INNOVATIVE SAUNA TECHNOLOGY

EOS

Aroma-Tec II

Automatic sauna splash system

(EN) **Installation and operation manual**

Made in Germany
CE IP44

Table of contents

Service Address

Please keep this address in a safe place together with the installation guide.
To help us answer your questions quickly and competently please provide the information printed on the type shield including the model, item no. and serial no., in all inquiries

1 Information regarding these instructions / general information

1.1 Scope of validity

These instructions describe the function, installation, commissioning and operation of the Aroma-Tec II automatic sauna splash system and the appropriate accessories.

These operating instructions must be carefully read before use and must be stored near the device for immediate use.

1.2 Target group

Only our authorised partners and persons who were instructed regarding the device functions and have read and understood the operating instructions may work on the system.

Electrotechnical connection work may only be performed by appropriately trained specialist staff!

1.3 Symbols used

The following types of safety instructions and general instructions are used in this document:

DANGER !
"DANGER" identifies a safety instruction that is neglected at the risk of severe or life-threatening injuries or major damage to goods!

CAUTION !
"CAUTION" identifies safety instructions that are neglected at the risk of injuries, damage to health or damage to goods!

ATTENTION !
"ATTENTION" identifies safety instructions that are neglected at the risk of damage to goods!

HIGHLY FLAMMABLE !

"HIGHLY FLAMMABLE" identifies substances with a low flash point under 21°C.

ESD-SENSITIVE !

"ESD SENSITIVE" identifies electronic components that can be damaged by electrostatic discharge. The generally known precautions regarding ESD-sensitive devices must be adhered to when handling these devices!

HINT !

A "HINT" characterises information that may help to improve the operation.

1.4   Warranty

All devices and systems of the EOS company are produced using the latest production methods and comprehensive quality control. Please contact your specialist dealer should you nevertheless have reason for complaint. The general warranty conditions of EOS apply. (see below).

General warranty conditions

Company EOS provides a warranty for 2 years from the date of commissioning or a maximum period of 27 months after delivery, assuming correct installation and commissioning with completed and signed commissioning protocol.

Wearing parts such as seals, hoses, membranes, dosing screw conveyors, electrodes, roller carriers and other parts that are subject to mechanical or chemical wear are excluded. We provide a warranty for half a year on those parts.

Our ERP programme requires an invoice for each delivery (also for warranty services). Customers will receive a credit note after returning the faulty part and its inspection as required. Please return goods within 14 days.

Costs for consequential damage and costs resulting from handling warranty claims are excluded.

Warranty claims are not valid when the damage was caused by frost, water, over-voltage or inappropriate handling.

HINT !

Please send a completed commissioning protocol together with the defective part to EOS to maintain your warranty claims. We reserve the right to settle the warranty claim when no commissioning protocol is available.

ATTENTION !

Modification of the device is not permitted. Warranty and product liability claims become void when this requirement is not fulfilled.

1.5 Further information

Further information regarding specific topics such as layout of the dosing performance or description of the operating parameters is available from your specialist dealer or directly from:

2 Safety

2.1 Appropriate use

The Type Aroma-Tec II automatic sauna splash system may only be used for the applications described in Section *3.2, Product* description of the product description. The locally applicable regulations regarding accident prevention, worker safety and drinking water protection must be adhered to.
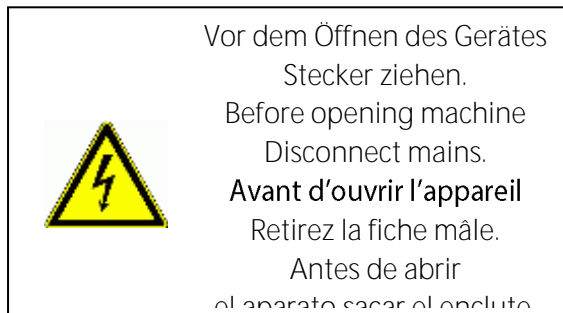
2.2 Safety instructions:

ATTENTION !

The operating instructions must be carefully read and considered before installation and use!

Work on the system and changes to the settings may only be performed by trained and instructed persons! It is particularly important that the regulations for worker safety and accident prevention as well as for wearing protective clothing are adhered to.

Take note of the information stickers on the device!

Vor dem Öffnen des Gerätes
Stecker ziehen.
Before opening machine
Disconnect mains.
Avant d'ouvrir l'appareil
Retirez la fiche mâle.
Antes de abrir
el aparato sacar el enchute

Check the dosing hose of the pump
and replace it as required when
topping up the fragrance
(see operating instructions).

Important information on the handling of chemicals and fragrances is provided in the safety data sheets of the fragrance manufacturers!

The automatic sauna splash system mixes water with fragrance and doses it onto the sauna heater. The fragrance concentration in the water is so low that it poses no risk to people.

DANGER ! IRRITATION !

The underlined fragrances may lead to irritation and allergic reactions.

HIGHLY FLAMMABLE !

The underlined fragrances may be highly flammable. This may cause injuries to persons or risks to the environment. It is therefore necessary to perform all work with great care!

CAUTION !

The fragrances may also be harmful to health in high concentrations!

In emergencies relating to the handling of chemicals, you can contact a Poison Emergency Call Centre! Example for Germany:

Emergency call number:

Poison Emergency Call Munich (or any other poison centre)

Telephone: +49 89 19240

CAUTION !

Water from the drinking water network is used to supply the automatic sauna splash system.

A safety combination unit for non-poisonous liquids <u>with free drainage</u> according to DIN EN 1717 (Germany and EU) is installed in the device to protect the water supply network. The splash line from the device to the heater shower must therefore be installed in a way that allows the line to drain by itself (declining, without water trap, no non-return fitting).

A system separation unit according to DIN EN 1717 for non-poisonous liquids <u>without free drainage</u> must be installed in the supply line of the automatic sauna splash system when the splash line is not self-draining (e.g. installed with incline, non-return fitting or water trap in the pipe).

Please adhere to the locally applicable regulations!

ATTENTION !

Modification of the device is not permitted!

3 Product description - delivery scope

3.1 Delivery scope / accessories

The Type Aroma-Tec II automatic sauna splash system mainly consists of the following components:

- Microprocessor controller SSD + BET in housing
- 1 to 4 SA-Vi hose pumps for dosing fragrance concentrate
- Mounting plate with bracket for fragrance bottles
- **Supply line with ball valve, ½" internal thread**
- Fine screen 0.3 mm, brass
- Safety combination unit / pipe aerator according to DIN EN1717 for self-draining outlet lines
- 1 solenoid valve ¼" VA
- Pressure monitoring
- **Dosing pipe with 1 to 4 dosing valves 3/8" VA**
- **Discharge 3/8" internal thread**
- **Splash shower: Perforated pipe with 3/8" internal thread**

The following options are available as accessories:

1. Wall feed-through Sauna VA for heater shower: Item no.: 15214
2. Special versions of the wall feed-through are available on request
3. Special versions of the splash shower are available on request
4. Sauna splash connection set: Item no.: 20101, consisting of:
   a. 10 meter PTFE hose 6x1 mm
   b. Hose **connection for splash automatic system 3/8" external thread x** 6x1 mm
   c. Hose connection for wall feed-**through 3/8" internal thread x 6x1** mm
   d. **3/8" angle internal/external thread**
5. Button plate made of wood incl. illuminated button for operation in the cabin: Item no.: 12905
6. **System separating unit ½" for automatic sauna splash system (when** outlet pipes are not self-draining): Item no.: 24321
7. Hose connection, nickel-**plated brass, 3/8" internal thread for PTFE hose** 6x1 mm, item No.: 19282

3.2 Product description

The Aroma-Tec II automatic sauna splash system is a dosing system for a fully automated splash onto the sauna heater. A fragrance can automatically be added to the splash water.

The dosing cycle, the amount of water (splash amount) and the amount of fragrance (smell intensity) can be individually set with the touch panel on the control unit.

The system can be controlled by an internal timer program, an internal cycle programme or an optional button.

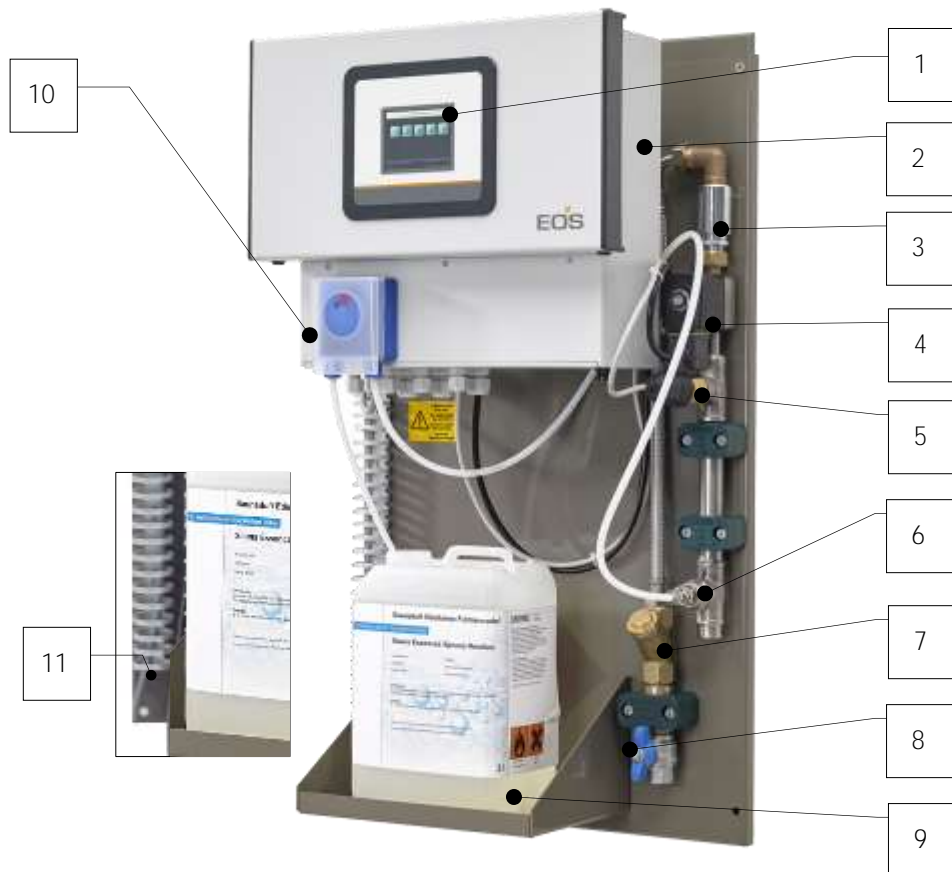Overview automatic splash sauna Type: Aroma-Tec II

Figure 1, Automatic sauna splash system, Aroma-Tec II

1. Touch display
2. Switch box
3. Safety combination unit according to DIN EN1717 (non-return valve + aerator)
4. Solenoid valve
5. Pressure switch
6. Dosing valve, 1-4 units
7. Dirt filter
8. Shut-off ball valve
9. Fragrance container, 1-4 units
10. Hose pumps for dosing, 1-4 units
11. Connection for electrical grounding

23. Main fuse *(see* Figure 12, Control unit with touch display*)*
24. Main switch *(see* Figure 12, Control unit with touch display*)*

The solenoid valve (4) opens for one splash and the splash water flows to the sauna heater. The water is retained at the diaphragm installed behind the pressure switch (5) and pressure builds up. Fragrance dosing is released when the pressure is higher than 1.2 barg. The dosing pump (10) selected doses the predetermined amount of fragrance from the fragrance container (9) through the dosing valve (6) into the water flowing to the heater.

The fault message "Water input pressure of 1.2 barg not reached, fragrance safety switch-off => Check water supply" (see Section *7.3, Fault removal /* fault codes*)* is shown when 1.2 barg are not reached and the solenoid valve keeps closed. This ensures that the fragrance concentrate can only be dosed when the necessary water pressure is present in the device.

The installed safety combination unit (3) according to DIN EN 1717 (non-return valve + aerator) provides additional protection against splash water flowing back into the supply network in the event of a pressure drop. A dirt filter (7) and a ball stop valve ½" (8) are installed upstream of the safety combination unit (3).

ATTENTION !

The automatic sauna splash system must either be locked with the sauna controller on-site or the splash times must be coordinated to avoid dosing onto a cold heater! The first splash after switching on the power is prevented when the internal time delay (0 - 30 minutes adjustable) is activated. This switch-on delay can be switched off as required (e.g. when the splash is externally triggered).

3.2.1 Dosing unit

Fragrance dosing is achieved with hose pumps that can reliably provide very small dosing amounts, even when air or gas bubbles are enclosed in the suction line. Rotating rollers press the dosing hose against the wall, squeezing out the liquid in front of the rollers while sucking in new liquid at the same time. Hose pumps are extremely reliable and particularly easy to operate.

Figure 2, Hose pump function

Fragrance concentrates can be extremely corrosive.
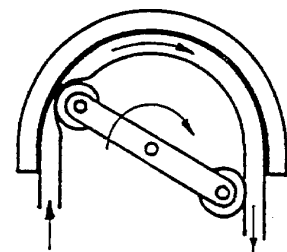The dosing hose used resists most of the commercially available concentrates.

The installation of a combined, spring-loaded non-return and dosing valve reliably prevents water from being pushed back and the dosing line from running empty. The complete valve body consists of stainless steel, hose connection 4x1 mm - **3/8" external thread.**
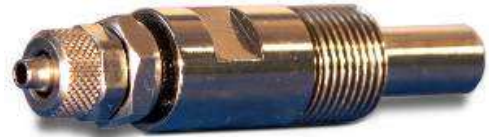

Figure 3, Non-return and dosing valve

ATTENTION !

The composition of the fragrance varies. This may reduce the service life of the hoses in the hose pumps. It is therefore necessary to check the hose pumps on a regular basis according to the maintenance plan.

3.2.2   Control unit

The control unit has a housing of protection class IP44. All electronic components are installed in it. The touch panel on the control unit can be used to set the operating parameters.

Control signals for external consumers / attractions

The following control signals are available for controlling external consumers.

1. Control signal for sauna heater, floating.
   The controller of the automatic sauna splash system provides a signal to control the sauna heater before a splash to ensure that the splash is not provided onto the unheated heater.
2. Sound effect, floating.
   This signal can be used to trigger a sound effect during the splash pre-indication and/or the splash.
3. Fault message, floating
   This signal can be used to send a fault message to an external GLT.
4. Sauna splash pre-indication, 230 V
   This signal can be used to control a light signal within or outside the sauna in order to announce the splash.
5. Effect illumination, 230V
   This signal can be used to trigger a light effect during the splash pre-indication and / or the splash.

Also see the terminal plan in *Section 9.1.*

Avoid splash onto a cold heater
There are two options for preventing the first splash onto a cold heater:

Option 1 (switch-on delay)
Activating the switch-on delay makes it possible to set a delay (0-30 min) for the first sauna splash (see *Section 6.5.2 Splash* → *switch-on delay)*.

Option 2 (pre-heat the sauna heater during operation)
The sauna heater control signal (for external consumers) makes it possible to set a pre-heating time (0-180 sec) for the sauna heater. The sauna heater is then heated up before a splash. Setting see *Section 6.5.3, Menu for splash announcement + sauna* → *heater.* This setting is available when the heater uses the feature "Preheating".

3.2.3 Piping and fittings

The pipes of the automatic sauna splash system consist of a ball stop valve (8), a dirt filter (7), and a safety unit combination (5) according to DIN EN 1717 to ensure that water cannot be sucked back into the water supply system. The piping further includes a solenoid stop valve (3) as well as a pressure switch (4) for pressure monitoring.

