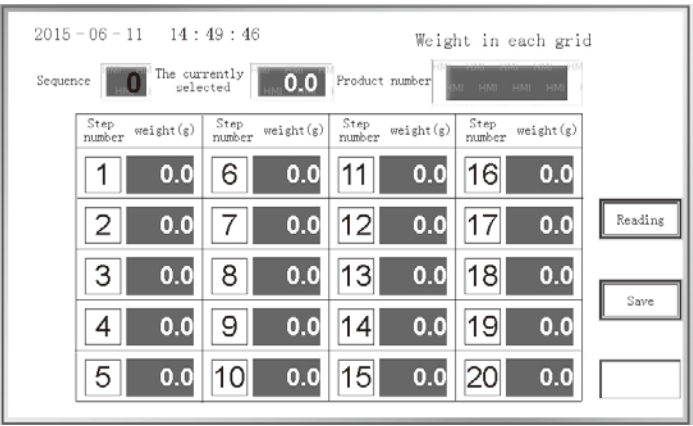
3.2.3 克数的设定 SETTING OF WEIGHT (G)

按 单格克数 ，触摸屏进入如下画面：

[图 6]

3.2.3 SETTING OF WEIGHT (G)

Press Weight in Each Grid , the touch screen enters the following menu:

[Figure 6]

操作员先设定好"序列"，如"序列" 1 （最多可设定至 20），再在下面 1~20 格"步数"右侧方框内分别设定好所需克数，按 存储 ，系统将操作员设定的参数储存下来。在每个"序列"下，可最多分别设定 20 种不同克数，并分别保存好，以便于操作员在以后的操作过程中不再需要频繁地设定克数，而只要根据以前设定好的"序列"，按 读取 并选择该克数对应的"步数"，系统即按该"步数"下的克数来充绒。

The operator first sets Sequence, such as 'Sequence' 1 (maximum to 20), then respectively set required weight (g) in right square frame of following 1-20 grids' 'Step Number', press Save , the system will save the parameters set by operator. Each 'Sequence' can maximum set 20 different weight (g), respectively save so as to the operator no longer needs to frequently set weight (g) in later operation process, but just according to set Sequence to choose 'Step Number' corresponded by the weight (g), and press Reading then the system will fill according to weight (g) under the 'Step Number'.

按 分格克数 ，触摸屏进入如下画面：

Press Weight in Divided Grid , the touch screen enters the following menu:


［ 图 7 ］

［ Figure 7 ］

［ 图 8 ］

［ Figure 8 ］

操作员先设定好"序列"号，如"序列" 1 ，再设定好"产品代码"（即衣片代号），再根据工艺需要在下面的"步数"方框内按衣片上每个格子的充绒顺序分别设定好克数，余下的"步数"内的克数必须设定为 0 ，否则系统将默认按顺序继续充绒。每个序列分 5 页，每页可设定 20 个"步数"，共计 100 个"步数"。按"存储"，系统即将该衣片的充绒顺序及克数储存下来了。重复以上操作，最多可设定至"序列" 100 ，即可保存 100 个衣片的分格充绒克数。完成以上操作后，操作员在以后的操作过程中不再需要频繁地设定克数，而只要根据以前设定好的"序列"，直接选择该衣片对应的"序列"，按 读取 ，系统即按该"序列"下的顺序及克数来充绒。

注：一次克重设定尽量不超过 25 克，极限可达 30 克（干燥 90 绒），否则容易造成称重箱堵塞，如想一次充绒超过 30 克，请均分多次充绒。

3.2.4　操作工在充绒前，必须先确认是单格充绒还是分格充绒，否则系统会无法正常充绒。按 单格充绒 ，此按钮会自动变为 分格充绒 ，此按钮为交替选择钮，操作员必须按充绒工艺要求操作此钮。

3.2.5　按 绒选择 ，触摸屏进入如下画面：

[图 9]
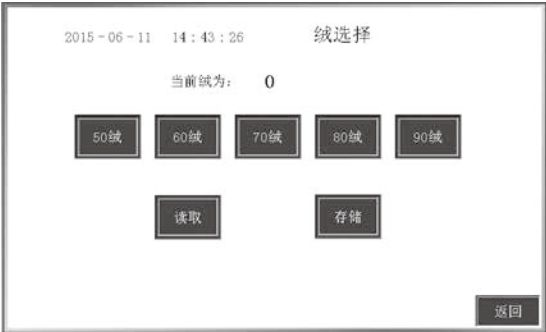
因在各种绒号状态的"流量"等参数可能会不尽相同，因此，操作员在正常充绒前必须先确认并选择好具体的绒号，如"90 绒"，则必须按 90 绒 再按 存储 钮，系统会将设定好的参数保存在 90 绒 状态下。一旦更换绒号后，也必须执行以上操作，以便于以后换绒后快速读取各种绒号状态下的参数。
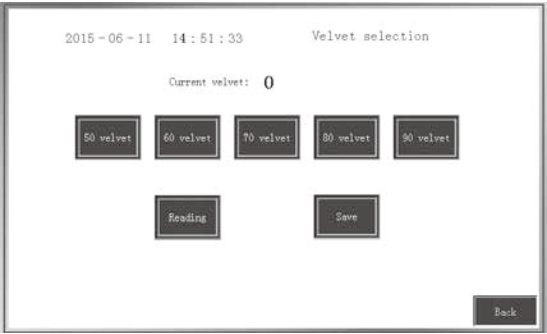

The operator first sets 'Sequence', such as 'Sequence' 1 , and set 'Product Code' (namely, sheet code), then based on process need, respectively set weight (g) in following 'Step Number' square frame according to filling sequence of each grid of sheet, the weight (g) in rest of 'Step Number' must be set as 0 , or else, the system will default to continue fill in sequence. Each sequence is divided into five pages and each page can set 20 'Step Number', total of 100 'Step Number'. Press 'Save', the system will save the filling sequence and weight (g) of sheet. Repeat above operations, can maximum set to 'Sequence' 100 , namely, can save divided grid filling weight (g) of 100 sheets. After completion of above operations, the operator no longer needs to frequently set weight (g) in later operation process, but just according to set 'Sequence' to directly choose 'Sequence' corresponded by the sheet, and press Reading , then the system will fill according to sequence and weight (g) under the 'Sequence'.

NOTE: Reset as far as possible not to exceed 25g velvet feeding of a time , limit of up to 30 grams (dry 90-velvet), otherwise easily lead to weighing box plugging, if you want a cashmere filling more than 30 grams, Please divide the number of times.

3.2.4　Before filling, the operator must first confirm each grid or divided grid, or else, the system will not fill normally. Press Filling in Each Grid , the button will automatically become Filling in Divided Grid , the button is alternation option button, the operator must operate it according to filling process requirements.

3.2.5　Press Velvet Selection , the touch screen enters the following menu:

[Figure 9]

' Flow' and other parameters corresponded by various velvet codes may be different, therefore, before normal filling, the operator must first confirm and select specific velvet code, such as: '90' velvet, must press 90 velvet and then press Save button, the system will save parameters under 90 velvet state. Also must implement above operations once the code is changed, so as to quickly read parameters under various velvet codes after velvet changes.

3.2.6 按 回主菜单 ，触摸屏回到主画面。

3.3 按 参数画面 ，（密码进入）触摸屏进入如下画面：

[图 10]

3.3.1 按 B 参数 ，触摸屏进入 B 参数如下画面 11：

3.3.2 按 公共参数 ，触摸屏进入如下画面 12：

[图 11]

[图 12]

3.4 按 流量测试 ，（密码进入）触摸屏进入如下画面：

3.2.6 Press Back to Main Menu , the touch screen backs to main menu.

3.3 Press Parameter Menu , (password entry), the touch screen enters the menu:

[Figure 10]

3.3.1 Press B Parameter , the touch screen enters B parameter menu 11;

3.3.2 Press Common Parameter , the touch screen enters following menu 12:
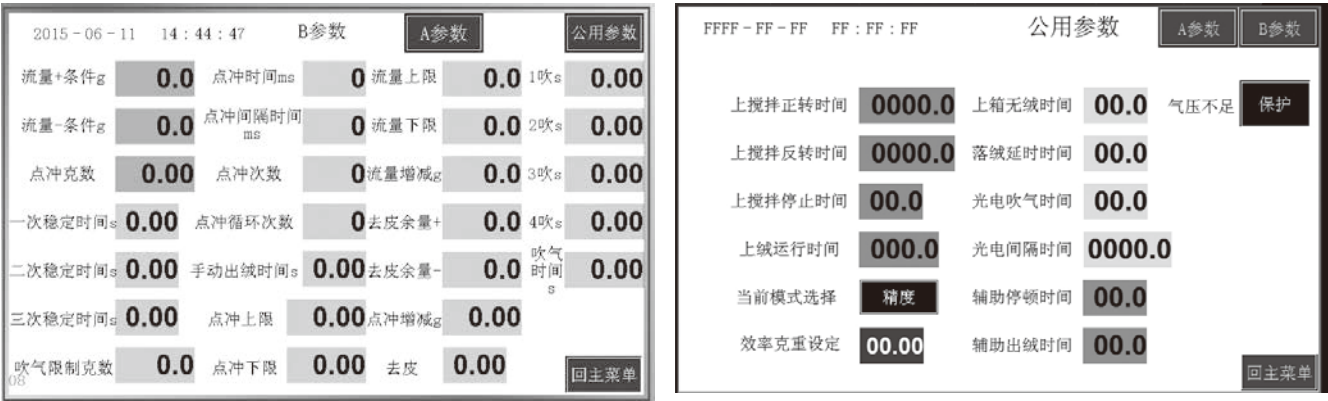
[Figure 11]

