AQUA REX®

The Water Softener Alternative

PROOF OF PERFORMANCE CASE STUDIES



No Scaling at The Cosmopolitan

Aqua-Rex technology solved the Las Vegas resort's hard water issues and is still going strong after more than a decade.

The Cosmopolitan of Las Vegas opened in December 2010. Aqua-Rex was called in shortly after the opening to look at ways of solving the hard water issues that the hotel engineer expected to occur from the 20-grain hardness in the domestic water supply from nearby Lake Mead.

Thirteen years after completing the installation, the Cosmo engineering team reported that there have been no issues with scaling anywhere on the property — a sharp contrast with experience on neighboring properties where frozen valves, scaled-up showerheads and failing heaters are the norm. The Cosmo has never had to replace any valves due to scaling. Likewise, the plate-and-frame heat exchangers have performed perfectly without servicing or cleaning.

At the Cosmo the cost was only around $100,000, a tenth of what softeners would have cost. But the real savings are on maintenance and servicing. There is no service or maintenance at all and the product is warrantied for twenty years.

The Cosmo is a perfect case study of the benefits and savings that modern Aqua-Rex technology can offer compared to conventional chemical softeners that represent ninety year old technology.

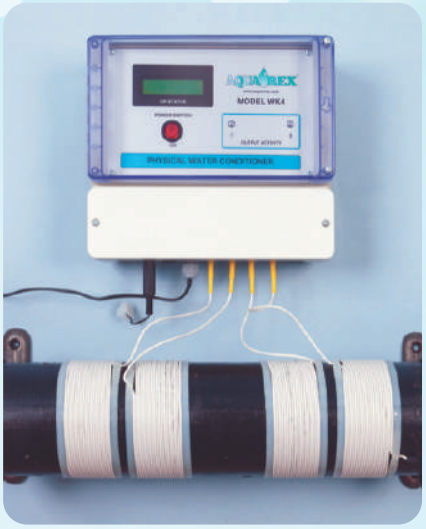
What Is Aqua-Rex and How Does it Work?

First of all, it's NOT a magnet nor an electro-magnet. It's actually a radio transmitter that puts ultra-high frequency radio waves in the water that travel in the water in both directions - upstream and downstream. The radio waves change the structure of the iron (Fe) molecules to form nucleation seeds so the scale sticks to them instead of the surfaces where it would normally go. The scale forms as a non-adhesive powder in suspension instead of encrusting surfaces.

The radio waves also create a resonance that breaks up existing scale. As a result, a plumbing system can be completely cleaned of old scale over a few weeks. The nucleation process also reduces dissolved calcium in the hot water which makes it softer than it would be otherwise. This softer water does not have a slippery feel as typically happens when salt is used from a conventional softener.

All Aqua-Rex units have aerial wires that are wrapped around existing pipework. They are quick and simple to install, requiring no plumbing, no shut down, and no other disruptions. For further information download the Specifier Guide from our website www.aqua-rex.com.

Remember Aqua-Rex comes with a no quibble, no condition, 100-day money back guarantee. You have nothing to lose but your limescale!



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Luxury Las Vegas Condominiums save millions switching to Aqua-Rex

Many condominiums in Las Vegas were built with conventional chemical softeners treating just the water supply to the hot water services. Scale still occurs on showerheads and countertops from the cold water and these softeners need replacing every few years. They also increase water consumption by at least 10% while regenerating.

Aqua-Rex has replaced many of these softeners, saving millions of dollars in replacements plus reducing water consumption and the service time providing salt.

A typical installation costs around $50,000 with a payback measured in just four months. As well as saving money, Aqua-Rex does more than the original softeners as it treats the cold water as well as the hot. This stops scaling on visible showerheads and countertops as well as the mixing valves in the plumbing system.

Treasure Island Uncovers Value in Aqua-Rex

Aqua-Rex conducted a trial in the tower at Treasure Island Resort/Hotel in Las Vegas, NV by installing a unit on the cold water services to its upper floors. The shower head in Room 32020 at the time the Aqua-Rex WK5 unit was installed was very heavily scaled on the chrome ring and the center section (Dec. 30th photo). Only a vigorous acid wash would remove this scale normally.

One month later, the chrome ring was removed and merely wiped with a soft cloth. The residual scale came off with the cloth leaving the ring virtually scale-free (Jan. 26th photo).

The complete shower head is shown looking like new (Mar. 29th photo) after a short three months of treatment with Aqua-Rex. The savings in chemicals and cleaning time by using Aqua-Rex are considerable, plus the guest experience is enhanced significantly.

