

## General information

### Cleaning:

Use cloth and cleaning agent as required. Use neutral detergents or soap mixed with water for cleaning and alcohol-based products for disinfection. Do not spray high pressure water on the unit, and do not use strong solvents around the keypad.

### Service requirements:

The device has to be serviced once a year by authorized personnel. Service includes an extended functionality and water parameter test, and an exchange of the internal Bio-reactionZone-filter. If the water contains many particles, the lifetime of the Bio-reactionZone-filter will be shorter and should be replaced accordingly. Preventive maintenance will be carried out according to a defined schedule. Information can be required from the supplier.

### Disposal:



The BacTerminator Dental is considered electronic waste, and should be disposed of in accordance to national rules. If in doubt, return the device to the manufacturer.

### Further information:



Further information on storage, transport, changing fuse and further electrical information is available on [www.adept-dental-water.com](http://www.adept-dental-water.com)

### Specifications:

**Ambient temperature:** 10-35°C

**Water line:** OD 8 mm hard tubing

**Inlet pressure:** Max 6 bar

**Outlet pressure:** 3 bar (adjustable), approx. 1.5-2.0 L/min

**Softener capacity:** Durability: 6 months after installation.

Filter type:	Hardness	Capacity
AWT 145D	0-7°dH	2200 L
Part no.	8-14°dH	1100 L
130025	15-21°dH	700 L
	≥ 22°dH	500 L
AWT 115-D	0-7°dH	700 L
Part no.	8-14°dH	500 L
140007	15-21°dH	—*
	≥ 22°dH	—*

\*Use AWT 145D for hard water.

The outgoing water contains chlorine

**Electrics:** 110-230VAC, max 130VA

**The device conforms to:**

EN 60601-1:2006 + A1:2012 and EN 60601-1-2:2007.

### Safety (Read first):



**Note – Use only on dental unit waterline – Connect only to devices that are conforming to EN 60601-1**

The water produced by the BacTerminator Dental is not drinking water. Intake of the water is not harmful.

**Warning: Do not use the BacTerminator Dental on dental units with other disinfection systems activated.**

This may reduce or compromise the effect of the BacTerminator Dental

**Warning: Keep the downstream water system short and straight**

Blind branches and long tubes reduce the effect of treatment. Water may be re-contaminated from a poorly designed flow system.

**Warning: Do not neglect service or change of softener/filter**

The internal filters must be clean in order to keep the unit operating efficient. Hard water will reduce or eliminate the efficiency of the disinfection process. The filter cartridge may clog as well

**Warning: Do not apply water pressure above the specified (6 bar).**

Higher pressure can cause rupture and flooding.

**Warning: Perform Verification of correct effect regularly**

To ensure functionality, measure the chlorine content in the water from the instruments or the water dispenser on a weekly basis.

**Warning: Do not use the unit on other liquids than water or without installed filter**

Misuse can cause permanent damage and release dangerous substances.

**Warning: Keep unit in upright position**

If else, water may run out and damage the equipment or surroundings

**Warning: Corrosion**

Use of oxidative disinfectants, such as free chlorine, is a source of corrosion. The BacTerminator Dental system is designed to operate with low (0.2-1mg/L) levels of chlorine, but some materials are not compatible with oxidizing agents. Make sure your Dental Unit is designed to be used with drinking water within WHO's specifications.

**Danger: Electric shock**



To avoid risk of electric shock, this equipment must only be connected to a supply main with protective earth. The power outlet powering the BacTerminator Dental should be easily accessible. **Only authorized personnel should open the unit.** Opening the unit (excluding the filter section) may lead to exposure to high voltage.

**Note:** Portable and mobile RF communications equipment can affect MEDICAL ELECTRICAL EQUIPMENT

## BacTerminator® Dental Compact



**Water treatment unit**

**Type 140025**

Only to be installed and serviced by authorized personnel.



Read this and accompanying documents before use.



**Manufactured by:**

Adept Water Technologies A/S

Ellekaer 6, DK-2730 Herlev, Denmark

[www.adept-dental-water.com](http://www.adept-dental-water.com)

The BacTerminator Dental is a medical device according to directive 93/42/EEC.



**This product has the following intended use:**

The device produces active chlorine\* for disinfection of Dental Unit Waterlines (DUWLs). Spectrum of efficacy: Reduces water bacteria – including Legionella.

*\*Active chlorine is generated from (sodium) chloride by electrolysis, and is the designation used by EU in regard to the Biocidal Products Regulation.*

The treated water will not be harmful to the health of patients or dentists.


**Consumables:**

Part	Adept part no.
Free chlorine test strips	130043
BioReactionZone Filter	130032
Filter cartridge AWT 145D	130025
Filter cartridge AWT 115-D	140007

## Operation

### Standard conditions for operation



When the **OK button** shows a constant or blinking green light, the unit is ready to deliver water. When the symbol  is alight (blinking) the electrolysis process is running.

