

# AQUAKAT<sup>®</sup>

## FAQ



## What is the AquaKat?

### **1. What is the AquaKat used for?**

Through technical and chemical processing as well as pressurization, transport and sitting stagnant in pipes for prolonged periods of time, water loses most of its vitality. The AquaKat gives water back its original vitality. The AquaKat was developed to revitalize mains water for one-family houses, apartment buildings, apartments, wells, commercial industrial agricultural and industrial use and when traveling.

### **2. How does the AquaKat work?**

The AquaKat transmits selected oscillation patterns that vitalize the water by means of its specially designed body. This stimulates the 'memory' of the water, i.e. water molecules are activated and start to resonate, water clusters (molecule chains and clusters) break up into more structured water clusters form. This effect resonates throughout the entire watersystem.

### **3. What are the effects of the AquaKat?**

The size of lime crystals is reduced, crystallization behavior changes, taste improves and becomes fresher and the water dissolves other substances (lime, iron as well as chemical substances and fertilizer) better.

### **4. Which volumes can be treated with the device?**

AquaKat S – 100 liters per day, attach near tap

AquaKat M – 750 liters per day, pipe length 20 meters max.

AquaKat 1" – 2,000 liters per day, pipe length 60 meters max.

AquaKat L – 3,000 liters per day, pipe length 80 meters max.

AquaKat XL – 3,000 liters per day, pipe length 120 meters max.

AquaKat 2" – 12,000 liters per day, pipe length 180 meters max.

AquaKat XXL – 30,000 liters per day, pipe length 240 meters max.

AquaKat8+ – 175,000 liters per day (see chapter 9)

If water consumption exceeds those values or if the pipes are longer than stated above, additional AquaKats need to be fitted.

### **5. Where is the AquaKat used?**

The AquaKat is used in houses for one or more families and in apartments. Other areas of use include agriculture, industry, wells etc. The AquaKat can be fitted to all types of 'water points'.

**6. How and where is it fitted?**

The AquaKat should be installed down-line from the water meter and the pressure-reducer using the clamp fitting. It should also be ensured that there are no sources of strong electromagnetic interference nearby. A free length of pipe is required to fit the AquaKat, depending on the size of the device. It is not necessary to make any modifications to the pipe grid. The pipe should be clean and free of corrosion.

**7. Are there any known problems with using the AquaKat?**

If the pipes are very old, it is possible that they may start to leak due to limescale being removed, e.g. if there are any existing hairline cracks in the pipes. The AquaKat should not be used with old lead pipes.

**8. Capacity of AquaKat 8+**

AquaKat 8+ 175 m<sup>3</sup> per day, pipe length 800 meters max.

AquaKat 8+ plus 1 module – 350 m<sup>3</sup> per day, pipe length 1,000 meters max.

AquaKat 8+ plus 2 modules – 600 m<sup>3</sup> per day, pipe length 1,200 meters max.

AquaKat 8+ plus 3 modules – 1,000 m<sup>3</sup> per day, pipe length 1,400 meters max.

AquaKat 8+ plus 4 modules – 1,500 m<sup>3</sup> per day, pipe length 1,600 meters max.

**9. Is the AquaKat in any way harmful to humans, animals or the environment?**

The AquaKat is completely harmless to humans, animals and the environment.

## Using the AquaKat

**1. What can interfere with or slow down the effects of the AquaKat?**

Strong electrical fields interfere with the effects of the AquaKat. If there are any larger electrical appliances in the room, the electromagnetic load should be measured at the point of installation using a suitable measuring device.

Plastic pipes are slower conductors (frequency transmitters) than metal pipes. If the AquaKat is fitted to such a plastic pipe, a slight delay can be expected before its effects take hold.

**2. With a cold and a hot water pipe, should an AquaKat be fitted to both pipes or can the pipes be connected? Will this have an impact on the effects?**

Ideally, one AquaKat will be installed to the cold water pipe and another to the hot water pipe (heating the water leads to it losing energy again). The AquaKat S can be used at individual taps.

