

Spa Touch Control



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Spa Touch Control EN

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1. Introduction

Dear customer,

Thank you for choosing the Spa Touch Control for remote control of your HygroMatik steam generator.

The Spa Touch Control is state of the art technology.

In order to be able to operate the Spa Touch Control reliably or to set it up, please read this manual.

Please use the Spa Touch Control only when it is in perfect condition and only for the purpose intended.

Should you have any queries please contact your specialist dealer.

For queries and ordering spare parts please always state type of unit and serial number.

1.1 Intended use

The Spa Touch Control is a display and operating panel for control of the operating functions of a HygroMatik steam generator. The unit is designed for moisture-proof wall installation with fixed control cable. Use inside the steam cabin is permissible if the installation manual is stringently complied with regarding the sealing. Nonetheless we do recommend that installation be outside the steam cabin

For test purposes the unit is capable for temporary portable use on a HygroMatik steam generator. Since no strain relief for the control cable is provided the permanent portable use of the display and operating panel is not permitted.

1.2 Protection class

When correctly installed the front of the assembly has the protection class IP 65. The rear protection class is determined by the construction provided by the customer. The rear protection class in as-supplied condition i.e. with no additional measures is IP00.

1.3 Safety instructions

For the running and operation of the Spa Touch Control no special safety notes apply. Nevertheless all safety notes applicable to each respective unit (steam generator) the operation of which the Spa Touch Control is used for are to be observed.

1.4 Typographic distinction

- » With this double chevron operating steps are identified which are absolutely necessary for retrieving a function or carrying out a setting.

1.5 Definitions

In this operating manual differentiation is made between the user and the operator of the steam bath facility.

User (hereinafter called "user")

The user is a person who wants to "utilize" the steam bath facility. User operation of the steam bath is limited to the essentials.

The operating functions of the Spa Touch Control accessible to the user are depicted in the "User level".

Operator

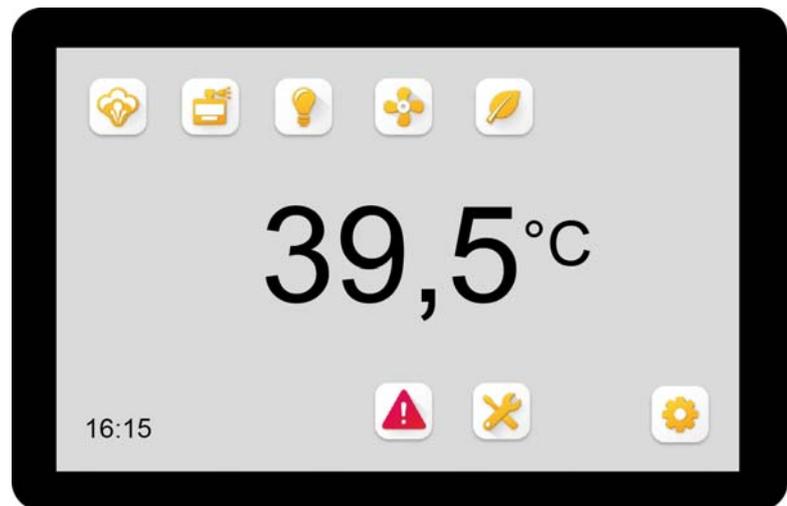
The operator is the entity which has the technical responsibility for the facility. The operator can determine the functions of the steam bath facility in full and define which operating functions are to be made accessible to the user.

The operating functions of the Spa Touch Control available to the operator are depicted in the "Operator level". The user level is of course available to the operator as well.

2. Overview

The HygroMatik Spa Touch Control is a compact display and operating panel for HygroMatik steam generators.

Use direct on the steam generator or separated from it via cable with a maximum length of 50 m.



2.1 Characteristics of the Spa Touch Control

- Moisture-protected flush mounted wall installation
- Protection class frontal IP 65
- Data connection to steam generator via permanent Cat 5 control cable
- 12 V power supply through steam generator via the control cable
- Communication via Modbus RTU protocol
- Touch-sensitive surface (touchscreen)
- Range of functions of operational control password protected and definable by operator
- All functions controllable via screen icons (no text information)
- Screen icons supply information on device status
- Continuous mode, short-term and timer mode (weekly auto timer)

2.1.1 Monitor characteristics

- Capacitive touchscreen (PCT)
- High scratch resistance

2.2 Scope of supply

The "Spa Touch Control" ordering package includes the following items:

- Touch-sensitive 5 inch monitor (touchscreen)
- Connecting cable 20 cm long, RJ45 plug on one end, 4-pin system specific connector on the other
- RJ45 socket for connection of the connecting cable with the permanent Cat 5 control cable
- Installation frame for flush fitting incl. bolts and seal plugs
- Aluminium frame as face cover
- Instruction manual

2.3 Prerequisites for connection of the Spa Touch Control to the steam generator

The HygroMatik steam generator must be equipped with a connection kit consisting of the transformer for the 12V AC supply, a connector strip and the RS485 computer interface.

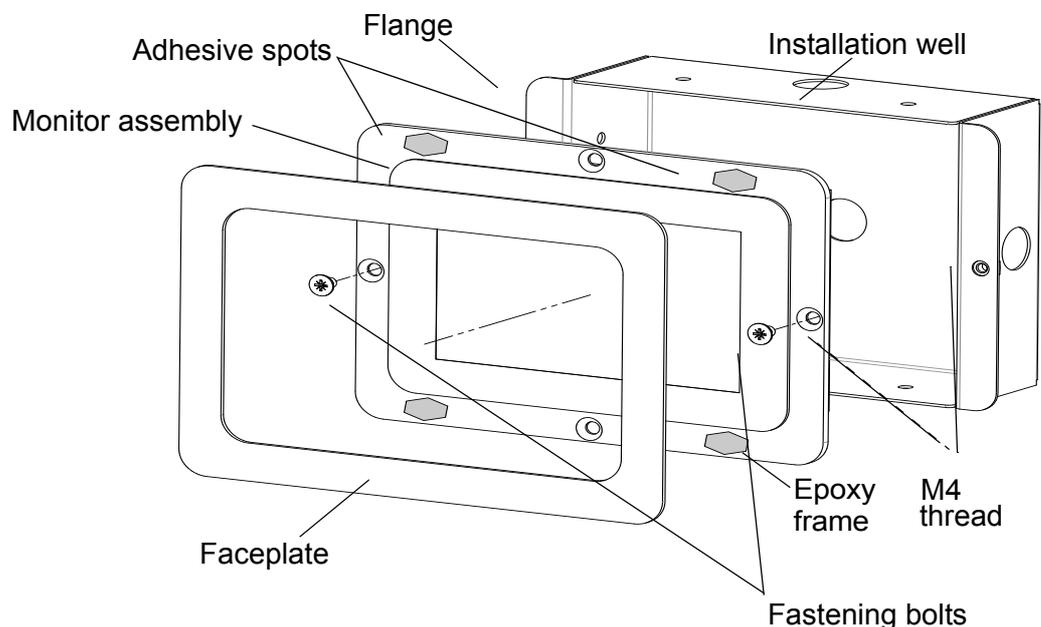
This connection kit is available from HygroMatik under item no. B-0608053.

3. Mechanical setup

The Spa Touch Control consists of the monitor assembly, the installation well with 2 attachment bores for the monitor assembly with rear welded M4 nuts and the faceplate.

The monitor assembly is designed as a sandwich construction. The actual touchscreen is connected through an epoxy material frame and combined with the circuit board at the rear to form a single compact unit. The circuit board carries the combined system plug for the 12V AC power supply and the RS485 2-wire bus.

After fitting the installation well (see section "Wall installation") the monitor assembly is attached to the flange of the installation well with the two M4 countersunk bolts. The finish at the front is provided by the black anodized aluminium faceplate which is attached to the epoxy frame over the whole area or with the aid of the four adhesive spots (see section "Wall fitting").



4. Wall installation

4.1 Installation principle

The Spa Touch Control is designed for flush mounted installation. To protect the assembly an installation well is included which subject to the conditions provided by the customer is to be plastered into a solid wall construction or in the case of a cavity wall installed in another way. Depending on the judgement of the implementing company installation in a dry cavity wall can be made without the installation well. The attachment bores with M4 threads are then to be provided by the customer.

For leading the control cable to the electronic module the customer is similarly responsible for finding a suitable method (laid flush-mounted or in cavity).

4.2 Choice of installation location

The installation of the Spa Touch Control can be made inside or outside the steam cabin. The installation height above the floor is to be selected so that easy reading of the screen is possible for the kind of usage envisaged (sitting or standing operation).

4.3 Installation steps

- » Plaster installation well into wall recess or install by other method.
- » Lead Cat 5 control cable into well and connect to 20 cm adapter cable via RJ45 socket or directly to the electronic module (see section "Electrical connection").
- » Place electronic module in the installation well and attach it to the installation well with the two countersunk bolts.
- » Remove protective film from the 4 adhesive spots.
- » Place face cover onto the adhesive spots and press on. Alternatively the face cover can be glued on by the application of silicone joint material to the complete surface.
- » Draw a silicone joint around the face cover to seal to the wall.

Please note

For the adhesive spots 3M™VHB™ adhesive tape item no. "4932" is used. Refer to the relevant data from the manufacturer for processing information.

5. Electrical connection

5.1 Connection principle (Spa Touch Control - side)

For connecting the Spa Touch Control to the steam generator a Cat 5 control cable is required to be laid by the customer and which is utilized for the 12V AC supply as well as the RS485 2-wire bus. Max. cable length is 50 m.

