
HQUA

Electronic Water Descaler HQUA 5000E User Manual

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Section 1 General Information

HQUA 5000E is an electronic water descaler with revolutionary new technology is adopted, against for your hard water problems without the need for salt, chemicals or even the any change in your plumbing system. Before we introduce its function, we must establish some basic scientific concepts.

1.1 What is hard water?

Hard water is the water that has high mineral content (in contrast with "soft water"), which is formed when water percolates through deposits of limestone and chalk.

Hardness can be quantified by instrumental analysis. The total water hardness is the sum of calcium and magnesium ions.

Hard drinking water may have moderate health benefits, but can pose critical problems in water appliances and pipe system.

1.2 How does the limescale deposit?

The main constituent of the lime scale is calcium and magnesium carbonates which is more easily happened in a hard water system. These compounds form into hard deposits setting on the surface of sinks, faucets, pipes, shower heads, and inside appliances, creating restrictions and greatly reducing the efficiency of water heater and furnaces.

And when the first layer formed, the deposit will get easier to stay on the previous rough surface.

1.3 Traditional water softener

Traditional water softeners work by "Ion Exchange", this process will eliminate calcium and magnesium that dissolved in the water to prevent the reaction with carbonates.

Chemicals need to be added periodically to guarantee its function. The continually cost of the maintenance and attention you paid on the replacement are

required in this treatment.

1.4 HQUA 5000E Electronic Descaler

~~HQUA 5000E functions by the complex, frequency modulated electromagnetic wave that transmitted through two cable bands wrapped around the main water pipe.~~

~~When the frequency meet the natural frequency of the calcium carbonate which is dissolved in the water. A physical phenomenon called "resonance" occurs, and the dissolved calcium carbonate is precipitated out in the water now. The calcium carbonate will stay in the water instead of stick to any surface of the fixture, since its crystal texture is not that sticky any more.~~

~~Meanwhile, the carbon dioxide that released from the water will help to dissolve existing scale deposits and drain from your plumbing system.~~

~~**Unlike traditional water softeners, there won't be any change in the water hardness after the operation of HQUA 5000E Descaler.**~~

Notices:

1.4.1 We would suggest to combine the traditional water softener and 5000E to achieve better performance if the water is very hard. 5000E should be installed after the water softener if that' s so. And 5000E would help you decrease the salt-use in the traditional water softener since it would produce less sticky crystal of calcium.

General Information

(Check your local regional health authority website or other municipal resources for local regulations, sampling procedures, water testing facilities (accredited testing labs), and any associated fees. The local authority would give you professional advice for tests and which company is verified to do that.)

1.4.2 Water condition changes from area to area, we could not guarantee it would get very good performance in every cases. It is a very new technology, we still try to improve it. If you are not satisfied with the performance. We would provide a full refund without asking for a return. Please share your order number and contact us if you would like to take it.

1.5 Why choose new technology?

Compared to the traditional water softener, HQUA 5000E have so many features present a different performance. Hereby, we summarize these differences in the following table, which can help you better understand the function and effect of this unit.

Differences	Traditional Water Softener	HQUA 5000E Electronic Descaler
Water hardness range	Depends on the unit.	Less than 25 gpg / 425ppm.
Change of water hardness	Yes, bring it back to the normal level.	No, but the problem (caused by the hard water) will disappear.
Installation	Need plumbing job.	No plumbing job, simply just fix it with the main water pipe.

General Information

Prevent the limescale deposit	Yes, though decrease the calcium & magnesium ions.	Yes, though change the crystal texture of the carbonates.
Remove the exist lime scale	Yes and slightly.	Yes, effectively remove with a couple months operation.
Maintenance	Chemicals, salt needed regularly. Time and money are required for that.	Nothing required. Power Consumption is 8W, 10-15 US\$ cost per year.
Minerals reservation	No, it will be replaced and reserved in the softener.	Yes and is good for health with drinking the minerals water.
Suitable House Size	Depending on the water hardness and the size of the machine.	Suitable for a family of 6/7 members. (measured by per capita living area of the U.S.)

As you may find out, HQUA 5000E is very competitive in many different aspects as an innovative, eco-friendly programmed device. This technology adopted by HUQA 5000E might be hard to understand its working principle, but still you will observe the changes that happened in your water system.

