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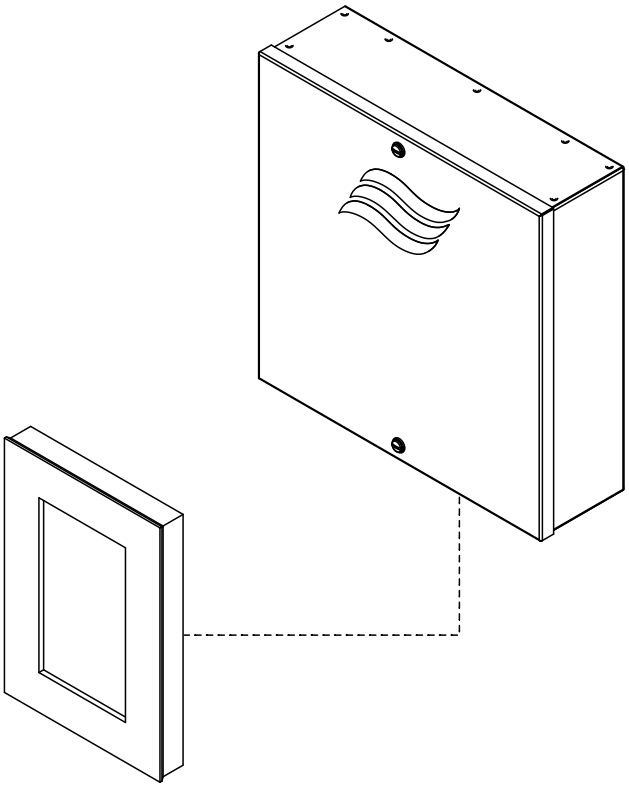
CONTROLS SERIES



READ AND SAVE THESE INSTRUCTIONS

OPERATION MANUAL

SPA control unit
Condair **Delta SPA Control**

Humidification, Dehumidification
and Evaporative Cooling

condair

Thank you for choosing Condair

Installation date (MM/DD/YYYY):
Commissioning date (MM/DD/YYYY):
Site:
Model:
Serial number:

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1 Introduction

1.1 To the very beginning

We thank you for having purchased the **Condair Delta SPA Control Box**.

The Condair Delta SPA Control Box incorporates the latest technical advances and meets all recognized safety standards. Nevertheless, improper use of the Condair Delta SPA Control Box or the SPA control software, respectively may result in danger to the user or third parties and/or damage to property.

To ensure a safe, proper, and economical operation of the Condair Delta SPA Control Box, please observe and comply with all information and safety instructions contained in the present operation manual, in the Condair Delta SPA Control Box installation manual as well as in the separate documentations of the components used together with the Condair Delta SPA Control Box.

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

1.2 Notes on the operation manual

Limitation

The subject of this operation manual is the operation and configuration of te SPA control software of the Condair Delta SPA Control Box via the SPA display.

The explanations in this operating manual are limited to the operation and configuration of the SPA control software via the SPA display as well as notes on maintenance and troubleshooting and are meant for well trained specialists being sufficiently qualified for their respective work.

This operation manual is supplemented by various separate items of documentation (Condair Delta SPA Control Box installation manual, Condair Delta SPA Control Box spare parts list, etc.), which are included in the delivery as well. Where necessary, appropriate cross-references are made to these publications in the operation manual.

Symbols used in this manual

CAUTION!

The catchword "CAUTION" used in conjunction with the general caution symbol designates notes in this operation manual that, if neglected, may cause **damage and/or malfunction of the unit or damage to property**.

WARNING!

The catchword "WARNING" used in conjunction with the general caution symbol designates safety and danger notes in this operation manual that, if neglected, may cause **injury to persons**.

DANGER!

The catchword "DANGER" used in conjunction with the general caution symbol designates safety and danger notes in this operation manual that, if neglected, may lead to **severe injury or even death of persons**.

Safekeeping

Please safeguard this operation manual in a safe place, where it can be immediately accessed. If the equipment changes hands, the operation manual must be passed on to the new operator.

If the operation manual gets misplaced, please contact your Condair representative.

Language versions

This operation manual is available in other languages. Please contact your Condair representative for information.

2 For your safety

General

Every person assigned to operate the Condair Delta SPA Control Box via the SPA Display must have read and understood this operation manual.
Knowing and understanding the contents of this operation manual is a basic requirement for protecting personnel against any kind of danger, to prevent faulty operation and configuration, and to operate the unit safely and correctly.

Qualification of personnel

All work described in this operation manual **may only be carried out by persons who are well trained and adequately qualified and are authorised by the customer**.
For safety and warranty reasons any action beyond the scope of this manual must be carried out only by qualified personnel authorised by Condair Ltd.

It is assumed that all persons working with the Condair Delta SPA Control Box are familiar and comply with the appropriate regulations on work safety and the prevention of accidents in the SPA area.

The Condair Delta SPA Control Box and the SPA display may not be used by persons (including children) with reduced physical, sensory or mental abilities or persons with lacking experience and/or knowledge. Children must be supervised to make sure that they do not play with the Condair Omega steam generator.

Intended use

The SPA Display is intended exclusively for the configuration and operation of the SPA control software of the Condair Delta SPA Control Box according to the instructions in this manual. Any other type of application, without the written consent of Condair Ltd., is considered as not conforming with the intended purpose and may lead to the Condair Delta SPA Control Box becoming dangerous and will void any warranty.
Operation of the equipment in the intended manner requires **that all the information contained in this operation manual, in the additional manuals to the Condair Delta SPA Control Box as well as in the separate documentations of the components used together with the Condair Delta SPA Control Box are observed (in particular all safety instructions)**.

Preventing unsafe operation

If it is suspected that **safe operation of the SPA system is no longer possible**, the Condair Delta SPA Control Box should immediately **be shut down and secured against accidental power-up according**. This can be the case under the following circumstances:

– if the Condair Delta SPA Control Box and/or the SPA display is damaged
– if the electrical installations are damaged
– if the Condair Delta SPA Control Box and/or the SPA display are no longer operating correctly
– if connections and/or piping are not sealed

All persons working with the Condair Delta SPA Control Box and the SPA display must report any alterations to the units that may affect safety to the owner without delay.

Prohibited modifications to the unit

No modifications must be undertaken on the SPA display and the without the express written consent of Condair Ltd.

For the replacement of defective components use exclusively **original accessories and spare parts** available from your Condair representative.

3 Overview

3.1 Overview SPA Display

The SPA Display is connected to the Condair Delta SPA Control Box and / or the Condair Omega via the CAN BUS. Up to 8 SPA displays can be connected via the CAN BUS. The system can be operated and configured via any of these SPA displays. *Fig. 1* shows possible connection variants.

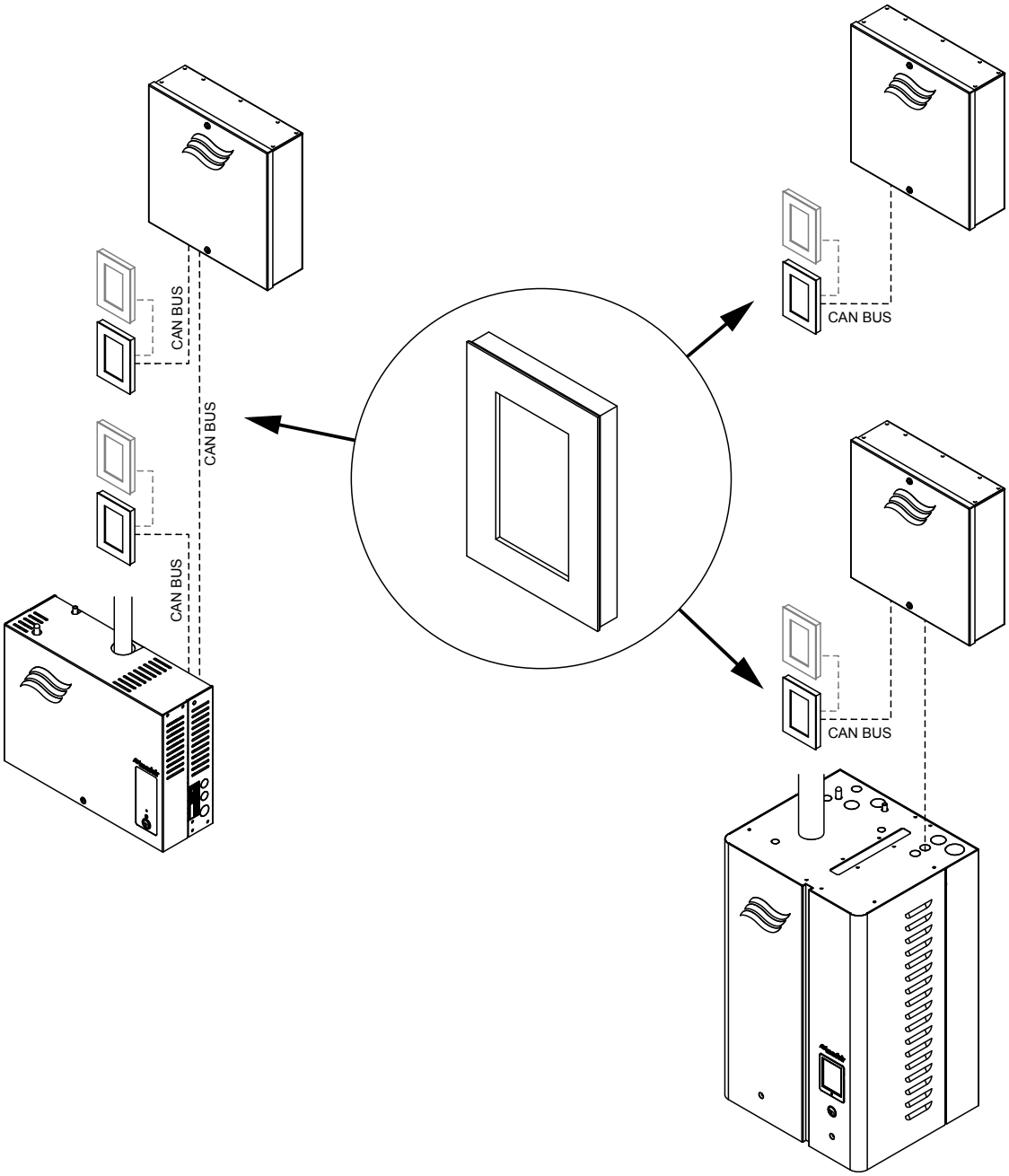


Fig. 1: Examples of connection variants of the SPA displays

4 Operation

The SPA Display and the Condair Delta SPA Control Box must be commissioned and operated only by persons familiar with the SPA Display and the Condair Delta SPA Control Box and adequately qualified. It is the owner's responsibility to verify proper qualification of the personnel.

4.1 First-time commissioning

The first-time commissioning must always be done by a service technician of your Condair representative or a well trained and authorised person of the customer. Therefore the current manual does not provide detailed information on this procedure.

The following steps are carried out upon first-time commissioning in the specified order:

- Inspecting the SPA Display and the Condair Delta SPA Control Box for correct installation.
- Inspecting the electrical installation.
- Inspecting the installations of the components controlled by the Condair Delta SPA Control Box
- Configuring the control software of the Condair Delta SPA Control Box via the SPA Display (see *chapter 6.1*) or via the integrated web interface (see separate web interface operation manual) .
- Carrying out test runs including checking of the control and monitoring devices.
- Filling out the commissioning record.

4.2 Display and operating elements

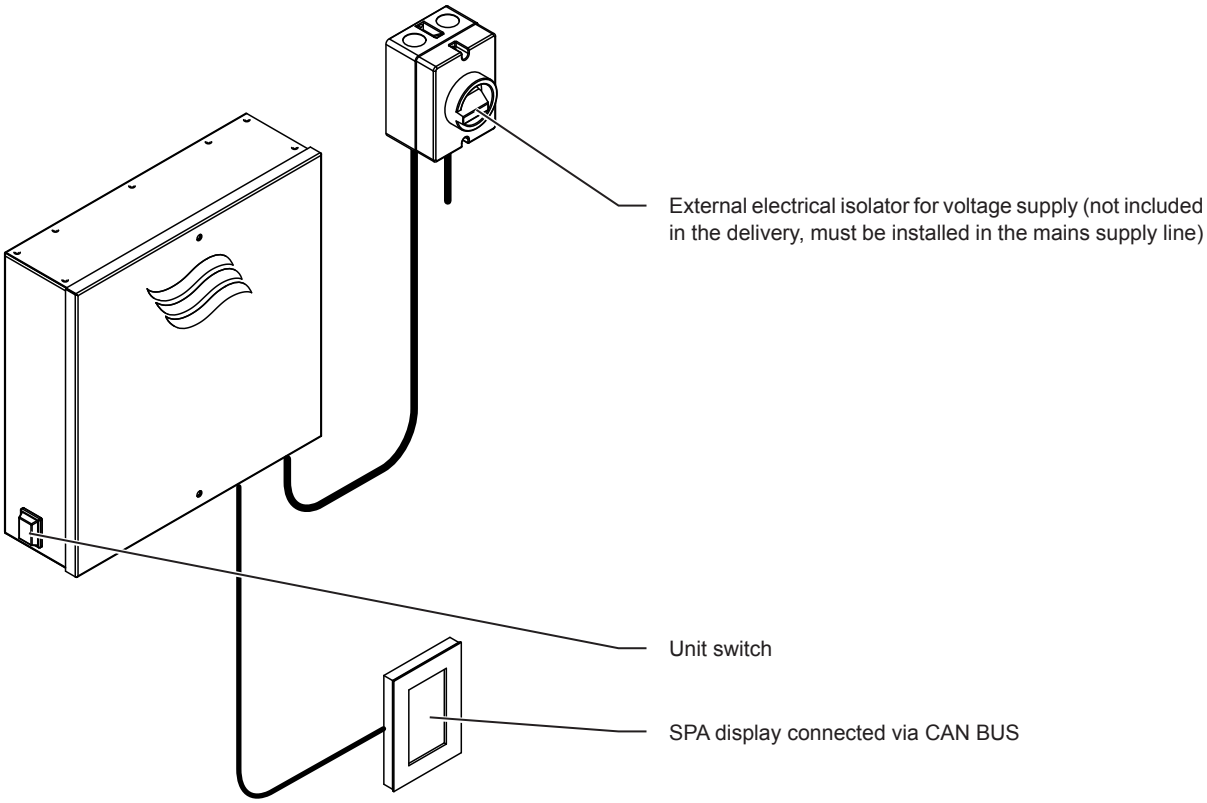


Fig. 2: Display and operating elements

DANGER!
Risk of electric shock!

After switching off the unit switch, there is still live voltage inside the Condair Delta SPA Control Box. **Therefore, before opening the Condair Delta SPA Control Box the unit must be always separated from the mains supply via the electrical isolator.**

4.3 Commissioning after an interruption of operation

The following description outlines the start up procedure after an interruption of operation. It is assumed that first-time commissioning has been carried out properly by the service technician of your Condair representative and the Condair Delta SPA Control Box has been configured accordingly.

1. Make sure the housing cover is attached to the Condair Delta SPA Control Box and locked with the two screws with the gaskets.
2. Swith on the external electrical isolator(s) in the power supply/supplies.
3. Switch on the unit switch on the left side of the Condair Delta SPA Control Box.

   As soon as the Condair Delta SPA Control Box is switched on via the unit switch, the SPA display(s) will be started and the home screen will be displayed.
4. If the Condair Delta SPA Control Box is operated together with a steam generator, start up the steam generator in accordance with the steam generator operating instructions.

4.4 Taking the unit out of operation

To take the Condair Delta SPA Control Box out of operation, for example, for the annual inspection, proceed as follows:

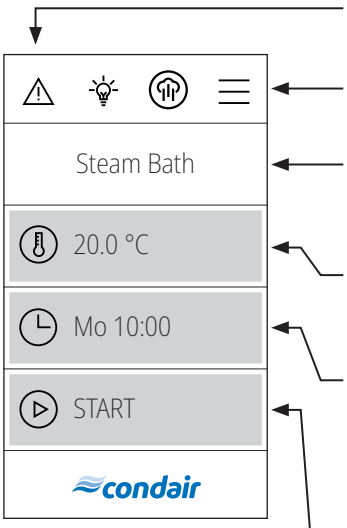
1. Switch off the Condair Delta SPA Control Box via the unit switch on the left side of the unit.
2. **Disconnect Condair Delta SPA Control Box from the mains**: Switch off the electrical isolator(s) in the mains supply line(s) and secure switch(es) in "**Off**" position against accidentally being switched on, or clearly mark the switch.
3. If the Condair Delta SPA Control Box is operated together with a steam generator and, if necessary, take the steam generator out of operation in accordance with the operating instructions of the steam generator.

5 Working with the SPA-Display

5.1 Home screens

After switching on the Condair Delta SPA Control Box the **home screen** is shown in the SPA Display. The appearance of the home screen depends on the configuration of the control software of the Condair Delta SPA Control Box.

5.1.1 Home screen "Steam bath application"



Warning triangle (function see *chapter 5.2*)

Function and navigation elements (see *chapter 5.3*)

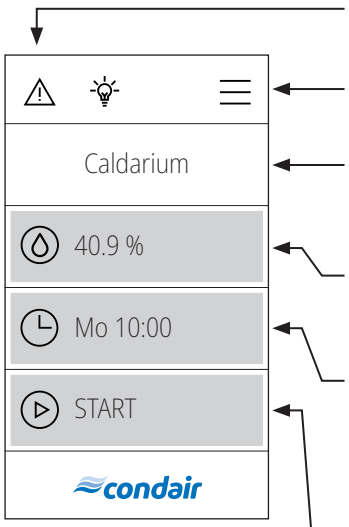
Selected SPA application
Note: With dual cabin application, you can toggle between the two applications by pressing on the SPA application field.