For connection a 20 cm long adapter cable is supplied which allows extension of the permanent Cat 5 control cable via the RJ45 socket also supplied, provided the former is complete with RJ45 plug.

Alternatively the Cat 5 control cable can be connected directly to the Spa Touch Control. For this purpose the 4-pin system plug of the adapter cable is to be used. Since the plug uses spring-type terminals, non-destructive dismantling of the adapter cable is possible.

5.1.1 Connections

Connection 1: Utilization of the adapter cable



Adapter cable Cat 5 on system plug

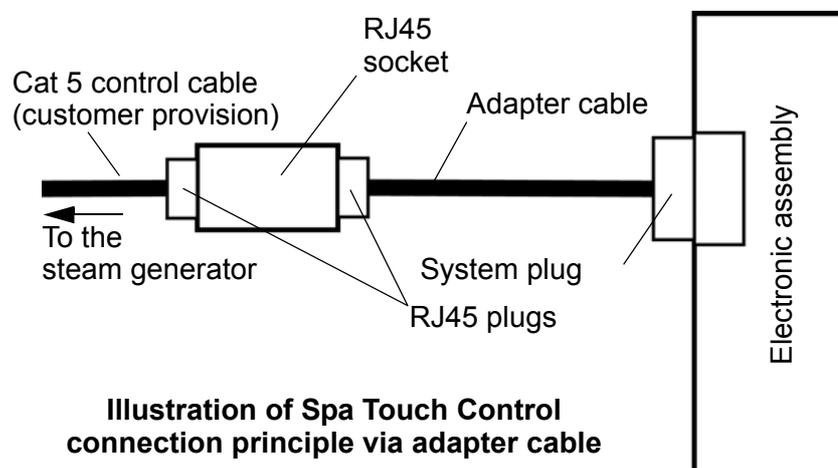
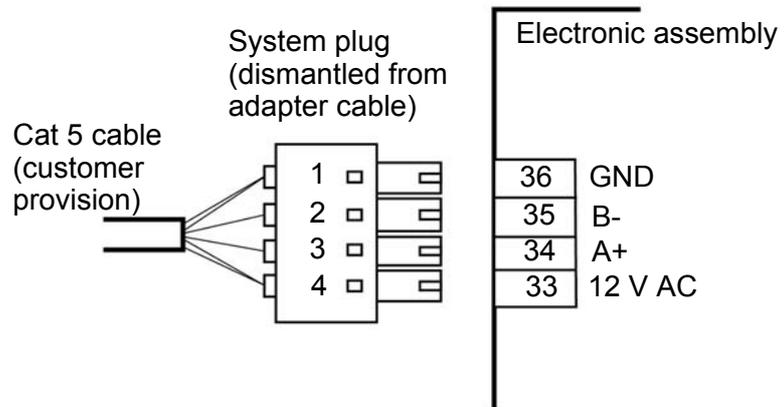


Illustration of Spa Touch Control connection principle via adapter cable

Connection 2: Direct connection to electronic assembly



Plug pin	Assembly pin	Allocation	Core colours
1	36	GND	og and wh-bn
2	35	B-	wh-bu
3	34	A+	bu
4	33	12 V AC	wh-og and bn

5.2 Connection to steam generator



For connection of the Spa Touch Control to a HygroMatik steam generator a connection kit is required (see Section "Overview" last paragraph). One component part of this kit is an RJ45 socket in the form of a feedthrough housing (see adjacent illustration).

The Cat 5 cable from the Spa Touch Control is inserted into this socket.

If the permanent cable is to be directly connected to the steam generator an RJ45 socket is to be fitted to its end. The core colours for pin allocation correspond with those of the above chart.

The permanent cable can also be completed by the customer with a flush or surface-mounted RJ45 socket. The connection of the steam generator can then be made with a commercially available Cat 5 patch cable in line with normal network engineering practice.

6. Time control of the steam generator with the aid of Spa Touch Control

With the aid of Spa Touch Control the steam generator can be run in manual mode, short-term mode or timer mode (weekly schedule). In addition to these, mixed modes are possible. For example through manual intervention, the weekly schedule can be overridden ("manual override").

6.1 Optional operating modes

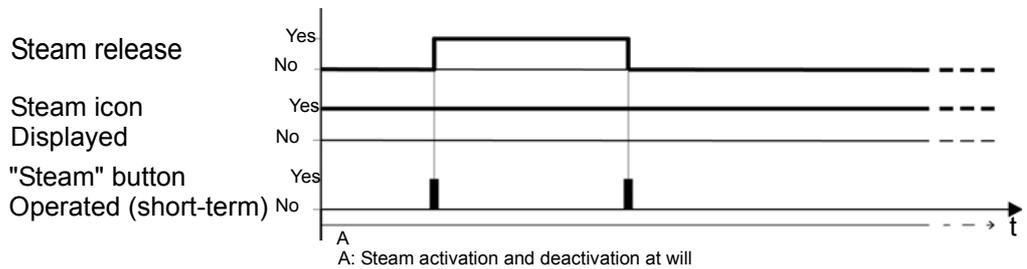
The operating mode is determined by the operator (see section "Operation", paragraph "Settings by the operator").

Please note

The operating modes only determine the behaviour of the steam release. Actual steam generation within the scope of the operating mode selected is determined by control of the steam generator on the basis of steam bath temperature.

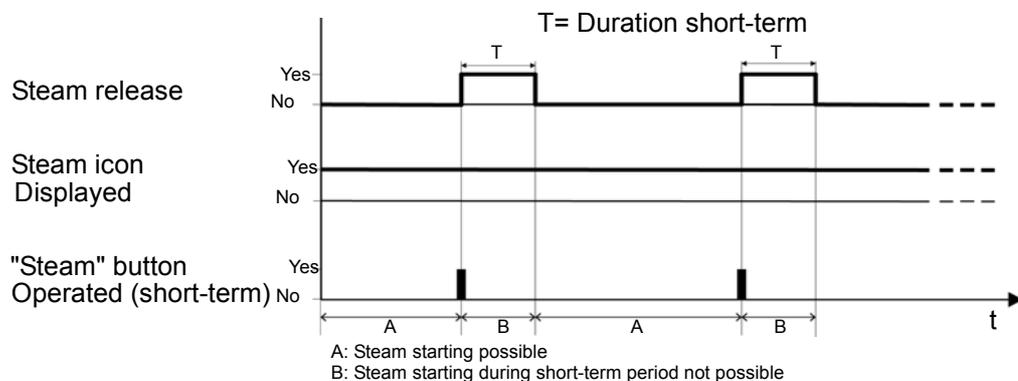
6.1.1 Manual operation

When the user operates the steam button the steam bath operation is enabled until the release is either withdrawn or the electronic control system of the steam generator in accordance with the internal parameter "Limitation of operating time", causes it to be switched off.



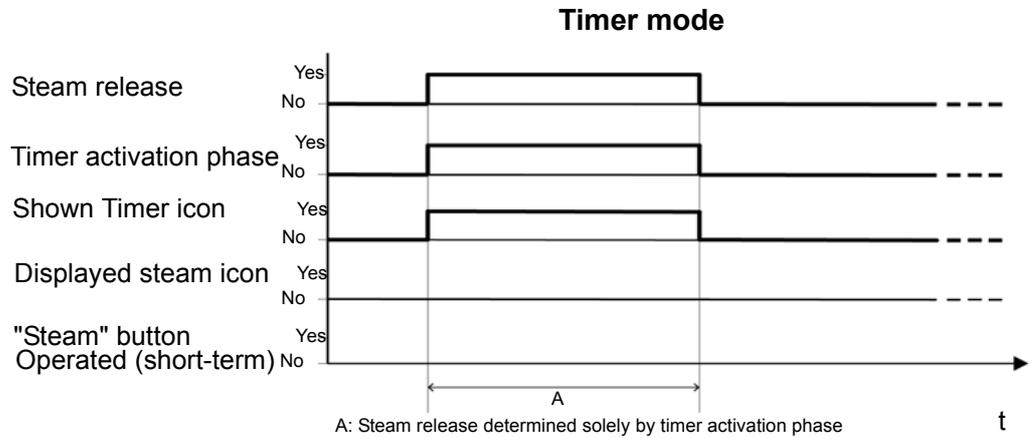
6.1.2 Short-term mode

When the user touches the steam button steam release is made for a fixed period. During this period no new start is possible; after expiry however, any number of times.

