

SIMONIZ®



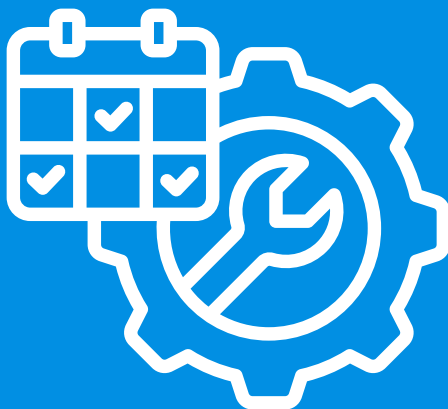
CRS

CHEMICAL REDUCTION SOLUTIONS

NanoSoft®

THE WATER SOFTENER REPLACEMENT
POWERED BY NANOBUBBLE TECHNOLOGY

No Salt. Water Savings. Enhanced Performance.



Car Wash Maintenance Is Hard

Hard water scale, hardness breakthrough, and fluctuating wash volume can put constant stress on a car wash. The result is lower efficiency, higher energy use, faster equipment wear, and poorer wash quality

Over time, that means higher operating costs, more maintenance, shorter equipment life, and less consistent results for customers



NanoSoft®

The patent-pending NanoSoft® powered by NanoBubblizer® continuously conditions water before it reaches the wash equipment. Using hydrodynamic cavitation and electro-ionization, the system helps support cleaner operation, better chemical performance, and reduced scale throughout the wash



Key Benefits

- 10% water savings compared to softener
- Cleaner, drier, shinier cars
- Scale prevention and removal
- Enhanced chemical performance
- Extended equipment life
- Fewer service calls
- No consumables; no salt

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CRS and
Simoniz®

www.chemicalreduction.com
www.simoniz.com

BETTER WATER. BETTER EQUIPMENT. BETTER ECONOMICS.

Water Treatment Designed for Car Wash Operators

ENHANCING WASH QUALITY AND PROTECTING
EQUIPMENT WHEN PEAK DEMAND PUSHES
TRADITIONAL SYSTEMS BEYOND THEIR LIMITS



CRS and Simoniz® Nanobubble Solution

The NanoSoft® generates high concentrations of stable nanobubbles that:

- Dissolve and destabilize existing scale
- Condition internal pipe and equipment surfaces
- Reduce mineral adhesion and nucleation

This system-wide conditioning effect persists through peak demand events, mitigating the impact of intermittent hardness breakthrough without requiring oversized softening equipment

Water Softeners Cannot Handle Peak Demand

Because of cost, space, and operating constraints, water softeners are rarely sized for peak car wash demand. During high-flow periods, hardness can break through the system and begin forming scale on injectors, pumps, nozzles, plumbing, and other critical wash equipment

Over time, this intermittent exposure leads to:

- ✓ Scale Accumulation
- ✓ Equipment Failure
- ✓ Fouled Fixtures
- ✓ Reduced Thermal Efficiency
- ✓ Poor Wash Quality
- ✓ Waterborne Bacteria Accumulation

The Hidden Cost of Water Softeners and Benefits of Nanobubbles



Salt and Water Waste

Busy car wash operators can spend more than \$0.05 per car on regen water and around \$800 per month on salt for water softeners—plus the time and labor to maintain salt-based softening systems



Accelerated Capital Spend

Scale drives premature failure of injectors, nozzles, water heaters, mixing valves, and pumps, shortening equipment life and pulling capital expenditures forward



Scale and Biofilm Prevention

Nanobubbles mitigate scale and fouling inside a car wash water system preventing biofilm growth. This can reduce odor problems, enhance chemical performance, and make overall wash quality improved



Maintenance & Chemical Performance

Car washes that use whole-wash nanobubble infusion benefit from better chemical performance, easier maintenance, and more consistent wash quality—helping create a better customer experience and bring customers back again and again



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WHAT IS A NANOBUBBLE?



Tiny. Stable. Game Changing.

2500 times smaller than a grain of sand, nanobubbles are so small that they have a lower buoyancy and will remain suspended in water for a long time

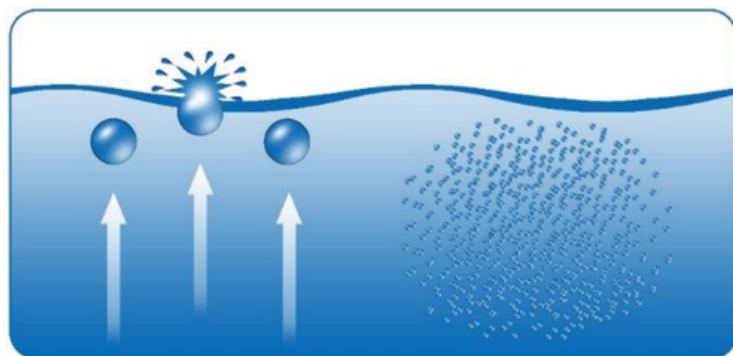


Industrially Useful

Nanobubbles are useful in removing and preventing scale and biofilm growth, improving heat transfer, inhibiting rust, reducing surface tension and improving filtration efficacy

We are the future of your business

CRS and Simoniz® are on a mission to use their economical and simple nanobubble generator, the NanoBubblizer®, to improve profitability and reliability of water systems



nanobubbles remain suspended in water

575+

NANOBUBBLIZERS®
DEPLOYED IN 2025

MORE THAN

15 years

OF EXPERIENCE

500+ million

GALLONS OF WATER
TREATED PER MONTH



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HOW ARE NANOBUBBLES FORMED?



