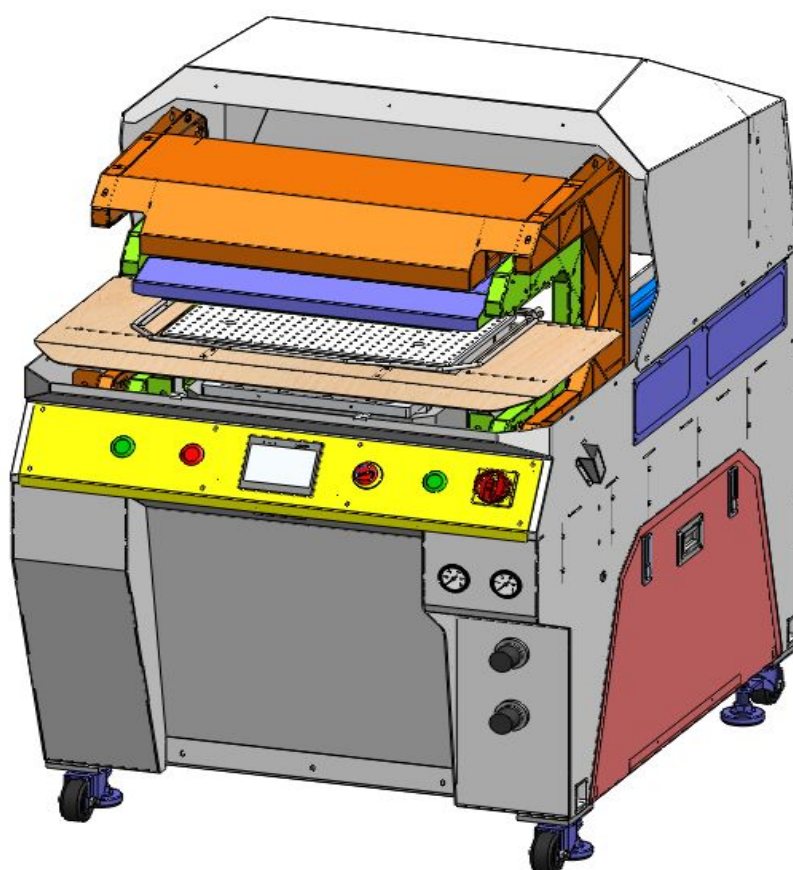


*CS-017 Pneumatic Flat Cool + Heat Press Machine*

Operation Manual



is powered by

H&H Asia Group Limited

## Table of Contents

Precautions with regard to Safety

Name Plate

Introduction

Specification

Features

Component Names

Front View

Back View

Left Side View

Right Side View

Control Console

Preparation for Installation

Operation and Controls

Touch Screen Control

Heating Control

Heating Time Span Setting

Cooling Control

Cooling Time Span Setting

Operation Tips

Function Release Key

Work Personality Selection

Signal Feedback Monitoring

Manual & Auto Testing

Heat Temperature Calibration

Setting the Chiller

Pressure Adjustment

## Table of Contents (cont.)

Precaution when Using Mold

Cleaning and Maintenance

Cleaning the Thermo Plate

Daily Maintenance

Monthly Maintenance

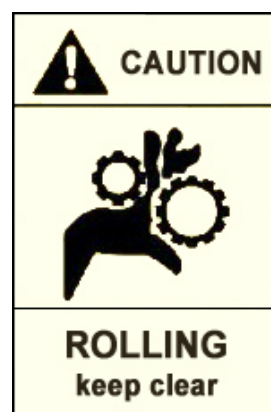
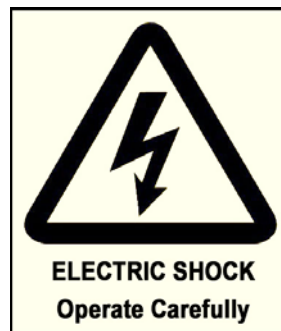
Trouble Shooting

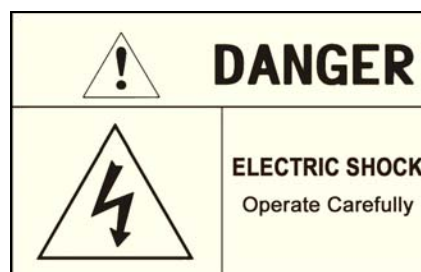
Appendix A      Pneumatic Scheme

Appendix B      Wiring Scheme

> 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

<b>Model : CS-017</b>				
<b>Pneumatic Flat Cool + Heat Press Machine</b>				
<b>Voltage</b>	<b>Frequency</b>	<b>Power</b>	<b>Compressed Air</b>	<b>Weight</b>
220 V	50/60 Hz	4000 W	>0.4 Mpa	410 Kg
<b>Date :</b>			<b>S/N :</b>	

**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](http://www.hh.com.hk)  
MADE IN CHINA

**CE**

## > Introduction

Thank you for your choosing of CS-017 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-017
Voltage	:	220 V, single phase
Frequency	:	50/60 Hz
Power	:	4000 W max, 3500 W typical
Compressed Air	:	>0.4 Mpa
Overall Dimensions	:	943mm(L) x 1294mm(W) x 1341mm(H)
Overall Weight	:	410 kg

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

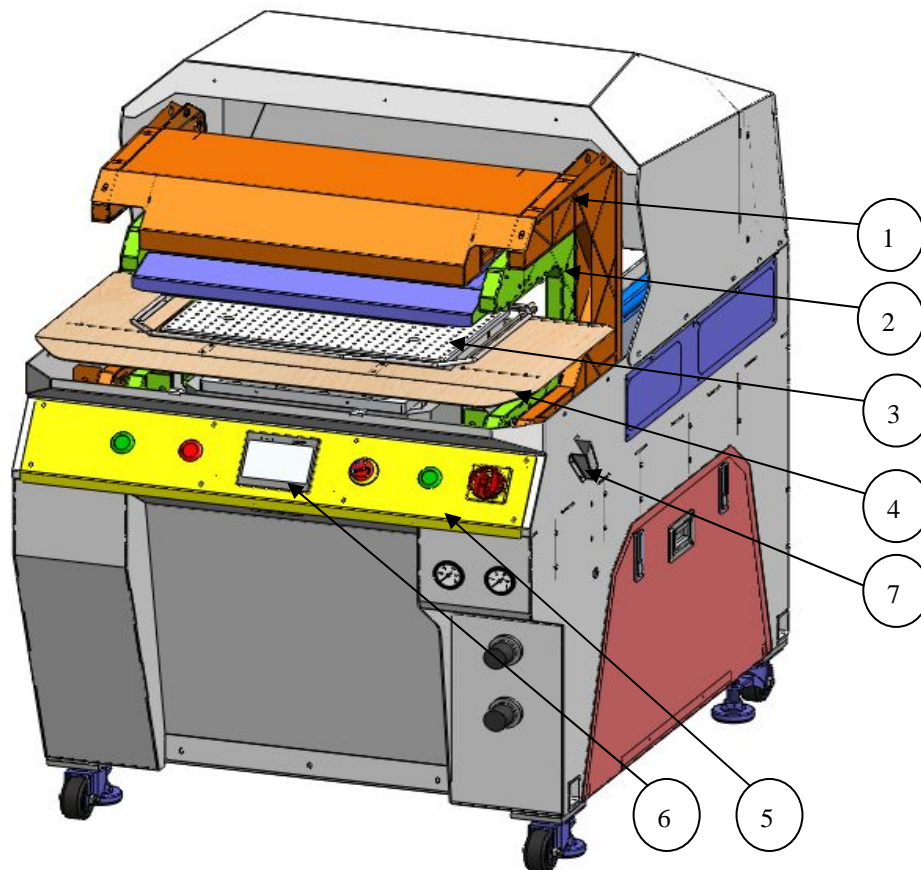


## > Features

- 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.
- Individual heat and cool temperature control.
- Memory system - temperature settings are stored even after the power is turn off.
- Cooling system - original Hitachi compressor (subject to change without prior notice).