[Figure 12]

3.4 Press Flow Test (password entry), the touch screen enters the following menu:

[图 13]

以上图 10~13 画面为管理员画面，其中的各项参数均有本公司服务人员设定，用户不得随意更改否则会造成称重定量不准，或充绒效率低下，甚至无法正常工作。若由用户必须更改，则必须在本公司服务人员指导下才能更改。
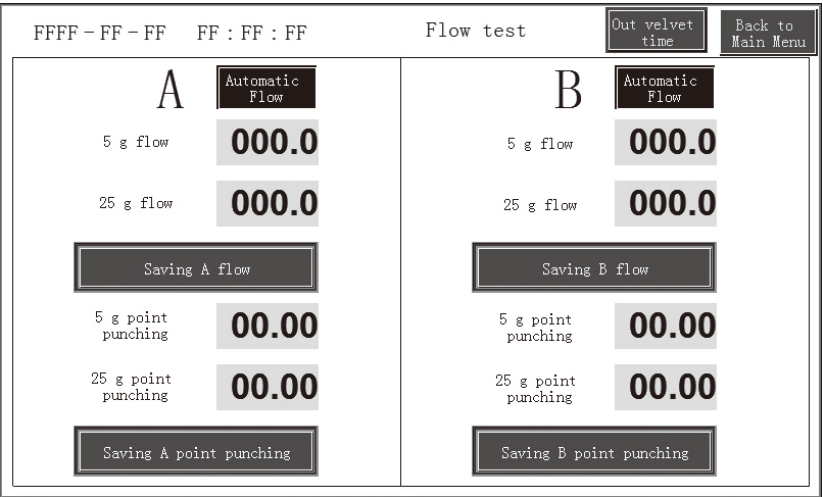
3.4.1 按 出绒时间 ，触摸屏进入如下画面：

[图 14]

该画面内参数为出厂默认参数。一般无须调节。

3.5 按 回主菜单 ，触摸屏回到主画面，在主画面中有两个按钮 A 箱开启（关闭）切换按钮、 B 箱开启（关闭）切换按钮，此两个按钮可分别控制 A 箱或 B 箱的工作状况，正常情况，要确保两个称重箱均保持开启状态（此时系统保持两箱交替称重），若其中有一个箱体有故障，则可将其关闭，另一个能正常工作。

熟知以上操作过程后，操作员就可以开始操作本机器了。

[Figure 13]

The above Figure 10-13 are administrator menus, various parameters are set by our service personnel, the user cannot change them randomly, or else, will cause inaccurate weighing or low efficiency of filling, even not work normally. If the user must change them, must be guided by our service personnel.

3.4.1 Press Out Velvet Time , the touch screen enters the following menu:

[Figure 14]

The frame parameter is the factory default parameter. Generally do not need to adjust.

3.5 Press Back to Main Menu , the touch screen backs to main menu, there are two buttons in main menu: A Box Open (Close) switch button and B Box Open (Close) switch button, these two buttons can respectively control working conditions of A or B box. Under normal condition, should ensure two boxes at open state (at this time, the system keeps alternate weighing of two boxes), can close the box if it has failure, and the other boxe can work normally.
The operator can begin to operate the machine after familiar with above processes.

附：在正常充绒过程中出现的触摸屏提示：

● 正常情况下踩脚踏开关就会出绒，但有时不出绒，有一般有以下两种情况：一种是上一次称重还没结束，此时要等待上一动作结束。

另一种情况是（以 A 箱为例）：自动画面提示 [A 箱有绒未出净，请出绒] 说明 A 箱内有绒未出干净，要去查看一下充绒箱，如确认有绒，则可能的情况是：a、操作工操作方式不准确，b、出绒时间太短，c、羽绒与称重箱内壁有静电吸附。

如果确认是情况 a，那就点击 [出绒 A] 出绒干净，即可继续下一步操作。如果确认是情况 b，那就把出绒时间加长即可。如果确认是情况 c，则可以点击吹气和出绒反复几次。B 箱操作类似，不再重复。（**如果确认是静电吸附，必须打开加湿器，以消除羽绒上的静电，否则会影响充绒效率**）

● 提示：[气压不足]，同时蜂鸣器报警，检查气源供应有无问题，以及是否有泄漏情况，在确定气源没有问题才能进行自动充绒。

● 提示：[上箱无绒]，同时蜂鸣器报警，此时要加绒，在面板上按上绒，直接上绒，再按一次，停止上绒。

（三）设备参数

长（含两边充绒台）＊宽＊高：SCR-1P:2.5m*1.6m*1.8m

SCR-2P:4.3m*2.1m*2.1m

输入电压：~220V（单相 3 线制）

装机容量：1.5KW

充绒口：SCR-1P: 单侧 1 个；SCR-2P: 双侧各 1 个

可充羽绒：干燥 50 绒以上

充绒速度：视一次充绒克重 1~8 秒 / 次

每次上绒量：SCR-1P:2.5Kg；SCR-2P:5Kg

一次充绒克重：1g~25g（若干燥 90 绒极限可达 30 克）

称重误差：10 克以下可控制在 ±0.2 克，10 克以上可控制在 ±3%（90 绒，标准环境测试）

APPENDIX: Touch screen prompt occurred during normal filling:

● Under normal situation, the velvet will be out when stepping the foot switch, however, generally, the following two situations will not out velvet: first is that above weighing isn't over, at this time, need to wait until above operation is over.

The other situation is (A box for example): automatic menu indicates *There is velvet in A Box, please out velvet* , what shows that, there is velvet in A box and need to observe filling box, if there is velvet, the possible situations are: a. Operation way of operator is not correct; b. Out velvet time is too short; c. There is electrostatic adsorption between velvet and inner walls of weighing box.

For a, click [Out Velvet A] and then continue to next operation. For b, lengthen the time of out velvet. For c, repeatedly click Blow and Out Velvet for several times. Operation of B boxe is similar with A, no repeat. (**For electrostatic adsorption, must open humidifier to eliminate static electricity of velvet, or else, will affect filling efficiency**)

● PROMPT: "*Air Pressure is Insufficient*", at the same time, the buzzer alarms, should check air supply and observe whether there is leakage, can carry out automatic filling only after confirm that air supply is safe.

● PROMPT: "*No Velvet in Upper Box*", at the same time, the buzzer alarms, need to feed velvet, press velvet on the panel, directly feed velvet, press one time again, stop velvet feeding.

NO.3 Equipment Parameters

Length (including two sides' filling platform) *width *height: SCR-1P:2.5m*1.6m*1.8m

SCR-2P:4.3m*2.1m*2.1m

Input voltage: ~220V (single-phase 3-wire system)

Installed capacity: 1.5KW

Filling mouth: SCR-1P:Unilateral 1；SCR-2P:each one at both sides

Velvet filling: dry 50-velvet above

Filling speed: 1-8 seconds / time based on weight (g) of a time

Velvet feeding of a time: SCR-1P:2.5Kg ；SCR-2P:5Kg

Filling weight (g) of a time: 1g~25g (Some dry 90 velvet, filling limit up to 30 grams)

Weighing error of a time: Below 10 grams, controlled within ±0.2g, 10 grams or more can be controlled in ＋3%. (90-velvet, test in standard environment)

二、0.01g 高精度机型（SCR-1P-3G、SCR-2P-6G）

0.01 克高精度自动充绒机，更适合小克重分格充绒；单侧单充绒头或两侧双充绒头结构，是由触摸屏及 PLC 控制的生产羽绒服饰等产品用的充绒设备，每个充绒头由三秤交替称重，能有效提高生产效率，减轻工人劳动强度，减轻工厂环境压力。

（一）基本要求及安装调试

1、场地要求

- 最小搬运通道：1m（宽）*2.1m（高）
- 最小放置场地：SCR-1P-3G：3m（长）*4m（宽）*2m（高）
  SCR-2P-6G：5m（长）*3m（宽）*2.1m（高）
- 建议放置场地：SCR-1P-3G：4m（长）*4.5m（宽）*2m（高）以上
  SCR-2P-6G：6m（长）*4m（宽）*2.1m（高）以上

2、气压要求

- 供气量：SCR-1P-3G：0.5m³/min 以上；SCR-2P-6G：0.8m³/min 以上。
- 气压：不低于 0.58Mpa。
- 若集中供气，要求管道距离 20m 以内，管道直径不小于 1 英寸，若距离长，则相应加粗管道，否则供气量不够，会造成出绒不稳定。
- 若独立供气，则推荐配置 SCR-1P-3G:3.5KW 以上高压气泵（气压 0.6~0.8Mpa）及不小于 0.4m³ 的储气罐；SCR-2P-6G:5.5KW 以上高压气泵（气压 0.6~0.8Mpa），及不小于 0.6m³ 的储气罐。

3、使用环境要求

- 温度：根据 GBT 14272-2011 要求，充绒量测试温度在 20±2 摄氏度。
- 湿度：根据 GBT 14272-2011 要求，充绒量测试湿度在 65±4 度。

4、卸车与搬运

- 使用铲车时注意不要叉到电控箱下的电线或气管。
- 因设备内有精密称重传感器，要轻抬轻放，以防损坏称重传感器。

II. 0.01G HIGH PRECISION MACHINE
（SCR-1P-3G、SCR-2P-6G）

The equipment is high-precision velvet filling machine for 0.1g and more suitable for filling grid by grid and small weight (g); The structure is dual filling head on both sides or unilateral single filling head, it is velvet filling machine used for production of feather dress controlled by touch screen and PLC, each head weighs alternately by three scales, can effectively improve production efficiency, reduce labor intensity as well as reduce environment pressure of factory.