Many problems that caused by hard water will be solved, such as: dissolve the hard limescale that existed already, skin and hair feel smoother, soap lathers up more and so on, though the water hardness test may not show any change in it

Section 2 Operation Manual

2.1 Application range

Installation position

The HQUA 5000E should be applied at the entry of main water supply pipe.

1. To achieve the best water treatment effect, it should be installed after the water meter or grounding cable if they were used.
2. You could decide the relative position between two cable bands and the main unit. But make sure there has at least 0.5 inch distance between the cable bands.
3. HQUA 5000E could install horizontally, vertically or at any angle you want. The main unit also could paste on the wall.
4. If the space is limited, is ok to wrap the cables in the by-pass pipe as close to the main pipe.

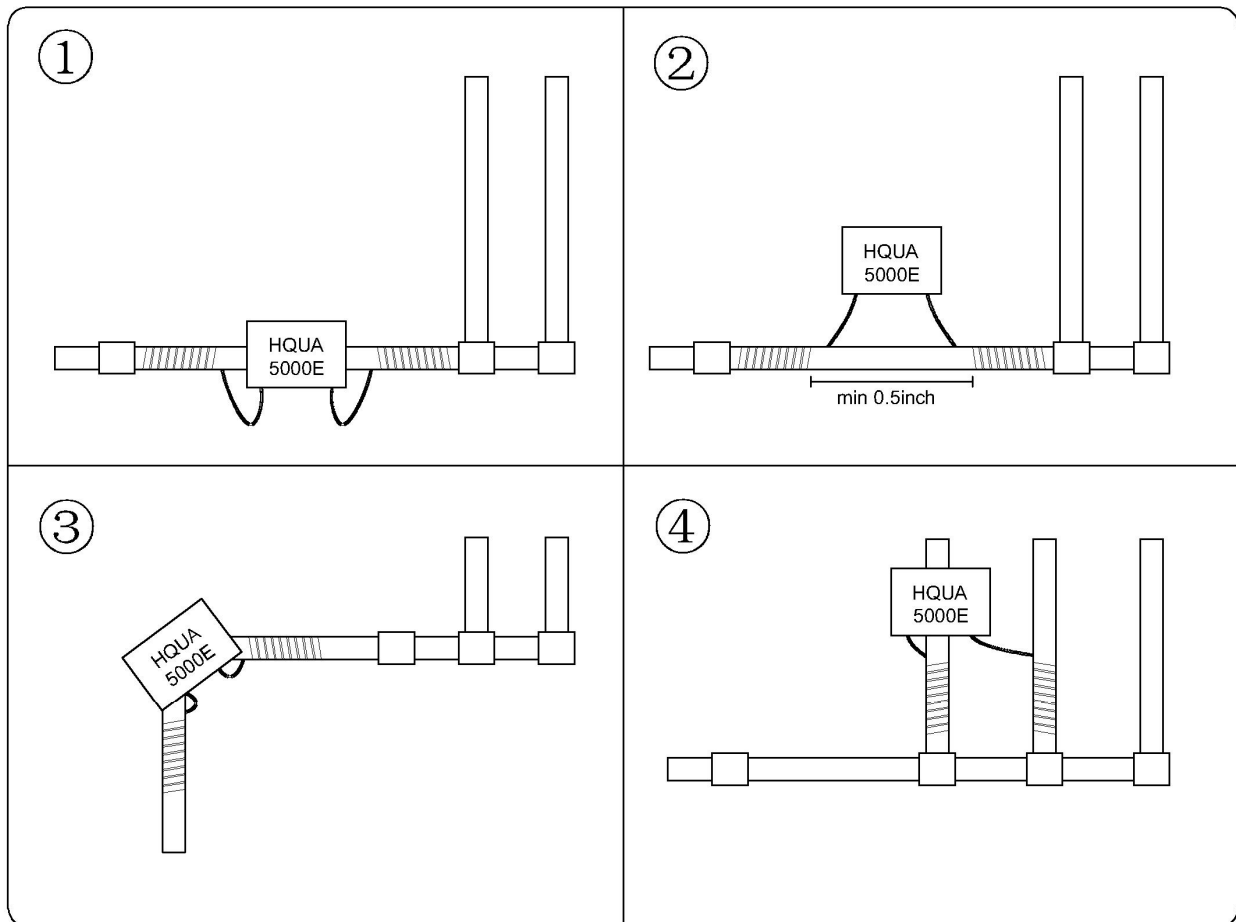


Figure 1 Different Installation Position

Notices:

Make sure at least five feet from any TV, radio or any other information transmission appliances to minimize the possible interference. And if you would like to install this device outdoor, please make sure you have a waterproof space without direct sunlight.