Current temperature in the steam cabin in °C/°F.
Note: By pressing this button you access the settings window for determining the temperature setpoint value.

Next starting time for day timer (time only) or week timer (day of the week and time) controlled bathing operation, or "Off" if no day timer has been set.
Note: Pressing this button opens the settings menu for configuring the day timer settings.
Note: After having started the bathing operation (via the <START> button or the timer), this field displays the remaining time until the end of the bathing operation.
Note: This field is only displayed if the day timer function (factory setting) and/or the week timer function is/are activated in the "Engineering" menu.

<START>/<STOP> button
Note: By pressing the <START> button you start the bathing operation, the button changes to <STOP>. By pressing the <STOP> button you can stop the bathing operation at any time.

5.1.2 Home screen "Caldarium application"



Warning triangle (function see *chapter 5.2*)

Function and navigation elements (see *chapter 5.3*)

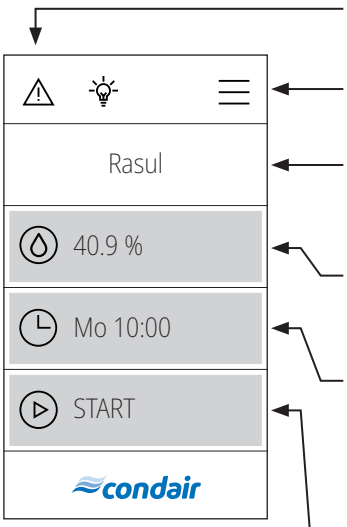
Selected SPA application
Note: With dual cabin application, you can toggle between the two applications by pressing on the SPA application field.

Current humidity in the Caldarium cabin in %.
Note: By pressing this button you access the settings window for determining the humidity setpoint value.

Next starting time for day timer (time only) or week timer (day of the week and time) controlled bathing operation, or "Off" if no day timer has been set.
Note: Pressing this button opens the settings menu for configuring the day timer settings.
Note: After having started the bathing operation (via the <START> button or the timer), this field displays the remaining time until the end of the bathing operation.
Note: This field is only displayed if the day timer function (factory setting) and/or the week timer function is/are activated in the "Engineering" menu.

<START>/<STOP> button
Note: By pressing the <START> button you start the bathing operation, the button changes to <STOP>. By pressing the <STOP> button you can stop the bathing operation at any time.

5.1.3 Home screen "Rasul application"



Warning triangle (function see *chapter 5.2*)

Function and navigation elements (see *chapter 5.3*)

Selected SPA application
Note: With dual cabin application, you can toggle between the two applications by pressing on the SPA application field.

Current humidity in the Rasul cabin in %.
Note: By pressing this button you access the settings window for determining the humidity setpoint value.

Next starting time for day timer (time only) or week timer (day of the week and time) controlled bathing operation, or "Off" if no day timer has been set.
Note: Pressing this button opens the settings menu for configuring the day timer settings.
Note: After having started the bathing operation (via the <START> button or the timer), this field displays the remaining time until the end of the bathing operation.
Note: This field is only displayed if the day timer function (factory setting) and/or the week timer function is/are activated in the "Engineering" menu.

<START>/<STOP> button
Note: By pressing the <START> button you start the Rasul operation, the button changes to <STOP>. By pressing the <STOP> button you can stop the Rasul operation at any time.

5.2 Function of the warning triangle

The warning triangle has the following functions:

Warning triangle	Description
⚠	Warning triangle lights **grey**: The Condair Delta SPA Control Box operates trouble free.
⚠	Warning triangle lights **yellow**: A warning is present or a maintenance is due. The Condair Delta SPA Control Box continues operation. However, depending on the type of warning, certain restrictions in the operation may occur.
⚠	Warning triangle lights **red**: An fault is present. Depending on the type of fault the Condair Delta SPA Control Box is stopped or continous normal operation.

5.3 Function and navigation elements

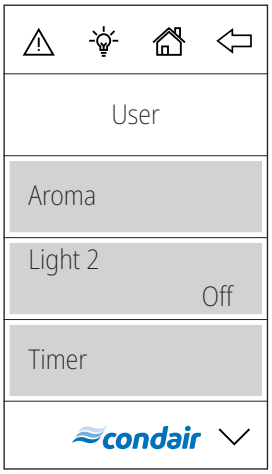
Navigation element	Action
☰	<Menu> button - Accessing the main menu Note: If "Display lock" is set to "On" a password (factory set password "0000") must be entered in order to be able to access the main menu.
🏠	<Home> button - Back to home screen
	<Steam Blast> button - Start and stop of the steam blast function Note: This element only appears on the home screen if the steam blast function has been activated in the menu.
💡	Taste <Cleaning Light> button - Switching the cleaning light on and off
⇦	Jumps back to previous screen (Cancel and back)
∨ ∧	Scroll up/down in the present window or selecting settings options.
✓	Confirm set value or selection (<Tick> button).
✕	Cancel or back to previous screen (<Cancel> button).

5.4 Configuration of the control software

5.4.1 Accessing the main menu

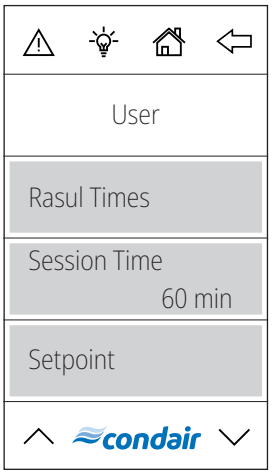
Press the <Menu> button on the top right corner of the display. Then, enter the password "0000" (if main menu is configured with password protection). The main menu appears.
Note: The password for the user menu can be modified in the "Engineering > Admin > Password" submenu.

The content of the user menu depends on the selected SPA application. The following description of the settings in the user menu lists all available parameters of the user menu.

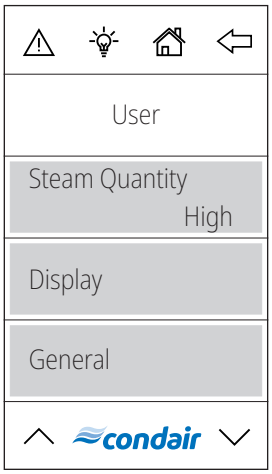
User menu		
	**Aroma**	
	Aroma 1	Setting the intensity level (Level 1 ... Level 5) of the fragrance pump 1 or switching off the fragrance pump 1. **Note**: This menu item appears only if Aroma 1 Mode in the "Engineering" menu is set to "Interval" or "External".
	Aroma 2	Setting the intensity level (Level 1 ... Level 5) of the fragrance pump 2 or switching off the fragrance pump 2. **Note**: This menu item appears only if Aroma 2 Mode in the "Engineering" menu is set to "Interval" or "External".
	Light 2	Turning on and off light 2. **Note**: This menu item appears only if Light 2 Mode in the "Engineering" menu is set to "Auto" or "Manual". **Note**: Light 1 can be switched on and off via the lamp icon at the top of the display.
	Timer	

	Day Timer	In the day timer menu, you can specify when the next bathing operation should be started. For that, set the time of the day and the duration of the bathing operation. The bathing operation starts automatically at the set point of time with the corresponding settings. **The day timer is carried out only once**.
		Settings:
		– Timer Mode:
		  – Off: Day timer deactivated
		  – Time: Bathing operation starts time of day controlled.
		– Start Time: Setting the starting time when the bathing operation should start (appears only if "Timer Mode" is set to "Time")
		– Duration: Setting the duration of the bathing operation in minutes.

	Week Timer	The programming of the week timer is equal as the day timer, however with the week timer the bathing operation is **repeated**. For each week day/week day range individual settings can be configured. A maximum of 10 week days/ week day ranges can be specified.
		Note: If the selected time of day is already past, the bathing operation will start on the next set point of time.
		
		Settings:
		– Week Day: Setting the week day or week day range at which the week timer shall be active (Mo-Fr, Mo-Sa, Sa-Su, Mo, Tu, We, Th, Fr, Sa, Su) or deactivating the week timer.
		– Start Time: Setting the time of day at which the bathing operation should start
		– Duration: Setting the duration of the bathing operation in minutes.
		– Sauna mode: (not applicable)
		– Temperature: Enter the cabin temperature setpoint value in °C/°F for temperature controlled steam shower and steam bath application.
		– Humidity: Setting the cabin humidity setpoint in %rh for Caldarium application and Rasul application.
		– Steam Mode: Setting the application mode for the steam shower operation.
		  – Constant Steam
		  – Temp. Control
		– Setpoint: Setting the temperature setpoint (appears only if "Steam Mode" is set to "Temp. Control").
		– Steam Quantity: Setting the steam capacity level "Low", "Mid" or "High" for constant steam operation (appears only if "Steam Mode" is set to "Constant steam").



Rasul Times **Note**: This menu item only appears if the car type in the "Engineering" menu is set to "Rasul"!	
Treatment Time	Setting the treatment time in minutes for the Rasul application
Bath Time	Setting the bathing time in minutes for the Rasul application
Shower Time	Setting the shower time in minutes for the Rasul application
Session Time	Setting the duration of the bathing operation in minutes.
Setpoint	
Temperature	Setting the cabin temperature setpoint value in °C/°F for temperature controlled steam shower and steam bath application.
Humidity	Setting the cabin humidity setpoint value in %rF for Caldarium application and Rasul application.
Bench Temp.	Setting the temperature setpoint value for the bench heating in °C/°F for steam bath application with optional bench heating, Caldarium application and Rasul application. **Note**: This menu item only appears if the mode of relay 8 or relay 9 in the "Engineering" menu is set to "Bench heating".
Wall Temp.	Setting the temperature setpoint value for the wall heating in °C/°F for Caldarium application and Rasul application. **Note**: This menu item only appears if the mode of relay 8 or relay 9 in the "Engineering" menu is set to "Wall heating".



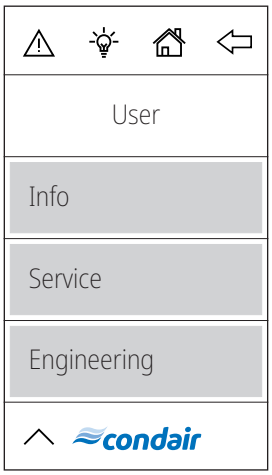
Steam Quantity
Note: This menu item appears only when the steam shower mode in the "Engineering" menu is set to "Constant steam".

In this submenu you determine the steam production for steam shower operation with constant steam production. You can select between three levels ("Low", "Mid" and "High").

The following table shows the steam capacities in % for each level:

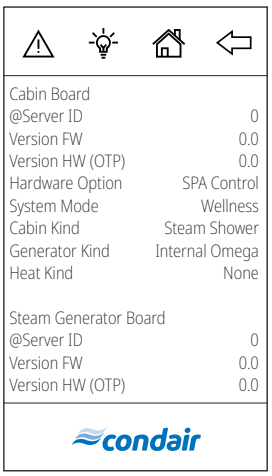
	Low	Mid	High
Omega 2	100 %	n/v	n/v
Omega 4	50 %	n/v	100 %
Omega 6	50 %	n/v	100 %
Omega 8	50 %	100 %	100 %
Omega 12	33 %	66 %	100 %
Omega 16	25 %	75 %	100 %
Omega 20	20%	60 %	100 %

Display	
Display Lock	Activating ("On") or deactivating ("Off") the password protection for the main menu. **Note**: The main menu password can be adjusted in the "Engineering" menu! If the password gets lost the display lock can be unlocked any time with the passwords 3562 or 1055.
Language	Selecting the dialogue language of SPA Display.
Brightness	Adjusting the brightness of the SPA display.
Screen Saver Mode	Activating ("On") or deactivating ("Off") the screen saver mode (factory setting: "Off").
Screen Saver Timeout	Adjusting the screen saver timout after which the display is switched off (factory setting: "10 min"). Note: Appears only if "Screen saver Mode" is set to "On".
Theme	Defining the appearance of SPA Display ("Light" or "Dark").
Units	Selecting the units system ("metric" or "imperial").
Date Format	Selecting the date format ("jjjj-mm-tt", "tt.mm.jjjj", "tt/mm/jjjj" or "mm/tt/jjjj")
General	
Date	Setting the current date in the specified date format.
Time	Setting the current time of day in the format "hh:mm".



Info

Display of device information.



Service

Information regarding the "Service" menu can be found *chapter 6.2*.

Engineering

Information regarding the "Engineering" menu can be found *chapter 6.3*.

6 Configuration of SPA control software

The SPA control software is configured via the "Service" and the "Engineering" menu. *chapter 6.1* describes the configuration processes for the respective SPA applications. In *chapter 6.2* and *chapter 6.3* you will find an overview of the setting parameters of the "Service" and the "Engineering" menu.

6.1 Configuration processes based on the SPA application

6.1.1 Configuration procedure for steam bath application

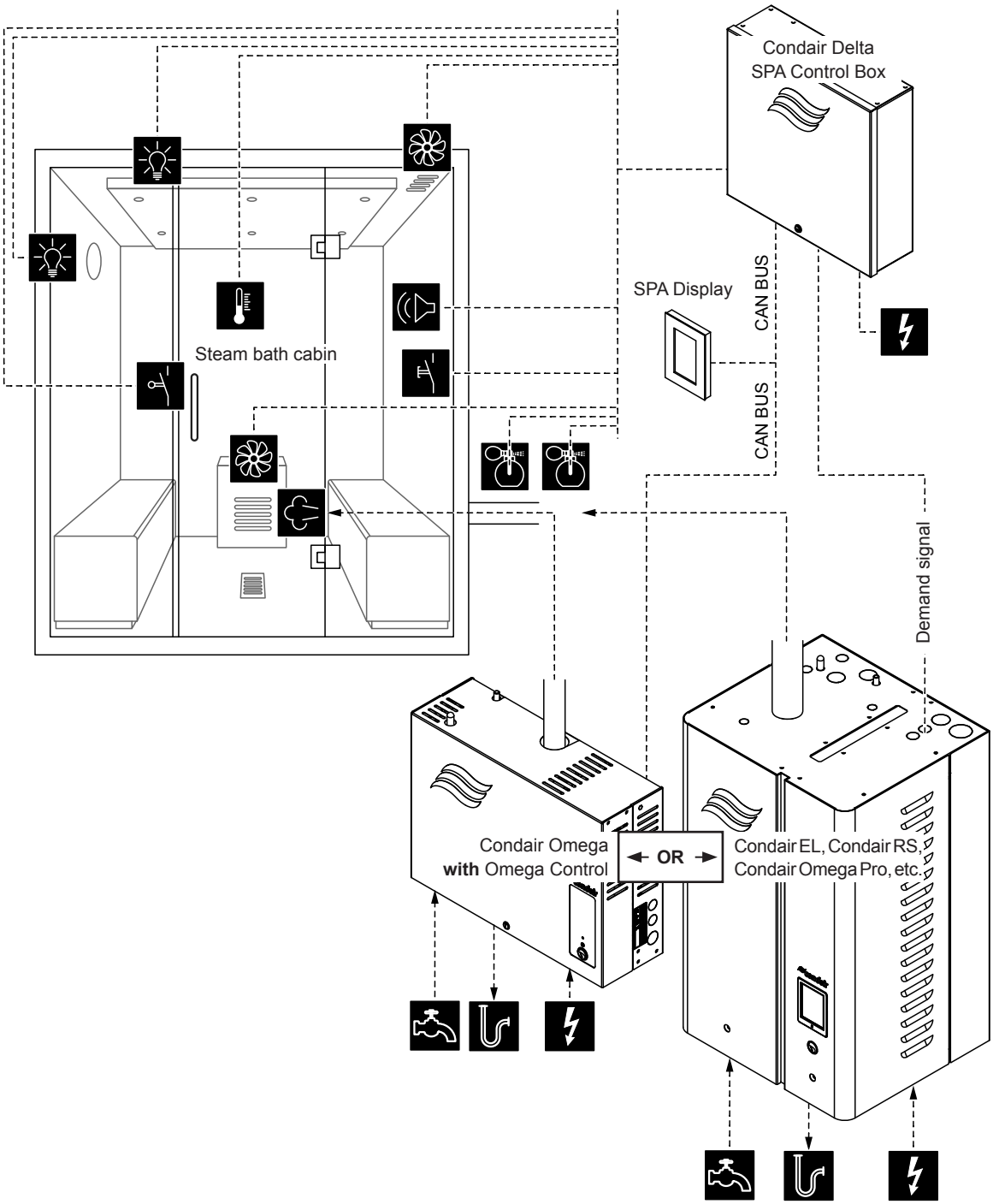


Fig. 3: Condair Delta SPA Control Box with equipment for steam bath application

Configuration procedure for steam bath application:

1. Reset SPA Control to factory settings.
   (Path: Engineering > SPA Control Board > Factory Reset)
2. **Important**: This step must be carried out only with single cabin application:
   Reset SPA Display to factory settings.
   (Path: Engineering > Admin > Display > Factory Reset)
3. Set cabin type to "**Steam Ba**th".
   (Path: Engineering > SPA Control Board > Cabin Kind > Steam Bath)
4. Set steam generator type:
   (Path: Engineering > SPA Control Board > Generator Kind)
   - "**Internal Omega**" if a Condair Omega with SPA control is used or
   - "**External Omega**" if a Condair Omega with Omega control is used or
   - "**External Analog**" if a demand signal controlled steam generator is used (e.g. Condair Sigma, Condair Omega Pro, etc.).
5. Determine temperature control settings:
   (Path: Engineering > Control Settings > Temperature Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears
6. Determine accessory control:
   (Path: Engineering > Accessories)
   - Determine the control of Light 1 and Light 2
   - Determine the control of the fragrance pump 1 (Aroma 1) and fragrance pump 2 (Aroma 2)
   - Determine the fan control (for single stage fans 1 and 2)
   - Determine the control of relay 8 and 9
7. If steam generator type "External Omega" has been selected, the menu control for the Condair Delta SPA Control Box (Cabin 1) and the Condair Omega (Steam Generator 1) must be set as follows:
   - Cabin 1: "Enable" to "On" and Server ID to "0"
     (Path: Engineering > Menu Tree > Cabin 1)
   - Steam Generator 1: "Enable" to "On" and Server ID to "1":
     (Path: Engineering > Menu Tree > Steam Generator 1)

   Note: The server ID can be set with the rotary switch "SW1" on the SPA/Omega control board (see Condair Omega or Condair Delta SPA Control Box installation manual).
8. If steam generator type "External Omega" has been selected:
   - Configure the external Omega as "Steam Generator".
     (Path: Engineering > Omega Control Board > System Mode > Steam Generator)
   - Set the control source of the steam generator to remote control ("Remote").
     (Path: Engineering > Steam Generator > Steaming Settings > Control Source > Remote)
   - Set the steam generator type of the Condair Omega to "Internal Omega".
     (Path: Engineering > Omega Control Board > Generator Kind > Internal Omega)

9. If steam generator type "Internal Omega" or "External Omega" has been selected, the unit size must be determined.
   - Read the unit size on the type plate of the Condair Omega and read out the corresponding values from the following table.

