User Guide for Hydrostatic Pressure Generator Software

(**Pressure Test Machine**)

How to Use the Software?

After installing the desired software, open it by clicking on the icon.

In the main menu, at the center of the screen, you can view the line information, which includes: line number, current status (State), set pressure (Set Pressure), set test time (Set Time), and elapsed test time (Time), along with a real-time analog pressure gauge. The digital pressure value of the line is displayed below the pressure gauge.

Below these details, you will find test settings icons as well as the **Start** and **Stop** options.

On the left side of the menu, a list of available pressure lines is displayed, showing their status, current pressure, corresponding temperature, and elapsed time.

On the right side of the menu (Tank Temperature), you can monitor the device's pump pressure and status, as well as the temperature of the available tanks.

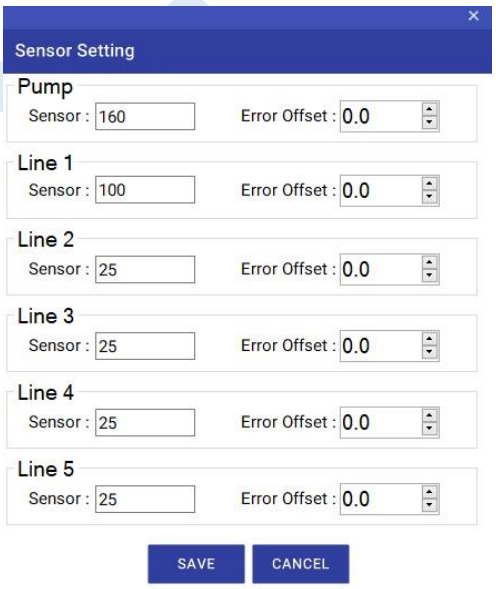
Toolbar Menu

This section includes the following options: **File, Setting, Edit,** and **Help**.

- In the **File** section, the **Open** option allows you to load previously conducted test files. Another option in this section enables you to **Connect** or **Disconnect** the software.
- In the **Setting** section, the **Pump Setting** option is used to configure the pump settings. This section manages the pump operation and pressure range settings.

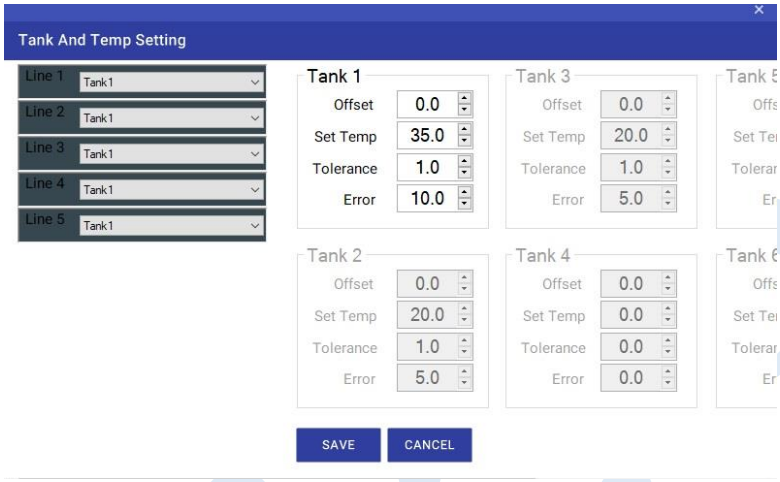
- The **Auto** mode automatically maintains the pump pressure within the predefined minimum and maximum range, ensuring it stays above the highest pressure of the test lines.
- The **Manual** mode allows manual control of the pump pressure based on specified values.
- The **Error** setting defines how many seconds the device should wait before stopping operation if it fails to maintain pressure, preventing potential damage to the pump.

The **Sensor Setting** option is used to configure the operating range of the pump sensors and the pressure sensors of the lines. In this section, based on the specifications of the device's sensors, you can define the ranges and, if necessary, apply an offset to the selected sensor. Finally, click **Save** to store the settings.



In the **Tank Temp Setting** option, you can select the desired tank for each line based on your testing requirements (for example, assign **Tank 1** to **Line 1**). If no specific temperature is required for a line, select the **None** option.

On the right side of the screen, you can configure the **Set Temperature (Set Temp)**, the **allowed tolerance for temperature variations (Tolerance)**, the **offset value (Offset)**, and the **error threshold (Error)** for stopping the test. Finally, click **Save** to store the settings.



The Edit menu includes two options: Application and Report.

The Application section is used to configure the IP address and Port for network connection, which is essential for enabling the data transfer system to the software.

The Report section allows you to manage the test report settings, where you can specify the details and information you want to include in the test report.

If needed, use the Help option to contact Azmoon Polymer Sepahan company.

Test Execution Steps:

After launching the software, establish the connection between the computer and the device by going to the Edit menu, selecting Application, and entering the IP and Port details. Click Save to exit the page.

Next, navigate to the File menu and select Connect. After a few seconds, the connection will be established, allowing you to view the line and pump information on the software.