3.2.4 Heater shower

The standard delivery scope includes a heater shower consisting of a stainless steel pipe d18 x 200 mm with holes that distribute the water onto the heater stones. The **heater shower has a 3/8" internal thread connection.**

Figure 4, Heater shower (standard)

3.2.5 Wall feed-through (optional)

We offer different wall feed-throughs **with 3/8" thread connection made of** stainless steel for installation and safe attachment of the heater shower, see Section *3.1 Delivery scope / accessories.*

Figure 5, Example of a wall feed-through for heater shower

3.3 Identification of the device / name plate for Aroma-Tec II

Enter the data on the name plate of your device here.

Array 1:   Number of fragrance pumps
Array 2:   Complete the item number
Array 3:   Serial no.
Array 4:   Manufacturing date

Typ: **Aroma-Tec II** / __ _____
Art.: **94.624**_   **Serien Nr.:**_____
230V - 1~ 50Hz - P: 50 W

Herstellung __.__._____
CE **EOS Saunatechnik**
Schneiderstriesch 1
D-35759 Driedorf

Figure 6, Name plate

3.4   Technical data

	Aroma-Tec II	
Dimensions and weights:		
External dimensions	0.70 x 0.40 x 0.23m HxWxD	
Space requirements	0.90 x 0.50 x 0.30m HxWxD	
Space requirements incl. operation and maintenance	2.00 x 0.60 x 1.00m HxWxD	
Empty weight / operating weight	8 / 12.5kg	
Connection data		
Inlet water	**1/2" internal thread (up to 2,5l/min)**	
Outlet splash pipe	**3/8" internal thread**	
Connection heater shower	**3/8" internal thread**	
Electrical connection	230VAC, 50Hz, 50W, two-pin earthed plug	
Main fuse F0	Microfuse 5x20, 1,25A lazy	
Nominal pressure / operating pressure	1.5-6barg / 1.5-6barg	
Required inlet pressure	1.5-6barg	
Operating data:		
Splash water	max. 1200ml per single splash at 100%	
fragrance	max. 24ml per single splash at 100%	
Cycle time	5-120 minutes	
Hose pump	24V DC	
Solenoid valves	**1/4" internal thread, 230VAC**	
Control unit for automatic splash	230VAC	
Medium temperature	5-30°C	
Environmental temperature in utility room	5-30°C	
Humidity in utility room	max. 70%	
Ventilation and extraction	Recommended for the utility room	
Software version	---	
Hardware version	1.2	
Accessories / options		

3.5   Transport / storage

The device must be checked for possible transport damage immediately after receipt.

CAUTION !

The device can get damaged by frost or high temperatures. Prevent exposure to frost during transport and storage! Do not store systems and devices next to objects with high heat radiation or directly exposed to sunlight. The device may only be transported and stored in its original packaging. Careful handling must be ensured.

The roller carrier of the dosing pump is not installed during transport and storage. This prevents deformation of the hose.

3.5.1   Storage of fragrances / chemicals

DANGER !

The safety data sheets of the fragrance manufacturers have to be considered with regard to storage!

The following points must be considered, among others:
- Fragrances may only be stored in appropriately marked, original plastic containers.
- The fragrances must be stored in a separate storage room.
- The environmental temperature may not exceed 20°C.

Also see *Section 2.2.1 Handling chemicals*

ATTENTION !

Observe the regionally applicable regulations for handling chemicals!

4   Assembly

The work described here may only be performed by appropriately trained specialist staff of a specialist company.

4.1   Selecting the place of installation

The place of installation must have the following characteristics:

1.   The place of installation must be protected against frost.
2.   The system must be protected against direct sunlight.
3.   An electrical power connection with ground contact must be available.
4.   Good air supply and extraction are recommended for the installation room.
5.   A waste water connection must always be available. (only required for version with system separation)

4.2   Assembly information (installation suggestion)

The automatic sauna splash system is mounted on a wall in the utility room. The pipe to the sauna heater should be as short as possible. Consider the space required for operation and maintenance of the device described in *Section 3.4 Technical data*.

The warning and information signs required according to the locally applicable accident prevention regulations (Germany: GUV-V D05) must be attached at the intended positions before the beginning of the installation.

Installation drawing
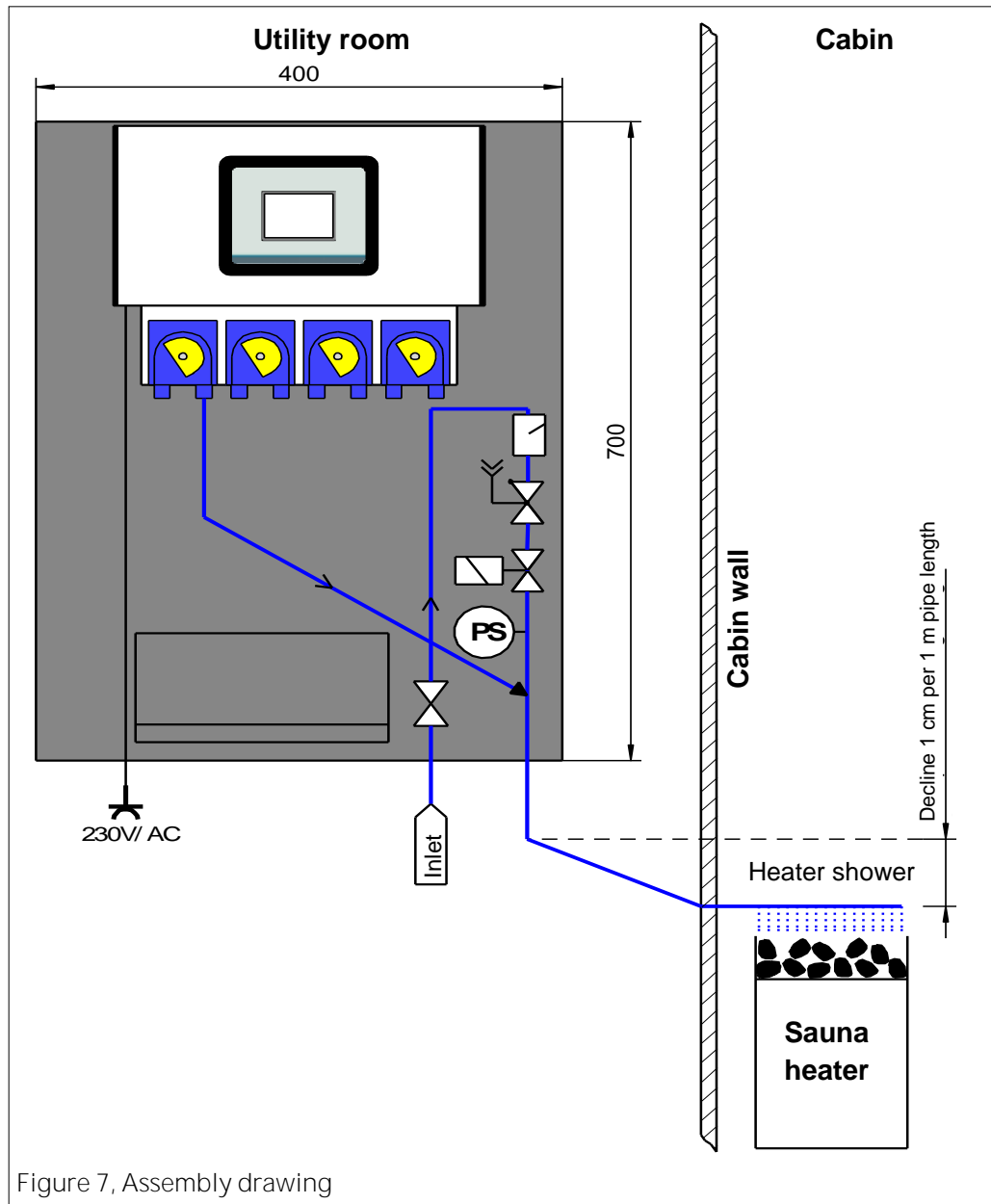
Figure 7, Assembly drawing

4.3 Mechanical installation

Installing the dosing device

The AROMA-TEC II dosing device is delivered ready for operation. It must be installed at a place that is easy to access. The splash line to the heater shower must be installed with a decline of at least 1cm per 1m pipe length! The heater shower must be installed approx. 10-15cm above the sauna heater.

Safely attach the mounting plate to the wall with 4 screws and consider good accessibility.

Wall feed-through for heater shower (optional)

HINT !
A wall feed-**through with two 3/8" external** threads made of stainless steel is provided for installation and safe attachment of the heater shower *(see Section 3.2.5).* A hole with approx. 18mm diameter is to be drilled into the sauna wall approx. 10-15cm above the heater; the wall attachment with collar is then inserted from the inside. The collar is fastened to the sauna wall using the V4A screws provided.

4.4   Hydraulic installation

Supply pipe
Rinse the supply line to the automatic splash system and then connect the intake connector of the automatic splash system to the supply line.

Splash line to the heater shower / wall feed-through

The splash line can be connected in two different possibilities to the heater shower:
a) The splash line is installed in a way that ensures that it can self-drain completely.
b) The splash line is installed in a way that does not allow it to self-drain completely e.g. water trap, installation at an incline).

To a) The line can self-drain

Use a pipe or hose with an internal diameter of max. 15mm.

HINT !
The safety combination unit for non-poisonous liquids with <u>free drainage</u> according to DIN EN 1717, which is installed as a standard (in Germany and the EU), is sufficient, when the outlet line is self-draining.

Connect the splash line 3/8" internal thread to the wall feed-through (optional) **3/8" external thread. Screw the heater shower hand**-tight to the wall feed-through. Only use Teflon tape for sealing to make shower cleaning as easy as possible.

To b) The line cannot self-drain

DANGER !

An additional system separation unit for nonpoisonous liquids <u>without free drainage</u> according to DIN EN 1717 (in Germany and the EU) must be installed when the splash line is not self-draining (e.g. installed with incline, or water trap in the line). This ensures that no fragrance can be sucked back into the drinking water line! *(see Section 3.1 Delivery scope / accessories)*

Use a pipe or hose with a maximum internal diameter of 6mm.

Connect the splash line 3/8" internal thread to the wall feed-through (optional) **3/8" external thread. Screw the heater shower hand**-tight to the wall feed-through. Only use Teflon tape for sealing to make shower cleaning as easy as possible.

The optional sauna splash connection set, from Company EOS, is used to connect the automatic sauna splash system with a hose to the wall feed-through.

4.5 Electrical installation

DANGER DUE TO HIGH VOLTAGE !

The electrical installation may only be performed by appropriately trained specialist staff!

The automatic sauna splash system must be switched to a voltage-free state and secured against switching on before electrical work is performed!

Connect the ground terminal (11) with the ground wire on site.

<u>Connecting control signals to external consumers:</u>
The standard version provides 5 control signals for controlling external consumers. Connect the appropriate control signals to the corresponding consumers.
See *Section 3.2.2,* Control unit *and Section 9.1, Terminal plan.*

5   Commissioning

5.1   Commissioning - comments

The work described here may only be performed by appropriately trained specialist staff of a specialist company. The work may alternatively be performed by persons who have completely read and understood the operating and installation instructions. The systems installed must be inspected for appropriate installation and tightness before commissioning.
Use the commissioning protocol in *Section 9.2 for the commissioning procedure.*

The device is provided with factory settings when it is delivered. Adjust the standard parameters to the desired operating mode during commissioning and enter these values into the operating data sheet shown in *Section 9.4.*

5.2   Commissioning - procedure

Filling and starting the automatic sauna splash system

1.   Ensure that the device is appropriately installed and connected.

2.   Unscrew the lid of the fragrance container and drill a hole of at least 7mm diameter into the lid. Screw back the lid and place the delivery container onto the bracket of the automatic sauna splash system.

CAUTION !
The bracket is only intended for a load up to 5kg. Place the fragrance container onto a separate shelf when this load is exceeded.
Most fragrances are easily flammable!

3.   Connect the bottle with the desired fragrance to the hose pump selected. Push the suction hose into the container until the end of the suction hose touches the bottom of the container. Proceed accordingly with optionally other fragrance containers.

<u>Insert the roller carriers into the hose pump</u>

1. Remove the clicked-in, transparent pump cover and the blue lock washer (32). Pull the hose holder (33) out of the guide in the housing.

31 Transparent pump cover (not shown)
32 Lock washer
33 Hose holder with dosing pipe made of Viton (hose set)
34 Roller carrier
35 Pump housing
41 Suction connection
42 Pressure connection
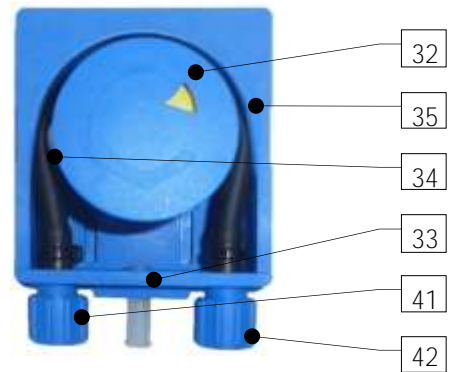
Figure 8, Schlauchpumpe

2. Place the yellow roller carrier onto the axle.

Figure 9, Insert roller carriers

3. Insert the hose holder in the guides of the housing in until it locks completely.

Figure 10, Insert hose holder

4. Turn the roller carrier anti-clockwise while carefully pushing the hose into the housing. Continue turning the roller carrier until the hose is completely inside the housing.

Figure 11, Turn roller carrier

Thereafter, replace the lock washer and the transparent pump cover. The roller carrier installation is then completed.

Proceed in reverse order to de-install the roller carrier and the hose holder.

Insert the safety connector into an appropriate mains socked and switch on the device at the main switch.

The first splash can be delayed by 0-30 minutes after the voltage has been switched on when the switch-on delay is activated. This prevents a splash from being performed when the sauna heater is cold. Subsequent splashes follow according to the cycle selected.

The device is then ready to use.

6 Operation / handling

6.1 General

The work described here may only be performed by appropriately trained and instructed persons. Alternatively, it can be performed by operating staff who have read and understood the operating instructions.
The operation can be started once all commissioning preparations have been completed. Switch on the device at the main switch (if that has not already been done).

6.2 Controller - software

The controller of the automatic sauna splash system is operated by using the touch display on the front of the device.

External control signals (e.g. buttons) and the fault message can be connected inside the controller housing as required.
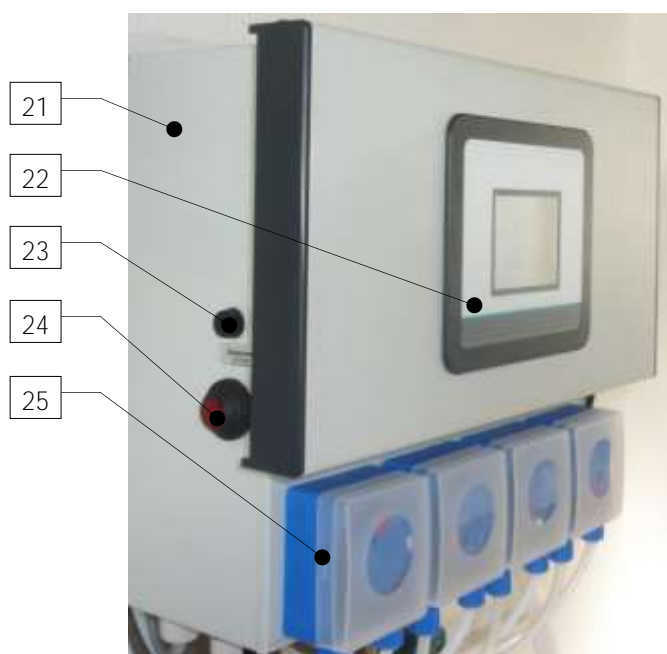
Figure 12, Control unit with touch display

Key:
21. Controller housing
22. Touch display
23. Main fuse
24. Main switch
25. Dosing pumps 1-4

A touch screen stylus is included in the delivery scope to make usage easier and protect the touch display.

