

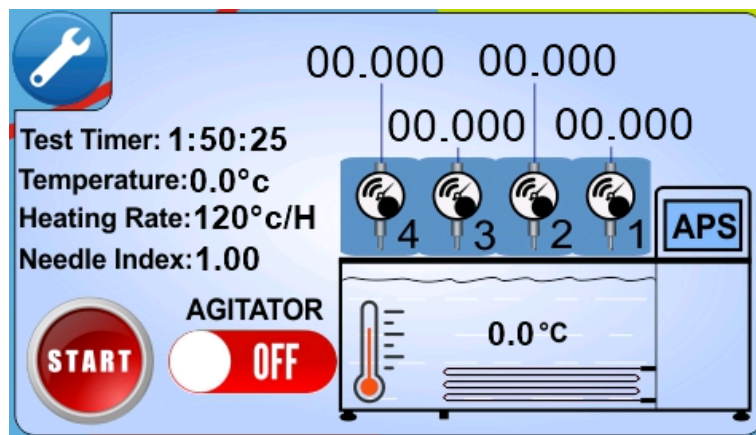
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## Vicat Machine Operating Guide

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By connecting to the power and turning on the power switch, the front panel of the device lights up, and the operating system starts.

Once the operating system is fully loaded and the system is ready for use, the following screen will be displayed



On the device panel, an image of the device and indicator clocks is displayed, showing the penetration relative to the type of clocks ordered, from 2 to 3 decimal places.

On the panel, based on the number of stations, you can confirm whether the clocks are connected or disconnected. When properly connected, the circles in the indicator clock icon turn green, and if not connected, they appear black.

On the left side of the display, the device parameters are shown:

**Test Timer:** Displays the elapsed time since the test started.

**Temperature:** Displays the real-time oil temperature, which increases based on the set Rate as the heaters are activated, shown in degrees Celsius.

**Heating Rate:** Displays the rate of oil heating in degrees Celsius per hour, which is determined according to the product standard.

**Needle Index:** Displays the maximum needle penetration in millimeters in the sample, which should be specified according to the product standard.

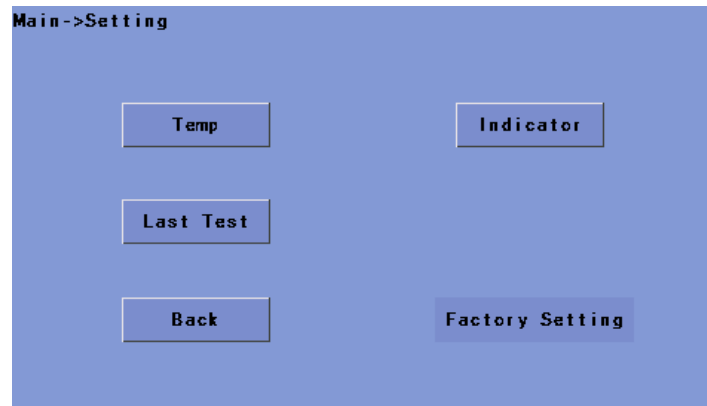
By pressing the Start button, the mixer begins rotating and mixing the oil inside the tank, and the heaters start heating to reach the oil temperature at the rate set by the user.

To manually turn on the internal mixer, the AGITATOR can be activated, which is typically used for mixing the oil inside the device during the cooling process with the water circulation system.

The device elevator is controlled by the UP and DOWN buttons. These buttons are disabled during an active test to prevent any damage to the device.

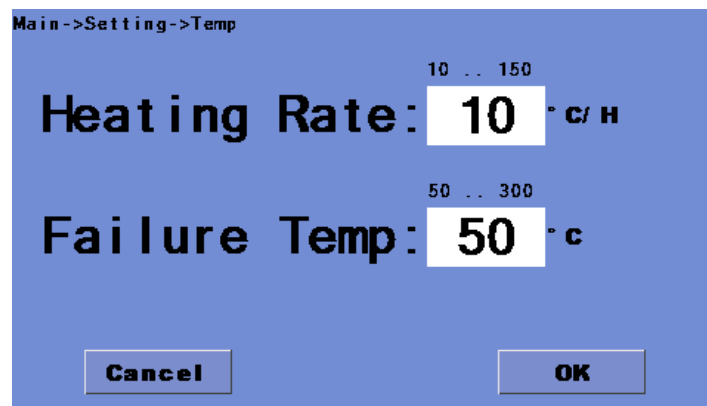
Settings Menu:

To enter the settings menu, press the wrench icon in the upper left corner, and you will enter the following page.