NO.1　BASIC REQUIREMENTS, INSTALLATION AND DEBUGGING

1. REQUIREMENTS OF SITE

- Minimum transport channel: 1m (width) *2.1m (height)
- Minimum place area: SCR-1P：3m (length) *4m (width) *2m (height)
  SCR-2P：5m (length) *3m (width) *2.1m (height)
- Suggestion to place area: SCR-1P：3m (length) *4m (width) *2m (height) above
  SCR-2P：6m (length) *4m (width) *2.1m (height) above

2. REQUIREMENTS OF AIR PRESSURE

- AIR DEMAND: SCR-1P：0.5m³/min above；SCR-2P：0.8m³/min above.
- AIR PRESSURE: Not lower than 0.58Mpa.
- Central air supply requires the distance of pipeline is within 20m, pipeline diameter is not less than 1 inch, if the distance is too long, should correspondingly thicken the pipeline, or else, the air supply is insufficient to cause instability of out velvet.
- For independent air supply, recommend configure SCR-1P:3.5KW above high-pressure air pump (with air pressure of 0.6~0.8Mpa), as well as air tank of not less than 0.4m³；SCR-2P:5.5KW above high-pressure air pump (with air pressure of 0.6~0.8Mpa), as well as air tank of not less than 0.6m³.

3. REQUIREMENTS OF USE ENVIRONMENT

- TEMPERATURE: In accordance with the requirements of GBT 14272-2011, test temperature of filling is 20±2 degrees Celsius.
- HUMIDITY: In accordance with the requirements of GBT 14272-2011, test humidity of filling is 65±4 degrees.

4. UNLOADING AND HANDLING

- Pay attention to not fork wires or air tube under the electric cabinet when using a forklift.
- The equipment includes precision weighing sensor, should handle with care, so as not to damage the sensor.
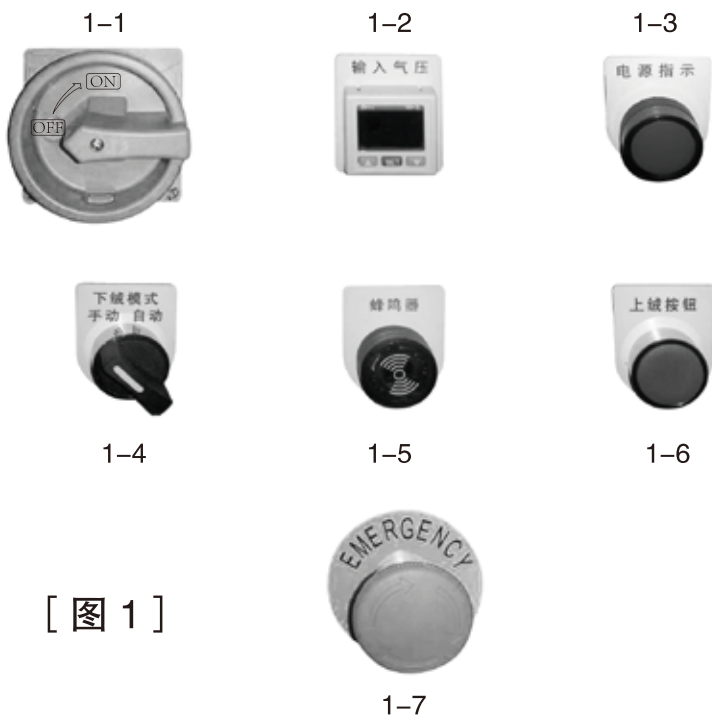
5、安装调试

由本公司或经销商派员到用户安装调试，用户派员协助。

⚠ **警告:** 正常情况下，落绒门气缸开关闭速度、光电探头位置、各调压阀所调整的压力、触摸屏高级参数（密码进入的）均由本公司专业人员调整，用户不能随意调节。若由用户调节，必须在本公司专业人员指导下才能调节，否则将导致系统无法正常工作。

（二）、正常操作

1、电器箱控制面板各按钮功能（图 1）

［ 图 1 ］

1.1 电源开关（图 1 中 1-1）：ON 为开启状态，OFF 为关闭状态。

1.2 输入气压表(图1中1-2)：显示当前气压，当气压小于设定值时，系统会自动报警。

1.3 电源指示灯（图1中1-3）：灯亮说明当前系统已通电，灯灭说明当前系统已断电。

1.4 下绒模式旋转按钮（图1中1-4），主要用于在第一次上绒时，控制上箱的羽绒下落至下箱的落绒速度，将按钮旋转至手动模式，按压触摸屏手动画面中上落绒按钮，系统会将落绒小门打开，上箱的羽绒很快会下落至下箱，透过箱体观察窗，看下箱绒面达到一定高度时，**将该旋转按钮旋转至自动模式**，系统将自动把绒面保持在一定高度。
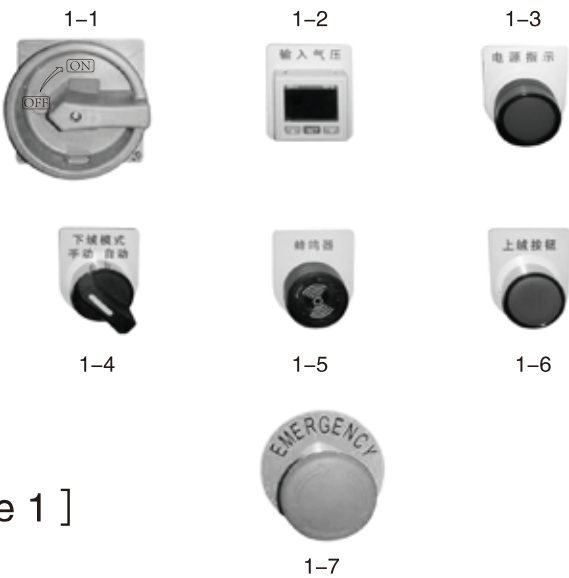
注意：正常操作时必须将该按钮旋转至自动模式，不然会导致下箱很快会无绒，影响正常生产。

5. INSTALLATION AND DEBUGGING

Our company or distributor appoints personnel go to user to install and debug, the user appoints persons to assist.

⚠ **WARNING:** Under normal circumstances, the open and close speed of velvet falling gate cylinder, photoelectric probe location, pressure regulated by regulating valves and senior parameters of touch screen (password entry) should be regulated by professionals of our company, and user cannot regulate them randomly. If the user regulates, must under guidance of professional of our company, or else, the system will not work normally.

NO.2　Normal Operation

1. FUNCTION OF BUTTONS ON THE CONTROL PANEL OF ELECTRICAL BOX. (Figure 1)

［ Figure 1 ］

1.1　POWER SWITCH (1-1 in Figure 1): ON means open and OFF means close.

1.2　INPUT PRESSURE GAUGE (1-2 of Figure 1): show current air pressure, the system shall automatically alarm when air pressure is less than setting value.

1.3　POWER INDICATOR (1-3 of Figure 1): The light is on, means that current system is on, the light is off, means that current system is off.

1.4　VELVET FALLING MODE ROTATING BUTTON (1-4 of Figure 1) is mainly used for first feeding, to control falling speed of upper box velvet falls down to lower box, rotate the button to manual mode, press touch screen manual menu's falling button, the system will open the falling gate, upper box velvet will quickly fall down to lower box, observe lower box's velvet surface through observation window, when the surface reaches a certain height, rotate the button to automatic mode, then the system will automatically keep the surface in a certain height.

