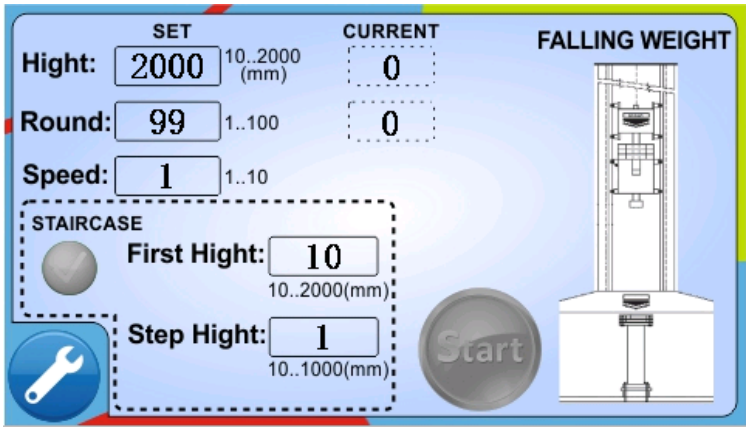
Instructions for the Falling Weight

Upon connecting to power and turning on the power switch, the front panel of the device lights up, and the operating system begins to run.

After the operating system has fully loaded and the system is ready for operation, the following screen will be displayed.



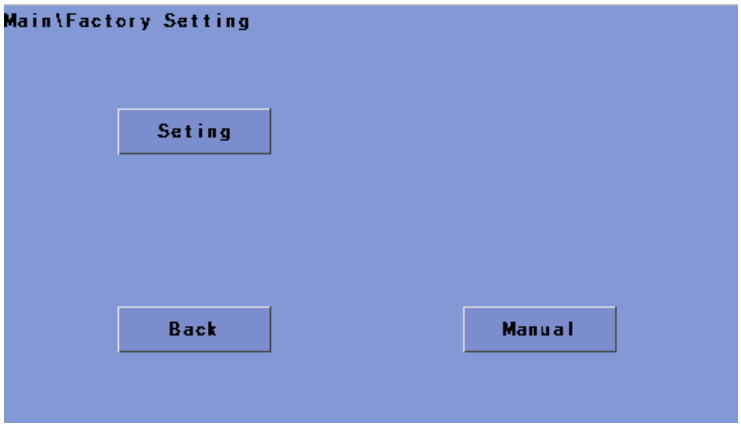
Introduction of Parameters on the Panel:
On the right side of the panel, a diagram of the device is displayed, showing the status of the sensors and the door's open/closed position.
On the left side of the panel, the following parameters are displayed:

- **Height:** The height of the hammer relative to the sample in millimeters, which can be adjusted by the operator between 10 and 2000. The actual distance between the hammer and the sample is displayed in the adjacent field.
- **Round:** The number of impacts the hammer should make on the sample, adjustable by the operator between 1 and 100. The adjacent field displays the number of impacts applied to the sample since the start of the test.
- **Speed:** The speed of the hammer's movement, adjustable by the operator from 1 to 10.

STARCASE Section:
By activating the checkbox in this section, you enable the capability to perform the test in steps. In the **First High** section, the operator sets the distance for the first impact in the test. In the **Step Height** section, the operator specifies the increase in hammer height after each impact, until the final distance is reached.

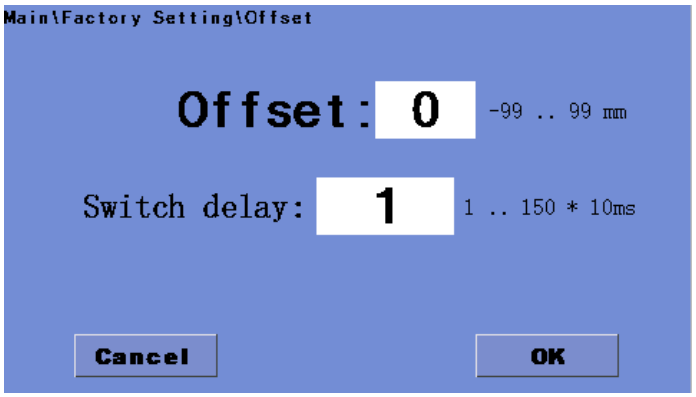
Upon pressing the **Start** button, if the door is closed and the sample and desired hammer are correctly placed for the test, the device will begin calibrating its position and then proceed with the test.

To access the factory settings menu, touch the wrench icon at the bottom left of the screen. Then, you will enter the following menu.



The factory settings menu consists of two sections:

1- **Setting:** By touching this button, you will enter the following menu.

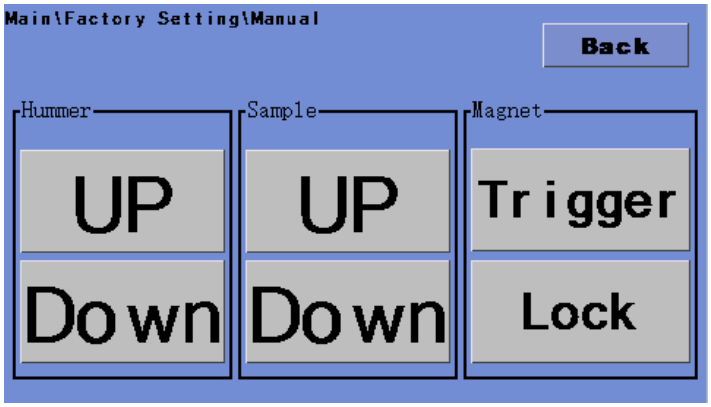


In this menu:

Offset: This parameter is used to correct the displacement error of the hammer relative to the sample, measured in millimeters, and it is calibrated by the manufacturer.

Switch Delay: This refers to the time the magnets used in the device remain activated. This parameter is adjusted based on the internal structure of the device and set by the manufacturer

2- **Manual**: By touching this button, you will enter the following men



In this menu, if the test is stopped, the operator can manually activate the magnets and motors of the device.

Operating Procedure with the Device:

Prepare a tube of 20 cm length.

Place the tube in the specified position.

Start the test.

In this test, the procedure varies depending on the tube size:

For tubes with sizes of 63 or 50 mm, several samples should be prepared and tested.

For a tube of 250 mm, the tube should be divided into 12 equal parts, and after each impact, the tube should be rotated to ensure 12 impacts occur in 12 different areas on the tube.