Figure 13, Touch screen stylus

6.2.1 Menu structure of the controller

Overview main menu
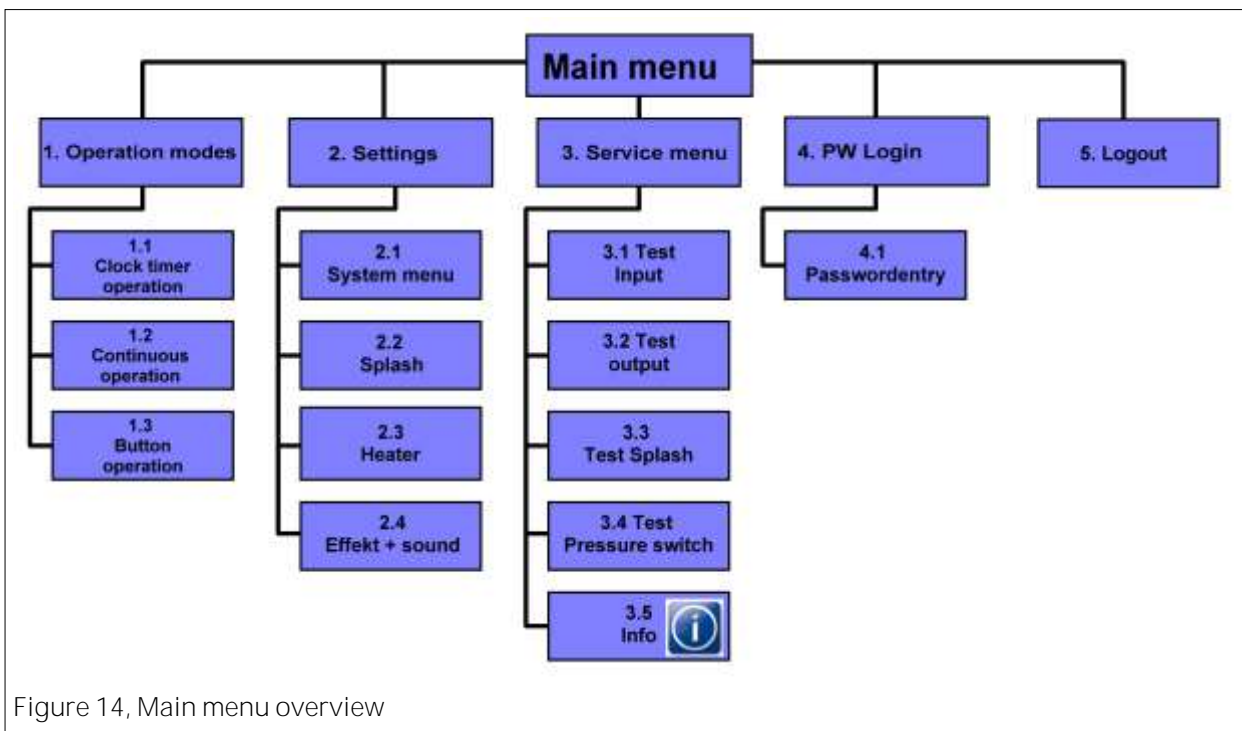
Figure 14, Main menu overview
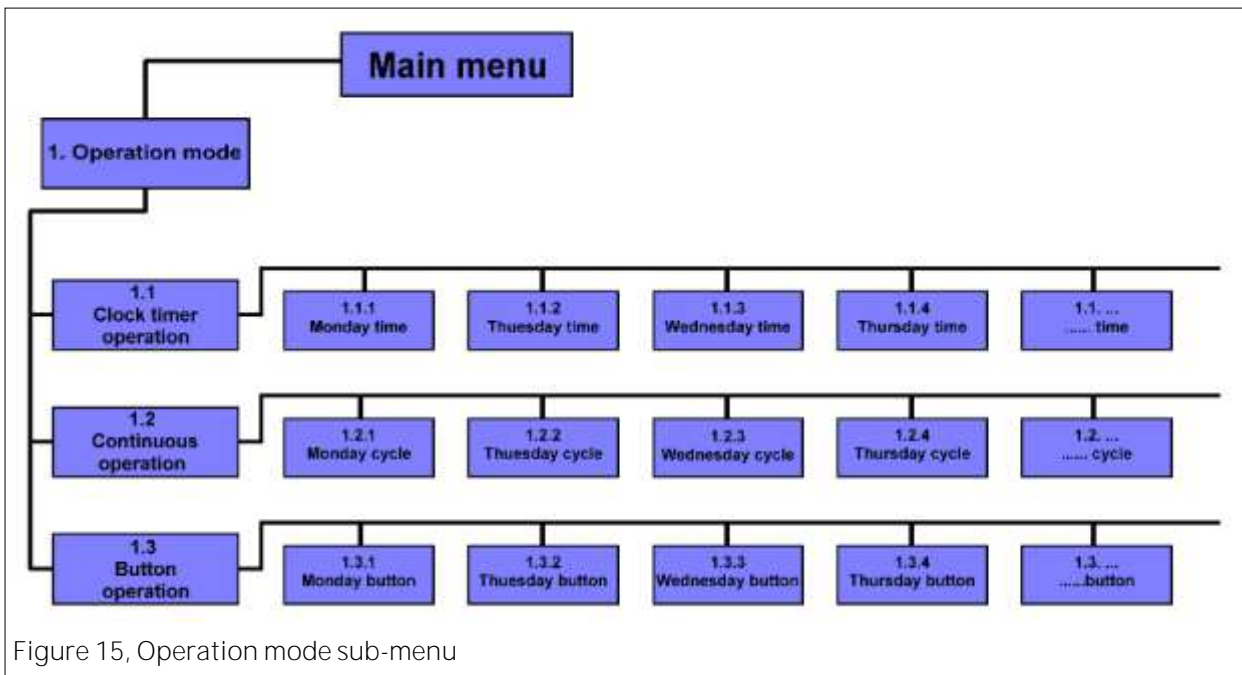
Figure 15, Operation mode sub-menu

Operation modes sub-menu

Settings sub-menu
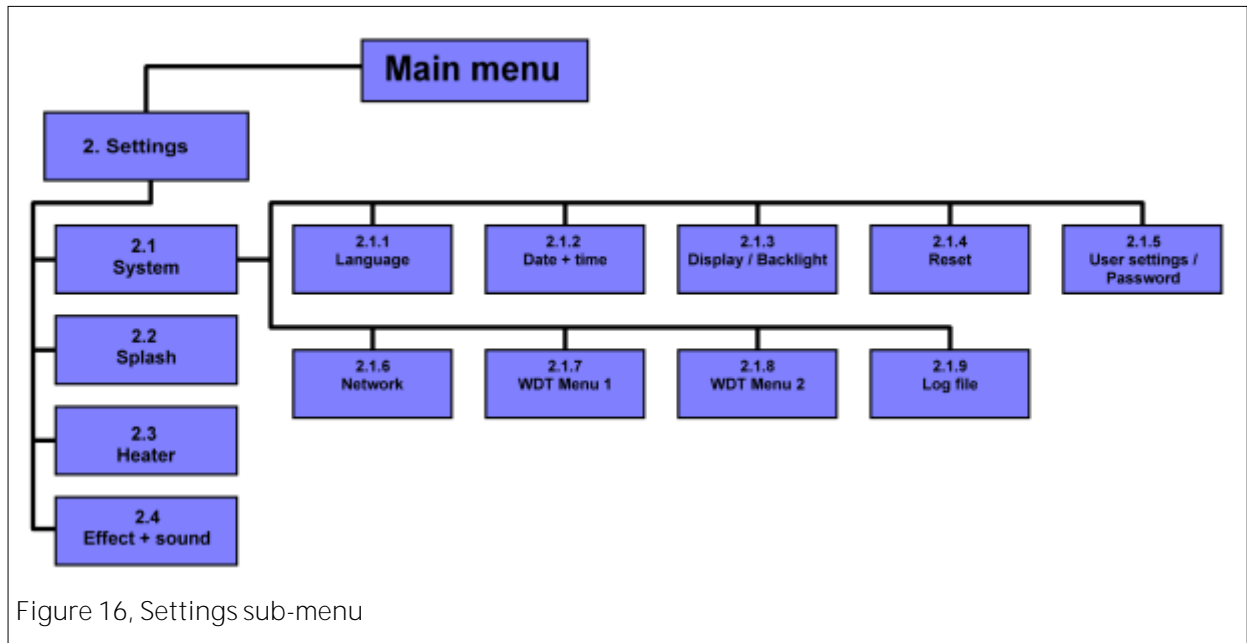
Figure 16, Settings sub-menu

6.2.2 Controller flow diagrams

Example with start by menu (timer programme or cycle operation)

Splash scenario with 3 partial flashes

Figure 17, Timer programme and cycle operation flow chart
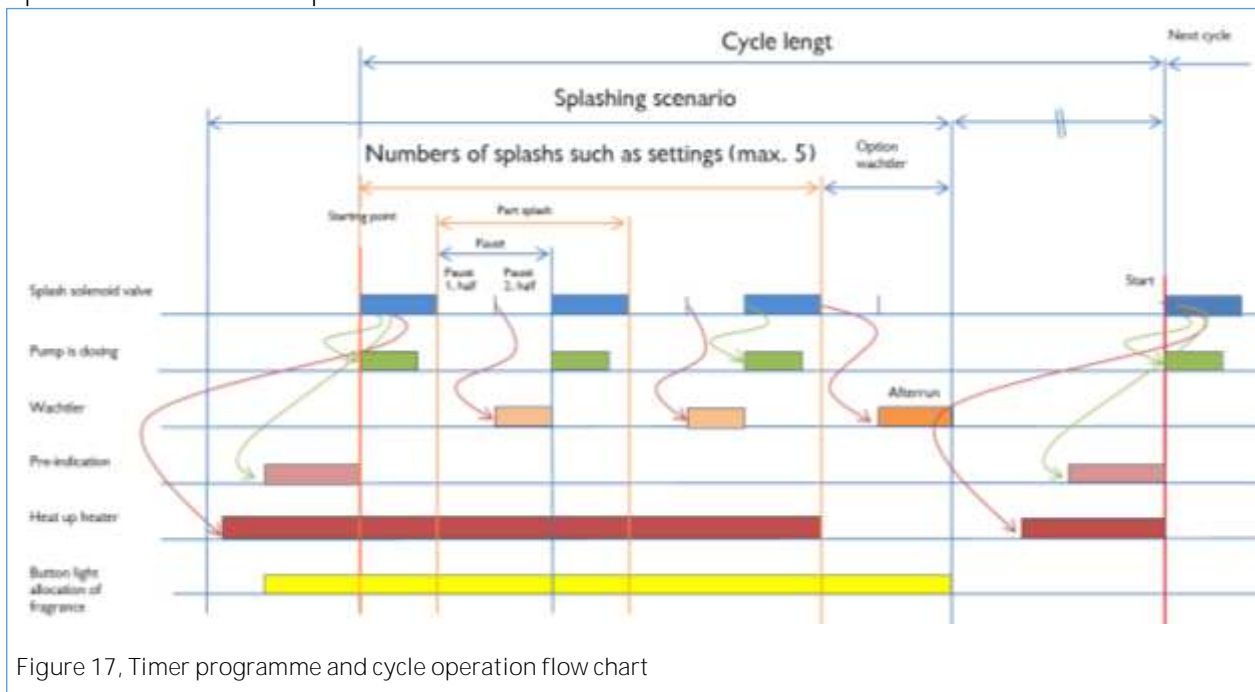
Example for start with button (button operation)

Splash scenario with 3 partial flashes

Figure 18, Button operation flow chart
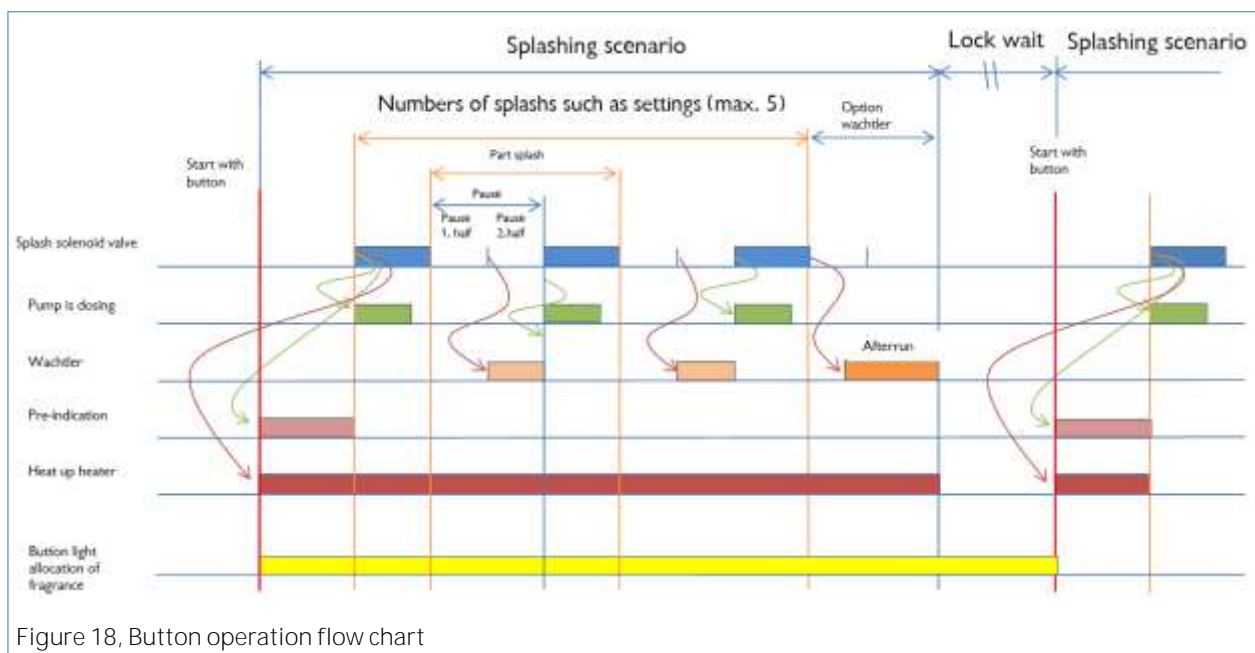
The main menu is displayed after switching on the device at the main switch on its side.

5 main groups may be selected from the main menu

Explanation of the symbols

The main menu

1.   Operation modes

2.   Settings

3.   Service menu

4.   Login to the various rights levels

5.   Logout from the rights levels. Successful logging off is indicated by a "0" in the information bar!

The information bar

The information bar remains visible at the bottom of the screen. It shows the following information.

a. Display of the operating mode; e.g. System Reset
b. Device description; Aroma-Tec II
c. Level of user rights; 0-7
d. 00:00:00; Time information concerning the next splash
e. Day of week, date, time

The navigation field

After tapping the input field, the font turns white and the navigation field is automatically shown. The desired values are set with the arrow keys and confirmed with OK.

The values are saved with the SAVE button while ESC terminates the input process.

6.3.1 Login main menu

Login is required before settings can be entered into the device.

