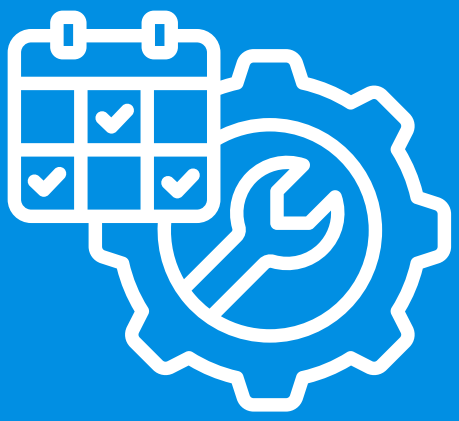
SIMONIZ® CRS CHEMICAL REDUCTION SOLUTIONS

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

Connect with Simoniz® and CRS

www.simoniz.com
www.chemicalreduction.com

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CRS CHEMICAL REDUCTION SOLUTIONS

SIMONIZ®

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
- Reduced Thermal Efficiency
- Equipment Failure
- Poor Wash Quality
- Fouled Fixtures
- 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 help mitigate scale and fouling inside car wash water systems, reduce biofilm formation, reduce odor, enhance chemical performance, and improve overall wash quality

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.

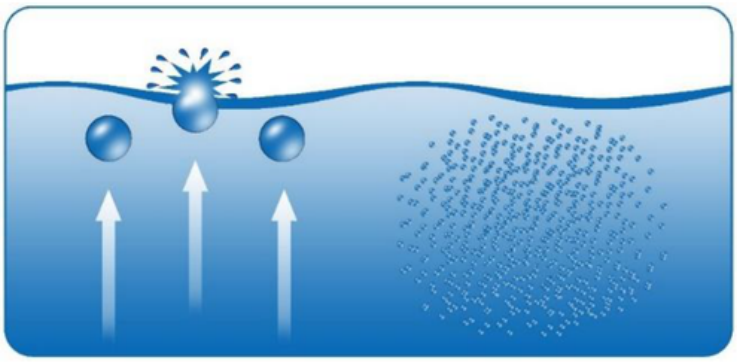
2500 times smaller than a grain of sand, nanobubbles are so small that they have a lower buoyancy and will remain suspended in water for a long time

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 NANOBUBBLE EXPERIENCE

500+ million
GALLONS OF WATER TREATED PER MONTH

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HOW ARE NANOBUBBLES FORMED?

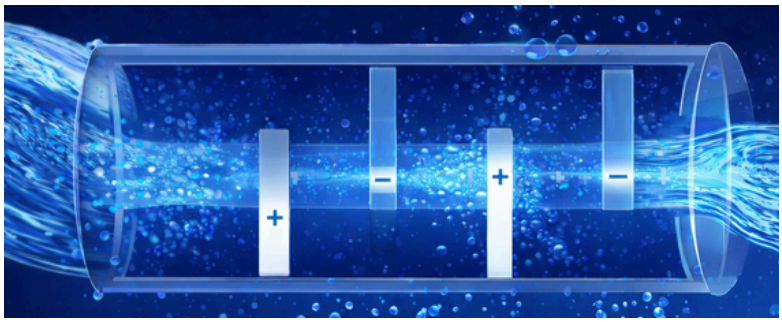
Hydrodynamic Cavitation

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 gases 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?