The output cable band is not water proof also, splash is ok. But is wise to keep the whole unit away from the short circuit dry to ensure the operation well.

Pipe system requirement

HQUA 5000E could work effectively fit for a house with 6/7 members according to per capita living area data of the U.S. family. Or a pipe system which the longest flow distance less than 70/80 feet. Bigger house requires more HQUA 5000E Descalers.

The diameter of the main water pipe should not exceed 1.5 inch. HQUA 5000E couldn' t handle a larger pipe.

HQUA 5000E could fit for any type of water pipe: copper, iron, stainless steel, plastic. Metal pipe might need more time to observe the descaling and softening phenomenon depending on the thickness of the pipe, compared to the plastic pipe system. Plastic pipe system has the best performance.

2.2 Package list

Check the package with this diagrammatic drawing and list below. If anything is missed from the package, feel free to contact us. Free replacements will arrive in next 2-3 workdays.

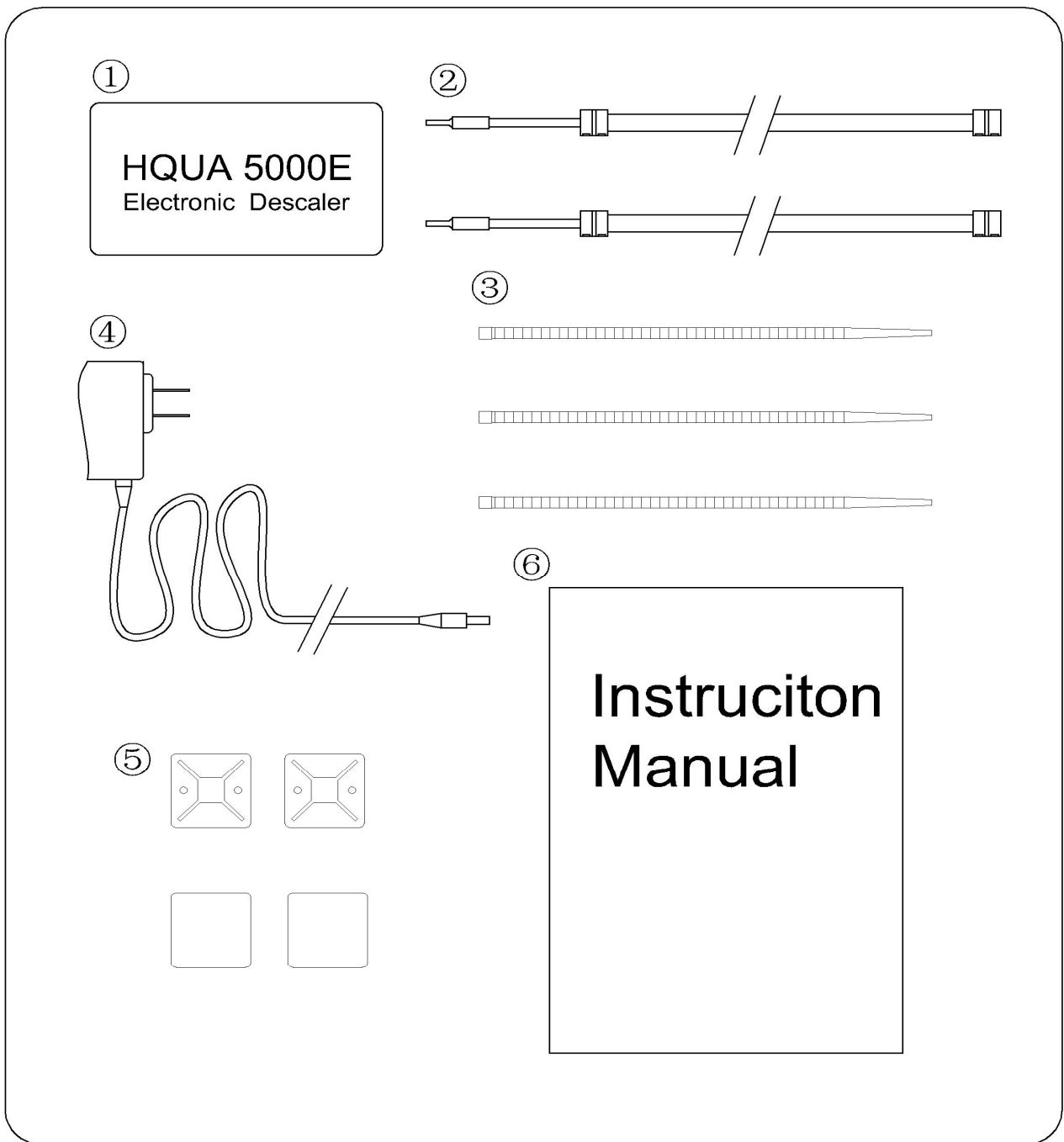


Figure 2 Package List

1. The main unit of the HQUA 5000E.
2. Two output cable band to emit the electromagnetic wave with 40 inch/ 1 meter.
