Chapter 7. **Defining Study Setups**

Before you can run a qualification study, you must use the ValProbe RT software to create or modify a setup. A setup defines everything required to run a qualification study.

Note: *To create or modify a setup, you must have permissions established by your System Administrator in the Admin menu (User Management tab).*

The setup is accessed from the Asset Details screen, through the Setup pane. When creating a setup:

- Define the sensors you are going to use in the study
- Assign sensors to groups and generate a wiring diagram
- Specify calculations and define group events to be monitored during the qualification study
- Specify start and stop conditions for qualification and exposure cycle

When the setup is created and saved, you can run a qualification study.

7.1. Create a Setup File

A setup defines everything required to calibrate sensors and run a qualification study for a specific asset. Setup files are created in the Setup screens. To create setups, permissions must be assigned by your System Administrator.

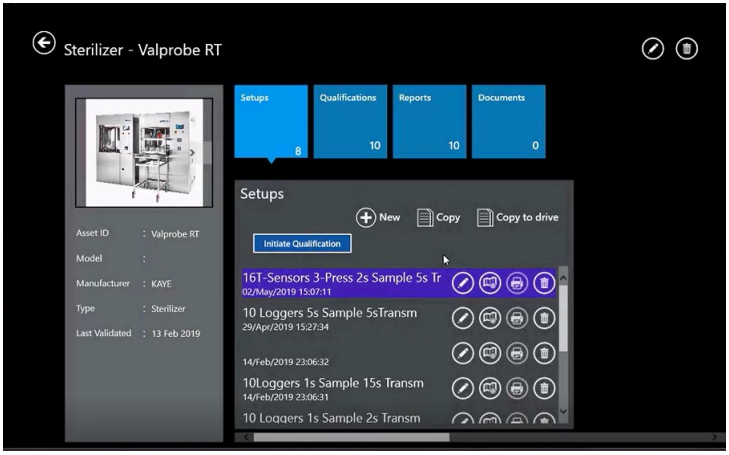

Figure 46: The Setup Hub Screen

To create a setup file:

From the Asset Details screen, press **Setups**. In the Setup Pane Hub, press **New** to enter the Study Details screen.

You can now define sensors, assign sensors to calculation groups, specify the qualification cycle, and save your setup.

7.2. Modify an Existing Setup

Setup files for a specific asset are listed on the Setup screen. To modify an existing setup file:

From the Setup Hub screen for your asset, select the setup file that you want to modify.

Click the **Edit** (pencil) button.

Note: *You must have user permissions to modify a setup.*

7.3. The Define Setup Screen

On the Asset Details Screen Setup Hub, press **New** to open Define Setup.

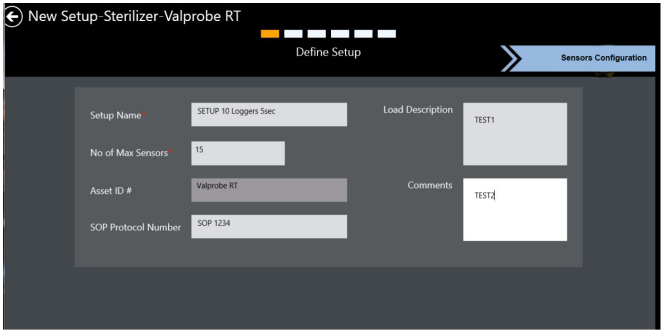

Figure 47: Define Setup Screen

On this screen, you define the setup for a study. Use the textboxes or drop-down lists to enter:

- Setup Name
- No (number) of Max Sensors
- Asset ID #
- SOP (Standard Operating Procedure) Protocol Number
- Load Description
- Comments

Note: *The Setup name, study type, and number of sensors fields are mandatory.*

The Setup Name and Comment fields accept alphanumeric characters and blanks; the EQ ID, Load Description, and SOP fields can also include special characters (hyphens, underscores, forward and backward slashes).

When all asset data is entered, press **Sensors Configuration** to continue.

7.4. Sensors Configuration Screen

From the Asset Details screen, press **Sensors Configuration** to open the Sensors Configuration screen.

