# **Operating and installation instructions**



Brine fog making Type Solfog V2



Item no.: 26143 Language: EN

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### 1 <u>Information regarding these instructions / general information</u>

#### 1.1 Scope of validity

These instructions describe the function, installation, commissioning and operation of the Solfog V2 brine fog making device with 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!



#### 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 program 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

The brine fog making device Solfog V2 may only be used for the purposes specified in Section 3.2 of the product description! The locally applicable regulations regarding accident prevention, worker safety and drinking water protection must be adhered to.

#### 2.2 Safety instructions:

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!

Note for electrical tension



Vor Öffnen des Gerätes Netzstecker ziehen. Before opening disconnect mains. Avant d'ouvrir l'appareil retirez la fichemâle. Antes de abrir el aparato sacar el enchufe.

#### Note for corrosion resistance

- 1. Before the installation of the device all materials of the cabinet as well as supply and exhaust shaft on the salt containing water / air mixture in the room.
- 2. The dosing station does not have a medical approval.
- 3. We urge you to use only very clean, disinfected **WDT** brine solution.
- 4. If the device is not used for a longer period, it must be rinsed with distilled water in order to avoid incrustations.

### 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 chemicals manufacturers!

With the brine fog maker a fragrance can be added to the brine fog. The fragrance concentration in the brine fog 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 <u>undiluted</u> 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!

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



#### **ATTENTION!**

Please adhere to the locally applicable regulations!

### 3 Product description - delivery scope

#### 3.1 Delivery scope / accessories

The brine fog maker type Solfog V2 is mainly composed of the following components:

- Microprocessor control NT35 + HMI-NT35, V4.0 installed in casing.
- Hose dosing pump SA for brine solution.
- Level switch to fill the ultrasonic fog maker
- Completely preassembled and prewired on assembly plate with console for 1 to 5 kg brine tank
- Disinfection set with disinfection tablet, mixing tank and recipient
- 5kg germ free brine solution in politainer
- Fog maker cone pipe of PVC, dia 40mm with fog maker cover

#### The following options are available as accessories:

- 1. Button plate including key
- 2. Button plate made of wood incl. illuminated button for operation in the cabin:
- 3. Nozzle cover of stainless steel
- 4. Fragrances, to fragrance the room

#### 3.2 Product description

The brine fog making system type Solfog V2 is foreseen to produce a salty sea climate in rest spaces, salt spaces, infra-red cabins and saunas. The brine fog maker makes a fog of the brine or also water, by means of an ultrasonic fog maker. The brine is supplied to the cabin by means of an air flow generated by the fan.

When the ultrasonic fog maker starts, at the same time, by means of a hose pump (04) there will be a backfeed of brine in the fog maker tank. In this way the used brine is changed, and at the same time the ultrasonic fog maker is cooled.

Optionally, simultaneously with the fog, also fragrance can be blown into the room. Therefore the fragrance tank (15) must be filled to the marking (maximum 50ml) with a fragrance for fragrancing the room, and a filter star must be installed. The fan blows the fragrance by means of a reflux valve (14) into the fog maker tank. There the fragrance is mixed with the brine fog and is blown into the connected cabin.

#### Service without brine

When the Solfog is only used for water, and not for brine, then this is possible with a water politainer or a fixed water connection. In case of a direct connection to the water line, the politainer is changed by a fixed water connection  $\frac{1}{2}$  and a solenoid valve.



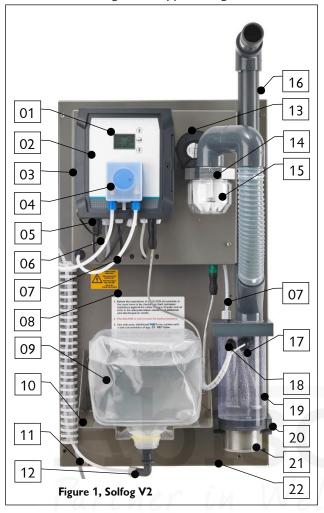
#### **CAUTION!**

#### Only use "fragrance oil concentrates for room fragrancing"!

Default starting of the system is done with the main switch (03).

Optionally, the device can be controlled by a button from the cabin, or by means of an external signal.

#### Overview brine fog maker type Solfog V2



#### Key

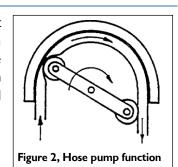
- 1. Display with 3 operating buttons
- 2. Controller housing
- 3. Main switch (covered, see Figure 19, Control unit with display)
- 4. Hose dosing pump
- 5. Button connection
- 6. Suction line brine solution
- 7. Pressure line brine solution
- 8. Warning notes
- 9. Brine politainer
- 10. Console for brine politainer
- 11. Additional earth connection
- 12. Pluggable politainer connection
- 13. Fan
- 14. Support for fragrance with reflux valve
- 15. Fragrance tank with filter star
- 16. Exit pipe brine fog maker
- 17. Level control fog maker tank (with cable)
- 18. Cable ultrasonic fog maker
- 19. Fog maker tank
- 20. Support fog maker tank
- 21. Ultrasonic fog maker
- 22. Installation plate

#### 3.2.1 Control unit

The control unit has a control housing (02) of protection class IP64. All electronic components are installed in it. At the control unit, the service parameters can be adjusted on a LCD-display with 5 lines and 3 operation buttons.

