

**PLEASE READ AND SAVE
ALL INSTRUCTIONS!**

**LISEZ ET CONSERVEZ
TOUTES LES INSTRUCTIONS!**

**¡POR FAVOR LEA Y
GUARDE TODAS
LAS INSTRUCCIONES!**

BONECO

healthy air



S450

Instructions for use (7 – 16)

en

Instructions d'utilisation (17 – 26)

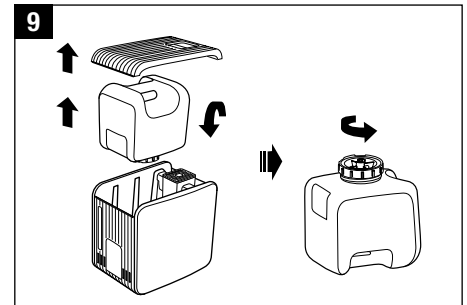
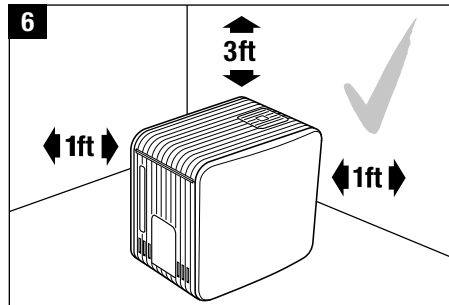
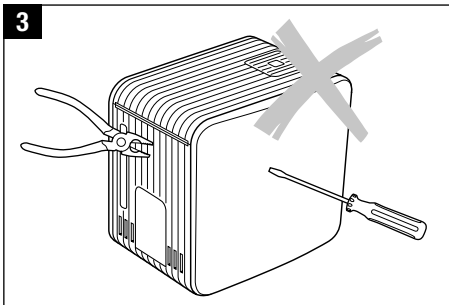
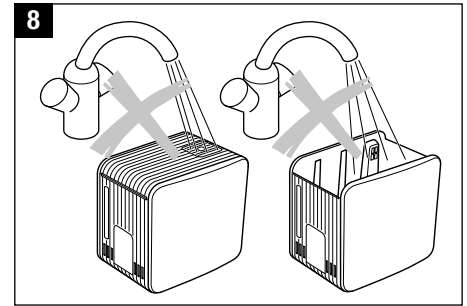
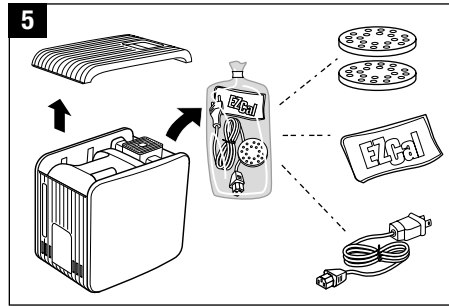
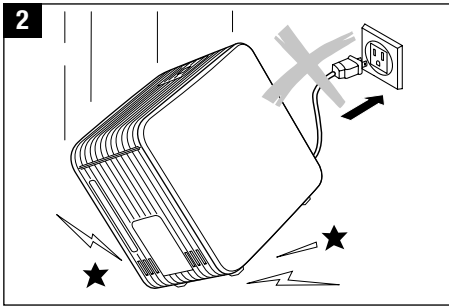
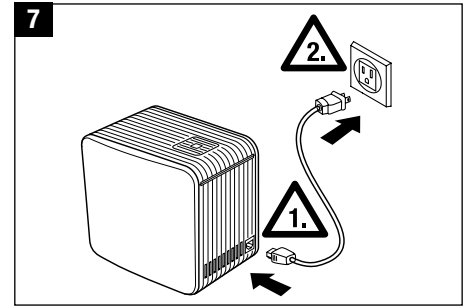
