

Aroma-Tec II Basic

automatic sauna water splash system



 Installation and operation manual

Made in Germany

 IP44



Table of contents

1	Information regarding these instructions / general information	4
1.1	Scope of validity.....	4
1.2	Target group	4
1.3	Symbols used.....	4
1.4	Warranty	5
1.5	Further information	5
2	Safety	6
2.1	Appropriate use	6
2.2	Safety instructions:.....	6
2.2.1	Handling of chemicals, risks to persons and the environment	6
2.2.2	Protective measures and behavioural rules.....	7
3	Product description - delivery scope.....	8
3.1	Delivery scope / accessories.....	8
3.2	Product description	8
3.2.1	Dosing unit	9
3.2.2	Control unit.....	10
3.2.3	Piping and fittings.....	10
3.2.4	Heater shower (series).....	10
3.2.5	Wall feed-through (optional)	10
3.2.6	Extension (optional).....	10
3.3	Identification of the device / name plate	11
3.4	Technical data.....	11
3.5	Transport / storage.....	12
4	Installation	13
4.1	Selecting the place of installation.....	13
4.2	Installation information (installation suggestion).....	13
4.3	Mechanical installation	14
4.4	Hydraulic installation.....	14
4.5	Electrical installation.....	15
5	Initial operation	16
5.1	Initial operation - comments	16
5.2	Initial operation works.....	16
6	Operation / handling.....	18
6.1	General.....	18
6.2	Control - software	18
6.2.1	Controller flow diagrams	19
6.3	The main menu.....	20
6.3.1	Operating modes.....	20
6.3.2	Pause time / locking time	21
6.3.3	Water quantity	21
6.3.4	Fragrance quantity.....	21
6.3.5	Switch-on delay.....	21
6.3.6	Pump test	21
6.3.7	SV test.....	21
6.3.8	Pressure test.....	21
6.3.9	Splash test.....	22
6.3.10	Contrast	22
6.3.11	Language	22
6.3.12	Info.....	22
6.4	Top up consumables.....	22
7	Maintenance, service, faults	23
7.1	Device maintenance.....	23
7.1.1	Check / replace hose set	23
7.1.2	Check the dosing valve	24
7.1.3	Clean the heater shower	24
7.1.4	Clean the dirt filter	24
7.2	Regular water inspection	24
7.3	Fault removal.....	24
8	Shutting down - Storage - Disposal	26
8.1	General.....	26
8.2	Shutting down	26

9	Documents.....	27
9.1	Declaration of conformity	27
9.2	Terminal plan	28
9.3	Commissioning protocol / instruction	30
9.4	Operating data sheet	31
9.5	Maintenance protocol.....	33
9.6	Spare parts list, wearing parts list, consumables list	34
10	Appendices.....	35

Imprint

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These operating instructions are based on the German original provided by the WDT company.

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1 Information regarding these instructions / general information

1.1 Scope of validity

These instructions describe the function, installation, commissioning and operation of the SAUNA PLUS 8 Basic automatic sauna splash system and the appropriate accessories.

The operating instructions must be carefully read before using or maintaining the device and have to be stored in immediate proximity of the device!

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" indicates a safety instruction that must be adhered to at the risk of death or severe injury!



CAUTION !

"CAUTION" indicates a safety instruction that must be adhered to at the risk of light to medium injuries!



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!



ATTENTION !

"ATTENTION" indicates a safety instruction that must be adhered to at the risk of damage to goods breakdowns!



HIGHLY FLAMMABLE !

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



Hint !

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

1.4 Warranty

All devices and systems of the WDT company are produced using the latest production methods and comprehensive quality control. Please send your warranty claims according to the general warranty conditions (see below) to WDT should there nevertheless be a reason for complaint.

General warranty conditions

WDT provides a warranty for 2 years from the date of commissioning, 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 WDT to maintain your warranty claims. We reserve the right to settle the warranty claim when no completed 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

Additional information regarding specific topics such as description of the operating parameters as well as further support is available from your specialist dealer.

2 Safety

2.1 Appropriate use

Automatic sauna splash systems of the "Sauna Plus 8 Basic" type may only be used for the applications described in Section 3.2 Product description! The locally applicable regulations regarding accident prevention, worker safety and drinking water protection must be adhered to.

2.2 Safety instructions:

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 warning information on the device!



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

2.2.1 Handling of chemicals, risks to persons and the environment

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 undiluted fragrances may lead to irritation and allergic reactions.



HIGHLY FLAMMABLE !

The undiluted 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!

Emergency call number:

Poison Emergency Call Munich (or any other poison centre)

Telephone: +49 89 19240

2.2.2 Protective measures and behavioural rules



CAUTION !

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

A safety combination unit for non-poisonous liquids with free drainage 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 reflux fitting).

A system separation unit according to DIN EN 1717 for non-poisonous liquids without free drainage 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 or water trap in the pipe).

Please adhere to the locally applicable regulations!



ATTENTION !

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

3 Product description - delivery scope

3.1 Delivery scope / accessories

Automatic sauna splash systems of the type "Sauna Plus 8 Basic" mainly consist of the following components:

- Microprocessor controller NT35 + HMI-NT35, V4.0
- Hose dosing pump SA-Vi for fragrance concentrate
- Mounting plate with bracket for fragrance container
- 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 dosing valve 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. Extension for the heater shower 3/8", different lengths
5. Sauna splash connection set: Item no.: 20101, consisting of:
 - a. 10 meter PTFE hose 6x1mm
 - b. Hose connection for splash automatic system 3/8" external thread x 6x1mm
 - c. Hose connection for wall feed-through 3/8" internal thread x 6x1mm
 - d. 3/8" angle internal/external thread
6. Button plate made of wood incl. illuminated button for operation in the cabin: Item no.: 12905
7. System separating unit ½" for automatic sauna splash system (when outlet pipes are not self-draining): Item no.: 24321
8. Hose connection, nickel-plated brass, 3/8" internal thread for PTFE hose 6x1mm, item No.: 19282

3.2 Product description

The Sauna Plus 8 Basic automatic sauna splash system is a dosing system for a fully automated splash onto the sauna heater. A fragrance is automatically added to the splash water.

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

The device can be controlled by an internal cycle program or an optional button.

Function

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 selected (10) doses the predetermined amount of fragrance from the fragrance container (16) through the dosing valve (7) into the water flowing to the sauna heater. The water is then splashed on. The solenoid valve closes at the end of the dosing cycle. The pressure switch monitors the pressure drop in the splash line, which has to take place within 3 seconds.

If the pressure of 1.2 barg is not reached or if the pressure drops during the splash, the "water pressure fault" message is shown, the fragrance supply is switched off by a safety switch and the solenoid valve remains open (see Section 7.3). This ensures that the fragrance concentrate can only be dosed when the device has the necessary water pressure. This is important, as undiluted fragrance concentrate may not get onto the sauna heater. The concentrate can be flammable!