### 3.2.2 The dosing unit for brine solution

For the brine dosing a hose pump is used, conveying even the smallest dosing volumes securely, even when there are air or gas pockets 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.



#### 3.2.3 Ultrasonic fog maker

The ultrasonic fog maker produces from the brine solution in the fog making tank (19) a fine atomised fog. This list is blown with the Fan (13) into the cabin.



Figure 3, Ultrasonic fog maker

#### 3.2.4 The dosing unit for fragrance (option)

Simultaneously with the fog, also a fragrance can be blown into the room. Therefore the *fragrance tank (15)* must be filled to the marking (maximum 50ml) with a fragrance for fragrancing the room, and a filter star must be installed. The fan (13) blows the evaporated fragrance by means of a *reflux valve (14)* into the fog maker tank. There the fragrance is mixed with the brine fog and is blown into the connected cabin.



Figure 4, Fragrance dosing

#### 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

Typ: Sole-Nebler V 2
Art.: 26143 Serien Nr.:
230V/UC 1Ph ~ 50Hz I max. 3,15A

C Herstellung
WDT - Werner Dosiertechnik GmbH & Co. KG
Hettlinger Str. 17
D-86637-Wertingen

Figure 5, Name plate

### 3.4 Technical data

<u> </u>	Solfog V2	
Disconsions and weighter	301108 42	
Dimensions and weights:	0.40 0.74 0.25 \\	
External dimensions	0.40 × 0.71 × 0.25 m; W × H × D	
Space requirements	$0.50 \times 0.90 \times 0.30$ m; W×H×D	
Space requirements incl.	2.00 x 0.60 x 1.00 m; W x H x D	
operation and maintenance		
Empty weight / operating weight	11kg / 16kg	
Connection data		
Inlet water	-	
Connection fog maker pipe	40mm	
Electrical connection	230VAC/50Hz, 50W, safety	
	connector	
Main fuse	Microfuse 20x6mm, 2A with time lag	
Nominal pressure / operating	Max. 1.7 barg	
pressure		
Operating data:		
Evaporation power	Max. 0.5 l/h	
Hose pump	24VDC	
Control unit for Solfog	230VAC	
Medium temperature	5 to 35°C	
Environmental temperature in	10 to 35°C	
utility room		
Humidity in utility room	max. 70%	
Ventilation and extraction	Recommended for the utility room	
Software version	-on in Mollin	0
Hardware version	NT 35 V2,0 + MP3HMI / V4.0	25.5

#### 3.5 Transport / storage

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



#### **ATTENTION!**

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

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

Storage of fragrances / chemicals



#### **DANGER!**

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

The following points must be considered, among others:

- Fragrances and the brine solution may only be stored in appropriately marked, original plastic containers.
- The fragrances and the brine solution must be stored in a separate storage room.
- The environmental temperature may not exceed 20°C.

Also see Section 2.2.1 Handling chemicals.



#### **ATTENTION!**

Observe the regionally applicable regulations for handling chemicals!

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### 4 Assembly

The work described here may only be performed by appropriately trained specialist staff or by 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.

### 4.2 Assembly information (installation suggestion)

The Solfog V2 is mounted on a wall in the utility room. The pipe to the cabin should be as short as possible (maximum 4m). Consider the space required for operation and maintenance of the device described in Section 3.4 Technical data.



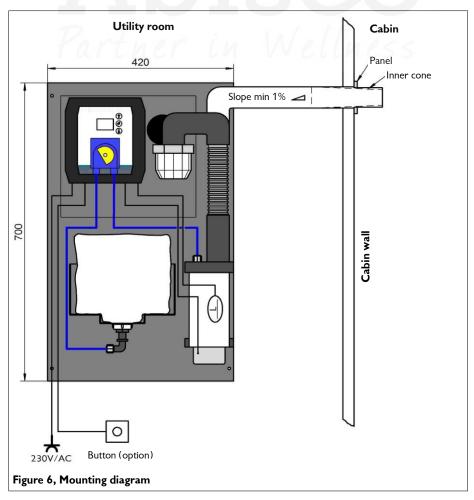
### **ATTENTION!**

#### The brine fog maker is not intended for installation in the open!

Before the assembly the following works must be performed:

- Remove transport locks
- Warning and information signs according to the locally valid accident prevention regulations (Germany: GUV-V D05) are to be provided at the intended positions.

#### Mounting diagram



#### 4.3 Mechanical installation

#### Assemble the fog making

The Solfog V2, except for the roll carrier and the brine solution, is supplied ready for use. It must be installed at a place that is easy to access.

Fix the assembly plate with 4 screws tightly on the wall and secure a good accessibility.

#### Assemble the button plate (option)

The button plate is fixed with 4 screws on the wall.



#### **ATTENTION!**

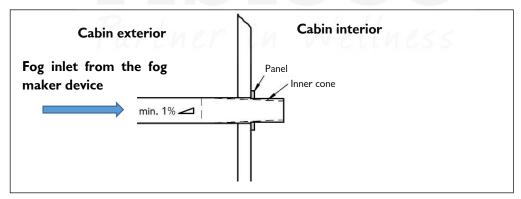
#### Avoid penetration of humidity behind the button plate!