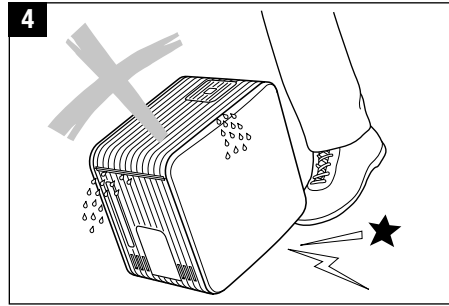
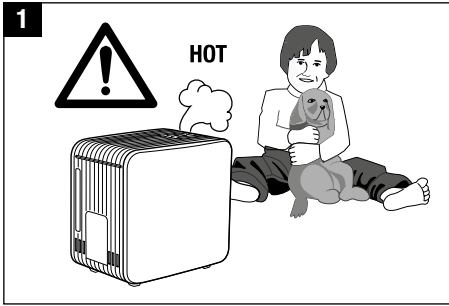
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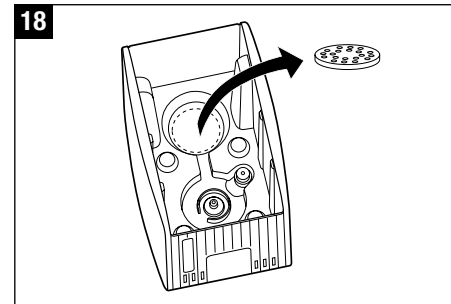
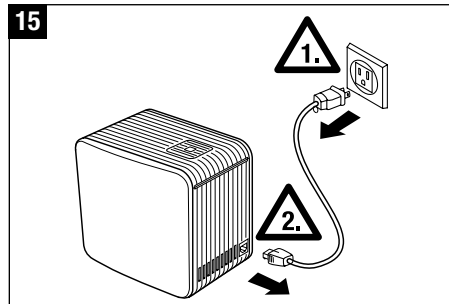
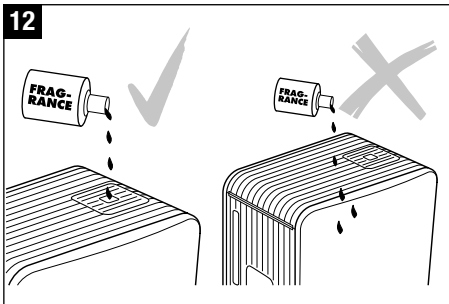
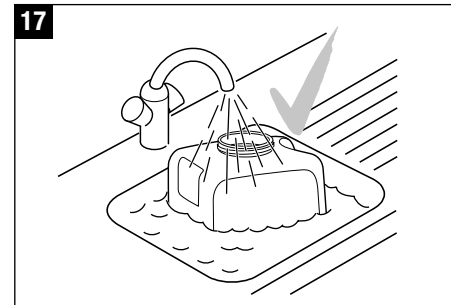
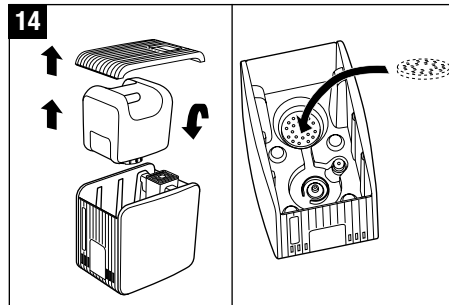
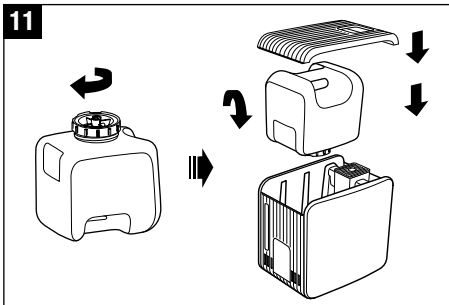
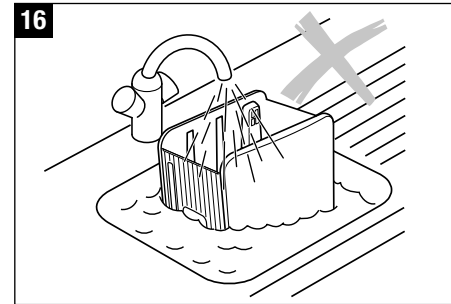
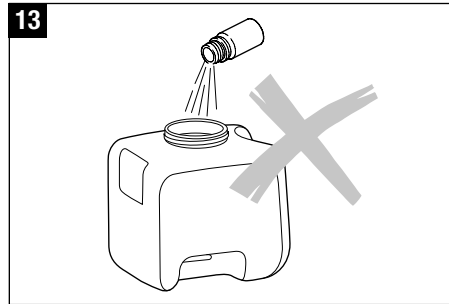
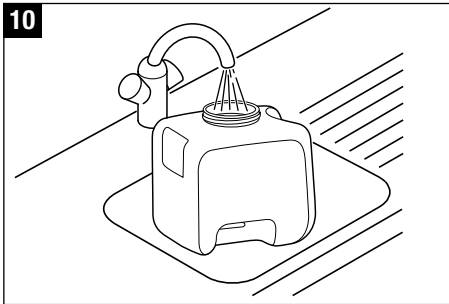
Instrucciones para el uso (27 – 36)