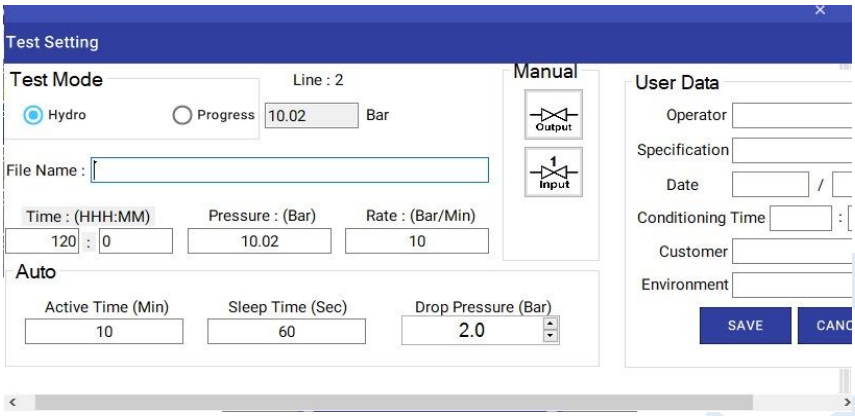
Go to the Application section, enter the number of pressure lines in your device, and in the Tank section, select the type of connection between the tanks and the pressure generator (via cable or wireless). Save the entered settings.

Now, go to the Setting section and configure the Pump Settings, Pressure Sensors, and Tank Settings in sequence, following the given instructions and your device specifications.

To start the test, in the main menu, select the desired line from the left-hand list (the background color will change upon selection). Then, click the gear icon (below the analog pressure gauge) in the Test Setting window and choose the test type from Hydro, Burst, or Progress.

Note: The Burst test can only be performed on Line 1.

For the Hydrostatic Test (Hydro): Enter the File Name (which can be the file or sample name), set the test duration (in hours and minutes) in the Time section, specify the test pressure (in bar) in the Pressure section, and define the pressure increase rate in the Rate section.



In the **Auto** section, you can set the following parameters:

- **Active Time**: The interval (in minutes) for leakage checks.
- **Sleep Time**: The duration when the line is not charged to detect leakage.
- **Drop Pressure**: The pressure drop threshold to identify failure.

User Data Section:

In this section, you can enter test details such as:

- **Operator Name**
- **Sample Information**
- **Test Date**
- **Sample Conditioning Time**
- **Test Requester**
- **Test Environment**

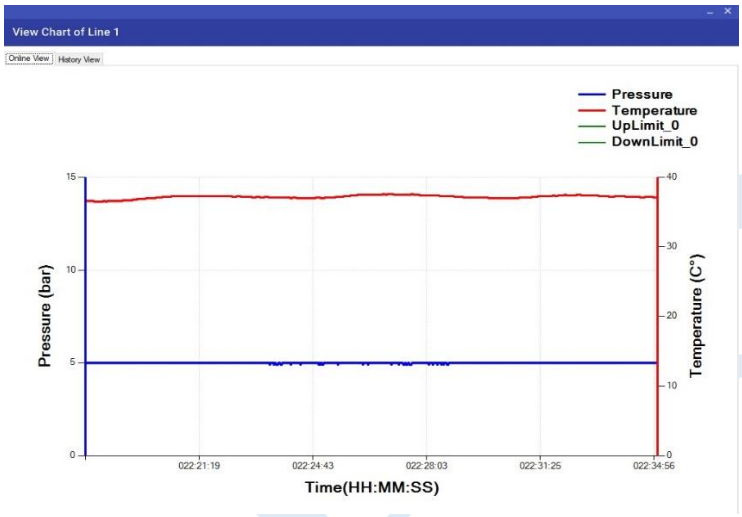
If required, this information will be included in the test report based on the **Report** settings. Click **Save** to return to the main screen.

Burst Test Execution:

- To perform a **Burst Test**, go to the **Test Setting** section, select the **Burst** option, and enter the **initial pressure** in the **Pressure** field.
- The device will increase the **line pressure** to the selected value within **60 seconds**.
- If the sample does not burst at this pressure, the device will **rapidly increase** the pressure until the sample fails.

Starting the Test:

1. After configuring the test settings and while on the **main screen**, click **Start** to begin the test. You can monitor the **real-time line performance** on the pressure gauge.
2. Once the test starts, you can observe the **real-time behavior of temperature and pressure** on the graph. The **permissible pressure variation limits** during the test are shown with **upper and lower boundary lines** on the main pressure curve.



Viewing Previous Test Data:

To view the **graph of a previously conducted test** on the same line:

- Navigate to the **History View** section in the same menu.
- Click on the **Save Icon (Arrow Symbol)** to load and display the test data on the graph.

Saving and Printing Test Reports:

If needed, you can:

- **Save the test file** by clicking on the **Save Icon**.
- **Print the test report** by clicking on the **Print Icon**.