#### 4.4 Hydraulic installation

Tube the *outlet pipe* (16), see *Figure* 1, until the fog inlet orifice in the cabin. The material is not included in the scope of delivery!

#### Assemble piping

- Search an appropriate place for the fog inlet in the cabin.
- Drill a 40 mm big opening in the cabin wall.
- Tube the fog conduct from the brine fog maker to the cabin with d 40mm. The fog maker pipe must be installed with a slope of 1cm for each 1m line length (=1%) to the fog maker device! The conduct must have a maximum length of 4m. In the conduct maximum 5 bows (no angles) may be installed.
  - Fix the rosette onto the sauna wall



Picture 7, assembly fog maker pipe



#### **CAUTION!**

Install the fog conduct upwards and without water pocket, so that the condensate can return and does not stay in the conduct. This is necessary for hygiene, so that no germs or bacteria can be formed! When the conduct cannot be installed upwards or with a water pocket, a drainage possibility must be foreseen.

#### Electrical installation 4.5



#### DANGER DUE TO HIGH VOLTAGE!

The electrical installation may only be performed by appropriately trained specialist staff! The brine fog maker must be switched off and secured against re-operation before any electrical work is carried out!

#### Assembly:

- The brine fog maker is connected by means of a protection socket (230V, 50Hz) on the power
- The brine fog maker is connected and disconnected by means of the main switch (03).
- Electrical wiring See terminal plan in Section 9.2.
- Connect button (option)

### Additional works for the connection to an external control system

Connection of the external control signal 230VAC on the terminal SL3 or 24VDC on the terminal SL4, according to the supplied terminal plan.

Connection of the potential free accumulative error message on the ZLT (central control system) on the terminal SL5.

#### Reset to factory settings

- Disconnect the device on the main switch! To avoid the presence of tension in the control
- Open the casing, put the DIP switch SW2-5 in the position ON, close the casing
- Connect the device on the main switch and wait until the start menu is displayed.
- Disconnect the device on the main switch! To avoid the presence of tension in the control
- Open the casing, put the DIP switch SW2-5 in the position OFF  $\rightarrow$  The factory settings are recovered.

Notice: If the DIP switch SW2-5 stays on ON, new adjustment are saved!

### 5 Initial operation

#### 5.1 Commissioning - 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. To reset the device to the factory settings, see section 4.5, Reset to factory settings.

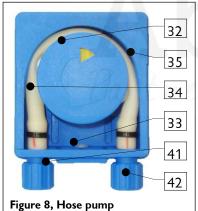
### 5.2 Initial operationworks

#### Filling and starting the brine fog maker

Ensure that the device is appropriately installed and connected. Follow the order of the start-up works.

#### 5.2.1 Insert the roller carriers into the fragrance pump

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

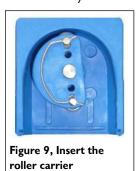


Key

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

The hose pump is equipped with a white dosing hose (here displayed in black)!

2. Push the yellow roller carrier onto the axle.



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



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



roller carrier

Then re-attach the safety disk and the transparent pump cover. The roller carrier installation is then completed.

Disassembly of the roll carrier and of the hose support in reverse order.

#### Perform disinfection

#### Explanation of the operation

Next to the LCD-display there are 3 operation buttons. With these buttons you can scroll in the menu.



Figure 12, Display of operating elements

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.

1. To perform the disinfection, connect the system on the main switch (3).

Disinfection
Break time
Fog time
Button-cycle
Operation

Select the menu disinfection with the operation buttons, and save with Enter.

2. Pull the Fog maker tank (19) to the front out of the support and take out downwards.

Empty the fog maker tank, rinse with potable water, and then put the empty fog maker tank back.

Disinfection > Start Back

Select start and start with the Enter button



Figure 13, Remove the fog maker container

### 3. Connect politainer

Fill the empty supplied 1 liter brine politainer with 0,5 liter water, add the supplied disinfection tablet SOLDOS, art. nr. 19871 and let it disintegrate.

Take the politainer from the console and unscrew the original lock from the politainer.



Pull the politainer connection for SOLDOS from the fitting of the suction conduct.



Screw the politainer connection on the politainer.



Insert the suction conduct with fitting in the politainer connection.

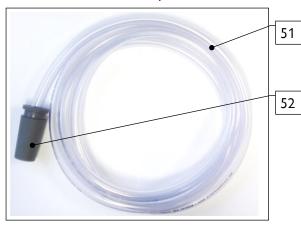


Turn the connected tank upside down and slide it in the console. Guarantee that the yellow flange ring is situated in the guide foreseen for this purpose.