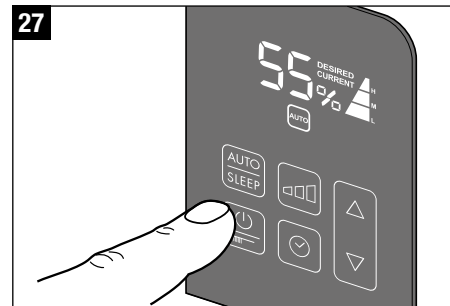
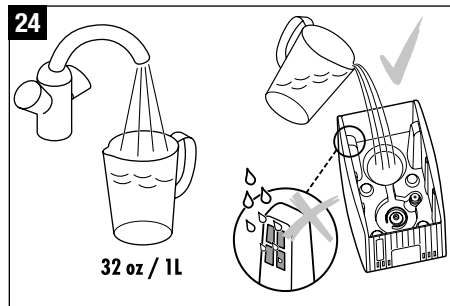
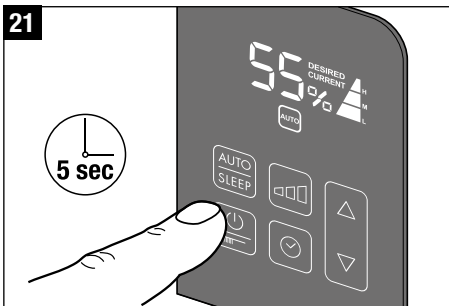
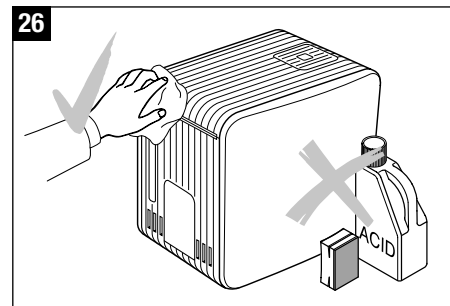
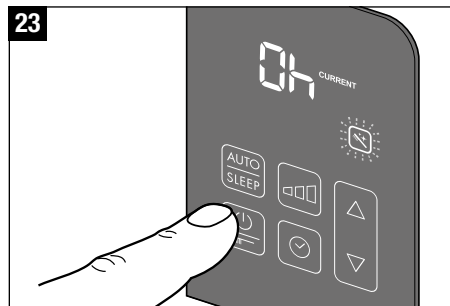
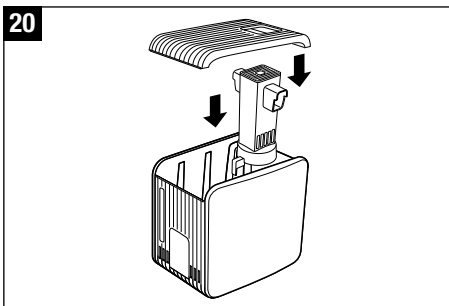
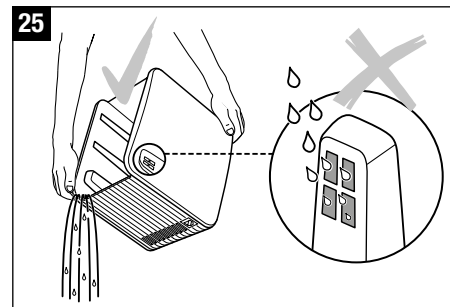
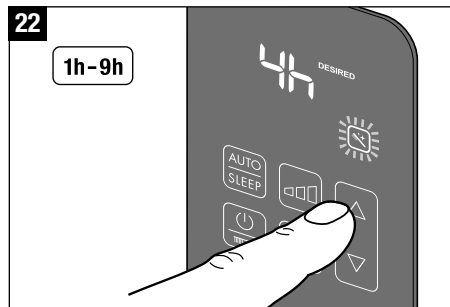
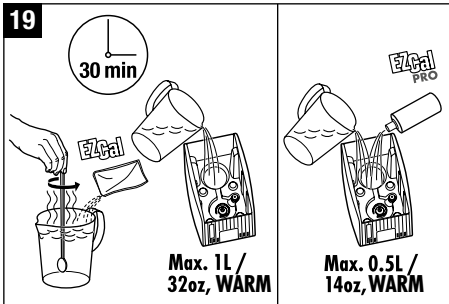
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Illustrations (1 – 27)









PLEASE READ AND SAVE ALL THESE INSTRUCTIONS!