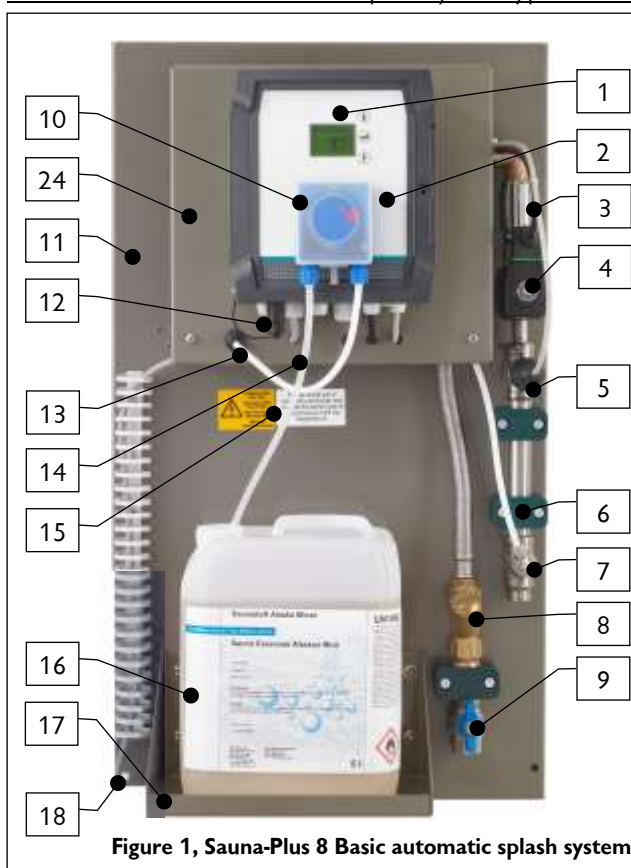
The installed safety combination unit (3) according to DIN EN 1717 (reflux valve + aerator) provides additional protection against splash water flowing back into the supply network in the event of a pressure drop. A dirt filter (8) and a ball stop valve ½“ (9) are installed upstream of the safety combination unit (3).



ATTENTION !

The automatic sauna splash system must either be interlocked with the sauna controller on-site or the splash times must be coordinated to avoid dosing onto a cold heater! When the internal switch-on delay (adjustable) is activated, it prevents the first splash once the mains have been switched on. The switch-on delay can be switched off when required (e.g. test operation).

Overview of the automatic sauna splash system type: Sauna Plus 8 Basic



Key

1. Display with 3 operating buttons
 2. Controller housing
 3. Safety combination unit according to DIN EN1717 (reflux valve + aerator)
 4. Solenoid valve
 5. Pressure switch and cover plate
 6. Pipe holder
 7. Fragrance dosing valve
 8. Dirt filter
 9. Shut-off ball valve
 10. Hose dosing pump
 11. Installation plate
 12. Socket for button
 13. Fragrance pressure line
 14. Fragrance suction line
 15. Warning notes
 16. Fragrance container
 17. Bracket for fragrance container
 18. Grounding connection
24. Main switch (covered, see Figure 14, Control unit with display)

Figure 1, Sauna-Plus 8 Basic automatic splash system

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.

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

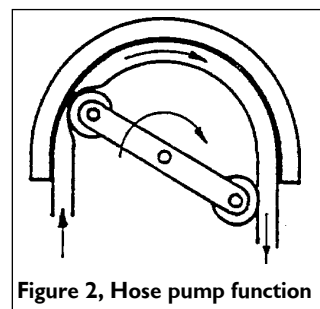


Figure 2, Hose pump function

The installation of a combined, spring-loaded reflux 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 (angular shape) - 3/8" external thread.

The opening pressure is 0.69 barg.

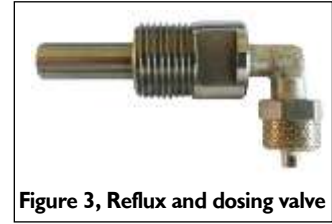


Figure 3, Reflux and dosing valve



ATTENTION !

The composition of the fragrance varies. This may reduce the service life of the hoses in the fragrance pumps. You should therefore regularly check the fragrance pumps according to the maintenance plan or whenever fragrance is topped up.

3.2.2 Control unit

The control unit has a housing of protection class IP64. All electronic components are installed in it. The control unit can be used to set the operating parameters.

Activation of the switch-on delay allows setting of a delay time for the first sauna splash. This prevents fragrance from collecting on the cold sauna heater and possibly bursting into flames during subsequent heating.

3.2.3 Piping and fittings

The piping of the automatic sauna splash system consists of a ball stop valve (9), a dirt filter (8) and a safety combination (3) that meets DIN EN 1717 regulations when the supply line is running empty, so that no water can be sucked back into the water supply system. The piping further includes a solenoid stop valve (4) as well as a pressure switch (5) for pressure monitoring.

3.2.4 Heater shower (series)

The standard delivery scope includes a heater shower consisting of a stainless steel pipe $\varnothing 18 \times 200$ 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" external thread connection made of stainless steel for installation and safe attachment of the heater shower, see Section 3.1 *Delivery scope / accessories*.

Standard dimensions:

Length before the flange: 190 mm

Length after the flange: 90 mm

Flange diameter: 60 mm

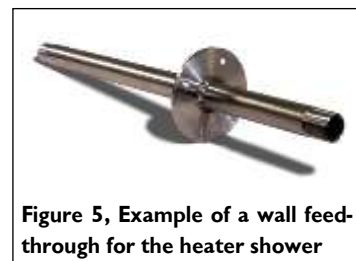


Figure 5, Example of a wall feed-through for the heater shower

3.2.6 Extension (optional)

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



Figure 6, Extension

3.3 Identification of the device / name plate

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

- Array 1: Enter the serial number
 Array 2: Enter the production date

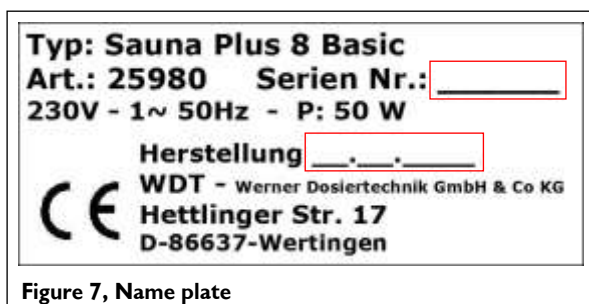


Figure 7, Name plate

3.4 Technical data

	Sauna Plus 8 Basic	
Dimensions and weights:		
External dimensions	0.70 x 0.40 x 0.23 m; HxWxD	
Space requirements	0.90 x 0.50 x 0.30 m; HxWxD	
Space requirements incl. operation and maintenance	2.00 x 0.60 x 1.00 m; HxWxD	
Empty weight / operating weight	10kg / 15kg	
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, safety connector	
Main fuse F500	2A slow, D8,3x8	
Nominal pressure / operating pressure	1.5-6 barg / 1.5-6 barg	
Required inlet pressure	1.5-6 barg	
Operating data:		
Splash water at 4 barg flow pressure	max. 1200ml per splash at 100%	
Fragrance	max. 24 ml per splash at 100%	
Lock time / pause time	1-90 minutes	
Fragrance pump	24VDC	
Solenoid valves	1/4" internal thread, 230 VAC	
Control unit for automatic splash	230V AC	
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	NT 35 V2,0 + MP3HMI / V4.0	

4 Installation

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 Installation 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*.

- Warning and information signs according to the locally valid accident prevention regulations are to be provided at the intended positions.