> Component Names

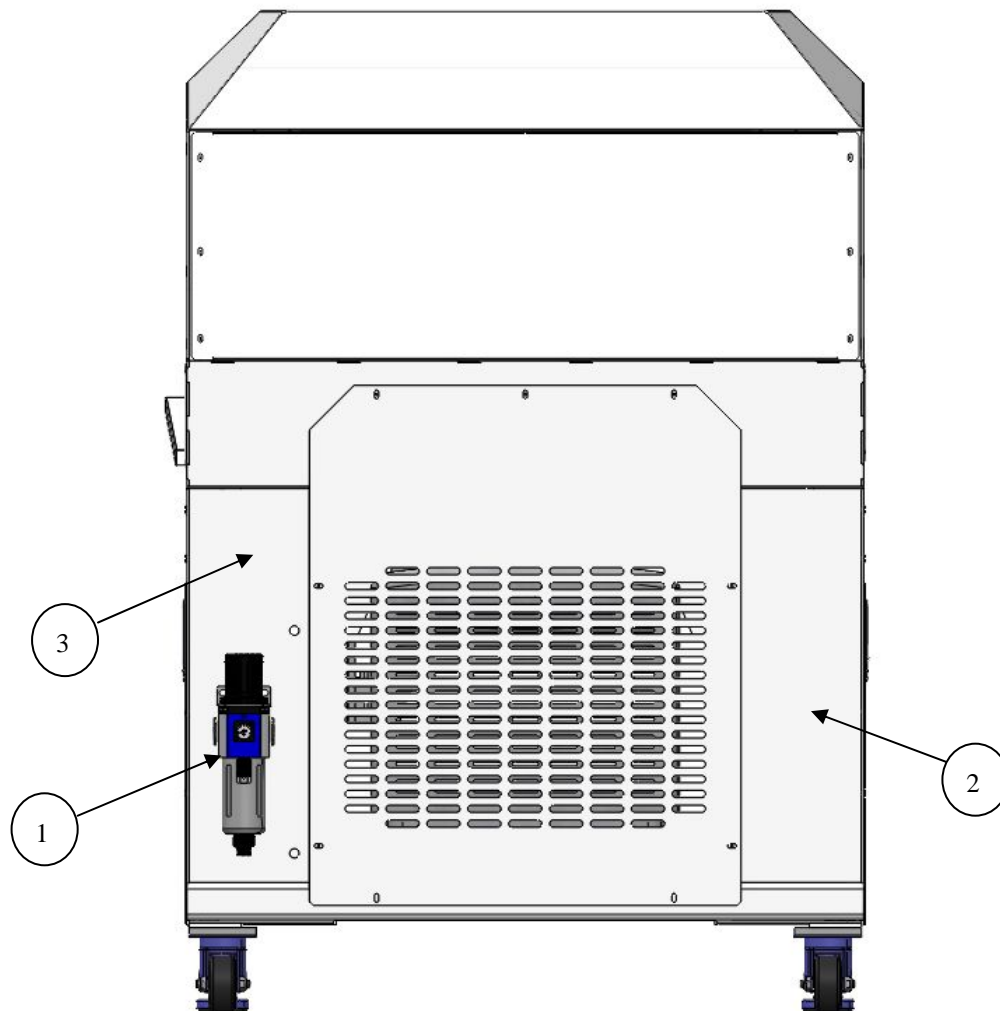
>> Front View



1. heating plate frame
  2. cooling plate frame
  3. flipping lid plate
  4. up/down working table (platform)
  5. control console
  6. touch screen control panel
  7. air purge gun holder
- For safety protection, the machine will not function when the Flipping Lid Plate #3 is in open state and a red alarm will flashing on the middle upper position of the touch screen panel with the word "lid open!!" shown at the main page.

> Component Names (cont.)

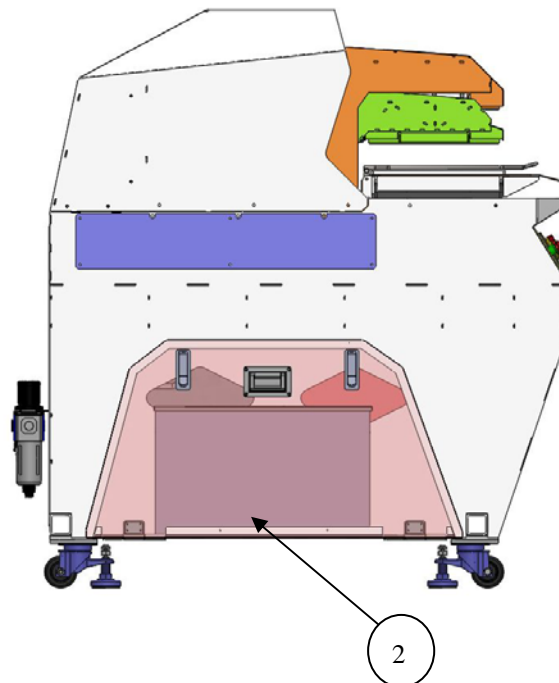
>> Back View



1. main air pressure supply connector and regulator
2. water tank enshrined inside
3. main electrical solenoid chamber

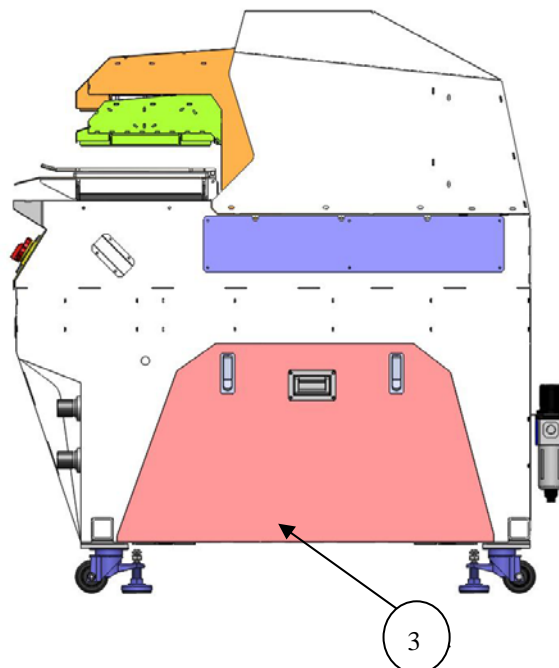
> Component Names (cont.)