3. Some cable ties for installation.
4. UL listed power supply with 60 inch/ 1-1/2" meter cord.

5. Different self-adhesive pads for the installation of the main unit.
6. Instruction Manual book that what you reading right now.

2.3 Installation

It is very convenient to install HQUA 5000E with your pipe system compared to the previous water softening technology with no plumbing job needed. Make sure you got everything you need according to our package list before you start it. You are welcome to e-mail us if you have any question with installing this unit.

Step 1 Wrap the antenna (cable band) on the pipe

Let' s start it with the output cable band, which consists of three parts. Part 1 is the output wires, for connecting to the main unit; Part 2 is the connection terminal; Part 3 is the antenna (cable band), and there is another connection terminal at the end of it.

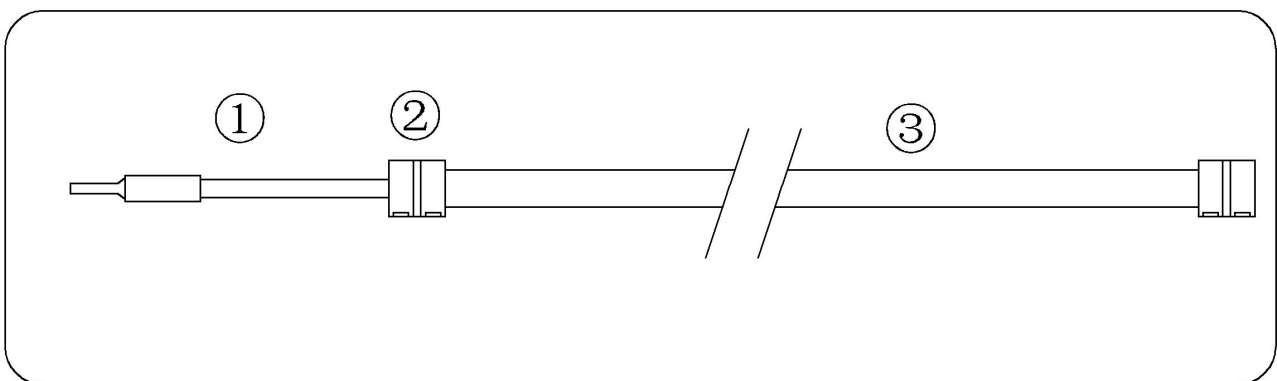


Figure 3 Output cable structure

Use the white plastic cable tie (work by looping round the pipe and inserting the free end into the oblong hole at the other end. A clicking sound is heard as the tie is tightened) to fix Part 2 on the pipe at a certain tilt that try to fit the pipe tightly.