Unit size	Power per stage	Capacity
2 kg/h	1.5 kW	2 kg
4 kg/h [1)]	1.5 kW	4 kg
6 kg/h	2.25 kW	6 kg
8 kg/h	3 kW	8 kg
12 kg/h	3 kW	12 kg
16 kg/h	3 kW	16 kg
20 kg/h	3 kW	20 kg

   [1)] Older Omega 4kg/h units are equipped with a single 3kW heating element. For these devices, the power per stage must be set to 3 kW.

   - Set the power per stage according to the table value.
     (Path: Engineering > SPA Control Board > System Mode > Power per Stage)
   - Set the capacity according to the table value.
     (Path: Engineering > Steam Generator > Tank Settings > Capacity)

10. If steam generator type "Internal Omega" or "External Omega" has been selected, the following additional settings must be made in the "Service" menu.
    - Determine the supply water type ("Tap Water", "RO" or "Filter Cartridge") and the carbonate hardness of the supply water (only if water supply type is set to " Tap Water" or "Filter Cartridge")
      (Path: Service > Steam Generator > Water Supply > Type)
    - Determine cartridge size (only if water supply type is set to "Filter Cartridge")
      (Path: Service > Steam Generator > Filter Cartridge > Cartridge Size)

11. Set current date and time of day:
    (Path: User > General)
    - Set date
    - Set time of day

6.1.2 Configuration procedure for steam bath application with optional bench heating

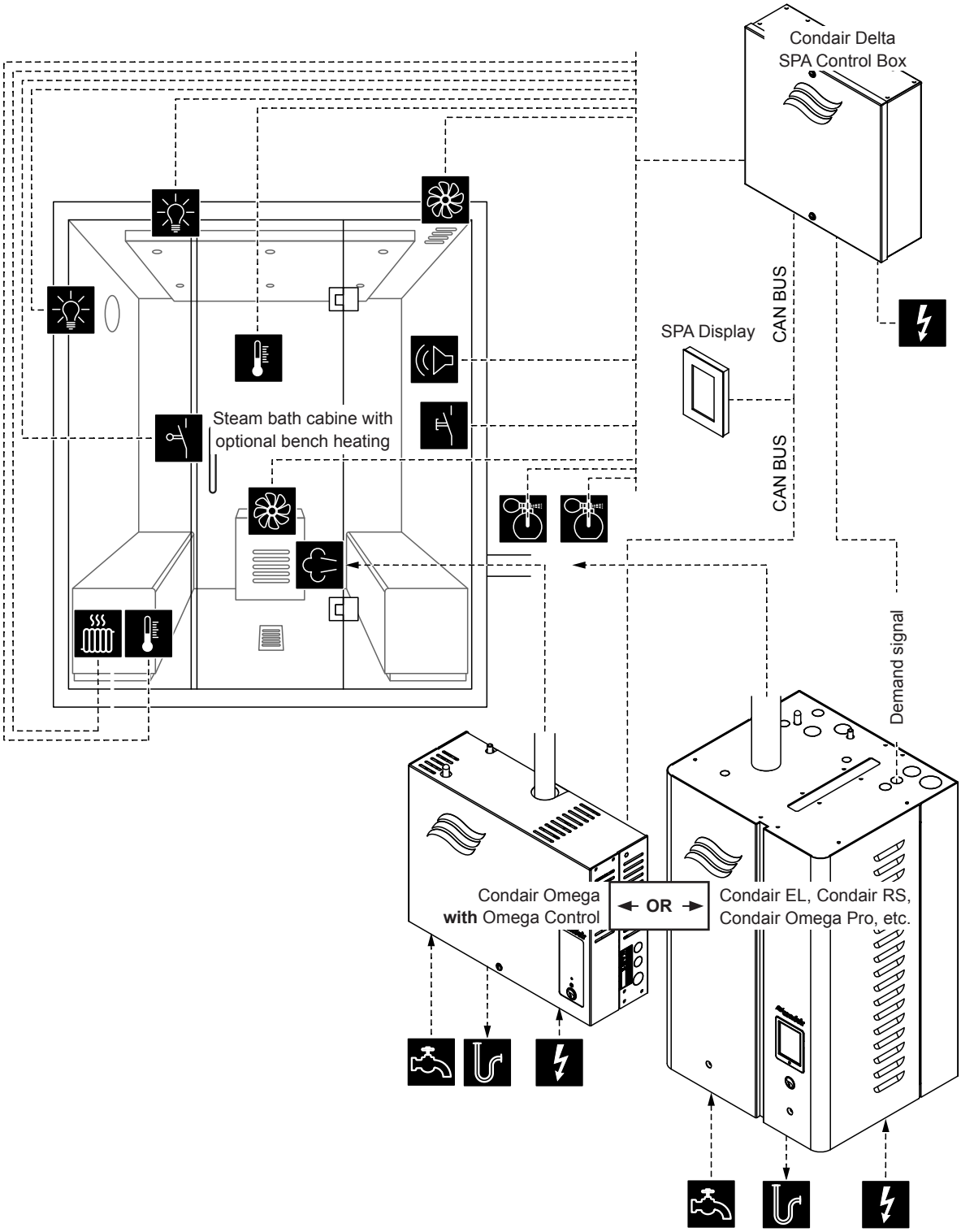


Fig. 4: Condair Delta SPA Control Box with equipment for steam bath application with optional bench heating

Configuration procedure for steam bath application with optional bench heating:

1. Reset SPA Control to factory settings.
   (Path: Engineering > SPA Control Board > Factory Reset)
2. **Important**: This step must be carried out only with single cabin application:
   Reset SPA Display to factory settings.
   (Path: Engineering > Admin > Display > Factory Reset)
3. Set cabin type to "**Steam Ba**th".
   (Path: Engineering > SPA Control Board > Cabin Kind > Steam Bath)
4. Set steam generator type:
   (Path: Engineering > SPA Control Board > Generator Kind)
   - "**Internal Omega**" if a Condair Omega with SPA control is used or
   - "**External Omega**" if a Condair Omega with Omega control is used or
   - "**External Analog**" if a demand signal controlled steam generator is used (e.g. Condair Sigma, Condair Omega Pro, etc.).
5. Determine temperature control settings:
   (Path: Engineering > Control Settings > Temperature Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears
6. Determine accessory control:
   (Path: Engineering > Accessories)
   - Determine the control of Light 1 and Light 2
   - Determine the control of the fragrance pump 1 (Aroma 1) and fragrance pump 2 (Aroma 2)
   - Determine the fan control (for single stage fans 1 and 2)
   - Determine the control of relay 8 and 9 (Path: Engineering > Accessories > Outputs)
     - "Relay 8 Mode": Set to "Bench Heater" to activate the bench heating
     - "Relay 9 Mode": freely configurable
7. Determine temperature control settings for the bench heating:
   (Path: Engineering > Control Settings > Bench Temp. Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears.
8. If steam generator type "External Omega" has been selected, the menu control for the Condair Delta SPA Control Box (Cabin 1) and the Condair Omega (Steam Generator 1) must be set as follows:
   - Cabin 1: "Enable" to "On" and Server ID to "0"
     (Path: Engineering > Menu Tree > Cabin 1)
   - Steam Generator 1: "Enable" to "On" and Server ID to "1":
     (Path: Engineering > Menu Tree > Steam Generator 1)

   Note: The server ID can be set with the rotary switch "SW1" on the SPA/Omega control board (see Condair Omega or Condair Delta SPA Control Box installation manual).
9. If steam generator type "External Omega" has been selected:
   - Configure the external Omega as "Steam Generator".
     (Path: Engineering > Omega Control Board > System Mode > Steam Generator)
   - Set the control source of the steam generator to remote control ("Remote").
     (Path: Engineering > Steam Generator > Steaming Settings > Control Source > Remote)
   - Set the steam generator type of the Condair Omega to "Internal Omega".
     (Path: Engineering > Omega Control Board > Generator Kind > Internal Omega)

10. If steam generator type "Internal Omega" or "External Omega" has been selected, the unit size must be determined.
    - Read the unit size on the type plate of the Condair Omega and read out the corresponding values from the following table.

Unit size	Power per stage	Capacity
2 kg/h	1.5 kW	2 kg
4 kg/h [1)]	1.5 kW	4 kg
6 kg/h	2.25 kW	6 kg
8 kg/h	3 kW	8 kg
12 kg/h	3 kW	12 kg
16 kg/h	3 kW	16 kg
20 kg/h	3 kW	20 kg

    [1)] Older Omega 4kg/h units are equipped with a single 3kW heating element. For these devices, the power per stage must be set to 3 kW.

    - Set the power per stage according to the table value.
      (Path: Engineering > SPA Control Board > System Mode > Power per Stage)
    - Set the capacity according to the table value.
      (Path: Engineering > Steam Generator > Tank Settings > Capacity)
11. If steam generator type "Internal Omega" or "External Omega" has been selected, the following additional settings must be made in the "Service" menu.
    - Determine the supply water type ("Tap Water", "RO" or "Filter Cartridge") and the carbonate hardness of the supply water (only if water supply type is set to " Tap Water" or "Filter Cartridge")
      (Path: Service > Steam Generator > Water Supply > Type)
    - Determine cartridge size (only if water supply type is set to "Filter Cartridge")
      (Path: Service > Steam Generator > Filter Cartridge > Cartridge Size)
12. Set current date and time of day:
    (Path: User > General)
    - Set date
    - Set time of day

6.1.3 Configuration procedure for Caldarium application

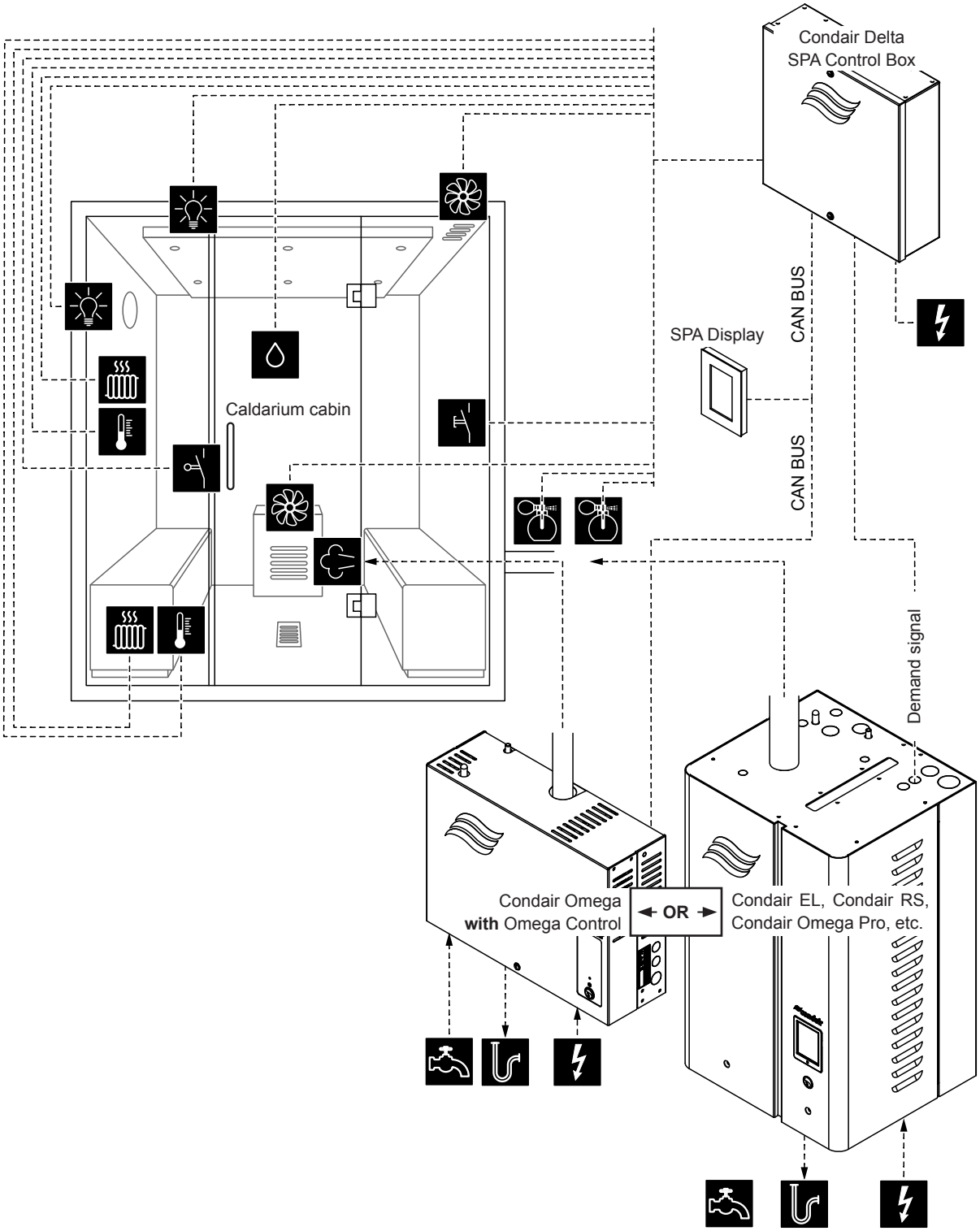


Fig. 5: Condair Delta SPA Control Box with equipment for Caldarium application

Configuration procedure for Caldarium application:

1. Reset SPA Control to factory settings.
   (Path: Engineering > SPA Control Board > Factory Reset)
2. **Important**: This step must be carried out only with single cabin application:
   Reset SPA Display to factory settings.
   (Path: Engineering > Admin > Display > Factory Reset)
3. Set cabin type to "**Caldarium**".
   (Path: Engineering > SPA Control Board > Cabin Kind > Caldarium)
4. Set steam generator type:
   (Path: Engineering > SPA Control Board > Generator Kind)
   - "**Internal Omega**" if a Condair Omega with SPA control is used or
   - "**External Omega**" if a Condair Omega with Omega control is used or
   - "**External Analog**" if a demand signal controlled steam generator is used (e.g. Condair Sigma, Condair Omega Pro, etc.).
5. Determine humidity control settings:
   (Path: Engineering > Control Settings > Humidity Control)
   - Determine the humidity sensor signal type ("0 - 5V", "1 - 5V", "0 - 10V", "2 - 10V", "0 - 20V", "0 - 16V", "3 - 16V", "0 - 20mA", "4 - 20mA", "On/Off" or "0 - 4V")
6. Determine accessory control:
   (Path: Engineering > Accessories)
   - Determine the control of Light 1 and Light 2
   - Determine the control of the fragrance pump 1 (Aroma 1) and fragrance pump 2 (Aroma 2)
   - Determine the fan control (for single stage fans 1 and 2)
   - Determine the control of relay 8 and 9 (Path: Engineering > Accessories > Outputs)
     - "Relay 8 Mode": Set to "Bench Heater" to activate the bench heating
     - "Relay 8 Mode": Set to "Wall Heater" to activate the wall heating
7. Determine temperature control settings for the bench heating:
   (Path: Engineering > Control Settings > Bench Temp. Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears.
8. Determine temperature control settings for the wall heating:
   (Path: Engineering > Control Settings > Wall Temp. Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears.
9. If steam generator type "External Omega" has been selected, the menu control for the Condair Delta SPA Control Box (Cabin 1) and the Condair Omega (Steam Generator 1) must be set as follows:
   - Cabin 1: "Enable" to "On" and Server ID to "0"
     (Path: Engineering > Menu Tree > Cabin 1)
   - Steam Generator 1: "Enable" to "On" and Server ID to "1":
     (Path: Engineering > Menu Tree > Steam Generator 1)

   Note: The server ID can be set with the rotary switch "SW1" on the SPA/Omega control board (see Condair Omega or Condair Delta SPA Control Box installation manual).
10. If steam generator type "External Omega" has been selected:
    - Configure the external Omega as "Steam Generator".
      (Path: Engineering > Omega Control Board > System Mode > Steam Generator)
    - Set the control source of the steam generator to remote control ("Remote").
      (Path: Engineering > Steam Generator > Steaming Settings > Control Source > Remote)
    - Set the steam generator type of the Condair Omega to "Internal Omega".
      (Path: Engineering > Omega Control Board > Generator Kind > Internal Omega)

11. If steam generator type "Internal Omega" or "External Omega" has been selected, the unit size must be determined.
    - Read the unit size on the type plate of the Condair Omega and read out the corresponding values from the following table.