Installation diagram

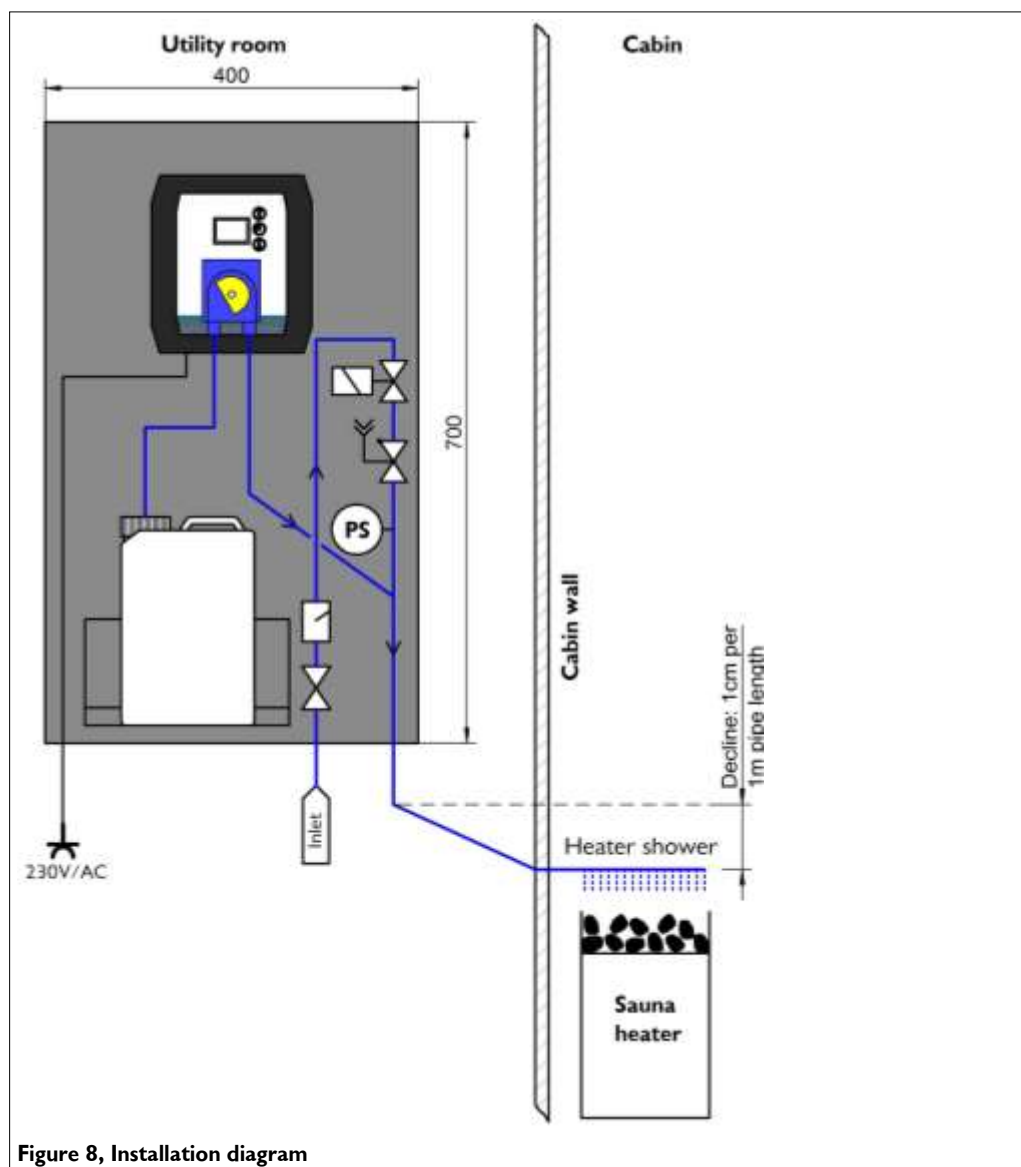


Figure 8, Installation diagram

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 made by WDT is used to connect the automatic sauna splash system 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!



ATTENTION !

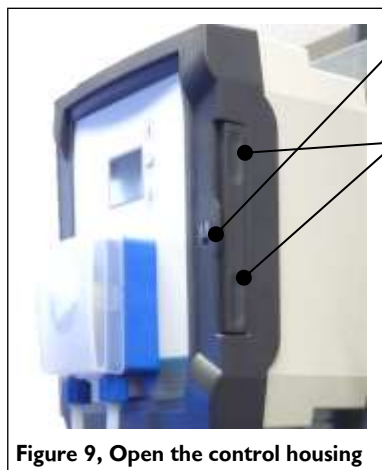
The electronic components of the devices are sensitive to electrostatic discharge. The generally known precautions regarding ESD-sensitive devices must be adhered to when handling these devices!

The following needs to be considered:

- Only pull or push in the plug-in connectors when they are not under tension.
- Discharge your body for at least 5 seconds before you touch the devices, e.g. by touching a grounded part of the system or by wearing an ESD ground strap that is connected to ground.

Connect the grounding connection (Pos. 18) to the on-site grounding cable.

Open / close the housing



Unlock the locking button with a screw driver

Press onto both handle recesses until the housing clips open. Swivel the lid sideways.

The housing is closed in reverse order

Figure 9, Open the control housing

5 Initial operation

5.1 Initial operation - comments

The work described here may only be performed by appropriately trained specialist staff or by a specialist company. Alternatively, the work may be performed by persons who have completely read and understood the operating instructions. The systems installed must be inspected for appropriate installation and tightness before commissioning.

Use the commissioning protocol in *Section 9.3* 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 Initial operation works

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 7 mm 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 5 kg. Place the fragrance container onto a separate shelf when this load is exceeded.

Most fragrances are easily flammable!

3. Connect the container with the desired fragrance to the fragrance pump selected. Push the suction hose into the container until the end of the suction hose touches the bottom of the container.

Insert the roller carriers into the fragrance pump

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

Key

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

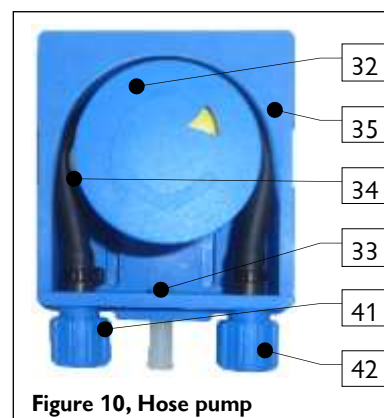


Figure 10, Hose pump

2. Push the yellow roller carrier onto the axle.



Figure 11,
Insert the roller carrier

3. Place the hose carrier into the guides inside the housing until it clicks in.



Figure 12,
Insert the hose carrier

4. Turn the roller carrier anticlockwise while carefully pushing the hose into the housing until it is completely within the housing.



Figure 13,
Turn the roller carrier

Then re-attach the safety disk 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 socket and switch on the device at the main switch.

The first splash can be delayed by 0-120 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.

Ensure that all installation work has been completed. Adhere to the work sequence for the initial operation.

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 Control - software

The control of the automatic sauna splash system is operated by using the control unit on the front of the device.

The controller menu is simple and easy to operate. It consists of an operating screen with the following menu points:

- | | |
|---|------------------|
| 1. Pause time (for cyclic mode) / lock time (for button mode) | 7. MV test |
| 2. Water quantity | 8. Pressure test |
| 3. Fragrance quantity | 9. Splash test |
| 4. Operating mode | 10. Contrast |
| 5. Switch-on delay | 11. Language |
| 6. Pump test | 12. Info |

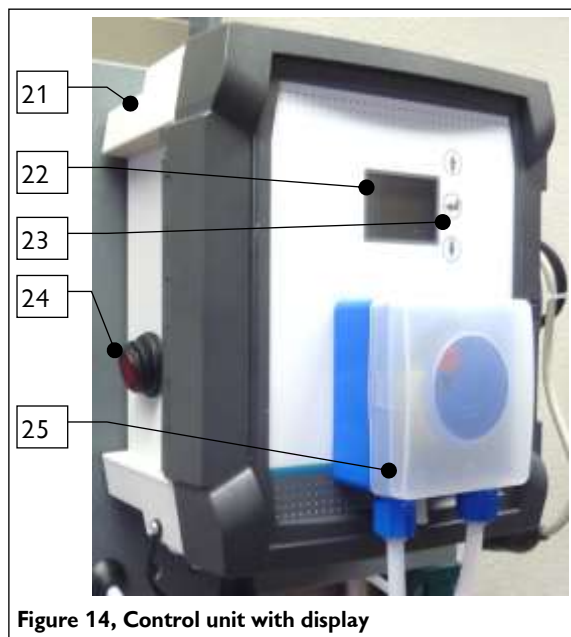
▶ Pause time
Water qty
Aroma qty
Oper. mode
Switch-on del

▶ Pump test
SU-test
Pres. test
Splash test
Contrast

▶ Language
Info

Start buttons can be plugged in at the control unit housing as required.