This menu consists of 4 sections:

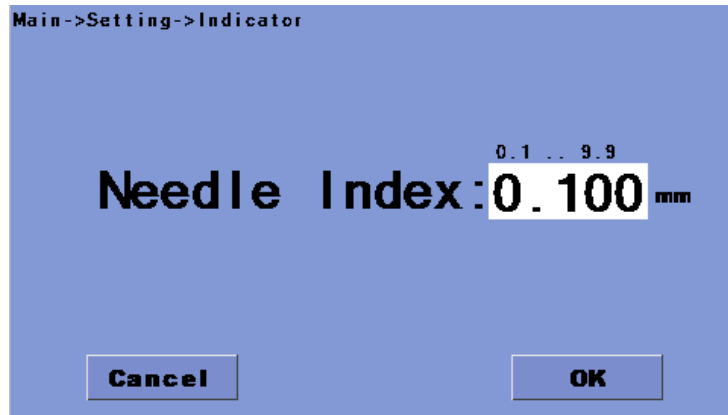
1. **Temp:** Pressing this button will take you to the following menu."\*\*



**Heating Rate:** The rate of temperature increase in degrees Celsius per hour, which is set by the user according to the standard.

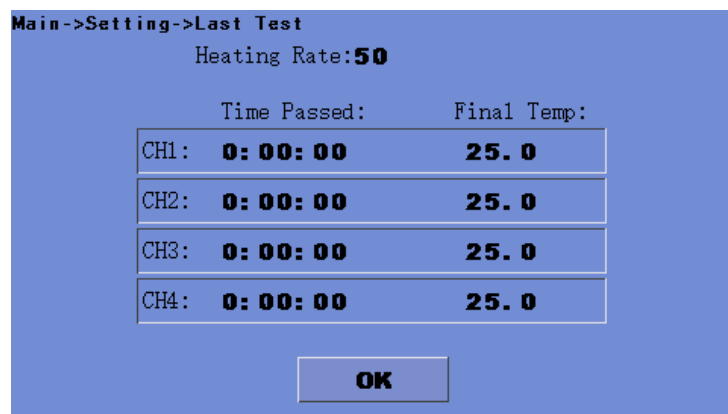
**Failure Temp:** The maximum temperature that the device is allowed to reach.

2. **Indicator:** Pressing this button in the settings page will take you to the following menu.

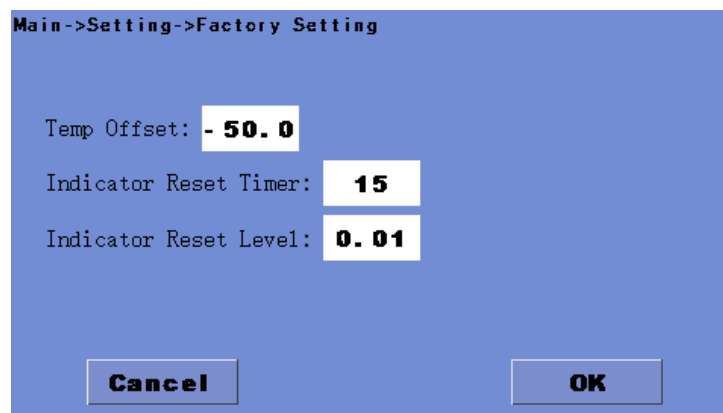


**Needle Index:** The maximum penetration depth into the sample, which is specified by the user. If the penetration exceeds this limit, the station will stop.

3. **Last Test:** Pressing this button in the settings page will display the following menu, which shows the results of the last test performed.



4. **Factory Setting:** Pressing this button and entering the password 1253 in the settings page will take you to the following menu



In this menu, under the Temp Offset section, you can compensate for the difference between the actual oil temperature and the value displayed by the device.

In the Indicator Reset Timer section, you can set a time cycle to reset the indicator clocks (in some devices, the clocks turn off after a period of time, and by setting a time cycle, this turning off can be prevented).

Note: This section is set by the manufacturer.

In the Indicator Reset Level section, you can adjust the minimum penetration level at which the time cycle for restarting the indicator clocks will stop.

Note: This section is set by the manufacturer.

Device Operation and Test Procedure:

To perform the test, depending on the number of stations available, 2x2 samples are required.

The samples must be free of any burrs after cutting.

First, press and hold the Up button to lift the elevator mechanism of the device.

Place the selected samples on the sample holders and position the needle on the sample.

After placing the samples, press and hold the Down button to lower the elevator mechanism and place the required weights in their designated positions.

Note: To ensure the longevity of the needle and maintain calibration, never raise or lower the elevator with weights attached simultaneously.

Set the oil temperature increase rate and needle penetration according to the instructions above, then press Start to begin the test.

The clocks will start measuring after the test begins, and as soon as penetration is detected in any station, that station will stop, and the test results will be saved.

For this test, the temperature at which a 1mm penetration occurs is of significant importance to the user.

Finally, once penetration is detected at all stations, the device will automatically stop, the temperature will decrease, and the result of the last test will be saved in the Last Test section.