Important safety instructions

- Read the operating instructions carefully before using the appliance and keep them in a safe place for later reference.
- Connect the appliance only to AC – with voltage indicated on the rating label.
- Always plug the power cord into the appliance first before connecting it to the electrical outlet. **CAUTION:** A sound from the unit indicates that the appliance is supplied with power.
- Only use the appliance indoors and within the parameters stated in the technical specifications. Using the appliance for a purpose for which it is not intended could pose a serious hazard to health and life.
- This appliance is not to be used by persons (including children) with impaired physical, sensory or mental capacities or insufficient experience and knowledge. Children should be supervised to ensure that they do not play with the appliance (fig. 1).
- Never use the appliance if there is any damage to the appliance or cable, after malfunction has occurred, after the appliance has been dropped (2) or damaged in any other way.
- Only use the original power cord.
- This appliance has a polarized plug (one blade is wider than the other). To reduce risk of shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. **DO NOT** attempt to defeat this safety feature.
- A loose fit between the plug (receptacle) and the AC outlet may cause overheating and a distortion of the plug. Contact a qualified electrician to replace loose or worn receptacles.
- **ALWAYS** unplug before removing/filling/emptying the water tank, before cleaning/maintaining, assembling/

dismantling of individual parts and before moving the appliance.

- In case the power cord is damaged, it must be replaced by the manufacturer, an authorized service dealer or a similarly qualified person, in order to avoid a hazard.
- Only operate the appliance when it is completely assembled.
- Repairs to electrical appliances may only be carried out by qualified service engineers (3). Improper repair work can pose a considerable hazard to the user.
- Never pull the plug from the electrical socket by the cable or with wet hands.
- Do not operate the appliance with wet hands.
- Always place the appliance on a dry, level surface.
- Do not immerse the main body in water or other liquids (16).
- Position the appliance where it cannot be easily knocked over (4).
- Do not run the power cord under a carpet or other objects. Position the appliance so that you will not trip over the cord.
- Do not use the appliance in areas where combustible materials, gases or vapours are present.
- Do not sit, stand or place any heavy objects on the appliance (keep the steam outlet clear).
- **Caution:** The surfaces of the unit are hot during operation.
- During operation, do not put the power cable on top of the appliance because of a danger of fire and short circuit.
- Do not use an extension cord.
- Do not place the unit on hot surfaces or near open flames. Keep a minimum distance of 1 ft.
- Never immerse the appliance or cable into water or any other liquids because of danger of injury, fire or electric shock.

- Only use original spare parts.
- Before cleaning, unplug the power cord and let the unit cool completely off.
- Do not move the appliance during operation.
- The manufacturer rejects all liability for damage caused by nonobservance of these instructions for use.

Foreword

Congratulations on choosing the S450 appliance. In doing so, you have taken an important step towards healthy indoor air and more wellbeing.

Proper use:

The appliance must only be used for the humidification of the air indoors.



Caution: Hot steam and boiling water!

Do not allow the appliance to be used by children. Steam and boiling water can lead to burns.