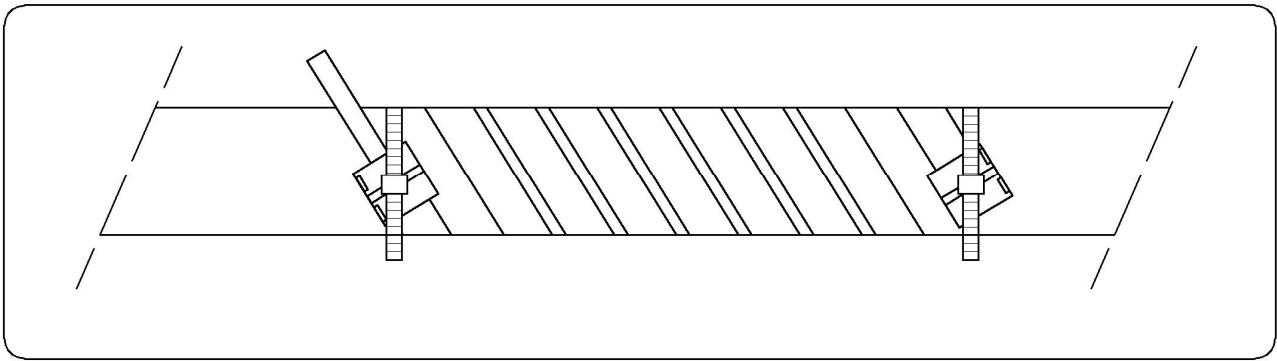


Figure 4 Wrap the cable on the pipe

We suggest you 'lock' the connection terminal part on the pipe to start it. And wrap the antenna helically to form a certain coil on the pipe. Make sure there is a gap (around 0.1 inch-5mm) between adjacent cord. That means you should avoid the antenna to cover themselves to archive a better performance.

Please don't worry about the transparent tape that attached on the cable band, it works as an insulator, do not try to remove it from the band.

And tie the end connection terminal of the cable tightly. There should be at least 9 rounds on the 1" pipe, and 7 rounds on the 1 1/2" pipe.

Step 2 Wrap another antenna (cable band) on the pipe

According to **Figure 1, part 1**, there should be at least 8 inch/20 cm between each antenna, to ensure there are enough room for the main unit. Reserving the distance and start to wrap another cable band on the pipe.

According to **Figure 1, part 2-4**, there should be at least 1/2 inch/1.3 cm between each antenna, to archive a better performance.

Then, Refer to **Figure 5**, wrap it with a different direction.

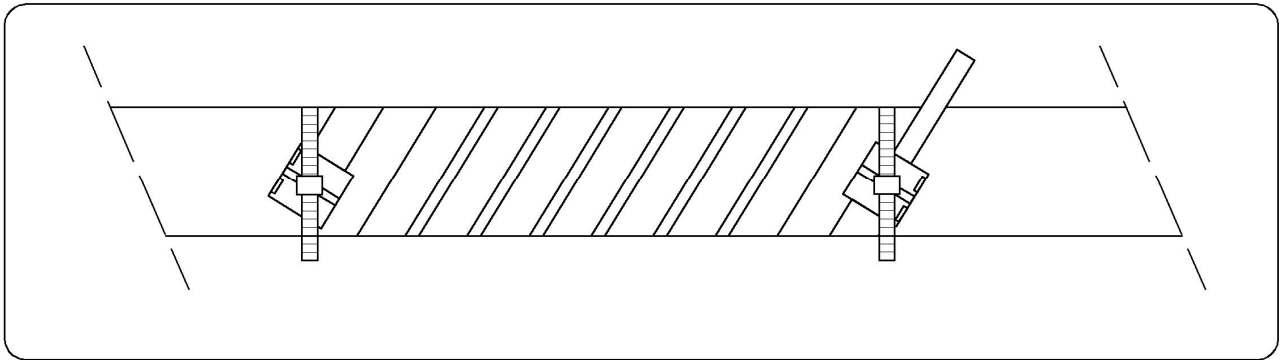


Figure 5 Wrap another cable on the pipe

Step 3 Mount the main unit on the pipe or wall

For the pipe installation: take out the self-adhesive pads with a retaining bracket on it, paste it on the rear of your main unit, though a cable tie in the hollow of the bracket, tie the main unit with the main water pipe to fix it.

