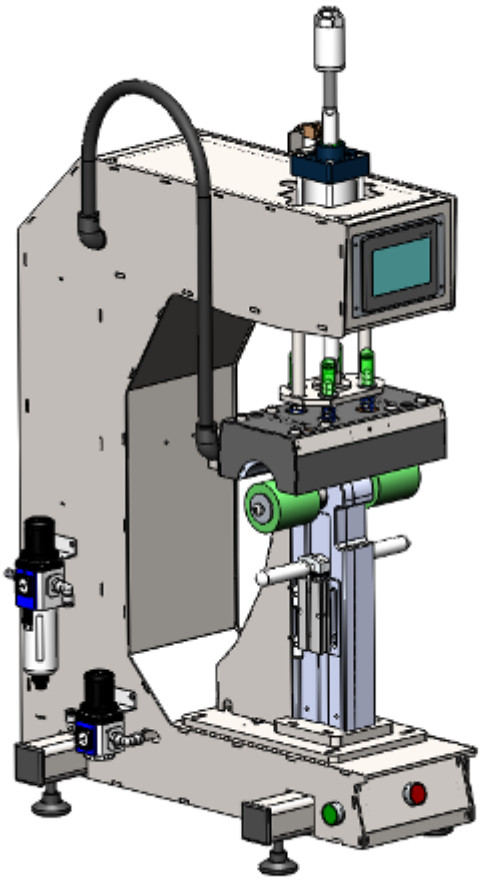
CS-651 Automatic Cuff Press Machine

Operation Manual



is powered by

H&H Asia Group Limited

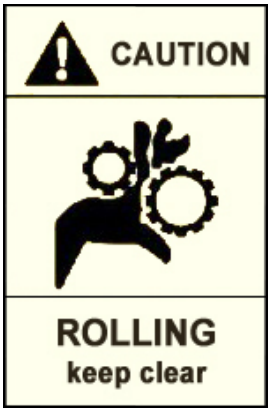
e = service@hh.com.hk
t = 852.24813068
f = 852.24813727

Room 1117, 11/F, Asia Trade Centre, 79 Lei Muk Road, Kwai Chung, N.T., Hong Kong.

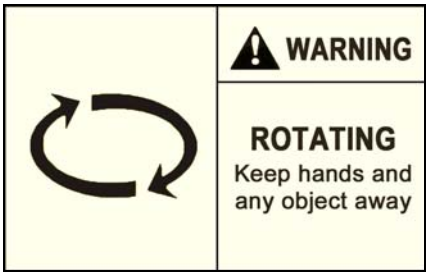
Content

> **Precautions with regard to Safety**

Please observe these safety tips for safe, efficient, an injury-free operation of your equipment. By strictly following all instruction contained in this manual you will certainly obtain an excellent performance from the use of this equipment for many years.



> **Precautions with regard to Safety (cont.)**



> **Name Plate**


Model : CS-651
Automatic Cuff Press Machine
spec A-A2R2-075066
Voltage
Frequency
Power
Compressed Air
Weight
220 V
50/60 Hz
1500 W
>0.4 Mpa
68 Kg
Date :
S/N :
H&H Asia Group Ltd.
Room 1117, 11/F, Asia Trade Centre, 79 Lei Muk Road, Kwai Chung, N.T., Hong Kong
Tel : (852) 2481-3068 Fax : (852) 2481-3727
www.hh.com.hk
MADE IN CHINA
CE

> **Introduction**

Thank you for your choosing of CS-651 which is manufactured by H&H.

This manual is aimed for the operators to understand the machine and avoid damage to the machine or personnel. Please read this manual carefully and keep it well for daily reference usage.

> **Specifications**

Model	:	CS-651
Voltage	:	220 V, Single Phase
Frequency	:	50/60 Hz
Power Consumption	:	1500 W
Compressed Air	:	> 0.4 Mpa
Heat Temperature Range	:	30~260℃
Heat Press Duration	:	1~999 second
Overall Dimensions	:	650mm x 370mm x 1150mm (length x with x height)
Overall Weight	:	68 kg

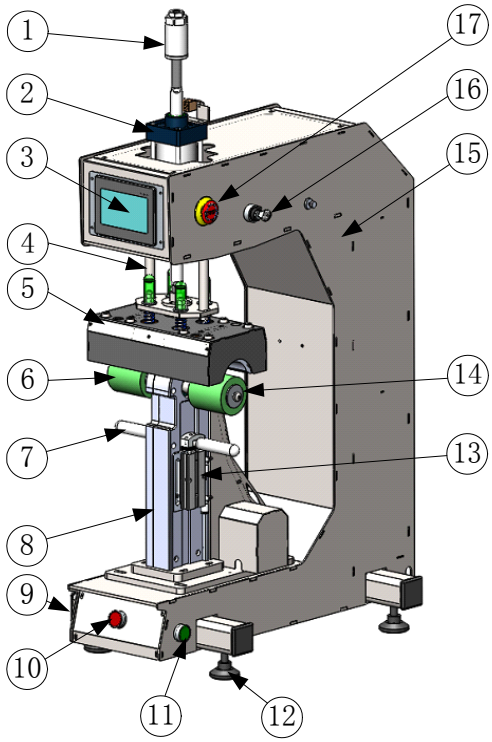
Note : due to continuous improvement, specifications are subjected to change without prior notification

> **Features**

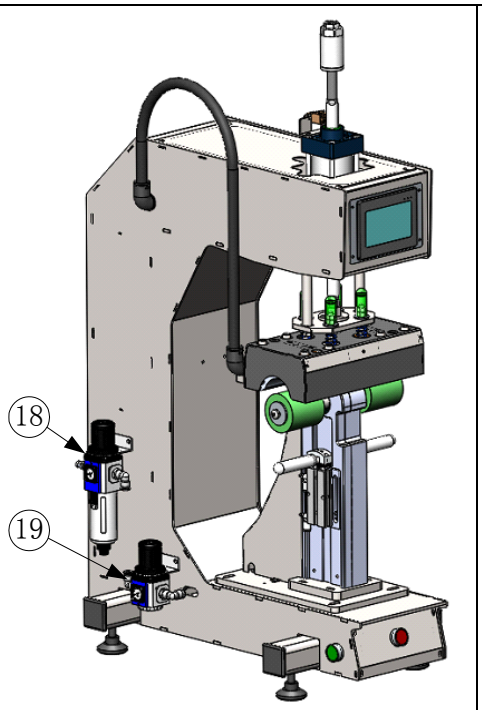
- Control system – user friendly touch screen interface.
- Safety protection –safety lever around the main working area. The machine will stop when this lever frame is lifted. Both of the start buttons must press simultaneously (within 0.5 second), otherwise the machine will not activate. The press need to reach the bottom working platform for 0.5 second before the hand can release the start buttons. The safe device mode enable for “any key cancel” can cancel the press down motion with any button.
- Individual heat temperature control.
- Individual heat cycle timing setting control.

> Component Names

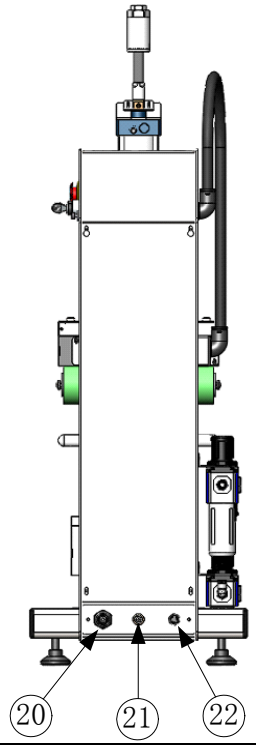
>> View



(a) view 1



(b) view 2



(c) view 3

Machine parts name

1. compress air filter & regulator	12. sdjustable foot support base
2. press cylinder	13. expander cylinder (left side and right side)
3. touch screen control panel	14. right roller
4. guide bars power switch	15. frame power cable inlet
5. heat arc (left side & right side)	16. operator/supervisor control key switch
6. left roller	17. emergency stop switch
7. expander roller (left side and right side)	18. inlet pressure regulating valve
8. under pillar	19. expander pressure regulating valve
9. start button left (work in pair)	20. power cable
10. stop/cancel button	21. foot pedal (optional) connecting socket
11. start button right (work in pair)	22. fuse

> **Preparation for Installation**

Installation must be carried out by authorized personnel. Please act according to the following steps :

1. Remove the package of the machine and placed it on the ground level, cleaning the machine before operation.

2. Unleashing all packing cables which tie to the machine and allow it from free movement.

3. Connect air hose to the inlet of the air regulating filter at the back of the machine, make sure the air pressure not lower than 0.4Mpa. Once connected, the heat plate will go up.

4. You can connect the foot pedal (optional) power plug with the corresponding socket at the back.

5. Connect the power cord with a 220V, 10A power supply.

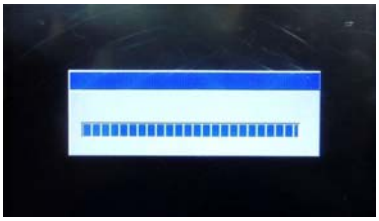
6. Switch on the emergency stop switch at the right top of the machine.

7. The touch screen panel will on and showing the program loading page. After a while, it will change to show the main control page.

