

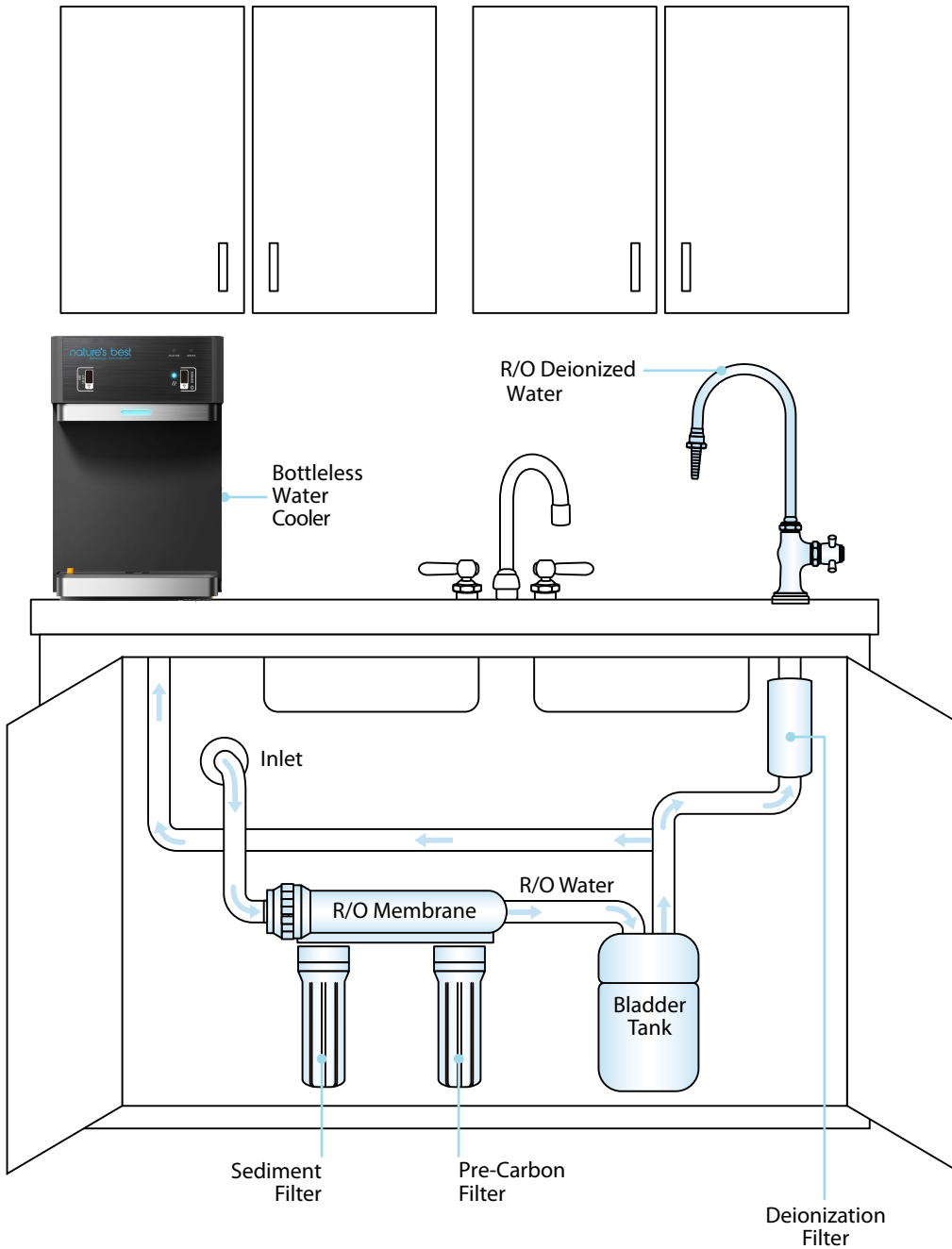
## UltraPure™ Deionized Water System

- ◆ An endless supply of "distilled-grade" water
- ◆ State-of-the-art multi-stage purification
- ◆ Compact undersink installation
- ◆ Dedicated faucet for easy access and dispense
- ◆ Option to add bottleless drinking water cooler
- ◆ Perfect for dental offices, veterinary clinics, optical labs, pharmacies, facial steamers and MORE!