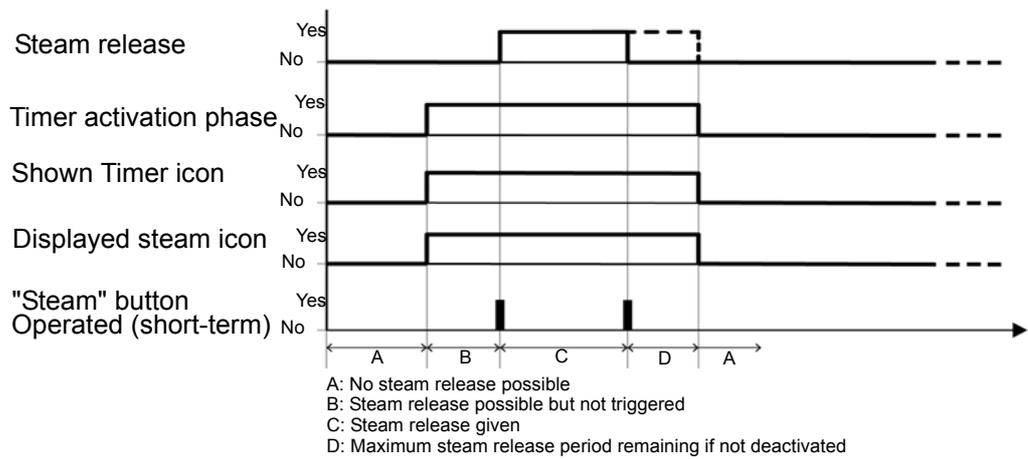


6.1.3 Timer mode

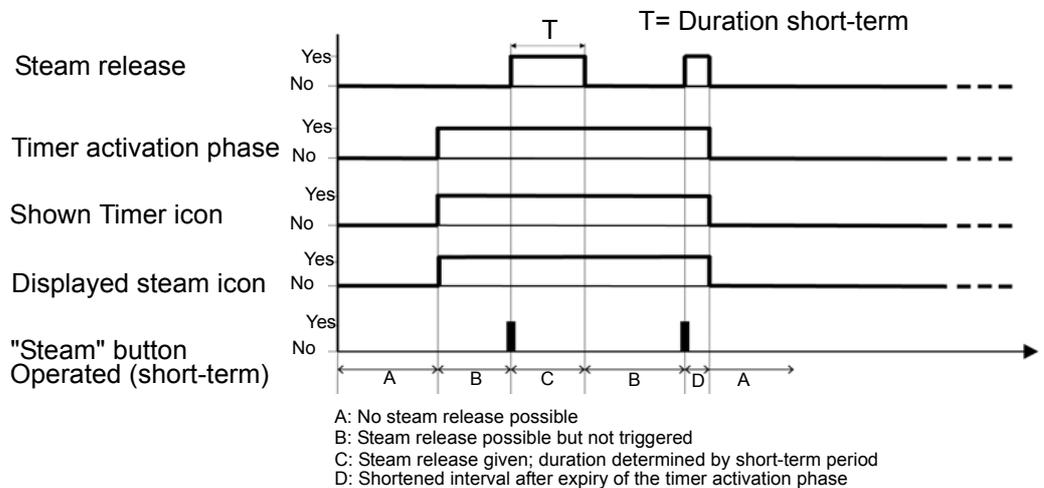
The on/off switching times for operation are saved to a weekly schedule. If there are no other activations (short-term mode or manual override) the weekly schedule directly determines the times for steam release. The three possible variants are described as follows:



Timer mode with "Manual override"



Timer mode with "Manual override" and short-term mode activation

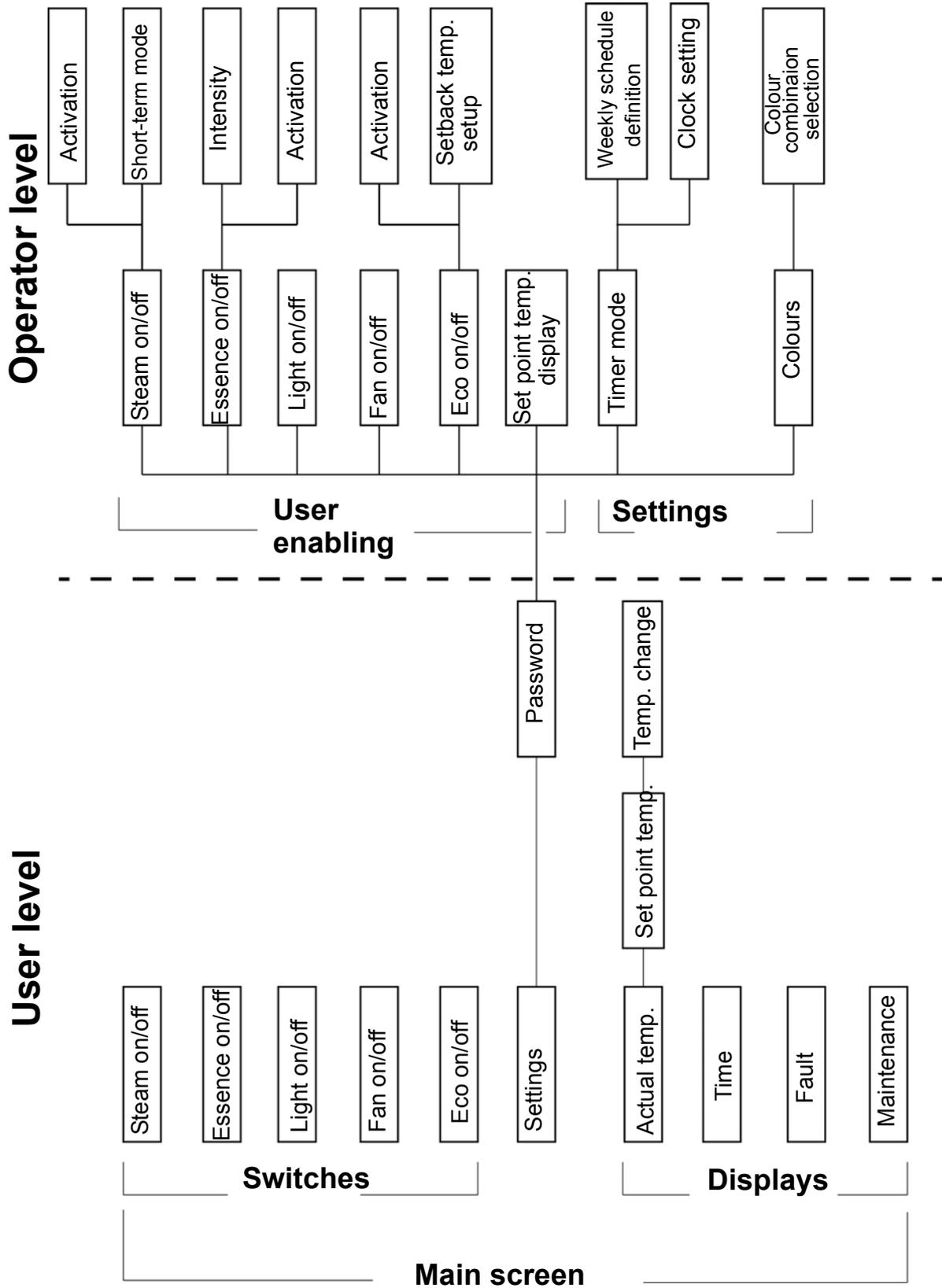


6.2 Status chart of available operating modes

Operating mode	Steam icon available	Steam button operated	Short-term mode activated	Timer activate	Timer in switch-on phase	Steam release
Manual	Yes	No	No	No	-	OFF
	Yes	Yes	No	No	-	Permanent until switched off or period limitation
Short-term	Yes	No	Yes	No	-	OFF
	Yes	Yes	Yes	No	-	for the fixed period set
Timer	No	n.a.	No	Yes	No	OFF
	No	n.a.	No	Yes	Yes	according to the programmed "ON" switching times
Timer with manual override	Yes	n.a.	No	Yes	No	OFF
	Yes	Yes	No	Yes	Yes	"Manual override" of switch-on period duration. Permanent "ON" until manual switch off or period limitation
Timer with manual override and short-term	Yes	Yes	No	Yes	No	OFF
	Yes	Yes	Yes	Yes	Yes	"Manual override" of switch-on period duration. "ON" for the duration of the short-term mode period saved

n.a. = not applicable

7. Menu structures



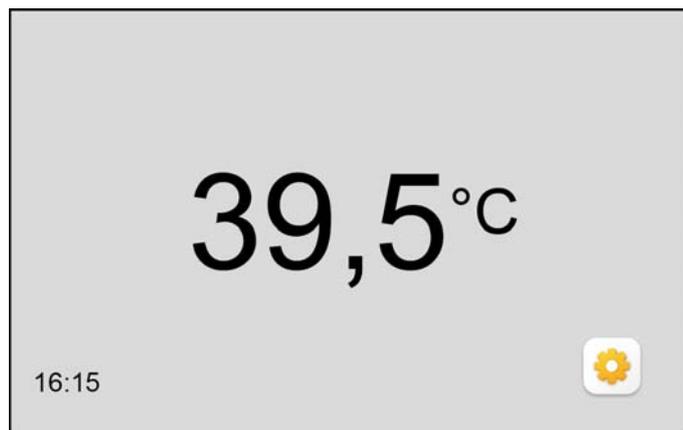
8. Initial operation

When the steam generator with Spa Touch Control connected is switched on the following start screen appears:



When initial operation is concerned after a brief period the display switches to the following screen in which there are not yet any operating options for the user.

Main screen with no user access rights

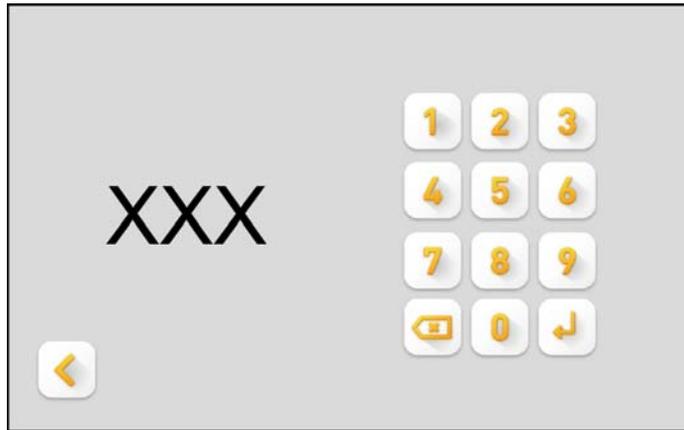


In the next step the operating functions which the user is permitted to access are to be set up by the operator.

