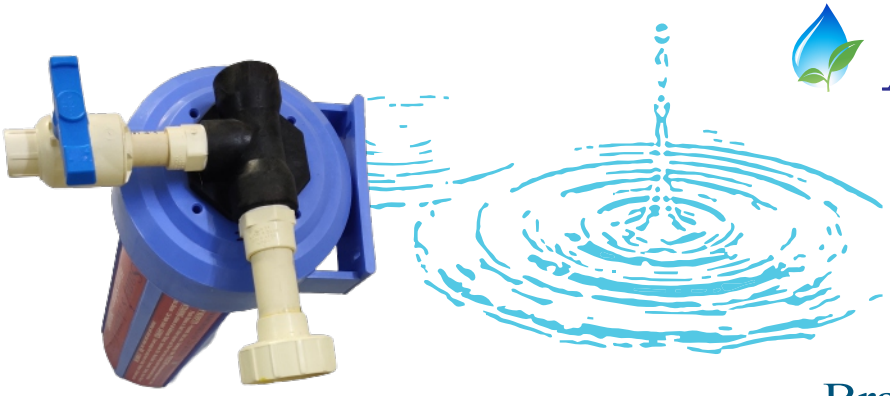


Aqua Green

A Water Management Company

Water Softner
Water Conditioner
Carbon Filter

Brand Sana's Aqua Green®

WHY WE CONSIDER
Sana's Aqua Green Water Sofner
TO BE THE BEST?

No TDS change: As Sana's Water Sofner does not remove or add anything to the water. As no ion-exchange chemistry is used, the **TDS** of the water remains unchanged before and after the treatment.

No pH change: value of the water remains the same. This factor makes the treated water suitable for almost any use where corrosion is concerned.

Minerals Preserved: Sana's Water Sofner **does not add sodium** or any chemicals to the water. It simply preserves the Calcium and Magnesium contents of water, making the treated water arguably the healthiest mineral water available. Both Calcium and Magnesium are quintessential for nervous systems and muscles functionalities. They are indispensable parts in the cell chemistry of the plants and most of the life forms on earth.

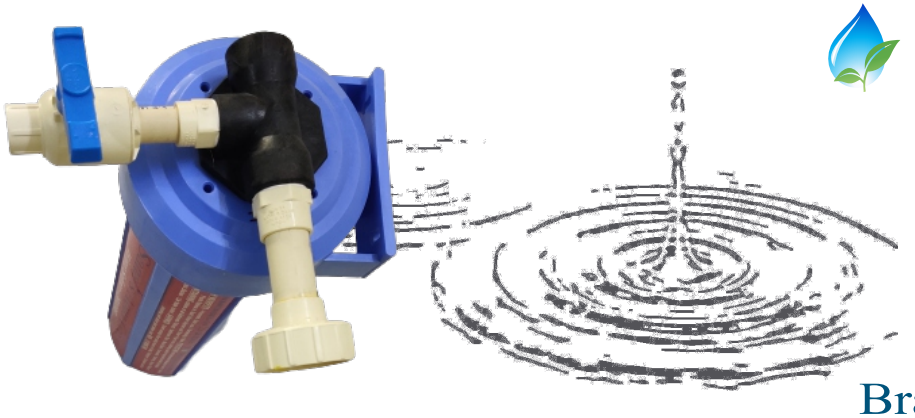
De-Scaling: Not only does Sana's Water Sofner prevent scale formation, but it also helps to remove the previously formed scales. During the flow some of the micro-bubbles are losing a small amount of CO_2, which diffuses rapidly in water and interact with surface scale, especially in closed spaces (pipes, boilers, etc). As a result, the scale which is already present on these surfaces is removed slowly.

Biocidal effect: The **NAC** process creates the conditions that water dissolved CO_2 agglomerate to form micro-bubbles. These CO_2 bubbles actively destroy bacterial membranes acting as a biocide. So along with the scale prevention Sana's Water Sofner also helps to prevent Biofouling.

Media Life : 3 to 5 years media life

Sana's Water Softner

Green CHEMISTRY · Non Toxic · Biodegradable



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Working Principle

When the hard water under goes nucleation in the pressure vessel, the calcium bicarbonate $Ca(HCO_3)_2$ is transformed into aragonite form of calcium carbonate $CaCO_3$ crystals. These crystals are formed through decomposition and crystallization process, forming very stable harmless crystals.

The following equation describes the reaction that occurs inside the pressure vessel when flow over grains of nucleation.

$$Ca(HCO_3)_2 \longrightarrow CaCO_3 + CO_2 + H_2O$$

The name fragment "SP (Scale Prevention) 3" is to indicate this unique transformation of water hardness $Ca(HCO_3)_2$ into 3 components viz.

1. $CaCO_3$ (micro-crystals)
2. CO_2 (colloid) and
3. H_2O (pure)

In the pressure vessel, the equilibrium of carbonate species in water is changed, assisted by the driving force of stable crystal formation and therefore the reaction is pushed to the right ⟶. With this technology, as long as CO_2 is being removed the soluble $Ca(HCO_3)_2$ converts into insoluble calcium carbonate ($CaCO_3$) crystals.

Other applications:

- Irrigation
- Swimming pools and SPA
- Dairy Processing
- Winery and Beverages
- Planting and Gardening
- Automobile Washing
- Hotel, Restaurants and Institutions
- Coffee and Tea-machines
- Vending appliances

and many more...

Sana's Water Softner

Physical Characteristics

Appearance		White / opaque solid granules
Composition		modified ceramic beads
Bulk density	SI	780 kg/m³
	US	48.7 lb / ft³
Particle size	SI	0.55 – 0.75 mm
Mesh size	US	20 x 35
Moisture content		10 – 25 %

Operational parameters & water impurities

Flow direction		Up Flow
Recommended operating time	SI	5 – 80 °C
	US	41 – 176 °F
ph range		6.5 – 9.5
Hardness, max.	SI	1338 ppm (mg/l)
	US	75 gpg
Salinity, max.		35000 ppm (mg/l)
Iron, max.		0.5 ppm (mg/l) *
Manganese, max.		0.05 ppm (mg/l)
Free chlorine, max.		3 ppm (mg/l)
Copper, max.		1.3 ppm (mg/l)
Oil		free
Hydrogen sulfide		free

Sana's Water Softner is able to remove Iron from water with very high efficiency.

Note: Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. System must be maintained according to manufacturer's instructions. Pre-treatment for sediment, Iron, Hydrogen Sulfide, Manganese, hydrocarbons and Copper may be required depending on conditions. Install systems in new facilities with copper pipe after six weeks of water use.

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