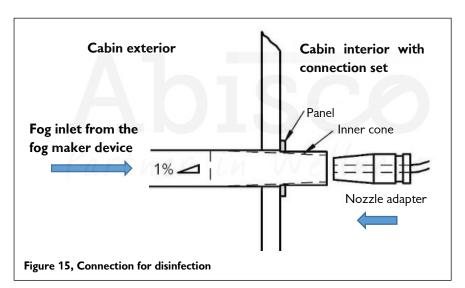
Politainer шith Disinfection solution fill up

Confirm the message with Enter

#### Insert the nozzle adapter



Connect the nozzle adapter (52) of the supplied connection set (51) on the fog outlet in the corresponding cabin. Collect the escaping disinfection solution in a synthetic container or evacuate directly in the sewer system.





### **CAUTION!**

Guarantee that there is nobody in the corresponding cabin!

The nozzle adapter with hose is connected to the fog nozzle in the cabin, so that the escaping liquid can be collected in a container, or can be evacuated directly in the sewer system.

Nozzles Adapter put on

Confirm the message with Enter

#### 5. Start disinfection

Pump ON until Niveau reach Disinfection Start Now the hose pump will convey the disinfection solution into the fog maker tank, until reaching the required filling level. (This message is not displayed when there is already liquid in the fog maker tank). Now the disinfection starts automatically. The disinfection solution is atomised by the ultrasonic fog maker and is blown by the fan into the fog maker pipe and the connection set. The disinfection takes 15 minutes.

Disinfection running

 $14^{\frac{51}{min}}$ 

Take away the *connection* set (51) at the fog outlet in the corresponding cabin. Confirm the message in the display with Enter.

Disinfection ready Adapter and adapter

Politainer exchange fogcontainer clean up Empty the brine politainer with the remaining disinfection solution, rinse and store for the next disinfection. Disassembly, empty and rinse the *fog container* (19) with potable water, and put the empty tank again in its place. Confirm the message in the display with Enter.



#### **ATTENTION!**

Document each disinfection in the disinfection report in section 9.5.1.



#### **CAUTION!**

When a fault is produced during the disinfection, it must be remedied and the disinfection must be repeated.

Now continue with the start-up.



#### <u>HINT!</u>

At delivery of the device, the politainer has already been connected as protection against dirt.

#### 5.2.3 Filling and starting the brine fog maker

- 1. Switch off the device at the main switch.
- Remove the fog maker container Therefore pull the Fog maker tank (19) forward out of the support, and take out downwards.
   Empty the fog maker tank, rinse with potable water, and then put the empty fog maker tank back.



Figure 16, Remove the fog maker container

- 3. Connect the new, unused *brine politainer* (09) with the 5% brine solution on the dosing conduct.
  - Therefore take the empty brine politainer from the console and turn the orifice upwards.
  - Now you pull the connection plug (61) out of the connection sleeve of the politainer connection (62) and hold the empty brine politainer with the lock upwards in the hand.
  - Screw the politainer connection off from the empty politainer.
  - Take a new brine politainer 1kg or 5 kg) and hold it with the lock upwards, and open the lock of the brine politainer. Attention, the politainer is now open!
  - Then you screw the politainer connection on the open brine politainer. Now you insert the connection plug into the connection sleeve of the politainer connection. Now the politainer is closed again. Turn



the closed politainer 180° upside down on the *console* (10) so that the yellow *belt ring* (63) is situated under the console.

#### Connection of the brine politainer

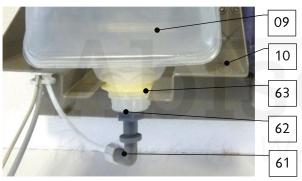


Figure 18, politainer connection with connection plug

- 09. Brine politainer
- 10. Console
- 61. Connection pin
- 62. Politainer connection with connection sleeve canister connection
- 63. yellow belt ring

Connect the device on the main switch. 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.



#### **CAUTION!**

For the start-up always perform first a disinfection of the brine tank as described in section 5.2.2.

As protection against germs and bacteria, perform at least every 28 days a disinfection, and document in the disinfection report! It is not important how long the device has been in service during this period.

After the disinfection perform the start-up procedure from section 5.2.3 Filling and starting the brine fog maker to connect the device.

After a standstill time of more than 7 days, first perform again a disinfection at the beginning of the service!

After a standstill time of 7 days or less, you can take the device into service as described in section 5.2.3 Filling and starting the brine fog maker.

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 Solfog V2 has a LCD-display with 3 operation keys.

Possible external control signals and the accumulated fault message can be connected on the control casing.

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

9. Flow pump

10. Device-test

11. Pump-test

12. Fan-test

13. Contrast

14. Language

15. Info

- 1. Disinfection
- 2. Break time
- 3. Fog time
- 4. Button-cycle (only when button service active)
- 5. Operating mode
- 6. Fan
- 7. Filling time
- 8. Empty message

Disinfection

Button-cycle

Break time

Fog time

Operation

<b>▶</b> Fan
Filling
Empty Message
Flow pump
Device-test

▶ Pump-test Fan-test Contrast Language

A start button can be plugged in at the control unit housing as required.

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#### Overview of control unit

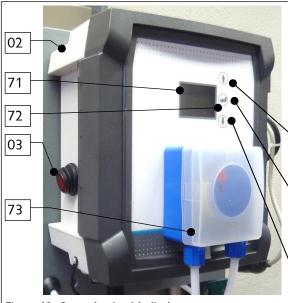


Figure 19, Control unit with display

#### Key

- 02. Controller housing
- 03. Main switch
- 71. Display
- 72. 3 Operation buttons
- 73. Dosing pump

### Navigation upwards

With the arrow button scroll upwards, or 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

With the arrow button scroll downwards, or adjust numerical values.