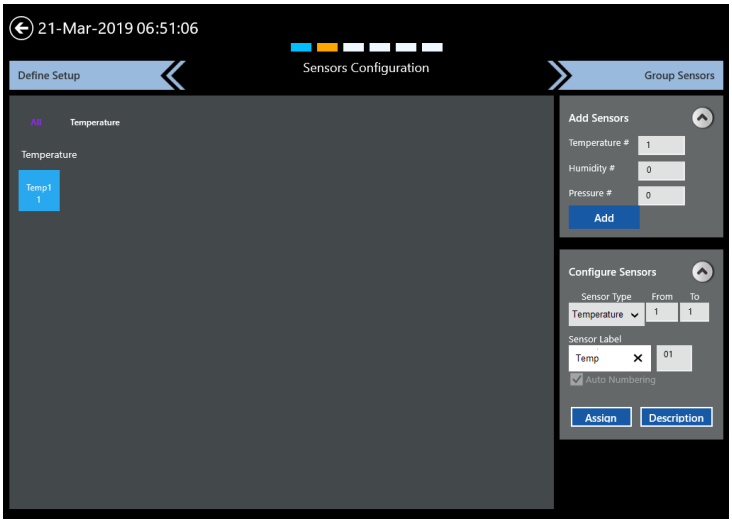

Figure 48: Sensors Configuration Screen

The Sensors Configuration screen graphically represents all connected sensors. The sensors are labeled based on their type.

For an initial setup, all sensor tiles are blue, to indicate that they have not been selected. Select a sensor tile to select it, the tile turns to dark blue and a selection icon in the upper right corner appears. You can also select a series of sensors in the Add Sensors pane on the right. Select a range of sensors, press **Select**, and those sensors all appear as selected on the left pane. To deselect a sensor, select an individual sensor, or select a range of previously selected sensors on the Add Sensors pane, and press **Select**.

Now that you have selected the sensors, you must configure them for the appropriate input type.

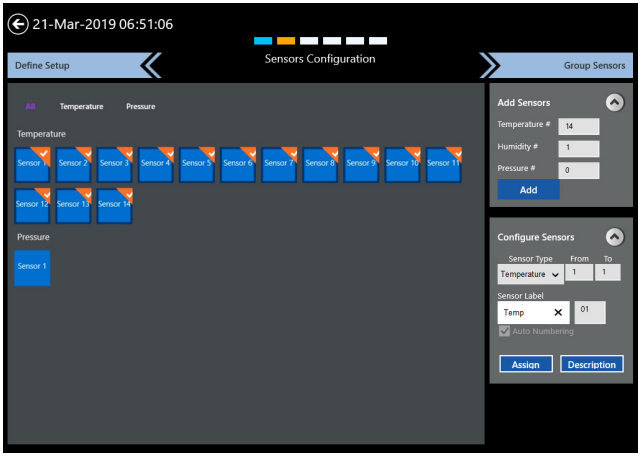

Figure 49: Configuring Sensors

- Sensor Type – Enter a range in the **From** and **To** textboxes.
- Sensor Label – Enter a sensor label in the textbox and a number to start labeling.
- Auto Numbering – Check/uncheck the box to enable/disable autonumbering. Auto numbering is enabled only if more than one sensor is selected.

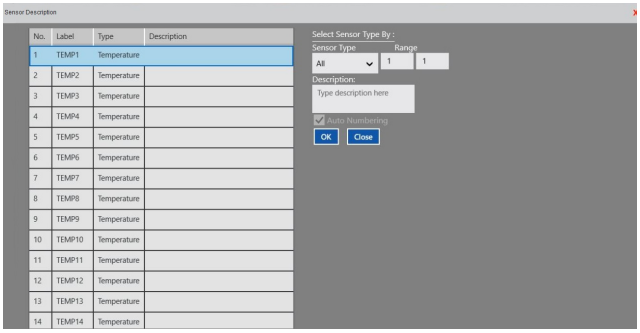

Figure 50: Sensor Description

Click the **Description** button to open the Sensors Description screen. On this screen all sensors are listed in a table with the information entered in the configuring sensors section. If desired, click a sensor and enter a description in the **Description** textbox and click **OK** to save the description or **Close** to cancel. To return to the Sensors Configuration screen click the red X in the upper left corner.

After sensor configuration, press the **Group Sensors** tab to advance to the next screen.

7.5. Understanding Groups

Grouping is a key concept of the ValProbe RT software. After your qualification study is complete, grouping allows you to customize your reports. Use the following guidelines when defining groups:

There must be at least one group defined in a setup. Each group must have a unique name.

Groups should be homogeneous (similar sensor types) since calculations are performed on all the sensors.

You can assign a sensor to more than one group to relate the sensor's output to different conditions. For example, you might have the same sensors in more than one group to look at data over different intervals. You could specify the maximum sensor reading during exposure for one group, and specify the maximum sensor reading during the entire qualification cycle for another group.

You must assign a sensor to a group to record data from that sensor. Any sensor not assigned to a group is considered unused and no data is recorded for that sensor.