>> Left Side View



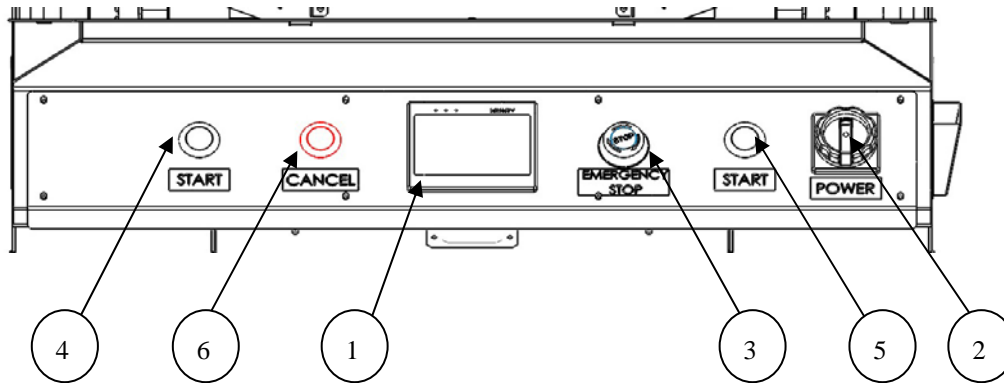
2. water tank enshrined inside

>> Right Side View



3. main electrical solenoid chamber

## > Control Console



1. touch screen control panel
2. main power switch
3. emergency stop button
4. start command button (left), working with button #5 together
5. start command button (right), working with button #4 together
6. operation cancel button

**> Preparation for Installation**

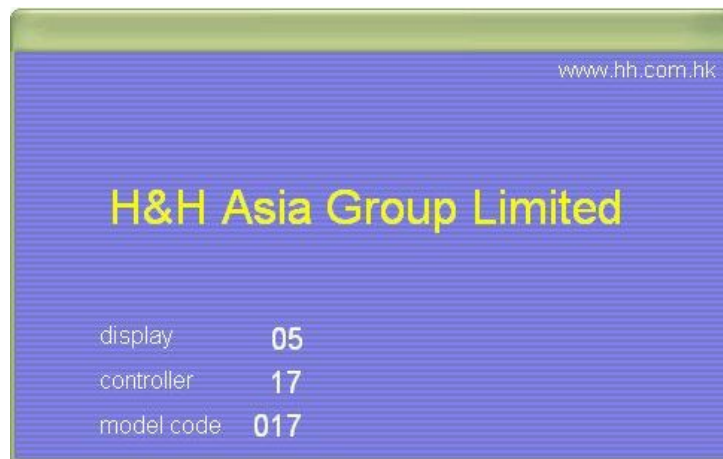
Installation must be carried out by authorized personnel. Please act according to the following steps :

1. Remove the package of the machine and placed it on the ground level, cleaning the machine before operation. Position the machine and allow at least 50cm clearance on both sides as well as the back side. This is essential to achieve an efficient heat dissipation of the chiller. It also allow rooms to carry out necessary service and maintenance
2. Lock all 4 wheels by stepping on the metal flap, this will prevent the machine from shifting during operation.
3. Open the side panel on the left hand side (facing to the machine) and pull out the water tank. Fill the tank to about 70% full with clean water. Ensure there is no water leakage on all connectors and circulation lines after the power is on.
4. Unleashing all packing cables which tie to the machine and allow it from free movement.
5. 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 and cool press will retract back to home position while the work platform will keep still at the low position.
6. Connect the power cord with a 220V, 16A power supply.
7. Turn on the main power switch of the machine and release the emergency stop button by pull it out a notch.
8. The touch screen panel will on and showing the welcome note and then it will turn to a model information page. After a while, it will change to show the main control page.

> Operation and Controls

>> Touch Screen Control

The page after the welcome note of the panel will show the intro page which will state clear about the machine manufacturer and model relevant information.

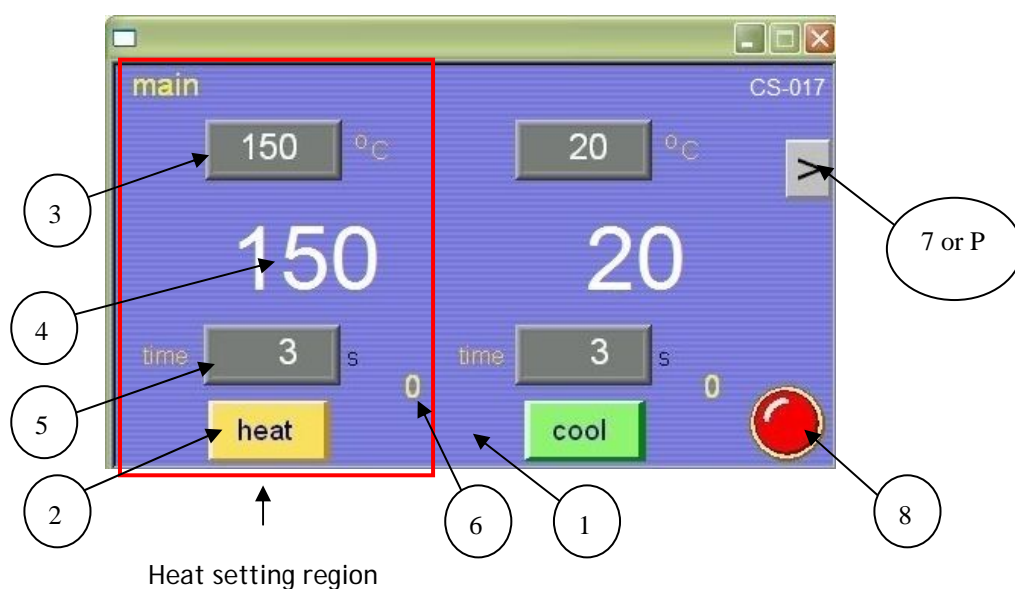


## > Operation and Controls (cont.)

This machine is versatile and can perform with different operation process. They can work with heating plate only, cooling plate only and heating plus cooling working together in alternative interval. While it is performing with heating plus cooling process, the sequence will be heating plate come first and the cooling plate function follow in tandem. The control of the heating and cooling are separated, so it makes the control more user friendly. Both heating and cooling control are framed in the same touch panel.

### >> Heating Control

The second page of the panel is named "main" means it is the main control of the machine.



1. touch screen control panel
2. heating activate button & process condition indicator
3. heating temperature preset button
4. heating plate online temperature feedback
5. heating temperature time span preset button
6. real time heating duration count down
7. next page button ( also called P)
8. function release button



> Operation and Controls (cont.)

>> Heating Control (cont.)



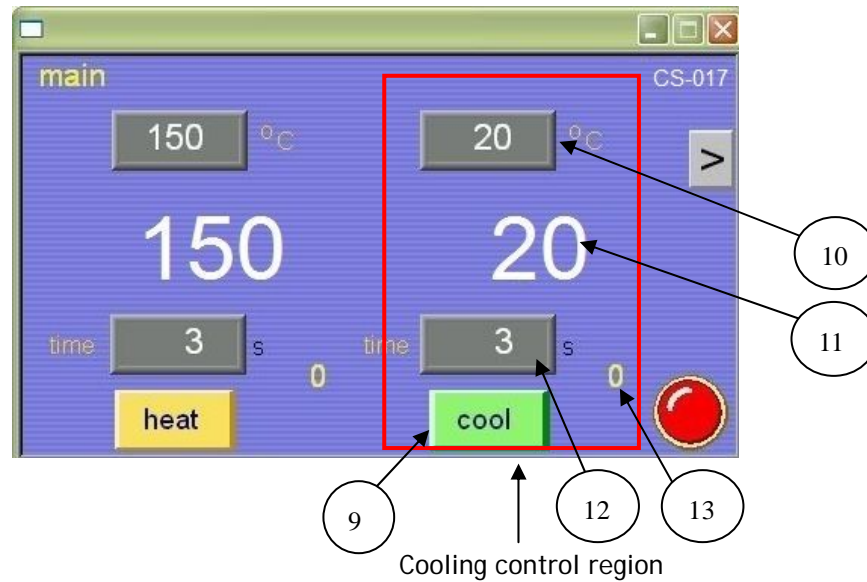
Press button #2 can activate the on/off function of the heating plate. The word "heat" will turn from blue to red and will keep flashing when the required temperature is not reached. Once the value is reached, it will turn to rigid red. Press button #2 again will turn off the heating process and the word "heat" will turn from red to blue. Press button #3 the key input display for heat temperature setting will pop up. You can enter the heating setting via this interface and confirm with the button ENT or if the original default setting is satisfied you can press ENT to confirm the current setting value. Press ESC if there is no need to change. For error input, you can press the CLR to cancel the input value and re-enter the required value

>> Heating time span setting

Press button #4 the key input display will pop up. You can enter the heating time span setting via this interface and confirm with the button ENT or if the original default setting is satisfied you can press ENT to confirm the current setting value. Press ESC if there is no need to change. For error input, you can press the CLR to cancel the input value and re-enter the required value.