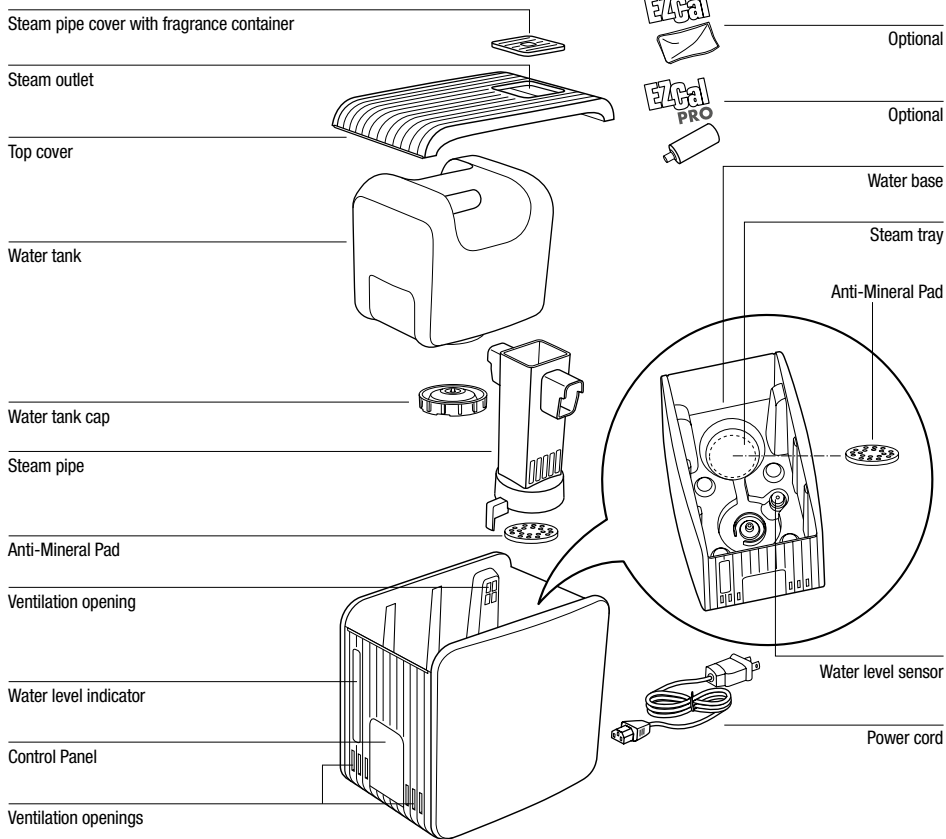
Unpacking

- Carefully remove the unit from its box.
- Remove the unit from the wrapping.
Note: the top cover of the unit is removable.
- Remove the accessories from inside the unit (5).
- Remove all packaging materials.

Description of the appliance/ Scope of delivery



Only operate the appliance when it is completely assembled.



Putting into operation



Please make sure to observe all safety instructions!



Use the appliance only on a flat and stable surface that is water and heat resistant. Keep a minimum distance of 1 ft from walls, furniture, and curtains (risk of moisture damage) (6). Caution: Knocking the unit over can cause scalding due to hot water.



Always plug the power cord into the appliance first, before connecting it to the electrical outlet (7). Caution: Insert the plug fully into the unit! A sound from the unit indicates that the appliance is supplied with power.



Please note that the appliance will produce louder operating noises for the first few minutes during commissioning.

Filling and refilling the tank with water



Caution: Only fill the water tank with fresh, cold tap water. Do not use carbonated mineral water or any other liquids.



Caution: Hot after usage!

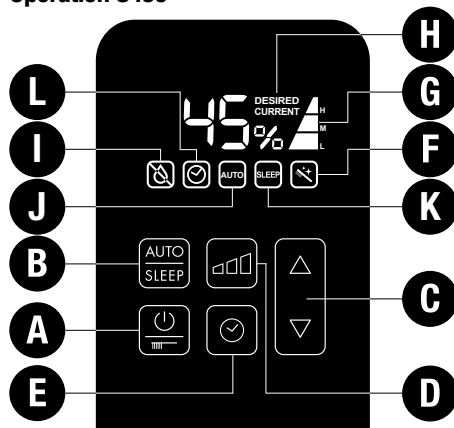


Caution: Never pour any water into the ventilation openings since this can damage the appliance.

Always fill water right into the tank. Never pour water directly into the unit or into the steam pipe (8).

- Make sure that the unit is turned off.
- Remove the top cover of the unit (Note: formation of condensation may occur after use on the inside of the cover) and take the water tank from the unit by using the tank handle (9).
- Turn the water tank upside down, unscrew the cap and fill with water (9 – 10).
- Close the tank cap securely, place the tank into the unit and put the cover back on (11).

Operation S450



A) Switch on/off

Pressing button A switches the appliance either on or off. Button A is also used to start the decalcification mode. See the section about “Decalcification Mode” (18 – 25). After the unit is switched on, it is in AUTO-Mode (symbol J).

B) AUTO- / SLEEP-Mode

AUTO-Mode:

After the unit is switched on, it is in AUTO-Mode (symbol J). The desired relative humidity (rH) is preset to 50%. The unit chooses the appropriate output level Low “L” / Medium “M” / High “H” (symbol G), in order to attain the value of 50% rH as quickly as possible.