Overview of control unit



- Key
- 21. Controller housing
 - 22. Display
 - 23. 3 sensor fields for operation
 - 24. Main switch
 - 25. Dosing pump

Figure 14, Control unit with display

Explanation of the operation



- Navigation upwards
The arrow key can be used to move upwards or to adjust numerical values.
- Enter key
The enter key opens the sub-menu selected or takes the user from the sub-menu back to the main menu.
- Navigation downwards
The arrow key can be used to move downwards or to adjust numerical values.

Figure 15, Display of operating elements

6.2.1 Controller flow diagrams

Example for start with cyclic mode menu

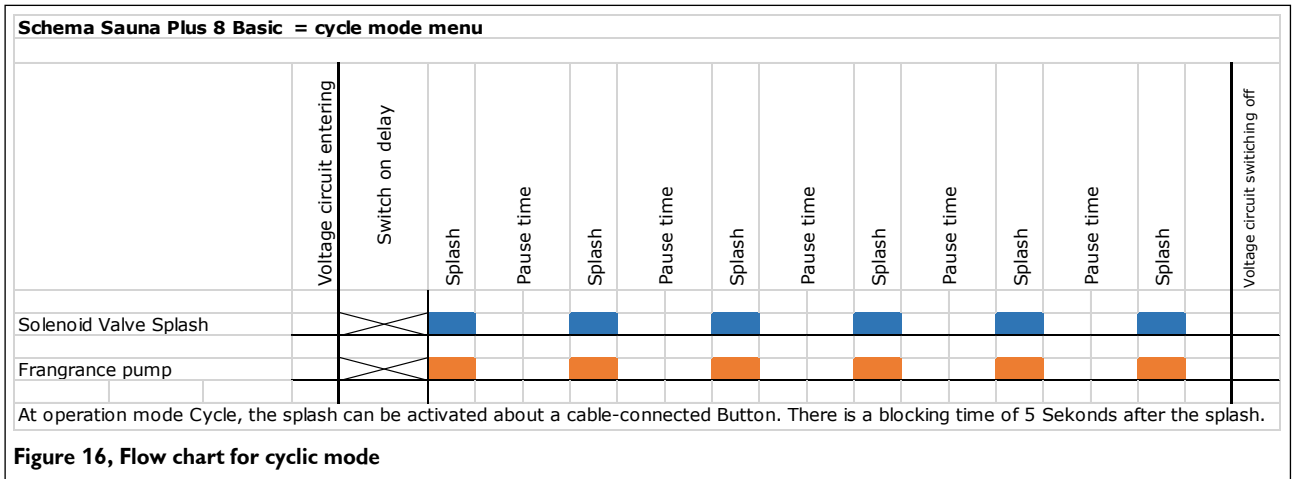


Figure 16, Flow chart for cyclic mode

Example for start with button mode menu - delivery state SL 6/1+3

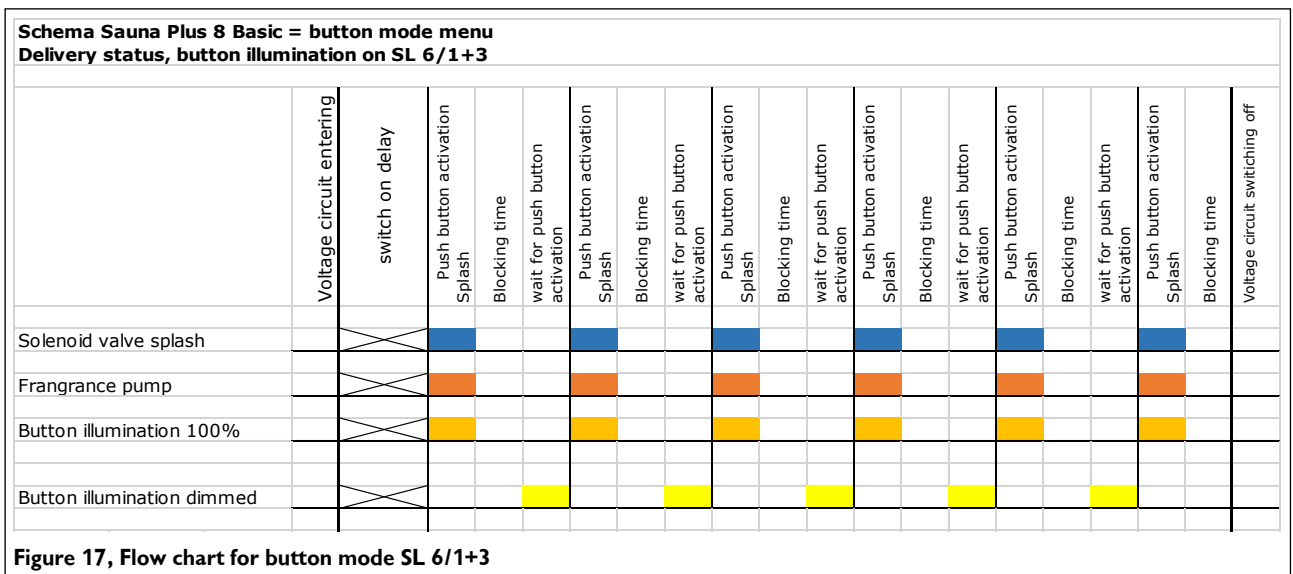
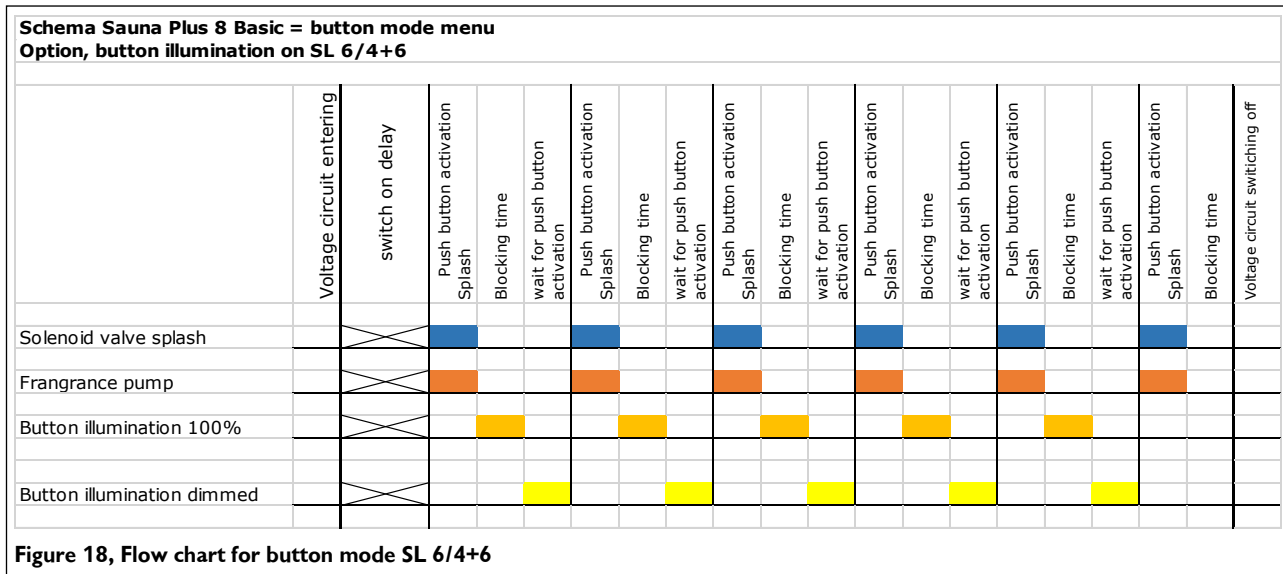


