



rain drop
WATER SOLUTIONS LTD.



REIONATOR™ Gold



REIONATOR™ Classic



REIONATOR™ Platinum

REIONATOR™ PROCESS

Fundamentals of the REIONATOR™ Ion Exchange Treatment Process

Water that contains dissolved calcium, magnesium, iron and manganese is commonly referred to as “hard” because these metals can combine with other compounds to leave hard scales or stains on the surfaces they touch, as well as interfering with the effectiveness of soap and other cleaning products. Water may also contain other dissolved unwanted minerals such as lead, nitrates, aesthetic chlorine, aluminum, organics that produce off tastes and odors, and other impurities. The proper selection of a WaterTech REIONATOR™ ion exchange water conditioner can greatly reduce or eliminate the problems caused by the presence of hardness and other unwanted minerals from water supplies. The REIONATOR™ is not intended to serve as a filter for removal of particulate matter. WaterTech Industries offers other products that are specifically designed for this purpose.

What makes the REIONATOR™ resin blend unique?

The WaterTech REIONATOR™ is a family of ion exchange water conditioners designed to treat water containing one or more unwanted minerals. A typical unit is equipped with one or two pressure tanks partially filled with one or several ion exchange resins. Our TechSoft™ and TechBlend™ media consist of highly porous resin beads that are loaded with ion exchange sites. There are millions of these ion exchange sites within a REIONATOR™ conditioner tank. These resins are preferentially attracted to hardness and other dissolved unwanted minerals. Each cubic foot of TechSoft resins can remove about 30,000 grains (exchange capacity) of hardness when dosed with 15 pounds of Potassium chloride. At a lower (economy) dosage of 6 pounds per cubic foot, the TechSoft resin yields about 20,000 grains of exchange capacity. This lower dosage is more cost-efficient, but it requires more frequent regeneration. TechBlend resins vary in capacity and selectivity and are engineered to meet specific application and unwanted mineral removal requirements.

The REIONATOR™ Regeneration Process

The REIONATOR™ water conditioner is equipped with a brine tank to provide a source of dissolved Potassium Chloride or Sodium Chloride for regenerating the resin and an automatic control valve to direct the flow of water during service and regeneration cycles. REIONATOR™ water conditioners are adjustable to meet the efficiency standards of recent environmental legislation and an increasing desire to conserve natural resources.

At the beginning of the service cycle, Potassium or Sodium Chloride ions occupy the resin's exchange sites. As water passes through the charged resin, a stronger affinity for hardness and other unwanted minerals causes the resins to take on those unwanted minerals and give up its Potassium and Chloride ions. Certain variables such as: TDS, temperature, flow-rate, contaminant levels and other factors can affect the performance of the treatment process. When the capacity of the resin has been exhausted, the REIONATOR's™ automatic control valve uses the Potassium salt brine to rinse the TechSoft and Tech-Blend media, driving off the unwanted minerals and recharging them for the next service cycle. This multi-step regeneration process typically takes about 80 minutes to complete.

The automatic control valve carries out each regeneration cycle. The regeneration cycle starts with an upflow backwash (lasting 5-10 minutes) that lifts and re-sorts the resin bed while flushing out suspended particles and sediment. During the brining cycle that follows, a solution of Potassium Chloride (or Sodium Chloride) is passed through the resin media. A jet stream eductor within the control valve draws concentrated brine from the storage tank while diluting it to the proper concentration. The regulated brine draw lasts from 10 to 25 minutes depending on the regeneration dosage of salt being used. The brining releases hardness and other unwanted minerals from the resin beads. Brining is followed by a slow rinse (lasting 30-45 minutes) that displaces spent and excess brine from the resin bed. The rinse carries to the drain the hardness and unwanted minerals that were released from the resin bed. A final fast rinse, lasting about 5-minutes, flushes any remaining brine from the resin media and tightly packs the media bed to prevent raw water from passing through the resin bed untreated during service. The automatic control valve then refills the proper amount of fresh water to the brine storage tank to dissolve brine for the next regeneration cycle.