> Operation and Controls (cont.)

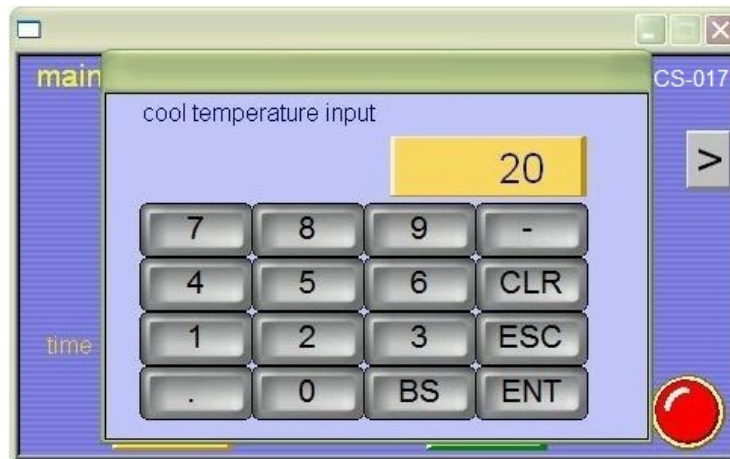
## &gt;&gt; Cooling Control



- 9. cooling activate button & process condition indicator
- 10. cooling temperature preset button
- 11. cooling plate online temperature feedback
- 12. cooling temperature time span preset button
- 13. real time cooling span count down

## > Operation and Controls (cont.)

### >> Cooling Control (cont.)



Press button #9 can activate the on/off function of the cooling plate. The word "cool" will turn from blue to red and will keep flashing when the required temperature is not reached. Once the value is reached, it will turn to rigid red. Press button #9 again will turn off the refrigeration process and the word "cool" will turn from red to blue. Please note, if the water level in the tank is too low, the water pump will be interlocked and not initial the work while button #9 will keep in blue with no response until the water level is back to normal. Press button #10 the key input display for refrigeration temperature setting will pop up. You can enter the cooling setting via this interface and confirm with the button ENT or if the original default setting is satisfied you can press ENT to confirm the current setting value. Press ESC if there is no need to change. For error input, you can press the CLR to cancel the input value and re-enter the required value

### >> Cooling time span setting

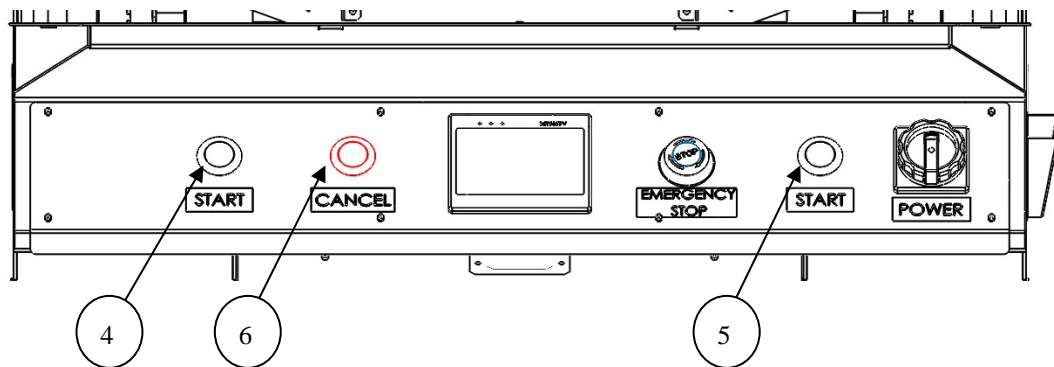
Press button #12 the key input display will pop up. You can enter the cooling time span setting via this interface and confirm with the button ENT or if the original default setting is satisfied you can press ENT to confirm the current setting value. Press ESC if there is no need to change. For error input, you can press the CLR to cancel the input value and re-enter the required value.

## > Operation and Controls (cont.)

### >> Operation Tips

Prompt:

It is very convenient by using a pedal located at the front end and under the machine to control the vacuum pump in order to holding the work piece in place and provide the ventilation through it.



After set up the heating parameters, refrigerating parameters, and suction function, you can start to use this machine by pressing the green start buttons #4 & #5 on the operation panel simultaneously. The machine will enter the operation state.

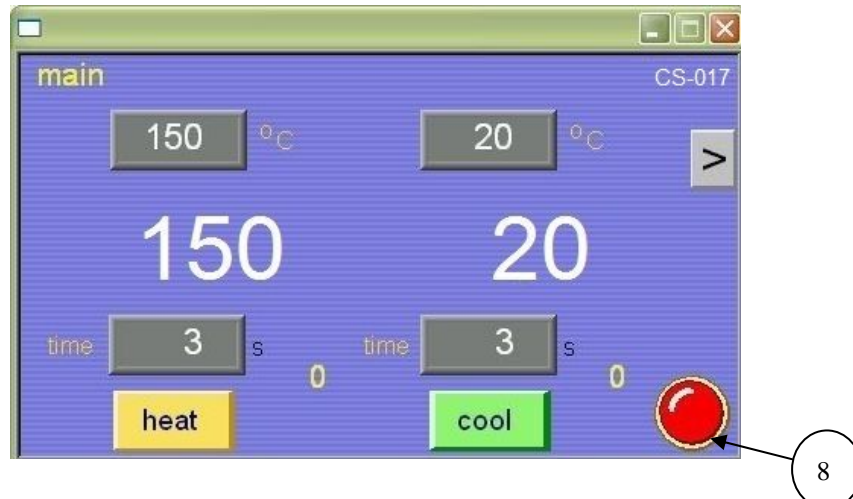
The green start buttons #4 & #5 need to press for at least 2 seconds to lock into the working sequence.

You can't release either hand until the machine is locked on the operation, otherwise, it will cancel the current action and retract back to home position.

In any circumstances, press the red cancel button #6 on the control console, the machine will terminates the current action instantly and the relevant working elements will return to the home position.

> Operation and Controls (cont.)