> Operation and Controls

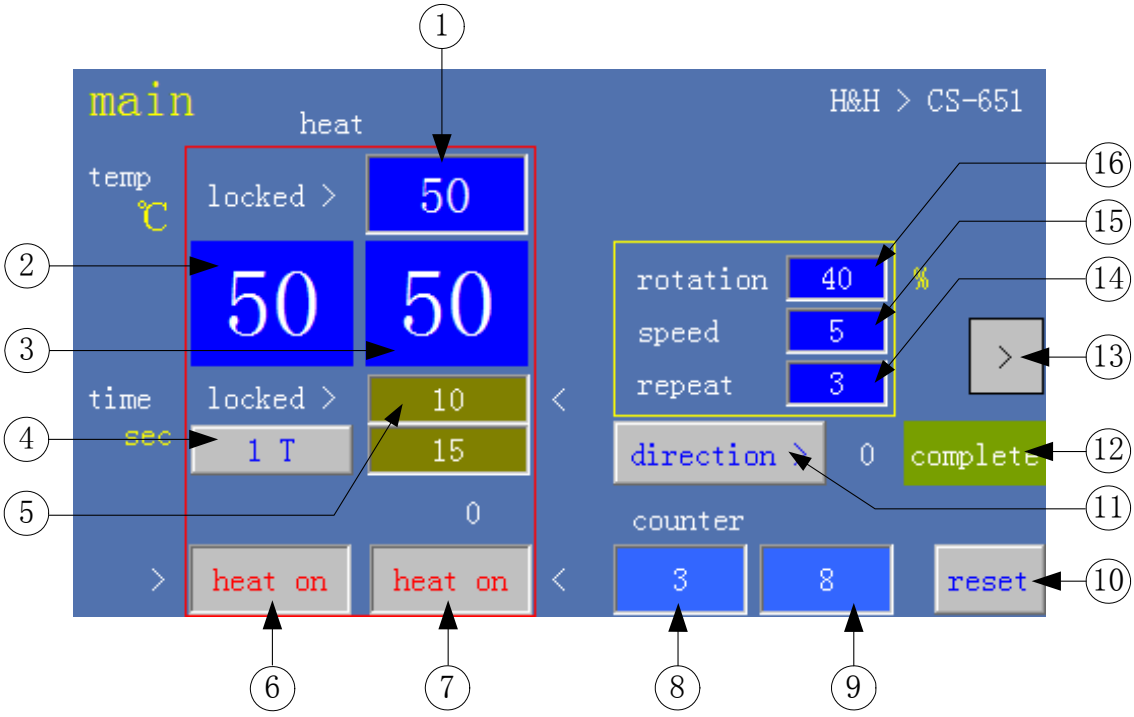
>> Touch Screen Control

The 1st & 2rd pages are welcome note & program loading pages. It will show up once the machine is powered on.



>> Main page

The 3rd page of the panel is named “main” means it is the main control of the machine.

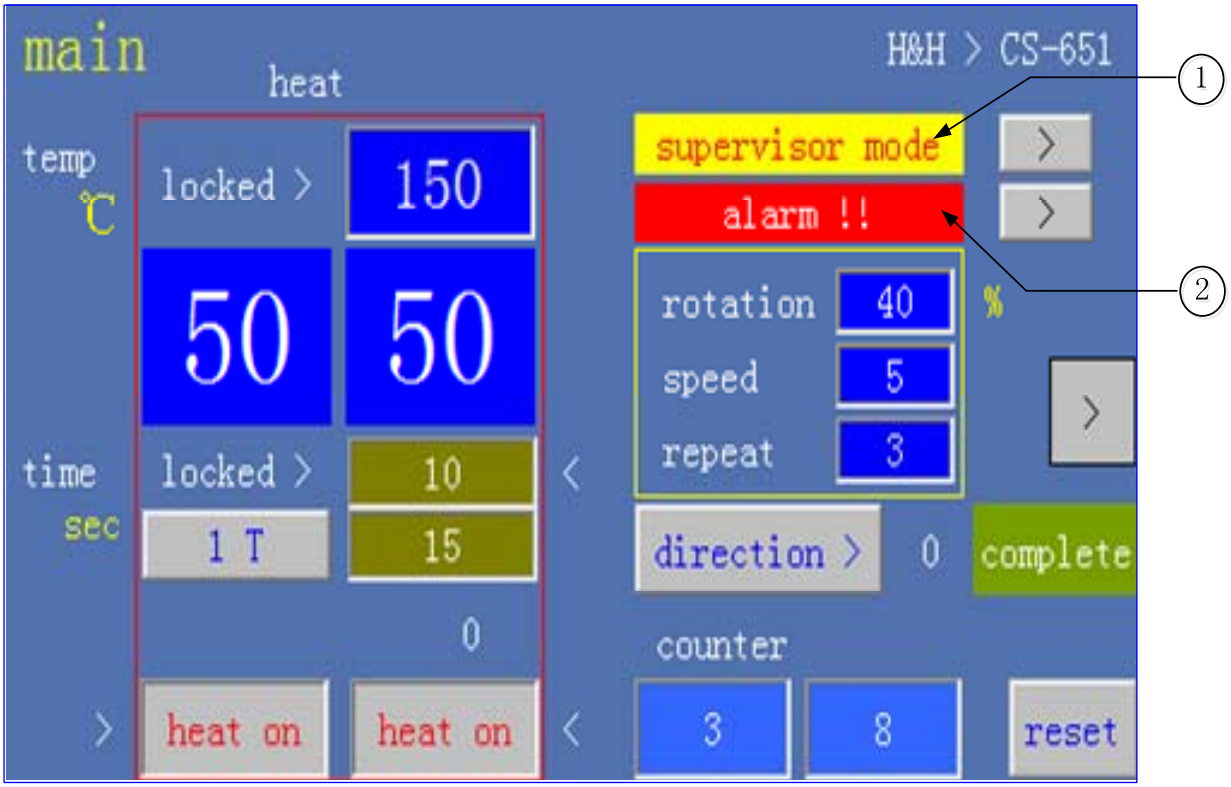


1. heating temperature preset button & display.
2. heating curve online temperature feedback (left side)
3. heating curve online temperature feedback (right side)
4. 1T/2T mode change button
5. heat press time preset button & display (1T mode). There will display white arrow beside the current press time.
6. heating on/off button (when heater is on, the text will turn red and the arrow at left will display).
7. heating on/off button (when heater is on, the text will turn red and the arrow at right will display).
8. press down counter (can be reset by #8 button).
9. times of action cancel or safety bar triggered, cannot reset by operator.

10. reset button (for press down counter #8)
11. switch the direction of rotation of the rollers
12. when complete a press cycle, it will display complete in green color; it will display working in red color when the press cycle haven't finished.
13. next page button.
14. Set the repeate times under a pressure cycle.
15. Speed of the roller.
16. set the rotation angle percentage of the roller.

> **Operation and Controls (cont.)**

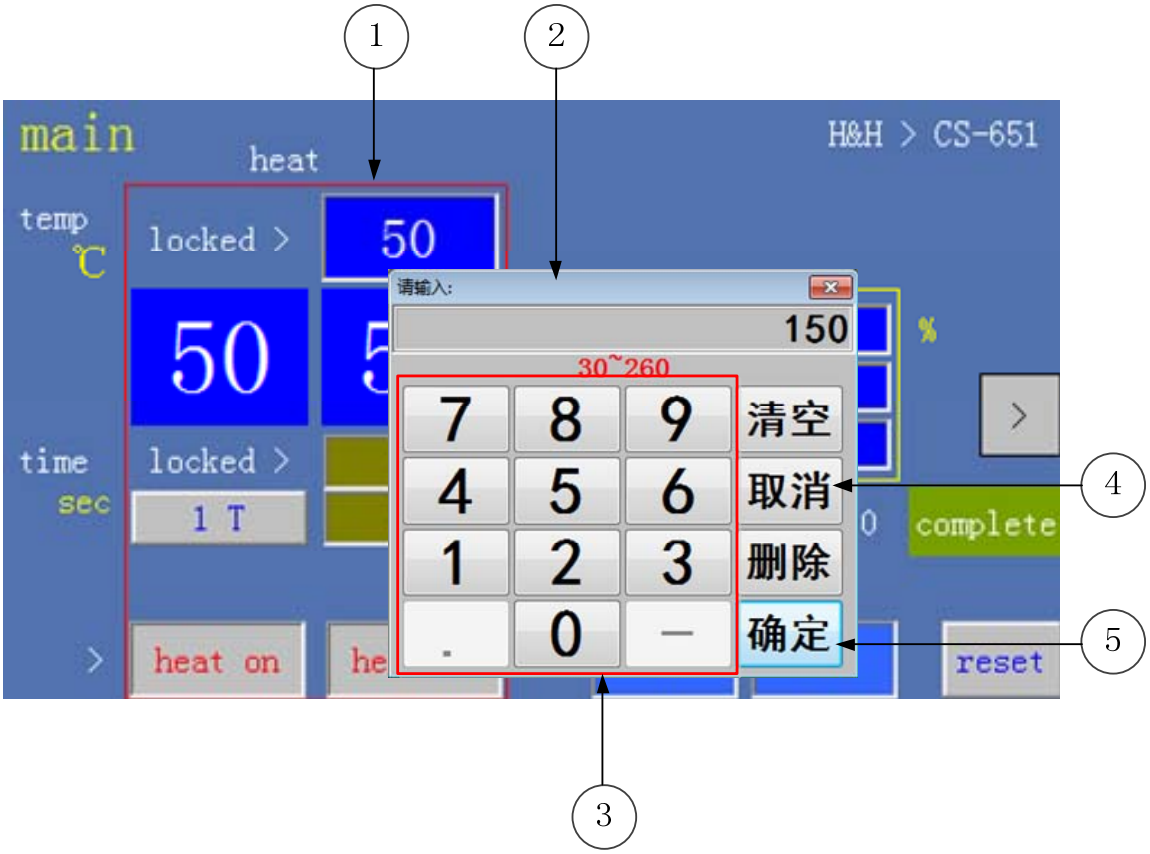
>>**Main page(cont.)**



1. When the control key is turned right, the main page will show up a yellow banner "supervisor mode".
2. An alarm will display when there is/are any fault or beyond the parameter setting range.

>> **Heating Control**

At the main page, you can preset the temperature setting at the panel.