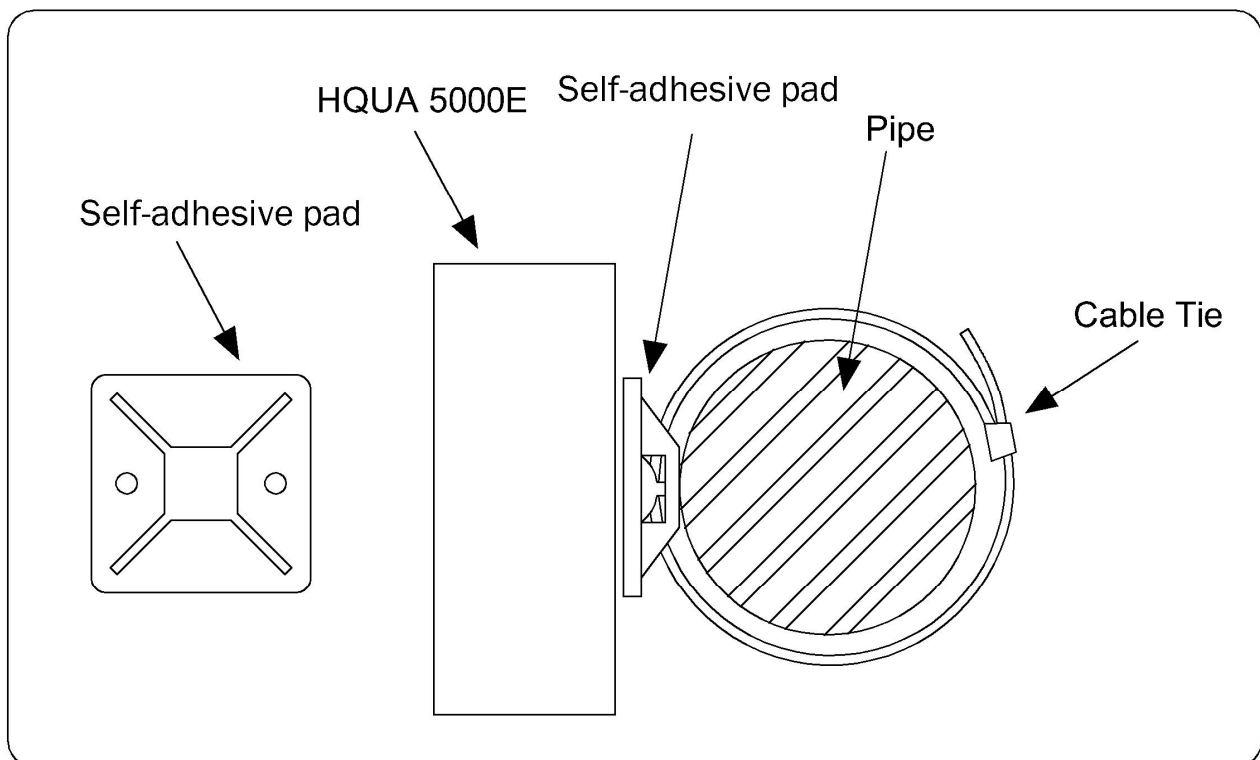


Figure 6 Fix HQUA 5000E with the pipe system

Wall installation is easier: take out the self-adhesive pads without a retaining

bracket on it, paste it on the rear of your main unit, and uncover the other side protective film, paste it on the wall.

Notice: Make sure the output wires which have already fixed could reach the main unit and connect it easily.

There are two female terminals below the main unit, insert the output cable into the main unit, and connect the power supply with the female terminal above the main unit.

Step 4 Connect to the power supply

Plug the power adapter to the socket of your power supply. There should be three green indicator lights on the main unit. The one of the above represent the power' s incoming. Two lights of the below represent the output' s working condition.

Section 3 Observation Timetable

HQUA 5000E works differently from the traditional water softener, and the water hardness will not show any change. Some phenomenon will happen in the water system help to judge the working condition.

Day 3:

After 3-days running, you could find out that the soap lathers more easily. The

changes also happen in the bathing, feels more smoother and more silky hair, though it may not that obvious at the beginning, it continues getting better day by day.

After 1 week:

The limescale will not grow any more, and start to dissolve in the water, form some small particles in the water, although most of the break down particles will be microscopic and couldn' t be observed by naked eye. New hard scale on the surface of the toilet, faucets, water sink will not appear anymore. Even you can see new dirt occur, it is easier to clean it with a duster and is totally different from the previous scale structurally.

After 2 weeks:

Loosening of scale on showerheads, faucets, kettles can be observed, wiping plastic, ceramic, metal and glass surface becomes much easier. If you have a rust problem before, the red water should be gone. Now the water should be transparent once again. No more problems with the bathing and washing hair. Washed clothes are also flatter and softer, soap and detergent required for bathing, cleaning and laundering become effective now.