NOTE: Under normal operation, must rotate the button to automatic mode, or else, will cause lower box have no velvet in a very short time, to affect normal production

1.5 蜂鸣器（图1中1-5）：用于系统故障或提示报警用。

1.6 上绒按钮（图1中1-6）：按压该按钮，吸绒风机开启，即可将外界的羽绒吸进箱体内，再次按压该按钮，吸绒风机关闭。（注意：在吸绒过程中，请停止正常充绒操作，否则可能造成称重不准）

1.7 急停按钮（图1中1-7）：此按钮用于出现紧急或突发故障时应急之用，按下为关闭，旋转弹起为开启，正常情况下，请保持该按钮弹起状态请勿随意操作该按钮。

注意：系统在正常运转状态下，请勿随意操作电源开关或急停按钮，正常操作均可在触摸屏上能控制。

2、称重模块的调试校准

在首次装机时或在正常充绒时用户日常检查发现实际出绒重量与触摸屏显示克重不符的状况下应执行以下操作。

首先将称重箱内绒排出干净，清理称重箱外围的羽绒及灰尘等杂物。

1、按 MODE 键 2 次，显示"CAL"，按 ENTER 键，显示"PASS"
按 ENTER 键，显示"0 — — — — —"

2、按 MODE 键 5 次，显示"000000"，按 ENTER 键，显示"PT — — — 0"

3、按 ENTER 键 6 次，显示"C 0.000"

4、放砝码（例200g），显示"2 0.730"（数字显示以实际为准）
按 ENTER 键，显示"C 0.730"
通过 OPTION 键和 MODE 键设定"20000"，按 ENTER 键
显示"000000"，按 ESC 键，显示"SIOCAL"，按 ESC 键，显示"PASS"
按 ESC 键，等待几秒自动退出，显示"020000"

5、关机，再开机。校准完毕。

注意：在操作的时候不要晃动称重箱及桌面，以免校正错误。

3、触摸屏操作

确认电源与气源通好后旋转电源旋钮，电源指示灯亮，机器进入通电状态，面板气压表显示数据，触摸屏进入如下主画面：

[图 2]

1.5 BUZZER (1-5 in Figure 1): Used for system failure or prompt alarm.

1.6 FEEDING BUTTON (1-6 in Figure 1): Press it, the suction velvet fan is opened to suck outside velvet into the box, press it again, the fan is closed. (Note: during suction process, please stop normal filling operation, or else, maybe cause inaccurate weighing.)

1.7 EMERGENCY STOP BUTTON (1-7 of Figure 1): It is used for emergency or unexpected accident, press for close, rotate and upspring for open, under normal circumstance, please keep at upspring state and don't operate it randomly.

NOTE: Please don't randomly operate power switch or emergency stop button when the system is under normal operation condition, all normal operations can be controlled in touch screen.

2. DEBUGGING AND CALIBRATION OF WEIGHING MODULE

The following operations should be done when first assembly, or actual velvet not meet the weight (g) displayed in touch screen detected by user in daily check under normal filling condition.

First, empty the velvet of weighing box, clear up velvet and dust, etc. around the weighing box.

1. Press MODE key 2 times, show "CAL", press ENTER key, show "PASS"
Press ENTER key to display "0 - - - - -"

2. Press MODE key 5 times, show "000000", press ENTER key, show "PT - - - - - 0"

3. Press ENTER key 6 times, show "C 0"

4. Put the weight (200g), show "20.730" (digital display to the actual prevail)
Press ENTER key to display "C 0.730"
Set "20000" by OPTION and MODE, press ENTER
Show "000000", press ESC key, display "SIOCAL", press ESC key, show "PASS""
Press ESC key and wait for a few seconds to exit automatically, showing "020000""

5. Shutdown, restart. Calibration.

NOTE: Don't sway weighing box and desk when operating, in order to avoid calibration error.
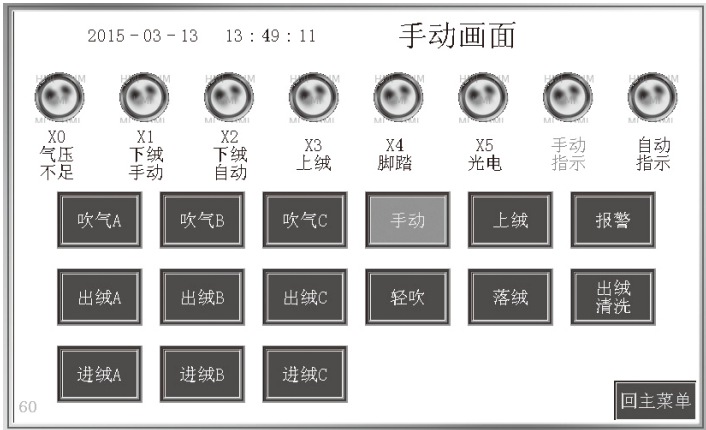
NO.3   OPERATION OF TOUCH SCREEN

Rotate power knob after confirmation of power and air supply are connected, the power indicator is on, machine is under electric state, panel pressure gauge displays data, touch screen enters the following main menu:

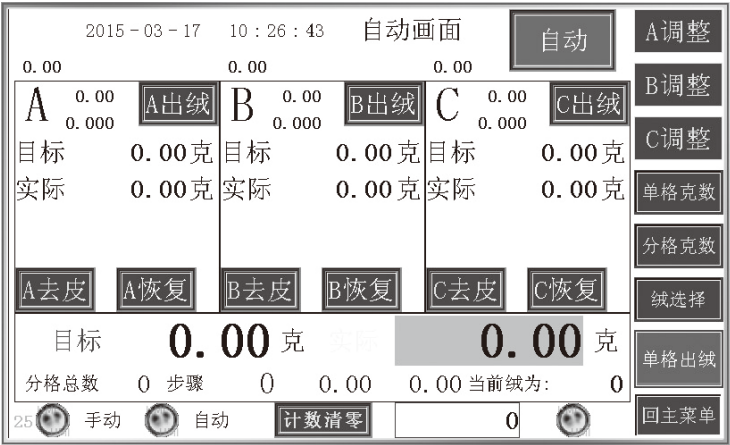[Figure 2]

3.1 按 [手动画面] ，触摸屏进入如下画面：

[图 3]
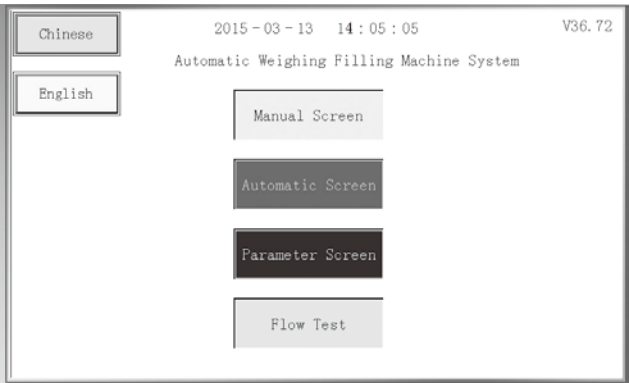
3.1.1 按"手动"，"手动指示"灯由红变绿。

3.1.2 按 [A 吹气]、[B 吹气] 或 [C 吹气]，系统会对 A 箱、B 箱或 C 箱内吹气搅散箱内的羽绒，便于将 A 箱、B 箱或 C 箱内的羽绒排出。

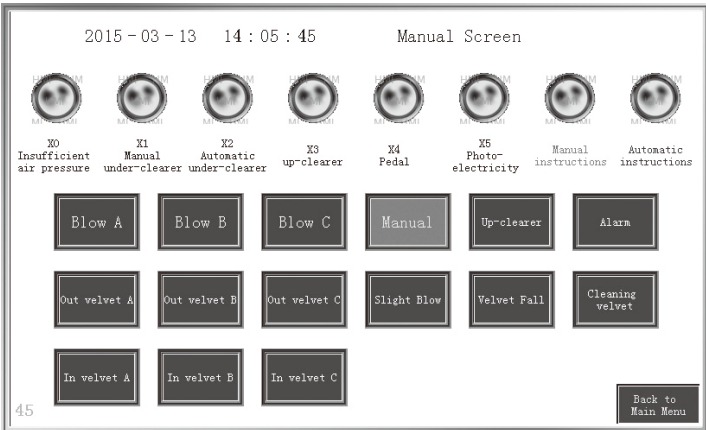3.1.3 按 [A 出绒]、[B 出绒] 或 [C 出绒]，系统会将 A 箱、B 箱或 C 箱内羽绒排出，以便于执行正确的自动充绒操作。

3.2 按 [自动画面] ，触摸屏进入如下画面：

此画面为自动充绒时的监视画面，并可执行以下操作：

[图 4]

3.1 Press [Manual Screen] , the touch screen enters the following menu:

[Figure 3]

3.1.1 Press [Manual] , The indicator light of "Manual instrvcions" from red turns green.

3.1.2 Press [Blow A] , [Blow B] or [Blow C] , the system will blow to A, B or C box, to stir velvet in the box, so as to empty the velvet in A, B or C box.

3.1.3 Press [Out Velvet A] , [Out Velvet B] or [Out Velvet C] , the system will empty the velvet in A, B or C box, so as to implement correct automatic velvet filling operation.