#### 6.3 The main menu

Solfog	•
Pause	0 min
Fog	1 sec
Fan	20 %
Start	0:00 min

After connecting the device at the lateral main switch, the start menu appears in the display. You can scroll in the menu with the 3 operation keys. The menu functions are described in the next section.

If the black square appears in 
the display then the correct level in the fog maker tank has been reached.

If the round key symbol O appears in the display, then the device has been adjusted on key service

If the point in the round key symbol ① appears, then the key service is activated.

By pressing a random key, the display goes to the main menu. You can scroll through the menu

Disinfection
Break time
Fog time
Button-cycle
Operation

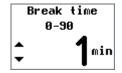
▶Fan Filling Empty Hessage Flou pump Device-test ▶Pump-test Fan-test Contrast Language Info with the arrow buttons. The corresponding function is selected with the enter key.

To reset the device to the factory settings, see section 4.5 Reset to factory settings.

#### 6.3.1 Disinfection

See Section 5.2.2, Perform disinfection.

#### 6.3.2 Break time



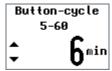
Adjust the Break time between 2 fog productions and save with the Enter button.

#### 6.3.3 Fog time



Adjust the duration of the fog production and save with the Enter button.

#### **6.3.4** Button-cycle (only in button operation mode)



Here the period button cycle is adjusted. During this period the adjusted fog and Break times are performed in a recurring cycle.

#### 6.3.5 Operating modes

Operation cyclic external button

There are **3 different service modes**. Depending on the order, the control is preadjusted at the factory for the corresponding control type.

Adjust here the desired service mode and save with the Enter button.

- 1. **Cyclic operation** → Starting from the connection of the tension, the device works with the internal adjustments in the main menu.
- 2. **External control** → Here the sentences pause and fog disappear in the start menu. → the external control determines the dosing and pausing times (The control does not react on the button signal!)
- 3. **Button service** → In the button service the evaporation is started through the buttons in the cabin. In this service mode the fog maker can also be operated with an external signal instead of the button. The device is working as long as the signal is present.

#### 6.3.6 Fan (Ventilator)



Adjust here the desired fan force to blow the brine fog into the cabin, and save with the Enter button.

#### 6.3.7 Filling time



When the device is connected, the fog tank must be first filled with the hose pump. Adjust the filling time here, and save with the Enter button. The filling time ends with the first triggering of the empty switch. If the empty switch does not trigger during the filling time, the error message "Filling time surpassed" is

displayed.

### **6.3.8** Empty message



If the hose pump for the filling of the fog maker tank works longer than the time that has been adjusted here, the error message "Tank empty" is displayed. Adjust the desired time and save with the Enter button.

#### 6.3.9 Flow pump



Each time then the empty indicator in the fog maker tank is triggered, the hose pump performs an after-run after reaching the full message during the time that has been adjusted. Adjust the desired Flow pump time, and save with the Enter button.

#### 6.3.10 Device-test

#### Device-test

17<sub>sec</sub>

During the device-test, during the displayed time, the evaporation is started and all error messages are retrieved. Start the device-test with the Enter button. Cancel with the ENTER button.

#### 6.3.11 Pump-test

Pump-test

**19**<sub>sec</sub>

The hose pump is activated for the time shown. Start the test with the ENTER button.

Cancel with the ENTER button.

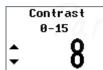
#### 6.3.12 Fan-test

Fan-test

18<sub>sec</sub>

The fan is activated for the time shown. Start the test with the ENTER button. Cancel with the ENTER button.

#### 6.3.13 Contrast



The contrast settings for the display can be made here. Adjust the desired contrast, and save with the Enter button.

#### 6.3.14 Language

Language Deutsch ▶ English Select the desired language, and save with the Enter button.

#### 6.3.15 Info

Solfog V2 001 Software V1.0 Information regarding the device type and the software version are found here.

#### 6.4 Top up consumables

Always keep the brine solution and the disinfection tablets with sufficient quantities in stock.

### **6.4.1** Refill / change the brine solution



#### **HINT!**

After opening, the brine politainer is durable for 28 days. Then it must be disposed of with the remaining contents!

See the expiration date of the brine solution.

To change the brine politainer, see section 5.2.3, page 20.

### 6.4.2 Refill / change fragrance

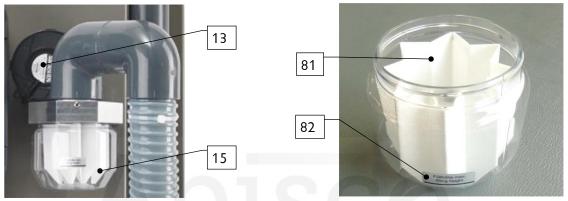


Figure 20, Fragrance container and fan

Figure 20, Fragrance container with filter star and filling height marking

- 13. Fan
- 15. Fragrance container

- 81. Filter star
- 82. Filling height marking, 50ml
- 1. Screw the *fragrance tank (15)* out of the aluminium holder, if necessary clean it or use a new fragrance tank.
- 2. Place a clean filter star (82) in the fragrance tank.
- 3. Fill the desired fragrance in the fragrance tank until the marking (max. 50ml).
- 4. Use only appropriate fragrance oil concentrations to fragrance the room!
- 5. Screw the fragrance tank again in the aluminium holder.