Touch the Login button in the main menu to enter the password for the desired user level.
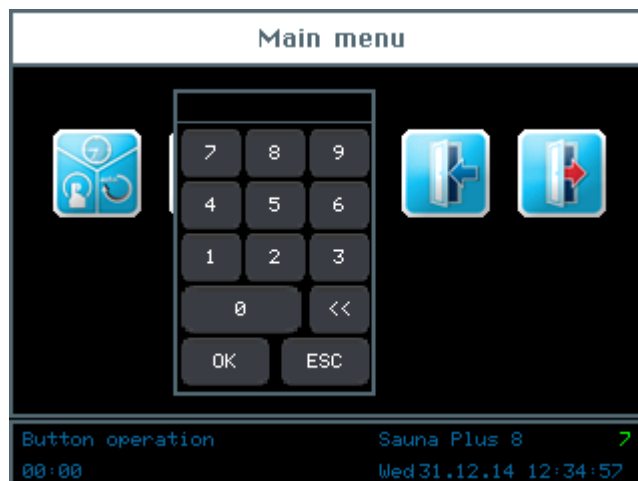
User levels from 0 to 7 exist for setting the controller.

User level 0	Guest	Reading rights
User level 1	Final customer	Limited changes
User level 2	Technician 1	More complex changes
User level 3	Technician 2	More complex changes
User level 4	Network administrator	Access for company service technicians
User level 5	Reset password	Access for service partner
User level 6	EOS menu 1	Access for company service technicians
User level 7	EOS menu 2	Access for company service technicians

Tipp

HINT !

The pre-installed passwords are provided in the operating data sheet in *Section 9.3.*

The respective user level is shown in green on the information bar of the display after successful login. The desired changes to the controller can be performed thereafter. Use the Logout button to log out after completing the settings. Also see *Section 6.8.*

Automatic logout:
The display switches to the screen saver when a selectable time period has expired. After a further minute has elapsed, the screen saver is dimmed and an automatic logout to user level 0 is performed.
The login process must be repeated before any settings can be made.

6.4 Operation modes menu

Operation modes
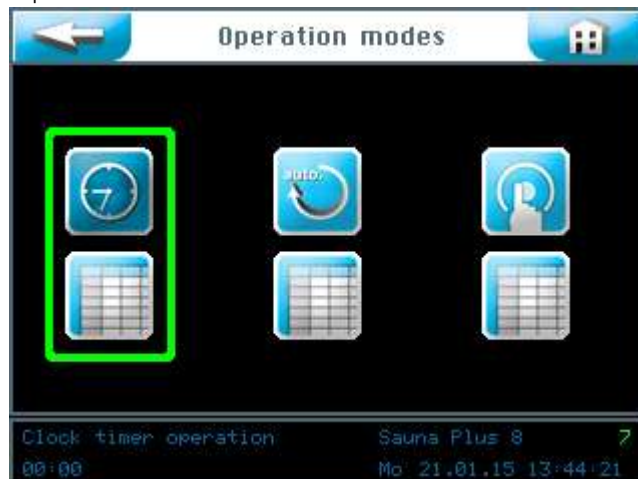
Explanation of the symbols

 Return button
The Return button leads back to the previous view.

 Home button
The Home button leads to the start menu.

You may choose between 3 Operation modes:
1. Operation with a timer program
2. Operation with a cycle program
3. Button operation

6.4.1   Timer programme operating mode

The timer programme operating mode can store up to 24 individual splash times for each day of the week. You can determine the start time, pump and number of repeats desired.
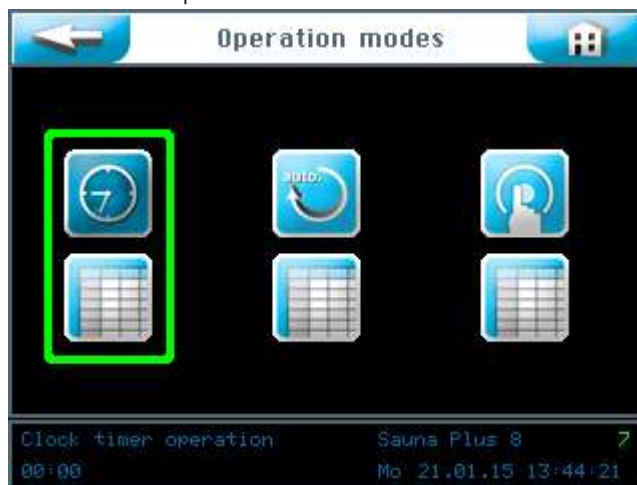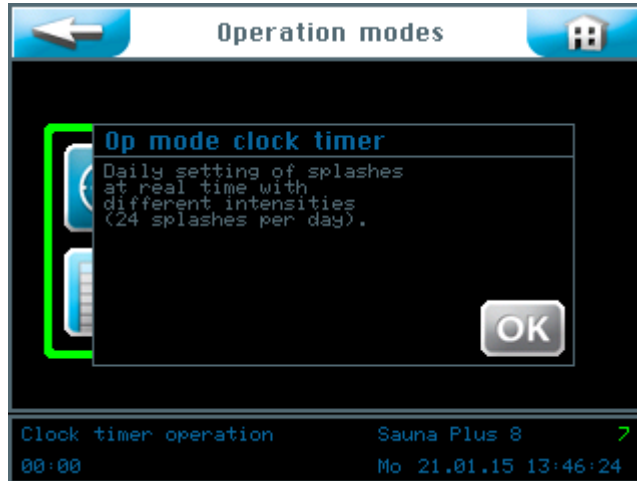

 Start / select timer programme operating mode

 Entering settings for the timer program

Confirm the information text with OK .
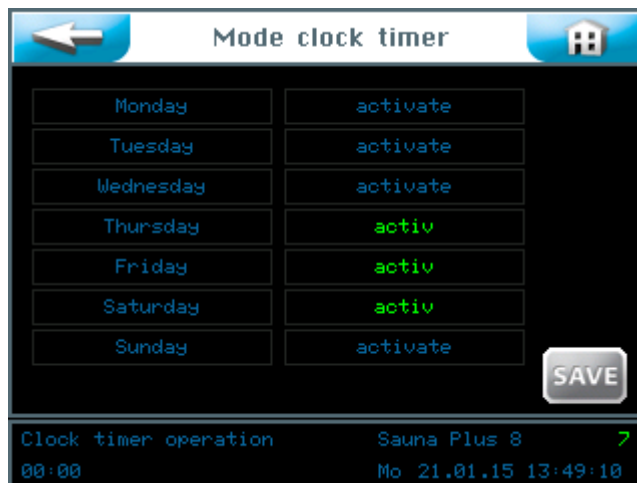
You can activate or deactivate each individual day of the week by pressing the corresponding active button in the right column.

Touch the left column of the relevant day of the week to enter starting times and the corresponding parameters.

The time menu for each day of the week.

An empty input template is shown here. You can enter up to 24 different starting times and the corresponding parameters.
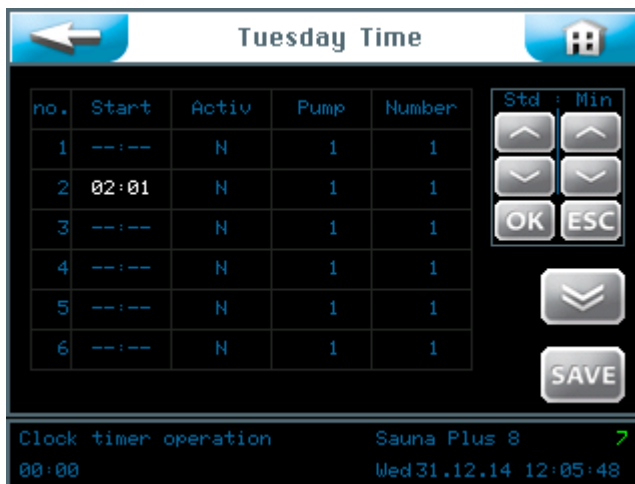
After tapping the input field, the font turns white and the navigation field is shown. Set the values required and save the input.

The Active column can be used to activate the time set with Y or to deactivate it with N .

The Pump column can be used to select the desired dosing pump and thereby the corresponding fragrance by tapping the field several times. 1 to 4 different dosing pumps are available, depending on the system version.

The Number column can be used to set the number of splash repeats by tapping the field several times.

Save the input with the SAVE button.

Touch the ⩔ button to page downwards.
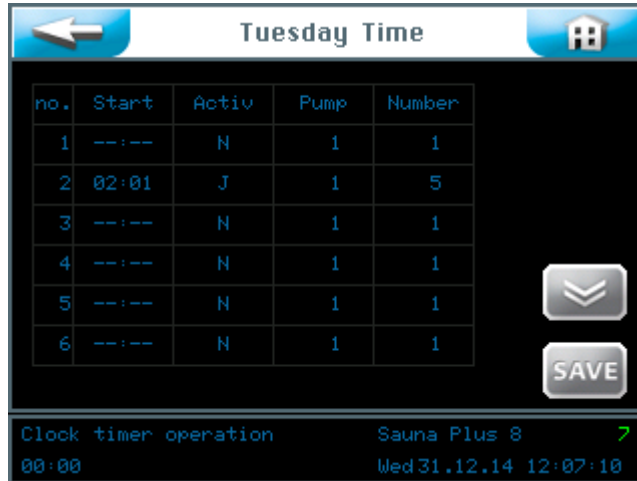
You can enter the starting times in any sequence. The times will be automatically sorted after pressing the SAVE button.

The starting times must separated by at least 30 minutes! For shorter distance, the system reports an error while saving the settings. The error is shown by the Start field with a red frame. Change the starting times accordingly, then save again.
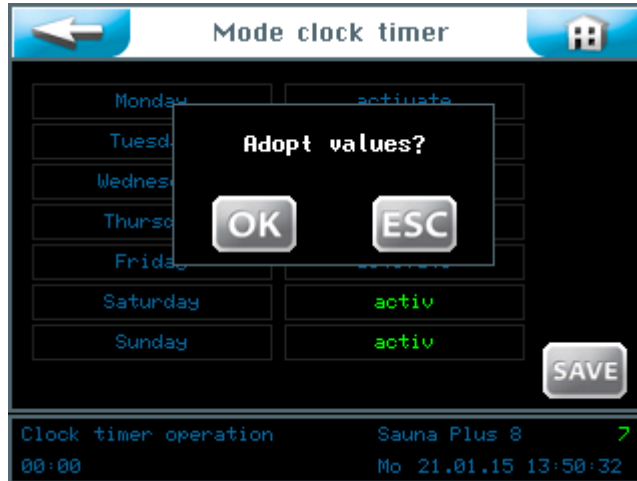
HINT !

The earliest Start time you can set is 00:01! The last cycle should be started not later than 23:30! Otherwise, it may overlap with the next day.
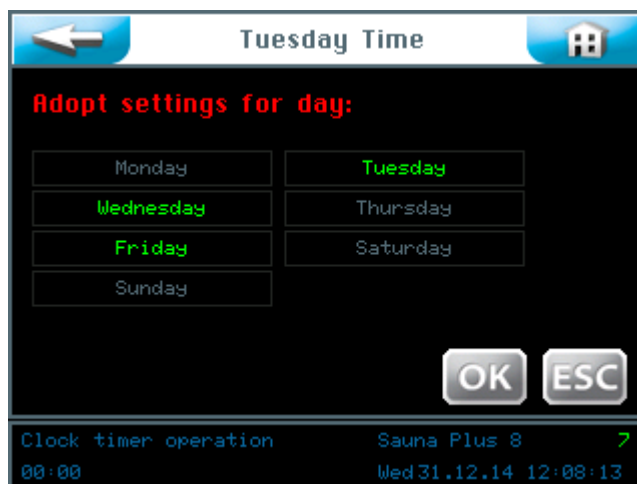
The controller then asks whether you want to accept the settings for other days as well. Mark all days for which you want to use the same settings in green and confirm the selection with OK .

Accept values with OK or quit with ESC .

The leads to the previous view. (Repeated query concerning saving)

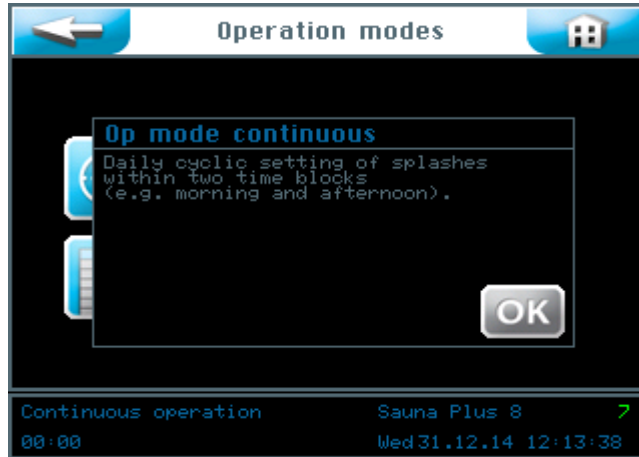### 6.4.2   Cycle programme operating mode

The cycle programme operating mode can be used to programme two individual splash cycles for each day of the week. You can set the starting and stopping time, the cycle length, the pump and the number of repeats.
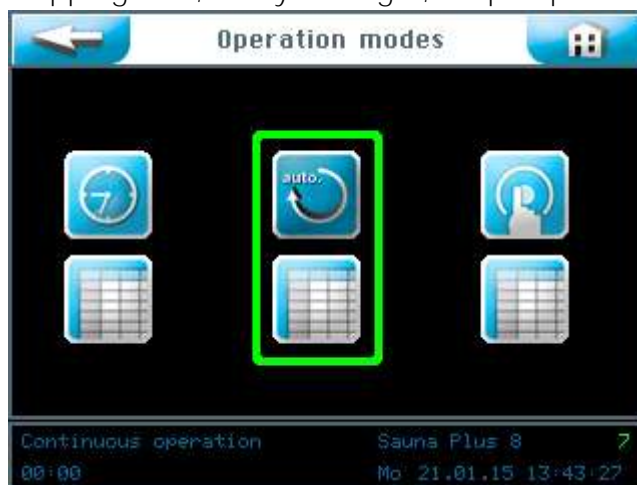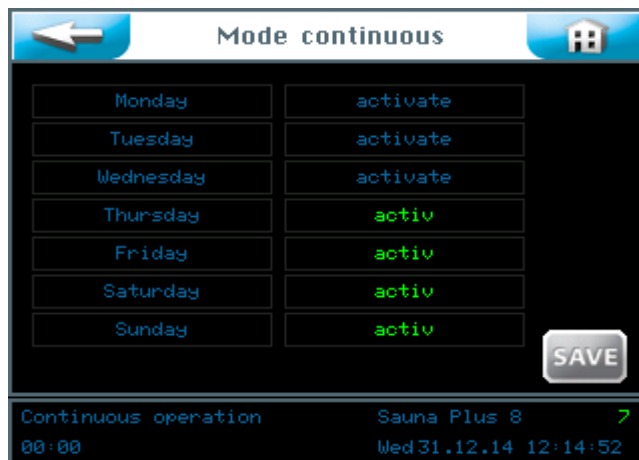

   Start / select cycle programme operating mode
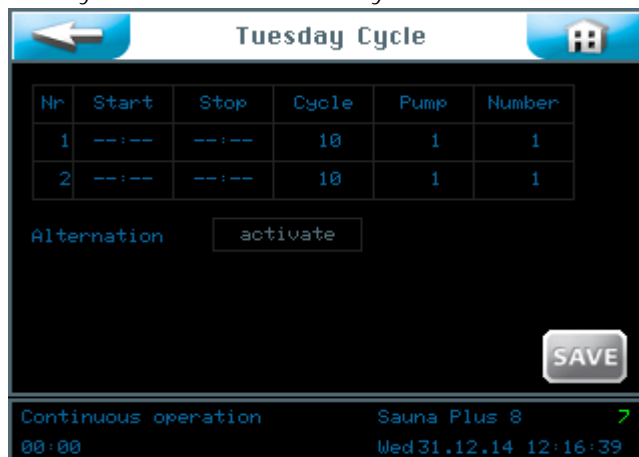
   Enter the settings for the cycle programme

Confirm the information text with OK.