- » Touch the button  , in order to enter set-up mode. The screen for entering the password is opened.

8.1 Password entry

View of password entry



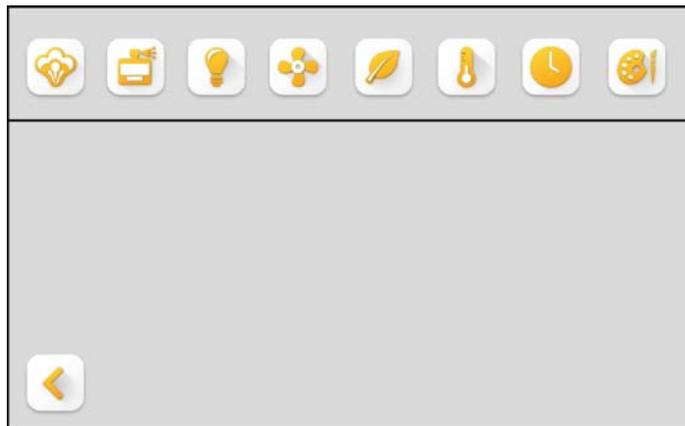
The password corresponds to the access code of the steal generator concerned (see operating manual of the relevant control system).

- » Digital entry of the three-figure password. The first digit is entered in the outermost right-hand position using the keyboard. With the next digital entry the previously entered digit moves one position to the left.
- » Repeat the step. The 3-digit password is now displayed in full.
- » Confirm the entry with the button .

Correction of the entry can be made with the button .

After entering the password the screen is opened which enables the operator to define the buttons and display icons of the main screen and change the default values (in the following designated as the options screen).

Options screen



The procedure for configuration of this screen and the changes to settings is described in Section "Operation".

9. Operation

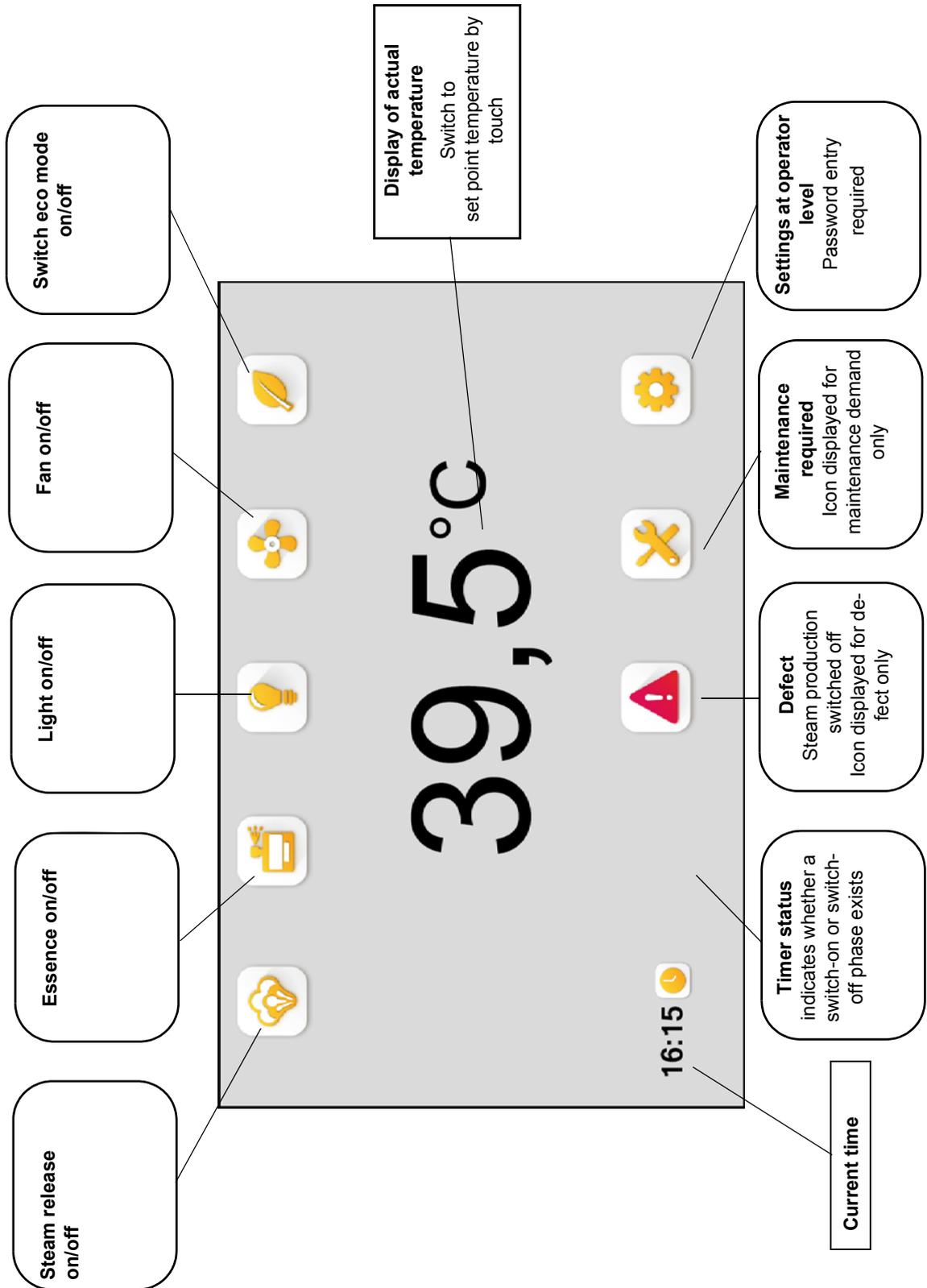
9.1 User and operator functions

Differentiation is made between user operation and display functions and extended functions available to the operator only - after entering a password. Settings can only be changed by the operator. One exception is the modification of the set-point temperature of the steam bath which can be carried out by the user if permitted by the operator.

The user screen is referred to as the "main screen" in this document.

The operating and display functions which can be controlled by the user are limited to basic operations such as "Steam on/off", "Fan on/off" etc. The scope of the main screen (and hence the equipment functions allocated to the user) is to be adapted by the operator for each individual case. In the following section the main screen with all possible buttons and displays is described together with the respective explanation. The actual scope of the main screen is determined by the extent of enabling to be performed by the operator.

9.2 Overview of operating and display elements for the user (main screen)



9.3 Operation by user

9.3.1 General operation

The selection of individual functions such as "Steam generation on", "Essence supply off" is prompted by briefly touching the respective icons in the main screen with a finger.

Please note Since a capacitive touchscreen is involved sure functioning is only provided by direct touch with a finger. The screen does not react to pressure.

When touched the colour of the icon background changes as an acknowledgement for the user. When the finger is withdrawn the selected function is activated. At the same time the icon changes its colour as a status signal for the user.

By retouching the previously activated function is deactivated Here too a status signal for the user is provided by a change to the icon background.

The various icons displayed are depicted in the following example of the fan control.

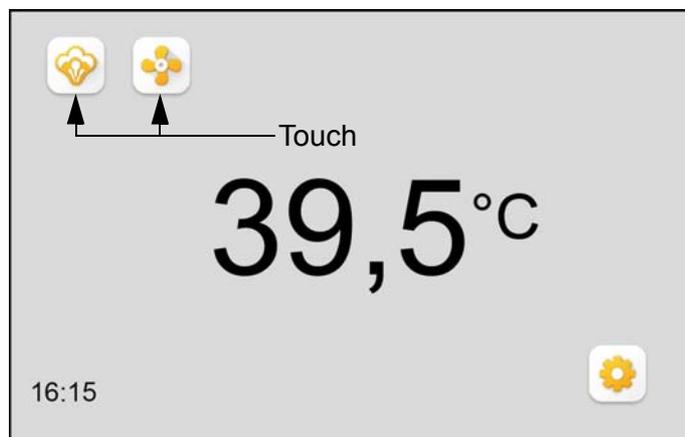
Icon	Meaning
	Function capable of selection
	Function is active

9.3.2 Operating examples for the user

Switching on the steam generation and the fan

- » Beginning with the example main screen shown below, touch the buttons for steam generation and fan engagement consecutively.

Main screen with possible operating functions



Both operating functions are launched and the main screen changes as follows:

Main screen with operating functions launched



Steam release and fan are now enabled. By retouching the respective button the relevant function can be switched off although in the case of the steam release this is only possible as long as the operator has not set a default runtime.

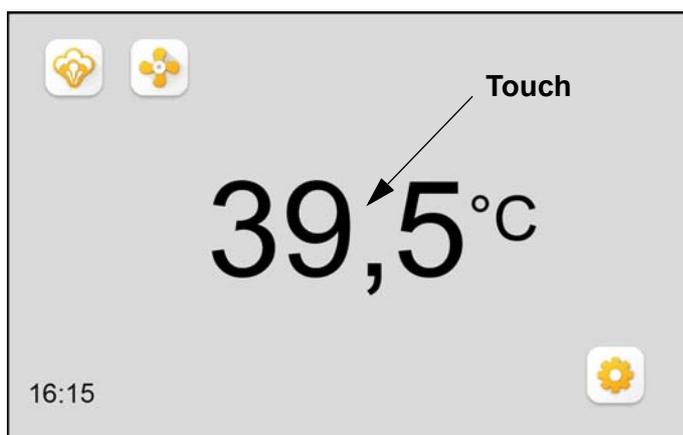
If steam release is made in short-term mode a further steam release can be made by the user after expiry of the set interval. As long as the interval has not expired further touching of the steam button does not produce an extension of the runtime.

