


Chapter 6 Troubleshooting

This section describes alarms, other problems, their possible causes, and actions to take. Contact your distributor or ESPEC in the following cases.

- When the chamber does not operate properly even after taking the actions listed here
- When a malfunction is listed as a "service call"

6.1 Alarms and actions

 **WARNING**

! **When working on the primary side of the equipment's breaker, be sure to turn off the main power supply switch at your facility before de-energizing. Also, take care not to apply voltage accidentally.**

Attempting to solve a problem with the power on can result in electric shock and create a very dangerous situation. Use the supplied breaker handle cover to prevent the breaker from being turned on accidentally.

! **Whenever you need to open the water circuit chamber door (heat exhaust chamber door), be sure to turn off the main power switch first.**

This chamber has functions to sound a buzzer if a problem occurs, perform a self diagnostic for major malfunctions, and display the malfunction details, cause, and action to take on the instrumentation screen.

The details of the displayed problem are described in the alarm list. Take the appropriate action according to the details listed.

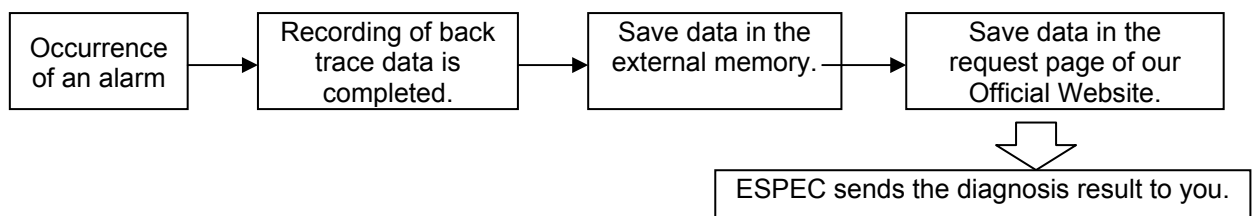
To troubleshoot problems that cannot be solved using the self-diagnostic, see "6.5 Troubleshooting". If the chamber does not operate properly even after taking the actions listed here, contact your distributor or ESPEC.

This chamber is equipped with a back trace function.

You can use the Online Diagnostics Service by sending back trace data to the request page of our Official Website. (Service available only to overseas customers)

- * The Online Diagnostics Service is to analyze the cause of failure and provide the customer with the diagnosis result for customers who send the internal data (back trace data) of the equipment before and after the occurrence of an alarm.

Flow of the back trace function



◆ Reference ◆

The Online Diagnostics Service is available only to overseas customers. (Back trace data recording is possible.)

If you are a customer in Japan, use the ESPEC online support.*

* A separate contract is required.



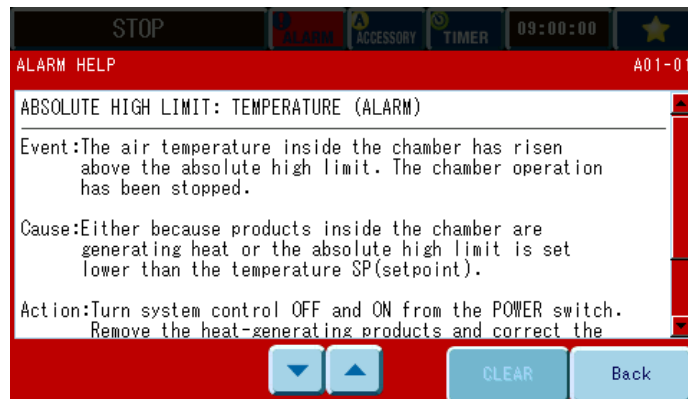
If an alarm occurs, the alarm screen below appears automatically and a buzzer sounds. The alarm icon continues to flash until the alarm is canceled. Pressing the name of the alarm on the alarm screen displays the alarm details. Check the alarm details, and then press [Stop Beep] to silence the alarm buzzer.

Alarm screen



Pressing the name of an alarm displays the alarm help (details), as shown below.

ALARM HELP screen



Notice

Disabling the error buzzer sound or alarm buzzer prevents audible notification and may delay notification of the error or alarm. Therefore, do not disable these sounds whenever possible.

If the buzzer sounds are disabled, notification is only provided by the red flashing operation lamp and alarm screen display, so be careful.

◆ Reference ◆

The operation of the alarm and error buzzers can be set using the maintenance settings and sound settings on the management setting screen.

Alarms and actions to take

Take the following action when an alarm occurs.

Alarms are divided into errors and alarms, and the action to take can vary.

- Error When the chamber or component devices malfunction resulting in an error status
- Alarm When there is no malfunction but operation may become affected, such as a maintenance announcement

◆ Reference ◆

- Even if an error occurs, backup operation may enable operation to continue. Operation continues during an alarm.
- For details about the alarms, see "[6.4List of alarms](#)".

(1) If an error occurs

<Procedure>

- 1) Press [Stop Beep] to stop the buzzer.
- 2) Refer to the operation manual or the alarm help screen to determine the required action and then perform the action accordingly.

