

Improve The Quality & Taste Of Your Water

Chemical-Free



At Work



At Home

Triangularwave Technologies, Inc. (TWT®) All-In-One Fluid Treatment Kits

**TWT® Filtration • Deposit Control Technology Ultra Violet (UV)
Disinfection & Purification Combined for Maximum Effectiveness**

TWT offers a full range of products & systems designed to address fluid problems wherever fluid flows. From TWT® patented deposit control technology to pre and post filtration needs, ionization, disinfection, and ultraviolet purification treatment and conditioning.

Components and subsystems chosen from across the range of treatment methods can be combined in different configurations to provide custom solutions specific to your facility site or application.

TWT® has the versatile, efficient, cost-effective methods to solve your water/fluid management problems end to end.

TWT® “The Competitive Edge”



Improve The Quality & Taste Of Your Water

Triangular Wave Technologies, Inc.

All-In-One fluid management systems, the ultimate in water treatment & conditioning

TWT® systems are factory engineered and assembled, applying all of the needed elements for maximum fluid protection, management, and peace of mind in one simple packaged solution. TWT® Filtration, Microprocessor Deposit Control Technology and UV Disinfection units are combined to provide a start-to-finish answer to simplified prevention, treatment and management of water line contamination dangers.

Water lines in the residential, commercial & industrial sectors, **where clean water is essential**, commonly allow a contaminated interior environment conducive to the growth of bacteria, protozoa, and fungi. These initially arrive in small numbers through wells, and public waterline plumbing systems. Over time, these microorganisms bind to the sides of your water pipes and tubing, and equipment forming biofilm. As water flows through the pipes and tubes, the biofilm sheds microorganisms and bacterial endotoxins into the water, leading to these harmful conditions.

How the TWT All-In-One Kits work!

1. Filtration Systems:

Filters are designed to trap various kinds of debris, dirt and organic particles that will otherwise enter your equipment and/or plumbing system, restrict your water flow and create a breeding ground for bacteria. Filtration is the first line of defense for residential, commercial, industrial facilities, where the source of water may be ponds, wells or streams that have high exposure to contamination from airborne pollutants, surface run-off, agricultural or industrial waste or similar dangers. The first step in achieving clean water is to install a filtration device that effectively removes particulate matter and similar debris. Filtration is an important step in water treatment, especially for water intended for human consumption. Filtration systems provide a bacteriostatic environment and are designed to remove, volatile organic chemicals, hydrogen sulfide and sulfur, herbicides, pesticides, chemical fertilizer residues, trihalomethanes and many other pollutants.

The filtration units utilized in TWT systems are comprised of several filter types and media that remove harmful chemicals, metals, and toxins from the water as it passes through these layers. Filters used in staged filter housings are configured as illustrated on system trade ads. Upon request if needed other filter mediums and filters used in system can be determined by a water quality analysis. If fluid conditions require additional micronic particle trapping for enhanced results, filters are available in various micronic sizes providing flexibility & adaptability to meet the needs of all fluid conditions & applications.



2. TWT® Patented Deposit Control Technology

The basic component of the TWT systems is the deposit controller. It is comprised of a microprocessor, solenoid coil wrap and/or a reaction chamber. The microprocessor is a patented controller that functions like a computer to relay a continuous electrical power supply to the solenoid coil and/or reaction chamber. The reaction chamber is plumbed into the main water in-take line and/or just before each piece of vital processing equipment, and provides a factory wrapped wire coil forming a solenoid. The solenoid conveys the triangular wave signal at the appropriate power level (as allowed by the model chosen) to the water passing through the chamber.



This signal constantly changes the polarity, frequency, and amplitude of the current entering the water. This triangular wave treatment produces several benefits. It increases the capability of water to hydrate scale ions and other colloidal particles. In effect, the surface charge of the hydrogen molecules is enhanced and the water is made "wetter". This "hydrated" water can dissolve unwanted particles, suspend them in solution, and allow them to be easily filtered out or flushed from the system. Accordingly, the mineral and biological particles that cause scale, deposits, and corrosion are dissolved and washed away.