9.3.3 Changing the set point temperature

The set point temperature can be changed by the user if the operator has provided this option. Changing is to be made as follows:

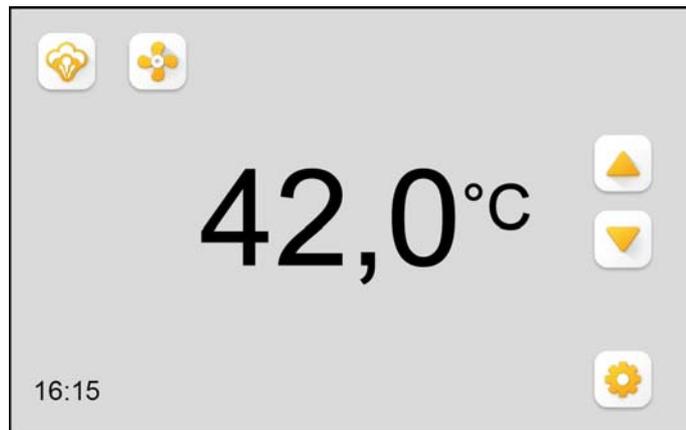
- » Touch the temperature display in the main screen.

Switch to display of the set point temperature



If enabled by the operator the temperature display now changes from "actual" to "set".

Display and changing of the set point temperature



- » with button ▲ or ▼ change the set point temperature in 0.5 °C increments.
- » Accept setting and return to actual temperature display by touching the temperature display again.

The adjustment range for the set temperature lies between 25 °C and 40 °C.

9.4 Settings by the operator

Operator settings require the entry of a password. The procedure for password entry is described in Section "Initial operation".

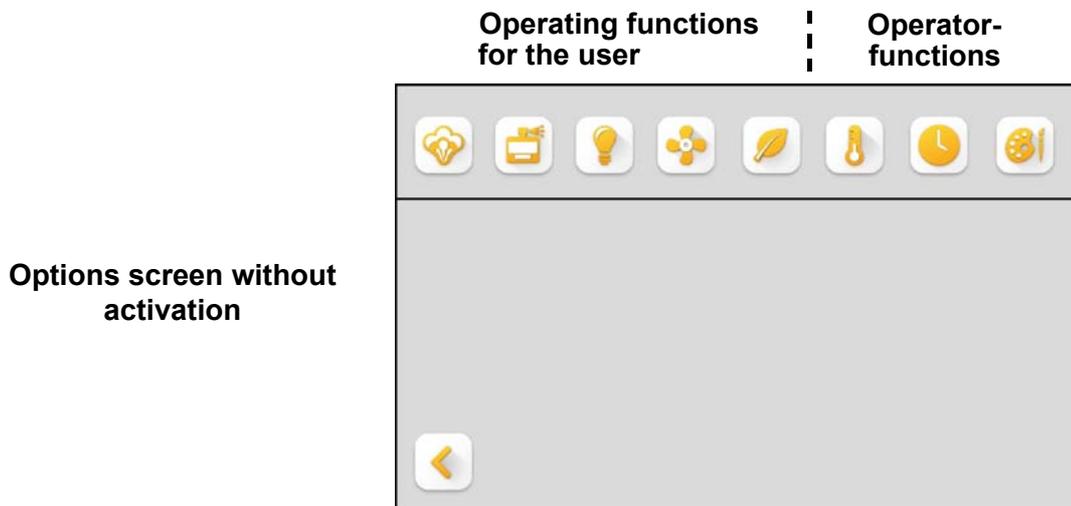
In addition to the "main screen" which is also available to the user the operator has the "selection screen" and function-related "sub-menu screen" available. To select a sub-menu the relevant button above the dividing line is to be touched. When the selected icon is touched the drop-down list of sub-menu options opens below it which allows the relevant settings to be made (excluding the icons/buttons for "Light" and "Fan" for which no sub-menus exist).

Entries in or changes made to the sub-menus are directly adopted. Return to the main screen is reached via the button



9.4.1 Defining the main screen (options screen)

In the options screen for defining the main screen all the operating functions are displayed which are able to be made available to the user. In addition there are icons/buttons present which are only relevant for the operator. After commissioning the Spa Touch Control all functions are initially deactivated:



Activation can be made by touching the relevant buttons. Only the activated buttons/icons are then visible on the main screen for the user.

Accept and return to the main screen by touching the button .

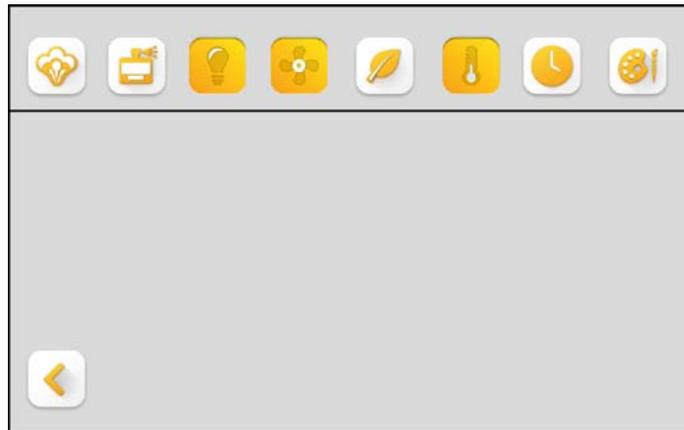
Insofar as functions with modifiable parameters (e.g. parameters "Essence intensity" for the "Essence supply") are concerned, the release of the function is made in 2 stages (see Section "Selecting steam control and changing settings").

Example: On the main screen only the icons for "Light on/off" plus "Fan on/off" should be visible. In addition the user should have the option of changing the set point temperature.

For this purpose the following steps are to be taken:

- » Activate the icons for fan and set point temperature release by touching the buttons. This generates the following screen

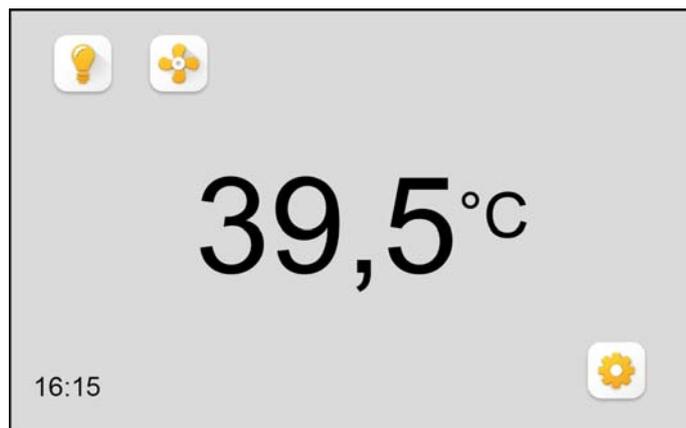
Options screen with activation



- » To store the selection and return to the main screen touch the button  .

Consequently the following screen appears for the user.

Main screen with possible operating functions



The buttons now permit the on/off switching of the cabin light and the fan. Moreover the set point temperature can be changed as described in Section "Changing the set point temperature".

Please note In this example the button for "Steam on/off" are not enabled i.e. the operator prefers steam control by other means (see Section "Steam control" or the next one). Selection of steam control and modification of settings.

In order to navigate to the required sub-menu for changing the relevant button must first be touched. The additional steps for each setting are described as follows.

9.4.1.1 Set manual mode ("Steam on/off" or short-term mode)

"Steam on/off"-mode

» In the options screen touch the button  .

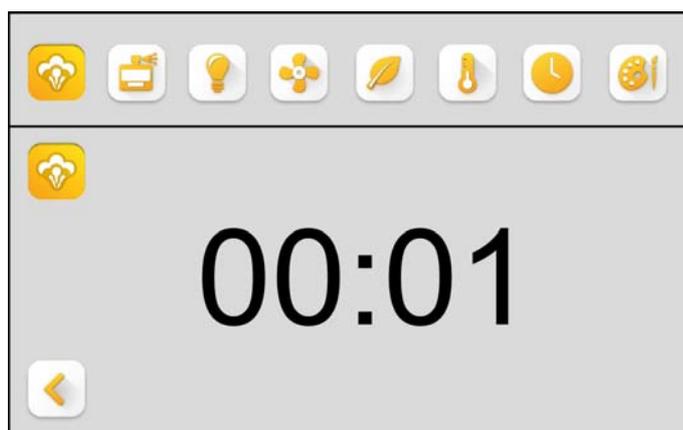
The following sub-menu screen:

Steam-mode
select



» By touching the button  under the dividing line the manual steam mode can be set i.e. switching steam generation on and off is made by the user ("Steam on/off"). Both steam icons are now shown as "activated":

Operating mode "Steam on/
off" selected



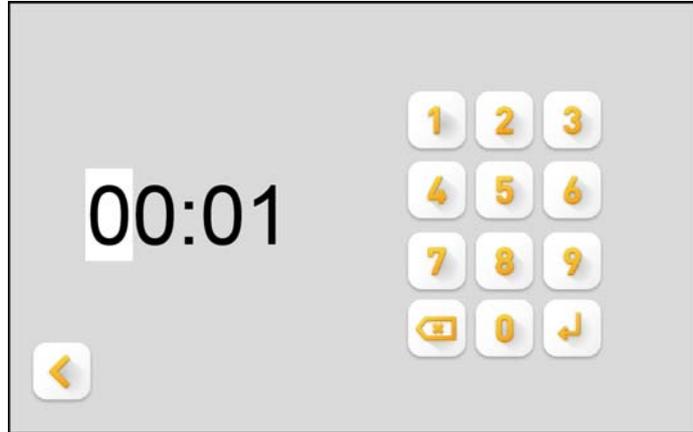
» Return to options screen with the button .