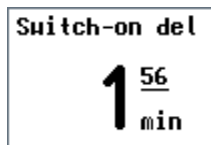
Figure 17, Flow chart for button mode SL 6/1+3

Example for start with button mode menu - option SL 6/4+6



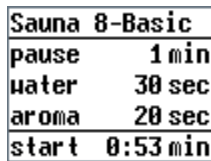
6.3 The main menu

Once the device has been switched on at the lateral main switch, the switch-on delay starts at the value set and counts down to "0".



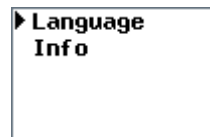
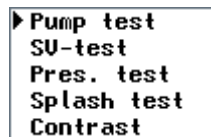
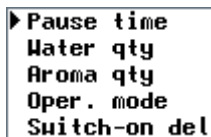
Thereafter, the display changes to the start screen showing the following information:

- Device name and indication of activation at the button input or the 230V controller
- Break time or locking time set
- Water dosing time set
- Fragrance (Aroma) dosing time set
- Time to the start of the next splash or to the end of the locking time.



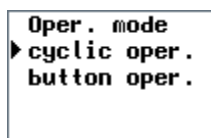
A ■ signal is pending at the button input or the 230-V controller input.

Pressing a button switches the display to the main menu.



You can use the 3 operating buttons to navigate between the menu points.

6.3.1 Operating modes

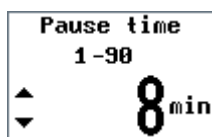


2 operating modes can be selected: cyclic operation mode and button operation mode.

Cyclic operation in combination with the pause time can be used to set an individual splash cyclic that is continuously repeated. You can determine the amount of water and fragrance as well as the pause time.

Button operation allows the sauna customer to determine the time of the splash directly. The splash is started by a button in the sauna. You can determine the amount of water, fragrance and the locking time according to your own preference. No splash can be triggered during the locking time.

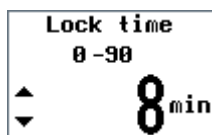
6.3.2 Pause time / locking time



Pause time is shown here if **Cyclic operation** has been selected.

The pause time is the time between splashes.

Set the desired pause time between splashes.



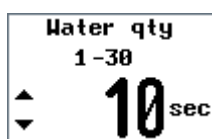
Locking time is shown here if **Button operation** has been selected.

The locking time is the time during which no new splash can be started.

No further splash is possible during the time period set here.

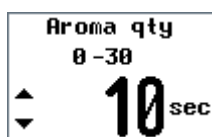
Set the desired locking time between splashes.

6.3.3 Water quantity



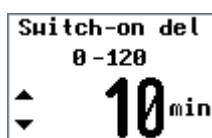
Set the duration of the water splash at the sauna heater (opening time for the solenoid valve)

6.3.4 Fragrance quantity



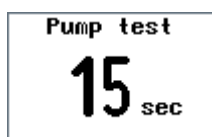
Set the runtime of the fragrance dosing pump during the splash. If the splash duration for the fragrance amount is longer than the splash duration for the water amount (Section 6.3.3), the fragrance dosing will be terminated at the latest when the water dosing stops. This prevents pure fragrance from being dosed into the sauna heater.

6.3.5 Switch-on delay



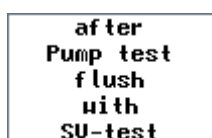
The first splash after the power has been turned on is delayed by the time set here.

6.3.6 Pump test



The fragrance dosing pump is activated for the time shown.

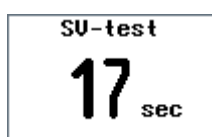
Press the enter key.



The following message is shown when an attempt to start the pump test is made 2x in a row. "After pump test rinsing with MV test".

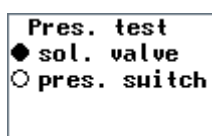
In this case, activate the MV test in the main menu so that the fragrance is rinsed out of the pipe!

6.3.7 SV test



The solenoid valve is activated for the time shown. Water is dosed onto the sauna heater.

6.3.8 Pressure test



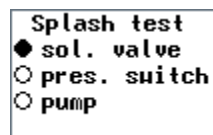
During the pressure test, the solenoid valve is activated and the pressure switch is evaluated. The pressure test was successful if no fault message is shown.

**DANGER!**

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

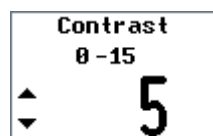
The device will be locked when the pressure switch is defective or no splash water is available in order to prevent malfunction, as most fragrances are easily flammable!

6.3.9 Splash test



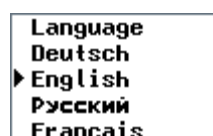
This test is used to inspect the splash function. A complete splash cyclic is executed. The solenoid valve and the pressure switch will be polled one after the other and the pump will be activated. The pressure test was successful if no fault message is shown. Otherwise one of the fault messages described will be shown.

6.3.10 Contrast



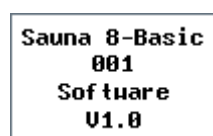
The contrast settings for the display can be made here.

6.3.11 Language



Select your preferred language
German, English, Swedish, Russian, French, Italian

6.3.12 Info



Information regarding the device type and the software version are found here.

6.4 Top up consumables

Fragrance

- Unscrew the lid of the new fragrance delivery container and drill a hole with a diameter of 7 mm into the lid.
- Replace the lid and place the delivery container onto the bracket of the automatic sauna splash system.
- Push the suction hose into the container until the end of the suction hose touches the bottom of the container, so that the whole 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 0.



DANGER DUE TO HIGH VOLTAGE !

The device must be switched off and secured against re-operation before any electrical work is carried out!

7.1.1 Check / replace hose set

The pump hose in the pump is subject to mechanical and chemical stress. The pump hose must therefore be checked at each fragrance change to detect damage in time and exchange the dosing hose.

The dosing hose must be exchanged at least every 6 months and more frequently when corrosive fragrances are used!