# UltraPure™ Deionized Water: "Distilled-Grade" Water on Demand

The UltraPure™ Deionized Water System is a state-of-the-art multi-stage purification system that delivers "distilled-grade" water free of dissolved solids, minerals, salts, and other impurities which is often required for commercial and laboratory applications. UltraPure™ provides high-purity water on demand, eliminating the need for deliveries of distilled water or on-site steam water distillers. Deionized water is often called for in dental offices, veterinary hospitals, optical labs, pharmacies, food-processing operations, and as a rinse agent since it leaves absolutely no salts or other minerals behind.



- Perfect for autoclaves and high-tech equipment that require high-quality water.
- Reduces costly maintenance of expensive equipment.
- Eliminates the time, hassle and expense of buying bottles of distilled water
- Makes 50 gallons of distilled-grade water per day.
- Environmentally-friendly system, with no plastic bottles to be disposed in landfills.
- Compact undersink installation
- Dedicated faucet for easy access and container filling
- Option to add bottleless water cooler (countertop or tower model)

# WHAT IS DEIONIZED WATER?



Deionized Water ("DI Water") is often synonymous with "demineralized" water due to the fact that all of the mineral ions are removed.

When combined with Reverse Osmosis technology, DI Water is a cost-effective solution to expensive Distilled Water and produces the same "distilled-grade" water critical for ultra-pure water applications.

## DEIONIZATION

Deionization is the procedure by which water is passed through ion exchanges to remove ions such as calcium and fluoride and replace them with hydrogen ions and hydroxyl ions which then reform to make pure water molecules.

**H<sup>+</sup> HYDROGEN ION**      **OH<sup>-</sup> HYDROXYL ION**



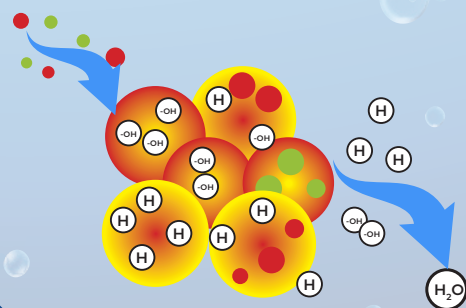
**CATION RESIN**

● Cations are positively charged ions such as Sodium, Calcium, Iron & Magnesium.



**ANION RESIN**

● Anions are negatively charged ion such as Chloride, Sulfate, Nitrate & Fluoride.



# DEIONIZED WATER USES AND APPLICATIONS

## LABORATORY APPLICATIONS

- As solvents to prepare various solutions
- In autoclaves to extend the life of the chamber
- To clean glassware without leaving a residue
- To sterilize sensitive equipment

## AUTOMOTIVE APPLICATIONS

- Lead-acid batteries
- Cooling systems
- Aircraft engines
- Gas-turbine engines
- Washing mechanisms

## PHARMACEUTICAL APPLICATIONS

- Compendial articles
- Analytical reagents
- Active pharmaceutical ingredients and intermediates

## MEDICAL APPLICATIONS

- To clean wounds in order to protect them from infection
- In irrigation solutions during surgery to prevent the entrance of bacteria
- In mouth rinsing during dentistry so that no bacteria is introduced to any open wounds

## 4 STAGE DEIONIZATION SYSTEM: HOW IT WORKS

**STAGE 3 -- RO MEMBRANE**  
The workhorse of the system, a state-of-the-art 0.0001 micron membrane that reduces metals, arsenic, pharmaceuticals, lead, mercury and other solids.

**ULTRA-PURE OUTPUT WATER**  
"Distilled-grade" water free of all impurities that is suitable for use in critical ultra-pure water applications.

**STAGE 4 - DEIONIZATION**  
A cartridge of positively and negatively charged resins that removes ionized minerals and salts.

**STAGE 2 -- PRE-CARBON FILTER**  
Reduces chemicals such as chlorine, solvents, pesticides and various organic compounds.

**STAGE 1 -- SEDIMENT FILTER**  
Reduces sediment such as rust, dust, clay and pipe residue.