Unit size	Power per stage	Capacity
2 kg/h	1.5 kW	2 kg
4 kg/h [1)]	1.5 kW	4 kg
6 kg/h	2.25 kW	6 kg
8 kg/h	3 kW	8 kg
12 kg/h	3 kW	12 kg
16 kg/h	3 kW	16 kg
20 kg/h	3 kW	20 kg

    [1)] Older Omega 4kg/h units are equipped with a single 3kW heating element. For these devices, the power per stage must be set to 3 kW.

    - Set the power per stage according to the table value.
      (Path: Engineering > SPA Control Board > System Mode > Power per Stage)
    - Set the capacity according to the table value.
      (Path: Engineering > Steam Generator > Tank Settings > Capacity)
12. If steam generator type "Internal Omega" or "External Omega" has been selected, the following additional settings must be made in the "Service" menu.
    - Determine the supply water type ("Tap Water", "RO" or "Filter Cartridge") and the carbonate hardness of the supply water (only if water supply type is set to " Tap Water" or "Filter Cartridge")
      (Path: Service > Steam Generator > Water Supply > Type)
    - Determine cartridge size (only if water supply type is set to "Filter Cartridge")
      (Path: Service > Steam Generator > Filter Cartridge > Cartridge Size)
13. Set current date and time of day:
    (Path: User > General)
    - Set date
    - Set time of day

6.1.4 Configuration procedure for Rasul application

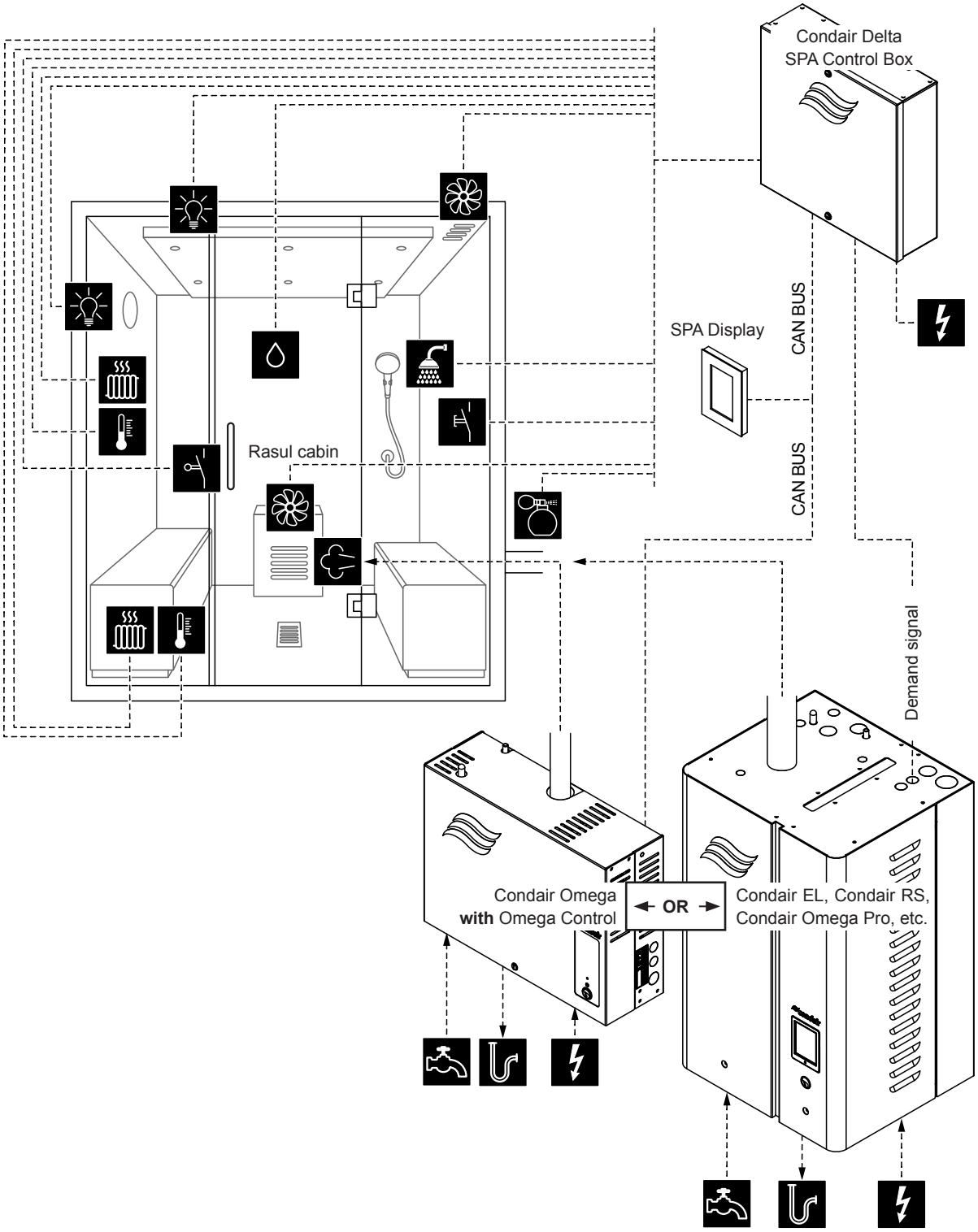


Fig. 6: Condair Delta SPA Control Box with equipment for Rasul application

Configuration procedure for Rasul application:

1. Reset SPA Control to factory settings.
   (Path: Engineering > SPA Control Board > Factory Reset)
2. **Important**: This step must be carried out only with single cabin application:
   Reset SPA Display to factory settings.
   (Path: Engineering > Admin > Display > Factory Reset)
3. Set cabin type to "**Rasul**".
   (Path: Engineering > SPA Control Board > Cabin Kind > Rasul)
4. Set steam generator type:
   (Path: Engineering > SPA Control Board > Generator Kind)
   - "**Internal Omega**" if a Condair Omega with SPA control is used or
   - "**External Omega**" if a Condair Omega with Omega control is used or
   - "**External Analog**" if a demand signal controlled steam generator is used (e.g. Condair Sigma, Condair Omega Pro, etc.).
5. Set the treatment mode for Rasul operation ("Off" or "Keep Warm")
   (Path: Engineering > Control Settings > Treatment Mode)

   Note: Further notes on the treatment mode can be found in *chapter 6.3*)
6. Determine humidity control settings:
   (Path: Engineering > Control Settings > Humidity Control)
   - Determine the humidity sensor signal type ("0 - 5V", "1 - 5V", "0 - 10V", "2 - 10V", "0 - 20V", "0 - 16V", "3 - 16V", "0 - 20mA", "4 - 20mA", "On/Off" or "0 - 4V")
7. Determine accessory control:
   (Path: Engineering > Accessories)
   - Determine the control of Light 1 and Light 2
   - Determine the control of fragrance pump 1 (Aroma 1) and shower valve (Aroma 2)
   - Determine the fan control (for single stage fans 1 and 2)
   - Determine the control of relay 8 and 9 (Path: Engineering > Accessories > Outputs)
     - "Relay 8 Mode": Set to "Bench Heater" to activate the bench heating
     - "Relay 8 Mode": Set to "Wall Heater" to activate the wall heating
8. Determine temperature control settings for the bench heating:
   (Path: Engineering > Control Settings > Bench Temp. Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears.
9. Determine temperature control settings for the wall heating:
   (Path: Engineering > Control Settings > Wall Temp. Control)
   - Select temperature sensor type ("PT100", "PT1000 (0.1mA)", "PT1000 (1.0mA)", "KTY (1.0mA)")
   - Set the critical temperature in °C/°F above which a warning appears.
10. If steam generator type "External Omega" has been selected, the menu control for the Condair Delta SPA Control Box (Cabin 1) and the Condair Omega (Steam Generator 1) must be set as follows:
    - Cabin 1: "Enable" to "On" and Server ID to "0"
      (Path: Engineering > Menu Tree > Cabin 1)
    - Steam Generator 1: "Enable" to "On" and Server ID to "1":
      (Path: Engineering > Menu Tree > Steam Generator 1)

    Note: The server ID can be set with the rotary switch "SW1" on the SPA/Omega control board (see Condair Omega or Condair Delta SPA Control Box installation manual).

11. If steam generator type "External Omega" has been selected:
    - Configure the external Omega as "Steam Generator".
      (Path: Engineering > Omega Control Board > System Mode > Steam Generator)
    - Set the control source of the steam generator to remote control ("Remote").
      (Path: Engineering > Steam Generator > Steaming Settings > Control Source > Remote)
    - configurer le type de générateur du Condair Omega sur "Omega intern".
      (Chemin d'accès : Ingénierie > Pla cd Omega > Type générat > Omega intern)
12. If steam generator type "Internal Omega" or "External Omega" has been selected, the unit size must be determined.
    - Read the unit size on the type plate of the Condair Omega and read out the corresponding values from the following table.

Unit size	Power per stage	Capacity
2 kg/h	1.5 kW	2 kg
4 kg/h [1)]	1.5 kW	4 kg
6 kg/h	2.25 kW	6 kg
8 kg/h	3 kW	8 kg
12 kg/h	3 kW	12 kg
16 kg/h	3 kW	16 kg
20 kg/h	3 kW	20 kg

    [1)] Older Omega 4kg/h units are equipped with a single 3kW heating element. For these devices, the power per stage must be set to 3 kW.

    - Set the power per stage according to the table value.
      (Path: Engineering > SPA Control Board > System Mode > Power per Stage)
    - Set the capacity according to the table value.
      (Path: Engineering > Steam Generator > Tank Settings > Capacity)
13. If steam generator type "Internal Omega" or "External Omega" has been selected, the following additional settings must be made in the "Service" menu.
    - Determine the supply water type ("Tap Water", "RO" or "Filter Cartridge") and the carbonate hardness of the supply water (only if water supply type is set to " Tap Water" or "Filter Cartridge")
      (Path: Service > Steam Generator > Water Supply > Type)
    - Determine cartridge size (only if water supply type is set to "Filter Cartridge")
      (Path: Service > Steam Generator > Filter Cartridge > Cartridge Size)
14. Set current date and time of day:
    (Path: User > General)
    - Set date
    - Set time of day

6.1.5 Configuration of several SPA displays

If more than one SPA display is used, each SPA display must have assigned a unique display Server ID ("Server ID Display").
(Path: Engineering > Admin > Display > Server ID Display)

Since the SPA displays are connected in series to the CAN BUS, make sure when assigning the Display Server ID that the SPA displays are numbered consecutively in the order of their connection to the CAN BUS. Give each newly added SPA display a new server ID (ID 8 ... 15, ex factory the Display Server ID is set to 8). This ensures that not several displays on the CAN BUS have the same server ID.

6.2 Settings in the "Service" menu

Accessing the "Service" menu

- Press the <Menu> button on the top right corner of the display. Then, enter the password "0000" (if main menu is configured with password protection). The main menu appears.
  Note: The password for the user menu can be modified in the "Engineering > Administration > Password" submenu.
- Select menu item "Service" in the main menu.
- Enter the password ("3562") in the password entry window that appears and confirm. Then, the "Service" menu appears.

Note: The content of the "Service" menu depends on the selected SPA application. The following description of the settings lists all available parameters of the "Service" menu.

Setting parameters Menu "Service"

Error List	Shows the list with the current warning and error messages.
Error History	Shows a list of the last 50 warning and error messages.
Measurement	
Temperature	Currently measured cabin temperature in °C/°F for temperature controlled steam shower and steam bath application.
Humidity	Currently measured cabin humidity in %rF for Caldarium application and Rasul application.
Bench Temp.	Currently measured bench temperature in °C/°F for steam bath application with optional bench heating, Caldarium application and Rasul application. **Note**: This menu item only appears if the mode of relay 8 or relay 9 in the "Engineering" menu is set to "Bench heating".
Wall Temp.	Currently measured wall temperature in °C/°F for Caldarium application and Rasul application. **Note**: This menu item only appears if the mode of relay 8 or relay 9 in the "Engineering" menu is set to "Wall heating".
SPA State	Current status of the cabin ("Off", "Warm Up", "Bathing", "Drying", "Keep Warm" or "Stop").
Steam Generator **Note**: This menu only appears for steam shower and steam bath application, Caldarium application and Rasul application, if the steam generator type is set to "Internal Omega", "Internal Reservoir" "External Omega" or "External Analog" in the menu "Engineering > SPA Control Board > Generator Kind".	
Error List	Shows the list with the current warning and error messages of the Condair Omega steam generator
Error History	Shows a list of the last 50 warning and error messages of the Condair Omega steam generator

Water Supply	Water supply settings for the Condair Omega.
	– Type: Determining the water supply type
	  – Tap Water
	  – RO (Reverse Osmosis Water)
	  – Filter Cartridge
	– Carbonate hardness: Setting the carbonate hardness of the supply water in °dH.
	  Note: This menu item appears only if the supply water type is set to "Tap Water" or "Filter Cartridge".

Device Service	View and reset the service values of the Condair Omega. – Service Done: Resetting the maintenance counter after maintenance has been carried out. – Heat Count: Shows the operating hours extrapolated to 100% steam output – Next Service: Remaining time in hours until the next maintenance is due.

Filter Cartridge	Display, set and reset of the filter cartridge service values.
	– Cartridge Size: Determining the size of the filter cartridge used.
	  – Small
	  – Large
	– Cartridge Replaced: Resetting the maintenance counter after replacing the filter cartridge.
	– Water Count: Shows the water consumption in liters.
	– Replace in: Remaining water consumption in liters until the next replacement of the filter cartridge is due.

Hardware	Hardware information of the heating channels.
	– **Hardware**:
	  – Sw. Cycles 1: Number of switching cycles of heating channel No. 1
	  – Sw. Cycles 2: Number of switching cycles of heating channel No. 2
	  – Sw. Cycles 3: Number of switching cycles of heating channel No. 3
	  – Sw. Cycles 4: Number of switching cycles of heating channel No. 4
	  – Sw. Cycles 5: Number of switching cycles of heating channel No. 5
	  – Replace HW 1: Theoretical remaining switching cycles of heating channel No. 1
	  – Replace HW 2: Theoretical remaining switching cycles of heating channel No. 2
	  – Replace HW 3: Theoretical remaining switching cycles of heating channel No. 3
	  – Replace HW 4: Theoretical remaining switching cycles of heating channel No. 4
	  – Replace HW 5: Theoretical remaining switching cycles of heating channel No. 5
	  – Op. Hours HW 1: Current operating hours of the heating channel No. 1
	  – Op. Hours HW 2: Current operating hours of the heating channel No. 2
	  – Op. Hours HW 3: Current operating hours of the heating channel No. 3
	  – Op. Hours HW 4: Current operating hours of the heating channel No. 4
	  – Op. Hours HW 5: Current operating hours of the heating channel No. 5

Draining	Draining the steam tank drain.
Device test	– Level Test: Performing a functional test of the level unit.
Restart	Restart device software

6.3 Settings in the "Engineering" menu

Accessing the menu "Engineering"

- Press the <Menu> button on the top right corner of the display. Then, enter the password "0000" (if main menu is configured with password protection). The main menu appears.
  Note: The password for the user menu can be modified in the "Engineering > Administration > Password" submenu.
- Select menu item "Engineering" in the main menu.
- Enter the password ("1055") in the password entry window that appears and confirm. Then, the "Engineering" menu appears.

Note: The content of the "Engineering" menu depends on the selected SPA application. The following description of the settings lists all available parameters of the "Engineering" menu.

Setting parameters Menu "Engineering"

SPA Control Board **Note**: This menu appears only on the Condair Delta SPA Control Box and on the Condair Omega with SPA Control.	
System Mode	Determining in which system mode the SPA Control Board should run. – Steam Generator: Setting for the operation of the Condair Omega with Omega Control as a pure steam generator for steam shower application. The steam production is controlled by a demand signal from an external controller. **CAUTION!** With this setting bathing time is not monitored. Make sure that the external control monitors the maximum allowed bathing time! – Wellness: Setting for single cabin application. The control takes place in accordance with the application via the device-specific control of the Condair Delta SPA Control Box or the Condair Omega. – Wellness Dual: (not applicable) – HVAC: (not applicable)
Cabin Kind	Determining of the SPA application – Steam shower **Note**: Steam shower application for the Condair Omega with Omega Control. The steam production is either temperature controlled or with constant steam operation. The following SPA applications appear only on the Condair Delta SPA Control Box and on the Condair Omega with SPA Control. – Steam Bath – Caldarium – Rasul – Bio Sauna (not applicable) – Fin sauna (not applicable)
Generator Kind	Determining of the type of steam generation used for steam shower, steam bath or Rasul application – None: There is no steam generator used. – Internal Omega (not applicable) – Internal Reservoir (not applicable) – External Omega: The steam is produced by a Condair Omega with Omega Control. – External Analog: The steam is produced by an external steam generator, which is controlled by a demand signal.
Signaling	Activation ("On") or deactivation ("Off") of the beeper for fault/warning signalization.
Stage Control	Setting the Eco mode for steam/heat production. – Eco Mode: Activation ("On") or deactivation ("Off") of the Eco mode. Eco operation ensures that not more than 9 kW (3 kW per phase) steam output (heat output) is consumed.