December 30th





January 26th



March 29th



Texas Jail Breaks Scale with Aqua-Rex

Dealing with scale from hard water in Detention Centers is much more of a problem than elsewhere because you can't use the normal methods to clean scale away using acid cleaners. Acids in the wrong hands can cause harm and injuries. The Federal Detention Center in downtown Houston, Texas had long ago by-passed their softeners but were looking for a efficient solution to deal with hard water in their laundry.

An Aqua-Rex WK3 solved that problem when installed on the Detention Center's twin PVI water heaters. And to their surprise and delight, Aqua-Rex did a lot more, as well. They found in the cell blocks that the shower operating handles and stainless-steel protectors could be wiped clean of scale using a soft cloth – there was no need for an acid de-scaler which had been the only alternative. The shower cubicles were heavily used but now they look shiny clean rather than having a dull, dirty look caused by the scale before.

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Aqua-Rex De-Scales Luxury Resort/Casino Plumbing System in Heart of Las Vegas!

A typical butterfly valve from this luxury hotel hot water supply was so badly scaled it couldn't be operated. For a trial evaluation, it was re-installed on a cold water line fitted with Aqua-Rex. After eleven weeks the scale had broken away from inside the valve and fallen out. The scale broke down into fine particles and was carried away in the flow without causing any downstream damage. This 2,500 room hotel tower was then fitted with Aqua-Rex throughout. Three years later, a similar valve from the hot water supply system was removed and found to be completely scale free.



Badly scaled valve
February



After Aqua-Rex installed
May



Completely scale-free valve
December

Reunion Trails Park Splash Pad

Reunion Trails Park in Henderson, NV, features the largest splash pad in the state. It was, however, encountering heavy scale on all of its many wetted surfaces. It required regular chemical cleaning to remove encrusted scale from the supply pipes and features.

To resolve the condition, an Aqua-Rex WK3 commercial unit was fitted on the supply line to the Splash Pad. Just 48 hours after installation, scale on the flower features at the Park could be wiped away with minimal effort and no chemicals. Even the concrete outer wall of their lazy river ride could be cleaned with a pressure washer less than a year later.

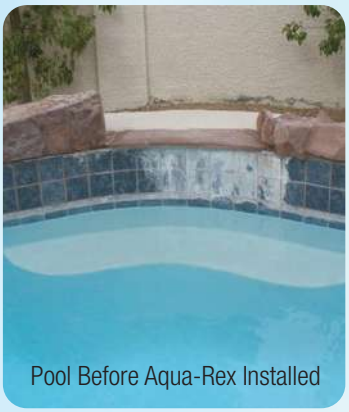


Reunion Trails Park Splash Pad

Aqua-Rex On Swimming Pools

This swimming pool in Las Vegas NV suffered badly from scale along the water line and down the spillway. Phosphates were always high, affecting the water clarity, and the TDS (total dissolved solids) level was off the chart on the measuring instrument.

An Aqua-Rex WK1P (pool unit) was fitted to the pool filter and no other changes were made to the regular weekly pool service. A short two months later, most of the scale had fallen off the tile walls and could be vacuumed up from the bottom of the pool. The remaining scale on the tiles could be wiped away. A second photo of the pool taken seven months later shows the tile walls still clear. In addition, the pool water is much clearer showing a substantial reduction in phosphates.



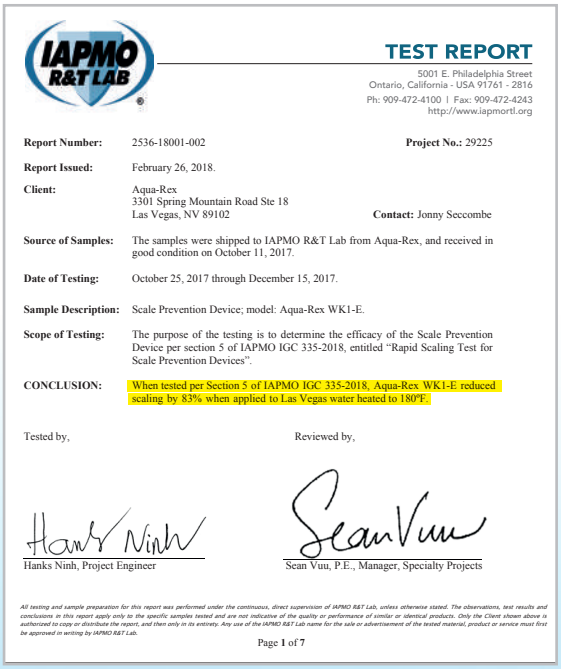
Pool Before Aqua-Rex Installed



Pool After Aqua-Rex Installed

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IAPMO R&T LAB

TEST REPORT

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Report Number: 2536-18001-002 **Project No.:** 29225

Report Issued: February 26, 2018.