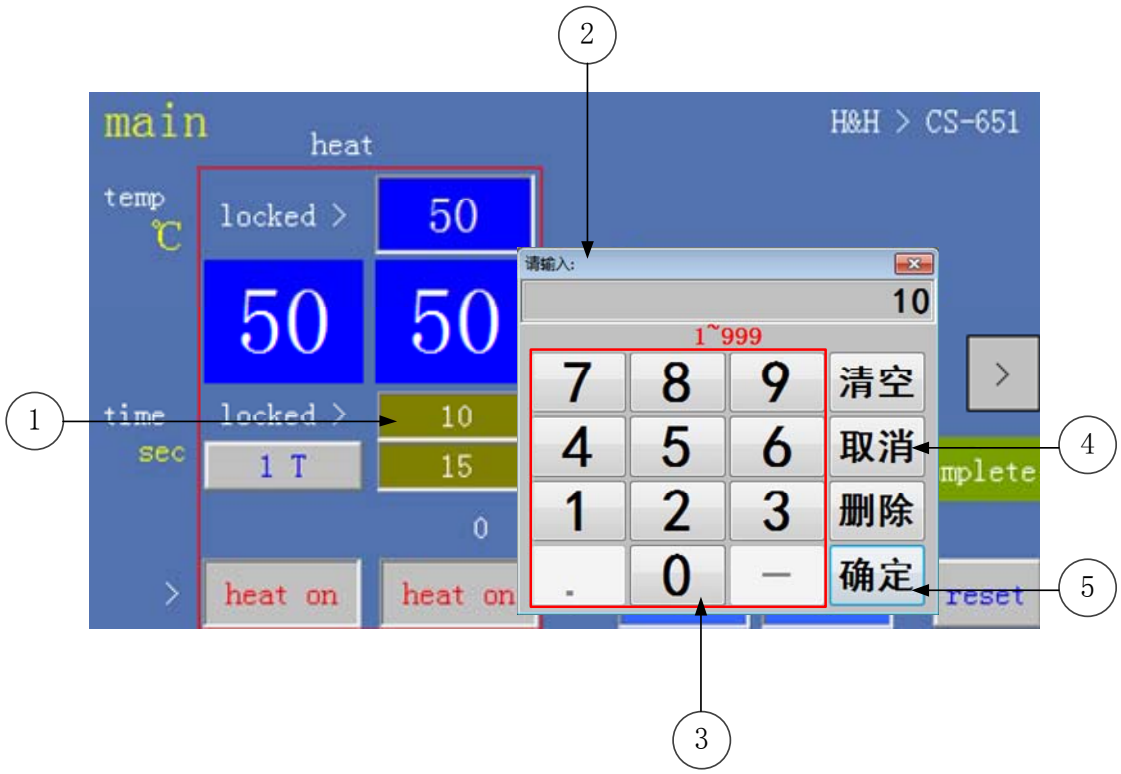
1. heating temperature preset button & display
2. input key pad
3. heating temperature data input
4. cancel
5. input accept

Press button #1 can preset the requesting heating temperature. The key pad #2 for heat temperature setting will pop up. You can enter the heating setting via this interface (input range 30~260 ℃) and confirm with the button #5 “ok” or if the original default setting is satisfied. Press button #4 “cancel” if there is no need to change.

> **Operation and Controls (cont.)**

>> **Heating time span setting**

At the main page, you can set the press time span at the panel.



1. heating press time setting button & display
2. input key pad
3. data input
4. cancel
5. input accept

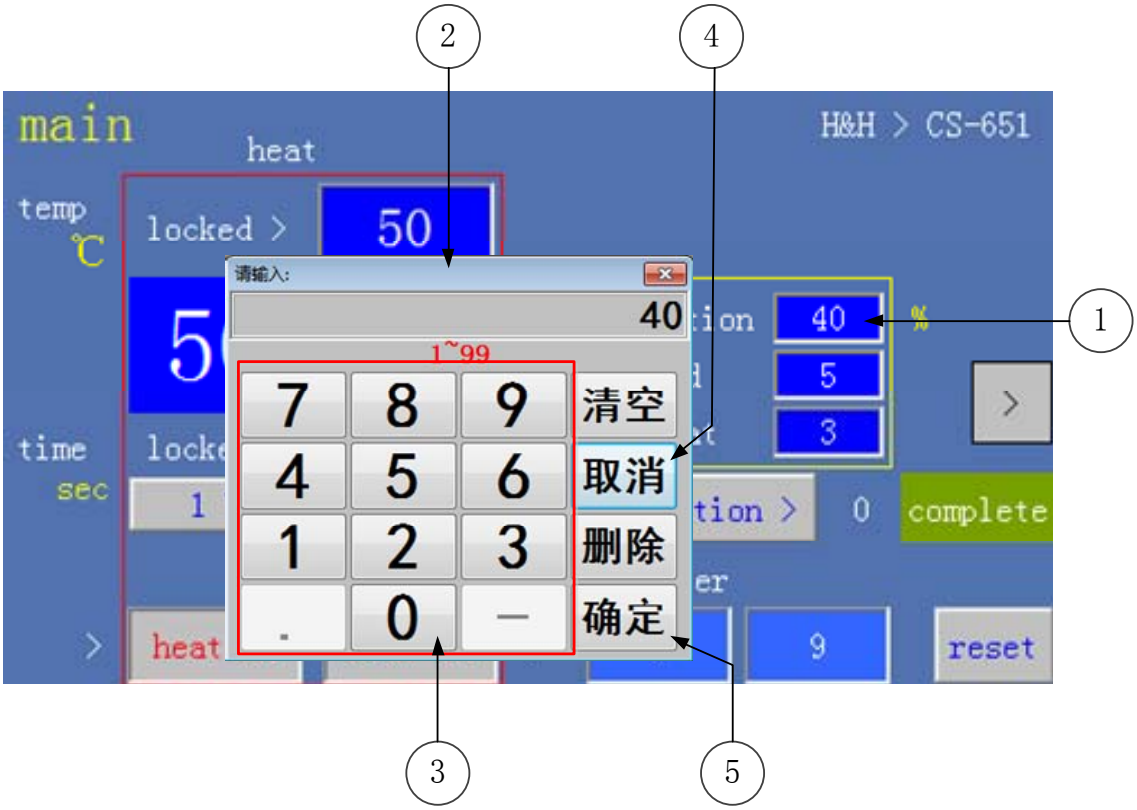
Press button #1 can preset the requesting heating press time. The key pad #2 for heating press time setting will pop up. You can enter the heating press time via this interface (input range 1~999 second) and confirm with the button #5 “ok” or if the original default setting is satisfied. Press button #4 “cancel” if there is no need to change.

Cooling press time can be set similar to heating press time.

> **Operation and Controls (cont.)**

>> **Rotation angle percentage of the roller span setting**

At the main page, you can set the rotation angle percentage of the roller span at the panel



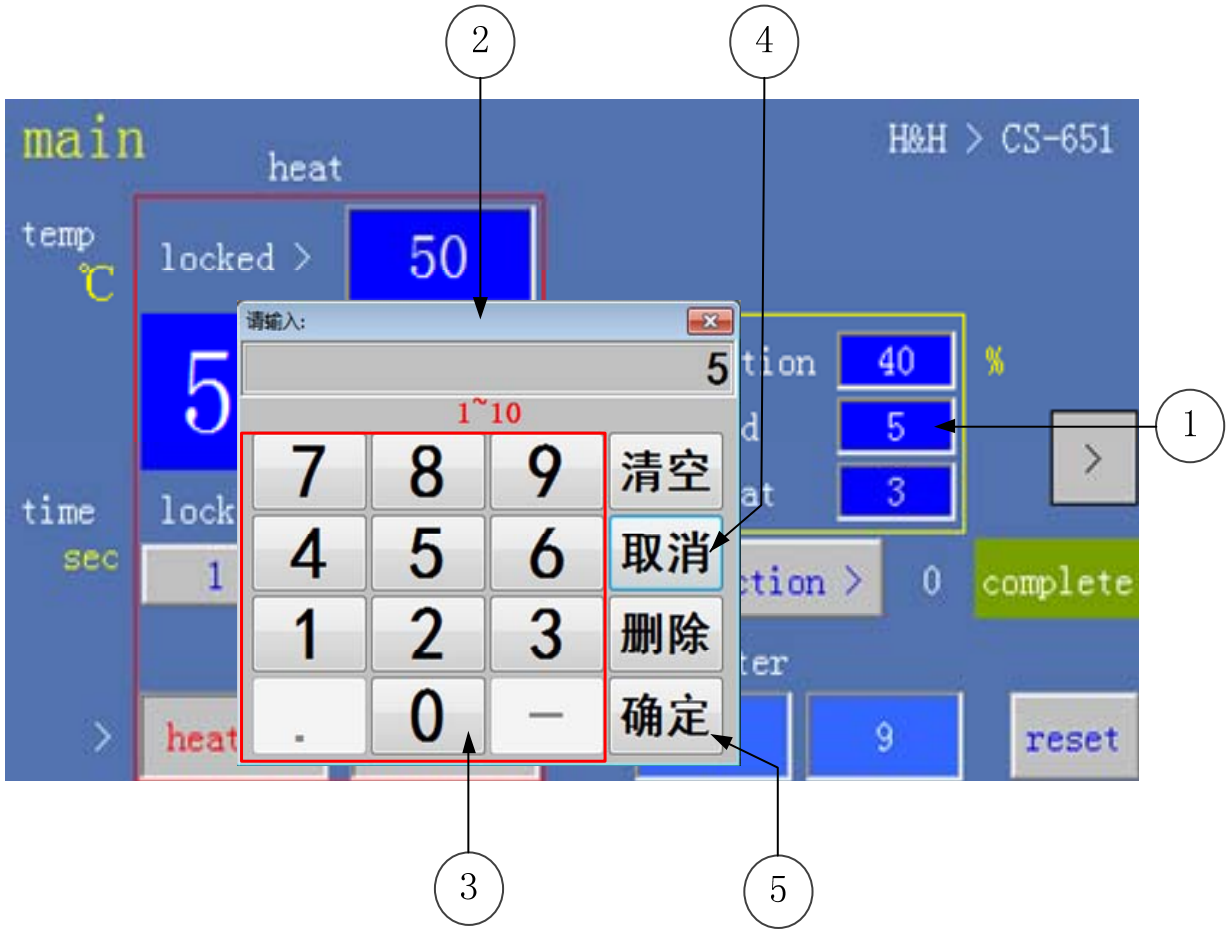
1. rotation angle percentage of the roller setting button & display
2. input key pad
3. data input
4. cancel
5. input accept

Press button #1 can preset the requesting rotation angle percentage of the roller. The key pad #2 for the rotation angle percentage of the roller setting will pop up. You can enter the rotation angle percentage of the roller via this interface (input range 1~99 percent) and confirm with the button #5 “ok” or if the original default setting is satisfied. Press button #4 “cancel” if there is no need to change.
This data means the ratio about the rotation angle with respect to a circle(50 percent means half circle).