Modbus Settings	Setting the Modbus parameters.
	– Protocessor:
	  – Slave Address: Determining the slave address of the Protocessor.
	  – Baudrate: Determining of the baud rate (4800, 9600, 19200, 38400, 57600, 115200)
	  – Parity: Determining of the parity (none, 1 stop bit; none, 2 stop bit; odd, 1 stop bit; even, 1 stop bit)
	  – Data Format: Determining of the byte order (ABCD: big edian; BADC: big, swap; CDAB: little, swap; DCBA: little, endi.)
	– Gateway:
	  – Slave Address: Determining the slave address of the Gateway.
	  – Baudrate: Determining of the baud rate (4800, 9600, 19200, 38400, 57600, 115200)
	  – Parity: Determining of the parity (none, 1 stop bit; none, 2 stop bit; odd, 1 stop bit; even, 1 stop bit)
	  – Data Format: Determining of the byte order (ABCD: big edian; BADC: big, swap; CDAB: little, swap; DCBA: little, endi.)
	Note: Detailed notes on Modbus communication can be found in the Modbus addendum manual.

Error History Reset	Reset the list of the 50 most recent warning and error messages from the SPA control electronics.
Factory Reset	Resetting SPA Control Board settings to factory defaults.
File System Reset	Resetting the internal file system. Note: The file system must be reset only if it does not function correctly anymore. Resetting the file system may take several minutes (up to 5 minutes). Leave the device switched on and wait until everything is working properly again.
Control Settings	
Steam Mode	Determining of the steam control for the steam shower application. **Note**: This menu appears only for steam shower application. – Const. Steam: The steam generator works with constant steam production ("High", "Mid", "Low") – Temp. Control: The steam production is temperature controlled
Treatment Mode	Determining of the treatment type for Rasul application. For the treatment phase, the operation can be set to either no steam ("Off") or light steam ("Keep Warm"). If the option is set to "Keep Warm", the cabin humidity is controlled during the treatment phase to the desired keep warm temperature (setting under menu "Keep Warm"). **Note**: This menu item appears only for Rasul application.
Temperature Control	Determining of the temperature control parameters. **Note**: This menu appears only for steam shower and steam bath application. – Temperature Sensor: Determining of the used temperature sensor (PT100, PT1000 (0.1 mA), PT1000 (1.0 mA), KTY (1.0 mA), KTY (0.1 mA)) – Max Temp. Setpoint: Determining the maximum adjustable temperature setpoint – Control Mode: Determining of the temperature control mode (On/Off control, PID control) – PID Type: Determining of the control type (Off, P, PI or PID). – PID P-Band: Determining of the proportional range in °C/°F for the P, PI or PID controller. – PID I-Time: Determining of the integral time in seconds for the PI or PID controller. – PID D-Time: Determining of the differential time in seconds for the PID controller. – Temperature Hysteresis: Determining of the temperature hysteresis for On/Off control. – Critical: Determining of the critical temperature in °C/°F above which the steam production/heating is interrupted and a warning is displayed. – Instab. Mode: Activation ("On") or deactivation ("Off") of the instable temperature measurement monitoring. – Instable Delta: Determining of the temperature deviation within the specified time ("Instable Time") which triggers an fault message if exceeded. – Instable Time: Determining of the time within the specified temperature deviation ("Instable Delta") must detected, that an fault message is triggered. – Instable Lock Time: Determining of the time in seconds how long the temperature monitoring is deactivated after the an unstable temperature has been detected. – Temperature Offset: Determining of the offset value in °C/°F to compensate measurement deviations. – Aroma Pre Run Temp.: Determining how many °C earlier an fragrance injection should take place before the temperature setpoint is reached (Factory setting 5 °C).

Humidity Control	Determining of the humidity control parameters **Note**: This menu appears only for Caldarium application and Rasul application. – Humidity Sensor Type: Determining of the control signal of the used humidity sensor (0-5V, 1-5V, 0-10V, 2-10V, 0-20V, 0-16V, 3-16V, 0-20mA, 4-20mA, On/Off or 0-4V) – Max Hum. Setpoint: Determining the maximum adjustable humidity setpoint – Control Mode: Determining of the humidity control mode (On/Off control, PID control) – PID Type: Determining of the control type (Off, P, PI or PID). – PID P-Band: Determining of the proportional range in %rF for the P, PI or PID controller. – PID I-Time: Determining of the integral time in seconds for the PI or PID controller. – PID D-Time: Determining of the differential time in seconds for the PID controller. – Humidity Hysteresis: Determining of the humidity hysteresis for On/Off control. – Humidity Offset: Determining of the offset value in %rh to compensate measurement deviations. – Aroma Pre Run Humidity: Determining how many %rh earlier an fragrance injection should take place before the humidity setpoint is reached (Factory setting: 10 %rh).
Steam Blast	Determining of the parameters for the steam blast function Note: This menu only appears if cabin type Steam bath, Caldarium or Rasul has been selected. – Mode: Switching On/Off the steam blast function. The following parameters only appear if the steam blast function is activated ("Mode" is set to "On"). If the steam blast function is activated, relay 8 or relay 9 can be used to control a display of an active steam blast. For this purpose, the "Steam Blast" option must be selected in the "Engineering > Accessories > Outputs" menu. – Duration: Determining of the duration of the steam blast in minutes. – Request: Determining of the intensity of the steam blast in % of the total steam output.
Bench Temp. Control	Determining of the temperature control parameters for the bench heating. **Note**: This menu only appears if the mode of relay 8 or relay 9 in the menu "Engineering> Accessories> Outputs" is set to "Bench Heating". – Temperature Sensor: Determining of the used temperature sensor for monitoring the bench heating (PT100, PT1000 (0.1 mA), PT1000 (1.0 mA), KTY (1.0 mA), KTY (0.1 mA)) – Temperature Hysteresis: Determining of the temperature hysteresis in °C/°F for the activation and deactivation of the bench heating. – Critical: Determining of the critical temperature in °C/°F above which the bench heating is deactivated and a fault message is displayed. – Temperature Offset: Determining of the offset value in °C/°F to compensate measurement deviations.
Wall Temp. Control	Determining of the temperature control parameters for the wall heating. **Note**: This menu only appears if the mode of relay 8 or relay 9 in the menu "Engineering> Accessories> Outputs" is set to "Wall Heating". – Temperature Sensor: Determining of the used temperature sensor for monitoring the wall heating (PT100, PT1000 (0.1 mA), PT1000 (1.0 mA), KTY (1.0 mA), KTY (0.1 mA)) – Temperature Hysteresis: Determining of the temperature hysteresis in °C/°F for the activation and deactivation of the wall heating. – Critical: Determining of the critical temperature in °C/°F above which the wall heating is deactivated and a fault message is displayed. – Temperature Offset: Determining of the offset value in °C/°F to compensate measurement deviations.

<table>
<tr><td>Safety</td><td>Determining of the safety parameters for the bathing operation
– Day Timer: Lock ("Locked") or unlock ("Unlocked") the day timer.
– Week Timer: Lock ("Locked") or unlock ("Unlocked") the week timer.
Note: If both timer functions are locked, the timer field with the next start time will not be displayed on the home screen.
– Max. Door Open Time: Determining of the maximum door open time, if elapsed the operation stops and a warning is displayed.
Note: The door contact can also be used as a load shedding device to interrupt the heating current. If the "Max Door Open Time" is set to "0", the heating is stopped as soon as the contact is opened and restarted as soon as it is closed.
– Door Open Delay: Determining of the delay after which a warning is displayed when the door is open.
– Door Observ. Mode: Activation ("On") or deactivation ("Off") of the door observation mode for cabins without physical door contact.
– Door Observ. Time: Determining of the time within which the cabin temperature must increase at least 5°C otherwise the control software interprets this as an open door and triggers W14 and stops the steam production.
– Door Query: Activation ("On") or deactivation ("Off") of the door query. If the door query is activated, confirmation that the cabin door is closed must be given before starting a bathing session.
– Session Timeout: Determining of the maximum duration of the bathing operation.
CAUTION! The maximum bathing time is set ex factory to 6 h. Make sure that the prescribed maximum bathing times for Fin saunas and Bio saunas are complied with!
<table><tr><td>Public SPA systems</td><td>—</td></tr><tr><td>Appliances for use in apartment buildings, hotels or similar locations</td><td>12 h</td></tr><tr><td>SPA systems for private use</td><td>6 h</td></tr></table>If the maximum bathing time is exceeded, the device goes into fault condition (E165) and must be restarted.
– Post Runtime: Determining of the follow-up time after bathing operation in seconds.
Note: During the follow-up time, the steam/heating demand on the system is retained and will not be reset before the run-on time has elapsed.
– Enthalpy Observ.: Determining whether enthalpy monitoring is carried out in accordance with EN60335-2 for correct use ("Standard") or incorrect use ("Tolerant").
– Safetychain: Indicates whether the safety circuit is closed ("On") or open ("Off").
– Cabin Overtemp.: Indicates whether the cabin overtemperature switch is closed ("On") or has triggered ("Off").</td></tr>
<tr><td>Keep Warm</td><td>Determining of the keep warm functions. The keep-warm functions serve to keep the cabin temperature, seat temperature, etc. in standby mode at a certain value, so that the operating temperatures are reached faster in the bathing operation.
Note: For steam shower application, not the cabin temperature but the water in the steam tank is kept warm. As a result, steam can be produced in steam shower applications in the shortest possible time, provided that the water has already been heated once.
– Keep Warm Mode: Determining of the control of the keep warm operation ("Off": Keep warm functions deactivated, "Always": The keep warm functions are always activated, "Day Timer": The keep warm functions are started at a certain time of the day, "Lead Time": The keep warm function is started a certain time before the set start time of the timer).
– Keep Warm Start: Determining of the starting time (time of day) at which the keep warm functions are started with timer controlled activation of the keep warm functions.
– Keep Warm Duration: Determining of the maximum running time of the keep warm functions in hours.
– Keep Warm Lead Time: Determining of the lead time in minutes the keep warm function start before the set timer start time.
Note: This setting is used to bring the system up to a warm-up temperature before a timer start time so that the warm-up temperature has already been reached at the timer start time. Depending on the cabin size, this value may be adjusted.
– Temperature: Determining of the target keep warm temperature of the cabin in °C/°F.
– Humidity: Determining of the target keep warm humidity of the cabin in %.
– Bench Temp.: Determining of the target keep warm temperature in °C/°F for the bench heating.
– Wall Temp.: Determining of the target keep warm temperature in °C/°F for the wall heating.</td></tr>
</table>

Start/Stop Settings	Determining of the Start / Stop settings for bathing operation. – Start Input Type: Determining whether the start impulse is initiated via a button ("Button") or a switch ("Switch"). – Stop Option: Activation ("On") or deactivation ("Off") of the manual stop function (via key <Start/Stop>, external button, web interface, etc.). **Note**: If you deactivate the "Stop Option", a ongoing bathing session can not be stopped manually.
Accessories	
Light 1	Determining of the settings for controlling Light 1. – Light Working Mode: Determining whether Light 1 is switched on and off manually ("Manual") or automatically by the SPA Control ("Auto") or whether the control of Light 1 is deactivated ("Off"). – Light Post Run: Determining of the time in minutes Light 1 should remain switched on with automatic control after bathing operation has ended. – Light On States: Determining in which operating conditions Light 1 should be switched on. Several operating states can be selected ("Off": When the unit is ready, "Keep Warm": During the keep warm phase, "Warm Up": During the Warm-up phase:, "Bathing": During the bathing operation, "Drying": During the drying phase, "Stop": If the bathing operation was stopped by a fault). **Note**: With the Rasul application additional operating states can be selected ("Pre-Treatment": During the Warm-up phase: for the treatment, "Treatment": During the treatment phase, "Shower": During the showering phase). – Light On Mode: Determining whether Light 1 should burn permanently ("Fix") or be controlled in pulses ("Interval"). – Light On Interval: Determining of the Interval time in minutes for the interval control of the light. – Light On Impulse: Determining of the pulse length in seconds for turning on the light.
Light 2	Determining of the settings for controlling Light 2. – Light Working Mode: Determining whether Light 2 is switched on and off manually ("Manual") or automatically by the SPA Control ("Auto") or whether the control of Light 2 is deactivated ("Off"). – Light Post Run: Determining of the time in minutes Light 2 should remain switched on with automatic control after bathing operation has ended. – Light On States: Determining in which operating conditions Light 2 should be switched on. Several operating states can be selected ("Off": When the unit is ready, "Keep Warm": During the keep warm phase, "Warm Up": During the Warm-up phase:, "Bathing": During the bathing operation, "Drying": During the drying phase, "Stop": If the bathing operation was stopped by a fault). **Note**: With the Rasul application additional operating states can be selected ("Pre-Treatment": During the Warm-up phase: for the treatment, "Treatment": During the treatment phase, "Shower": During the showering phase). – Light On Mode: Determining whether Light 2 should burn permanently ("Fix") or be controlled in pulses ("Interval"). – Light On Interval: Determining of the Interval time in minutes for the interval control of the light. – Light On Impulse: Determining of the pulse length in seconds for turning on the light.
Aroma 1	Determining of the settings for controlling the fragrance pump 1. – Aroma Mode: Determining whether the fragrance injection is interval-controlled via the SPA Control ("Interval") or via an external control ("Extern") or whether the fragrance injection 1 is deactivated ("Off"). – Aroma Level: Determining of the intensity level for the fragrance injection (Level 1 to Level 5). – Aroma Interval Min.: Determining of the minimum interval time in minutes for fragrance injection. – Aroma Interval Max.: Determining of the maximum interval time in minutes for fragrance injection. – Aroma Impulse Min.: Determining of the minimum pulse length in seconds for fragrance injection. – Aroma Impulse Max.: Determining of the maximum pulse length in seconds for fragrance injection.

Aroma 2	Determining of the settings for controlling the fragrance pump 2. – Aroma Mode: Determining whether the fragrance injection is interval-controlled via the SPA Control ("Interval") or via an external control ("Extern") or whether the fragrance injection 2 is deactivated ("Off"). – Aroma Level: Determining of the intensity level for the fragrance injection (Level 2 to Level 5). – Aroma Interval Min.: Determining of the minimum interval time in minutes for fragrance injection. – Aroma Interval Max.: Determining of the maximum interval time in minutes for fragrance injection. – Aroma Impulse Min.: Determining of the minimum pulse length in seconds for fragrance injection. – Aroma Impulse Max.: Determining of the maximum pulse length in seconds for fragrance injection.

Fan	Determining of the settings for controlling the fans.
	– Fan Mode: Determining whether two single-stage fans ("2 fans 1-stage"), one single stage fan ("1 fan 1-stage") or no fan ("Off") is/are used.
	– Fan 1: Determining of the settings for fan 1
	  – Light Dependency: Determining whether fan 1 should be switched on and off depending on Light 1 ("as Light 1"), depending on Light 2 ("as Light 2") or independently of the light control.
	  – Bath Dependency: Determining whether the fan 1 should always run during the bath phase and shower phase ("On"), only if steam demand is present ("at Steam Request"), whether the fan operation should be controlled by a sensor ("Sensor Controlled") or whether the fan 1 is deactivated ("Off").
	  Note: If the fan is set to "Sensor Controlled", the fan will operate as follows:
	  As soon as the measured temperature value or humidity value rises above the setpoint value + PID P-Band/2, the fan is switched on. The fan is switched off again as soon as the measured temperature value or humidity value drops below the setpoint value - PID P-Band/2.
	  – Warm Up Time: Determining of the fan run time in minutes for the Warm-up phase.
	  – Dry Time: Determining of the fan run time in minutes for the drying phase.
	– Fan 2: Determining of the settings for fan 2
	  – Light Dependency: Determining whether fan 2 should be switched on and off depending on Light 1 ("as Light 1"), depending on Light 2 ("as Light 2") or independently of the light control.
	  – Bath Dependency: Determining whether the fan 2 should always run ("On"), only if steam demand is present ("at Steam Request"), whether the fan operation should be controlled by a sensor ("Sensor Controlled") or whether the fan 2 is deactivated ("Off").
	  Note: If the fan is set to "Sensor Controlled", the fan will operate as follows:
	  As soon as the measured temperature value or humidity value rises above the setpoint value + PID P-Band/2, the fan is switched on. The fan is switched off again as soon as the measured temperature value or humidity value drops below the setpoint value - PID P-Band/2.
	  – Warm Up Time: Determining of the fan run time in minutes for the Warm-up phase.
	  – Dry Time: Determining of the fan run time in minutes for the drying phase.

Outputs	Determining of the settings for controlling the additional relays 8 and 9.
	– Relay 8 Mode: Determining the operating mode of relay 8.
	  – "Off": Relay function deactivated.
	  – "Auto Status": Relay 8 is activated automatically dependent on the corresponding On states of relay 8.
	  – "Bench Heater": Relay 8 is used to control the bench heating.
	  – "Wall Heater": Relais 8 is used to control the wall heating.
	  – "Steam Blast": Relay 8 is used to indicate an active steam blast.
	  – "Signal 0-4V": Relay 8 interrupts the power supply to the humidity sensor of the bio sauna in fin sauna mode.
	– Relay 8 On States: Determining in which operating states relay 8 should be activated automatically. Several operating states can be selected ("Off": When the unit is ready, "Keep Warm": During the keep warm phase, "Warm Up": During the Warm-up phase:, "Bathing": During the bathing operation, "Drying": During the drying phase, "Stop": If the bathing operation was stopped by a fault).
	Note: With the Rasul application additional operating states can be selected ("Pre-Treatment": During the Warm-up phase: for the treatment, "Treatment": During the treatment phase, "Shower": During the showering phase).
	– Relay 9 Mode: Determining the operating mode of relay 9.
	  – "Off": Relay function deactivated.
	  – "Auto Status": Relay 9 is activated automatically dependent on the corresponding On states of relay 9.
	  – "Bench Heater": Relay 9 is used to control the bench heating.
	  – "Wall Heater": Relais 9 is used to control the wall heating.
	  – "Steam Blast": Relay 9 is used to indicate an active steam blast.
	  – "Signal 0-4V": Relay 9 interrupts the power supply to the humidity sensor of the bio sauna in fin sauna mode.
	– Relay 9 On States: Determining in which operating states relay 9 should be activated automatically. Several operating states can be selected ("Off": When the unit is ready, "Keep Warm": During the keep warm phase, "Warm Up": During the Warm-up phase:, "Bathing": During the bathing operation, "Drying": During the drying phase, "Stop": If the bathing operation was stopped by a fault).
	Note: With the Rasul application additional operating states can be selected ("Pre-Treatment": During the Warm-up phase: for the treatment, "Treatment": During the treatment phase, "Shower": During the showering phase).