Short-term mode (Steam mode for a defined time interval)

If the short-term mode is to be selected in place of the straight manual "Steam on/off" mode proceed as follows:

- » Touch the 00:00 display. The following sub-menu screen:

Screen for setting the interval for short-term mode



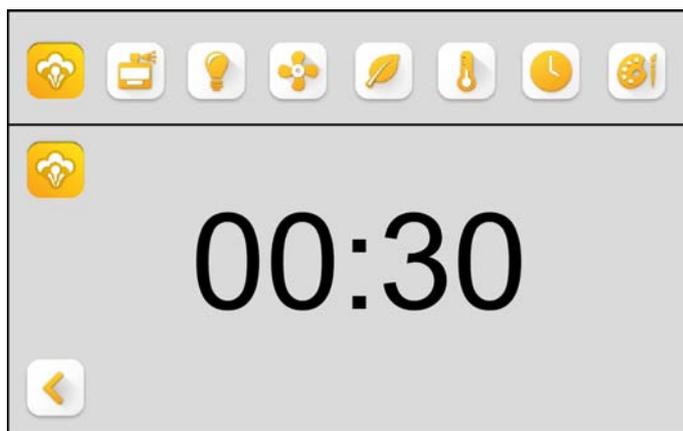
Activation of short-term mode is made by overwriting the 00:00 display using the keyboard. The format is "Hours:Minutes". Cursor control is analogous to setting the daytime clock (see following section). As long as the display remains at "00:00" short-term mode is not activated.

In activated condition the interval length can be overridden at any time.

- » Return to previous screen with the button .

For activated short-term mode the sub-menu display is shown as e.g. thus (Criterion is an interval which differs from "00:00").

Operating mode "Short-term mode" selected

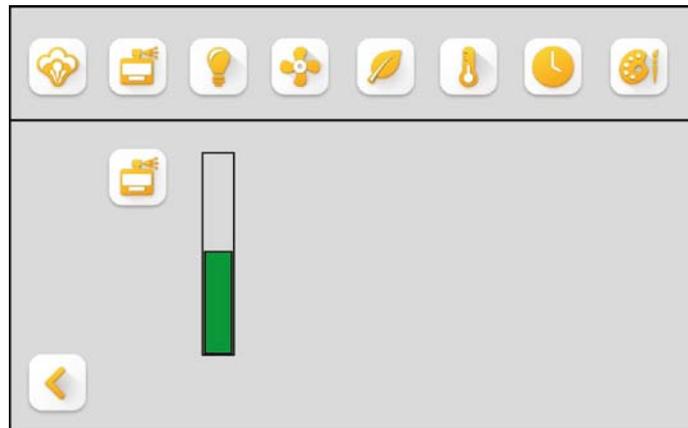


- » Return to options screen with the button .

9.4.2 Activate "Essence on/off" and set intensity

- » Touch the essence button in the options screen. The following sub-menu screen is shown:

Activation of essence function or setting the intensity



Activate "Essence on/off" for the main screen

For this purpose only the button above the bar needs to be touched. The function is thereby enabled. The icon changes its display format (in both screen positions). The length of the bar corresponds to the intensity of the essence saved to the control system.

- » Return to options screen with the button .

Set essence intensity

By touching the bar diagram at the top or bottom (Denotes "more" or "less" essence) the preset essence intensity is increased or decreased. Each touch alters the intensity by one step. The scale is comprised of 10 regulating steps.

- » Return to options screen with the button .

9.4.3 Activate "Light on/off" for the main screen

- » Touch the button .

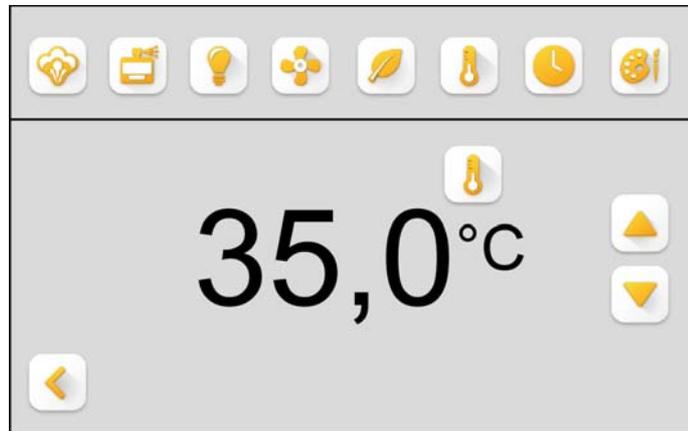
9.4.4 Activate "Fan on/off" for the main screen

- » Touch the button .

9.4.5 Activate set point temperature display and set point temperature

- » Touch the button . The following sub-menu screen appears:

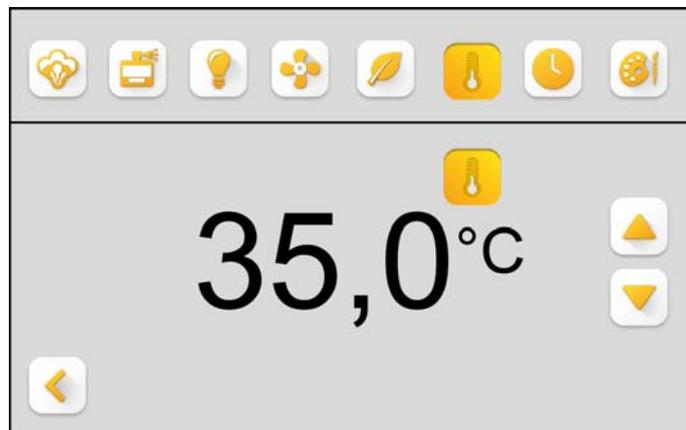
Set point temperature display activation



- » Touching the button  under the dividing line activates the user temperature display switching option between actual and set point temperature. Without any further entry the temperature displayed in the screen is adopted as the set point temperature.

The screen changes as follows:

Enable user switching to set point temperature and setting of the set point temperature



- » To change the set point temperature touch the button  or .

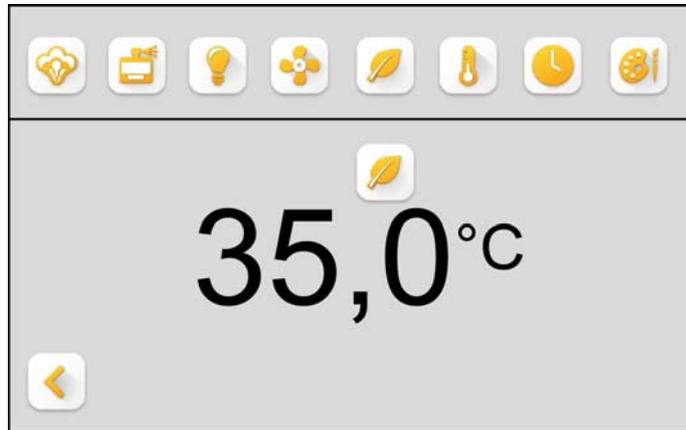
9.4.6 "Eco mode on/off" and set the setback temperature

In eco mode the steam generator operates with lowered steam bath temperature. The eco mode can be combined with other Spa Touch Control functions (e.g. the timer functions). To activate the eco mode for the main screen and to set this temperature proceed as follows.

Activate "Eco mode on/off" for the main screen

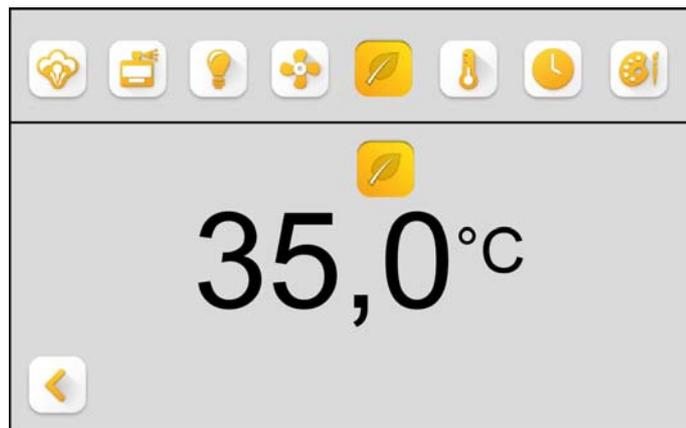
- » Touching the eco button on the options screen leads to the following sub-menu screen.