7.6. Assigning Sensors to Groups

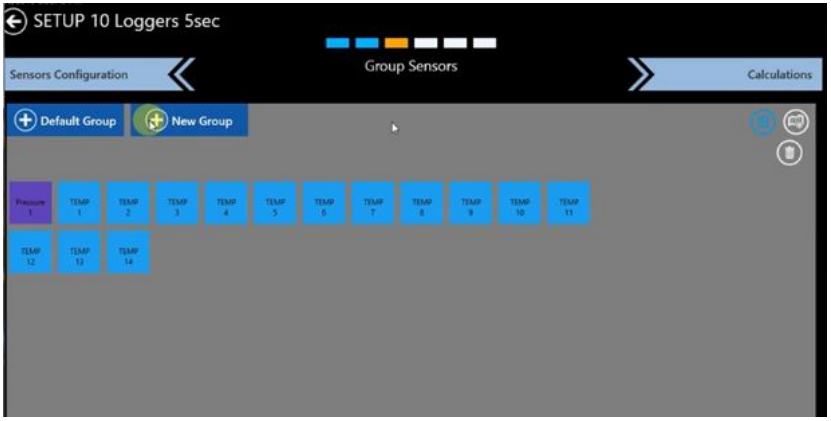

Figure 51: The Group Sensors Screen

On the Group Sensors screen, Loggers are assigned to groups. The same sensor can be assigned to multiple groups.

After the configuration of the sensors, the next step is to group them by pressing **Group Sensors**. The Group Sensors screen displays a scrollable listing of existing groups, as well as the **New Group** button.

As long there is no group defined, the **Default Group** button automatically generates groups for sensors with the same measured variable, like temperature and pressure.

To assign sensors to groups:

1. Select individual sensors to select them for the group. These sensors now appear deep blue with an orange checkbox.

Press the **New Group** button, and the Group Name textbox appears on the screen. The Group Name textbox accepts characters that can be upper and lower case, numeric, special characters like hyphen, underscore, slashes (forward and backward) and, blanks. Enter a name and toggle the **Save** button to save the group.

This screen also offers the following options:

- Delete - permits deletion of a group of sensors
- Move Sensors - permits moving sensors to another sensor group (specified in drop-down list)

- Customized Header for each group: The group specific header fields are pre-populated with the information from the asset. The header can be customized for each group. Any new information needs to be saved using the Save button before switching to another group.
- Add Sensors - add further sensors to a group
- A Wiring Overlay – accessible via the **Book** icon - enables wiring overlay configuration.

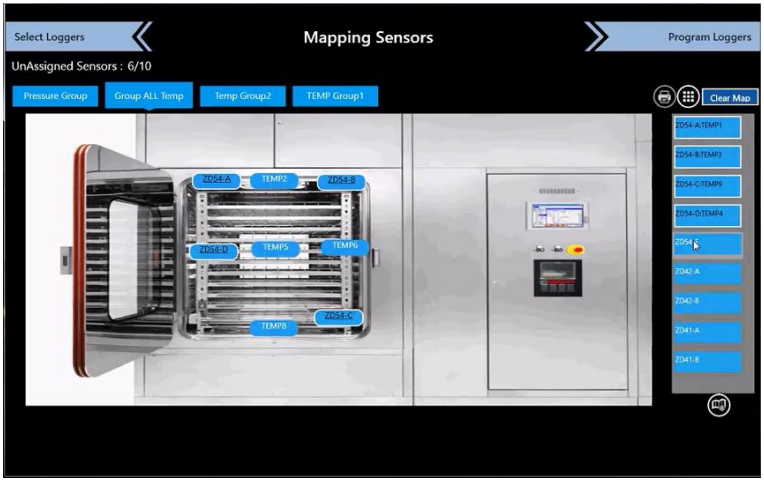

Figure 52: Wiring Overlay Diagram

Using the wiring diagram, you can define up to five pictures as background for placing the sensor positions. After selecting a picture frame on the left side, a picture can be loaded from a disk or taken with the built-in camera. The **Trash** icon can be used to delete pictures.

Note: *If opening the camera, ensure that the software can access the camera. The picture can be taken by double tapping the screen.*

Senor tags can be moved via drag and drop to the position reflecting the desired or actual position on the asset. Wiring diagrams can be exported to a pdf using the **Printer** button.

For every group, it is possible to select a picture and a sensor position, then save it together with the setup. The wiring diagram can be printed from the Wiring Overlay screen or as a part of the setup report directly from the Asset Details screen. The wiring diagram is used as the basis for the live mode layout view.

When you have finished, and saved your changes, press **Calculations** to proceed to the Group Calculations screen.

