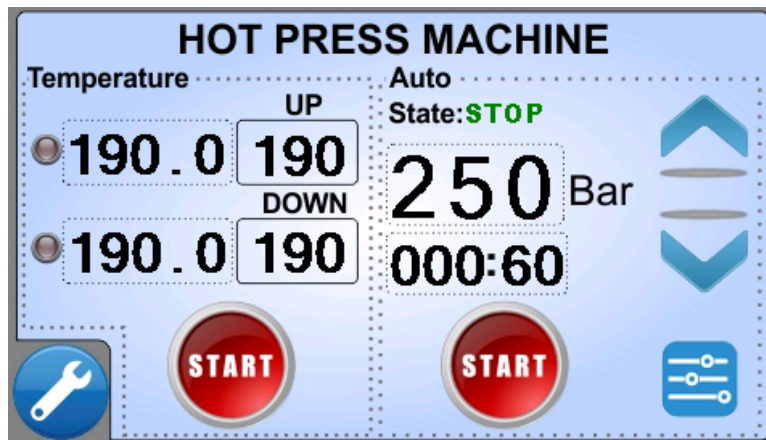


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## Operating Instructions for the Hot Press Machine

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Once connected to power and the power switch is turned on, the front panel of the device lights up, and the operating system starts. After the operating system is fully loaded and the system is ready for operation, the following screen will be displayed.



This menu includes two main sections: Temperature and Auto.

1- Temperature: This section is for setting the temperature of the upper (UP) and lower (DOWN) plates. In the boxes under UP and DOWN, the operator sets the temperature, and the real-time temperature of each plate is displayed in the adjacent box.

Pressing the "Start" button in this section will initiate heating, and the plates will reach the temperature set by the operator.

When the temperature stabilizes within the set range, the device will trigger an alarm.

2- Auto: In this section, the status and progress of the test are displayed automatically.

In the State section, the current test phase is shown, and the applied pressure on the sample by the plates, in terms of load and elapsed time at each stage, is also displayed.

On the right side of this section, two buttons for manual movement of the lower plate are provided, with directions for upward and downward movement. This can also be done using the buttons on the machine's body.

Pressing "Start" in this section will begin the test and sample preparation according to the operator's programming.

To adjust the device's operating settings, touch the button on the lower right of the panel to enter the Pressure Setting menu.

Process Setting:			
<input type="checkbox"/>	<b>Pre Pressure</b>	15 Bar	5 Sec
<input type="checkbox"/>	<b>Down</b>	10 Sec	1 Cycle
<input type="checkbox"/>	<b>Hot Press</b>	100 Bar	2 Min
<input type="checkbox"/>	<b>Cold Press</b>	50 °C/Min	50 °C
<input checked="" type="checkbox"/>	<b>Open</b>	10 Sec	

#### Pre Pressure and Down Sections:

Adjusting the parameters of these two sections helps to ensure proper bubble removal from the sample, and their function is combined.

In the **Pre Pressure** section, the operator can set the pre-pressure applied to the sample and the duration of this phase.

In the **Down** section, the operator can set the time the upper and lower plates remain open in seconds, as well as the number of repetitions for the pre-pressure and plate movement in the **Cycle** section.

#### Hot Press Section:

In this section, the actual pressure is applied for a specified time according to the standard test procedure for the sample. The applied pressure is measured in bar, and the time for applying this pressure is defined in minutes.

#### Cold Press Section:

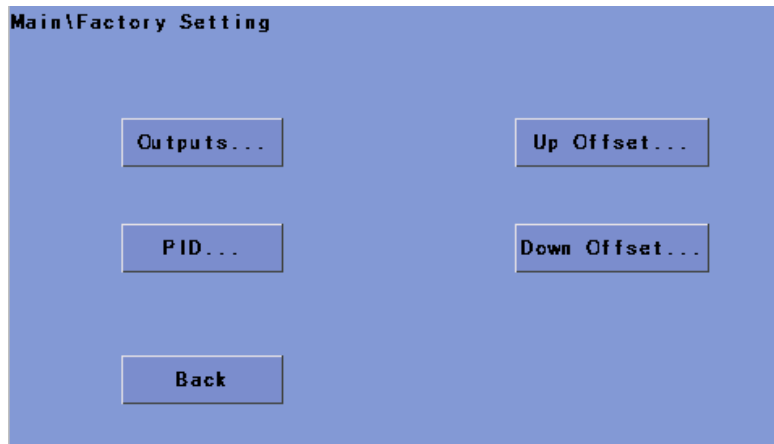
In this section, the plates begin cooling using a circulating water system. The cooling rate, in °C per minute, can be adjusted until the desired temperature is reached in °C.

#### Open Section:

After the plates reach the set temperature in the **Cold Press** section, they begin to open according to the set time in this section, allowing the operator to remove the sample from the device.