3.2 Press [Automatic] Menu , the touch screen enters the following menu:

It is monitoring menu of automatic filling, and can implement the following operation:
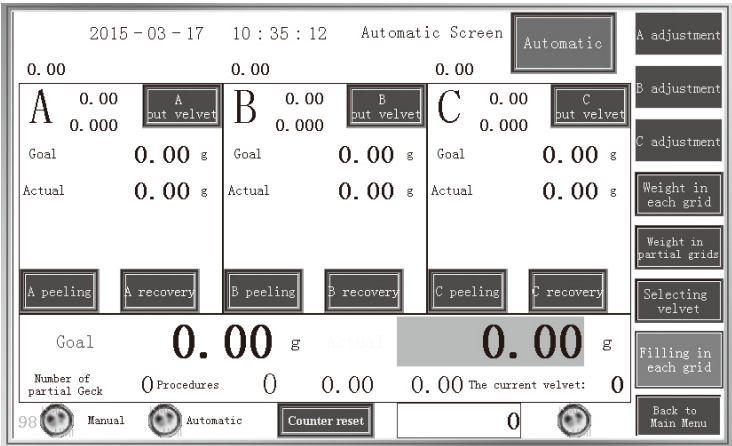
[Figure 4]

3.2.1 按 A 去皮 、 B 去皮 或 C 去皮 ，系统会将 A 箱、B 箱或 C 箱称重清零，以使称重定量正确。

正确的去皮方式很重要，如去皮方式不正确，将造成充绒时定量不准，甚至无法正常充绒，以下为正确的去皮方式：

● 每次打开电源及气源后，清空 A 箱羽绒，并对 A 箱 去皮 ；清空 B 箱羽绒，并对 B 箱 去皮 ；清空 C 箱羽绒，并对 C 箱 去皮 。

● 机器在通电及通气状态下长时间不操作，也应 去皮 。

● 正常充绒过程中，如发现 A 箱、B 箱或 C 箱有 "0" 点漂移现象（确认 A 箱、B 箱或 C 箱羽绒已清空，但显示数值不在 "0" 点附近，如显示数值大于 "0.2" 或小于 "-0.2"），也应 去皮 。

● 一旦对称重箱外围进行了清理，也应 去皮 。

⚠ 警告：在去皮之前必须将称重箱内的羽绒清空，否则如果箱内有绒未清空而 去皮 ，将造成称重不准，甚至无法正常充绒。

3.2.2 按 A 调整 、 B 调整 或 C 调整 ，触摸屏进入如下画面：

FFFF-FF-FF   FF:FF:FF   A调整
流量 减 00.00 加 自动流量
误差范围g 00.00
误差上限g -00.00
出绒时间s 00.00
GK 00.00
GX 00.00
00 返回

[图 5]

此画面由操作员可根据实际情况分别对 A 箱或 B 箱的参数进行调整，以使本机器的称重准度与充绒效率发挥至最佳。

对该画面内的流量及出绒时间等的具体调节方法如下：

3.2.1 Press A Peeling , B Peeling , the system will do zero clearing to weighing of A or B box, to make weighing is quantitative and correct.

Correct peeling way is very important, the inaccurate way will cause inaccurate weighing, even not normal filling, the following ways are correct:

● Every time after open the power supply and air supply, empty A box's velvet and peeling ; empty B box's velvet and peeling ; empty C box's velvet and peeling .
● Peeling should also be done if the machine is not operated for a long time under the state of connecting to electricity and air.
● Peeling should also be done during normal filling if finds '0' point drift phenomenon of A ,B or C box (confirm that the velvet of A, B or C box have been emptied, but the display value is not near '0' point, such as: value is more than '0.2' or less than '-0.2').
● Peeling should also be done once have emptied the surrounding of weighing box.

⚠ WARNING: Before Peeling , must empty the velvet of weighing box, or else, the weighing shall be not accurate, even cannot normally fill.

3.2.2 Press A Adjustment , B Adjustment or C Adjustment , the touch screen enters the following menu:

FFFF-FF-FF   FF:FF:FF   A adjustment
Flow Less 00.00 More Automatic Flow
Error Range g 00.00
Error Upper Limit g -00.00
out velvet time s 00.00
GK 00.00
00 GX 00.00 Back
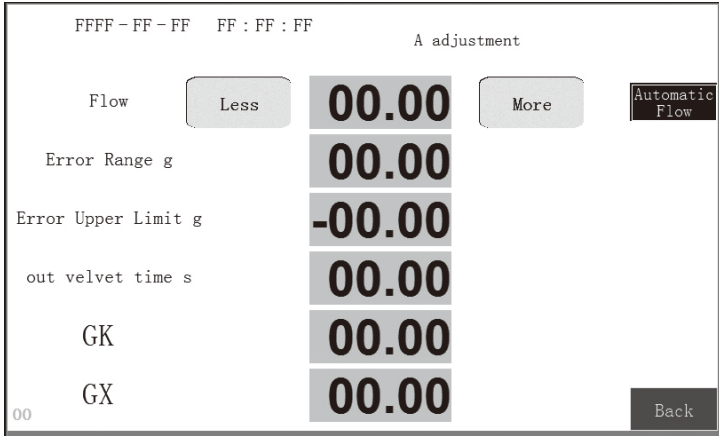
[Figure 5]

The menu is operated by operator to adjust the parameters of A, B or C box based on actual situations, in order to make the weighing accuracy and filling efficiency of machine best.

The specific adjustment method of flow and out velvet time in the menu as follows:

举例：对"A 箱"进行调节（B 箱、C 箱的调节方法相同）

在 A 调整 画面中：

● 按"流量"对应的 加 或 减 ，就可以对流量进行调节。也可直接按方框内的数据，对其直接更改。（该画面中有一个 自动流量 与 固定流量 的切换按钮，只要确认本机在 自动流量 状态下，系统对流量有自动调节功能，操作员一般无须调节。正常操作时，该按钮应保持在 自动流量 状态，而本公司服务人员或用户工厂管理人员在做流量测试时才将其保持在 固定流量 状态，一旦流量测试工作结束，应立即将其切换至 自动流量 状态）

● 按"误差范围"可以设定目标值的允许误差值

● 按"误差上限"可以设定目标值的允许最大误差值，根据"误差范围"与"误差上限"系统会自动计算出允许误差下限值

● 该画面中的"GK"及"GX"参数，是为小克重精度而设计，举例：将该参数设定为 0.2，则系统默认为 0.2 克及以下可以限制误差下限（即最小充绒量），而如果将"GX"参数设定为 0.02，则系统会默认在充制 0.2 克及以下时的误差下限为 0.02 克，即控制了充绒的最小量。

3.2.3 克数的设定 SETTING OF WEIGHT (G)

按 单格克数 ，触摸屏进入如下画面：

[图 6]
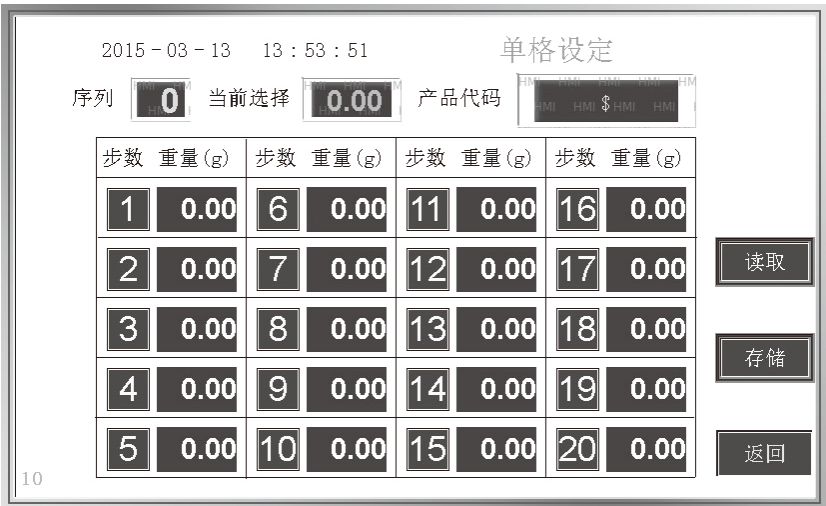
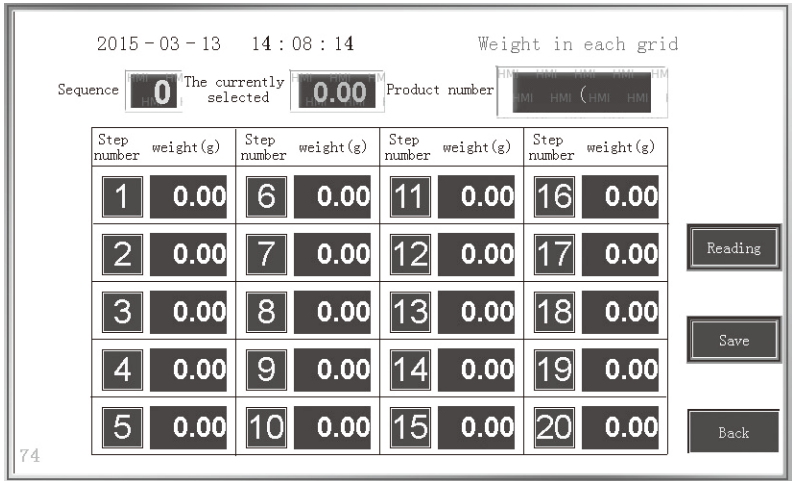**FOR EXAMPLE:** Adjust 'A box' (the adjustment method of B and C boxes is similar with it) In 'A Adjustment' menu:

• Press More or Less corresponded by 'Flow' to adjust the flow. Can also directly change according to the data in square frame. (In the menu, there is one switch button between Automatic Flow and Fixed Flow, the system owns automatic adjustment function to flow as long as you confirm the machine under Automatic Flow state, generally, not need to be adjusted by operator. Under normal operation, the button should be kept at Automatic Flow state and it will be kept at Fixed Flow state when our service personnel or user factory's management personnel carries out flow test, should immediately switch to Automatic Flow state once the test is over)

• Press 'Error Range' to set permissible error value of goal value.