## &gt;&gt; Function Release Key

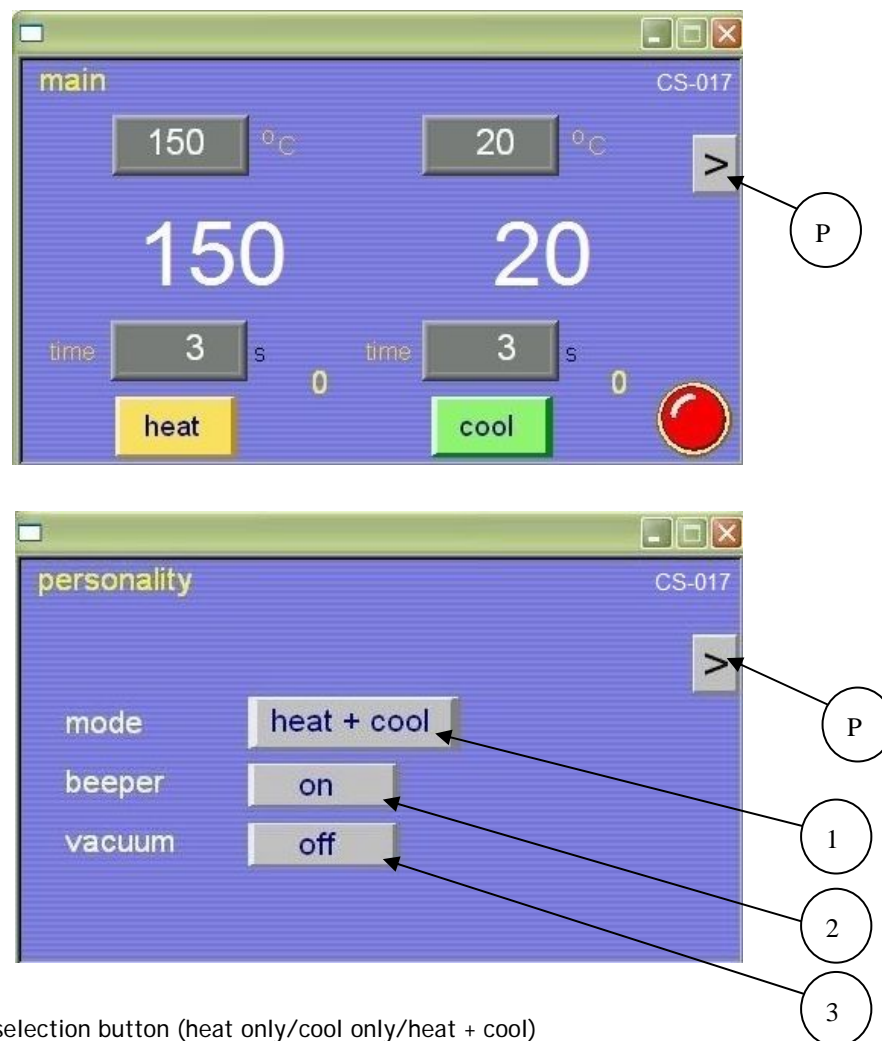


At any time, pressing the button #8 will relieve all of the incomplete work. The relevant working elements will return to the home position and waiting for the re-start command.

> Operation and Controls (cont.)

>> **Work Personality Selection**

Press button #P will go to the next page of the touch screen, named "personality", and it is for the selection of which working process you are needed.



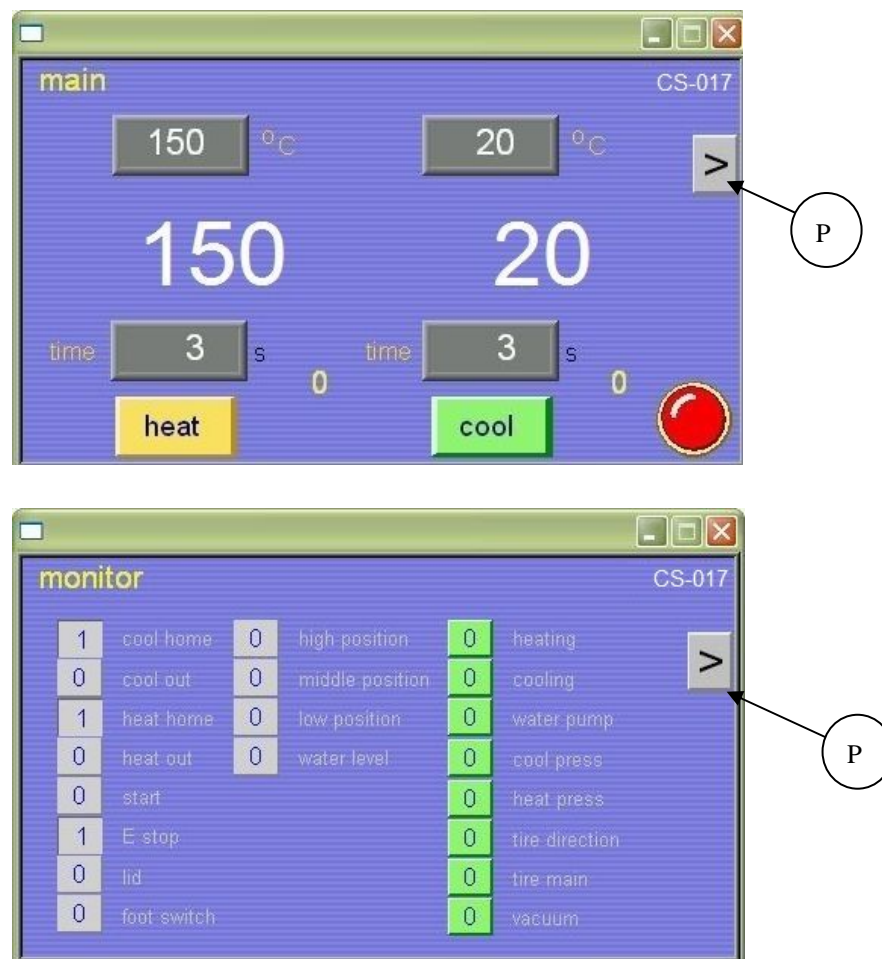
1. mode selection button (heat only/cool only/heat + cool)
2. beeper On/Off button
3. vacuum pump enable On/Off button

Press the next page button #P again will go to the next another page named "monitor"

> Operation and Controls (cont.)

>> Signal Feedback Monitoring

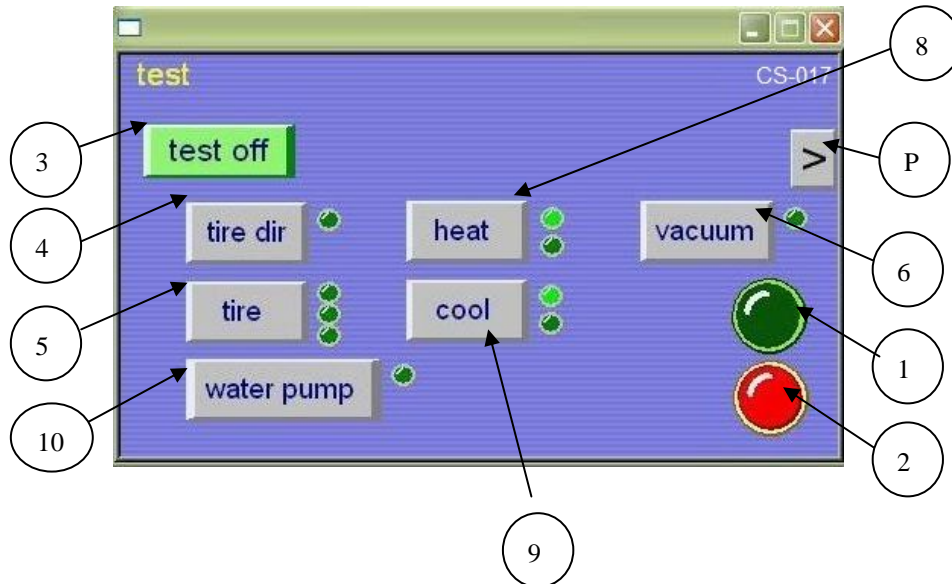
Press button #P will go to the next page of the touch screen, named "monitor", and it is listed all the feedback information of the sensors.



