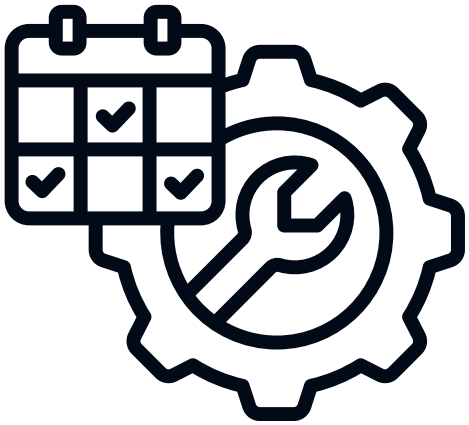
SIMONIZ® CRS
CHEMICAL REDUCTION SOLUTIONS

Nanobubble water conditioning for Reverse Osmosis Machines.

Drier Cars. Cleaner RO Water. Less Maintenance.



RO Feed Water Is Working Against You

Mineral scaling, particulate fouling, and unstable water behavior limit RO performance, reduce spot-free capacity, and accelerate membrane fouling

The result is shorter membrane life, lower permeate output, inconsistent rinse quality, increased chemical cleaning, and unplanned maintenance, all of which cap throughput and increase operating costs

Simoniz® Solution

Simoniz® installs a patent-pending, passive nanobubble generator inline on key car wash water lines. Using hydrodynamic cavitation and electro-ionization, the system continuously conditions water before it reaches RO machines and rinse stages

Key Benefits

- Improved pretreatment and filtration efficiency
- Higher quality spot-free rinse
- Reduced scale and fouling in RO membranes and plumbing
- Improved RO reliability and uptime
- Extended membrane and equipment life
- Less algae growth in bays
- No electricity or consumables

Connect with Simoniz® and CRS

www.simoniz.com

www.chemicalreduction.com

BETTER WATER. BETTER EQUIPMENT. BETTER ECONOMICS.

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CRS
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WHAT IS A NANOBUBBLE?

Tiny. Stable. Game Changing.

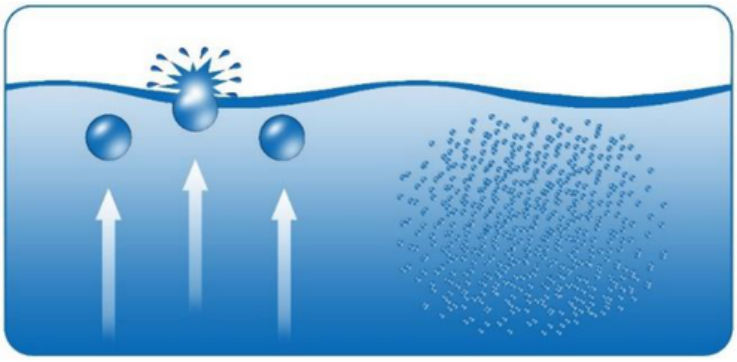
2500 times smaller than a grain of sand, nanobubbles are so small that they have a lower buoyancy and will remain suspended in water for a long time

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 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?

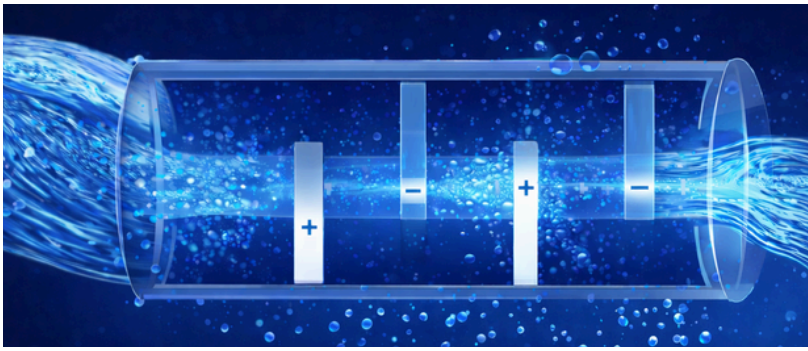
Hydrodynamic Cavitation

As water flows through the NanoBubblizer®, the internal 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 the 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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NANOBUBBLIZER®

Spot Free Rinse Installation Instructions

APPLICATIONS

- Suitable for all reverse osmosis machines
- Designed for municipal or treated water
- No power, no programming, no maintenance required
- Installs before the pre-filter
- Can flow in either direction

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IMPORTANT INSTALL LOCATION

The NanoBubblizer® MUST be installed BEFORE the water filter. Why? Nanobubbles cause suspended minerals and impurities to coagulate, which:

- Extends filter life
- Improves filtration effectiveness
- Reduces scale and biofilm inside the RO machine

THREAD SEALANT REQUIREMENT

- Use Loctite 55 cord
- Apply to all NPT threads
- Do not use excessive sealant

TWO INSTALLATION STRATEGIES (SIMPLE & PERFORMANCE BOOSTING)

Single Pass: Place NanoBubblizer® upstream of your earliest pre-filter to protect your RO system, improve pre-filtration, lower scale buildup and infuse both RO permeate and reject water with nanobubbles

Multi-Pass Recirculation (Premium Drying Performance): Use a NAN-SUB submersible NanoBubblizer® to create a recirculation loop inside the RO permeate tank using a submersible pump.

INSTALLATION STEPS

01 Shut Off Water Supply
and relieve pressure by opening a downstream fitting

02 Disconnect the water line immediately before the filter

03 Install NanoBubblizer® inline
Using appropriate thread sealant and fittings

04 Restore Water Supply

05 Check for Leaks

06 Flush and Return to Service
If machine is badly scaled a good flush should be done before re-using

TECH NOTES (FOR SERVICE MANAGERS)

- No pressure drop impact on RO machines
- Compatible with carbon, sediment, and other pre-filters

NANOBUBBLIZER®

Spot Free Rinse Unit Model Selection

INSTALL TIPS

- Use the lowest flow NanoBubblizer® that will NOT trigger a low pressure fault on the RO machine
- After initial installation and after running the NanoBubblizer® for several days, change RO pre-filters to maximize effect
- The NanoBubblizer® cannot repair RO membranes with channels and holes, but can improve lifespan

SIMONIZ®

SONNY'S MODEL NUMBERS

SONNY'S RO Machine	NanoBubblizer®
VROF-2	NAN39
VROF-4	NAN614
VROF-6	NAN1020
VROF-8	NAN1020
VROF-12	NAN2040

NANOBUBBLIZER® MODEL SIZING

01 **Measure the Total RO Flow**

Permeate Flow + Reject Flow = Total Flow

02 **Choose the Right NanoBubblizer®**

TOTAL RO FLOW (Permeate + Reject)	NanoBubblizer®
1 - 2 GPM	NAN03
3 - 4 GPM	NAN15
5 - 7 GPM	NAN39
8 - 13 GPM	NAN614
14 - 20 GPM	NAN1020

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