### 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 Soldos:

1. Disinfection and maintenance according to the maintenance protocol in Section 9.5.



#### **CAUTION!**

Perform a disinfection each time the politainer is changed, however at least every 28 days! With a politainer of 5 kg, depending on the adjustment, a service time of appr. 15h is reached.

- 2. Provisioning of the required consumables. Pay attention to durability and storage time!
- 3. Regular cleaning of the device. Brine water causes dirty spots and attacks metals when it has not been eliminated.



### **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 Maintenance works at the control casing general



#### **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!

Particularly for works at the control card:

- 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. 11) to the on-site grounding cable.

#### Open / close the housing

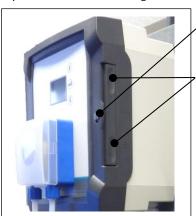


Figure 21, Open the control housing

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

#### 7.1.2 Check / replace hose set

The pump hose in the pump is subject to mechanical and chemical stress. That is why the pump hose must be checked  $1 \times a$  week to detect damages in due time and to change the dosing hose.

The dosing hose must be changed at least every 6 months!

### Components of the hose dosing pump

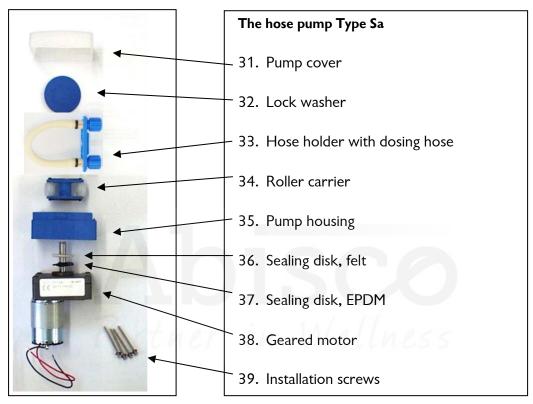


Figure 22, Hose dosing pump spare parts

### 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 5.2, Commissioning work
- 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. Removing the hose set, see Section 5.2, Commissioning work.

#### The individual parts of the hose set

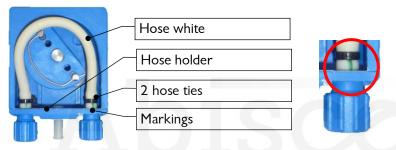


Figure 23, Hose set

#### 7.2 Regular water inspection

not required

#### 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 In case of a failure at the device, the atomisation is interrupted.

#### Brine fog maker



Fault indication 1 Container empty



Fault indication 3 Hose break



Fault indication 2
Filling time exceeded



Fault indication 4
Push button cycle not active

#### Fault table

Fault indication / fault	Possible cause	Actions
Fault indication 1, Container empty;	Brine politainer empty	Change politainer
	Hose pump not operating	Check hose pump
	Plug level control taken	Check plug level control
	off/defective	
Fault indication 2, Filling time	Brine politainer empty	Change politainer
exceeded;	Hose pump not operating	Check hose pump
	Plug level control taken	Check plug level control
	off/defective	
Fault indication 3, Hose break;	Pump hose defective	Check / exchange the pump hose
Fault indication 4, Push button cycle	Wrong operation mode	Select correct operation mode
not active	selected	//
The device cannot be switched on	Main fuse defective	Check / exchange the fuse
	Main switch defective	Check main switch
	Power supply interrupted	Check the power supply
Device without function	Wrong setting	Check / reset settings
	Main fuse defective	Replace fuse
	Control board defective	Check / exchange the board
	Plug pulled off	Check the plug
Solenoid valve without function	Fuse defective	Replace fuse
	Solenoid valve / coil defective	Check / exchange the solenoid valve
Hose pump without function	Fuse defective	Replace fuse
	Pump motor defective	Check / exchange the pump motor
Button illumination does not work	Fuse defective	Replace fuse
No fragrance	Fragrance tank empty/dried	Check / refill fragrance
	Fuse defective	Check / replace fuse
	Fan defective	Replace dosing hose
No fog production	No brine fog	Check the conduct on leakages
		Ultrasonic brine maker defective /
		exchange
		• Check / exchange the fan
		<ul> <li>Check the plug of the ultrasonic fog maker</li> </ul>
The stored adjustments will get lost	• Dip switch SW2-5 in position	• Set Dip switch SW2-5 to OFF
, ,	ON	
		1

Index: 01

### 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

If the system is put out of service for more than 28 days, disconnect the device on the main switch.

The fog maker container must be manually emptied and cleaned when the device is shut down for more than 28 days. The fog maker head must be dried with a soft tissue or paper. The brine tank must be taken away and must be replaced by a new one during the new commissioning.

When put out of service, all parts must be cleaned and stored in a dry place.