Components of the hose dosing pump

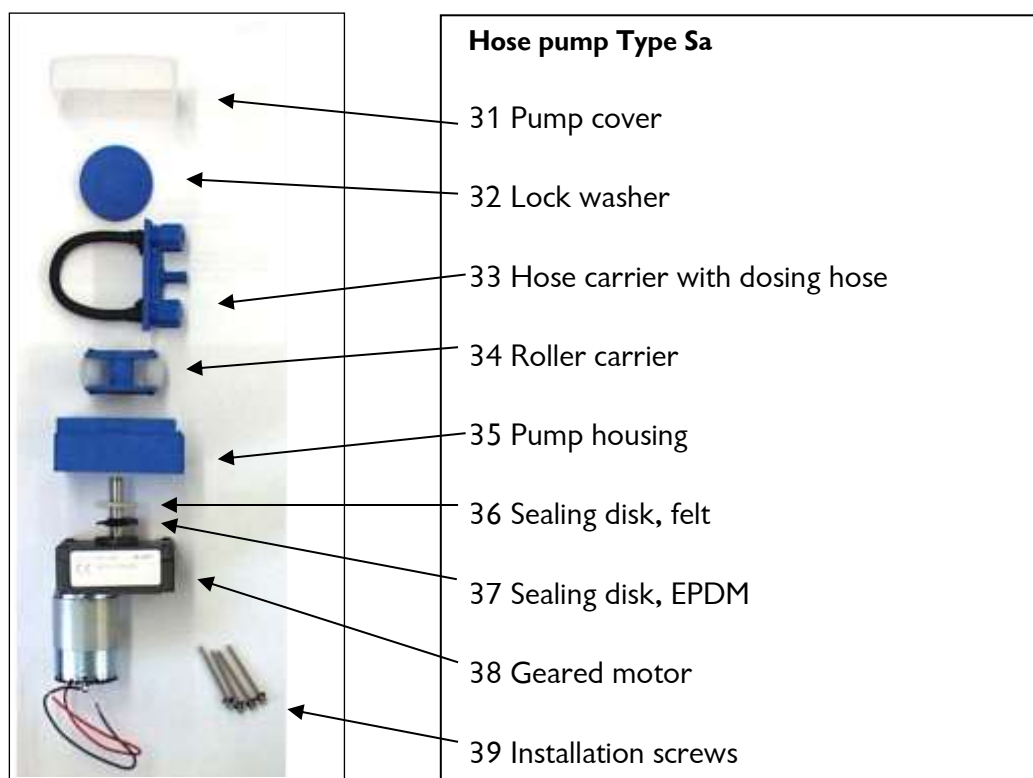


Figure 19, Hose dosing pump spare parts

Changing the hose set and roller carrier

See description in Section 5.2 Commissioning work, "Insert roller carrier at the fragrance pump"

Replace the hose at the hose holder

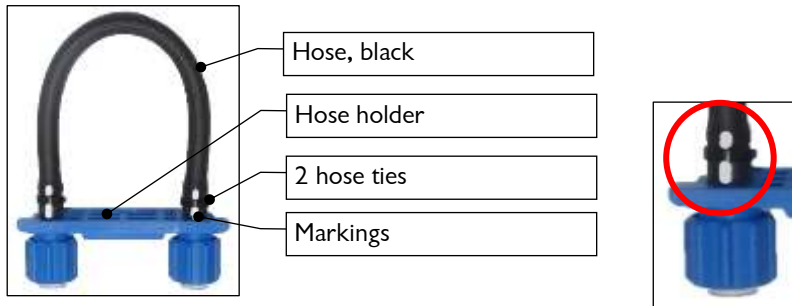


ATTENTION !

The new hose must have the same colour and size as the hose removed. The hose may not be twisted after insertion! The markings must be in front and in the middle (see image).

1. Removing the hose set, see *Section 7.1.1*
2. **Carefully** cut open the hose ties with a sharp knife or pliers in order to exchange the dosing hose! **Take care not to damage the hose nipples!**
3. Push the new dosing hose onto the hose nipples, so that the markers at the hose ends are in front. This ensures that the hose is not twisted.
4. Fasten the hose ends with the hose ties and cut off the protruding parts of the hose ties.
5. Installing a hose set, see *Section 7.1.1*

The individual parts of the hose set



7.1.2 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 little air and track the air bubble while the fragrance pump is running while you top up the fragrance. 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.

7.1.3 Clean the heater shower

The heater shower will necessarily calcify after some period of use. Switch off the automatic sauna splash system and unscrew the shower in order to clean the heater shower. Clean the shower mechanically as well as with mild acid and tighten by hand. Only use Teflon tape for sealing.

7.1.4 Clean the dirt filter

The *dirt filter* (Pos. 8, Page 9) 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* (Pos. 9) 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



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

The following fault messages may be shown. See the following fault table for removing the fault messages



Fault indication 1
Pressure switch fault



Fault indication 3
Pressure decrease



Fault indication 2
Water pressure fault

Fault table

Fault indication / fault	Possible cause	Actions
<u>Fault indication 1, Pressure switch fault:</u> The contact of the pressure switch is closed before opening the solenoid valve	<ul style="list-style-type: none"> • Pressure switch defective • Splash line blocked • Cable/plug short-circuit 	<ul style="list-style-type: none"> • Check / exchange the pressure switch • Check the splash line • Check/replace the cable/plug.
<u>Fault indication 2, Water pressure fault:</u> A pressure of 1.2 barg is not reached during the splash or the pressure drops during the splash. → Safety shut-down of the fragrance pump, the next splash is started nevertheless.	<ul style="list-style-type: none"> • Water supply interrupted • Water pressure too low 	<ul style="list-style-type: none"> • Check water supply • Check supply pressure
<u>Fault indication 3, Pressure decrease:</u> After closing the solenoid valve, the pressure does not drop within 3 seconds. → Further splashing locked	<ul style="list-style-type: none"> • Opening in the cover plate blocked • Splash line blocked 	<ul style="list-style-type: none"> • Check / clean / renew the cove plate • Check / clean / replace the pipe
The device cannot be switched on	<ul style="list-style-type: none"> • Main fuse defective • Main switch defective • Power supply interrupted 	<ul style="list-style-type: none"> • Check / exchange the fuse • Check main switch • Check the power supply
Device without function	<ul style="list-style-type: none"> • Wrong setting • Main fuse defective • Control board defective 	<ul style="list-style-type: none"> • Check / reset settings • Replace fuse • Exchange board
Solenoid valve without function	<ul style="list-style-type: none"> • Fuse defective • Solenoid valve / coil defective 	<ul style="list-style-type: none"> • Replace fuse • Check / exchange the solenoid valve
Dosing pump without function	<ul style="list-style-type: none"> • Fuse defective • Pump motor defective • Missing release of the pressure switch 	<ul style="list-style-type: none"> • Replace fuse • Check / exchange the pump motor • Check / exchange the pressure switch
Button illumination does not work	<ul style="list-style-type: none"> • Fuse defective 	<ul style="list-style-type: none"> • Replace fuse
No splash	<ul style="list-style-type: none"> • Fuse defective • Solenoid valve defective • No water supply pressure • Device input filter clogged • Splash line blocked 	<ul style="list-style-type: none"> • Check fuses • Check / exchange the solenoid valve • Check water supply • Clean inlet filter • Clean splash line
No fragrance dosing	<ul style="list-style-type: none"> • Fuse defective • Fragrance pump defective • Dosing hose worn • Roller carriers worn out • Dosing valve blocked 	<ul style="list-style-type: none"> • Check / exchange the fuse • Check / exchange the pump • Replace dosing hose • Exchange the roller carrier • Check / clean / exchange dosing valve

8 Shutting down - Storage - Disposal

8.1 General

The device must be completely emptied or protected against frost when it is 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 Shutting down

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

The fragrance container must be removed from the device when it is deactivated for more than 30 days.

Fragrance dosing lines must be rinsed with water.

All parts should be stored in a dry and clean state.

The roller carrier of the fragrance pump must be removed to ensure that the dosing hose is not damaged.

Procedure see Section 5.2.






ATTENTION !

The instructions in the "Commissioning" chapter must be adhered to and the steps in the commissioning protocol must be performed when re-operating the device.