> **Operation and Controls (cont.)**

>> **Speed of the roller**

At the main page, you can set the speed of the roller span at the panel.



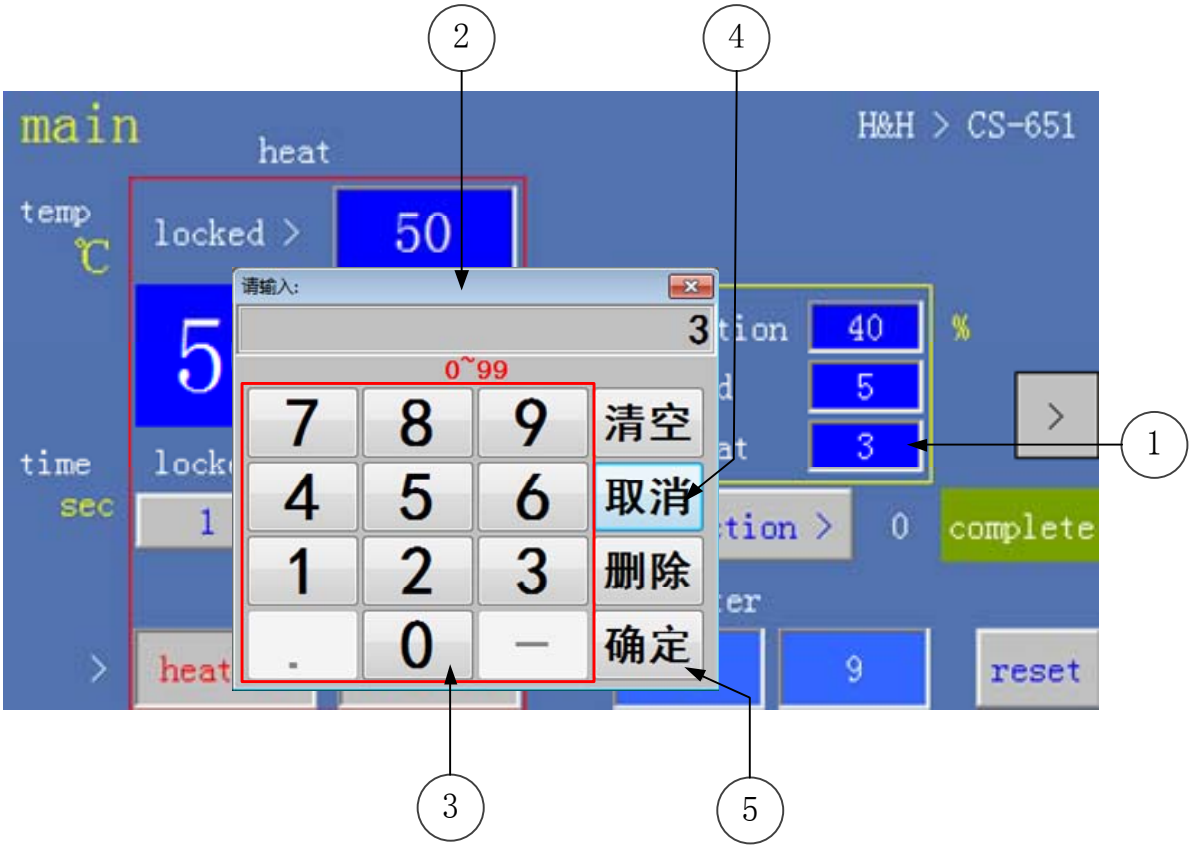
1. speed of the roller setting button & display
2. input key pad
3. data input
4. cancel
5. input accept

Press button #1 can preset the requesting speed of the roller. The key pad #2 for the speed of the roller setting will pop up. You can enter the speed of the roller via this interface (input range 1~10) and confirm with the button #5 “ok” or if the original default setting is satisfied. Press button #4 “cancel” if there is no need to change.

> **Operation and Controls (cont.)**

>> **The repeate times under a pressure cycle**

At the main page, you can set the repeate times under a pressure cycle span at the panel.



1. the repeate times under a pressure cycle setting button & display
2. input key pad
3. data input
4. cancel
5. input accept

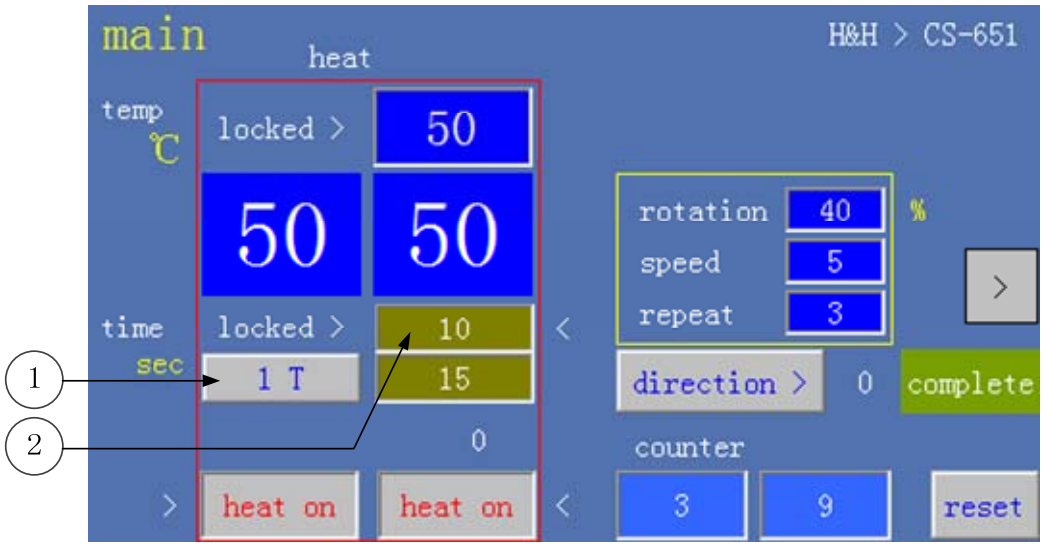
Press button #1 can preset the requesting the repeate times under a pressure cycle. The key pad #2 for the repeate times under a pressure cycle setting will pop up. You can enter the repeate times under a pressure cycle via this interface (input range 1~99) and confirm with the button #5 “ok” or if the original default setting is satisfied. Press button #4 “cancel” if there is no need to change.

> **Operation and Controls (cont.)**

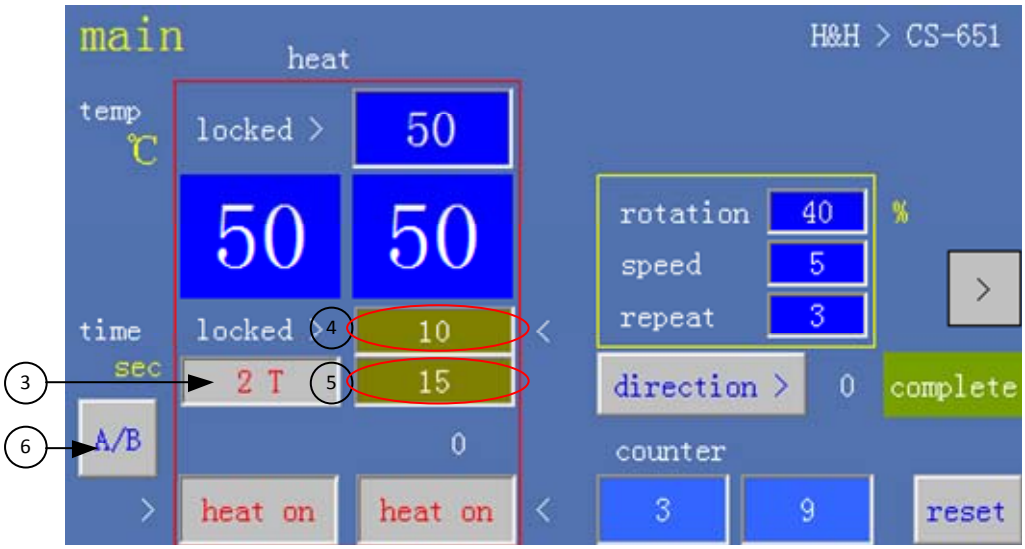
>> **1T/2T mode change**

At the main page, you can change 1T mode and 2T mode.

When the automatic mode on,it can only work in 1T mode and can't change into 2T mode.
1T mode——each pressing time of the heat arc is fixed;
2T mode——in this mode you can set the first and the second pressing time，the heat arc pressing time will change between the setting time.



1T mode. Pressing time is fixed on a set value (#2 button). The roller will rotate refer to the setting angle and direction again and again while the repeat times complete.