Activate eco mode



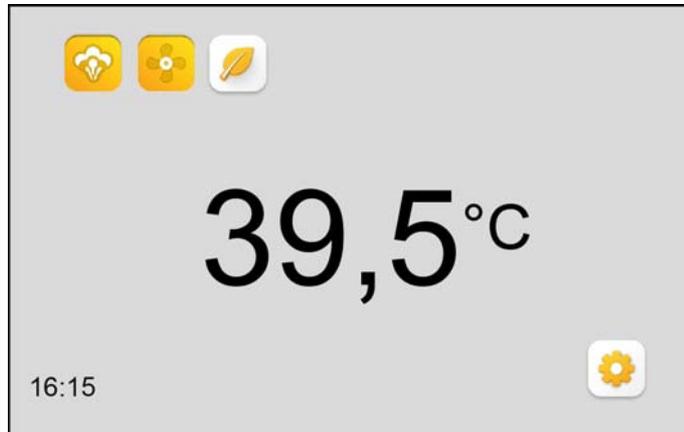
- » Touching the button  below the dividing line activates the eco mode for the main screen. The eco icon changes its display format in both positions:

Eco mode activated



The following exemplary main screen results which enables the user to switch on the eco mode (with the saved setback temperature).

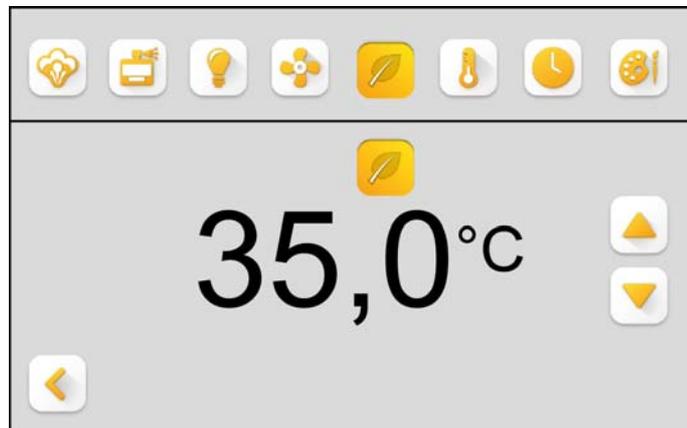
**Main screen with
activation**



Set the setback temperature

- » Touching the temperature display in the eco mode sub-menu screen leads to the following sub-menu screen:

Setback temperature setting



- » With buttons ▲ and ▼ the steam bath temperature for the eco mode can be changed in increments of 0.5 °C. This is possible irrespective of whether the eco mode is activated for the main screen or not. The change is adopted directly.
- » Return to previous screen with the button < .

9.4.7 Timer function (weekly schedule) activation and setting the daytime clock

The weekly schedule enables the setting of day-related intervals for steam supply. The respective interval ("switch-on phase") is specified by the freely programmable switch-on and switch-off points.

The factory settings for switch-on times are:

Weekday	Day coding in display	Start	Finish
Monday	1	0:00	0:00
Tuesday	2	0:00	0:00
Wednesday	3	0:00	0:00
Thursday	4	0:00	0:00
Friday	5	0:00	0:00
Saturday	6	0:00	0:00
Sunday	0	0:00	0:00

In Section "Steam control" it was stated that in timer mode 2 additional variants are possible namely, "Timer mode with manual overwriting" and "Timer mode with manual overwriting and short-term".

For the moment the following section is concerned with the simple timer-mode in which the switch-on and switch-off times directly control the steam supply. The special features of both of the other variants are described subsequently.

Please note

If simple timer mode without additional functions is to be used the "Steam on/off" button on the options screen must not be activated!

Settings for operating mode "Timer"

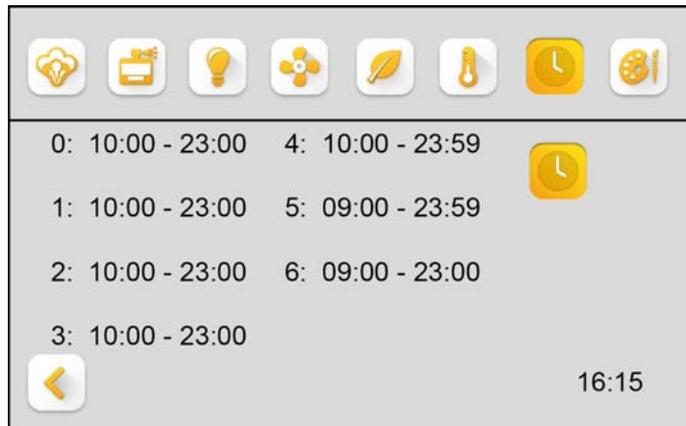
- » Touch the timer button on the options screen. The following sub-menu screen is displayed (shown here with the factory settings for switching times of the weekly schedule).

Timer function activation



- » To activate the timer function touch the button  below the dividing line. The two button icons change their display format:

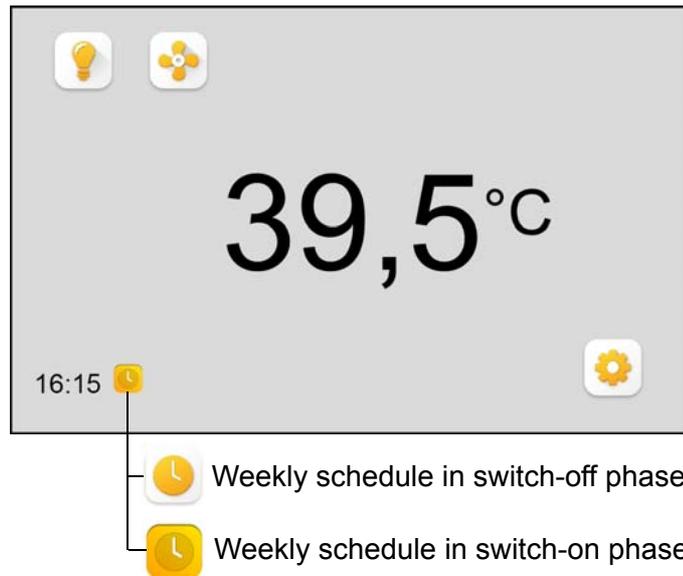
Timer function activated



The timer function is now activated with those weekly switching times shown on the screen.

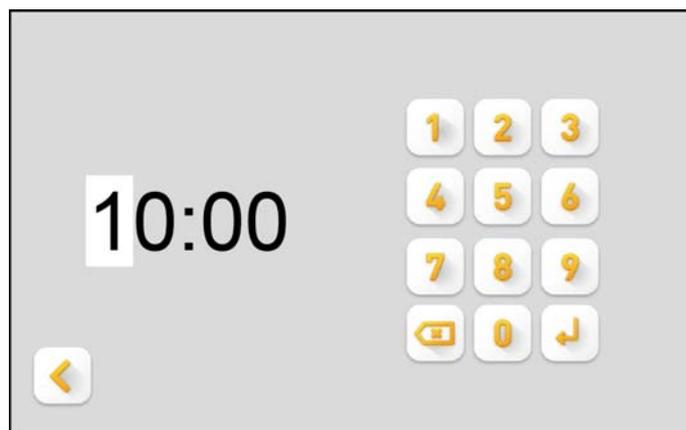
On the main screen (for the user) the activated timer mode is indicated by the relevant icon next to the daytime clock. The icon functions simultaneously as a status display.

Main display with activated timer function



To change the switching times the relevant entry is to be touched. The following sub-menu screen opens (example shown for Monday):

Timer switching times adjustment



The entry can now be overwritten. Changes are immediately effective.

» Return to previous screen with the button .

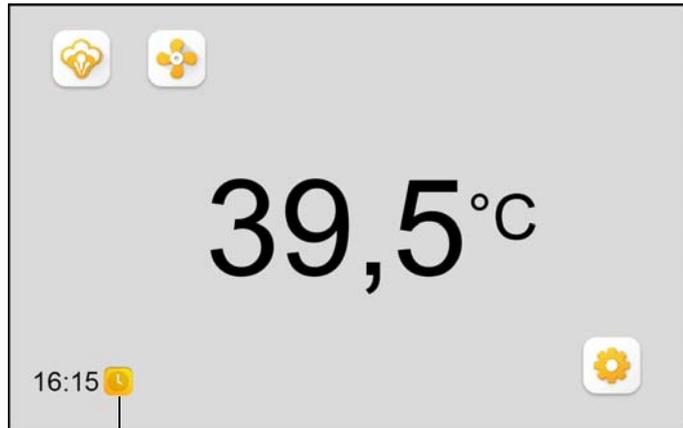
If required the switching times for the remaining days of the week can be changed in the same way.

» Return to options screen with the button .

Settings for operating mode "Timer with manual overwriting"

For this operating mode it is necessary to activate the "Steam on/off" button on the options screen in addition to timer activation. Steam mode can be manually started and ended however only then when there is a switch-on phase in the weekly schedule at the same time. When the timer switch-off point is reached the steam supply is switched off. Up to this point in time the steam supply is continuous as long as a manual switch-off is not made. The main screen is presented to the user for example as shown below:

Timer mode with manual overwriting



-  Weekly schedule in switch-off phase
-"Steam on/off" functionless
-  Weekly schedule in switch-on phase
-steam mode possible by touching
"Steam on/off"

Settings for operating mode "Timer with manual overwriting and short-term"

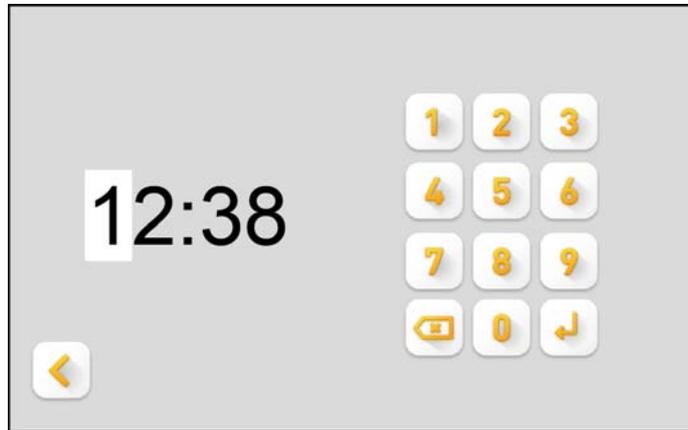
To select this operating mode an entry for the short-term mode interval must be made by the operator (see section "Short.term mode" in Section "Manual mode ...setting"), in addition to setting the timer mode and activation of the steam buttons.