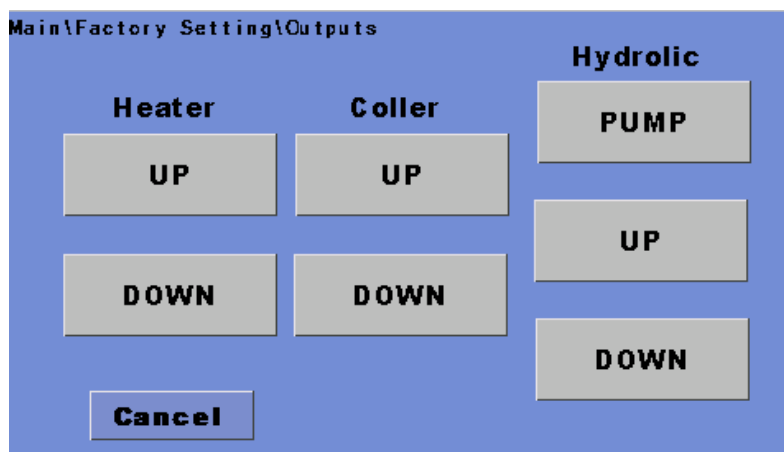
It is important to note that for these sections to function, the square next to each section must turn black; otherwise, the section will not execute.

To enter the **Factory Settings** menu, touch the wrench icon in the bottom left corner. After entering the password 1253, you will enter the following menu.



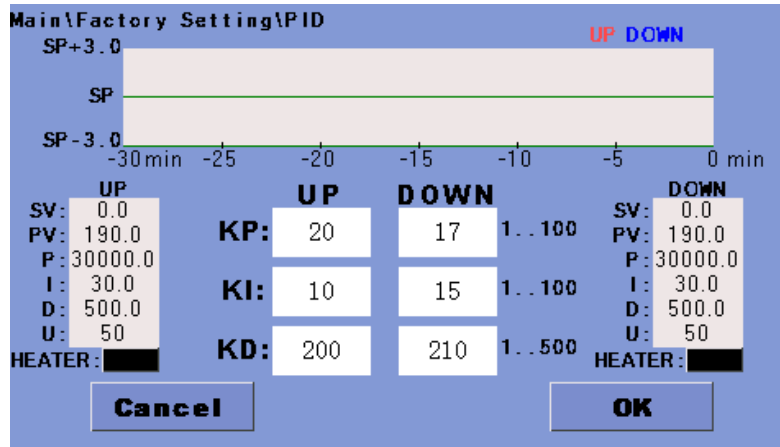
Factory Settings include 4 sections:

1- Outputs: By touching this section, you will enter the menu below.



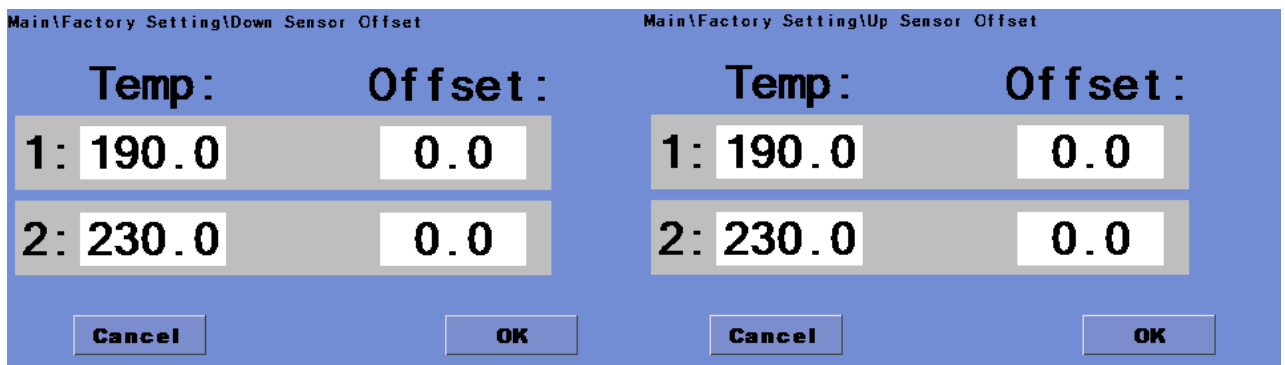
In this section, the operator can manually check the functions of the device, including the upper and lower plate heaters, the hydraulic pump, the solenoid valves for the cooling system, and the movement of the lower plate.

2- PID: By touching this section, you will enter the menu below.



In this section, the settings related to the element control system are configured and calibrated by the manufacturer.

3- Up Offset and Down Offset: These sections are used to calibrate the device's temperature. By touching either of these, you will enter the corresponding menu.



In these menus, the device provides the ability to compensate for temperature differences between the upper and lower plates, allowing the user to apply an offset and bring the plate temperatures closer to the actual temperature.

Device Operation Process:

- 1- First, calculate the mold volume according to the desired thickness and fill the mold with the required material.
- 2- Once both plates reach the desired temperature, place the mold into the machine and start the device.

3- The machine will perform the test according to the specified operations, and after cooling, the mold can be removed, and the sample can be taken out.

This device is used for creating sheets from granules to perform tests such as tensile, Charpy impact, etc.