• Press 'Error Upper Limit' to set permissible maximum error value of goal value, the system will automatically calculate permissible error lower limit in accordance with 'Error Range' and 'Error Upper Limit'.

• 'GK' and 'GX' parameters in the menu are designed for small weight (g) precision, for example: set the parameter as 0.2, the system will default that 0.2g and below can limit error lower limit (namely, minimum filling), however, if set 'GX' parameter as 0.02, the system will default that the error lower limit of filling 0.2g and below is 0.02g, namely, control the minimum of filling.

3.23 SETTING OF WEIGHT (G)

Press Weight in Each Grid , the touch screen enters the following menu:

[Figure 6]

　　操作员先设定好"序列"，如"序列" 1 （最多可设定至 20），再在下面 1~20 格"步数"右侧方框内分别设定好所需克数，按 存储 ，系统将操作员设定的参数储存下来。在每个"序列"下，可最多分别设定 20 种不同克数，并分别保存好，以便于操作员在以后的操作过程中不再需要频繁地设定克数，而只要根据以前设定好的"序列"，按 读取 并选择该克数对应的"步数"，系统即按该"步数"下的克数来充绒。

The operator first sets Sequence, such as 'Sequence' 1 (maximum to 20), then respectively set required weight (g) in right square frame of following 1-20 grids' 'Step Number', press Save , the system will save the parameters set by operator. Each 'Sequence' can maximum set 20 different weight (g), respectively save so as to the operator no longer needs to frequently set weight (g) in later operation process, but just according to set Sequence to choose 'Step Number' corresponded by the weight (g), and press Reading , then the system will fill according to weight (g) under the 'Step Number'.

　　按 分格克数 ，触摸屏进入如下画面：

Press Weight in Divided Grid , the touch screen enters the following menu:

[图 7]

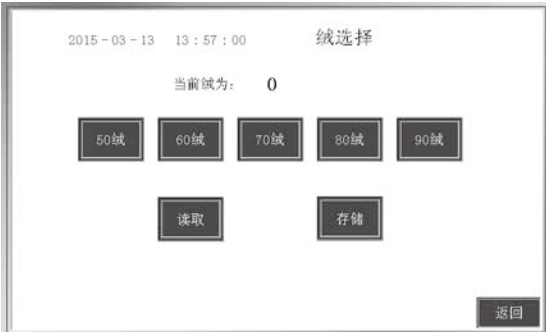[Figure 7]

[图 8]

[Figure 8]

操作员先设定好"序列"号，如"序列" 1 ，再设定好"产品代码"（即衣片代号），再根据工艺需要在下面的"步数"方框内按衣片上每个格子的充绒顺序分别设定好克数，余下的"步数"内的克数必须设定为 0 ，否则系统将默认按顺序继续充绒。每个序列分 5 页，每页可设定 20 个"步数"，共计 100 个"步数"。按"存储"，系统即将该衣片的充绒顺序及克数储存下来了。重复以上操作，最多可设定至"序列" 100 ，即可保存 100 个衣片的分格充绒克数。完成以上操作后，操作员在以后的操作过程中不再需要频繁地设定克数，而只要根据以前设定好的"序列"，直接选择该衣片对应的"序列"，按 读取 ，系统即按该"序列"下的顺序及克数来充绒。

注：根据用户充绒工艺，用户可选配料斗容量的大小，如用户可选配 3 克或 6 克或 25 克的料斗，如用户在充绒过程中进绒量大于了料斗最大容量，则会造成称重箱堵塞，如果想一次充绒超过料斗最大容量，请均分多次充绒。

3.2.4 操作工在充绒前，必须先确认是单格充绒还是分格充绒，否则系统会无法正常充绒。按 单格充绒 ，此按钮会自动变为 分格充绒 ，此按钮为交替选择钮，操作员必须按充绒工艺要求操作此钮。

3.2.5 按 绒选择 ，触摸屏进入如下画面：

[图 9]

因在各种绒号状态的 流量 等参数可能会不尽相同，因此，操作员在正常充绒前必须先确认并选择好具体的绒号，如"90 绒"，则必须按 90 绒 再按 存储 钮，系统会将设定好的参数保存在 90 绒 状态下。一旦更换绒号后，也必须执行以上操作，以便于以后换绒后快速读取各种绒号状态下的参数。
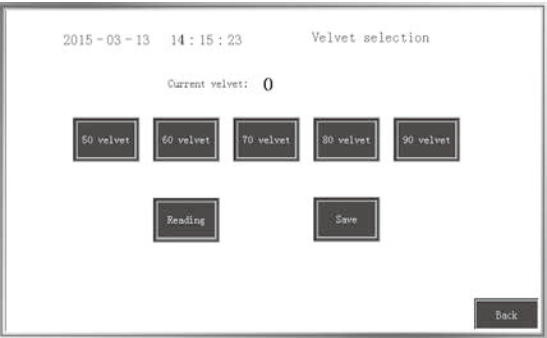
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The operator first sets 'Sequence', such as 'Sequence' 1 , and set 'Product Code' (namely, sheet code), then based on process need, respectively set weight (g) in following 'Step Number' square frame according to filling sequence of each grid of sheet, the weight (g) in rest of 'Step Number' must be set as 0 , or else, the system will default to continue fill in sequence. Each sequence is divided into five pages and each page can set 20 'Step Number', total of 100 'Step Number'. Press 'Save', the system will save the filling sequence and weight (g) of sheet. Repeat above operations, can maximum set to 'Sequence' 100 , namely, can save divided grid filling weight (g) of 100 sheets. After completion of above operations, the operator no longer needs to frequently set weight (g) in later operation process, but just according to set 'Sequence' to directly choose 'Sequence' corresponded by the sheet, and press Reading , then the system will fill according to sequence and weight (g) under the 'Sequence'.

NOTE: Based on filling process, the user can select the volume of hopper, such as: the user can select the hopper of 3g or 6g or 25g, during filling, the weighing box will be blocked if the velvet feeding is more than maximum capacity of hopper, please evenly and repeatedly filling if want one-time filling more than maximum capacity of hopper.

3.2.4 Before filling, the operator must first confirm each grid or divided grid, or else, the system will not fill normally. Press Filling in Each Grid , the button will automatically become Filling in Divided Grid , the button is alternation option button, the operator must operate it according to filling process requirements.

3.2.5 Press Velvet Selection , the touch screen enters the following menu:

[Figure 9]

Flow and other parameters corresponded by various velvet codes may be different, therefore, before normal filling, the operator must first confirm and select specific velvet code, such as: '90' velvet, must press 90 velvet and then press Save button, the system will save parameters under 90 velvet state. Also must implement above operations once the code is changed, so as to quickly read parameters under various velvet codes after velvet changes.

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3.2.6 按 回主菜单 ，触摸屏回到主画面。

3.3 按 参数画面 ，（密码进入）
触摸屏进入如下画面：

[图 10]

3.3.1 按 B 参数 ，触摸屏进入 B 参数画面：

3.3.2 按 C 参数 ，触摸屏进入 C 参数画面：

3.3.3 按 公共参数 ，
触摸屏进入如下画面：

[图 11]

3.4 按 流量测试 ，（密码进入）
触摸屏进入如下画面：

[图 12]

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3.2.6 Press Back to Main Menu , the touch screen backs to main menu.