Press the next page button #P again will go to the next another page named "test".

> Operation and Controls (cont.)

## &gt;&gt; Manual Testing



This page is for maintenance usages.

1. manual test function enable On/ Off button
2. function disable button
3. individual manual test enable On/Off button
4. air bag tire heat/cool air path selection button
5. air bag tire up/down control with position indicators (high/middle/low)
6. vacuum pump start/stop button with indicator
7. next page button (also called P)
8. heating plate movement control with position indicators (home/far end)
9. cooling Plate movement control with position indicators (home/far end)
10. water pump initial button

- Remark: Please be aware the Button #5, #6, #8, #9 & #10 holding for enable and retract for disable of the relevant function when in manual "test on" condition while it will not response when in "test off" mode.

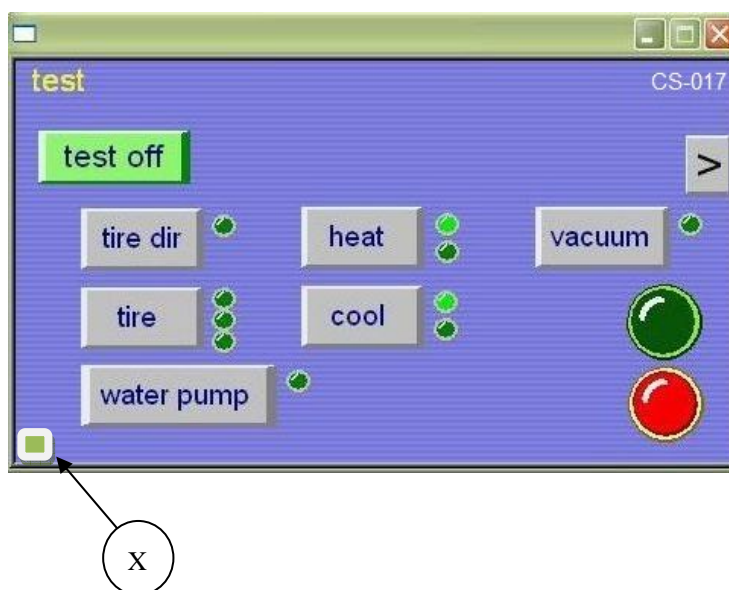


> Operation and Controls (cont.)

>> Manual Testing (cont.)

Press button #P again will go back to the “main” page of the touch screen or press #X to “auto testing” page.

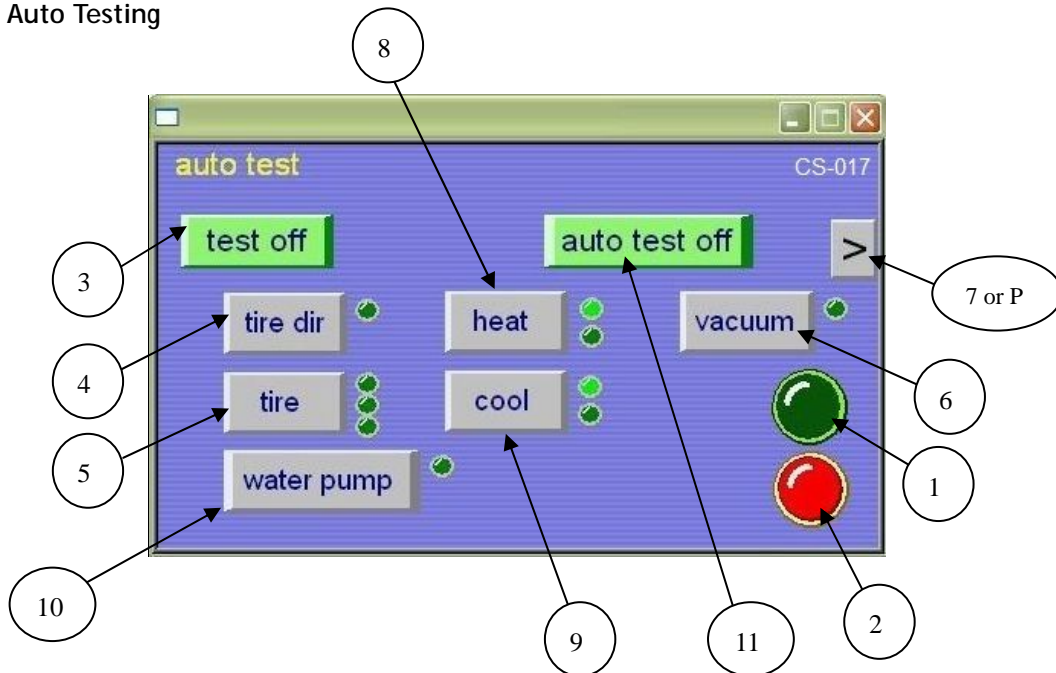
There is a secret touch point button #X to go to the “auto testing” page at the left-below corner of this page.



After touching # X at the manual testing page for about 6 seconds, the “auto testing” page will pop up.

> Operation and Controls (cont.)

## &gt;&gt; Auto Testing



This page is for maintenance usages.

1. test function enable button
2. test function disable button
3. individual manual test enable On/Off button
4. air bag tire heat/cool air path selection button
5. air bag tire up/down control with position indicators (high/middle/low)
6. vacuum pump start/stop button with indicator
7. next page button (also called P)
8. heating plate movement control with position indicators (home/far end)
9. cooling plate movement control with position indicators (home/far end)
10. water pump initial button
11. auto test function enable On/Off button (will go through non-stop working cycles when On)

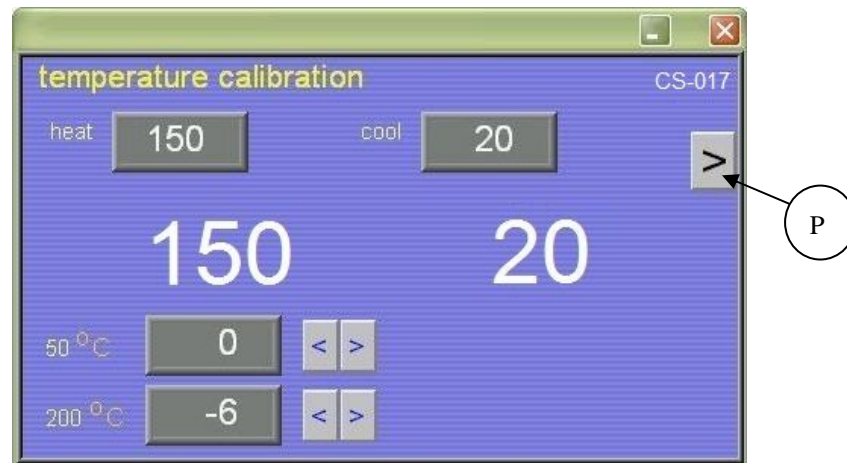
Remark: When auto test function is enabled on, it will go through non-stop heating and cooling working cycles until the button #2 is touched for stop.

Please be aware the Button #5, #6, #8, #9 & #10 holding for enable and retract for disable of the relevant function when in manual "test on" condition while it will not response when in "test off" mode.

Press button #P again will go to the "temperature calibration" page.

> Operation and Controls (cont.)