**3. Can an earthing cable interfere with the AquaKat?**

Yes, if leakage current flows through this line and the protective devices in the switch cabinet fail to respond. In that case the section of the pipe where the AquaKat clamp is to be attached should be wrapped with insulation tape. We also recommend attaching a Phone Chip to the AquaKat in such circumstances. The Phone Chip can reduce the effects of the electromagnetic fields.

**4. Will a reverse osmosis filter work in conjunction with the AquaKat?**

Yes. However, the filter cartridges must be serviced regularly. The AquaKat should also be installed down-line of the reverse osmosis system in order to revitalize the water. Installation of the AquaKat down-line from the filter will also help to improve the taste of the water.

**5. The water is treated with UV radiation in order to combat germs.**

This may reduce the effects of the AquaKat to such an extent that it might become necessary to install an additional AquaKat. Install down-pipe from the UV filter.

**6. According to the description, deposits in the pipe might become detached. Will large quantities of those end up in our bodies? Does a filter need to be installed?**

The deposits usually come off in small plates that are, however, big enough to be held back by the aerator mesh. The fine lime particles, which are re-dissolved, increase water hardness in the short term. The lime is dissolved in small volumes and over an extended period of time, therefore an increased intake of lime is not to be expected. It is not necessary to install an additional filter.

Tip: Let the water run for a little while first before using any of it in order to flush out smaller particles that have accumulated over night first.

**7. By how many degrees is the hardness of the water reduced after the AquaKat has been installed?**

The hardness of the water remains unchanged; for a short period of time after the installation it might even slightly increase due to deposits becoming detached from the inside walls of the pipes. The AquaKat nearly always leads to a stabilization of hardness, but does not have a softening effect. However, the water has a substantially softer feel after the AquaKat has been installed.

**8. What is hardness stabilization? What happens to the lime?**

Hardness stabilization is a physical process whereby the crystallization behavior of the water constituents is altered in such a way that the crystals no longer form chains or clusters. Therefore they will no longer form limescale either.

**9. How can the effects of the AquaKat be verified?**

For example by looking at limescale deposits.

**10. Is it possible that the effectiveness of the AquaKat fluctuates?**

Fluctuations are usually due to one of the following factors:

- Changes in water quality
- Switching electrical devices in close proximity of the AquaKat on and off (sources of interference)
- Getting used to the effects
- Deposits form between fixing clamp and pipe (must be removed)

Should such fluctuations occur very frequently, please contact your Penergetic representative.

**11. Can small children drink the tap water again after the AquaKat has been installed?**

This depends entirely on the quality of the supplied water.

**12. Can the device be installed in such a way that it touches two pipes? What other options are there?**

In principle this is possible. However, it is more effective to connect the pipes with a large sheet of metal and to fit the AquaKat up-line from the connection or to the connection itself. It must be ensured that the rated capacity of the AquaKat is not affected or exceeded by such a layout.

**13. Can the AquaKat be leaned against the wall?**

No, the AquaKat should be fitted to the pipe in such a way that it freely hangs from or stands on the pipe.

**14. Does the direction of flow need to be taken into account when fitting the AquaKat?**

The AquaKat does not need to be aligned with the direction of flow.

**15. Can an AquaKat be fitted to the heating system?**

For this purpose we use our ThermoKat. It can be fitted easily to the heating cycle. Benefits: active water, better heat conductivity, less sludge, deposits on thermostats are reduced and energy will thus be saved.

**16. What difference does the pipe material make?**

The AquaKat works with all pipe materials. It is most effective with stainless steel. With plastic the effects might be slightly delayed.

**17. Can the AquaKat be used to vitalize swimming pool water?**

In swimming pools etc. the AquaKat is fitted to the circulation pipe. In addition, another AquaKat can be fitted to the main fresh water supply. This depends on the volume of water in the pool.

**18. How many AquaKats are needed for a swimming pool?**

The number of AquaKats depends on the amount of water that is replaced daily by freshwater. However, the situation should be assessed on an individual basis.

**19. Problems with germs in the swimming pool?**

Due to the water vitalization the environment for the germs changes. This may lead to the germs no longer finding the conditions they need to thrive and thus they are reduced. This effect needs to be observed over a longer period of time.