Hydrodynamic Cavitation

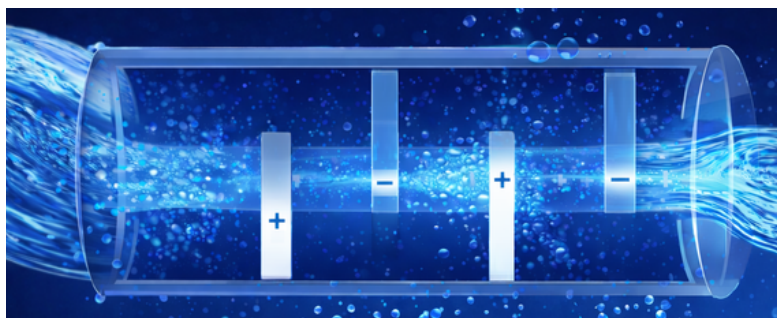
As water flows through the NanoBubblizer®, the geometry creates localized pressure differentials and high shear zones. Under appropriate flow conditions, these effects induce controlled hydrodynamic cavitation



Ionization of Entrained Gas

Nanobubbles are formed under more lenient flow conditions when the gasses that are entrained in water are ionized or charged by NanoBubblizer®'s proprietary metal alloy baffles

Hydrodynamic cavitation **plus** entrained gas ionization



Hydrodynamic cavitation is a well-documented physical phenomenon in which microscopic vapor- or gas-filled cavities form and collapse due to transient pressure reductions in a moving liquid. In the NanoBubblizer®, this process also results in the formation of stable micro- and nanobubbles

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HOW DO NANOBUBBLES INHIBIT SCALE AND BIOFILM?



Preventing Scale Nucleation

Nanobubbles inhibit scale by disrupting nucleation, keeping minerals dispersed, and preventing crystal adhesion to surfaces



Reduces Biological Fouling

Nanobubbles carry a negative surface charge (zeta potential), which can increase electrostatic repulsion between bacteria and surfaces, making initial attachment more difficult

Engineered **for** Performance



Due to their small size and surface charge, nanobubbles penetrate microscopic surface features and improve water-surface interaction. This enhanced contact helps lift and disperse deposits, particles, and biofilm, allowing them to be removed by normal system flow. The result is cleaner surfaces, improved system efficiency, and reduced fouling over time

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NANOSOFT® NANOBUBBLE GENERATOR

Main Line Flow Independent NanoBubblizer®

TECH INNOVATION

Because the NanoBubblizer® relies on hydrodynamic cavitation, maintaining the proper flow rate through the device is critical for performance

The patent-pending NanoSoft® uses an energy-efficient circulator pump to ensure the correct flow rate through the unit, resulting in water saturated with trillions of nanobubbles and charged particles. That treated water is then fed into the car wash as water is used

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BENEFITS OF NANOSOFT®

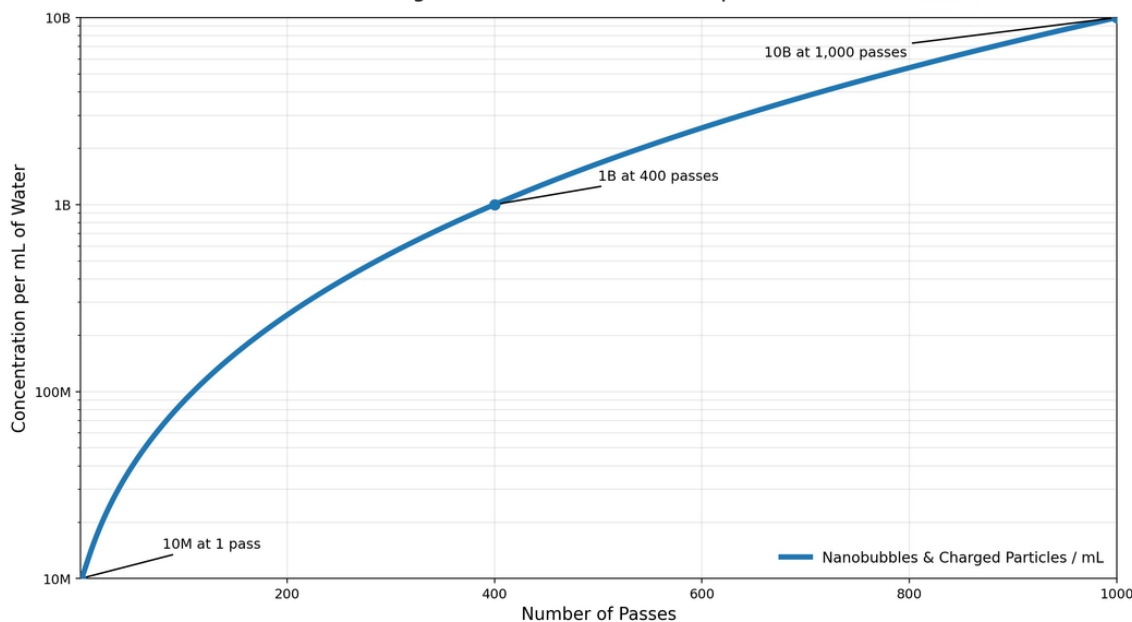
01

Eliminates the need for a water softener

02

Infuses entire car wash with nanobubbles irrespective of water flow

Nanobubble and Charged Particle Concentration per Pass



FAQ

Does the NanoSoft® soften water? No. The NanoSoft® does not soften water, but nanobubble conditioning does mitigate hard water problems

What flow rates does the NanoSoft® support? There are two models of NanoSoft®, the mini (up to 40GPM) and the NanoSoft® (up to 125GPM)

Can I use this with RO? Yes, nanobubble conditioning increases the effectiveness and longevity of RO machines

INSTALLATION TIPS

- Licensed plumber should install the NanoSoft®
- Install the NanoSoft® on a bypass for ease of installation and pump replacement (pump has a three year manufacturer's warranty)



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