9 Documents

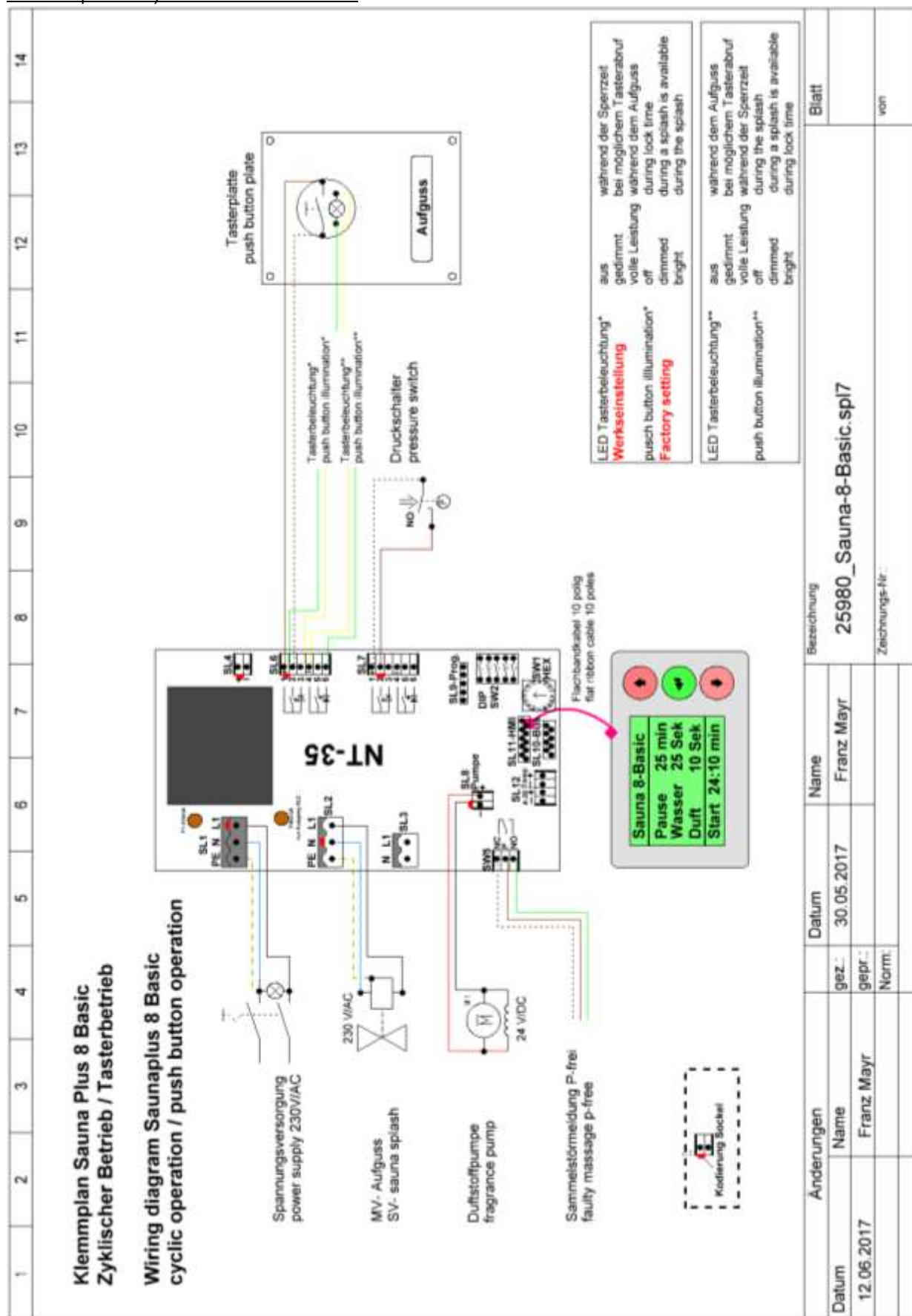
9.1 Declaration of conformity

<p>WDT Werner Dosiertechnik GmbH & Co. KG Hettlinger Straße 17 D-86637 Wertingen Tel. 0049 8272 98697-0 Fax 0049 8272 98697-19 info@werner-dosiertechnik.de www.werner-dosiertechnik.de</p>			
<p>EG Konformitätserklärung EC declaration of conformity Déclaration de conformité de l'UE</p>			
Hersteller: Manufacturer: Fabricant:	WDT – Werner Dosiertechnik GmbH & Co.KG Hettlinger Str. 17 86637 Wertingen		
Produkt: Product: Produit:	Sauna Plus 8 und Sauna Plus 8 Basic - Saunaaufgussautomatik Sauna Plus 8 and Sauna Plus 8 Basic - Automatic sauna splash system Sauna Plus 8 et Sauna Plus 8 Basic - Splash automatique pour Sauna		
Artikel-Nr.: Article-no.: Numéro d' article:	24520 / 24521 / 24522 / 24523 / 25980		
<p>Wir erklären, dass das genannte Produkt in Ihrer Bauart mit den Bestimmungen der EG-Richtlinien entspricht. We confirm that the a.m. product corresponds to the regulations of the EC-instructions with regard to its construction. Nous déclarons que le produit mentionné correspond en mode de construction à la norme de l' UE.</p>			
<p>Die zutreffenden Punkte erfüllen die Anforderungen der: The respective points are meeting the requirements of the: Les points exacts remplissent les exigences des normes suivantes:</p>			
Niederspannungsrichtlinie Low voltage directive Directive de basse tension	EN 61010-1 (2011-07), EN ISO 12100:2011		
Elektromagnetische Verträglichkeit Electromagnetic compatibility Compatibilité électromagnétique	EN 61000-3 EN 55014-1 (2012-05) EN 55014-2 (2009-06)		
Angewendete harmonisierte Normen Used harmonized standards Des normes harmonisées appliquées	DIN EN1717:2000, WHG (Wasserhaushaltsgesetz)		
Datum/date: _____	07.06.2017	Unterschrift/signature:	 Jochen Rieger - Director
<p>WDT Werner Dosiertechnik GmbH & Co. KG Str. Wertingen Registrierungsamt Augsburg, HRA 15473 Umsatzsteuer ID: DE247329216 Geschäftsführer: Dipl.-Ing. Daimar Werner</p>		<p>Pers. haft. Gesellschafterin WDT Werner Dosiertechnik Verwaltungs GmbH Str. Wertingen Amtsgericht/Registrierungsamt Augsburg, HRB 21667 Geschäftsführer: Dipl.-Ing. Daimar Werner</p>	
		<p>Bankverbindung VR-Bank Led-Zusam eG Augsburger Str. 10 D-86368 Gersthofen Konto: 3268721 BLZ: 720 621 52 BIC: GENODE33HAN</p>	
 <p>Qualitätsmanagement Wir sind zertifiziert Registrierungsamt Zertifizierung nach ISO 9001:2008</p>			