3.3 Press Parameter Menu ,
(password entry), the touch screen enters the menu:
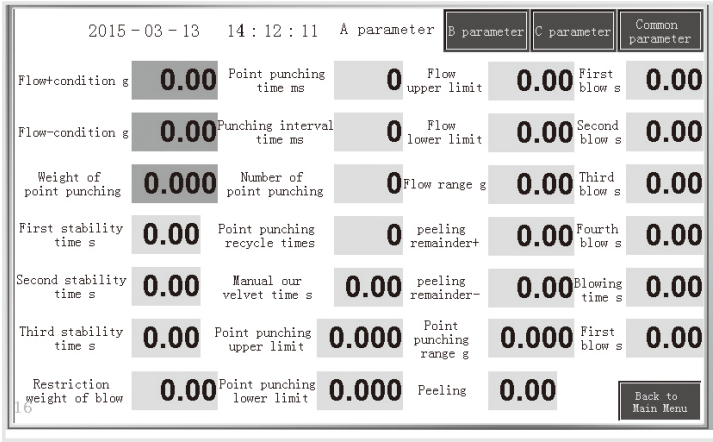
[Figure 10]

3.3.1 Press B Parameter , the touch screen enters B parameter menu ;

3.3.2 Press C Parameter , the touch screen enters C parameter menu;

3.3.2 Press Common Parameter ,
the touch screen enters following menu :

[Figure 11]

3.4 Press Flow Test (password entry),
the touch screen enters the following menu:

[Figure 12]

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3.4.1 按 [出绒时间] ，触摸屏进入如下画面：
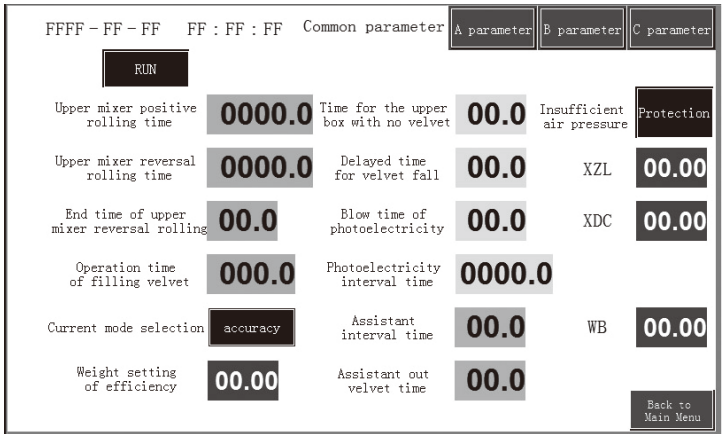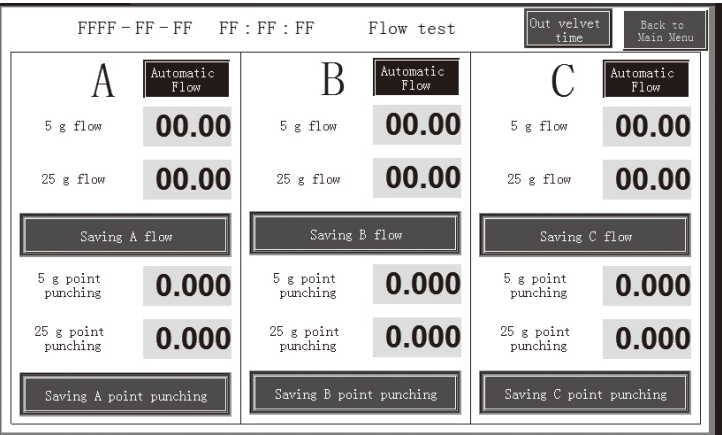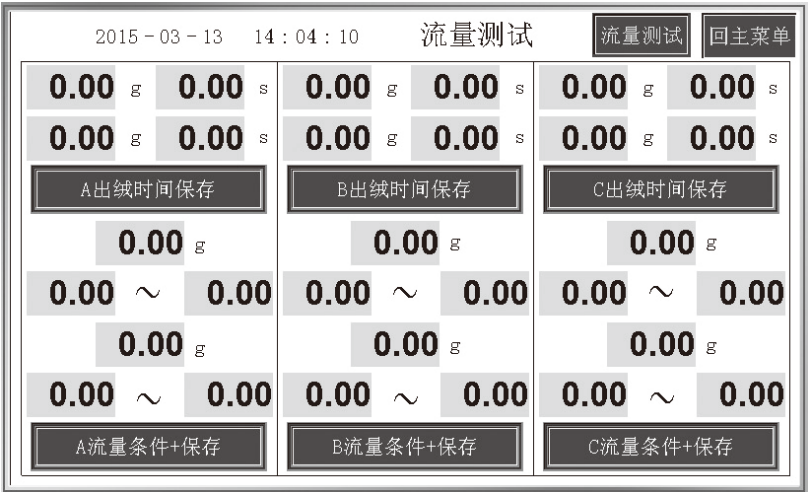
2015-03-13 14:04:10	流量测试	[流量测试] [回主菜单]

[图 13]

以上图 10~13 画面为管理员画面，其中的各项参数均有本公司服务人员设定，用户不得随意更改否则会造成称重定量不准，或充绒效率低下，甚至无法正常工作。若由用户必须更改，则必须在本公司服务人员指导下才能更改。

附：在正常充绒过程中出现的触摸屏提示：

● 正常情况下踩脚踏开关就会出绒，但有时不出绒，有一般有以下两种情况：

一种是上一次称重还没结束，此时要等待上一动作结束。

另一种情况是（以 A 箱为例）：自动画面提示 [A 箱有绒未出净，请出绒] 说明 A 箱内有绒未出干净，要去查看一下充绒箱，如确认有绒，则可能的情况是：a、操作工操作方式不准确，b、出绒时间太短，c、羽绒与称重箱内壁有静电吸附。

如果确认是情况 a，那就点击 [出绒A] 出绒干净，即可继续下一步操作。如果确认是情况 b，那就把出绒时间加长即可。如果确认是情况 c，则可以点击吹气和出绒反复几次。B 箱操作类似，不再重复。（如果确认是静电吸附，必须打开加湿器，以消除羽绒上的静电，否则会影响充绒效率）

● 提示：[气压不足] ，同时蜂鸣器报警，检查气源供应有无问题，以及是否有泄漏情况，在确定气源没有问题才能进行自动充绒。

● 提示：[上箱无绒] ，同时蜂鸣器报警，此时要加绒，在面板上按上绒，直接上绒，再按一次，停止上绒。

3.4.1 Press [Out Velvet Time] , the touch screen enters the following menu:
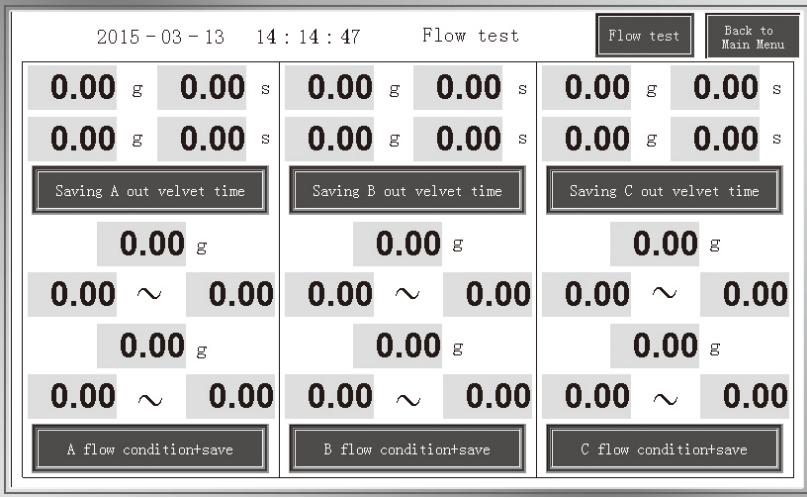
2015-03-13 14:14:47	Flow test	[Flow test] [Back to Main Menu]

[Figure 13]

The above Figure 10-13 are administrator menus, various parameters are set by our service personnel, the user cannot change them randomly, or else, will cause inaccurate weighing or low efficiency of filling, even not work normally. If the user must change them, must be guided by our service personnel.

APPENDIX: Touch screen prompt occurred during normal filling:

● Under normal situation, the velvet will be out when stepping the foot switch, however, generally, the following two situations will not out velvet: first is that above weighing isn't over, at this time, need to wait until above operation is over.

The other situation is (A box for example): automatic menu indicates *There is velvet in A Box, please out velvet* , what shows that, there is velvet in A box and need to observe filling box, if there is velvet, the possible situations are: a. Operation way of operator is not correct; b. Out velvet time is too short; c. There is electrostatic adsorption between velvet and inner walls of weighing box.

For a, click [Out Velvet A] and then continue to next operation. For b, lengthen the time of out velvet. For c, repeatedly click Blow and Out Velvet for several times. Operation of B boxe is similar with A, no repeat. (*For electrostatic adsorption, must open humidifier to eliminate static electricity of velvet, or else, will affect filling efficiency*)

● PROMPT: "*Air Pressure is Insufficient*", at the same time, the buzzer alarms, should check air supply and observe whether there is leakage, can carry out automatic filling only after confirm that air supply is safe.

● PROMPT: "*No Velvet in Upper Box*", at the same time, the buzzer alarms, need to feed velvet, press velvet on the panel, directly feed velvet, press one time again, stop velvet feeding.