In AUTO-Mode, the rH can be changed at any time by using button C; see C) Setting humidity level. If the output level is changed by using button D, the AUTO-Mode turns off and the unit is operated manually; see D) Manual operation. By pressing button B, the AUTO-Mode can be reactivated.

SLEEP-Mode

By pressing button B, the AUTO-Mode can be changed to SLEEP-Mode (symbol K) and vice versa. In the SLEEP-Mode, the desired relative humidity (rH) is preset to 45%. The unit chooses the appropriate output level Low “L” / Medium “M” (symbol G), in order to attain the value of 45% rH as energy-efficiently as possible.

In SLEEP-Mode, the rH can be changed at any time by using button C; see C) Setting humidity level. If the output level is changed by using button D, the SLEEP-Mode turns off and the unit is operated manually; see D) Manual operation. By pressing button B two times, the SLEEP-Mode can be reactivated.

C) Setting humidity level

The appliance is equipped with a hygrostat. This measures the relative humidity and switches the appliance off automatically when the desired value is reached. The internal ventilation remains turned on, to ensure an accurate reading of the relative humidity. If the relative humidity falls below the desired value, humidification resumes automatically. The desired relative humidity can be adjusted in steps of 5% by pressing button B. While selecting the desired humidity output, the value display is blinking. The word DESIRED appears on the display (symbol H). After a few seconds, the display automatically changes to show the current value (symbol H). Upon reaching the desired relative humidity, the display shows DESIRED and CURRENT.

A relative humidity of between 40 and 60% is recommended. The setting for the relative humidity ranges from a minimum of 30% to a maximum of 70% relative humidity or “CO” continuous mode.

Symbol E2

When the display shows “E2”, the current relative humidity has reached 90%. For safety reasons, the appliance switches off automatically. The appliance switches back on, when the relative humidity falls below 85%.

Quick display of the current relative humidity

When the unit is switched off (power cable is connected), the current relative humidity can be shown on the display by briefly pressing one of the C buttons. This display goes out automatically after a few seconds.

D) Manual operation

The appliance can be operated on 3 levels. The output levels Low "L" (night operation), Medium "M" (normal operation), and High "H" (power operation) can be selected by pressing button D (AUTO- and SLEEP-Mode are deactivated). The desired output level is shown on the display via symbol G.

E) Timer

The appliance has an OFF- and an ON-Timer.

OFF-Timer:

The OFF-Timer is set by pressing button E on the switched-on appliance. The blinking display shows the hours until the unit will be switched off: 0h. By pressing button C, the switch-off time can be selected from between 0h -9h. Without any input, the set value is enabled after 3 seconds and symbol L indicates that the timer is turned on. The display once again shows the current relative humidity. By pressing button E, the remaining time until switch-off is displayed and can also be adjusted.

ON-Timer

By pressing button E on the turned-off appliance, the ON-timer is set. The blinking display now shows the hours until the unit will be switched on: 0h. By pressing button C, the switch-on time can be selected from between 0h-9h. Without any input, the set value is enabled after 3 seconds. The display shows the set switch-on time and the symbol L is blinking. After the unit is switched on, the unit is in AUTO-Mode (symbol J).

F) Cleaning symbol (see also section about Decalcification-Mode)

The letter F in the display indicates that the appliance must be cleaned. The symbol appears until the Decalcification-Mode is completed. By pressing both C buttons simultaneously and holding them down for approx. 5 seconds, the cleaning symbol can be manually reset.

G) Output level symbol

H) Current and desired relative humidity symbol

I) Automatic shut-off „Water Tank empty“

If the water level falls below minimum level, the humidification switches off automatically. The red blinking symbol I appears on the display. If water is not added within 5 minutes, the display turns off, except for the symbol I. If water is added, symbol I turns off and the appliance continues operating.

J) AUTO-Mode symbol

K) SLEEP-Mode symbol

L) Timer symbol

Fragrance container

- The steam pipe cover contains an integrated fragrance container.
- Fill only a small amount of fragrance into the fragrance container and do not overfill (12).
- Caution! Do not put any fragrance directly into the water tank, water base or steam tray, as this can damage the material and consequently the appliance (13).

Anti-Mineral Pad



CAUTION: The steam tray contains boiling water! Remove the Anti-Mineral Pad only when the water in the steam tray has cooled off. Place only one Anti-Mineral Pad into the steam tray.