The roller carrier of the brine 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

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



EG Konformitätserklärung EC declaration of conformity Déclaration de conformité de l'UE

Hersteller:

WDT - Werner Dosiertechnik GmbH & Co.KG

Manufacturer: Fabricant:

Hettlinger Str. 17 86637 Wertingen

Produkt: Product: Produit: Solfog V2 - Solevernebelungsgerät Solfog V2 - Brine mist maker Solfog V2 - Création de brume saline

Artikel-Nr.:

26143

Article-no.:

Numéro d'article:

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.

Die zutreffenden Punkte erfüllen die Anforderungen der: The respective points are meeting the requirements of the: Les points exacts remplissent les exigencies des normes suivantes:

Niederspannungsrichtlinie Low voltage directive EN 61010-1 (2011-07), EN ISO 12100:2011

Directive de basse tension

Elektromagnetische Verträglichkeit EN 61000-3

Electromagnetic compatibility
Compatibilité électromagnétique

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: \_\_\_\_27.10.2017\_\_\_\_

Unterschrift/signature:

Rainer Rieger Director

Qualitätsmanagement
Wir sind zertifiziert
Regelmößigs feininge
Uberwochung soch 150 9001 2008

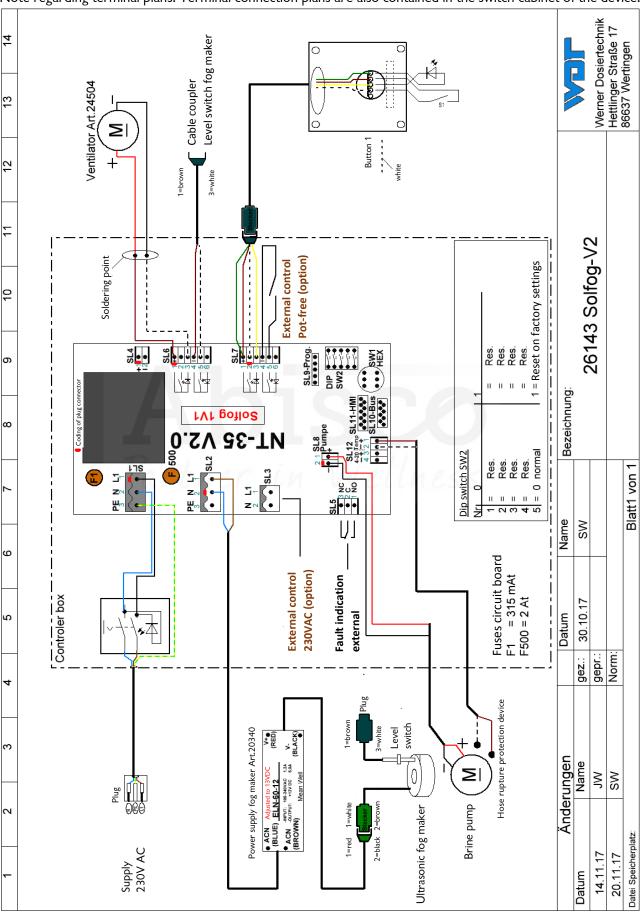
WDT Werner Dosiertechnik GmbH & Co. KG
Sitz: Wertingen
Registergericht Augsburg: HRA 15473
Umsatzsteuer ID: DE247329216
Geschäftsführer: Diol Jag. Dietmar Werner

Pers. haft. Gesellschafterin
WDT Werner Dosiertechnik Verwaltungs GmbH
Sitz: Wertingen
Amtsgericht Registergericht Augsburg: HRB 21667
Geschäftfeitner. Diel Jag Dietmar Werner

Bankverbindung
VR-Bank Lech-Zusam eG
Augsburger Str. 10 | D-86368 Gersthofen
Konto: 3268721 | BLZ: 720 621 52
BIC: GENODEF1MTG

### 9.2 Terminal plan

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



### 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	Optimised during the
rienu	I actory settings		Зієр	commissioning	operation
				Date:	Date:
Break time	5 min	0 - 90 min	1		
Fog time	10 sec	1-120 sec	1		
Push button cycle	30 min	5-60 min			
Operating mode	Cyclic	Cyclic			
		External			
		Push button			
Fan	60%	20-100%	1		
Filling time	150 sec	150-300 sec			
Empty message	15 sec	1-120 sec			
Flow pump	5 sec	1-20 sec			
Device-test	20 sec	<b> </b>			
Pump-test	20 sec	_			
Fan-test	20 sec				
Contrast	8	0-15	1		

To reset the device to the factory settings, see section 4.5, Reset to the factory settings.