（三）设备参数

长（含两边充绒台）＊宽＊高：SCR-1P-3G :2.5m*1.6m*1.8m

SCR-2P-6G :4.3m*2.1m*2.1m

输入电压：~220V（单相 3 线制）

装机容量：1.5KW

充绒口：SCR-1P-3G: 单侧 1 个；SCR-2P-6G: 双侧各 1 个

可充羽绒：干燥 50 绒以上

充绒速度：视一次充绒克重 1~8 秒 / 次

每次上绒量：SCR-1P-3G:2.5Kg；SCR-2P-6G:5Kg

一次充绒克重：最小 0.2 克，最大按用户选配料斗大小

称重误差：一般可控制在 ±0.05 克以内，最大误差一般不超过 ±0.1 克，
（90 绒标准环境测试，绒号偏低的羽绒误差可能会偏大）

NO.3　Equipment Parameters

Length (including two sides' filling platform) *width *height: SCR-1P:2.5m*1.6m*1.8m

SCR-2P:4.3m*2.1m*2.1m

Input voltage: ~220V (single-phase 3-wire system)

Installed capacity: 1.5KW

Filling mouth: SCR-1P-3G:Unilateral 1，SCR-2P-6G:each one at both sides

Velvet filling: dry 50-velvet above

Filling speed: 1-8 seconds / time based on weight (g) of a time

Velvet feeding of a time: SCR-1P-3G:2.5Kg，SCR-2P-6G:5Kg

Filling weight (g) of a time: 0.2 grams a time of Filling weight , the maximum weight is for the bucket by the user's choice

Weighing error of a time: Generally can be controlled within 0.05g or less, the maximum error is generally not more than 0.1 grams (90 cashmere standard environmental test, the low number of the down error may be too large)

三、一般异常及故障排除

1、 当正常充绒时，充绒头不出绒。首先查看称重箱内有无绒。

1.1、如有绒，则可能称重箱内堵塞，处理方法如下：

将触摸屏画面调至手动画面，按对应箱体吹气按钮，然后按对应箱体出绒按钮，连续几次，如仍发现称重箱内有绒，则可能有绒团堵塞在硅胶吸盘处，则可轻轻将吸盘翻起，用气枪往吸盘两侧内吹气，或用细铁丝将绒团钩出，再重复上面操作。

1.2、如无绒，则可能主箱体下箱出绒口处有绒团堵塞，处理方法如下：

将主箱体下箱与充绒箱连接处卡箍拧开卸下，检查出绒口有无绒团堵住，拿掉，重新装好即可。

1.3、如称重箱内再无绒进入，则联系本公司专业维修人员。

2、当主箱体上箱有绒，下箱无绒或明显绒面高度很底时，处理方法如下：

检查下箱光电开关指示灯有没有亮启，若没有亮启，则可能光电开关位置有变化，左右扭动光电开关，若还是无法亮启，则可能光电开关坏，更换即可。

3、当主箱体下层绒面高度超过观察窗口高度，无法分辨绒面高度时，会导致主箱体下层出绒口处极易堵塞，或者称重经常严重不准。处理方法如下：

检查下箱光电开关指示灯有没有亮启，若常亮，则可能光电开关位置有变化，左右扭动光电开关，若还是常亮，则可能光电开关坏，更换即可。此时绒面高度过高，必须将绒面高度处理至正常高度，才能正常充绒，否则此时充绒克重会不准。（处理方法很简单：模拟正常充绒过程，只是将多余的绒充入其它袋子即可）

4、系统无法开启，处理方法如下：

4.1、检查外围线路有无开路或接触不良。

4.2、打开电器控制箱门，检查电气板上过流保护器是否跳脱或熔断，重新按压下或更换即可，如发现经常跳脱或熔断，则检查其它电器有无故障，排除后再行操作。

NO.3　General Exception and Troubleshooting

1　First check whether there is velvet in the weighing box if the filling head doesn't out velvet under normal filling state.

1.1　If there is velvet, the weighing box may be blocked, the processing method as follows:
Adjust touch screen menu to manual menu, press blow button of corresponding box, then press out velvet button of corresponding box, after a few times, the weighing box still has velvet, what means that the velvet ball may be blocked in silicone suction cup, you can lightly turn up the cup and blow to both sides of cup by air gun, or hook out velvet ball by thin iron wire, then repeat above operations.

1.2　If there is no velvet, the velvet ball may be blocked in velvet outlet of lower box of main box body, the processing method as follows:
Loosen and disassemble the clamp of joint between lower box of main box body and filling box, check whether the velvet outlet is blocked by velvet ball, eliminate and re-install.

1.3　If the weighing box still has no velvet, should contact our professional maintenance personnel.

2　When the upper box of main box body has velvet, but lower box has no velvet or obvious velvet surface height is very low, the processing method as follows:

Check whether the indicator of photoelectric switch of lower box lights, if fails, the location of switch may be changed, twist the switch to the right and left, if it still doesn't light, the switch maybe damaged, should be replaced.

3　If main box body's lower velvet surface height exceeds the height of observation window, and not distinguishes velvet surface height, will cause lower velvet outlet of main box body be easily blocked, or weighing is often and severely inaccurate. The processing method as follows:

Check whether the indicator of photoelectric switch of lower box lights, if it lights constantly, the location of switch may be changed, twist the switch to the right and left, if it still lights constantly, the switch maybe damaged, should be replaced. At this time, the velvet surface height is too high, must process to normal height, then can carry out normal filling, or else, the weight (g) will be inaccurate. (Processing method is very simple: stimulate the normal filling process, just fill excess velvet into other bags)

4　The system cannot be started, the processing method as follows:

4.1　Check whether the peripheral circuit has open circuit or bad contact.

4.2　Open the gate of electrical control cabinet, check whether the over-current protector of electrical panel is tripped or fused, re-press or replace. If it is often tripped or fused, should check other electrical equipment to confirm whether has failure, operate again after troubleshooting.

四、日常维护

1、每天下班及正常关机前将称重箱内的绒全部排清（用触摸屏手动画面操作），然后再关闭机器。

2、每天下班前关闭机器后用气枪清理充绒箱内的粉尘及杂物。（注意：气枪不宜压力过大，轻吹即可）

3、每天下班前关闭机器后，将气枪头对准充绒口内四周环吹，清理充绒头内的粉尘及杂物以免影响排气速度，导致称重箱内的绒无法正常充出。

4、经常检查调压阀显示的压力是否正常。

5、经常用气枪清理电气控制箱及气动控制箱内的灰尘及杂物，保持箱内干净卫生，以免影响系统正常工作。（注意：这项工作必须在设备断电状态下进行，气枪不宜压力过大，轻吹即可，以免吹坏电器或其它元器件）

6、机器每工作一周，必须及时将设备上所配的两只小气罐内积水排出。

处理方法如下：关闭设备电源，关闭进气阀门，将气罐内气体排出干净，拧开罐体下方排水螺钉，将罐内水分排至接水容器内，倒掉，再拧紧排水螺钉即可。（用户外配空气压力机及储气罐内水分也应定期排出）

五、操作规范

● 下班前或长时间不使用，必须关闭电源及气源。

● 在做清理工作时必须关闭设备电源。

● 非专业机修人员禁止打开控制箱体。

● 称重箱上不得堆放任何物品，更不得重压或人为严重扭动。

● 吸绒风机常期不用时务必将吸绒管口封闭，（用布袋在扎牢即可）以防异物进入管道。

● 有异常声响，应立即停止操作，并关闭设备电源，并及时通知机修人员，以防故障范围扩大。在机修人员未到达前，禁止再次开启该设备。

● 长时间不使用设备时，应将设备内羽绒吸出清理干净，保持设备清洁卫生。

NO.4　Daily Maintenance

1. Every day after work and before normal shutdown, should clear all velvet in the weighing box (operated by manual menu of touch screen), then turn off the machine.

2. Every day before coming off work and after turning off the machine, should clean up the dust and debris in the weighing box by air gun. **(NOTE: Air gun should not be under a lot of pressure, just needs gentle blowing)**

3. Every day before coming off work and after turning off the machine, by air gun head to circular blowing to four sides of filling mouth, clean up the dust and debris of filling head, so as not to affect exhaust speed, to avoid that the velvet of weighing box is not normally out.

4. Often check whether the display pressure of regulating valve is normal.

5. Often by air gun to clean up the dust and debris of electrical control box and pneumatic control box, to keep clean and sanitary box environment, so as not to affect normal work of system. (**NOTE: The work must be conducted in the condition of interruption of power supply, and air gun should not be under a lot of pressure, just needs gentle blowing, so as not to damage electrical appliances or other components.**)

6. Every works for one week, the machine must be in a timely manner to drain the water of two small tanks equipped by equipment.

PROCESSING METHOD AS FOLLOWS: The processing method is as follows: Turn off power supply of equipment, close the inlet valve, completely drain the gas of tank, loosen the drainage screw in the lower part of tank to drain the water into container and pour out, then tighten the drainage screw. (User's additional air press and water of air tank should also be drained regularly.)

NO.5　Operation Specification

● Must close power supply and air supply before coming off work or not used for a long time.

● Must close equipment power supply when cleaning.

● Non-professional maintenance personnel are prohibited to open control box body.

● The weighing box should not be stacked any thing, more not be pressed or man-made serious twist.

● If the suction velvet fan is not used for a long time, must close the suction velvet nozzle, (tightened by cloth bag), to prevent foreign body into pipeline.

● For abnormal sound, should immediately stop operation, close equipment power supply, and in time notify maintenance personnel, to prevent expansion of fault range. Prohibit start the equipment again before the maintenance personnel arriving at.

● If the equipment is not used for a long time, should suck out and clean up the velvet of equipment, to keep clean and sanitary equipment environment.