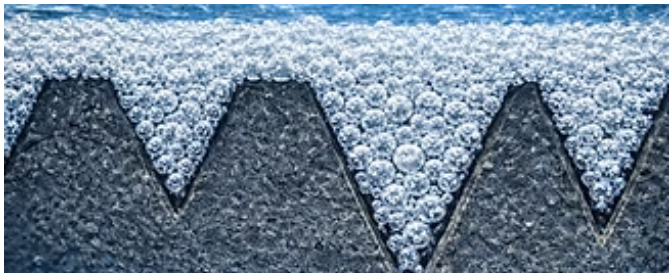
Preventing Scale Nucleation

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

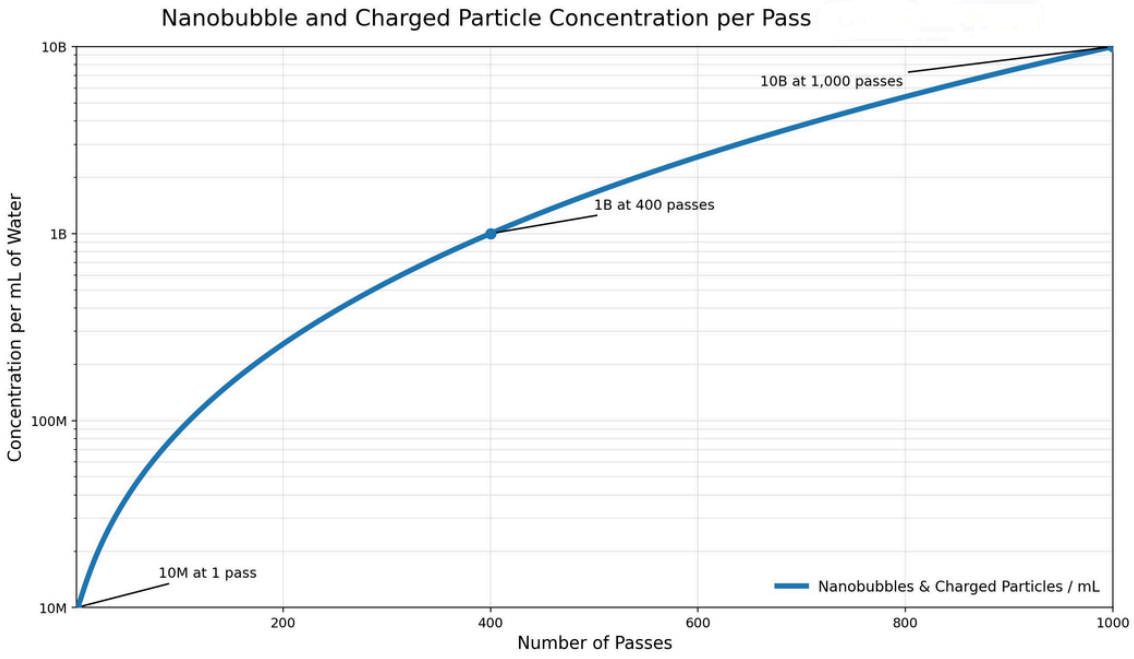
The patent-pending NanoSoft® uses an energy-efficient circulator pump to ensure the correct flow rate through the unit, resulting in water saturated with trillions of nanobubbles and charged particles. That treated water is then fed into the car wash as water is used

SIMONIZ®

BENEFITS OF NANOSOFT®

01 Eliminates the need for a water softener

02 Infuses entire car wash with nanobubbles irrespective of water flow



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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WHY CAR WASH OPERATORS CHOOSE NANOSOFT®

- Lower monthly costs
- Better wash results
- No salt ($500-$800/month on average)
- No wasted water (10% water savings average)
- No hardness breakthrough
- No tanks on the floor
- No staff time wasted filling brine tanks

NANOSOFT® VS. TRADITIONAL WATER SOFTENER

WHY LEADING CAR WASHES ARE SWITCHING TO NANOBUBBLE CONDITIONING

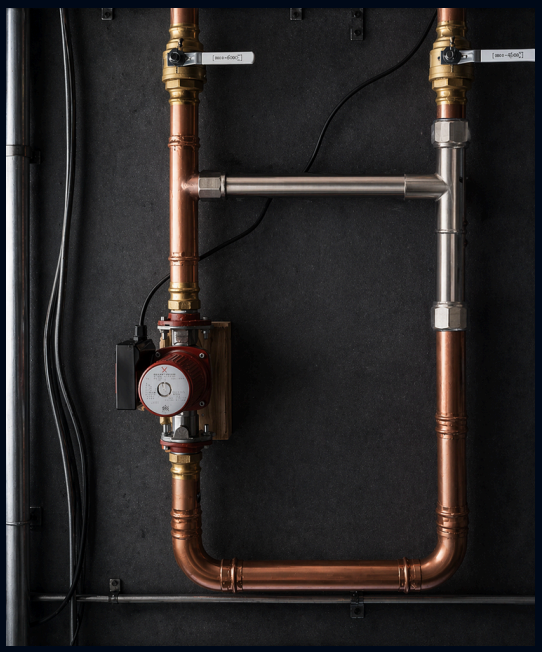
NANOSOFT®

- **Lower Installed Cost:** Typically slightly less upfront cost than a comparable softener
- **No Regeneration Waste**: Uses zero regeneration water
- **No Salt Needed**: Eliminates salt purchases entirely
- **Hands-Free Operation**: Fully automatic operation with no daily attention required
- **24/7 Consistent Protection**: Delivers continuous protection
- **Cleaner Rinse Performance**: Helps support strong wash quality, faster drying vehicles, and cleaner bays
- **3-Year Warranty**: Fully warrantied for 3 years with simple, reliable operation