>> Heat Temperature Calibration



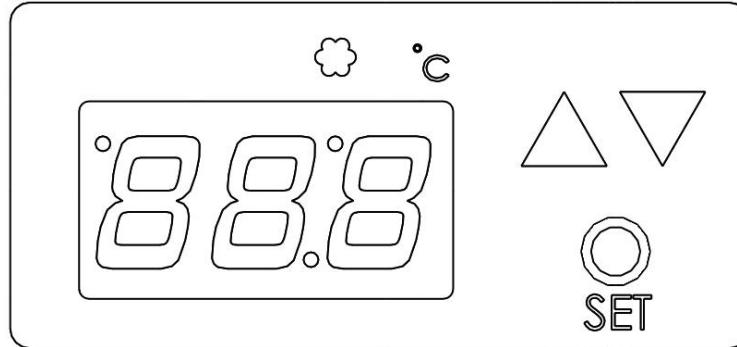
We have using two points as the benchmark calibration base for heating. On this diagram shown , it is represented that at 50°C the temperature is no deviation while it is at 200°C, the temperature feedback is too high and needs to offset it with minus 6°C.

Since the temperature range for cooling is not very wide, we do not consider the calibration for it.

Press button #P again will go back to the "main" page of the touch screen.



> Operation and Controls (cont.)

>> Setting the Chiller



The display at the chiller unit

The **SET** button is used to switch between preset and the real temperature feedback at the display. When the setting LED is off, it will show the water temperature at the water tank. When it is flashing, it is showing the preset temperature.

When press and hold the **SET** button for 3 seconds, the main display will start to flash and the preset temperature is indicated. This means the controller is ready to accept change to the preset temperature. Press  to increase the preset temperature or press  to decrease the preset temperature. The acceptable range is 4-28 °C, however, we recommend 15 °C to be the typical default setting.

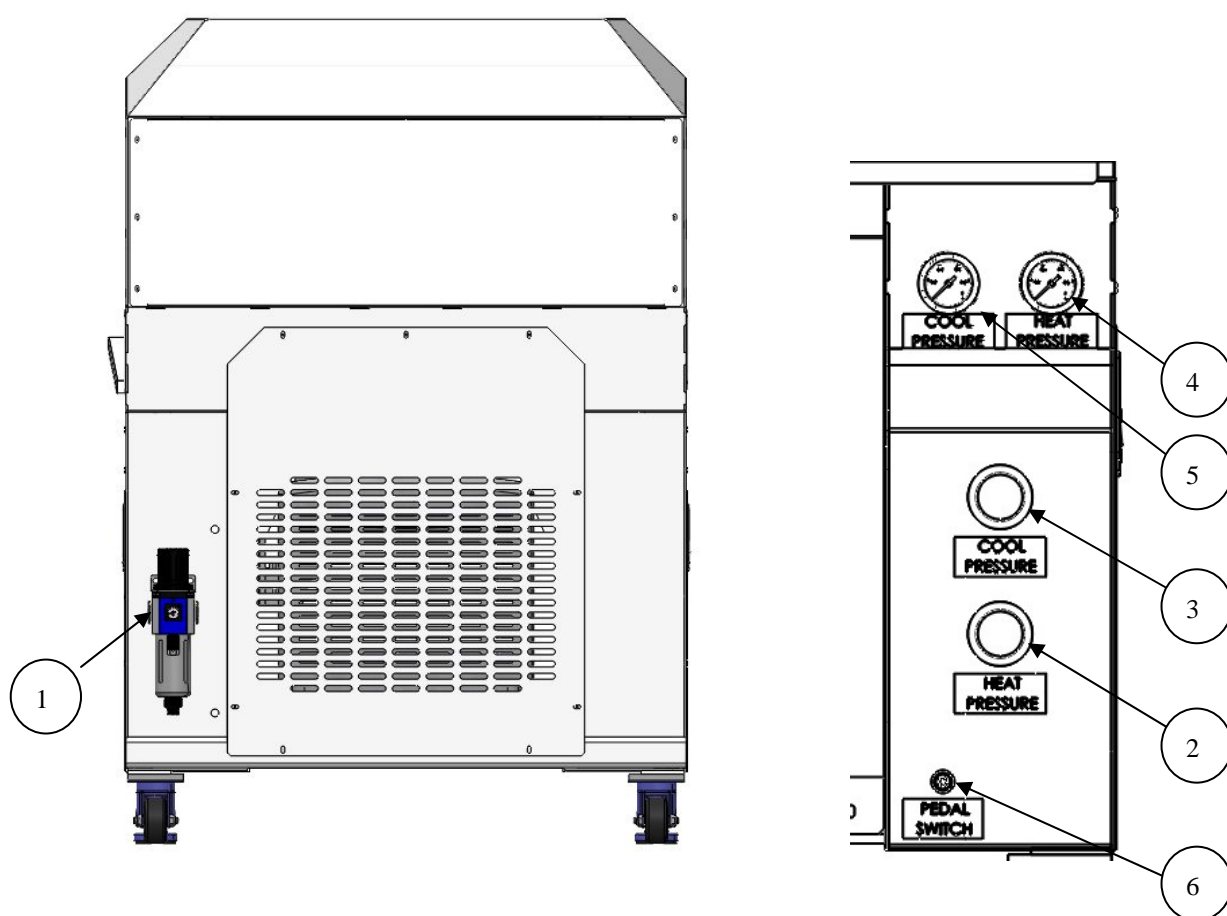
When you have finished the temperature setting, press **SET** again or wait for 8 seconds to direct the controller back to real temperature display mode.

## > Operation and Controls (cont.)

### >> Pressure Adjustment

In order to allow smooth operation of the press, it is essential to adjust proper pressure of individual cylinders. This press allows separate pressure adjustment for heat and cool cycle.

To adjust corresponding pressure, pull out the adjusting knob by one notch, turn the knob clockwise or anti-clockwise to increase or decrease the needed pressure accordingly. After you have finished the tuning of the pressure, lock up the air regulator by push in one notch of the adjusting knob.



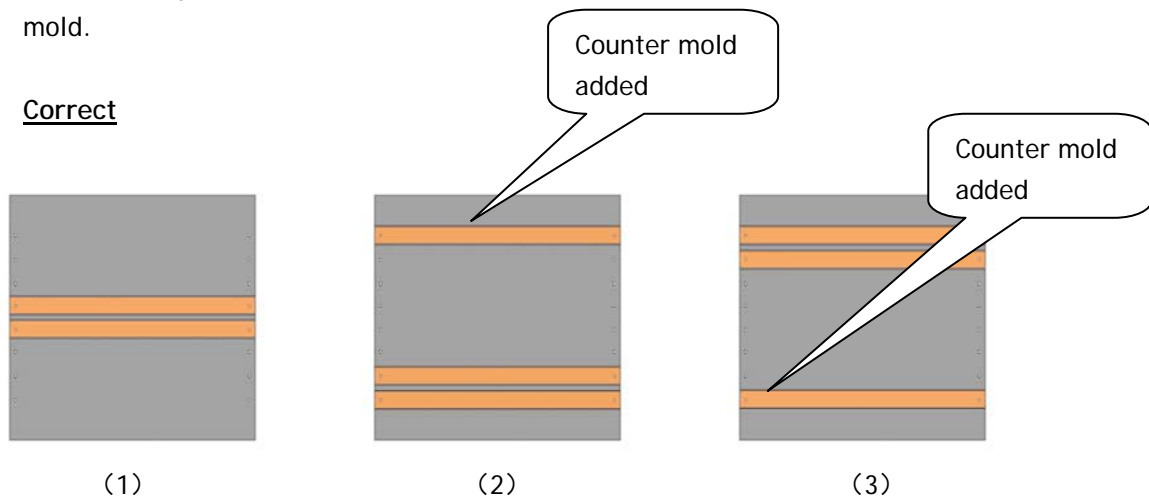
1. main Air pressure supply connector and regulator
2. heating press pressure adjusting knob
3. cooling press pressure adjusting knob
4. heating press pressure indicator
5. cooling press pressure indicator
6. suction pump foot pedal control connector

