



***Comparison
Cleaning System
among the Ionizers***

Regardless of the price or number of plates, the newly purchased ionizer has no problem producing alkaline water suitable for drinking and healthy for at least a week to a maximum of a month.

However, it can be observed that the ionizer's pH, ORP, and dissolved hydrogen values decrease as time passes. This is because alkaline minerals are plated and calcified because there are minerals in the water.

Alkaline and acid water is made by electrolyzing these minerals with an ionizer. However, these minerals plating in the electrodes and membranes(electrolyzer.), impairing their electrolytic ability.

Therefore, the ionizer's pH, ORP, and H2 performance are not about the number of electrodes or the high or low price, but rather how to effectively prevent such mineral plating on the electrode and membrane.

This mineral plating prevention system is called a "cleaning system," All ionizers use a "Reverse Polarity Cleaning" type.

However, not all reverse polarity cleaning types are the same.

Reverse polarity cleaning is when your ionizer reverses the polarity; positive electrodes become negative and conversely.

When an electrode is "bathed" in alkaline water containing scaling minerals, it becomes susceptible to mineral scale. When the polarity is reversed, the same electrode is exposed to acidic water, which removes the mineral scale.

Because it is acidic water to descale, there must be a good "acid to alkali wash ratio" in the wash cycle for optimum efficiency.

Studies have shown that it should be at least a 50:50 ratio reverse polarity cleaning to prevent mineral plating.

In other words, if you use 1 liter of alkaline water, you must change the polarity of the electrode used in alkaline water and then clean it with 1 liter of acid water to generate optimal alkali, ORP, and dissolved hydrogen.

Although almost all ionizers use a reverse polarity cleaning type, most have used an outdated cleaning system for decades without advancement or technological improvement.

Fortunately, a new and innovative technology called DARC has been developed that can replace these outdated cleaning systems and prevent mineral plating of the electrode plates and membranes.

DARC technique is based on the idea that plating of the electrodes can be avoided by periodically exchanging the polarity of the electrodes during electrolysis.

In order to collect alkaline or acidic water from the corresponding definite outlet, a rotary valve is installed and connected to the electrolytic cell, which moves synchronously to the electrolysis stroke automatically operated by a microcomputer.

Therefore, the current ionizer market is being separated into the ionizer brand, which still uses the old cleaning system, and the brand equipped with the innovative DARC cleaning system.

Types of Outdated cleaning systems and their problems

Outdated Type 1- Manual system(Acidic Buttons):

You must remember to reverse the polarity and initiate the cycle yourself.

This manual system is an acid water button essential to all ionizers.

Most brands are telling it as a function designed for washing or sterilizing.

Still, this function is an acidic water wash to the alkaline electrodes just after using alkaline water to prevent mineral plating on alkaline electrodes.

Outdated Type2- Post cleaning systems:

While they clean after each use, the clean cycle is extremely short, resulting in a poor acidic to alkaline ratio.

Since cleaning starts after the ionizer is off, only the water in the electrolyzer is used. Therefore, it is impossible to sufficiently clean the alkaline electrode and mineral scale with acidic water.

Outdated Type 3- Timer system:

Cleans at a set interval, such as every 15 minutes of use. After 15 minutes of run time, the next time you turn the ionizer on, the unit starts the cleaning cycle. Most often, you must wait while it completes the process.

Outdated Type 4- Volume system:

Similar to the timer system, but cleans based on a set volume of water (Say, for example, 10 liters) passing through the ionizer. You must also wait.

Each outdated cleaning system has drawbacks: you may need to remember to wash alkaline electrodes with the acidic button every time or feel annoyed, and the timer and volume systems have poor acidic to alkaline cleaning ratios. The worst fault is that with each of the above procedures, you have to wait for the cycle to complete before you can receive alkaline **drinking water**.

2) Type of Advanced Cleaning System

Advanced Type1- The DARC (Dual Automatic Reverse Cleaning)

DARC cleans with every use, eliminating damaging scale buildup. It accomplishes this by reversing polarity each time you use the ionizer.

The revolutionary DARC cleaning system eliminates mineral scaling on the electrodes and membranes.

DARC is highly effective because it works in the background to clean your electrode each time you use your ionizer and while you are using it.

Additionally, with the **dual solenoid system that directs water flow**, you never have to wait while your ionizer cleans to get your alkaline water.

Advanced Type2- The DARC + Hybrid Cleaning (DARC + Post Cleaning)

Alkaline minerals are most likely to be plated at the alkali outlet of the ionizer equipped with the DARC function.

Therefore, the DARC + Hybrid Post Cleaning is set in the Alpha ionizer to prevent alkali minerals from plating inside the alkaline flexible outlet.

This cleaning automatically discharges acidic water from the water cell as much as 30 seconds after turning off the power to sterilize the inside tubes and inside of the water cell and drain the residual alkaline minerals with acidic water.