The REIONATOR™ Family

The REIONATOR™ family includes the following product series: SoftMax™ high-efficiency cation softener, REIONATOR™ Select and Premium conditioner for broad spectrum taste, odor and aesthetic chlorine reduction with less of a 'slimy' feeling after showering, NitroMax™ conditioner for softening and Nitrate reduction, FerroMax™ conditioner for severe Hardness, Iron and Manganese removal. The REIONATOR™ may also be specially engineered for reducing specific unwanted minerals from a given water supply on an individual basis.

WARRANTY INFORMATION

WaterTech Industries Residential REIONATOR™ Limited Lifetime Warranty

WaterTech Industries (WTI) hereby warrants said equipment, only to the original purchaser at the original installation location.

THIS WARRANTY PERIOD BEGINS at the time of initial installation and use. The warranty becomes valid upon registration of the equipment.

LIMITED LIFETIME WARRANTY ON CONDITIONER AND BRINE TANK - WaterTech Industries will replace or repair (at WTI option) any conditioner tank that becomes unusable because of leakage, corrosion or rupture. All internal mechanical components are warranted for a period of five years from date of installation.

LIMITED LIFETIME WARRANTY ON RESIN - Your REIONATOR™ has been equipped with the highest quality NSF certified water treatment media. If, upon factory inspection, the resin is found to be defective, WaterTech Industries will furnish replacement resin. The resin warranty does not cover resins subjected to water containing greater than 3.0-ppm of free chlorine or chloramines or containing greater than 1.0-ppm total Iron and/or Manganese. Resin which has been fouled by iron, manganese, organics (or other contaminants not designed for treatment by the REIONATOR™) is not covered.

LIMITED LIFETIME WARRANTY ON CONTROL VALVE - Your REIONATOR™ has been equipped with the highest quality water conditioning control valves available. If, upon factory inspection, the control valve body is found to be defective, WaterTech Industries will furnish repair or replacement (at WTI option) of the control valve body. All internal mechanical components are warranted for a period of five years from the date of installation. All electrical or electronic components are warranted for five years from the date of installation.

EXCLUSIONS AND LIMITATION OF LIABILITY - WaterTech Industries' liability for special, incidental, or consequential damages is expressly disclaimed. In no event shall WaterTech Industries' liability exceed the obligation of repairing or replacing any part that becomes defective under valid warranty coverage as described above. Cosmetic damage that does not affect the process functionality of the equipment is not covered. WaterTech Industries makes every effort to ensure that all illustrations and specifications are correct. However, these do not imply a warranty that the product is merchantable or fit for a particular purpose, or that the product may not vary from the illustrations and specifications. The warranty contained herein is in lieu of all other warranties, expressed or inferred, including any implied warranty of fitness for a particular purpose. Labor and transportation costs incidental to the delivery or replacement of parts other than WTI factory repairs are not covered under this warranty. In the event of a warranty replacement or repair, WTI will cover the cost of shipping the covered components. This warranty expressly excludes any system which has been damaged by accident, fire, flood, Act of God, abuse, neglect, freezing, excessive temperature (over 100-deg. F.), excessive pressure (over 100-psi), misuse, alteration, product identification tampering, misapplication, installation or operation not consistent with WTI instructions and installation outside of applicable plumbing codes and local regulations. Fulfillment of the warranty coverage by WTI is contingent on proper execution of the procedures set forth in the WTI Warranty RMA policy. No person or representative is authorized to assume for WaterTech Industries any liability on its behalf, or in its name, except to refer the purchaser to this warranty. This warranty gives you specific legal rights, you may also have other rights which vary from state to state.

WHAT MUST YOU DO TO OBTAIN WARRANTY SERVICE - The warranty registration card must be filled out completely and returned to WaterTech Industries within thirty days of installation to validate the REIONATOR™ Limited Lifetime Warranty. Units that have not been registered will be covered under the Standard Product Warranty rather than the Limited Lifetime Warranty. Repair work should be performed by an authorized WaterTech Dealer. In the event that authorized dealer service is not available, defective components may be returned directly to WaterTech Industries for warranty service. The registered owner must return the defective component, freight prepaid, with proof-of-purchase, within the applicable warranty period.