7.7. Specifying Group Calculations

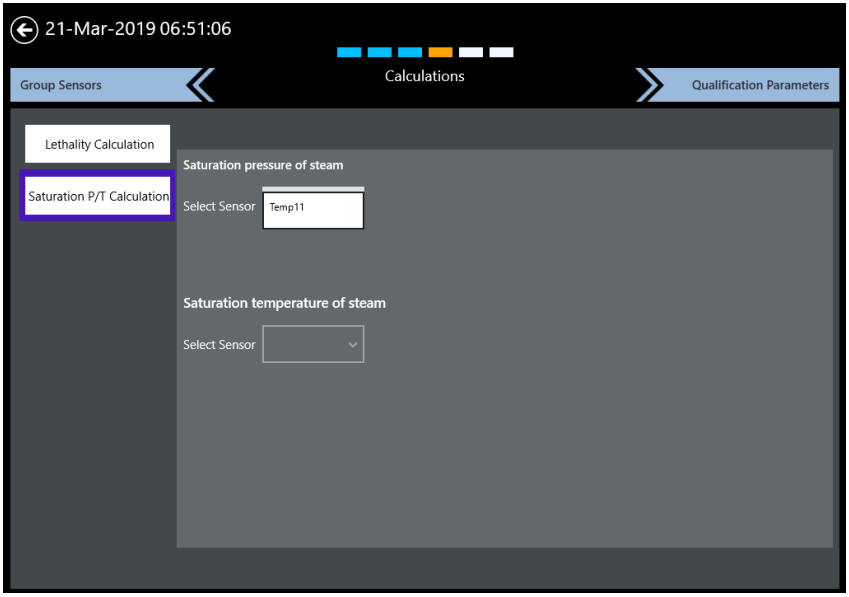

Figure 53: Calculations

Once you have defined sensors and assigned them to one or more groups, the next step is to specify calculations to be performed on the group of sensors during the qualification study. Calculations include statistical, lethality, interval, saturation pressure of steam, and saturation temperature of steam calculations.

The Statistical Calculations are all preselected by default and are calculated.

Note: *If lethality is selected in the setup, the report tool requires the definition of an exposure cycle as mandatory.*

It is also possible to define events to monitor during the study. These events are listed in the reports and can be used to define reporting tool cycles.

7.8. Specifying Qualification Study Conditions

Specify the conditions that control your qualification study on the **Qualification Parameter**s screen. From this screen, you specify:

Qualification start/stop conditions - used to start and stop the qualification cycle manually or automatically.

Exposure start/stop conditions - used to start and stop the exposure cycle manually or automatically.

Data storage options - the rates at which data is written to the memory of the Logger during a qualification run.

Clock adjustment on qualification start – This feature aids in synchronizing the study time with another device. It allows a change of +/- 15 console time minutes to adapt e.g. to the time of an autoclave for parallel protocols in sync. Please note, after the study start you should reset the time manually or use an NTP server connection for automatic time setup.

When you have finished, press **Review** to check your entries and save the setup.

7.9. Reviewing and Changing a Setup

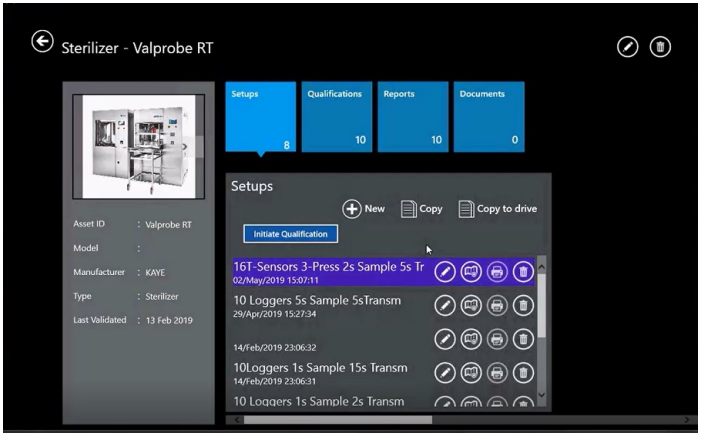

Figure 54: Setup Review Screen

After pressing **Review**, the Review screen opens, listing all the pertinent details about the setup you have just created. The Review screen provides following actions:

- Copy as New Setup —copy the current setup as a new setup and save it under a different name.
- Create Setup Report — creates a setup report as pdf file for saving and printing.

This screen also displays the following sections, each with an **Edit** icon to permit rapid changes:

- Asset Details
- Sensor Details
- Calculation
- Groups
- Report Header
- Qualification Parameters

Press **Save** to save the setup or use **Back** to exit the Setup menu without changes.