You can activate or deactivate each individual day of the week by pressing the corresponding active button in the right column.

Touch the left column of the relevant day of the week to enter starting times and the corresponding parameters.

The cycle menu for each day of the week.

A completed input template is shown here. You can enter 2 different periods with appropriate parameters. The cycle mode selected will be active in the sauna cabin during these periods.

After tapping the input field, the font turns white and the navigation field is shown. Set the values required and save the input.

Field ⌈ No. ⌉: 2 different operating periods can be configured, e.g. No. 1 for ladies' sauna in the morning and No. 2 for mixed sauna in the afternoon.

The time blocks must be at least 30 minutes apart! This means the end of period no. 1 must be at least 30 minutes before the start of period no. 2. For shorter distance, the system reports an error while saving the settings. The error is shown by the Start field with a red frame. Change the starting times accordingly, then save again.

The Cycle column can be used to set the cycle length in minutes for 2 subsequent splashes during this operating period. Save the result with OK .

The Pump column can be used to select the desired dosing pump and thus the corresponding fragrance by tapping the field several times. 1 to 4 different dosing pumps are available, depending on the version of the device.

The Number column can be used to set the number of splash repeats per cycle by tapping this field several times.

Save the input with SAVE .

The device automatically changes between different fragrance pumps when the Alternate function is activated. This function is only available when more than 1 fragrance pump is installed.
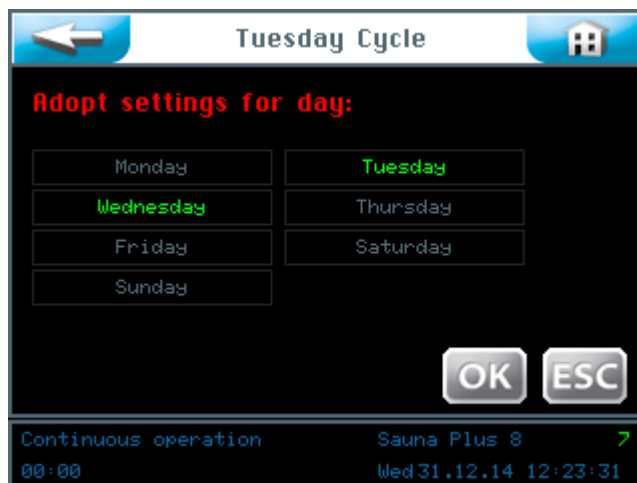
HINT !

The earliest Start time you can set is 00:01! The last cycle should be started not later than 23:30! Otherwise, it may overlap with the next day.

Store the values with SAVE after completing the entry.

The controller then asks whether you want to accept the settings for other days as well. Mark all days for which you want to use the same settings in green and confirm the selection with OK.

Accept values with OK or quit with ESC.

The leads to the previous view. (Repeated query concerning saving)
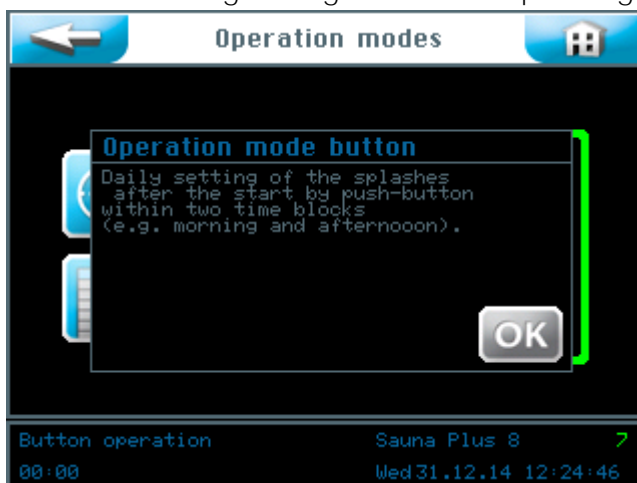
6.4.3 Button operating mode

The Button operating mode can be used to determine on which days of the week and at which times of the day the splashes can be started by the guests in the sauna cabin.
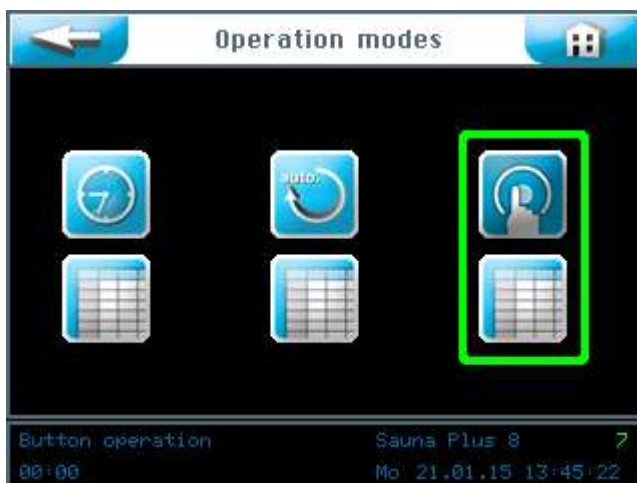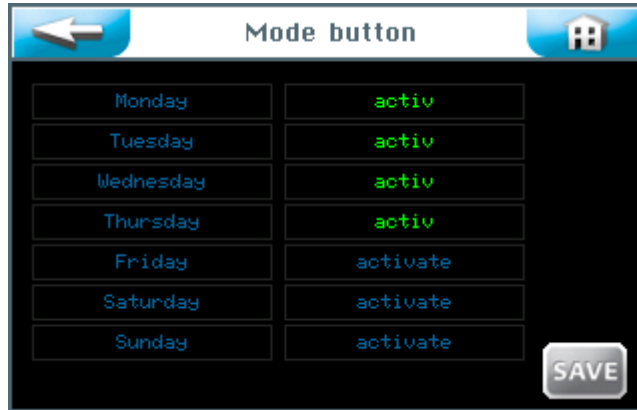

  Start / select button operating mode

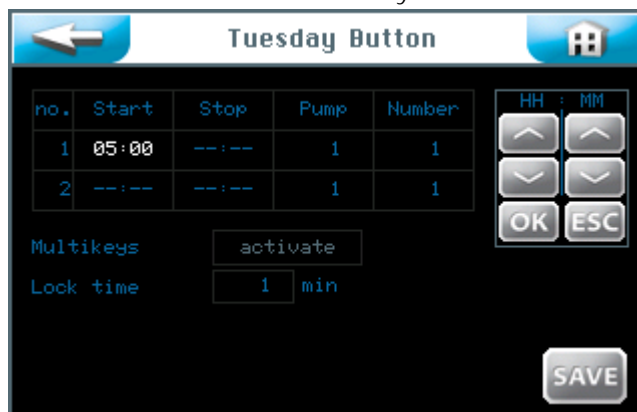 Entering settings for button operating mode

Confirm the information text with OK .

You can activate or deactivate each individual day of the week by pressing the corresponding active button in the right column.

Touch the left column of the relevant day of the week to enter starting times and the corresponding parameters.

The button menu for each day of the week.

A completed input template is shown here. You can enter 2 different periods with appropriate parameters. The button in the sauna cabin is active during these periods.
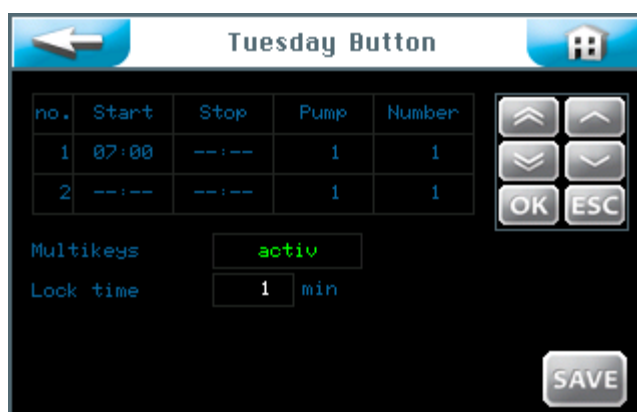
After tapping the input field, the font turns white and the navigation field is shown. Set the values required and save the input.

Field No. : 2 different operating periods can be configured, e.g. No. 1 for ladies' sauna in the morning and No. 2 for mixed sauna in the afternoon.

The time blocks must be at least 30 minutes apart! This means the end of period no. 1 must be at least 30 minutes before the start of period no. 2. For shorter distance, the system reports an error while saving the settings. The error is shown by the `Start` field with a red frame. Change the starting times accordingly, then save again.

The `Pump` column can be used to select the desired dosing pump and thus the corresponding fragrance by tapping the field several times. 1 to 4 different dosing

pumps are available, depending on the version.

The `Number` column can be used to set the number of splashes by tapping this field several times.

The values can be stored by pressing the `OK` button.

Activate the `Multikeys` function when you have a version with several Push-buttons.

The `Lock Time` button can be used to set the time in minutes in which no further splash can be started by using the button.

After completing the input, save the values with the `SAVE` button.

HINT !

The earliest Start time you can set is 00:01! The last cycle should be started not later than 23:30! Otherwise, it may overlap with the next day.
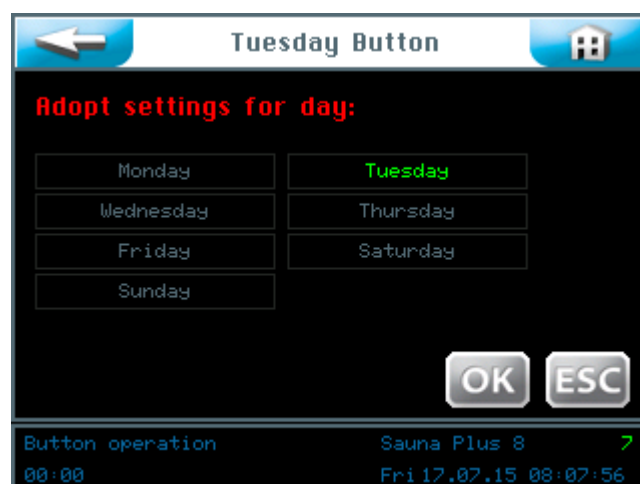
The controller then asks whether you want to accept the settings for other days as well. Mark all days for which you want to use the same settings in green and confirm the selection with `OK`.

Accept values with `OK` or quit with `ESC`.

The ⬅ leads to the previous view. (Repeated request to save)

6.5   Settings menu

Settings regarding the system, splash, pre-indication and effects and sound can be made here.

One of four settings groups can be selected on the touch screen:
1. System menu
2. Splash settings
3. Pre-indication heater
4. Effect + sound

The ⬅ leads to the previous view. (Repeated request to save)

6.5.1   System menu

One of 9 function can be selected on the touch screen:
1. Language
2. Date + time

3. Display and backlight
4. Reset
5. User settings / password allocation
6. Network
7. EOS menu 1
8. EOS menu 2
9. Log files

The leads to the previous view.
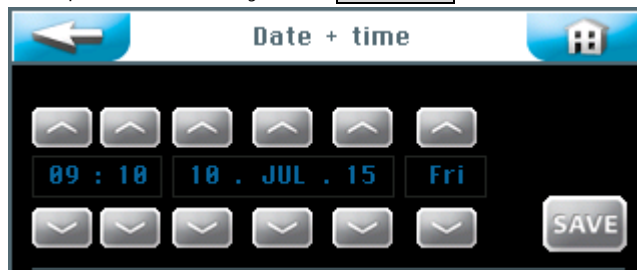
6.5.1.1 Language

Select the preferred language.

The leads to the previous view.

6.5.1.2 Date + time

The required date and time can be set by using the arrow keys. Save and complete the entry with SAVE .

The leads to the previous view.

HINT !

The adaptation of the time to summer and winter time must be manually performed!

6.5.1.3 Display + backlight

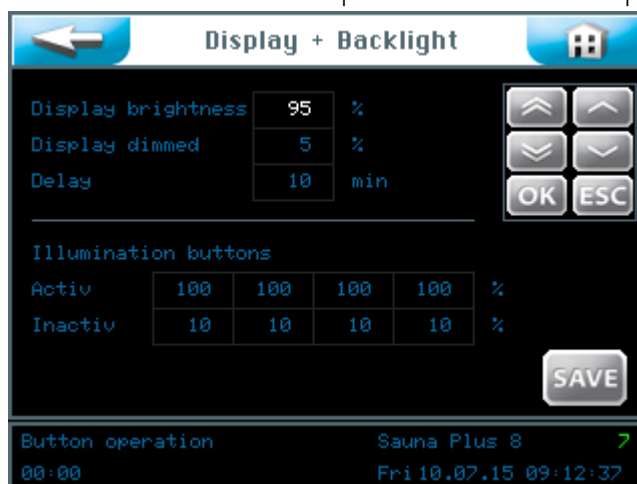The settings for the display and buttons can be entered here.

Display brightness

The display switches to full `Display brightness` when the touch panel is touched. The display switches back to the screen saver after the predefined `Delay` has elapsed. One minute later, the screen saver is dimmed to the `Display dimmed` value and an automatic logout to user level 0 is performed.

Illumination buttons

The button illumination can be set for the active and inactive button in %.
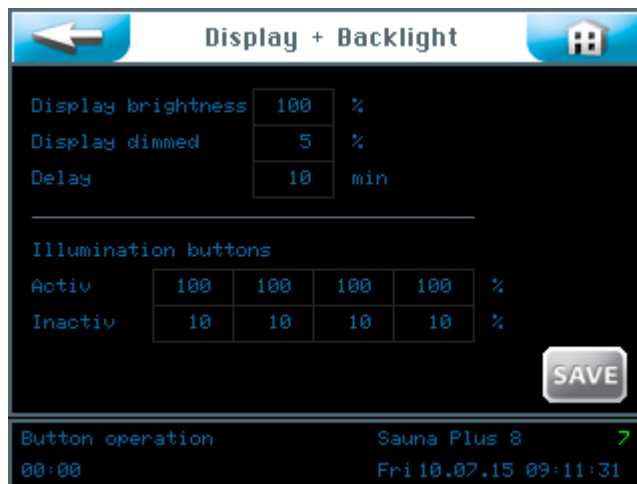
After tapping the input field, the font turns white and the navigation field is shown. Set the values required and save the input.

Enter the values set into the operating data sheet *Section 9.3.* The factory settings are also provided in the operating data sheet.

The button leads to the previous view.
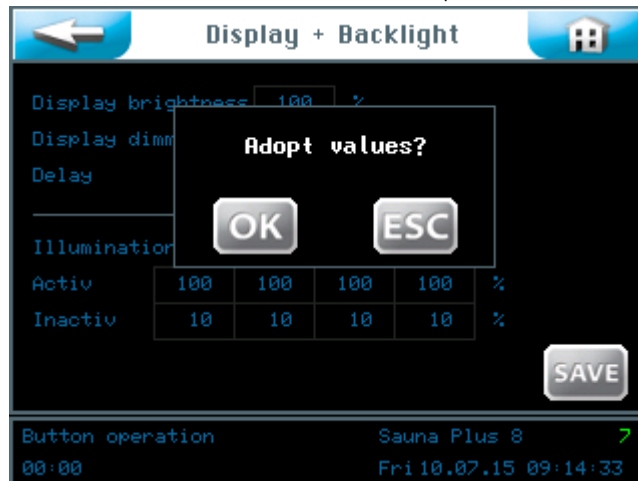
Accept values with OK or quit with ESC .

