



The Water Softener Alternative

PROOF OF PERFORMANCE CASE STUDIES



Panorama Towers

Aqua-Rex Conditioners Replace Water Softeners at Panorama Towers Luxury Highrises in Las Vegas!

The Panorama Towers are twin, 33-story, 635-unit luxury condominiums just off the Las Vegas Strip. They opened in 2006 with a total of four conventional water softeners installed on the ground floor and top floor of each tower to treat the hot water services. In early 2013, one of the softeners required extensive repairs and the management company decided to investigate the efficiency of Aqua-Rex. A total of four Aqua-Rex units were installed in place of one of the softeners. An extensive evaluation program was carried out over the next six months.

In December 2013, the HOA approved the purchase of additional Aqua-Rex units to treat both towers to replace the softeners entirely. In addition to treating the hot water, these units also treat the previously unsoftened cold water services. As a result, problematic scaling is reduced in mixing valves, shower heads, and faucets. The residents now enjoy less scale trouble than before.

The cost of the installation was only about \$55,000 for both Towers using multiple Aqua-Rex in each pressure zone. The resultant savings in the first year of installation were calculated to be around \$168,000. After three years, the savings are in excess of \$500,000. No further expenditure for treating hard water is expected over the life of the building, apart from electrical running costs of around \$200 total per year.

The property management company, First Service Residential, has since decommissioned softeners and installed Aqua-Rex in four further Condominium properties in Las Vegas, The Martin, One Las Vegas, the Juhl and the Ogden.

Panorama Tower Results

1st Year Savings: \$168,000 ✓

3-Year Savings: \$500,000 ✓

Annual

Operating Costs: \$200 power bill

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.

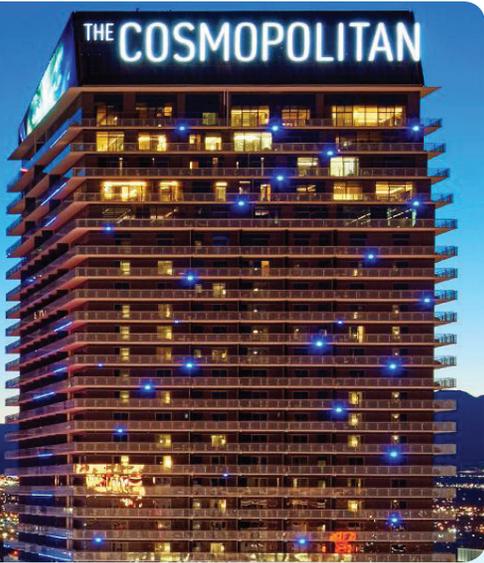
All Aqua-Rex units have aerial wires that are wrapped around existing pipework. They are quick and simple to install, requiring no plumbing, no shut down, and no other disruptions. For further information download the Specifier Guide from our website www.aqua-rex.com.

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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Cosmopolitan Hotel Chooses Aqua-Rex Over Water Softeners

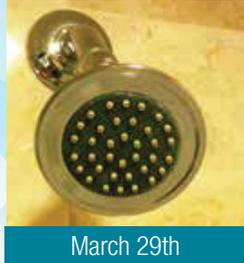
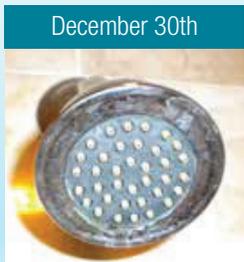
The Cosmopolitan Hotel was constructed without any water softeners except in the kitchens for the dishwashers. After some earlier trials, Aqua-Rex units were installed on the plate and frame heat exchangers supplying hot water to both towers and the low rise. Subsequently, additional units were installed on the recirculation loops in the towers. Shortly afterwards, it was found that scale could be brushed away from the work tops around the faucets leaving them completely scale free. The total installed cost of all the units was less than \$100,000. No issues caused by scaling have occurred in the property on the areas treated by Aqua-Rex since they were installed. This contrasts with similar properties using water softeners nearby where scale issues have been a constant problem.

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.



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.

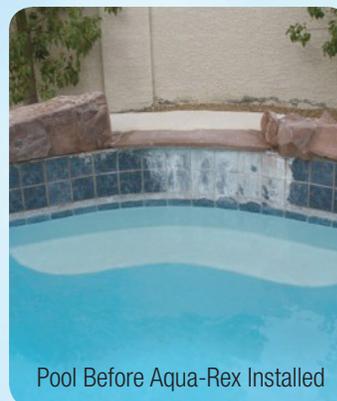


Reunion Trails Park Splash Pad

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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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 180°F 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

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.

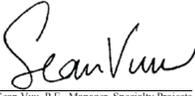
The “After” photo beside it is the very same showerhead just over one month later! The original scale had become soft and was easily wiped away by hand leaving the showerhead clean and attractive. The Aqua-Rex unit had softened the scale and reduced its adhesion to the shower surface. It has also stopped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



TEST REPORT
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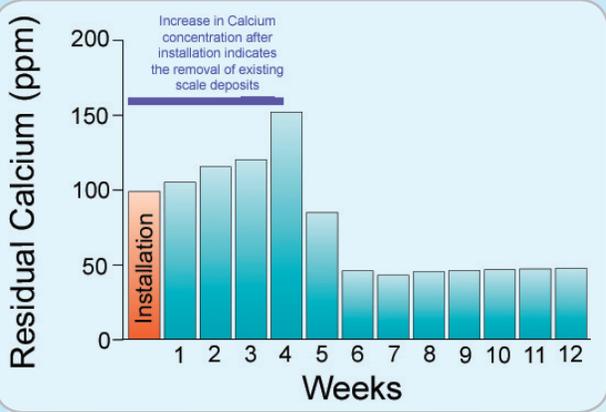
Report Number: 2536-18001-002 Project No.: 29225
Report Issued: February 26, 2018.
Client: Aqua-Rex
3301 Spring Mountain Road Ste 18
Las Vegas, NV 89102 Contact: Jonny Seccombe
Source of Samples: The samples were shipped to IAPMO R&T Lab from Aqua-Rex, and received in good condition on October 11, 2017.
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

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Shower-head Before



Shower-head After