If the steam control is in a timer switch-on phase the steam mode starts only after touching the "Steam on/off" button for the duration of the programmed short-term mode interval.

Time setting

As a second setting option on the timer screen the daytime clock can be adjusted. The clock continues to run as long as the display/button of the clock is not touched. When touched the clock is stopped and the (internal) second counter set to "zero". For setting the time the following screen appears:

Time setting



- » With the button  return to the previous level is made without changing the time.

If the time setting is to be changed proceed as follows:

- » Overwrite the digit at the cursor position by touching one of the numerical buttons on the keyboard (digits not possible to overwrite are darkened); with the entry the cursor moves to the next position immediately to the right.
- » Overwrite all digits required by the same method. The cursor jumps back to the far left position after reaching the position on the far right. Deliberate return of the cursor to the previous position can be made with the button .
- » Use the button  to save settings; the clock starts.

Please note

If a start is required accurate to the second the operation of the button  must be synchronized with an external time signal.

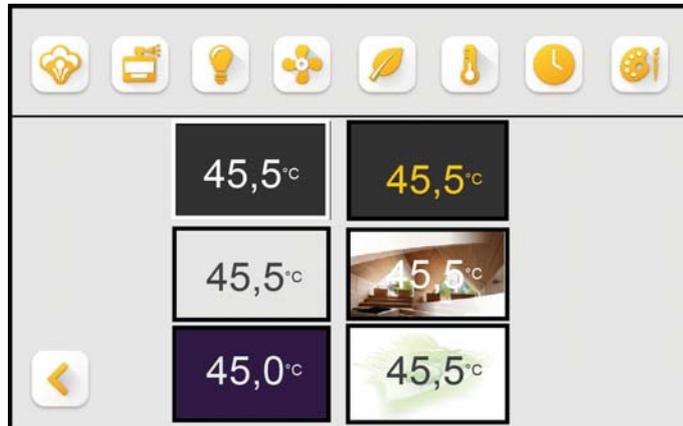
- » Return to main screen with the button .

9.4.8 Colour combination selection

For customizing the appearance of the main screen of the Spa Touch Control one of six colour combinations can be selected by the operator for the background and font colours.

The colour selection level is retrieved by operating the button  on the options screen (see Section "Defining the main screen (options screen)").

Selection of the colour combination



- » Select the required option by touching one of the six colour combination boxes. The screen changes immediately.
- » Accept and return to the options screen with the button  .

10. Technical specifications

Monitor

- 5" capacitive touchscreen (PCT touchscreen)
- Resolution 800 x 480 pixels
- 65K colour saturation
- Protection class IP65 front (rear IP00)

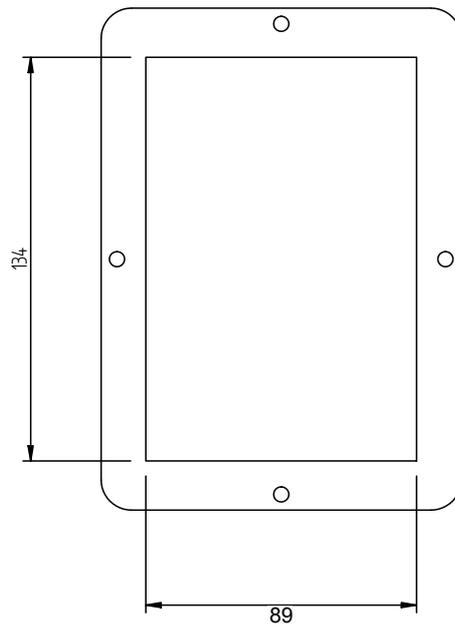
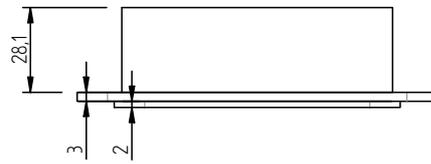
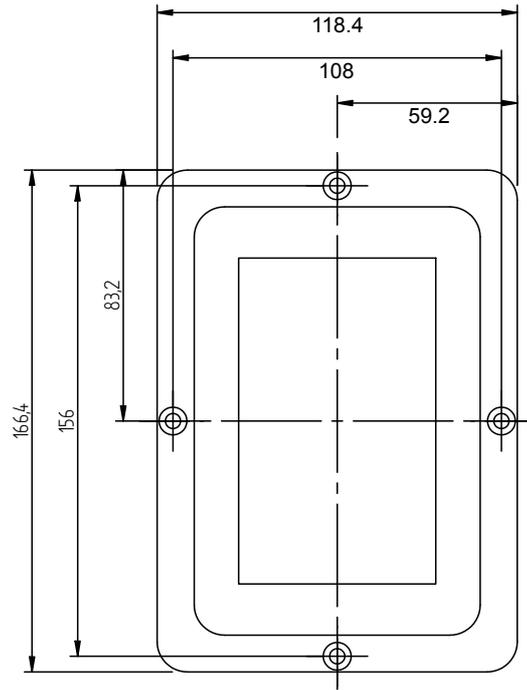
Overall assembly (Screen and electronic assembly)

- Operating temperature 0 to 55 °C
- Humidity: 10 to 60% relative humidity; non-condensing
- EMC compatibility: EN/IEC 60730-1

Electronic module

- connected to screen by sandwich construction
- Power supply 12V AC via data cable (external feed by steam generator)
- RS485 interface for connection to the steam generator (Modbus RTU protocol)
- Protection class IP00 together with screen, but frontal IP65

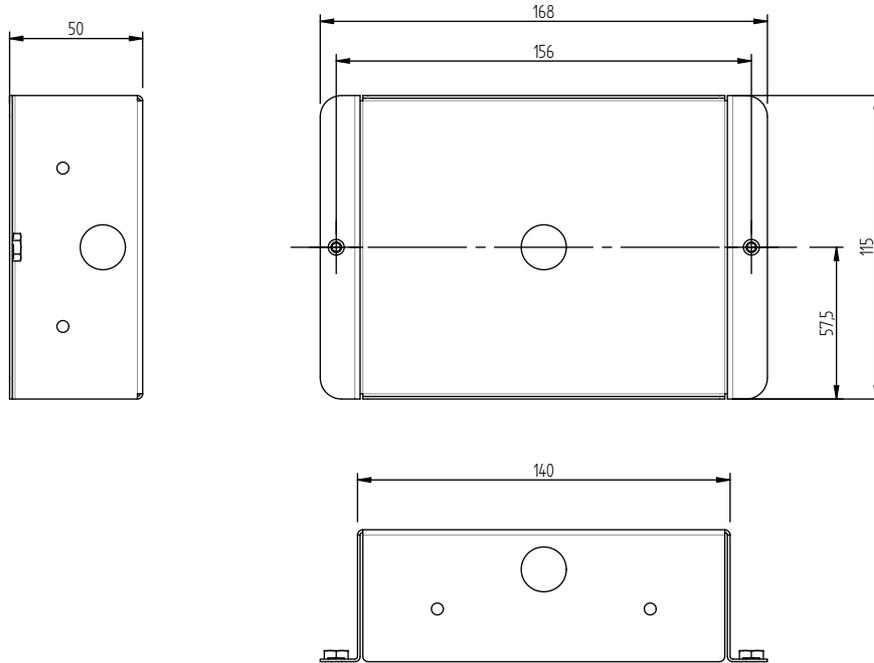
Dimensions



Installation well

- Steel construction 1.4301

Dimensions



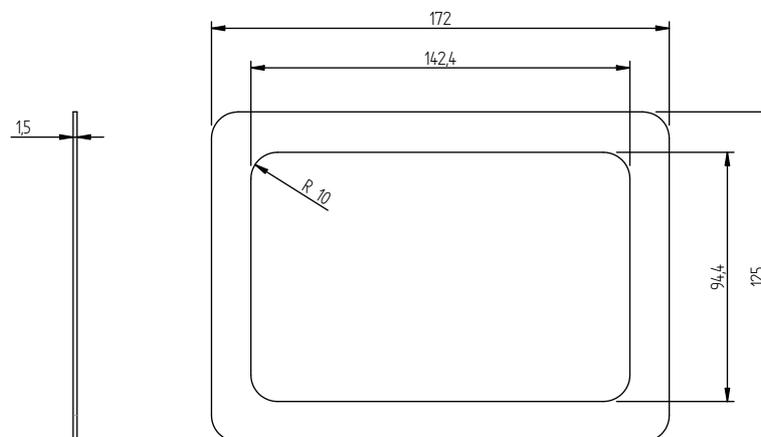
Installation bolts

- 2 off countersunk bolts M4 x 8

Face cover

- Aluminium black anodized

Dimensions



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