Client: Aqua-Rex
3301 Spring Mountain Road Ste 18
Las Vegas, NV 89102 **Contact:** Jonny Seccombe

Source of Samples: The samples were shipped to IAPMO R&T Lab from Aqua-Rex, and received in good condition on October 11, 2017.

Date of Testing: October 25, 2017 through December 15, 2017.

Sample Description: Scale Prevention Device; model: Aqua-Rex WK1-E.

Scope of Testing: The purpose of the testing is to determine the efficacy of the Scale Prevention Device per section 5 of IAPMO IGC 335-2018, entitled "Rapid Scaling Test for Scale Prevention Devices".

CONCLUSION: When tested per Section 5 of IAPMO IGC 335-2018, Aqua-Rex WK1-E reduced scaling by 83% when applied to Las Vegas water heated to 180°F.

Tested by, Reviewed by,

Hanks Ninh, Project Engineer

Sean Vuu, P.E., Manager, Specialty Projects

All testing and sample preparation for this report was performed under the continuous, direct supervision of IAPMO R&T Lab, unless otherwise stated. The observations, test results and conclusions in this report apply only to the specific samples tested and are not indicative of the quality or performance of similar or identical products. Only the Client shown above is authorized to copy or distribute the report, and then only in its entirety. Any use of the IAPMO R&T Lab name for the sale or advertisement of the tested material, product or service must first be approved in writing by IAPMO R&T Lab.

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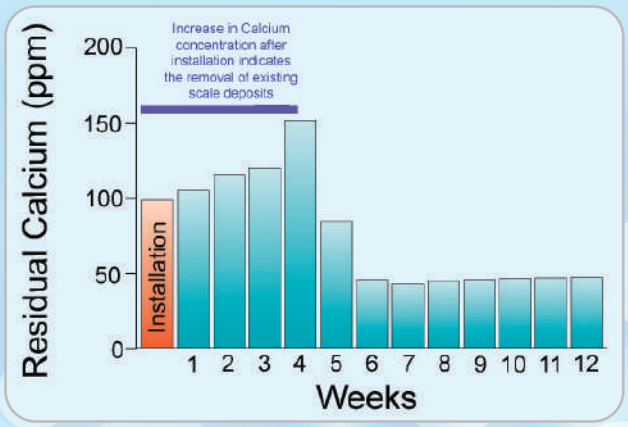
Independent Research/ Testing Lab Verifies Aqua-Rex Effectiveness

Aqua-Rex is the only physical water conditioner to be independently tested and receive verification by IAPMO R & T Labs using the IAPMO protocol IGC 335-2018 Rapid Scaling Test. The results showed that the Aqua-Rex WK1-E could reduce scaling by 83% in Las Vegas water heated to 180ºF for 23 hours.

Third-Party Performance Verification by:

IAPMO R&T LAB

Aqua-Rex Proven To Soften Water



Water containing dissolved calcium is defined as hard water. Aqua-Rex stimulates precipitation of the calcium into suspended particles so the water is now softer, although containing the same amount of total calcium. This is easily seen by the improvement in soap lather after Aqua-Rex is installed. Importantly, the soft water contains no added sodium so it does not suffer from the slippery feel of conventionally softened water that many people dislike and also can be dangerous in the tub or shower.

Independent tests carried out on an Aqua-Rex installation by TFW Associates, Forensic Engineering Consultants to the Legal Profession, show that at the end of the trial period, the residual calcium concentration was reduced by approximately 50% compared with the initial pre-installation value.

Aqua-Rex Works Out at The Gym



Shower-head Before



Shower-head After

Premier Fitness in Newport Beach, CA, is a highly utilized fitness club and suffers from heavy scaling in its changing rooms due to the hard water in the locality. Not only is the scale unsightly, it also harbors bacteria and dirt. To solve the problem, an Aqua-Rex WK1 unit was installed on the flexible cold water connection to the tank water heater as a trial.

The showerhead in the "Before" picture of this story is from a cubicle inside the women's changing room on the first day that the Aqua-Rex WK1 unit was installed. The scale on the showerhead was hard and encrusted and could not be removed by wiping or rubbing.

The "After" photo beside it is the very same showerhead just over one month later! The original scale had become soft and was easily wiped away by hand leaving the showerhead clean and attractive. The Aqua-Rex unit had softened the scale and reduced its adhesion to the shower surface. It has also stopped new scale from forming.

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