### Daily Sanitation

*(follow guidelines from dental unit manufacturer).*

Perform a flushing procedure of all instruments and cupfiller at least once a day (most important in the morning) to clean the dental unit waterlines. Some dental units have an automatic program for flushing. If done manually then tap 5 cups from the cupfiller and 200 ml (1 cup) from each instrument.

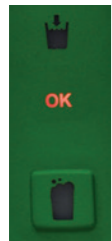
In order to avoid biofilm build-up, the flushing procedure should be done even if the unit is not used for patients on the current work day.

### Extra Sanitation – Sanitation Mode



If there is a lot of biofilm in the dental unit waterlines, it can be necessary with stronger disinfection. By pushing the “Sanitation button” the disinfection is increased. **Blue** light indicates that Sanitation Mode is ON. Push the button again to stop Sanitation Mode. Otherwise it will turn off automatically after two hours.

### Alarms:



Every second, the device’s OK button is blinking **red** and there is one beep sound per hour =>

*The softener/filter cartridge has expired and needs to be changed.*

The light on the button is **red** and the device emits a constant beep sound =>

*There is a water leakage: Shut off the water supply, shut down the device, call service*

### Change of softener – filter cartridge

When the device gives signal for changing the softener (see alarms) then the used softener is removed and replaced as shown in the figure:



**A:** Turn the cartridge clockwise right and pull down too release it from the cap. A little water will come out when the cartridge is removed.

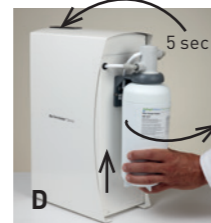


**Caution:** the cartridge is filled with water and is heavy.  
**Disposal:** The used cartridge is normal waste.

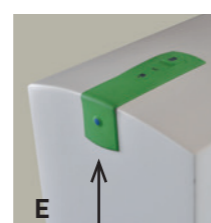
**B:** Take a new cartridge.



**C:** Remove the lid of the new cartridge.



**D:** Place the top of the Cartridge in the cap, push it up while turning the cartridge right until there is resistance.



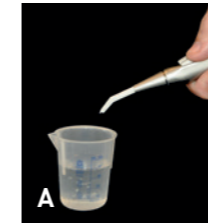
**E:** Push the button on the back of the device for 5 seconds resulting in 3 beeps from the device. This will reset the counter for the softener.



## Verification of correct effect

### Weekly routine – free chlorine test

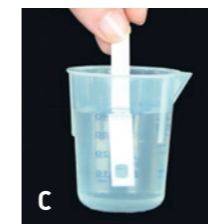
Once a week the concentration of free chlorine should be measured from one of the **instruments**. This should be done just after “Daily Sanitation” (flushing). Please use ‘free chlorine test strips’. Tap at least 200 ml (1 cup) of water before taking a water sample for the test strip.



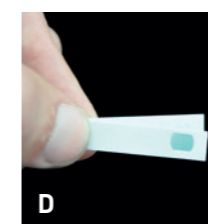
**A:** Tap off at least 50 ml of water from the instrument in any kind of cup.



**B:** Take a test strip from the bottle



**C:** Move the strip back and forth for 30 seconds.



**D:** Bend the strip and compare the colour to the colour scheme (method A) and read off the free chlorine value on the bottle.



### E: For self-monitoring:

Note the free chlorine value in the scheme “Weekly test” and write date (and unit/clinic). New schemes can be downloaded at [www.adept-dental-water.com](http://www.adept-dental-water.com)

### Evaluation of free chlorine level

Value	Evaluation	Action
0.0	Low level	Push the “Sanitation” button and tap 400 ml and then redo the measurement. If the level is ok then read the note* below. If the level is still low even with Sanitation Mode ON => <b>Call service</b>
0.05		
0.1		
0.2	Optimal level	None
0.4		
0.8		
1.2	High level	Not harmful but will give an unpleasant taste and smell. The level is acceptable if Sanitation Mode is ON. Press the Sanitation button to shut down Sanitation Mode, tap 400 ml (two cups) and redo the measurement. If the level is high without Sanitation Mode => <b>Call service</b>
>1.6		

*\*In the start-up period or after a weekend /vacation there can be biofilm and organic matter in the dental unit waterlines, and most/all of the free chlorine will be used up when it reacts with it. In a period where free chlorine is low, it is recommended to push the “Sanitation Mode” each morning before flushing – this will increase the disinfection. When the level of free chlorine reaches values >0.6 with “Sanitation Mode” ON, then it is no longer necessary to use the “Sanitation Mode”.*