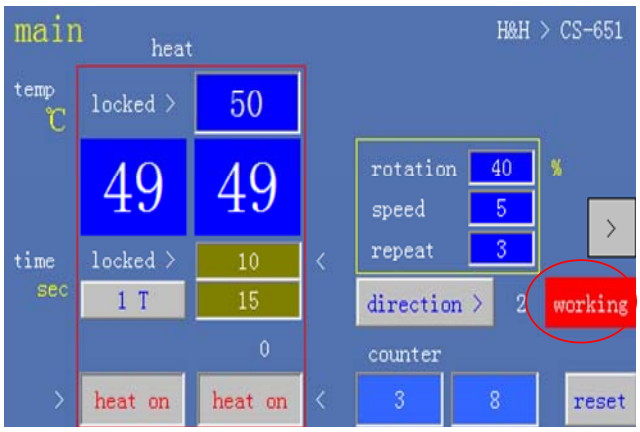


2Tmode. Pressing time is change at two values and the two vlues can be changed individually. #4 button set press time for the first pressing. #5 button set press time for the second pressing. You can also use #6 to change the presstime between #4 and #5. Press two times as a cycle and the counter will add one

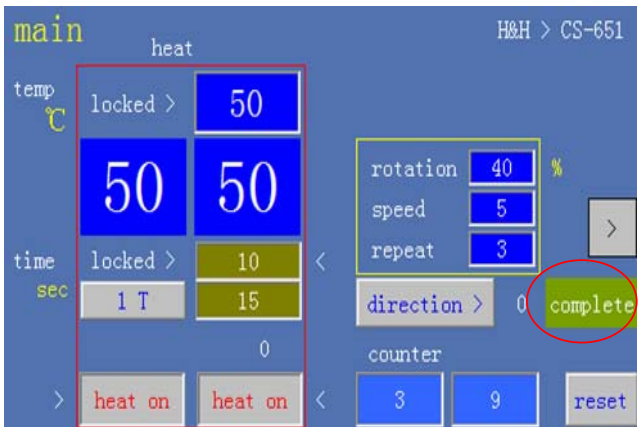
> **Operation and Controls (cont.)**

>> **Running situation display**

Start the press switch,the device press down and work until the repeat times complete,when the repeat times incomplete,the main page will display working ,when the repeat times complete,the main page will display complete.If you press cancle when it work,the system will display complete and the incomplete cycle counter add one.



(a)repeat incomplete

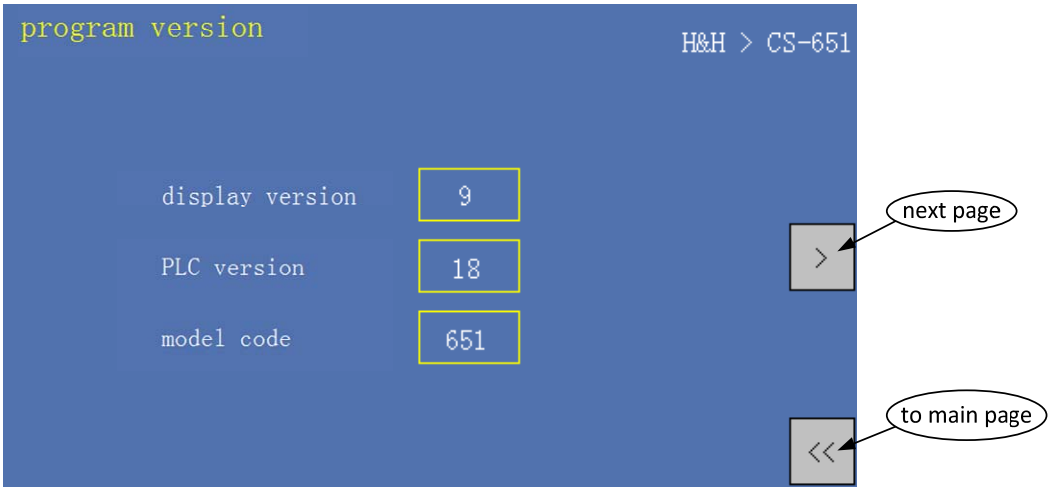


(b)repeat complete

> **Operation and Controls (cont.)**

>> **Program version**

The next page after “main” page is “mode” page.



It is an information page for your reference and we can use these data for future maintenance usage.

>> **Language Selection**

The next page after “program version” page is “language selection” page.

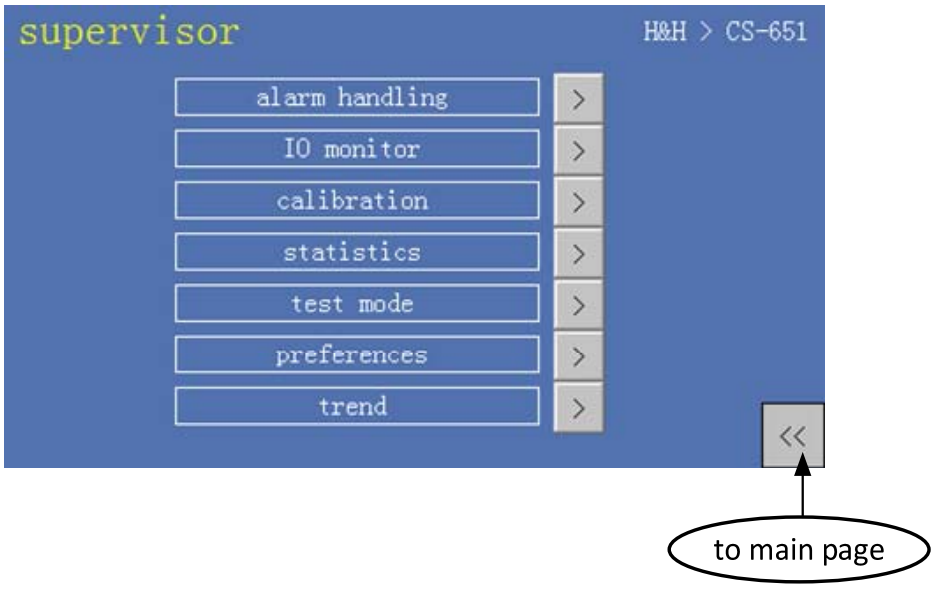
You can change the language between Chinese and English by push the button #1.

There are only three pages (i.e. main, program version and language) when the key is at operator mode control, press the next page will goes back to the “main” page.

> **Operation and Controls (cont.)**

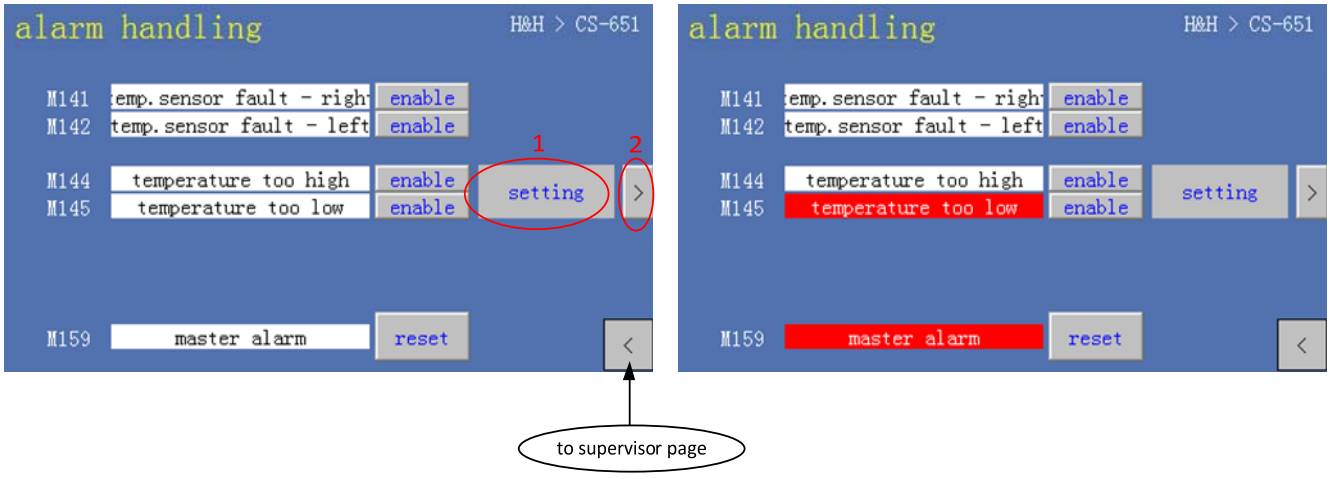
>> **Supervisor Mode Selection**

When the control key is turned right, you are selected the supervisor mode and the main page will show up a yellow banner “supervisor mode”. All the control keys are the same and can be exchange to use for other similar control series of H&H products. When you push the banner, the display will goes to the supervisor page.



>> **Alarm Handling**

When you press the alarm handling arrow at the supervisor page, the “alarm handling” page will show up. Push the “reset” once to clear the previous alarm.
Below left is normal condition alarm page while the right one is showing some alarms.