(2) If an alarm occurs

<Procedure>

- 1) Press [Stop Beep] to stop the buzzer.
- 2) Refer to the operation manual or the alarm help screen to determine the required action and then perform the action accordingly.
- 3) Press [Clear] on the alarm help screen.
Although operation does not stop when an alarm occurs, the alarm cannot be cleared from the alarm screen until the clear operation is performed or the main power switch is turned off.

6.2 Alarm history display

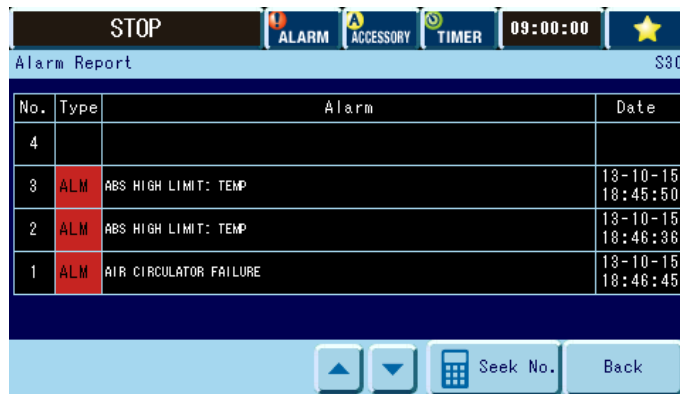
The history of alarms that occur can be displayed on the management settings screen. The current alarm can be viewed on the alarm screen, but once the alarm is canceled, the alarm display disappears. To display a history of alarms that occurred, use the alarm history display below.

<Procedure>

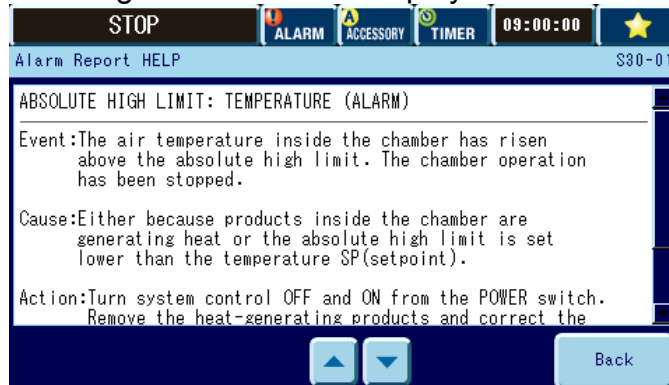
- 1) While the menu is displayed, enter management setting mode. Press the Chamber Setup tab. On the Chamber Setup selection screen, press [Alarm Report].



- 2) The alarm history is displayed.



No.: Displays the history number (1 to 100).
 Type: Displays whether the event is an alarm or warning.
 Alarm: Displays the name of the alarm that occurred.
 Pressing an alarm name displays the alarm help screen.



Date: Displays the date and time the alarm occurred.



Use these buttons to select a page.

History number: Enter a number to jump directly to that alarm.

◆ Reference ◆

- Up to four alarms are displayed on each page in order of occurrence, starting with the most recent one.
- The history stores up to 100 alarms. Occurrence of an alarm when there are already 100 alarms in history causes the oldest alarm in history to be deleted to make room for the new one.

6.3 Back trace function

This equipment automatically records back trace data during operation.

The back trace data contains the temperature/humidity set points, temperature/humidity process values, and control value information of the control items required to control the equipment. If an alarm occurs, the equipment automatically completes the recording of back trace data.

If you store the data in the request page of our Official Website, you can receive the Online Diagnostics Service.

<Procedure>

- 1) When an error occurs, the chamber automatically stops recording of the back trace data. When stopping of recording is complete, the following message appears.

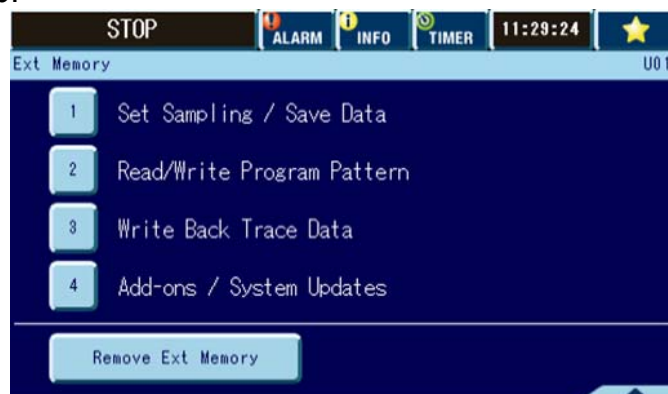


◆ Reference ◆

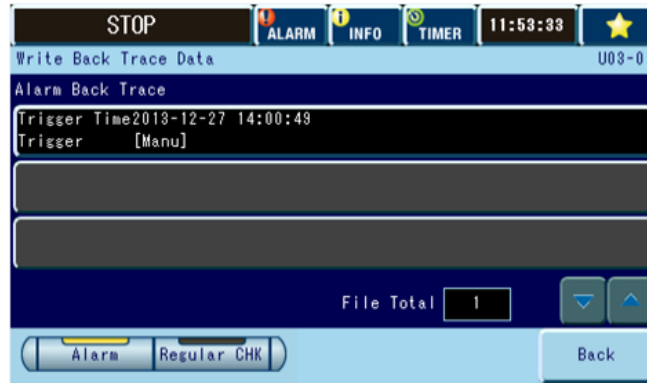
Resuming back trace recording

Even when data is not saved to the ESPEC Web site, if the back trace setting is set to on, recording of back trace data is resumed automatically.