Omega Control Board **Note**: This menu only appears for applications using a Condair Omega with Omega Control.	
System Mode	Determining in which system mode the **Omega Control Board** should run. – Steam Generator: Setting for the operation of the Condair Omega with Omega Control as a pure steam generator for steam shower application. The steam production is controlled by a demand signal from an external controller. **CAUTION!** With this setting bathing time is not monitored. Make sure that the external control monitors the maximum allowed bathing time! – Wellness: Setting for single cabin application. The control takes place in accordance with the application via the device-specific control of the Condair Delta SPA Control Box or the Condair Omega. – Wellness Dual: Not applicable. – HVAC: (not applicable)
Generator Kind	Determining of the type of steam generation used for steam shower, steam bath, Rasul or Bio sauna application – None: There is no steam generator used. – Internal Omega: The steam is produced by a Condair Omega with Omega Control.
Signaling	Activation ("On") or deactivation ("Off") of the beeper for fault/warning signalization.

Modbus Settings	Setting the Modbus parameters.
	– Protocessor:
	  – Slave Address: Determining the slave address of the Protocessor.
	  – Baudrate: Determining of the baud rate (4800, 9600, 19200, 38400, 57600, 115200)
	  – Parity: Determining of the parity (none, 1 stop bit; none, 2 stop bit; odd, 1 stop bit; even, 1 stop bit)
	  – Data Format: Determining of the byte order (ABCD: big edian; BADC: big, swap; CDAB: little, swap; DCBA: little, endi.)
	– Gateway:
	  – Slave Address: Determining the slave address of the Gateway.
	  – Baudrate: Determining of the baud rate (4800, 9600, 19200, 38400, 57600, 115200)
	  – Parity: Determining of the parity (none, 1 stop bit; none, 2 stop bit; odd, 1 stop bit; even, 1 stop bit)
	  – Data Format: Determining of the byte order (ABCD: big edian; BADC: big, swap; CDAB: little, swap; DCBA: little, endi.)
	Note: Detailed notes on Modbus communication can be found in the Modbus addendum manual.

Error History Reset	Reset the list of the 50 most recent warning and error messages from the SPA control electronics.
Factory Reset	Resetting Omega Control Board settings to factory defaults.
File System Reset	Resetting the internal file system. Note: The file system must be reset only if it does not function correctly anymore. Resetting the file system may take several minutes (up to 5 minutes). Leave the device switched on and wait until everything is working properly again.
Steam Generator **Note**: This menu only appears only for steam shower application, steam bath application, Caldarium application and Rasul application, if the steam generator type is set to "External Omega" or "External Analog".	
Steaming Settings	Determining of the steam settings for the steam generator – Control Source: If only one control board is available, the control is local ("Local"). If the steam generator is controlled by an external SPA Control Board, it is necessary to switch to remote control ("Remote"). In the case of a remote control, the server ID of the SPA Control Board must be specified under "Control Server ID". – Input signal: Determining of the type of demand signal for the steam generator (0-5V, 1-5V, 0-10V, 2-10V, 0-20V, 0-16V, 3-16V, 0-20mA, 4-20mA, On/Off or 0-4V). – Control Server ID: Server ID of the control board that controls the steam generator. – Control Mode: Determining of the control mode, Demand (ext. control) or rH (int. control). Note: For wellness applications, this setting must be set to "Demand".
Steam Values	Display of current steam values. – Steam Request: Current steam demand in % for the steam generator. – Steam Quantity: Current steam output in % of the steam generator.
Level	Current water level in the water tank.
Tank Settings	Settings of the water tank. – Power per Stage: Setting the power of the heating elements: 1.5 kW, 2.25 kW or 3.0 kW – Capacity: Setting the device size 2 kg/h, 4 kg/h, 6 kg/h, 8 kg/h, 12 kg/h, 16 kg/h or 20 kg/h. – Size: The water tank size is automatically determined by the capacity.
Reservoir Settings	Not applicable
Safety	Status indications of the safety elements of the steam generator. – Tank Overtemp.: Status display of the overtemperature sensor on the water tank. – Low Water: (not applicable)
Admin	
Password	Determining a password for the user level (no password set ex factory).
Display	Determining of the settings for the SPA Display Software. – Server ID Display: Setting the server ID of the SPA display. – Calibrate: Performing a calibration of the SPA display. – Factory Reset: Resetting the display electronic settings to factory defaults. – File System Reset: Resetting the internal file system. Note: The file system of the SPA display must be reset only if a logo must be reset or if the file system does not function correctly anymore. Resetting the file system may take several minutes (up to 5 minutes). During resetting, it may be that the SPA display is not working properly and the SPA display turns white. In this case, leave the device switched on and wait (max. 5 minutes) until everything is working properly again.
System Parameters	Determining of the settings for importing and exporting data and recording logger data. – Export: Export of data to the internal file system ("SpaExportSettings.json"). – Import: Import of data from the internal file system ("SpaExportSettings.json").

Menu Tree	
Cabin 1	Determining whether the settings of Cabin 1 should be displayed on the SPA display. – Enable: Display enabled ("On") or disabled ("Off"). – Server ID: Determining of the CAN BUS ID of the SPA control board or the Omega control board. – Subindex: If the system mode is set to "Wellness Dual", subindexes must be assigned for the individual cabins.
Cabin 2	Determining whether the settings of Cabin 2 should be displayed on the SPA display. – Enable: Display enabled ("On") or disabled ("Off"). – Server ID: Determining of the CAN BUS ID of the SPA control board or the Omega control board. – Subindex: If the system mode is set to "Wellness Dual", subindexes must be assigned for the individual cabins.
Steam Generator 1	Determining whether the settings of the steam generator 1 should be displayed on the SPA display. – Enable: Display enabled ("On") or disabled ("Off"). – Server ID: Determining of the CAN BUS ID of the Condair Omega control board.
Steam Generator 2	Determining whether the settings of the steam generator 2 should be displayed on the SPA display. – Enable: Display enabled ("On") or disabled ("Off"). – Server ID: Determining of the CAN BUS ID of the Condair Omega control board.
Diagnostic	Determining which control boards should be displayed in diagnostic mode on the SPA display. – Server ID 0: Display enabled ("On") or disabled ("Off"). – Server ID 1: Display enabled ("On") or disabled ("Off"). – Server ID 2: Display enabled ("On") or disabled ("Off"). – Server ID 3: Display enabled ("On") or disabled ("Off"). – Server ID 4: Display enabled ("On") or disabled ("Off")). – Server ID 5: Display enabled ("On") or disabled ("Off"). – Server ID 6: Display enabled ("On") or disabled ("Off")). – Server ID 7: Display enabled ("On") or disabled ("Off").
IP Settings	
Host Name Suffix	Determining of the host name suffix.
DHCP Mode	Determining whether DHCP mode should be used ("On") or not ("Off").
IP Address	Determining of the static IP address of the Condair Omega or the Condair Delta SPA Control Box.
Subnet Mask	Determining of the subnet mask for IP communication.
Gateway	Determining of the Gateway IP address of the Condair Omega or the Condair Delta SPA Control Box.
DNS Primary	Determining of the IP Address of the primary domain name server (DNS). The IP address for the primary domain name server is used when DHCP mode is off.
DNS Secondary	Determining of the IP Address of the secondary domain name server (DNS). The IP address for the secondary domain name server is used when DHCP mode is off.
Diag. Board ID 0 .... Diag. Board ID 7 **Note**: Only the boards that were selected in the menu tree appear under Diagnostics.	
Output Sensor Setup	Diagnostics of the settings for the sensor inputs. – Demand Select: Switching between current and voltage measurement. – Humidity Select: Switching between current and voltage measurement. – Temp. Control: Switching between different sensor types. – Temp Gain: Switching the input gain of the temperature sensor. – Bench Temp. Control: Switching between different sensor types. – Bench Temp. Gain: Switching the input gain of the bench temperature sensor.
Output Relay	Diagnostics of the relay outputs. – Sec. Contactor: Switching the safety contactor on and off. – Inlet Valve: Switching the inlet valve of the Condair Omega on and off. – Relay Drain: Switching the relay of the drain pump of the Condair Omega on and off. – Relay Fan 1: Switching the relay of fan 1 on and off. – Relay Fan 2: Switching the relay of fan 2 on and off. – Relay 8: Switching the additional relay 8 on and off. – Relay 9: Switching the additional relay 9 on and off. – Relay Error: Switching the error relay on and off (Err Out). – Relay Light 1: Switching the relay of Light 1 on and off. – Relay Light 2: Switching the relay of Light 2 on and off. – Relay Pump 1: Switching the relay of Pump 1/Valve 1 on and off. – Relay Pump 2: Switching the relay of Pump 2 on and off.

Output Heat	Diagnostic of the heating circuits. – Heat 1: Switching the heating circuit 1 on and off. – Heat 2: Switching the heating circuit 2 on and off. – Heat 3: Switching the heating circuit 3 on and off. – Heat 4: Switching the heating circuit 4 on and off. – Heat 5: Switching the heating circuit 5 on and off.
Signaling	Turning the beeper on and off.
Output Analog	Diagnostic of the analog outputs. – Led Red: Control of the red LED of the Condair Omega (fault). – Led Green: Control of the green LED of the Condair Omega (steam production). – Demand: Control of the demand to the external steam generator. – Reserve: Control of the reserve output
Status Relay	Indication of the current state of the relay. – Status Valve: "On" (switched on), "Off" (switched off). – Status Sec Contactor: "On" (switched on), "Off" (switched off).
Status Heat	Indication of the current state of the heating circuits. – Heat 1: "On" (switched on), "Off" (switched off). – Heat 2: "On" (switched on), "Off" (switched off). – Heat 3: "On" (switched on), "Off" (switched off). – Heat 4: "On" (switched on), "Off" (switched off). – Heat 5: "On" (switched on), "Off" (switched off).
Input Digital	Indication of the current state of the digital inputs. – Cartridge Reset: "On" (reset button pressed), "Off" (reset button not pressed). – Cabin Overtemp.: "On" (no overtemperature), "Off" (overtemperature switch has triggered). – Low Water: "On" (water level OK), "Off" (water level too low). – Level 1: "On" (water level at level 1), "Off" (water level below level 1). – Level 2: "On" (water level at level 2), "Off" (water level below level 2). – Level 3: "On" (water level at level 3), "Off" (water level below level 3). – On/Off: "On" (On button pressed), "Off" (On button not pressed). – Door: "On" (cabin door closed), "Off" (cabin door open). – Light 1: "On" (Light 1 burns), "Off" (Light 1 off). – Light 2: "On" (Light 2 burns), "Off" (Light 2 off). – Tank Overtemp.: "On" (no overtemperature in the steam tank), "Off" (overtemperature switch for steam tank has triggered). – Hardware Option SPA Control: Shows he hardware option of the Condair Delta SPA Control Box or the Condair Omega.
Input Analog	Indication of the current state of the analog inputs. – 24 V Local: Current voltage of the internal 24 V power supply. – 5 V Local: Current voltage of the internal 5 V power supply. – 24 V Extern: Current voltage of the external 24 V power supply. – 5 V Extern: Current voltage of the external 5 V power supply. – Demand: Current voltage value of the demand signal. – Temperature: Actual voltage value of the temperature demand signal for the cabin. – Bench Temp.: Actual voltage value of the temperature demand signal of the bench heating. – Humidity: Current voltage value of the humidity demand signal for the cabin. – Reserve: Current voltage value of the reserve input.

7 Maintenance

The Condair Delta SPA Control Box must be inspected **once a year** by an electrician or by a specialist authorized by the customer. Check the following points:

- Check the electrical connections/installations in the Condair Delta SPA Control Box for correct fastening and any damage to the insulation.
  Any loose cables should be tightened and damaged cables replaced.
- Check the inside of the Condair Delta SPA Control Box for water residues.
  If any water is found, the cause of water penetration should be investigated and remedied.

Safety

For the control work the Condair Delta SPA Control Box must be opened. Please note the following:

DANGER!
Danger of electric hazard!

You may get in touch with live parts when the Condair Delta SPA Control Box is open. Touching live parts may cause severe injury or even lethal violation.

Prevention: Before opening the Condair Delta SPA Control Box switch off the unit, disconnect it from the power supply (switch off the external electrical isolators) and secure the unit against inadvertent power-up.

CAUTION!

The electronic components inside the Condair Delta SPA Control Box are very sensitive to electrostatic discharge.

Prevention: Before carrying out any control work to the electrical or electronic equipment of the Condair Delta SPA Control Box appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

8 Fault elimination

8.1 Important notes on fault elimination

Qualification of personnel

Repair work must be carried out only by **qualified and well trained professionals authorised by the owner**.

Repair work relating to the electrical installation must be carried out by an electrician or professionals authorised by the owner.

General notes

Only use original spare parts from your Condair representative to replace defective parts.

Safety

Before starting repair work on the Condair Delta SPA Control Box set the Condair Delta SPA Control Box and the steam generator (if applicable) out of operation and disconnect it from the mains.

DANGER!
Danger of electric hazard!

Make sure the Condair Delta SPA Control Box and Condair Omega are separated from the mains (check with voltage tester).

CAUTION!

The electronic components inside the Condair Delta SPA Control Box and the control compartment of the Condair Omega are very sensitive to electrostatic discharge.

Prevention: Before carrying out any repair work to the electrical or electronic equipment of the Condair Delta SPA Control Box or the Condair Omega, appropriate measures must be taken to protect the respective components against damage caused by electrostatic discharge (ESD protection).

8.2 Fault indication

Malfunctions during operation detected by the control software are indicated by the **yellow warning triangle** (warning present or maintenance due) or the **red warning triangle** (fault present) on top left in the Home screen .
Note: on the Condair Omega additionally the LED above the device switch lights up yellow in the event of a warning and red in the event of a fault.

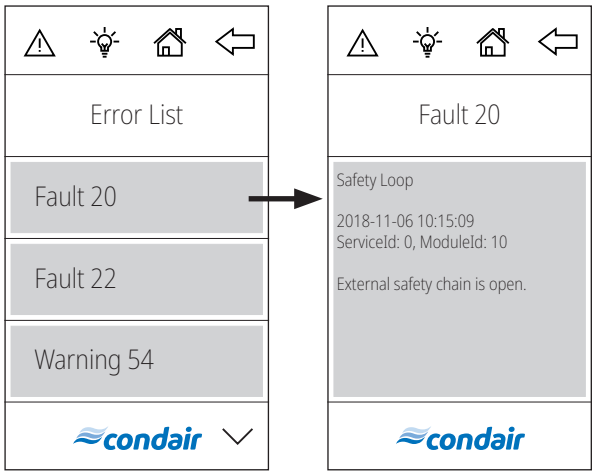
Warning (maintenance indication)

Warnings and/or a due maintenance (only when operation together with a Condair Omega) are indicated by the yellow warning triangle in the home screen of the external SPA display. The unit continues operation. Depending on the type of warning, certain operational restrictions may occur.

Fault

Operational states where further operation is limited or not possible, or where further operation would damage the system or endangering persons are indicated by the red warning triangle in the home screen. Depending on the type of fault the operation is stopped or the unit continues normal operation

By pressing on the warning triangle the error list is shown with all active warning and fault messages. By pressing on the corresponding Warning or Fault entry additional information regarding the malfunction are displayed (see display on the far-right).



8.3 Malfunction list

Most operational malfunctions are not caused by faulty equipment but rather by improper installation or disregarding of planning guidelines. Therefore, a complete fault diagnosis always involves a thorough examination of the entire system (e.g. hose connections, control system, etc.).

Warning	Fault	Message	Possible causes	Remedy
W14	**—**	**Max Door Open**	The cabin door was open too long. Note: The Condair Delta SPA Control Box or the Condair Omega automatically disconnect all heating systems (steam, bench heating, etc.) until the cabin door is closed again.	
			The cabin door was open longer than the set "Door open" time.	Close the cabin door.
			The door observation mode is active and has triggered.	The Condair Delta SPA Control Box or the Condair Omega needs to be restarted.
—	**E18**	**Cabin Temp. Sensor Instable**	Measurement of cabin temperature unstable. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the specified "Instable Time" has elapsed, operation will automatically resume.	
			Unstable temperature measurement due to manipulation of the temperature sensor in the cabin.	Check temperature sensor in the cabin.
—	**E20**	**Safety loop**	External safety loop is open. Note: The Condair Delta SPA Control Box or the Condair Omega go into standby operation. As soon as the external safety loop is closed again the Condair Delta SPA Control Box and the Condair Omega continue to work normally.	
			One or more monitoring device(s) of the external safety loop has/have triggered.	Check the monitoring device(s) of the external safety loop.
			External safety loop not connected correctly.	Let have the wiring of the external safety loop be checked and correctly connected by an electrician.
—	**E21**	**Max. level**	Water level in the steam tank of the Condair Omega too high. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Level unit calcified.	Clean level unit.
			Hose connections between level unit and steam tank blocked.	Check/clean hose connections between level unit and steam tank blocked.