(a) no alarm state (b) alarm state

1. goes to temperature monitoring setting page

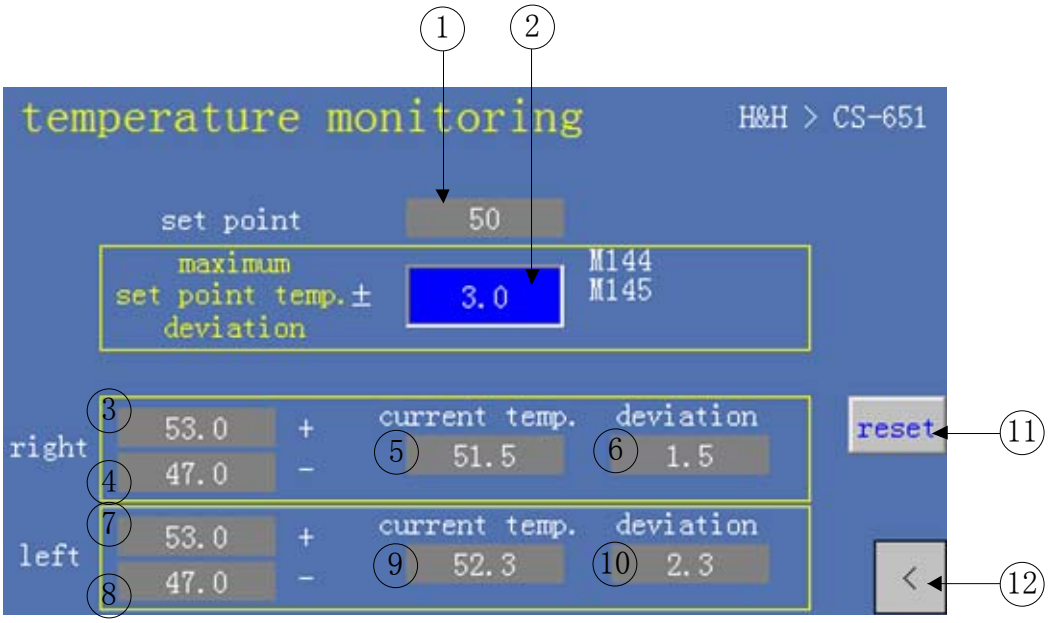
2. goes to pressure monitoring setting page

You can enable or disable on every row of alarm setting at the right hand side of it. You can also reset the master alarm when the selected alarm is disabled or the fault is fixed.

> **Operation and Controls (cont.)**

>> **Temperature Monitoring Setting**

When you press the #1 button at the alarm handling page, the “temperature monitoring setting” page will show up.

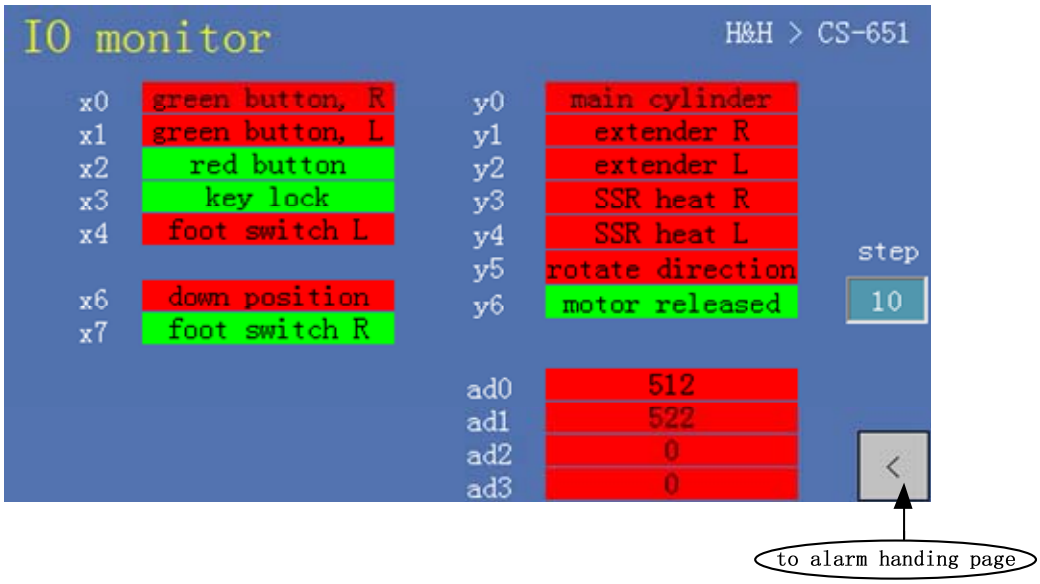


1. set the press temperature
2. set the temperature deviation alarm trigger set point (the range is marked underneath).
3. the right maximum permissible temperatures
4. the right minimum permissible temperatures
5. current temperature of the right heating plate.
6. display the right actual temperature deviation from the set point
7. the left maximum permissible temperatures
8. the left minimum permissible temperatures
9. current temperature of the left heating plate.
10. display the left actual temperature deviation from the set point
11. reset the alarm after the temperature deviation alarm trigger set point is changed.
12. back to alarm handling page.

> **Operation and Controls (cont.)**

>> **IO Monitor**

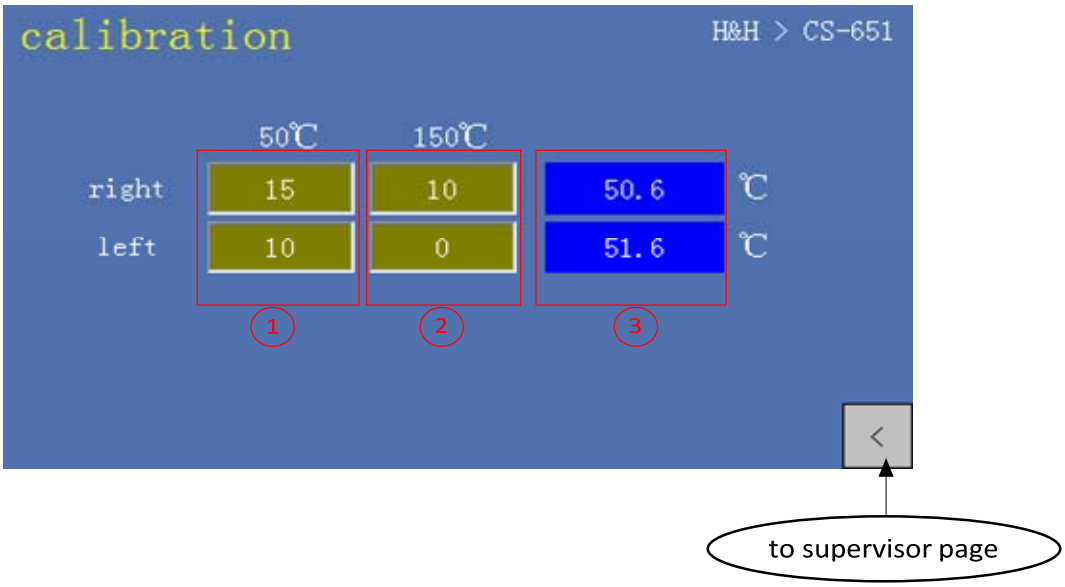
When you press the IO monitor arrow at the supervisor page, the “IO monitor” page will show up.



You can observe which limit switch is/are triggered in green, otherwise it will on red colour. The step means the progress of the program is going.

>> **Calibration**

When you press the calibration arrow at the supervisor page, the “calibration” page will show up.
Right、left is respective to the right、left heat arc.
The temperature correction should be carried out continuously and simultaneously at room temperature (about 50℃) and at 150℃.



1. set the room temperature (range -100 to 100)
2. set the calibrating curve offset setting number (range -50 to 50)
3. the number in this row will change when the #1 or #2 is changed

*For easier precise input, numbers appear here are using 0.1 as the basis unit, input 15=1.5 degree celsius (i.e. -15 at #1 is -1.5 degree celsius).

The method to regulate temperature:

First regulate each heat arc's temperature when 50℃:

At the main page,set the heating temperature on 50℃,then turn the status on "heat on" and wait for the temperature fluctuate on 50℃.

Set the heat press time(999 seconds),then control the heat arc press down.

Wait for the temperature display around 50℃,then turn the key right to open the "supervisor mode" and switch to the calibration page.

Prepare a thermometer,press the red button to cancle the press action.Then set the thermometer on the pressing position and control the heat arc press down again.

Wait for the temperature stead and record the temperature from the thermometer and the touch screen control panel.

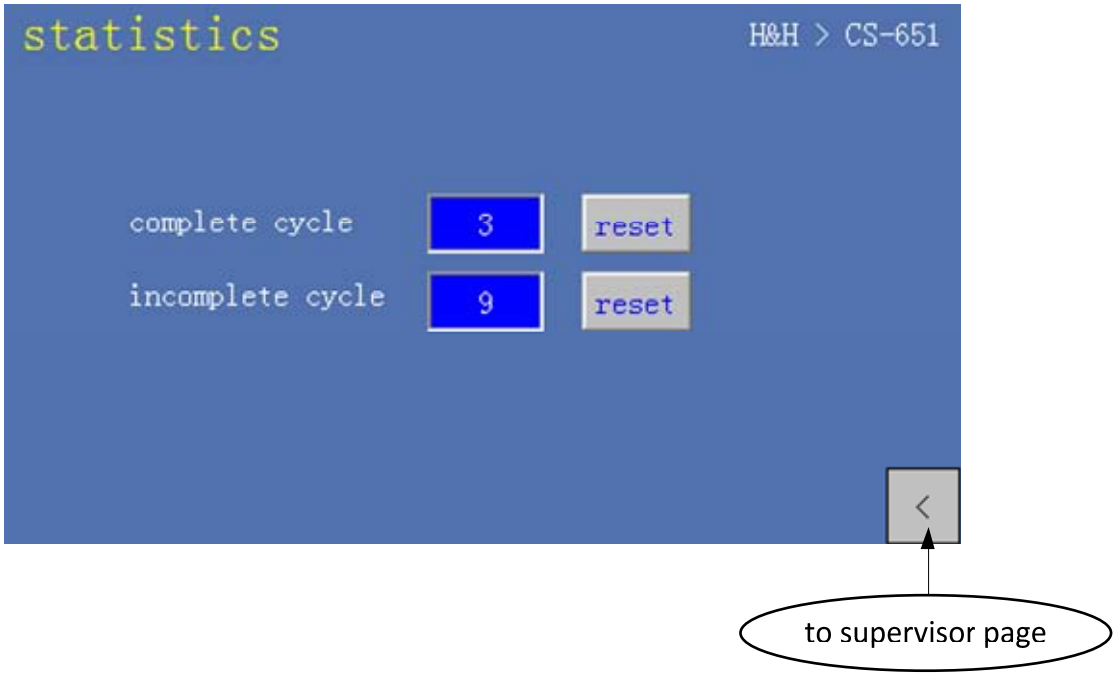
Compare these two temperature to determine the calibration value is positive or negative.then input the number using 0.1 as the basis unit.