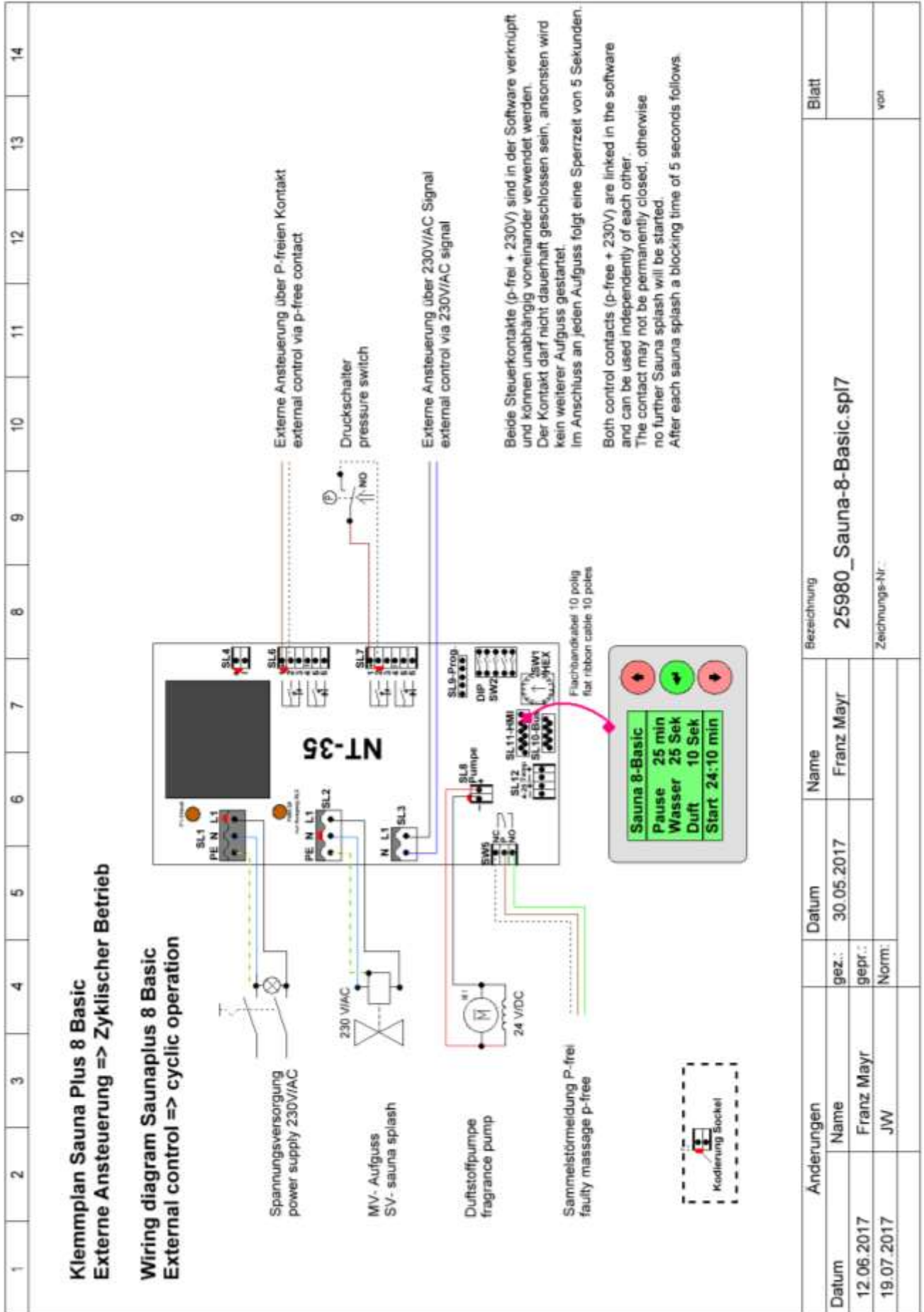
9.2 Terminal plan

Note regarding terminal plans: Terminal connection plans are also contained in the switch cabinet of the device.

Terminal plan for cyclic mode / button mode



Terminal plan for external control → Cyclic mode operation



9.3 [Commissioning protocol / instruction](#)

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.

9.4 Operating data sheet



Hint !

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

Menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during the operation
				Date:	Date:
Pause time (for cyclic mode) Locking time (for button mode)	15 min	1 - 90 min	1		
Water quantity	15 sec	1 - 30 sec	1		
Fragrance quantity	10 sec	0 - 30 sec			
Operating mode	Cyclic mode	Cyclic mode Button mode			
Switch-on delay	30 min	0 - 120 min	1		
Pump test		Sequence program			
MV test		Sequence program			
Pressure test		Sequence program			
Splash test		Sequence program			
Contrast	10	0-15	1		

Operating data sheet, –copy template–

Menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during the operation
				Date:	Date:
Pause time (for cyclic mode) Locking time (for button mode)	15 min	1 - 90 min	1		
Water quantity	15 sec	1 - 30 sec	1		
Fragrance quantity	10 sec	0 - 30 sec			
Operating mode	Cyclic mode	Cyclic mode Button mode			
Switch-on delay	30 min	0 - 120 min	1		
Pump test		Sequence program			
MV test		Sequence program			
Pressure test		Sequence program			
Splash test		Sequence program			
Contrast	10	0-15	1		

Operating data sheet, –copy template–

Menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during the operation
				Date:	Date:
Pause time (for cyclic mode) Locking time (for button mode)	15 min	1 - 90 min	1		
Water quantity	15 sec	1 - 30 sec	1		
Fragrance quantity	10 sec	0 - 30 sec			
Operating mode	Cyclic mode	Cyclic mode Button mode			
Switch-on delay	30 min	0 - 120 min	1		
Pump test		Sequence program			
MV test		Sequence program			
Pressure test		Sequence program			
Splash test		Sequence program			
Contrast	10	0-15	1		

Operating data sheet, –copy template–

Menu	Factory settings	Setting ranges	Step	During commissioning	Optimised during the operation
				Date:	Date:
Pause time (for cyclic mode) Locking time (for button mode)	15 min	1 - 90 min	1		
Water quantity	15 sec	1 - 30 sec	1		
Fragrance quantity	10 sec	0 - 30 sec			
Operating mode	Cyclic mode	Cyclic mode Button mode			
Switch-on delay	30 min	0 - 120 min	1		
Pump test		Sequence program			
MV test		Sequence program			
Pressure test		Sequence program			
Splash test		Sequence program			
Contrast	10	0-15	1		

9.5 [Maintenance protocol](#)

Perform the maintenance work listed in order to retain the validity of your warranty.
The maintenance protocol is included in the documents attached.

9.6 Spare parts list, wearing parts list, consumables list

**Hint !**

Do you need spare parts, wearing parts or consumables? Your service partner or specialist dealer will gladly provide those on request.

Spare parts list

Device	Pos	Description	Item no. WDT
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 3.2 x 1.6-Vi – 2x	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
Water assembly	09	Ball valve, brass ½“	10423
	08	Slanted-seat filter brass ½“	11479
	03	Pipe aerator 1/2" with RV	19877
	04	Solenoid valve VA ¼“ NC 230VAC	24846
	–	Solenoid valve connector with LED and cable	13082
	14	Suction hose PE 4x1- 1m	12064
	05	Pressure switch ½“	11336
	–	Protective cap for pressure switch, brass ½“	11337
	–	Dosing pipe	16865
	–	Dosing valve, angular shape, for fragrance 3/8" VA sauna	25959
	–	Dosing line PTFE internal diameter 4x1 mm, 0.5 m	10432
–	Heater shower	15211	
–	Wall feed-through	15214	
Control	–	Fuse bag 2 x 2 A slow 8.3 x 8	25976
	–	Fuse bag 2x315mA slow 8.3x8	23625
	02	Control housing, complete	25979
	–	Control circuit board NT 35	25346
	–	Display HMI MP3/NT 35	25364
–	Mains switch	21468	

Wearing parts list

Device		Description	Item no. WDT
	–	Hose set SA 3.2 x 1.6-Vi – 2x	12782
	–	Roller carrier for hose pump, blue	13039

List of consumables

Fragrances:

A list of the current fragrances is available from WDT.