6.5.1.4 Reset

Press the Reset button in the Systems menu when you want to reset the controller to factory settings.

Resetting to factory settings depends on the user level at which you are logged in (see operating data sheet *Section 9.3).*

The values of the following menu ranges are set to factory settings on User Levels 2 and 3:

Button operation, display and back-light, splash as well as pre-indication and heater

The values of the following, additional menu ranges are set to factory settings on

On User Level 5, all passwords on User Levels 1-4 are reset, in addition to User Level 3.

On User Level 6, the time and weekday settings are reset as well.

On User Level 7, also the product name, serial number and date and time are reset.

On User Level 4, the network settings are reset.


Confirm the selection with OK so that the software can be reset to factory settings. The current settings are retained when you terminate the command with ESC . The factory settings are provided in the operating data sheet *Section 9.3.*

6.5.1.5 User settings / password allocation

The passwords for the different user levels can be changed here. The default passwords can be found in the operating data sheet in *Section 0.*
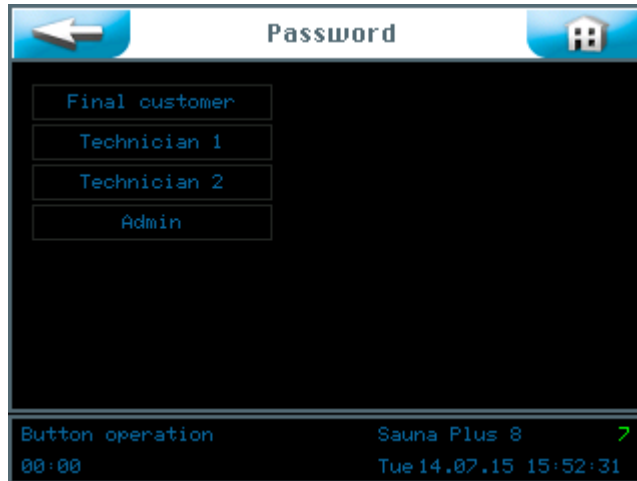
Select which password is to change.

User Level1	Final customer	The password must have 4 characters
User Level 2	Technician 1	The password must have 5 characters
User Level 3	Technician 2	The password must have 6 characters
User Level 4	Admin	The password must have 7 characters

Enter the respective password and confirm the entry with OK .

The password was successfully changed when the display returns to the "System Menu" after the last entry. The user level selected will be shown in green in the information line.

HINT !

Enter the changed password in the operating data sheet.

6.5.1.6 Network

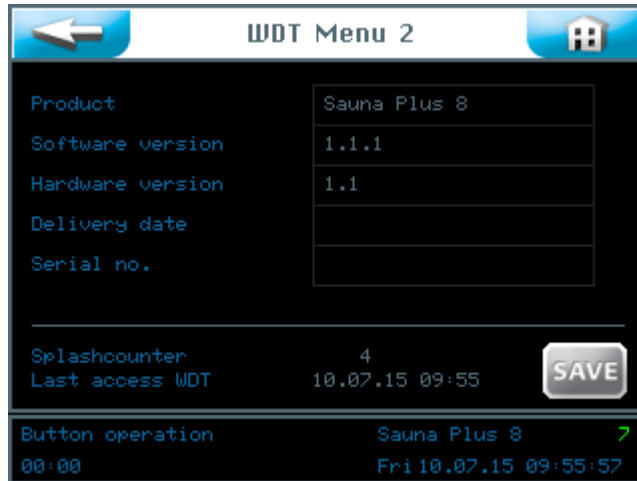This function is currently not active.

6.5.1.7 EOS menu 1

The operator has reading rights for this menu. Changes may only be performed by the EOS company customer service.

6.5.1.8 EOS menu 2
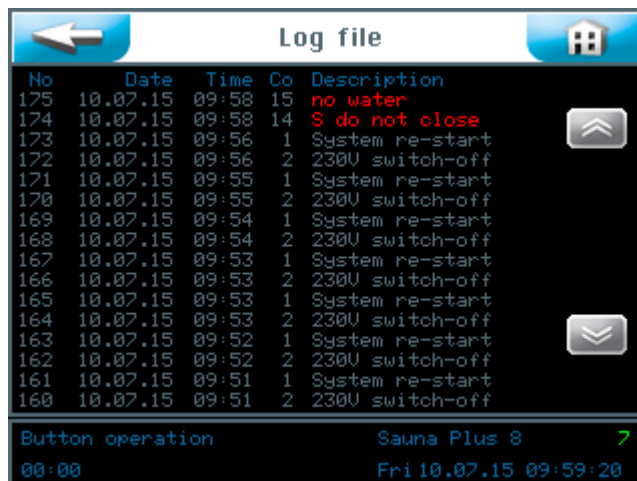
The operator has reading rights for this menu. Changes can only be performed by the EOS company customer service.

6.5.1.9 Log file

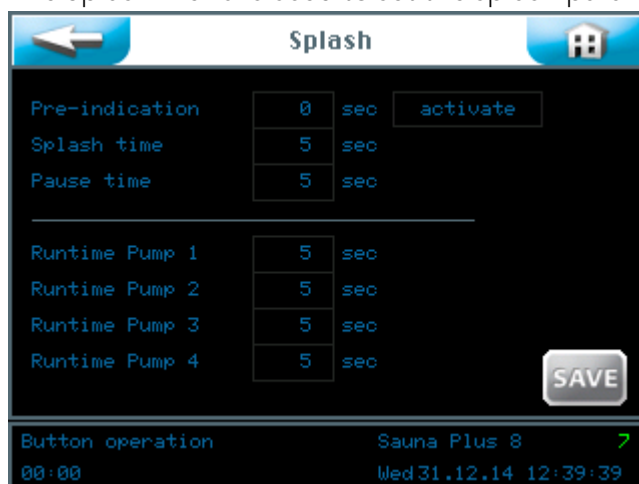The log file, including the last 255 events, is stored by the software. Faulty results are shown in red.

The Splash menu is used to set the splash parameters.

Pre-indication:
The pre-indication time before a sauna splash, can be set here for a pre-indi-cation function of an actuaor (e.g. light). Pre-indication means that an actuator is triggered before the sauna splash to indicate the upcoming splash to the sauna guests.

Splash time:
The duration of the splash onto the sauna heater (opening time of the solenoid valve)

Pause time:
The break between two splash repeats

Running time of Pump X:
Here you set the Running time of the respective fragrance dosing pump dur-ing the splash. Is the pump running time longer than the infusion time, so this will be completed at the latest by the end of the infusion period. This prevents the pure perfume can be metered on the heater.
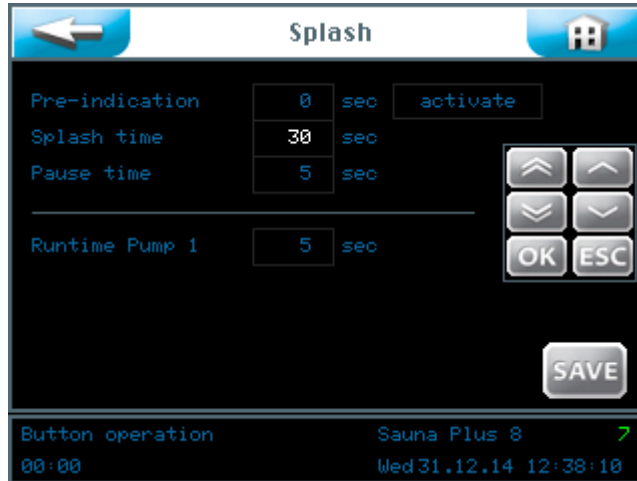
Set the desired values and store with SAVE . (Illustrated version with 1 pump)
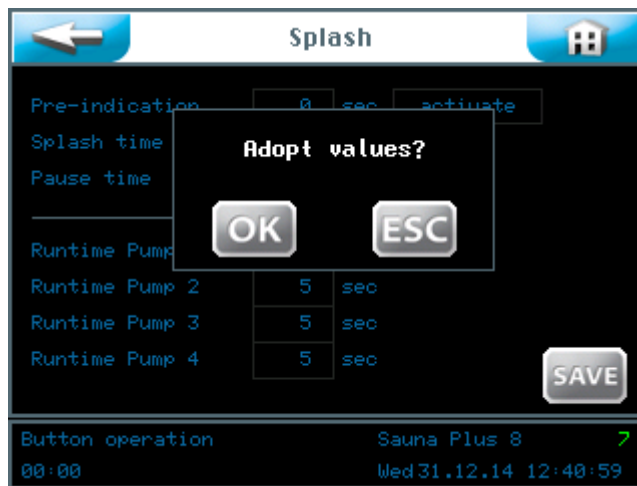
The leads to the previous view.
Confirm with OK or terminate with ESC .

6.5.3   Menu heater

Start delay:
The first splash after the power has been turned on is delayed by the time set here.

Saunaheater:
The Aroma-Tec II automatic splash system has the option of sending a control signal to the heater controller to heat up the heater before a splash. This pre-heating time can be set here. Not every saunaheater is equipped with this function!

HINT !

The pre-heating time for the sauna heater is just as long as the pre-indication time when the Button operating mode is chosen.
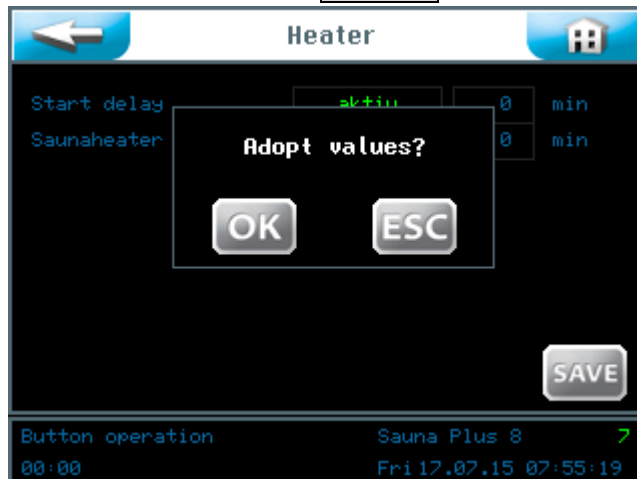

Here you can activate or deactivate both functions and set the times required by tapping the appropriate fields.

Store the data with the SAVE button once the entry is completed.

The leads to the previous view.

Confirm with OK or terminate with ESC .

6.5.4 Effect illumination and sound menu
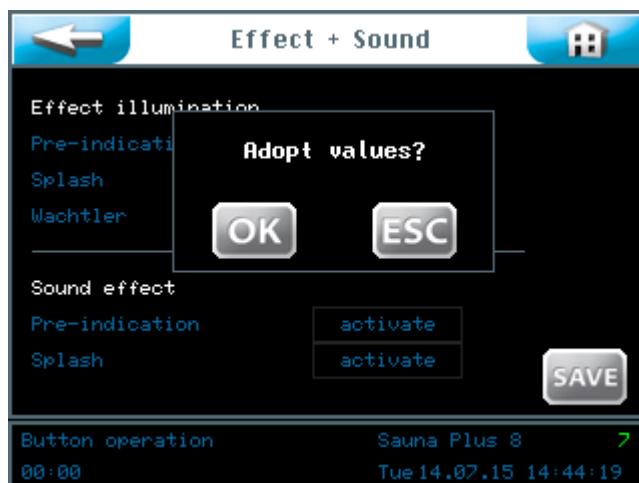
Effect illumination:

This signal can be used to trigger a light effect for the splash pre-indication and/or during the splash. The effect illumination can be activated for the splash pre-indication and/or during the splash.

Announcement:
Announcement time before the splash. This time is taken over from the announcement + heater setting, *see Section 6.5.2.*

Splash:
Splash length; the time is taken over from the Splash Length setting, *Section 6.5.2.*

Sound effect:

This signal can be used to trigger a sound effect during the splash announcement and/or the splash. The sound effect can be activated during the announcement and/or the splash.

Announcement:
Announcement time before the splash. This time is taken over from the announcement + heater setting, *see Section 6.5.2.*

Splash:
Splash length; the time is taken over from the Splash Length setting, *Section 6.5.2.*

Store the data with the SAVE button once the entry has been completed.
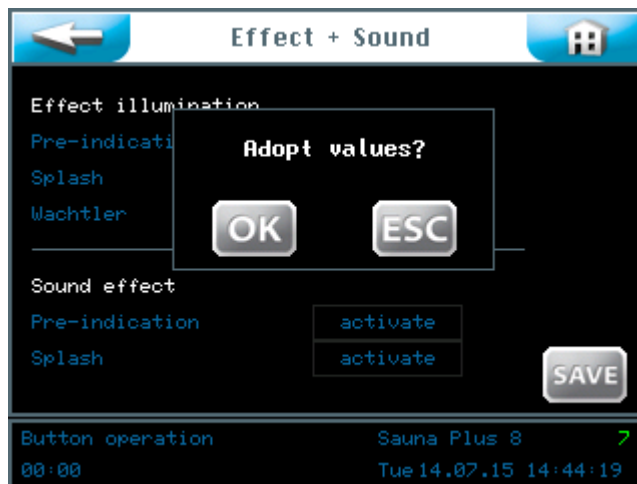
The leads to the previous view.

Confirm with OK or terminate with ESC .

6.6   Service menu

The Service menu can be used for functional tests of actuators and the controller. They are also used for fault searches.

The Service menu also includes device information.
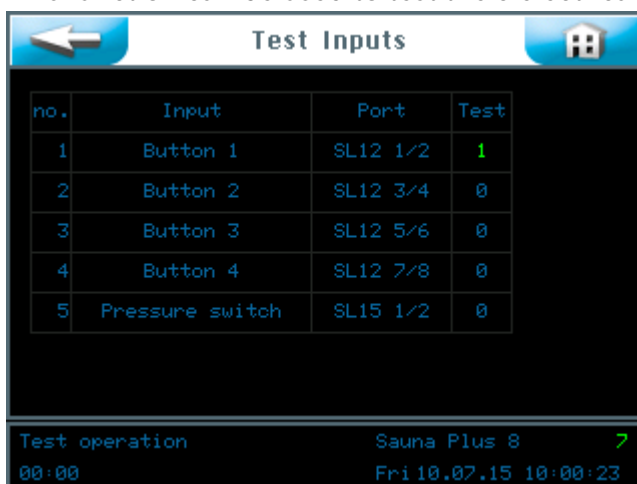
You can select one of 5 menus with the touch screen:

1. Inputs test menu
2. Outputs test menu
3. Splash test menu
4. Pressure switch test menu
5. Information test menu

6.6.1 Inputs test menu

This function can be used to test the 5 electrical inputs to the controller.

The Test column shows the actual state for the respective input.

When no electrical signal is provided to the input, a $\boxed{0}$ is shown.

When an electrical signal is provided to the input, a green $\boxed{1}$ is shown.

Explanation:

Button 1-4: A signal from the respective button is provided (only when button operation is active).
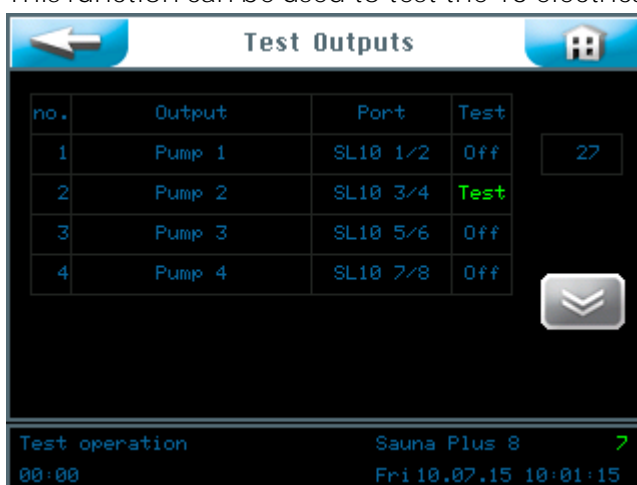
Pressure switch: A signal is provided by the pressure switch.