### > 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.

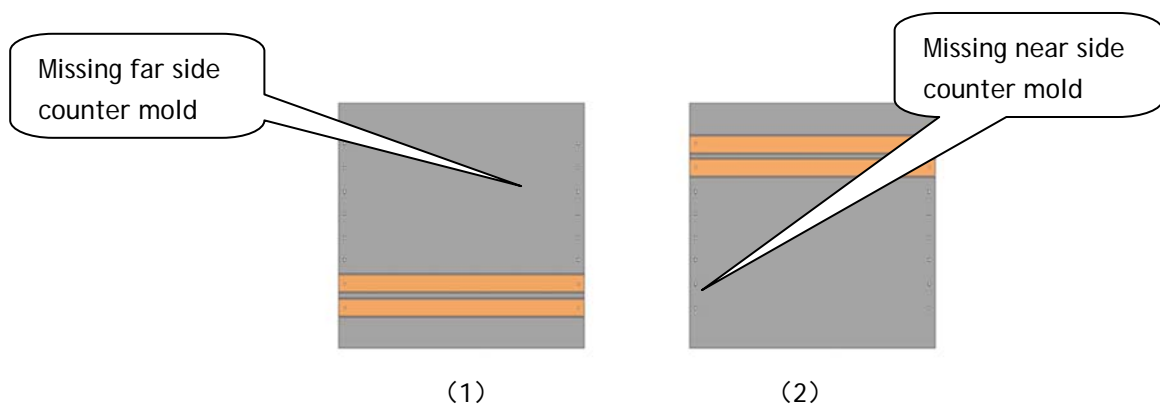
The following illustrations (top view) demonstrate the correct and incorrect method of using mold.

#### Correct



1. Zipper mold is positioned at the center of the working table.
2. Zipper mold is positioned off centered closer to the operator, a counter mold is added at the far side of the working table.
3. Zipper mold is positioned off centered at the far side from the operator, a count mold is added at the near side to balance the force

#### Incorrect



1. Missing far side counter mold
2. Missing near 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 or cool 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 both the heat and/or cool plate. There is no particular schedule for this type of cleaning, do it whenever required.

**>> Daily Maintenance**

- After power on, inspect the water pump to see if cooling water is circulating properly.
- Check to see if there is enough cooling water in the water tank, the tank should be at least half full.
- Operate the machine a few cycles before use, pay attention to any unusual noise. This may indicate a problem.

**>> Monthly Maintenance**

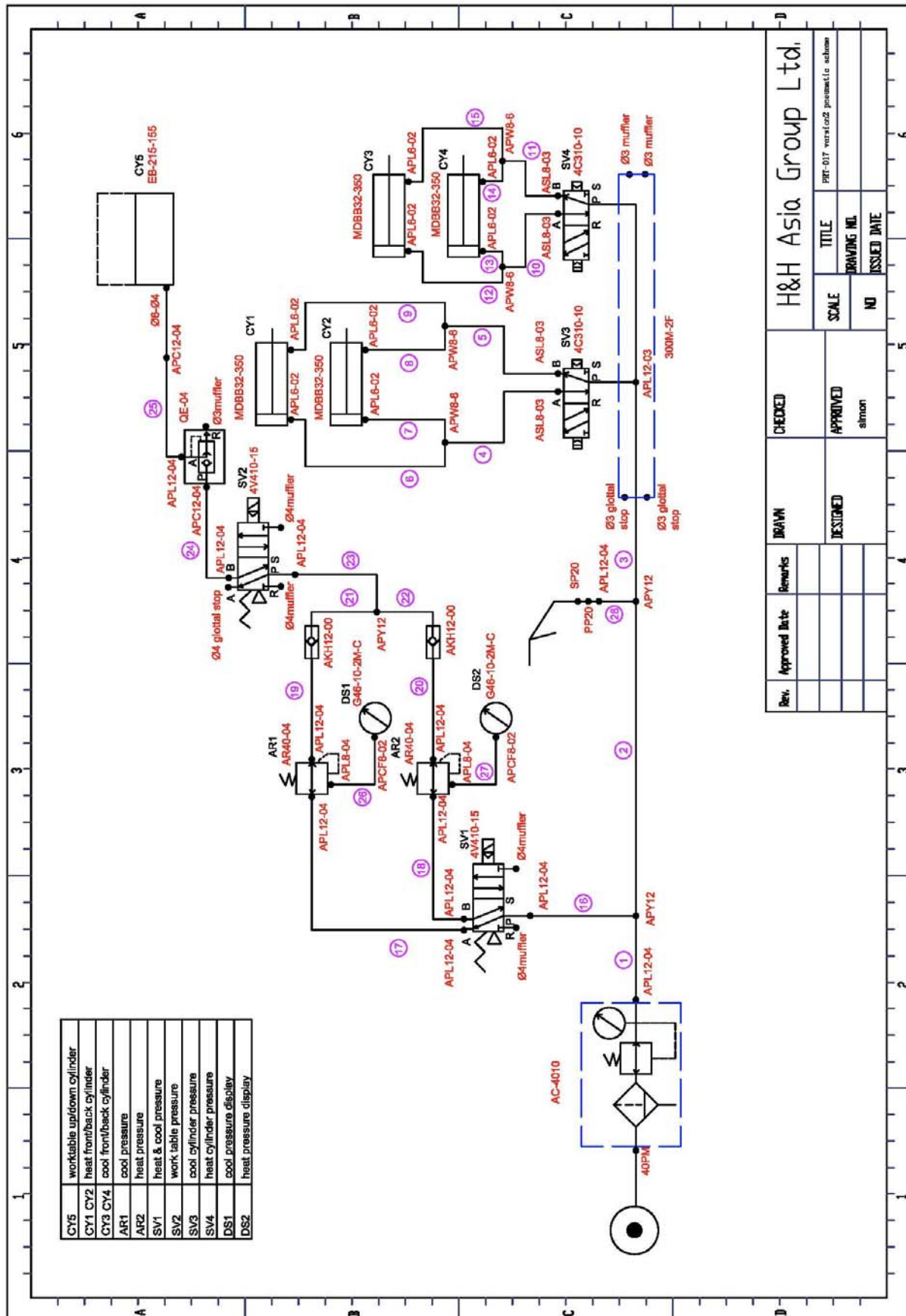
- To ensure the best cooling efficiency, replace the water from the tank with fresh clean water, this will remove any dust or particle from clogging the circuit later.
- Check the main press side guide rods for smoothness, apply lubrication if needed.
- Inspect the Teflon paper from wear and tear on both the heat press and the cool 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 circuit breaker and/or RCB tripped	Check the problem and reset breakers
Heat plate not heating up	Heater not enabled	Press the <b>heat</b> button once
	Preset temperature lower than room temperature	Change preset temperature above room temperature
Cool plate not cool or cooling effect not obvious	Cooler not enabled	Press the cool button once
	Preset temperature higher than room temperature	Change preset temperature below room temperature
	Water circulation blocked or insufficient water content	Purge the pipeline, clean the water tank and add suitable amount of water
	Radiator dirty or air flow blocked or limited	Remove dirt by brush or remove blocking object
	Insufficient coolant	Add coolant by authorized personnel
Excess noise and vibration during operation	Floor is not level or wheels are not locked	Reposition machine to a level and solid floor, lock all 4 wheels



# Appendix A . Pneumatic Scheme



## Appendix B . Wiring Scheme