- 2) Insert external memory (USB device) into the external memory port below the instrumentation panel and then press [Write Back Trace Data] on the Ext Memory tab.



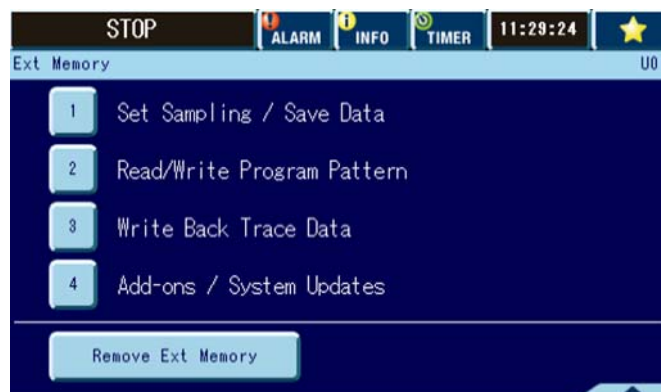
- 3) On the Write Back Trace Data screen, you can check the [Trigger Time] and [Trigger] details.
Select the data you want to save.
- * If more than one error occurred, the name of the first error detected by the chamber is displayed.



- 4) When writing to the external memory is complete, back trace is resumed.
- 5) Click [CLOSE]. On the External Memory screen, press [Remove Ext Memory]. Remove the external memory device after the message "Remove the memory" appears.

Notice

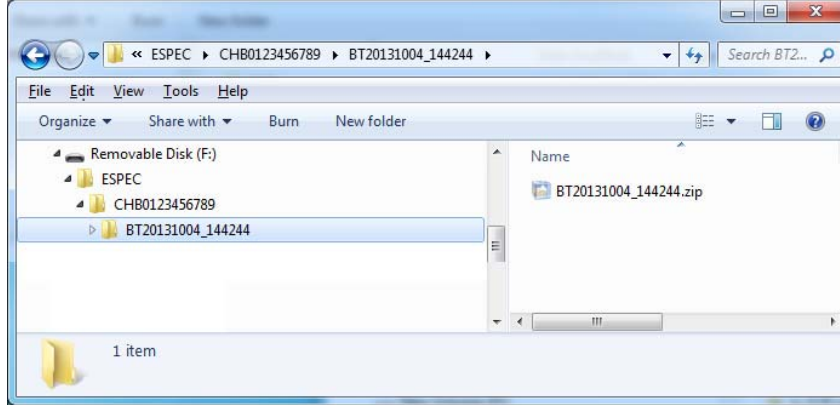
Removing the external memory device without pressing [Remove Ext Memory] first may damage the recorded data saved to the external memory.



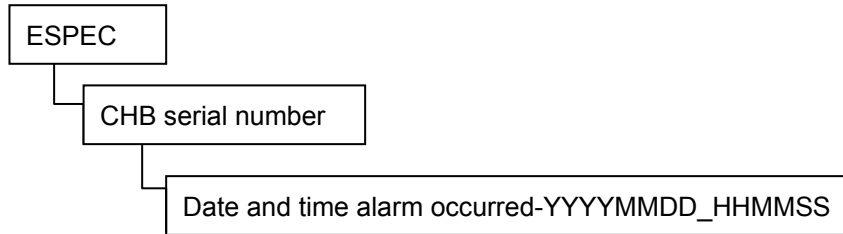
■ **Directory of external memory storage**

Three files are created in the directory that is automatically created in external memory.

(USB memory data viewed on a PC screen)



Folder configuration:



■ **Created files**

Unzipping the ZIP file creates the following files.

- Back trace data: date and time alarm occurred-YYYYMMDD_HHMMSS_t.btd
- Chamber Setup and Service information: date and time alarm occurred-YYYYMMDD_HHMMSS_c.bts
- Operation Setup information (Constant and Program Setup): date and time alarm occurred-YYYYMMDD_HHMMSS_p.bts

The numeric part of the file name indicates the date and time.

■ **Using the Online Diagnostics Service**

Store the files stored in the external memory in the request page of our Official Website. ESPEC will send the diagnosis result to you.

◆ **Reference** ◆

All constant operation and program operation data set on the chamber is saved in the operation settings information.

If "operation settings information" is not submitted to ESPEC, please send the back trace data (date and time alarm occurred-YYYYMMDDHHMMSS_t.btd) and the management settings and manufacturer maintenance information (date and time alarm occurred-YYYYMMDD_HHMMSS_c.bts).

Or set Mode Set File Set Out of Set Back Trace in Chamber Setup to off. Operation settings information will not be output.