Terminal: Assignment of the terminal point on the board

6.6.2 Outputs test menu

This function can be used to test the 16 electrical outputs of the controller.

Select the desired test line and start it by tapping the field $\boxed{\texttt{Off}}$.

Test no. 1 to 4

The word Test appears in a green font in the field and the timer counts from 30 seconds to 0.

An electrical signal is provided at the output during this time. A consumer connected to this output will operate during these 30 seconds.

Test no. 5 to 8

HINT !
Test No. 5, Wachtler is not active.

Test no. 9 to 12

Test no. 13 to 16

6.6.3 Splash test menu

This test is used to inspect the splash function.
In this test a hole splash cycle is executed. The Splash test menu is started
with the Start button.

The 10 test functions start sequentially and run for 5 seconds each. The
operator checks the correct functioning of the actuators activated.

When a test is active, the state will be shown as Test and the appropriate electric output will be triggered. Thereafter, the respective field will switch to OK .

The test is completed when all individual tests are marked with OK .

HINT !

This test does not generate fault messages. The person performing the test must check / observe whether the actuators activated function correctly!

6.6.4 Pressure switch test menu

This test is used to check the function of the pressure switch.

DANGER !

The function of the pressure switch is particularly important to ensure that no undiluted fragrance can be dosed onto the sauna heater.

The device will not be ready for operation when the pressure switch is defective or splash water is lacking, as most fragrances are easily flammable!

Start the Pressure Switch test menu with the green `Start` button. The test will then automatically proceed. The appropriate message will be shown thereafter.
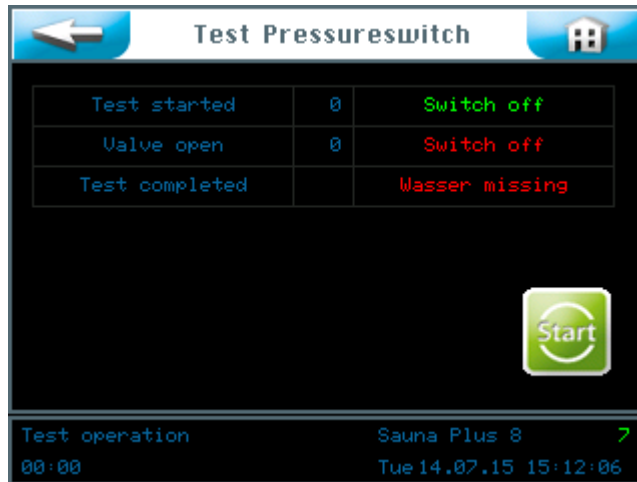
See fault removal in *Section 7.3,* "Water cleaning pressure not reached"

See fault removal in *Section 7.3 "Switch defective"*

The test was successful. The pressure switch is in order.

6.6.5 Information

Touch the `Info` button in the Service menu to show the device data.

6.7 Login

See Section 6.3.1

6.8 Logout

Touch the `Logout` button in the main menu to change to User Level 0 (operating level). The display in the information bar changes to 0.

<u>Automatic logout:</u>
The display switches to the screen saver when a selectable time period has expired. After a further minute has elapsed, the screen saver is dimmed and an automatic logout to user level 0 is performed.
The login process must be repeated before any settings can be made.

6.9   EOS Optional functions

None

6.10   Top up consumables

<u>Fragrance:</u>
Remove the empty fragrance delivery container. Unscrew the lid of the fragrance container and drill a hole of at least 7mm diameter into the lid. Screw back the lid and place the delivery container onto the bracket of the automatic sauna splash system. Push the suction hose as deeply into the container as possible, so that the end of the suction hose touches the bottom and the entire content can be used up.

7 Maintenance, service, faults

7.1 Device maintenance

It is recommended to task a specialist company with maintenance.

The following points must be considered for problem-free function of the automatic sauna splash system:
1. Regular cleaning of the device.
2. Storage of the consumables
3. Inspection and maintenance according to the maintenance protocol in *Section 9.4*

7.1.1 Check the dosing valve

Some fragrance concentrates create deposits in the dosing line and the dosing valve. It is possible that water is pressed back during the splash or that the fragrance dosing is interrupted, in particular when the dosing hose is already damaged. Therefore check the dosing valve every 6 months or as required. Let the pump aspire a bit of air and track the air bubble while the pump is running when you top up the fragment. The fragrance dosing system is in order when the air bubble is transported in the suction/pressure hose. The dosing valve is clogged when the air bubble only moves back and forth. Disconnect the dosing hose from the dosing valve for cleaning purposes, unscrew the dosing valve and wash it with warm water or methylated spirits. Install a new valve when this is not successful.

7.1.2 Check / replace hose set

The pump hose in the pump is subject to mechanical and chemical stress. The pump hose must therefore be checked during each fragrance change in order to detect damage and replace the hose set in due time.
The hose set must be exchanged at the latest every 6 months and more often when corrosive fragrances are used!
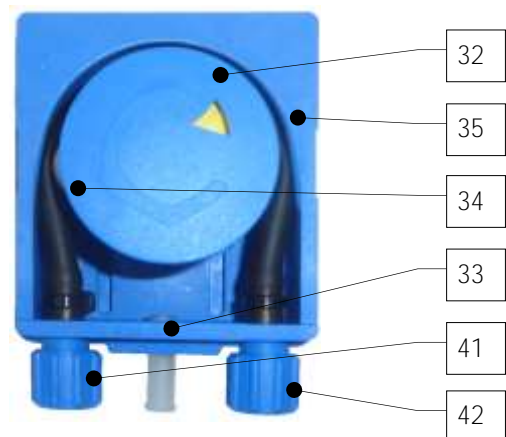
Figure 19, Hose dosing pump

Components of the hose dosing pump

	The hose pump Type Sa
	31 Pump cover
	32 Lock washer
	33 Hose set (hose holder with hose)
	34 Roller carrier
	35 Pump housing
	36 Sealing disk, felt
	37 Sealing disk, EPDM
	38 Geared motor
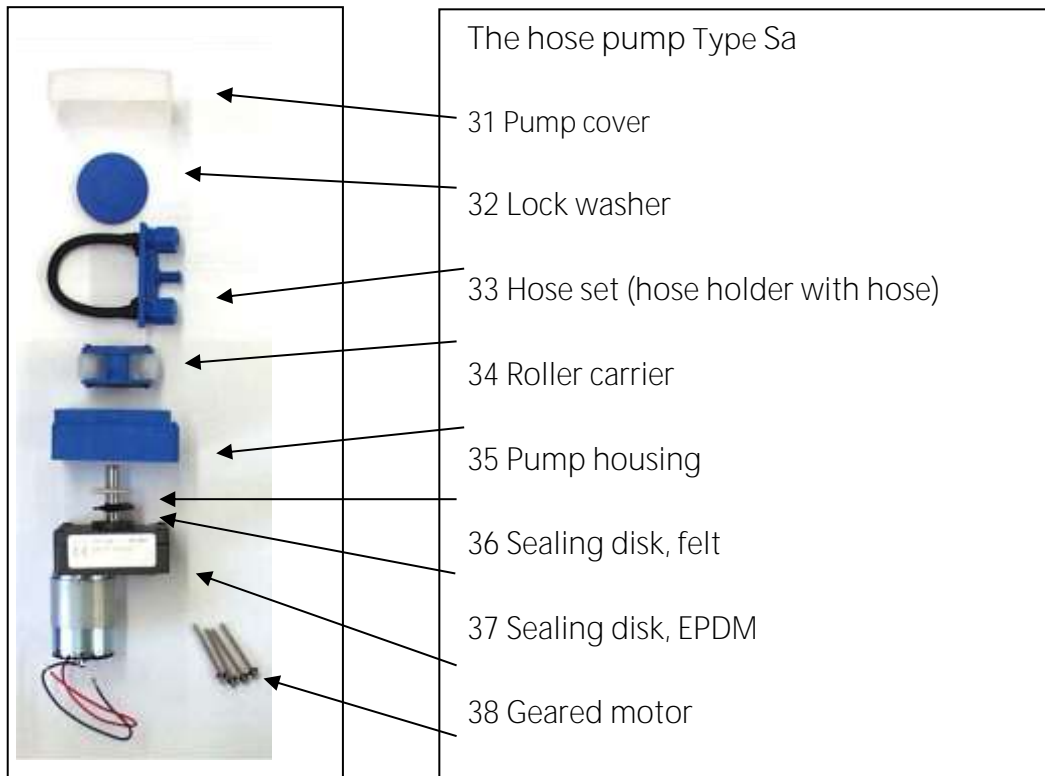
Figure 20, Hose dosing pump spare parts

Exchanging the pump hose
Gently pull the hose holder forwards at the suction and pressure connection and remove the transparent pump cover and the lock washer in order to exchange the pump hose. Turn the roller carrier to the left and pull the dosing hose forwards through the recess in the roller carrier. (also see Figures in *Section 5.2*)

Pull the hose holder with the dosing hose out of the guide and carefully remove the cable ties at the hose connections with a sharp knife or with pliers while taking care that the hose nipple is not damaged. Push the new dosing hose onto the hose nipples up to the limit stop, so that the markers at the hose ends are in front. This ensures that the hose is not twisted. Fasten the hose ends with the hose binders and cut off protruding parts of the hose binders. Turn the roller carriers anticlockwise and carefully press the hose into the housing (see Figures in *Section 5.2).* Click back the lock washer and the pump cover.

7.1.3 Clean the heater shower

The heater shower will necessarily calcify after some period of use. Clean the automatic sauna splash system by switching it off, unscrewing the shower, cleaning it mechanically and with mild acid and re-attaching it hand-tight. Only use Teflon tape for sealing.

7.1.4 Clean the dirt filter

The dirt filter (2, Page *15*) in the supply pipe must be cleaned according to the pollution level of the water network. This is particularly important directly after commissioning and after maintenance work, as the pipes and the water are more likely to contain dirt after assembly work. Close the ball valve (1) for this purpose, unscrew the sealing plug of the filter, pull out the filter element, clean it under flowing water and re-install it. Take care that the seal does not get damaged.

7.2 Regular water inspection

No water inspection is required when drinking water from the mains network is used.

7.3 Fault removal / fault codes

HINT !
It is furthermore possible that the switches or sensors are faulty and that it is therefore not possible to transmit an electrical signal.

Fault indications:
See the following fault table for removing the fault messages

Fault indication 1:


```
!! Fault occurred !!

        faulty pressure switch,
        short circuit,

        => check
        pressure switch
        and water supply

                                OK
```

Fault indication 2:


```
!! Fault occurred !!

        Water inlet pressure
        of 1.2barg not reached
        safety shutdown perfume.

        => check water supply

                                OK
```

Fault indication 3:


```
!! Fault occurred !!

        Pressure drop,
        1.2barg undershot
        during the infusion,
        safety shutdown perfume.

        => check water supply

                                OK
```
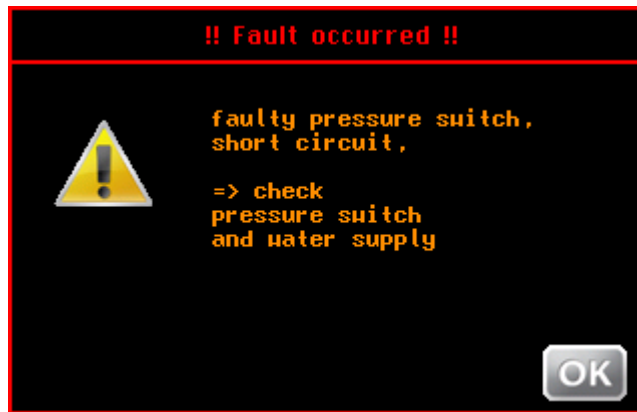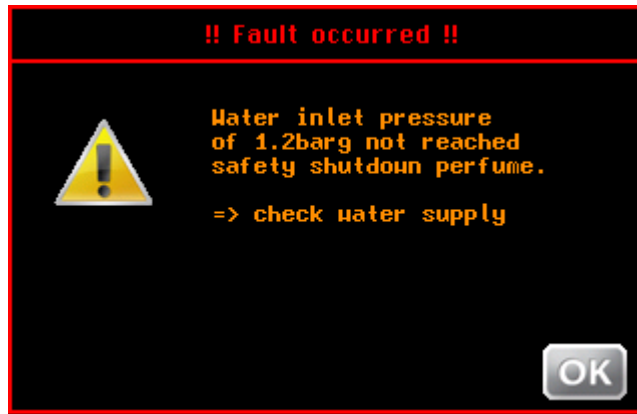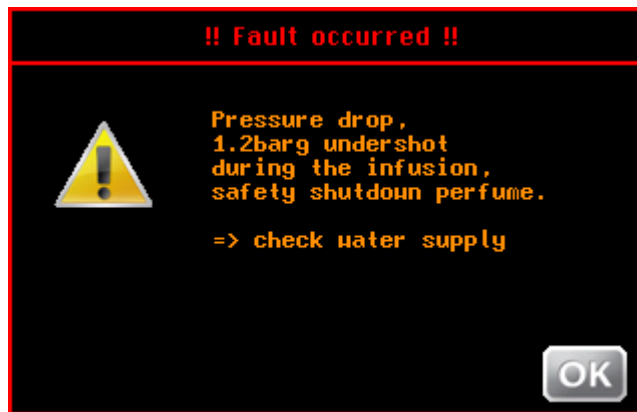
Fault indication 4:

Missing communication between the two PC boards.

Fault table

Fault indication / fault	Possible cause	Actions
Fault indication 1 Fault pressure switch, short-circuit	• Pressure switch defective • Splash line blocked	• Check pressure switch, replace if necessary • Check / exchange splash line
Fault indication 2 Water inlet pressure of 1.2barg not reached. safety switch-off fragrance	• Water supply interrupted • Water pressure too low	• Check water supply • Check the supply line
Fault indication 3 Pressure drop, 1.2barg not reached during the splash, safety switch-off fragrance	• Water supply interrupted • Water pressure too low	• Check water supply • Check the supply line
Fault indication 4 no response	• Communication fault between display board and control board	• Switch off the device at the main switch and switch it on after 5 seconds
The device cannot be switched on	• Main fuse F0 defective • Main switch defective • Power supply interrupted	• Check or exchange the fuse • Check main switch • Check the power supply
System does not work	• Wrong setting • Main fuse F1 at main PC board defective	• Check settings • Exchange main switch F1
Effect illumination does not work	• Fuse F3 effect illumination defective • Wrong setting	• Exchange fuse F3 • Check settings
Announcement does not work	• Fuse F4 for announcement defective • Wrong setting	• Exchange fuse F4 • Check setting
Solenoid valve without function	• Fuse F5 solenoid valve water defective • Solenoid valve defective	• Exchange fuse F5 • Check / renew solenoid valve
1 dosing pump without function	• Fuse F10, F11, F12 or F13 defective • Motor of pump defective	• Exchange appropriate fuse • Check / renew motor of pump
Button illumination does not work	• Fuse F14 defective	• Exchange fuse F14
No splash	• Fuse F5 defective • Solenoid valve defective • No water supply pressure • Device input filter clogged • Splash line blocked	• Check fuses • Check / exchange solenoid valve • Check water supply • Clean input filter • Clean splash line

No fragrance dosing	• Fuses F10 - F13 defective	• Check fuses
	• Fragrance pump defective	• Check / exchange pump
	• Dosing hose worn	• Exchange dosing hose
	• Roller carriers worn out	• Exchange roller carriers
	• Dosing valve blocked	• Check / clean / exchange dosing valve
Wrong time	• Power supply interrupted for more than 20 days	• Reset the time
	• Internal accumulator defective	• Check / exchange accumulator

7.4   Special versions

The standard equipment of the device includes 1 fragrance pump.
Up to 4 fragrance pumps can be ordered for special versions.