TRADITIONAL WATER SOFTENER

- **Higher Total Cost of Ownership**: Upfront equipment purchase plus ongoing salt, water, labor, and maintenance costs
- **Wastes Water Every Day**: Regen cycles cost up to $0.044 per car in wasted water
- **Constant Salt Expense**: Salt costs can exceed $800+ per month at busy locations
- **Labor Intensive**: Filling salt tanks, checking systems, and managing softener issues instead of serving customers and selling memberships
- **Hardness Breakthrough**: Hard water can break through and cause scale buildup on equipment and RO systems
- **Reduced Rinsing Efficiency**: Softened water makes surfactants harder to rinse, causing spotting

NANOSOFT® MOUNTS TO WALL



VS

TRADITIONAL WATER SOFTENER FOOTPRINT

World-class operators have replaced their water softeners with NanoSoft®

TIDAL WAVE AUTO SPA

TSUNAMI EXPRESS CAR WASH

Pit Stop CAR WASH

Calculate Savings

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Case Study 1: Top 5 Tunnel Operator Water Softener Removed. Wash Quality and RO Performance Maintained

- Corporate goal to reduce monthly salt and water use
- Installed NanoSoft® on mainline of wash
- 10% water savings due to no back-flushing and no salt expense

	Before NanoSoft® Install	After NanoSoft® Install (6 months post installation)
Water Hardness	7.7 GPG	7.9 GPG
Salt Usage	~45 Bags / Month	0 bags
Monthly Salt Spend	~$590 / month	$0 / month
Average Daily Car Count	724 Cars / day	754 Cars / day
Average Gallons / Car	39.0 Gallons / car	35.1 Gallons / Car

Case Study 2: 70+ Tunnel Chain 12% Lower Water Use with Improved Wash Quality

- Well respected tunnel operator in Wisconsin with hard water (10-11GPG)
- Operator experienced poor performing water softeners, resulting in premature RO membrane failure, spotting on cars and poor performing chemistry

	Before NanoSoft® Install	After NanoSoft® Install (6 months post installation)
Water Hardness	10.9 GPG	10.5 GPG
Monthly Salt Usage	~58 Bags / Month	0 bags
Monthly Salt Spend	~$800 / month	$0 / month
Average Daily Car Count	529 Cars / day	642 Cars / day
Average Gallons / Car	37.3 Gallons / car	32.8 Gallons / Car

FIELD-PROVEN TO IMPROVE RO PERFORMANCE AND PROTECT WASH EQUIPMENT

RO Case Study 1: In-Bay Automatic

RO Permeate TDS Reduced 75%
After NanoSoft® Installation

- Double In-Bay Automatic Operator in Midwest
- Installed NanoSoft® Mini on mainline of wash
- Improved RO performance, cleaner and drier vehicles, and more consistent wash results following installation
- Higher car counts observed following installation

	Before NanoSoft® Mini Install	After NanoSoft® Mini Install (12 months post installation)
RO Permeate TDS (downstream)	4.0 ppm	1.0 ppm
Permeate Flow	3.5 gpm	3.0 gpm
Reject Flow Rate	5.0 gpm	5.0 gpm
Water Hardness entering RO	12 GPG	11.8 GPG

Extended membrane lifespan by more than 50%

RO Case Study 2: Midwest Tunnel

RO Performance Restored
After Hard Water Breakthrough

- Before NanoSoft®, prematurely fouling injectors, poor RO performance, membrane swaps every 6 months
- After NanoSoft®, zero water spots, dryer cars, zero injector fouling

	Before NanoSoft® Install	After NanoSoft® Install (12 months post installation)
RO Permeate TDS (downstream)	3.9 ppm	0.0 ppm
Permeate Flow	4.4 gpm	3.9 gpm
Reject Flow Rate	4.7 gpm	4.8 gpm
Pump Pressure	192 PSI	190 PSI
Membrane Pressure	181 PSI	180 PSI
Inlet Pressure	42 PSI	40 PSI
Water Hardness entering RO	11.0 GPG	11.0 GPG

Stable RO performance maintained for 12+ months

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