

Choosing Water Treatment

Two atoms of hydrogen and one atom of oxygen compose a water molecule. The substances water molecules come into contact with are the contaminants that water treatment devices are designed to remove or treat. Understanding how to properly treat the contaminant is at the core of proper water treatment practices.



Representation

The primary role of water treatment equipment is to improve water quality through the disinfection and purification of untreated ground and surface water. Treatment equipment is designed to provide potable, palatable and end use water for Point-of-Use (POU) and Point-of-Entry (POE) applications.

Applications

POE devices are whole-house treatment systems which are designed to reduce contaminants in water and intended for use with showering, washing dishes and clothes, brushing teeth, and flushing toilets. They are designed to prevent scaling or staining of fixtures and restrict damage to water heaters, dishwashers and hot water boilers. This includes water softening (ion exchange), backwashing units, filtration systems and ultraviolet (UV) technologies.

POU devices treat water at the point of consumption primarily for drinking water applications. The technology provides the final barrier to further treat water before it is consumed or used. This includes activated carbon, reverse osmosis and ultraviolet (UV) technologies as well as distillation.



Equipment Tips

- POU devices can be POE applications such as whole house reverse osmosis.
- UV Disinfection is commonly used in both POE and POU applications.
- All POE & POU equipment applications should be properly applied.

How it Relates

Water and health are linked together. According to the Centers for Disease Control and Prevention (CDC), the top causes of disease outbreaks related to drinking water are Giardia intestinalis, hepatitis A, norovirus, and Shigella. There are also health risks related to water contaminated with organic and inorganic matter, other bacteria, viruses and various pollutants. The element lead (Pb) in drinking water has been linked to delays in physical and mental development, short attention spans, and learning difficulties in children. There's also evidence that arsenic (As) in drinking water can lead to nerve, heart, skin, and blood vessel damage. These are just a few of the multitudes of potentially harmful contaminants known to be present in Canada's water supply.



Commentary

- Treatment devices are designed to benefit consumer's lives, improving water quality.
- The complexity of contaminants grows with new research and published findings.
- Studies have shown that certain devices can save on electricity and cleaning costs.

Why it is Important

Water treatment plays a role in every consumer's life. It is a critical component of municipal water supplies and essential in rural applications for regulated or personal water supplies. Water treatment dealers play an important role in ensuring the safety of water for consumers. Softened water can save you money by keeping appliances at top efficiency, and making them last longer. Washing machines, dishwashers and hot water heaters operate properly with scale free water. Reverse osmosis systems can reduce total dissolved solids (TDS) to recommend drinking water guidelines. A properly installed, sized and applied UV system can provide disinfection for e.coli and coliform.

When installed correctly, treatment equipment can provide consumers with water that is safe and potable. Herein lies the challenge as a consumer for treatment equipment is varied and available widely through dealerships, plumbing companies, small and large retailers as well as the internet all with little regulation.

Charting the Right Course

The Canadian Water Quality Association (CWQA) acts in Canada as the agency to train, educate and certify water quality professionals. The CWQA supports, as well as improves the health, sustainability and credibility of the water quality industry in Canada. A certified water treatment professional has the education and resources to properly test water, recommend practices and install equipment. Certification can be further specialized into sales, design, installation and service. Members of the association adhere to the code of ethics which sets forth standards of conduct for industry members in their dealings with their customers, members of related industries, and with the public at large.



Walking the Path



A water treatment professional can navigate the options for you, due to the fact that water is complex, having many potential contaminants, and there is no "one size fits all" solution to your water problems. Having the proper certification, training and knowledge are important whether you are designing, selling, servicing or installing any type of water treatment equipment.