8   Shutting down – Storage – Disposal

8.1   General

The devices must be completely emptied or protected against frost when they are shut down!

Disposal of old part and operating materials
Thoroughly clean disassembled, contaminated parts before disposing of them.
Used parts and operating materials must be disposed of according to the regulations at the place of operation or recycled. Please take note of the respective instruction on the packaging when the operating materials are subject to specific regulations. In cases of doubt, information should be available from the institution responsible for disposal at your place of operation.
When this is not possible, dispose of them as special waste.

8.2   Automatic sauna splash system

Switch off the device at the main switch when shutting down the the sauna automatic.

The fragrance containers must be manually emptied and cleaned when the system is shut down for more than 30 days.
Fragrance dosing lines must be rinsed with water.
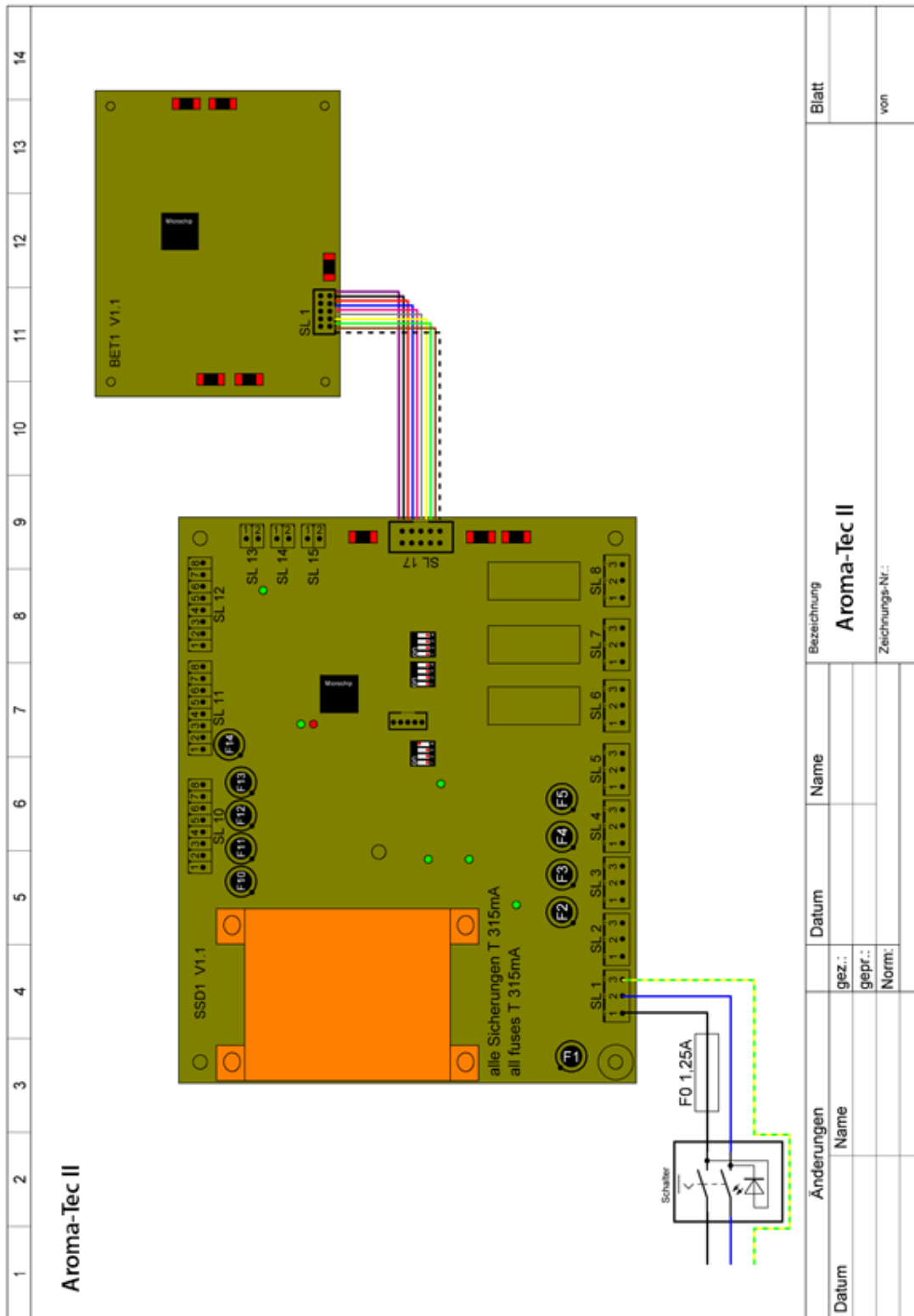All parts should be stored in a dry and clean state.
Remove the roller carriers from the dosing pump(s) to ensure that the dosing hoses do not get damaged. Preferable see *Section 5.2.*

9 Documents

9.1 Terminal diagram

Note regarding terminal plans: The special terminal plans adapted to optional equipment of the Aroma-Tec II automatic splash system are stored in the switch cabinet of the device.

Aroma-Tec II

Ausgänge / output

SL 1 — 230V / Spannungsversorgung / power supply (L1 N PE / 1 2 3)

SL 2 — 230V max. 60W / ohne Funktion / without function (L1 N PE / 1 2 3)

SL 3 — 230V max. 60W / Effektbeleuchtung / effect lighting (L1 N PE / 1 2 3)

SL 4 — 230V max. 60W / Voranmeldung / pre-indication (L1 N PE / 1 2 3)

SL 5 — 230V max. 60W / Magnetventil Wasser / solenoid valve water (L1 N PE / 1 2 3)

SL 6 — p-free (8A 230V/AC) / Störmeldung / fault indication (NC C NO / 1 2 3)

SL 7 — p-free (8A 230V/AC) / Soundeffekt / Sound (NC C NO / 1 2 3)

SL 8 — p-free (8A 230V/AC) / Steuersignal Saunaofen / control signal sauna heater (NC C NO / 1 2 3)

Ausgänge / output

SL 10 — 24V/AC (1 2 3 4 5 6 7 8 / + - + - + - + -)
1) + Duftstoffpumpe 1 / fragrance pump 1
2) GND Duftstoffpumpe 1 / fragrance pump 1
3) + Duftstoffpumpe 2 / fragrance pump 2
4) GND Duftstoffpumpe 2 / fragrance pump 2
5) + Duftstoffpumpe 3 / fragrance pump 3
6) GND Duftstoffpumpe 3 / fragrance pump 3
7) + Duftstoffpumpe 4 / fragrance pump 4
8) GND Duftstoffpumpe 4 / fragrance pump 4

SL 11 — 24V/AC (1 2 3 4 5 6 7 8 / + - + - + - + -)
1) + Beleuchtung Taster 1 / illumination push-button 1
2) GND Beleuchtung Taster 1 / illumination push-button 1
3) + Beleuchtung Taster 2 / illumination push-button 2
4) GND Beleuchtung Taster 2 / illumination push-button 2
5) + Beleuchtung Taster 3 / illumination push-button 3
6) GND Beleuchtung Taster 3 / illumination push-button 3
7) + Beleuchtung Taster 4 / illumination push-button 4
8) GND Beleuchtung Taster 4 / illumination push-button 4

Eingänge / input

SL 12 — 24V/AC (1 2 3 4 5 6 7 8 / IN - IN - IN - IN -)
1) IN Taster Duft / push-button 1
2) GND Taster Duft / push-button 1
3) IN Taster Duft / push-button 2
4) GND Taster Duft / push-button 2
5) IN Taster Duft / push-button 3
6) GND Taster Duft / push-button 3
7) IN Taster Duft / push-button 4
8) GND Taster Duft / push-button 4

Eingänge / input

SL 13 — (1 2 / IN -)
1) IN reserve
2) GND reserve

SL 14 — (1 2 / IN -)
1) IN reserve
2) GND reserve

SL 15 — 24V/AC (1 2 / IN -)
1) IN Druckschalter / pressure switch
2) GND Druckschalter / pressure switch

9.2 Commissioning report

This protocol is to be completed by the commissioning technician! All warranty claims expire when no completed and signed commissioning protocol is available!

The commissioning protocol is included in the documents attached.

9.3   Operating data sheet

HINT !

Enter the operating parameters on the operating data sheet during commissioning!

Settings menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during operation
				Date:	Date:
Button operation					
Lock time (for button)	1 min	1-60 min	1		
Display and backlight					
Display brightness	100%	5-100%	1		
Display dimmed	5%	5-100%			
Delay	10 min	10-60 min			
Password allocation					
Password guest	No password	---			
Password final customer	0123	0000-9999			
Password technician 1	01234	00000-99999			
Password technician 2	012345	000000-999999			
Splash					
Pre-indication time	0	0-180sec			
Pre-indication activate	activate	active / activate			
Splash time	2 sec	2-30 sec			
Pause time	5 sec	5-240 sec			
Operation time pump 1	1 sec	1-30 sec	1		
Operation time pump 2	1 sec	1-30 sec	1		
Operation time pump 3	1 sec	1-30 sec	1		
Operation time pump 4	1 sec	1-30 sec	1		
Heater					
Start delay activate	activate	active / activate			
Start delay time	0 sec	0-30min			
Saunaheater activate	activate	active / activate			
Saunaheater time	0	0-14 min			

Operating data sheet, --copy template--

Settings menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during operation
				Date:	Date:
Button operation					
Lock time (for button)	1 min	1-60 min	1		
Display and backlight					
Display brightness	100%	5-100%	1		
Display dimmed	5%	5-100%			
Delay	10 min	10-60 min			
Password allocation					
Password guest	No password	---			
Password final customer	0123	0000-9999			
Password technician 1	01234	00000-99999			
Password technician 2	012345	000000-999999			
Splash					
Pre-indication time	0	0-180sec			
Pre-indication activate	activate	active / activate			
Splash time	2 sec	2-30 sec			
Pause time	5 sec	5-240 sec			
Operation time pump 1	1 sec	1-30 sec	1		
Operation time pump 2	1 sec	1-30 sec	1		
Operation time pump 3	1 sec	1-30 sec	1		
Operation time pump 4	1 sec	1-30 sec	1		
Heater					
Start delay activate	activate	active / activate			
Start delay time	0 sec	0-30min			
Saunaheater activate	activate	active / activate			
Saunaheater time	0	0-14 min			

9.4 Maintenance protocol

The maintenance protocol is included in the documents attached.

> **HINT !**
> Do you need spare parts, wearing parts or consumables? You can easily request them from your service partner or specialist dealer.
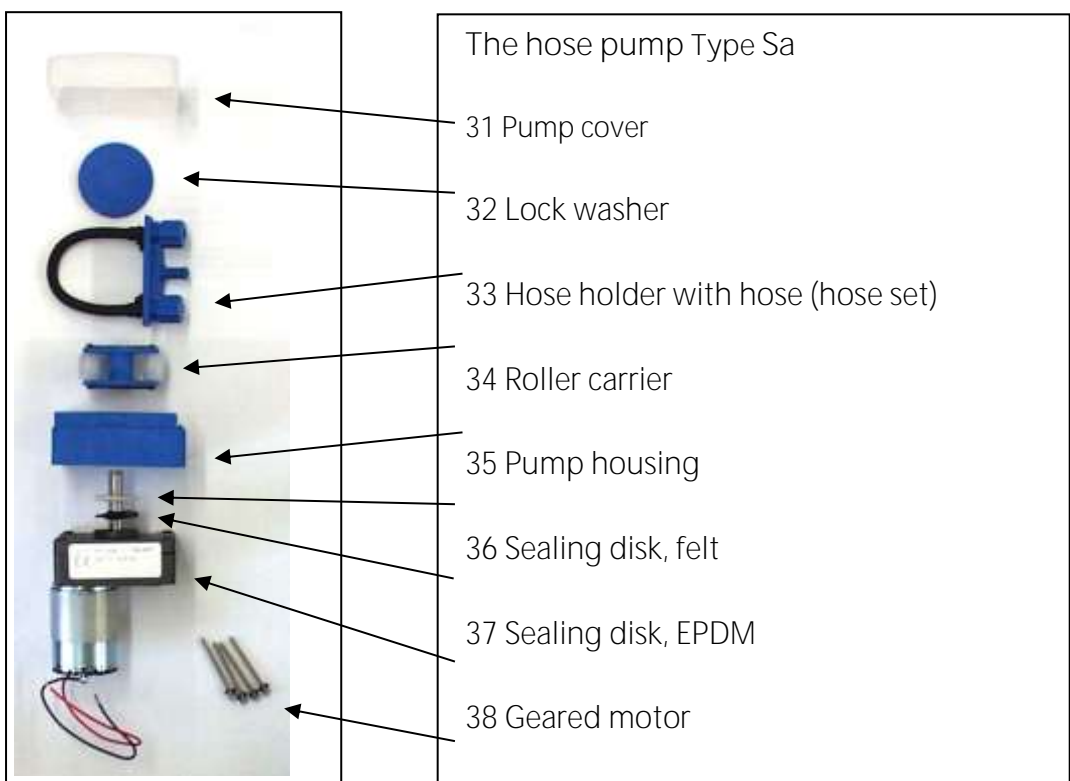
9.5.1   Spare parts list for hose dosing pump

The hose pump Type Sa

31 Pump cover

32 Lock washer

33 Hose holder with hose (hose set)

34 Roller carrier

35 Pump housing

36 Sealing disk, felt

37 Sealing disk, EPDM

38 Geared motor

Figure 21, Hose dosing pump spare parts

Device	Pos	Description	Reference no.
Fragrance pump	31	Lid for pumping housing Sa, transparent	14259
	32	Lock washer for roller carrier Sa blue	13633
	33	Hose holder with hose SA-3,2 Vi	13358
	--	Hose set SA 3,2x1,6-Vi – 2x47	12782
	34	Roller carrier for hose pump, blue	13039
	35	Pump housing Sa, blue	14140
	36	Sealing disk, felt Sa	14166
	37	Sealing disk, EPDM SA	12709
	38	Geared motor Sa 24 VDC	13557
	39	Installation screws, set	17067

9.5.2 Spare parts list for water assembly and controller

Device		Description	Reference no.
Water assembly		**Ball valve, brass ½"**	10423
		Slanted-**seat filter brass ½"**	11479
		Wall connection elbow 1/2"	11465
		Solenoid valve VA ¼" NC 230VAC	15072
		Solenoid valve connector with LED and cable	13082
		Suction hose PE 4x1- 1m	12064
		Pressure switch ½"	11336
		Protective cap for pressure switch, brass ½"	11337
		Dosing pipe	
		Dosing valve for fragrances 3/8" VA	15108
		Dosing line PTFE internal diameter 4x1 mm, 0.5 m	10432
		Heater shower	15211
		Wall feed-through	15214
Control		Fuse bag 2x1.25A slow, 5x20	16842
		Fuse bag 2x315mA slow 8.3x8	23625

Wearing parts list

Device		Description	Reference no.
		Hose set SA 3,2x1,6-Vi – 2x	12782
		Roller carrier for hose pump, blue	13039

List of consumables

Fragrances: A list of the current fragrances is available from EOS.

10 Appendices

Own notes

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____