After 1 month:

With the help from HQUA 5000E to the water heating system, it should take lesser time for heating the water. And the power consumption will reduce for that. The amount of scale on pipes, faucets and showerheads should be significantly reduced. Descaling phenomenon also happen in kettle, coffee machine and other

cooking utensil. The new sediment will be powder but not a hard scale, and is easy to clean it.

After 3 months:

Disappearance of the scale from the shower head, faucets and other water fixtures. Scaly crust in toilets is significantly reduced. The total time about descaling for your whole system will depend on your previous scale problem, sometimes it may take up to 6 months or more to dissolve all of it.

Section 4 Frequently Asked Questions

FAQs - Pipe system

~~Q: What is the suitable size of the pipe system?~~

~~A: The diameter of the main water pipe should not exceed 1.5 inch. Private homes are taken care of with one unit that treats the whole house, even for a 7 members family.~~

~~Q: Where to install HQUA 5000E?~~

~~A: At the entry of your pipe system, the main water supply should be the point. Please refer to **Section 2.1** to get more information.~~

~~Q: Does the pipe type matter?~~

~~A: The HQUA 5000E could fit for all types of plumbing, including copper, iron, stainless steel, plastic and galvanized.~~

Q: Will the limescale that is cleaned out block the pipes?

A: No, the scale is slowly dissolved back into a solution and the calcium and magnesium is washed away in the water as a fine powder.

FAQs - Operation

~~Q: Does the direction of winding matter?~~

~~A: No, it will not influence the output of HQUA 5000E. The reason why we suggest you wrap the cable like **Figure 4 or Figure 5** just for easier wiring.~~

Q: How to judge the working condition of this unit?

A: There are three green lights on our main unit. The one above represent the power supply condition, two lights below represent the working condition of the output electromagnetic wave. Both on means everything alright, no light if it failed in their function.

~~Q: How much it cost to maintain HQUA 5000E?~~

~~A: The power consumption is around 8 Watts, The cost of electric energy per year amounts to approx. 10-15 US\$, depending on electric charge of your living area..~~

FAQs – Function

~~Q: What' s the maximum water hardness that HQUA 5000E can handle?~~

~~A: 25 gpg/425ppm.~~

~~Q: Will it change the water hardness? Will it soften the hard water?~~

~~A: No, the HQUA 5000E is not a water softener, it works differently. It changes the crystal texture of the carbonates, you will enjoy the water just like it was softened. Easy lather up for the soap, better physical sensation, gradually disappearing scale and unobstructed water fixture. All the benefits for a family use will come to you as you have a soft water now.~~

~~Q: How long will it take to remove the original scale?~~

~~A: Well, it depends on different situation, normally after 1-3 months you will see the scale is reduced obviously. It might need a long time to clean your pipe system totally, just as the time that the scale formed.~~

Q: How long does the effect last?

A: The mono-crystals that formed by HQUA 5000E have a better performance in warm water, life time is up to seven days and shorter in cold water (approx. two days).

~~Q: Will it remove the rust in the pipe?~~

~~A: No, but it will stop the rust increasing. The HQUA 5000E treatment produces hydrogen dioxide (H₂O₂), will help to form the metallic carbonate which works as a covering layer and is totally different compare to the metallic oxide. And it protects pipes from corrosive substances.~~

Section 5 After-Sales Service

Should you need any support, or have questions about your system, please contact our Technical Support team with your order-id/address/phone number to hqua_qin@163.com and we will be happy to assist you. We sincerely hope you enjoy the benefits of 'soft' and clean water after the installation of your HQUA 5000E system.

Commitment

One-Year Limited Warranty for HQUA 5000E

HQUA warrants the whole unit to be free from defects in material and workmanship for a period of One year from the date of purchase. During this time, HQUA will repair or replace, at its option, any defective HQUA 5000E. Please return the defective part to your dealer who will process your claim.

One-Year Satisfaction Guarantee

HQUA 5000E want you to be completely satisfied with the operation of your unit. Accordingly, if our unit which had been purchased from an HQUA authorized seller fails to meet the needs or expectations of the original customer within the first 12 months after purchasing.

The original purchaser can return this unit and all associated parts and get a full, no quibble refund. If you receive this manual booklet, it means you are an Amazon buyer. 30 days return after purchasing, amazon might charge you a re-stocking fee. In order to save your money, please contact us, we will offer a better way to solve your problem.

Email:hqua_qin@163.com

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