### Operating data sheet (master template)

Factory settings	Setting ranges	Sten	During	Optimised during the
actory settings	Setting ranges	зієр	commissioning	operation
			Date:	Date:
5 min	0 - 90 min	1		
10 sec	1-120 sec	1		
30 min	5-60 min			
Cyclic	Cyclic			
	External			
	Push button			
60%	20-100%	1		
150 sec	150-300 sec			
15 sec	1-120 sec			
5 sec	1-20 sec			
20 sec	_			
20 sec				
20 sec				
8	0-15	1		
	10 sec 30 min Cyclic 60% 150 sec 15 sec 5 sec 20 sec 20 sec 20 sec	5 min 0 - 90 min 10 sec 1-120 sec 30 min 5-60 min Cyclic Cyclic External Push button 60% 20-100% 150 sec 150-300 sec 15 sec 1-120 sec 5 sec 1-20 sec 20 sec — 20 sec —	5 min 0 - 90 min 1 10 sec 1-120 sec 1 30 min 5-60 min  Cyclic Cyclic External Push button 60% 20-100% 1 150 sec 150-300 sec 1-120 sec 5 sec 1-20 sec 20 sec — 20 sec 20 sec — 20 sec 20 sec —	Factory settings   Setting ranges   Step   Commissioning

### 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.



### **ATTENTION: !**

Do not clean the fog maker membrane with sharp objects, use only a soft cloth or paper tissues.



### 9.5.1 Disinfection protocol



### **CAUTION!**

As protection against germs and bacteria at least every 28 days a disinfection must be performed as described in section 5.2.2, this disinfection must be documented in the disinfection report! If the device is not used for more than 7 days, this must be documented as well!

After a standstill of more than 7 days, a disinfection must be performed as well, at the beginning of the operation!

Disinfection / putting out of service Length of the fog conduct, max. 4m Disinfection carried out	Completed	Date:	Name
Length of the fog conduct, max. 4m	m		
Disinfection carried out			
D. A.		14/-	//
1 ar i ner		VVE	liness
-			
-			

### 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

<u>Device</u>	Pos	Description	Item no. WDT
Fragrance pump		Lid for pumping housing Sa, transparent	14259
		Lock washer for roller carrier SA, blue	13633
		Hose holder with SA-3,2	13260
		Pump housing SA, blue	14140
		Sealing disk, felt, Sa	14166
		Sealing disk, EPDM SA	12709
		Geared motor SA 24 VDC	13557
		Installation screws, set	17067
Control	_	Fuse bag 2x2A, round D 8mm	21388
	_	Fuse bag 2x315mA, round D 8mm	23625
		Control housing, complete	25979
	_	Control board NT 35 with program brine fog maker	25346
	-	Display HMI MP3/NT 35	25364
	$-/\Lambda$	Mains switch	21468

### Wearing parts list

<u>Device</u>	2	<u>Description</u>	Item no. WDT
7	-a	Hose set SA	13413
	_	Roller carrier for hose pump, blue	13039

### List of consumables

<u>Device</u>	Description	Item no. WDT
Brine	Brine 5%ig 1 kg in politainer	17519
	Brine 5%ig 5 kg in politainer	17613
	Cardboard brine 5%ig: 6 x 1 kg	17669
	Cardboard brine 5%ig: 6 x 5 kg	17667
Disinfection tablets	1 tablet SOLDOS disinfection	19871
	5 tablets SOLDOS disinfection	24907
	20 tablets SOLDOS disinfection	24907
	25 tablets SOLDOS disinfection	19871-1

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

### 10 Appendices

- Commissioning protocol
- Maintenance protocol

Own notes			





# Commissioning protocol IP 38 Solfog V2

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

Obje	ct:	Date:	Date:						
City,	Street, Street number:	•••••							
Devi	ce type: Year of construction:	Serial	no.:						
	Activity	Completed	Comment						
	,								
1	Initial operation								
1.1	Device checked for correct installation								
1.2	Device and pipes checked for leaks								
1.3	Mist conduct maximum 4 m long and slope towards the brine mist maker								
	Roll carrier inserted as to the operating manual part 5.2.1								
1.5	Disinfection according to operating instructions Section 5.2.2 was performed.								
1.6	Device filled and started according to the operating manual part 5.2.3								
1.7	Adjustments performed, service mode selected and inserted in the operation data sheet under part 9.4								
	All test programmes checked								
	Brine mist maker started								
1.10	Device checked for correct operation								
		/ //							
2	<u>Other</u>	10111	1000						
2.1	Operating instructions discussed and handed over								
2.2	Operating and maintenance staff instructed								
Othe	er comments:								
Perso	missioning and instruction performed by: ons instructed: uture of commissioner: ntersigned by operator:								



# Maintenance protocol WP 44 Solfog V2

This protocol must be completed by the maintenance technician! We reserve the right to determine the warranty conditions when no completed and signed maintenance protocol is available.

Object:															_
City	, Street, Street number:					••••				••••				•••••	
Device type:															
	Activity	Maintenance interval in	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Comment / additional work
1	Brine mist maker														
1.1	Carry out disinfection according to operating manual part 5.2.2, at least every 28 days	Х													
1.2	Clean the mist maker membrane with a soft cloth	1													
	Grease the O-ring of the mist tank	1													
	Check hose pump for function and leak- tightness	1													
1.5	Check the device for tightness and visual checking	3													
1.6	Perform test programmes	3											1		
1.7	Exchange hose set (only use WDT original part)	6													
1.8	Clean the device	6					Α								
1.9	Check electrical cabling	6			1		//\		l	UB		25	5		
	Replace filter star	12													
1.11	Replace hose conducts	12													
Othe	er comments:														
Maintenance carried out and device checked for correct working:Date:															
Cou	ntersigned by operator:														