It's similar to regulate the temperature when 150℃.

> **Operation and Controls (cont.)**

>> **Statistics**

When you press the statistics arrow at the supervisor page, the “statistics” page will show up.

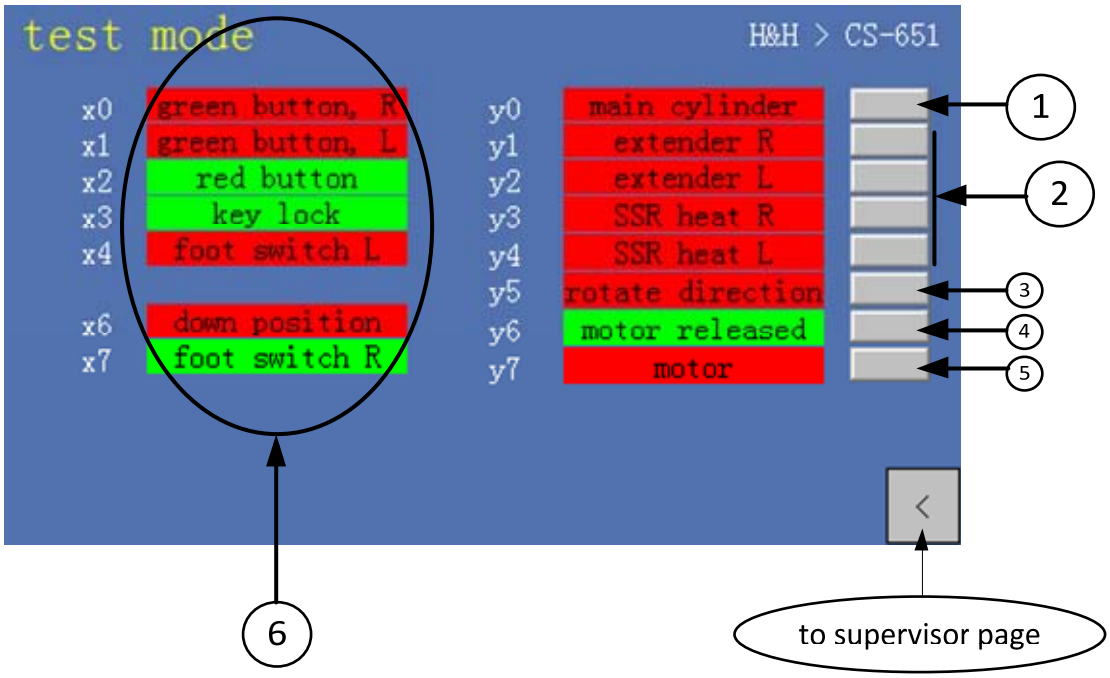


It will show the information of the complete press cycle and incomplete cycle times (triggered by cancel button or safety bar). You can reset both the cycle with the respective reset button. It can prevent the operator from illegally to break the immature cycle for increase the production rate.

> **Operation and Controls (cont.)**

>> **Test mode**

When you press the test mode arrow at the supervisor page, the “test mode” page will show up.

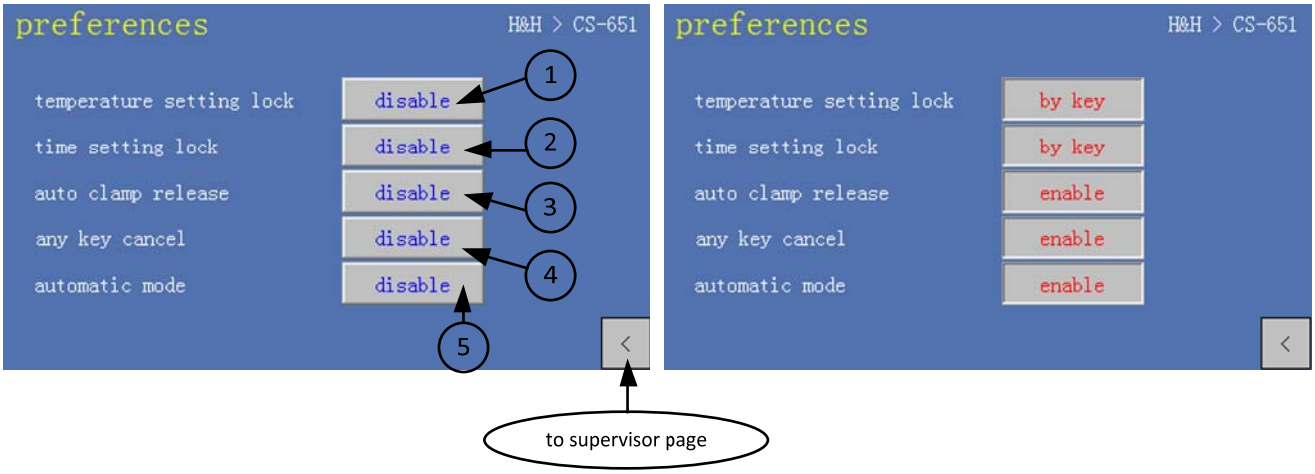


1. press to activate the heating plate
2. press to activate the heat arc and the extenders
3. press to change the ratate direction
4. press to lock the motor press to lock the motor
5. press to start the roller
6. feedback of the respective parts (triggered in green while others in red).

> **Operation and Controls (cont.)**

>> **Preferences**

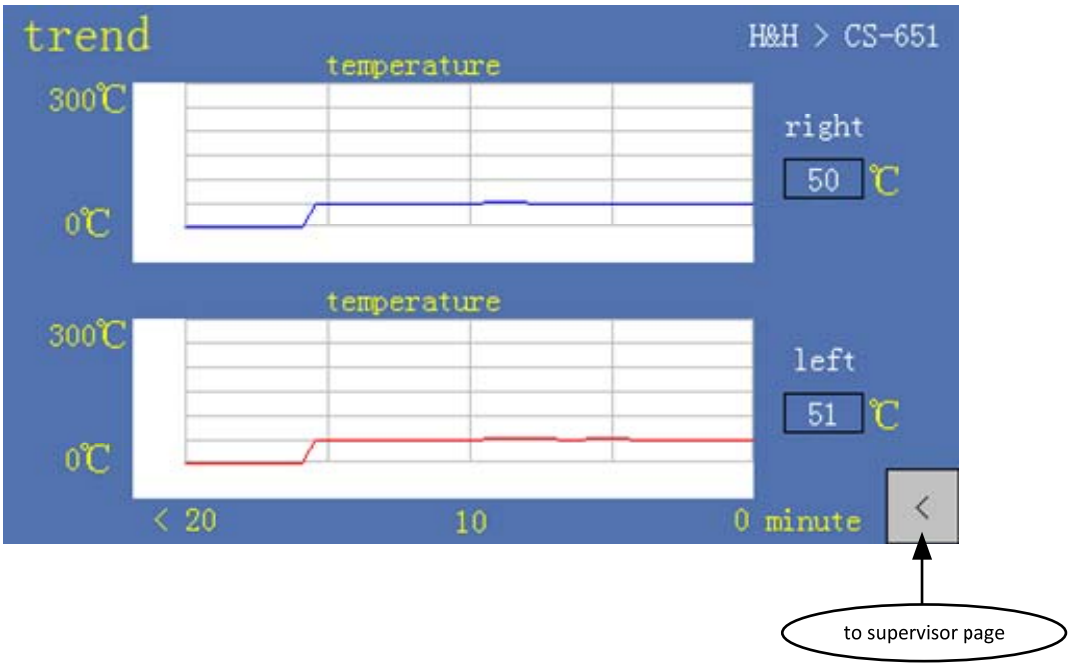
When you press the preferences arrow at the supervisor page, the “preferences” page will show up.



1. press to select the temperature setting lock “off” or “by key”
2. press to select the press time setting lock “off” or “by key”
3. press to select the auto clamp release lock “off” or “enable”
4. press to select the any key cancel function lock “off” or “enable”.If this function enable,after the heat arc press down,it will cancle its action when you press any key.
5. press to select the automatic mode lock “off” or “enable”.If this mode enable,the machine will work on 1T mode,or it can change 1T mode and 2T mode.

>> **Trend**

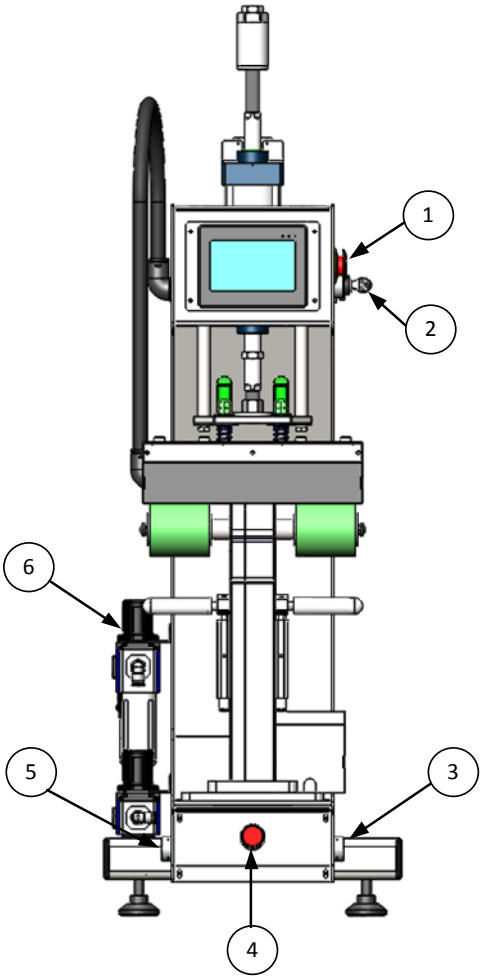
When you press the trend arrow at the supervisor page, the “trend” page will show up.