Warning	Fault	Message	Possible causes	Remedy
—	E22	**Max. filling time**	Maximum filling time exceeded. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Water supply blocked, shut-off valve in the water supply line closed. Water pressure too low.	Check water feed (filter, pipes, etc.), check/open shut-off valve, Check water pressure.
			Inlet valve blocked or defective.	Check strainer inside the inlet valve, clean if necessary. Replace valve.
			Excessive back pressure in the steam line (pressure in steam bath cabin too high, steam line too long or kinked), causing water loss via filling cup.	Check pressure in the steam cabin, inspect steam installation.
			Water system leaky.	Check/seal water system.
W29	—	**Service required**	The maintenance counter for the unit maintenance of the Condair Omega has elapsed. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The maintenance counter for the unit maintenance has elapsed.	Carry out unit maintenance in accordance with the operating instructions of the Condair Omega. Then, reset the maintenance counter.
—	E32	**Cabin Temp. Sensor out of Range**	The measured temperature in the cabin is outside the permissible range. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred.	
			Wrong temperature sensor connected.	Check if the correct temperature sensor is connected.
			Temperature sensor not or not correctly connected.	Check/correctly connect the wiring of the temperature sensor.
			Incorrect configuration of the temperature sensor in the control software.	Check/correctly set temperature sensor settings in the control software
			Temperature sensor defective.	Replace temperature sensor.
—	E46	**Max. drain time**	Maximum drain time of the Condair Omega exceeded. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Drain pump not or not correctly connected.	Check/correctly connect drain pump.
			Drain hose inside the unit kinked or blocked.	Check/clean drain hose inside the unit, replace if necessary.
			Water drain obstructed (external drain line or funnel blocked).	Clean external drain line and siphon.
			Hoses to level unit blocked.	Clean or replace hoses.
			Drain pump defective.	Replace drain pump.

Warning	Fault	Message	Possible causes	Remedy
—	E47	**Level unit**	The level in the steam tank of the Condair Omega is in an unacceptable range. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Level unit defective.	Replace level unit.
—	E56	**Int. safety loop**	The internal safety loop of the Condair Omega is open. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Overtemperature switch(es) not connected correctly.	Let have the wiring of the overtemperature switch(es) checked/correctly connected by an electrician.
			Overtemperature switch(es) defective	Let have the overtemperature switch(es) be replaced by an electrician.
			Overtemperature switch(es) has/have triggered.	Let have the Condair Omega be checked by a Condair service technician. **Important: for safety reasons all heating elements have to be replaced if the overtemperature switch(es) has/have triggered.**
—	E57	**Cabin Over Temp.**	Too high temperature in the cabin or on a heating element. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred).	
			Cabin overtemperature switch has triggered due to excessive cabin temperature	Have the cabin overtemperature switch checked by an electrician.
			Heating element overtemperature switch has triggered due to high temperature of a heating element.	Check heating elements monitored by the overtemperature switch.
—	E87	**Local 24 V supply**	Local 24 V voltage on control board of the Condair Delta SPA Control Box or the Condair Omega out of valid range. Note: The Condair Delta SPA Control Box or the Condair Omega goes into standby mode. If the fault disappears on its own, the Condair Delta SPA Control Box or the Condair Omega continues to run normally.	
			Short circuit on the supply module or supply module defective.	Contact your Condair representative.
—	E88	**Local 5 V supply**	Local 5 V voltage on control board of the Condair Delta SPA Control Box or the Condair Omega out of valid range. Note: The Condair Delta SPA Control Box or the Condair Omega goes into standby mode. If the fault disappears on its own, the Condair Delta SPA Control Box or the Condair Omega continues to run normally.	
			Short circuit on the supply module or supply module defective.	Contact your Condair representative.

Warning	Fault	Message	Possible causes	Remedy
—	E97	Ext. 24 V supply	External 24 V supply of the Condair Delta SPA Control Box or the Condair Omega faulty. Voltage too high or too low Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Fuse "F2" on the control board defective.	Replace fuse "F2" on the control board.
			Short circuit on external connection.	Let have the short circuit be eliminated by an electrician.
			Overload on external connection.	Disconnect load on external connection.
—	E120	Min. fill time	Minimum filling time of the Condair Omega underrun. Note: The operation of the Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Level unit calcified.	Clean level unit.
			Hose connections between level unit and steam tank blocked.	Check/clean hose connections between level unit and steam tank.
			Strainer insert in the steam tank strongly calcified or unit strongly calcified.	Carry out the unit maintenance, then reset the maintenance counter "Service Done".
W121	—	Max. evaporation time	Maximum vaporization time of the Condair Omega exceeded. Note: The Condair Omega carries out a level test and, if the test is successful, continues to operate normally and the warning message is cleared. If the level test was not successful, the warning message appears again and the level test is repeated. If the warning occurs repeatedly, check the following points.	
			Individual heating elements defective.	Replace corresponding heating elements.
			Mains voltage too low or failure of a phase (L1, L2 or L3).	Let have the mains voltage and connections be checked by an electrician.
			Steam line too long or not insulated.	Maintain maximum steam line lengths (max. 8 m), Insulate steam line.
—	E155	Ext. 5 V supply	External 5 V supply of the Condair Omega faulty. Voltage too high or too low. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Short circuit on LED.	Contact your Condair representative.
			Overload on LED connection.	Check LED connection.
	E156	EEPROM read	Reading from EEPROM not possible. Note: In order to reset the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault occurred).	
			EEPROM defective.	Contact your Condair representative.

Warning	Fault	Message	Possible causes	Remedy
	E157	**EEPROM write**	Writing to EEPROM not possible. Note: In order to reset the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault occurred).	
			EEPROM defective.	Contact your Condair representative.
—	**E158**	**Heat Element 1 control relay**	Heating element control relay 1 does not work correctly. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Heating element control relay 1 on control board blocked.	Contact your Condair representative.
—	**E159**	**Heat Element 2 control relay**	Heating element control relay 2 does not work correctly. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Heating element control relay 2 on control board blocked.	Contact your Condair representative.
—	**E160**	**Heat Element 3 control relay**	Heating element control relay 3 does not work correctly. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Heating element control relay 3 on control board blocked.	Contact your Condair representative.
—	**E161**	**Heat Element 4 control relay**	Heating element control relay 4 does not work correctly. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Heating element control relay 4 on control board blocked.	Contact your Condair representative.
—	**E162**	**Heat Element 5 control relay**	Heating element control relay 5 does not work correctly. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After the fault has been eliminated, the Condair Omega must be switched off and on again. If the Condair Omega is controlled by a Condair Delta SPA Control Box, the Condair Delta SPA Control Box must also be switched off and on again after the Condair Omega has been restarted.	
			Heating element control relay 5 on control board blocked.	Contact your Condair representative.

Warning	Fault	Message	Possible causes	Remedy
W163	**—**	**Cartridge replacement**	The maintenance counter for replacement of the optional filter cartridge in the water supply of the Condair Omega has elapsed. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Optional filter cartridge is exhausted.	Replace filter cartridge, then reset the maintenance counter (see Condair Omega operation manual).
W164	**—**	**Hardware replacement**	The maintenance counter for replacement of the hardware of the Condair Omega or the Condair Delta SPA Control Box has elapsed. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The hardware of the Condair Omega or the Condair Delta SPA Control Box is outdated.	Contact your Condair representative.
—	**E165**	**Max. session time**	The maximum bathing operating time has been exceeded. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again.	
			The bathing operation was not stopped within the set maximum bathing operating time.	Check/correctly set the setting of the maximum bathing operating time.
W166	**—**	**Forced Shut Down**	During the drying phase, a forced shutdown was triggered. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally. After a forced shutdown a new bathing phase can be started at any time. The warning message will be automatically reset upon restart.	
			The device was switched off before the drying phase was completed.	Wait until the set drying time has expired.
—	**E170**	**Hum. Sensor out of Range**	The measured humidity in the cabin is outside the permissible range. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred).	
			Wrong humidity sensor connected.	Check that the correct humidity sensor is connected.
			Humidity sensor not connected or not correctly connected.	Check/correctly connect the wiring of the humidity sensor.
			Incorrect configuration of the humidity sensor in the control software.	Check/correctly set the humidity sensor settings in the control software.
			Humidity sensor defective.	Replace humidity sensor.
—	**E171**	**Hum. Sensor Instable**	Measurement of cabin humidity unstable. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred).	
			Unstable humidity measurement due to manipulation of the humidity sensor in the cabin.	Check humidity sensor in the cabin.

Warning	Fault	Message	Possible causes	Remedy
—	E172	**Bench Sensor out of Range**	The measured bench temperature in the cabin is outside the permissible range. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred).	
			Wrong temperature sensor connected.	Check if the correct temperature sensor is connected.
			Temperature sensor not or not correctly connected.	Check/correctly connect the wiring of the temperature sensor.
			Incorrect configuration of the temperature sensor in the control software.	Check/correctly set temperature sensor settings in the control software
			Temperature sensor defective.	Replace temperature sensor.
—	E173	**Wall Sensor out of Range**	The measured wall temperature in the cabin is outside the permissible range. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred).	
			Wrong temperature sensor connected.	Check if the correct temperature sensor is connected.
			Temperature sensor not or not correctly connected.	Check/correctly connect the wiring of the temperature sensor.
			Incorrect configuration of the temperature sensor in the control software.	Check/correctly set temperature sensor settings in the control software
			Temperature sensor defective.	Replace temperature sensor.
W175	—	**Critical Cabin Temp.**	The measured cabin temperature has exceeded the critical temperature limit. Note: The Condair Delta SPA Control Box or the Condair Omega automatically disconnect all heating systems (steam, bench heating, etc.) until the cabin temperature is within the permissible range again.	
			The cabin temperature has exceeded the critical temperature limit.	Make sure the temperature setpoint value or critical temperature is set correctly.
W176	—	**Critical Bench Temp.**	The measured bench temperature has exceeded the critical temperature limit. Note: The Condair Delta SPA Control Box or the Condair Omega automatically disconnect the bench heating until the temperature of the bench heating is within the permissible range again.	
			The bench temperature has exceeded the critical temperature limit.	Make sure the temperature setpoint value or critical temperature is set correctly.
W177	—	**Critical Wall Temperature**	The measured wall temperature has exceeded the critical temperature limit. Note: The Condair Delta SPA Control Box or the Condair Omega automatically disconnect the wall heating until the temperature of the wall heating is within the permissible range again.	
			The wall temperature has exceeded the critical temperature limit.	Make sure the temperature setpoint value or critical temperature is set correctly.

Warning	Fault	Message	Possible causes	Remedy
W180	**—**	**Critical Setpoint**	The set setpoint value is above the critical limit. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally. However, if the critical value is exceeded during the bathing operation, the heating switches off automatically.	
			The set setpoint value is outside the admissible range	Make sure that the setpoint value is within the valid range.
—	**E181**	**Demand/Hum. Input**	The demand signal or the sensor signal at the signal input is outside the valid range. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the fault has occurred.	
			The measured value at the signal input is outside the valid range.	Check the signal input.
W183	**—**	**Door Open**	The cabin door is open. Note: No new bathing session can be started as long as the door is open.	
			The cabin door is open.	Close the cabin door.
—	**E200**	**File System**	Initialization of the Flash file system failed. Note: The Condair Delta SPA Control Box or the Condair Omega continues to work normally. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again to reset the fault (depending on which device the fault occurred).	
			A problem occurred during initialization of the flash file system.	Contact your Condair representative.
—	**E201**	**Ethernet**	Initialization of Ethernet adapter failed. Note: The Condair Delta SPA Control Box or the Condair Omega continues to work normally. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again to reset the fault (depending on which device the fault occurred).	
			A problem occurred during initialization of the Ethernet adapter.	Contact your Condair representative.
—	**E202**	**CANopen**	Initialization of the CANopen adapter failed. Note: The Condair Delta SPA Control Box or the Condair Omega continues to work normally. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again to reset the fault (depending on which device the fault occurred).	
			A problem occurred during initialization of the CANopen adapter.	Contact your Condair representative.

Warning	Fault	Message	Possible causes	Remedy
W204	**—**	**CANopen Heartbeat**	The clock signal of one or more components connected to the CAN BUS is missing. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			One or more components on the CAN BUS do not work.	Let have the CAN BUS wiring between components be checked by an electrician. Also check if all devices on the CAN bus are switched on.
			Warning appears after a software update.	The warning should disappear after a few seconds. Ignore this warning, it disappears after a few seconds.
W205	**—**	**Node incompatible**	Unsupported component(s) connected to the CAN BUS. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Software of one or more components is not up to date.	Check that all components on the CAN BUS are updated with the latest software.
W206	**—**	**Update in Progress**	A firmware update is running. Note: It is possible that the Condair Delta SPA Control Box or the Condair Omega may not work properly during the update. In addition, it is possible that the SPA display truns white during update. In this case, leave the device switched on and wait (max. 5 minutes) until everything is working properly again.	
			A firmware update is in progress.	Wait until the firmware of all components of the CAN BUS is updated. The warning is automatically reset after the update is completed.
W207	**—**	**Update Failed**	The firmware update failed. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The firmware update failed.	Make sure that the correct firmware is used and restart the update.
—	**E208**	**Slave Master Missing**	A device (slave or master) on the CAN BUS can not be found. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. Once the slave or master is found, the system continues to run normally.	
			A CAN BUS participant (slave or master) is missing.	Make sure that all CAN BUS users are available and correctly connected. Also check if all devices on the CAN BUS are switched on.

Warning	Fault	Message	Possible causes	Remedy
—	E209	**OTP Hardware**	The OTP hardware code is invalid. Note: The operation of the Condair Delta SPA Control Box or Condair Omega is stopped. After eliminating the fault, the Condair Delta SPA Control Box or the Condair Omega must be switched off and on again (depending on which device the error has occurred).	
			The hardware version which is stored in the OTP is invalid.	Replace the control board in the Condair Delta SPA Control Box or in the Condair Omega.
W250	—	**Export File**	The configuration file was not saved. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The configuration file ("SpaExportSettings.json") could not be created on the local file system.	Make sure the local file system is working properly.
W251	—	**Export Incomplete**	Not all data records of the configuration file were saved. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Not all configuration settings could be stored in the configuration file ("SpaExportSettings.json") on the internal file system.	Make sure that the saving process has not been interrupted or that no components have been removed from the CAN BUS.
W252	—	**Import File**	Downloading of the configuration file failed. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The configuration file ("SpaExportSettings.json") could not be found or opened on the local file system.	Make sure the configuration file ("SpaExportSettings.json") is present and has been saved correctly.
W253	—	**Import Incompatible**	The configuration file to be downloaded is incompatible. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			Some parameters in the configuration file ("SpaExportSettings.json") are not supported.	Make sure that all components of the CAN BUS are updated with the latest software version and that the configuration file has not been manipulated.
W254	—	**Import Incomplete**	Not all data from the configuration file could be loaded. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The configuration file ("SpaExportSettings.json") to be downloaded has been exported with an older firmware version.	A file export with the latest firmware has to be done again.
			A component has been removed from the CAN BUS after an export has been performed.	Check that all components are connected correctly to the CAN BUS.
W255	—	**No Logger Space**	There is no free memory for the logger file. Note: The Condair Delta SPA Control Box or the Condair Omega, respectively continue to work normally.	
			The free space on the control board of the Condair Delta SPA Control Box or the Condair Omega is too small for the logger file.	Remove unnecessary files.

8.4 Resetting the fault indication

To reset the fault indication (Warning triangle on the SPA display lights up red):

1. Switch off the Condair Delta SPA Control Box via the unit switch.
2. Wait approx. 5 seconds, then switch on the Condair Delta SPA Control Box again.

Notes:

– If the Condair Omega is controlled by a Condair Delta SPA Control Box, the SPA Control Box must always be switched off and on again after the Condair Omega has been restarted.

– If the fault has not been eliminated, the fault indication reappears after a short while.

8.5 Replacing the fuses and backup battery in the SPA control board

The fuses and the backup battery on the SPA control board of the Condair Delta SPA Control Box must be replaced by **authorized personnel only** (e.g. electrician).

Replace the fuses on the control board only with a fuses matching the specifications below with the appropriate nominal current capacity.

Never use refurbished fuses. Do not bridge the fuse holder.

To replace the fuses or the backup battery proceed as follows:

1. Disconnect the Condair Delta SPA Control Box from the mains by switching off the electrical isolator (s) in the mains supply line(s) and secure electrical isolator(s) in "Off" position against inadvertent switching on.
2. Loosen the retaining screws of the Condair Delta SPA Control Box unit cover, then remove the unit cover.
3. Remove the touch protection shield from the control board.
4. Replace the fuses or the backup battery.