The Anti-Mineral Pad absorbs a large part of the resulting lime scale while in operation. The Anti-Mineral Pad reduces excessive calcification of the steam tray as well as the frequency of necessary decalcification. In order to insert the Anti-Mineral Pad, remove the top cover as well as the water tank and the steam pipe from the unit (14). Now insert the supplied Anti-Mineral Pad directly into the steam tray and reassemble the appliance in the reversed order (14). The Anti-Mineral Pad needs to be replaced as soon as it is completely full of lime (Anti-Mineral Pad hardens). Depending on the hardness of the water, this needs to be done every 2 to 4 weeks. The Anti-Mineral Pad can be disposed with the Household waste.

Cleaning



Always disconnect the power plug of the appliance, before cleaning or rinsing (15).



The unit has to be completely emptied and cooled off. Caution: Danger of burning!



Caution: Never pour any water into the ventilation openings since this can damage the appliance (24 – 25).



Important: Do not use any abrasive objects (knives etc.) or sponges to clean the steam tray.



Never immerse the appliance in water or any other liquids (16).

- Regular cleaning is essential for hygienic, problem-free operation.
- Depending on water quality, regular decalcification of the appliance is recommended (see Decalcification-Mode).

Cleaning of water tank and covers – weekly (15 – 25)



Clean the water tank, top cover, fragrance container and steam pipe with a soft plastic brush and dish detergent and rinse well (17).

Decalcification-Mode

Only use EZCal and EZCal PRO for decalcification. Damage that is caused by the use of other cleaning agents is not covered by the warranty.

The **Decalcification-Mode** enables simple cleaning and decalcification of the steam tray, water base, and steam pipe.

The Anti-Mineral Pad needs to be removed, before starting the Decalcification-Mode (18) (see section about Anti-Mineral-Pad). Dissolve the EZCal or EZCal PRO decalcification agents in warm water (EZCal: 32 oz / 1 L; EZCal PRO: 14 oz / 0.5 L) and pour into the water base (19). Then reinsert the steam pipe and top cover (20). Pressing and holding button A for 5 seconds switches the appliance to Decalcification-Mode (21). Decalcification-Mode is shown on the display by the flashing symbol E (22). The value “4h” is shown flashing on the display. Button C can be used to change the decalcification period from 1h to 9h, depending on the level of soiling (22). After 3 seconds without further input, the set value is taken as “desired value” and the flashing display changes back to “CURRENT”. The unit heats up the EZCal and EZCal PRO-water solution during Decalcification-Mode and shuts off after it is finished. The heating of the water takes place every 30 minutes while the Decalcification-Mode is active. The cleaning period is now permanently displayed and switches to minutes when the time falls below the 1 hour mark. The cleaning period can be changed at any time by pressing button C. At the end of the cleaning period, a short double signal is sounded, the display shows the value “0h” and the cleaning symbol F will rapidly flash (23). Press-

ing button A ends the Decalcification-Mode and switches off the appliance (23).

CAUTION: The water base must now be emptied of the EZCal and EZCal PRO and rinsed (24 – 25). Make sure no water enters through the ventilation opening (25). Tip: In case of excessive lime scale, decalcify overnight (12 to 15 hours).

Cleaning the housing – once or twice annually (26).

Clean the housing with a damp rag and wipe it dry; use a cleaning agent suitable for plastic if needed.

After usage

- Switch the appliance off by pressing button A (27).
- Disconnect power plug (15).
- Wait until the appliance has completely cooled off.
- Empty any remaining water and clean the water tank and the water base. Decalcify if necessary.
- Let the appliance dry.

Storing the appliance for extended periods

Clean the appliance as described earlier and allow to dry thoroughly. Preferably store the appliance in its original box, in a dry place away from high temperatures.

Accessories

Contact your local retailer or check our website www.boneco.us for reorder information.

Legal notice

The appliance is cETL-listed.

Subject to technical change. The instructions for use are protected by copyright © BONECO AG.

Serial number

The serial number is placed on the bottom of the appliance.

Customer Service

Customer Service (USA) 1-800-336-0326
www.boneco.us

Technical data

Electrical voltage	100 – 120 V / 50/60 Hz
Power consumption up to	160 – 480 W*
Humidity output up to	3.5 gallons / 24h (13.2 L / 24 h)*
Suitable for rooms up to	860 sq ft (80 m ²)
Dimensions (LxWxH)	14 x 9.5 x 13.2 inches (35.5 x 24 x 33.4 cm)
Weight (empty)	10 lbs (4.5 kg)
Operating noise level	< 35 dB(A)
Accessories	Anti-Mineral Pad A451 EZCal A7417 EZCal PRO A100

*@ 120 V / 60 Hz

General Humidifier Questions

Q. Why isn't there enough moisture in my room?

A. How often do you run the unit? If the unit is only run at night, then during the day the moisture level will drop if moisture is not constantly added to the air.