You can check the trend of the working area pressure and temperature in the recent 20 minutes

> **Operation and Controls (cont.)**

>> **Manual Control Console**



1. emergency stop button
2. operator/supervisor control key switch (turn right for supervisor mode)
3. start button right(in pair)
4. stop/cancel button
5. start button left
6. inlet pressure regulating valve

Remark: start button #3 pair need to press simultaneously, otherwise it will not function.

>> **Press Pressure Adjustment**

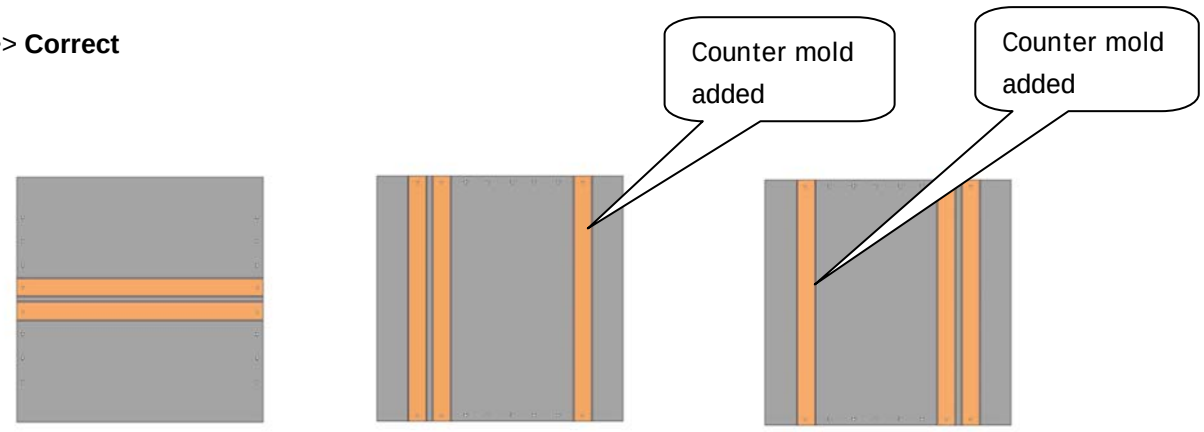
A. Turning the knob on the compress air filter regulator to adjust the press pressure.

> **Precaution when Using Mold**

Some application require a special mold as fixture to position the object correctly, examples are zipper mold or pocket mold. It is essential that the center of mold is position directly under the center of the press, or otherwise the downward pressing force from the main cylinder may induce a rotating force to the rotating head. This may cause damages to the press head and the cylinder and may also affect the overlook of the product due to uneven pressure. In case the mold is required to position off center, a counter balance mold of the same height is necessary to correct the force of the press.

The following illustrations (top view) demonstrate the correct and incorrect method of using mold.

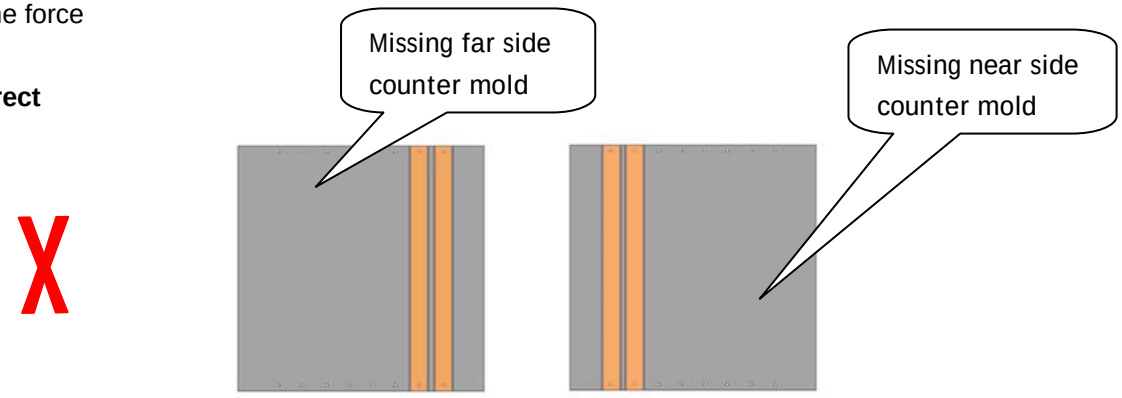
>> **Correct**



（1） （2） （3）

1. Zipper mold is positioned at the center of the working table.
2. Zipper mold is positioned off centered, a counter mold is added at the right hand side of the working table.
3. Zipper mold is positioned off centered, a count mold is added at the left hand side to balance the force

>> **Incorrect**



（1） （2）

1. Missing left hand side counter mold
2. Missing right hand side counter mold

> Cleaning and Maintenance

>> Cleaning the Thermo Plates

During operation, excess glue or residue may deposit on the surface of the lower silicone rubber and/or the top heat plates. This may deteriorate the outlook of the final product in the coming cycle and cleaning is necessary. To carry out this operation, we suggest you to use a dry piece of towel to wipe off the surface of the heat plate. There is no particular schedule for this type of cleaning, do it whenever required.

>> Daily Maintenance

- Operate the machine a few cycles before use, pay attention to any unusual noise. This may indicate a problem.

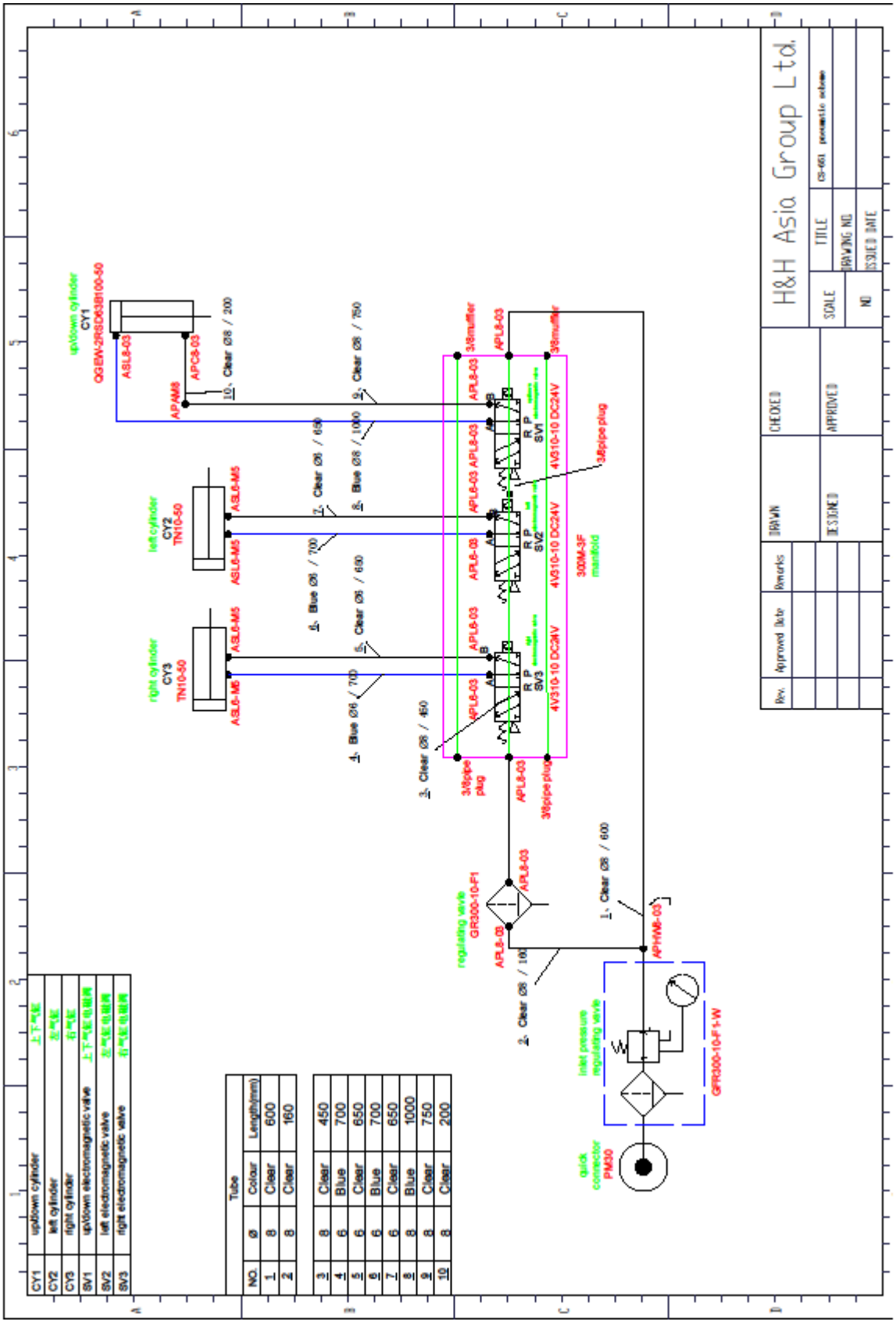
>> Monthly Maintenance

- Check the main press side guide rods for smoothness, apply lubrication if needed.
- Inspect the Teflon paper from wear and tear on the heat press, as this may affect the outlook of the finished product. Replace with a new one if necessary.

> **Trouble Shooting**

Problem	Cause	Solution
Display not light up Whole machine not working	Power supply not connected	Plug in a suitable power supply
	Power plug not secure	Try to plug in socket again
	Overloaded or tripped of circuit breaker	Check the problem and reset breakers
Heat plate not heating up	Heater not enabled	Press the heat button once
	Preset temperature lower than room temperature	Change preset temperature above room temperature
Excess noise and vibration during operation	Floor is not level or wheels are not locked	Reposition machine to a level and solid floor

> Appendix A . Pneumatic Scheme



> Appendix B . Wiring Scheme