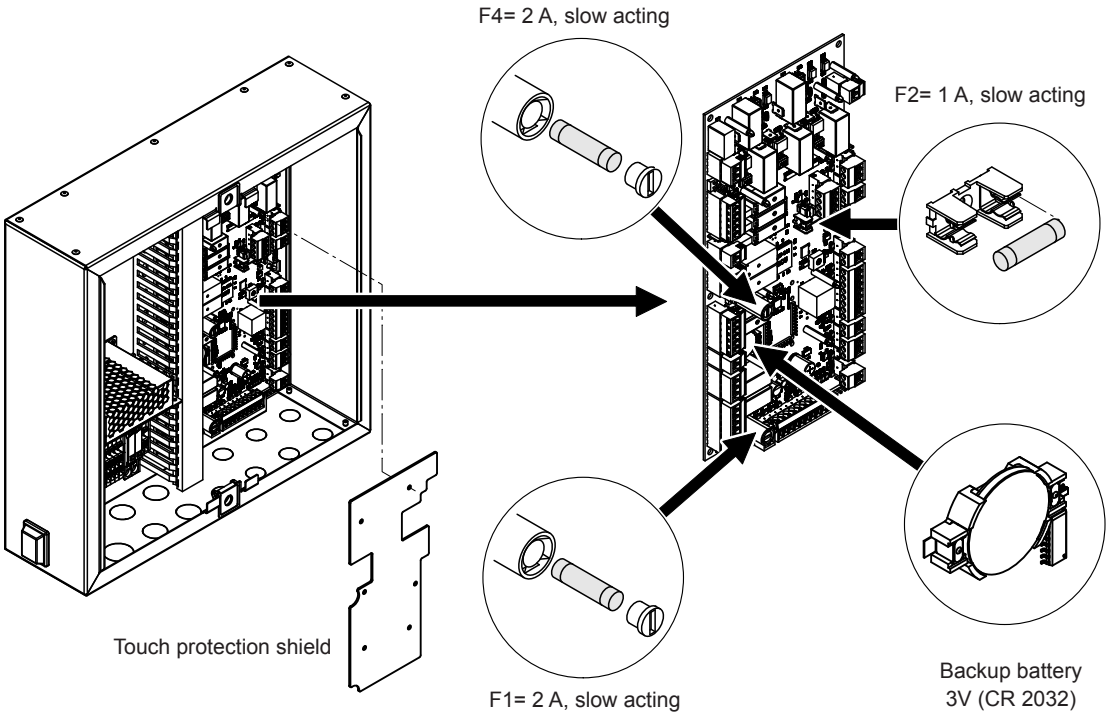


Fig. 7: Position of the backup battery and the fuses on the SPA control board

5. Relocate the touch protection shield on top of the control board.
6. Relocate unit cover and lock it with the two retaining screws with sealing rings.
7. Reconnect Condair Delta SPA Control Box to the mains by switching on the electrical isolator(s) in the mains supply line(s).

9 Taking out of service/Disposal

9.1 Taking out of service

If the Condair Delta SPA Control Box must be replaced or if the Condair Delta SPA Control Box is not needed any more, proceed as follows:

1. Take the Condair Delta SPA Control Box out of operation as described in *chapter 4.4*.
2. Have the Condair Delta SPA Control Box (and if applicable other system components) unmounted by a qualified service technician.

9.2 Disposal/Recycling

All components of the Condair Delta SPA Control Box must be disposed of in accordance with local regulations at the authorised collecting point.

If you have any questions, please contact the responsible authority or your local Condair representative.

Thank you for your contribution to environmental protection.

10 Product specification

10.1 Technical data Condair Delta SPA Control Box

Dimensions (LxBxT)	353 mm x 350 mm x 107 mm
Weight	6 kg
Admissible control signals	0-5 V, 1-5 V, 0-10 V, 2-10 V, 0-20 V, 0-16 V, 3-16 V, 0-20 mA, 4-20 mA, On/Off, 0-4 V
Admissible temperature sensors	PT100, PT1000, KTY
Admissible ambient temperature	1...40 °C
Admissible ambient humidity	1...75 %rh (non-condensing)
Protection class	IP22

10.2 Certificates

Certificates	CE, UL

10.3 Connection data accessories

Maximum power consumption accessories for Condair Delta SPA Control Box

Application	Accessories										
	Light		Ventilation		Fragrance		Additional relay		Shower	Heating	
	Cleaning light (Light 1)	Color Light (Light 2)	Supply air fan (Fan 1)	Exhaust fan (Fan 2)	Fragrance 1 (Pump 1)	Fragrance 2 (Pump 2)	Music, ... (Rel 8)	Music, ... (Rel 9)	Shower (Pump 2)	Bench heating (Rel 8)	Wall heating (Rel 9)
Steam bath	max. 1 kW								-	max. 0.75 kW	-
Caldarium	max. 0.5 kW								-	max. 0.75 kW	max. 0.75 kW
Rasul	max. 0.5 kW									max. 0.75 kW	max. 0.75 kW

Connection data accessories

Application	Hardware variant	Control voltage accessories	Control power accessories max. in kW	Cable cross section supply line in mm²	Fuse F7 fast acting in A
Steam bath	SPA Control with standard equipment	120 V/1~/50…60 Hz	1	1.5	10
Steam bath with bench heating	SPA Control with equipment for bench heating		1.75	2.5	16
Caldarium	SPA Control with equipment for bench and wall heating		2	2.5	20
Rasul	SPA Control with equipment for bench and wall heating		2	2.5	20

11 Appendix

11.1 Program descriptions SPA applications

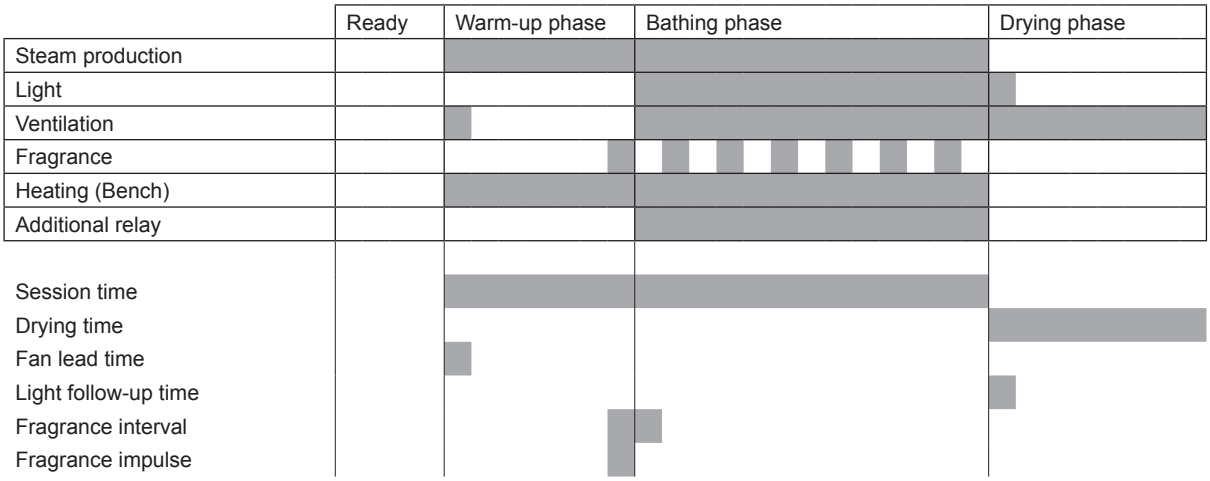
11.1.1 Steam bath application

In the steam bath application, the relative humidity in the cabin is 100 %, whereby the cabin temperature can be regulated up to 50 °C. The heat is generated by the hot steam and an optional bench heating.

The operation of the steam bath application can be divided into several phases:

- Ready — The system is ready for operation and can be started.
- Warm-up phase: — In the warm-up phase, the system is brought to operating temperature.
- Bathing phase: — During the bathing phase, the cabin temperature is regulated to the set temperature setpoint.
- Drying phase: — After the bathing phase, a drying phase follows to dry the cabin.

Optionally, it can be determined whether the system switches to a keep warm state after the bathing phase, in which the cabin temperature is regulated to a set temperature value. Thus, the warm-up phase can be reduced for the next bathing operation. Light and additional relays can be freely configured in which phase they should be active. Below is a possible configuration shown.



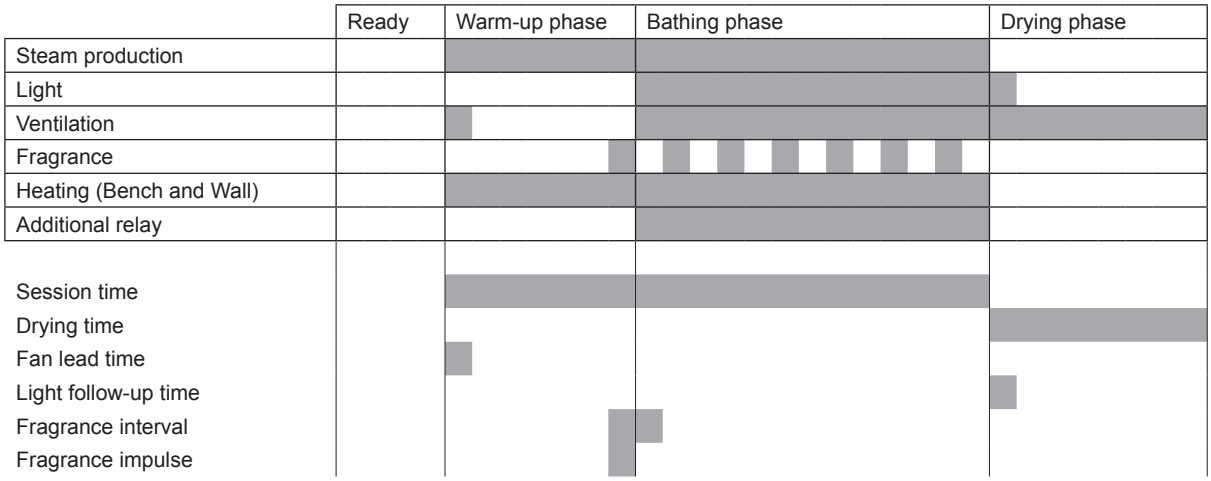
11.1.2 Caldarium application

In the Caldarium application, the relative humidity in the cabin is around 80%, which is generated by the steam of a steam generator. The heat is mainly generated by the seat and wall heating.

The operation of the Caldarium application can be divided into several phases:

- Ready — The system is ready for operation and can be started.
- Warm-up phase: — In the warm-up phase, the cabin is brought to operating humidity (steam) and bank and wall heating are brought to operating temperature.
- Bathing phase: — During the bathing phase, the cabin humidity is adjusted to the set humidity setpoint and the bench and wall heating are adjusted to the set temperature setpoints.
- Drying phase: — After the bathing phase, a drying phase follows to dry the cabin.

Optionally, it can be determined whether the system switches to a keep warm state after the bathing phase, in which the cabin humidity as well as the bench and wall temperature are regulated to a set keep warm value. Thus, the warm-up phase can be reduced for the next bathing operation. Light and additional relays can be freely configured in which phase they should be active. Below is a possible configuration shown.



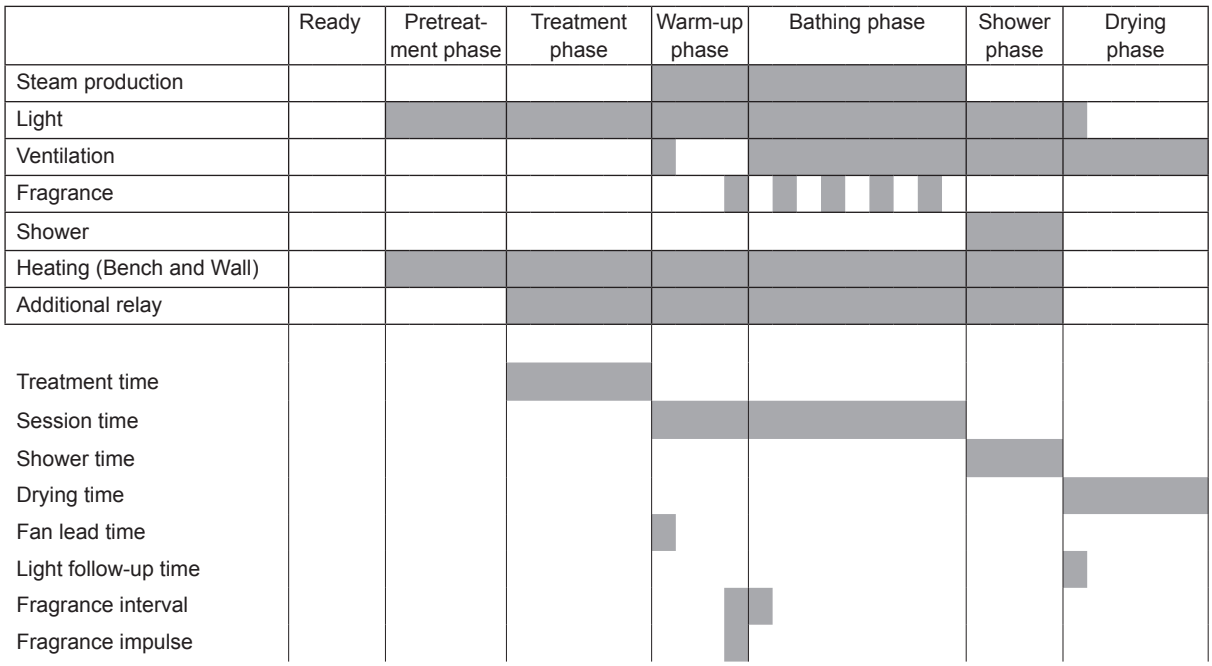
11.1.3 Rasul application

The Rasul application is a bathing ritual originating from the ancient Arab world. In a first step, clay is applied to the skin and waited until the mass on the skin has dried out (treatment phase). Then, bathing phase follows in which the clay mass is softened by water vapor. Finally, the clay is washed off with a shower (shower phase).
In the Rasul application, the relative humidity in the cabin is around 80%, which is generated by the steam of a steam generator. The heat is mainly generated by the seat and wall heating.

The operation of the Rasul application can be divided into several phases:

- Ready: The system is ready for operation and can be started.
- Pretreatment phase: In the pretreatment phase, the bench and wall heating are brought to operating temperature. Optionally, a certain humidity can also be set in this phase.
- Treatment phase: During the treatment phase, the bench and wall temperature are regulated to the set temperature setpoint. Optionally, a certain humidity can also be set in this phase.
- Warm-up phase: In the warm-up phase, the cabin is brought to operating humidity (steam) and bank and wall heating are brought to operating temperature.
- Bathing phase: During the bathing phase, the cabin humidity is adjusted to the set humidity setpoint and the bench and wall heating are adjusted to the set temperature setpoints.
- Drying phase: After the bathing phase, a drying phase follows to dry the cabin.

Optionally, it can be determined whether the system switches to a keep warm state after the bathing phase, in which the cabin humidity as well as the bench and wall temperature are regulated to a set keep warm value. Thus, the warm-up phase can be reduced for the next bathing operation. Light and additional relays can be freely configured in which phase they should be active. Below is a possible configuration shown



Warranty

Condair Inc. or Condair Ltd. (depending on the entity that supplied the product, and hereinafter collectively referred to as CONDAIR) warrant for a period of two years after installation or 30 months from the manufacturer's ship date, whichever date is earlier, that CONDAIR's manufactured and assembled products, not otherwise expressly warranted, are free from defects in materials and workmanship. Notwithstanding the foregoing, the products listed below have an alternate warranty period:

- GSTC Series heat exchanger(s) are warranted to be free from defects in materials and workmanship for a period of 3 years from installation or 40 months from the manufacturer's ship date, whichever is earlier.
- SAM-e Short Absorption Manifolds, except for the coupling seals, are warranted to be free from defects in materials and workmanship for a total period of 10 years from the manufacturer's ship date.
- Condair RH Connect and Condair RH Classic humidifiers are warranted to be free from defects in materials and workmanship for a period of 5 years from the manufacturer's ship date.
- Spare Parts used for repairs are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer.
- No warranty is made against corrosion, deterioration, or suitability of substituted materials used as a result of compliance with government regulations.

CONDAIR's obligations and liabilities under this warranty are limited to furnishing replacement parts to the customer, F.O.B. CONDAIR's factory. The replacement parts are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer. Procedure:

1. Customer Requests Warranty as per instructions on the CONDAIR Warranty Form.
2. CONDAIR reviews the warranty claim and will respond in one of two ways:
   a. Warranty Accepted – Replacement Part or credit granted.
   b. Warranty Declined – Response with justification will be provided to the customer.
3. In some cases, CONDAIR may request the part to be returned, freight prepaid by the customer, as part of the warranty acceptance or warranty determination process. Some reasons include:
   a. Part must be analyzed to determine the root cause of failure.
   b. Part must be returned to the supplier for claim/investigation.

   When parts are requested to be returned, replacement parts will be sent by CONDAIR to the customer against an invoice from CONDAIR paid by the customer. The cost of the replacement parts will be reimbursed to the customer with a credit note after the parts are received and analyzed by CONDAIR, if the warranty is accepted.

The warranties set forth herein are in lieu of all other warranties expressed or implied by law. No liability whatsoever shall be attached to CONDAIR until said products have been paid for in full and then said liability shall be limited to the original purchase price for the product. Any further warranty, with the exception of a purchased extended warranty described below, must be in writing, and signed by an officer of CONDAIR.

CONDAIR makes no warranty and assumes no liability unless the equipment is installed in strict accordance with the installation manual in effect at the date of purchase, and by properly qualified and licensed professionals capable of installing such equipment.

CONDAIR makes no warranty and assumes no liability whatsoever for consequential damage or damage resulting directly from misapplication, incorrect sizing, or lack of proper maintenance of the equipment.

CONDAIR makes no warranty and assumes no liability whatsoever for damage to the products, humidifier, supply lines, drain lines, steam distribution systems, or the building as a whole caused by freezing.

CONDAIR reserves the right to change the design, specifications, and performance criteria of its products without notice or obligation.

Extended Warranty

Extended warranties are available to purchase under the conditions listed above. Extended warranties must be purchased at the time of the original equipment order.

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