



# RMT-CQT-S series

Reaching Modern Max Technology  
State of the art filtration plant



REVERSE OSMOSIS + ULTRAVIOLET + ULTRAFILTRATION



## Product Overview

The Crystal Quest® RMT-CQT-S Series is a complete state of the art filtration plant offering highly filtered water while being easy to use. We incorporate many individual units to achieve a higher quality of filtration. Initially the water travels through a 5-micron Sediment Pre-filter addressing undissolved matter. Followed by additional prefiltration for Iron, Magnesium and Hydrogen Sulfide which includes a blended media for maximum reduction. This is then followed by a Water Softener which prepares the water for the Reverse Osmosis (RO) filtration process. The RO is also precluded with a 0.20-micron UF membrane for additional filtration. The 1,200 GPD Reverse Osmosis system will then filter the prepared water for its final filtration stages. After which we have the Alkalinize, Ionizer, Mineralizer and Oxidation System to add back the good minerals such as calcium and potassium and increases the waters alkalinity and then a Disinfectant Water Sterilizer to protect for bacteria, pathogens and microorganisms. The end result being a healthier great tasting water!



## Stage 1:

Crystal Quest® CQE-WH-04015 Pleated Cellulose Sediment Cartridges are manufactured from pleated cellulose media and are designed for general water filtration. The media is pleated around a polypropylene core for added strength and the ends are immersed in a thermo-setting vinyl plastisol. Its pleated design maximizes dirt-holding capacity. 5 Microns.



## Stage 2:

Crystal Quest® CQE-WH-01195 Whole House Manganese, Iron and Hydrogen Sulfide Water Filters contains naturally mined ore of manganese dioxide, which has been used in water treatment for more than 75 years for hydrogen sulfide, iron and manganese reduction. It functions as a catalyst, but itself remains relatively unchanged. It works on a principle whereby the hydrogen sulfide, iron and manganese are oxidized and trapped on the media. Simple backwashing cleans the filter. No regeneration is required. Nothing is imparted into the drinking water and it has a high capacity for low contaminant concentrations, and can be used in conjunction with aeration, chlorination, ozone or other pretreatment methods for difficult applications. Chlorine or other oxidants accelerate the catalytic reaction.



### Stage 3:

Crystal Quest® CQE-WH-01123 Eagle Softener Resin is used to soften water. It can be regenerated with either potassium chloride or sodium chloride. Typically, it requires about 10% more salt to regenerate with potassium chloride salt when compared to sodium chloride salt. The advantage of potassium salt is that it does not contribute to a high sodium diet and the backwash can be discharged onto a lawn or garden. Sodium chloride salt will kill plants, so it must be discharged into a sewer system. Salt and Iron Out® remove iron levels up to 4 ppm. Media can be regenerated at 8, 12 and 15 lbs. per ft<sup>3</sup> salt dosages.

Hard water also causes a higher risk of lime scale deposits in household water systems. The negative effect of lime scale buildup is that pipes are blocked and the efficiency of hot boilers and tanks is reduced. This increases the cost of domestic water heating by about fifteen to twenty percent. Another negative effect of lime scale is that it has damaging effects on household machinery, such as laundry machines. Water softening means expanding the lifespan of household machines, and the lifespan of pipelines. It also contributes to the improved working and longer lifespan of solar heating systems, air conditioning units and many other water-based applic





## Stage 4:

Crystal Quest® CQE-WH-04056/01101 Ultrafiltration (UF) is an important purification technology used for the production of high-purity water. UF is effective for the removal of colloids, proteins, bacteria, viruses, parasites protozoa and pyrogens, (e.g., gram-negative bacterial endotoxins), and other organic molecules larger than 0.20 Micron size and most other water contaminations known today. Also removes pesticides and herbicides, as well as the hardness in water and some salt.



## Stage 5:

Crystal Quest® CQE-CO-020251 THUNDER® Series Commercial Reverse Osmosis (RO) Systems are for fresh water and use water purification technology runs water through a semipermeable membrane to remove larger particles from drinking water. In reverse osmosis, an applied pressure is used to overcome osmotic pressure, a colligative property, that is driven by chemical potential, a thermodynamic parameter. High quality components, compact size, easy-to-use features, as well as an expandable design make our Industrial Reverse Osmosis Systems the premier choice for industrial water purification applications. Crystal Quest® Reverse Osmosis systems are ruggedly designed and manufactured for dependable and simple operation. These units provide a higher output of continuous quality de-mineralized water for many industrial applications such as restaurants, pharmaceuticals, bottled water plants, coolant or chemical mixing and the list goes on.



## Stage 6:

Crystal Quest® CQE-UV-00102 6 GPM Ultraviolet Disinfectant Water Sterilizer Systems are specifically designed to meet the demanding microorganism control concern. These microorganisms can range from bacteria and viruses to algae and protozoa. A major advantage of Disinfectant treatment is that it is capable of disinfecting water faster than chlorine without cumbersome retention tanks and harmful chemicals to your drinking water. Crystal Quest® commercial and residential Ultraviolet Water Sterilizers are also extremely cost efficient. The Disinfectant lamp incorporates natural ultraviolet light energy to eradicate microbiological contamination. Water enters through the bottom part of the reactor chamber and swirls around a high output, low pressure mercury vapor lamp thermally protected by a quartz sleeve. The Disinfectant lamp emits powerful ultraviolet light. Energy components contained in microorganisms absorb the light energy; this disrupts the DNA and prevents reproduction. The hard glass germicidal lamps provide an economical way of treating water requiring a 99.99% reduction of bacteria and virus and protozoa. This process is accomplished without adding any harmful chemicals to your drinking water.





## Stage 7:

Crystal Quest® CQE-WH-20006A Alkalinize/Ionize, Remineralize & Oxidation System allows water to travel through a special blend of natural minerals and infrared balls then through a special blend of natural carbonate media which will alkalinize/ionize and mineralize the water and raise the pH level of your water. This process will reduce acidity in the body and will produce natural calcium, magnesium, and potassium ions that can be absorbed 100% in the human body.

Alkalinity refers to a higher pH level of water (8 or 9) as opposed to normal drinking water, which generally has a neutral pH of 7. Alkaline water occurs naturally when water passes over rocks and picks up minerals such as calcium, potassium & magnesium. Advocates of alkaline water believe the higher alkalinity can neutralize the acid in your body and help in preventing certain illnesses because they cannot survive in an alkaline environment. Acid in the body can occur from stress, diet, or environmental conditions such as smog. Alkaline water is believed to provide a variety of health benefits. Its proponents claim that alkaline water can alleviate acid reflux, increase oxygen levels and improve energy and metabolism by helping neutralize acid in the bloodstream, contain antioxidants that fight aging and disease, cleanse the colon, rejuvenate the skin, lubricate muscles and joints, reduce body fat and fatigue, protect bones, support the immune system, and achieve better overall health.



# Technical Information

## TDS Meter

Digital TDS Meter CQE-PT-05014 for Reverse Osmosis Plant. Provides digital reading of permeate water.



## 5600 Control Head Valve

5600 Control Valve CQE-CV-05600 for water filter or softener. Time-tested, hydraulically balanced piston for service and regeneration. LCD display alternates between time of day, and number days until regeneration. Swivel attachment for 360° rotation of 220V power head. Super capacitor for keeping time of day during power outage.



## Custom frame

Material SUS 304 or steel with epoxy coated