**20. Can chlorine be omitted?**

Public pools are subject to legal stipulations. However, it might still be possible to reduce chlorine dosages. A new, optimized dosage might be found while germ levels are being monitored constantly.

**21. Can the AquaKat be used for air conditioning systems?**

Yes, however, local conditions (pressure / temperature) are the decisive parameters for determining the number of devices and area of use.

**22. Can the AquaKat be used with industrial installations?**

Different versions of the AquaKat are available. Therefore it is possible to find the optimal device for domestic use but also for industrial purposes (see question 5).

**23. Does the AquaKat also help with Legionella problems**

The first and most important measure in cases of Legionella problems is sanitation (thermal and chemical sanitation). Fitting an AquaKat is recommended only after the system has been sanitized and checked. In general it must be ensured that the pipes are flushed regularly, in particular for the hot water system, and that filter systems are cleaned and serviced.

**24. Penergetic products are already in use. Is it necessary to install an AquaKat and can the dosages of the other products then be altered?**

The Penergetic products are designed to interact with and supplement each other. Water is the most important element. After the AquaKat has been installed, the effects of the respective products will be stronger in all areas that the vitalized water comes into contact with. After observing and measuring the effects on an individual basis for a period of time it may be possible to reduce the dosage of the Penergetic products over time.

## Product details

### 1. How long is the warranty period for the device?

The device can be returned within 30 days of purchase and there is a 5-year warranty on workmanship and material.

### 2. How long will the AquaKat last?

The AquaKat has a life expectancy of 15 years.

## Example scenarios

### 1. There is not enough space to install the device because the outgoing pipes for the individual living areas follow directly. Where should the AquaKat be fitted?

- It should be fitted to the water meter connection
- Install on the first outgoing pipe, as close as possible to the main pipe
- Fit a bracket to the main pipe and fix the AquaKat to it
- During the test phase the AquaKat can be laid on or tied lengthwise to the pipe. Please request a smaller fitting clamp if required
- Insert an extra length of pipe into the line and mount the AquaKat to it

### 2. It is not permitted to attach any devices to the main pipe. How can an AquaKat be installed in an apartment?

The AquaKat can be attached to a branch pipe or, in the apartment, ideally at the start of the feed pipe. If space is restricted, an AquaKat M or S should be used. It can be installed in the bathroom, in the kitchen, close to the washing machine or under the sink, as required. However, ideally both the cold and hot water pipes should be fitted with AquaKats.

### 3. It works well, but there are still hard deposits in the pressure cooker and the kettle – why?

The pressure cooker works at a temperature of up to 100° C and at an enormous pressure. Under these conditions lime starts to turn into limescale again.

Leftover water is frequently left standing in the kettle and then re-boiled. However, the vitalization effect is not permanent. Therefore this "older" water and precipitated lime will form small deposits that will build up over time if it is not removed.

The kettle should thus be completely drained after use and possibly be rinsed out.

#### **4. No discernible difference after two weeks?**

In that case a number of questions must first be clarified:

- Where was the device installed and how?
- What expectations did you have from the device?
- Are there any sources of interference and / or other devices nearby?

The quality of the water, the volume of water and the pipe material affect efficacy. We recommend uninstalling the AquaKat, clarifying these questions and reinstalling the AquaKat a week later and possibly fitting a second device.

#### **5. The AquaKat has stopped working after two months?**

Again, a number of questions must be clarified first:

- Have new devices been put into operation nearby in the meantime?
- Were there changes to the supplied water (ask the water utility: new treatment plant, different mix etc.)?
- Has the AquaKat been mounted correctly or did it maybe fall?
- Have deposits formed?
- Have larger volumes of water been used?
- Have people already become used to the improved quality?
- Is the lime structure the same as it used to be before?

If in doubt, again we would recommend uninstalling the AquaKat and reinstalling it after two weeks.

#### **6. The water has suddenly turned brown. Why?**

This is a very positive effect! Lime and other substances like iron (rust) are being redissolved. When this happens, the line should be frequently flushed thoroughly.

#### **7. Aerators and meshes are clogged.**

Unscrew the aerator and remove any deposits that have become detached from the pipe wall and got caught in the aerator / mesh.