Q. Do you leave your door open or closed when the unit is running?

- A. a) By leaving the door open, this allows moisture to leave the room and go into other areas of the house. If you would like the moisture to stay within one specific room you should consider closing the door while the unit is running.
- A. b) Wood, leather, carpet, curtains, and other types of fabric soak up a lot of moisture, thus not leaving enough moisture for the air. If the window is left open, then this allows moisture to escape the room. Another factor is a lot of times the unit is placed next to a heating device. The idea is that the air blowing into the room will quickly place moisture around the room. Unfortunately, this concept does not work because the hot air coming out of a vent will soak up most of the moisture, and none of the air within the room will receive any.

Q. How much moisture do I need in my room?

A. Suggested humidity levels are between 40 – 60%.

Q. What are the effects of too little or too much humidity?

A. Dry air can cause dry skin, static electricity, out of tune musical instruments, increased levels of dust (dry air causes dust to rise), damage to wooden objects (dry out and eventually cracks appear), discomfort, sickness, and dries out nasal membranes. Over-humidifying the air can cause mold and wallpaper to peel.

Q. Why do I need a humidifier when I can just open my window?

A. The moisture level within the outside air is not high enough to humidify a room. The colder the air the less moisture it is capable to hold, and the more the air is heated up the percentage of relative humidity is lower. Relative humidity means the amount of water vapor in the air, compared to the amount the air could hold if it was totally saturated. The difference is higher between outside and inside temperatures; more humidification is needed because of the dry air in the room.

Q. Where should I place my humidifier?

A. The unit should be free-standing and not close to a wall, window, door, or thermal bridge so that air may circulate around the unit.

Steam Humidifier Questions

Q. There is no fill-line on the water tank, how far may I fill it up?

A. There is no fill line on the water tank, and it may be filled all the way to the top.

Q. Humidity level is not changing or does not reach the desired humidity level.

A. If the water tank needs refilling more than once per day, the unit is working properly and the climatic condition in the room has an influence on the humidity.

Reasons for low humidity level:

- air circulation is very high (air is fully exchanged several times per day – the humidifier needs to start its work from scratch)
- insulation of home (see air circulation)
- open space with high ceilings (not only the footage of the room counts but also the height) – high-rise buildings require more humidification.
- open windows – works similar to air circulation (if it is very cold outside don't open the window more than 2 times per day for 3 minutes)

- big difference between outside temperature and inside temperature – the colder the air the less moisture it is capable to hold and the more the air is heated up the lower is the percentage of relative humidity (=the amount of water vapor in the air, compared to the amount the air could hold if it was totally saturated)
- position of the unit - if it is placed close to a door, window or air vent. This increases the air circulation.

Q. No mist / unit is not working

- If the unit is not working and the empty light is not flashing you might have set the desired humidity too low and the current humidity level in the room is higher. That is why the unit switches off automatically.

Q. Water tank cap is too tight to unscrew

A. This could be a cause of the air pressure within the water tank. Press the spring on the bottom of the water tank cap to release air from the water tank. Continue to do this until you are able to unscrew the water tank cap.

Accessories

Q. What is EZCal and EZCal PRO?

A. There is a sample packet of EZCal included in the packaging of your humidifier. EZCal and EZCal PRO are used for cleaning and descaling any of the humidifiers and cleans mineral build-up. EZCal and EZCal PRO are the only recommended cleaning and descaling solutions. Do NOT use any other cleaning solution since it can damage the product. Any use of cleaning solutions apart from EZCal and EZCal PRO will void the warranty. Instructions for using are on the packet. Dissolve the EZCal or EZCal PRO decalcification agents in warm water (EZCal: 32 oz / 1 L; EZCal PRO: 14 oz / 0.5 L) and pour into the water base. Do not change the ratio. It can also be used for other humidifier brands. Thoroughly rinse the base with tap water and make sure no EZCal and EZCal PRO residues remains in the base! EZCal and EZCal PRO are available at selected retail stores and online www.boneco.us.