This means that the breeding environments for bacteria, such as bio-film and corrosion, are eliminated. The agitation created in the reaction chamber also disrupts the conditions essential for the normal reproduction of bacteria and they die, thus allowing them to be harmlessly flushed out of the system. If left untreated, scale build-up inside the reaction chamber and on the quartz sleeves containing the UV lamps may rapidly diminish the UV disinfection effectiveness by reducing the amount of UV light which is absorbed into the water stream. The TWT Deposit Control System will further condition the treated water stream so as to prevent this scale build up inside the UV reaction chamber, helping to maintain maximum UV life cycle and penetration into the water stream. TWT deposit control technology (treated fluid) maintains the ability to control deposits throughout the system with down-stream residual value.

3. Ultra-Violet Disinfection/Purification:

The UV disinfection technology used in the system provides safe process and potable water, free of disease-causing pathogens. As water passes through the UV chamber, UV light will attack and render harmless any bacterial, viral or spore contamination present in the treated water. "High intensity UV light destroys these contaminant's with a 99.9% or greater kill rate".



The output water is thus disinfected and offers exceptionally high quality for human consumption and use.

TWT® Deposit Control Technology, Ultra Violet Lamp Protection (cleaning) with Down-Stream Residual Benefits.

Chemical-Free All-In-One Water Treatment Kits



#TWT-AIOKIT: 4 GPM – Designed for pipes up to 3/4" in diameter

Kits Include:

One (1) 10" Double Filter Set – Sediment & Carbon

One (1) Triangularwave Chemical-Free Deposit Controller with a Copper pipe signal Enhancer for copper pipe application only. # TWT-5C8-472CSE

One (1) 4-GPM Ultraviolet Purifier. # TWT-UV-250

Kits include double filtration with and extras set of replacement filters, filter wrench, chemical-free deposit control (hard water treatment) and ultra-violet purification technology.

Note: All products are shipped with easy to follow application, installation and maintenance materials. Handy man and/or licensed plumbing contractor application and installation suggested. Note: If water feed lines at the facility are PVC / Pex or Non-magnetic material, you will not need the Copper pipe signal enhancer. Copper pipe signal enhancer optional, must specify if not required when placing purchase order.

(All pumps, pipes, fittings and other related plumbing equipment needed, owners responsibility).



TWT-AIOKIT: 8 GPM – Designed for pipes up to 1" in diameter

Kits Include:

One (1) 20" Slim-line Double Filter Set – Sediment & Carbon

One (1) Triangularwave Chemical-Free Deposit Controller with a Copper pipe signal Enhancer for copper pipe application only. # TWT-5C8-472CSE

One (1) 8-GPM Ultraviolet Purifier. # TWT-UV-700

Kits include double filtration with and extras set of replacement filters, filter wrench, chemical-free deposit control (hard water treatment) and ultra-violet purification technology.

Note: (A) All products are shipped with easy to follow application, installation and maintenance materials. Handy man and/or licensed plumbing contractor application and installation suggested. Note: If water feed lines at the facility are PVC / Pex or Non-magnetic material, you will not need the Copper pipe signal enhancer. Copper pipe signal enhancer optional, must specify if not required when placing purchase order.

(All pumps, pipes, fittings and other related plumbing equipment needed, owners responsibility).



TWT-AIOKIT: 12 GPM – Designed for pipes up to 1" in diameter

Kits Include:

One (1) 20" Big Blue Double Filter Set – Sediment & Carbon

One (1) Triangularwave Chemical-Free Deposit Controller with a Copper pipe signal Enhancer for copper pipe application only. # TWT-5C8-472CSE

One (1) 12-GPM Ultraviolet Purifier. # TWT-UV-1200

Kits include double filtration with and extras set of replacement filters, filter wrench, chemical-free deposit control (hard water treatment) and ultra-violet purification technology.

Note: (A) All products are shipped with easy to follow application, installation and maintenance materials. Handy man and/or licensed plumbing contractor application and installation suggested. Note: If water feed lines at the facility are PVC / Pex or Non-magnetic material, you will not need the Copper pipe signal enhancer. Copper pipe signal enhancer optional, must specify if not required when placing purchase order.

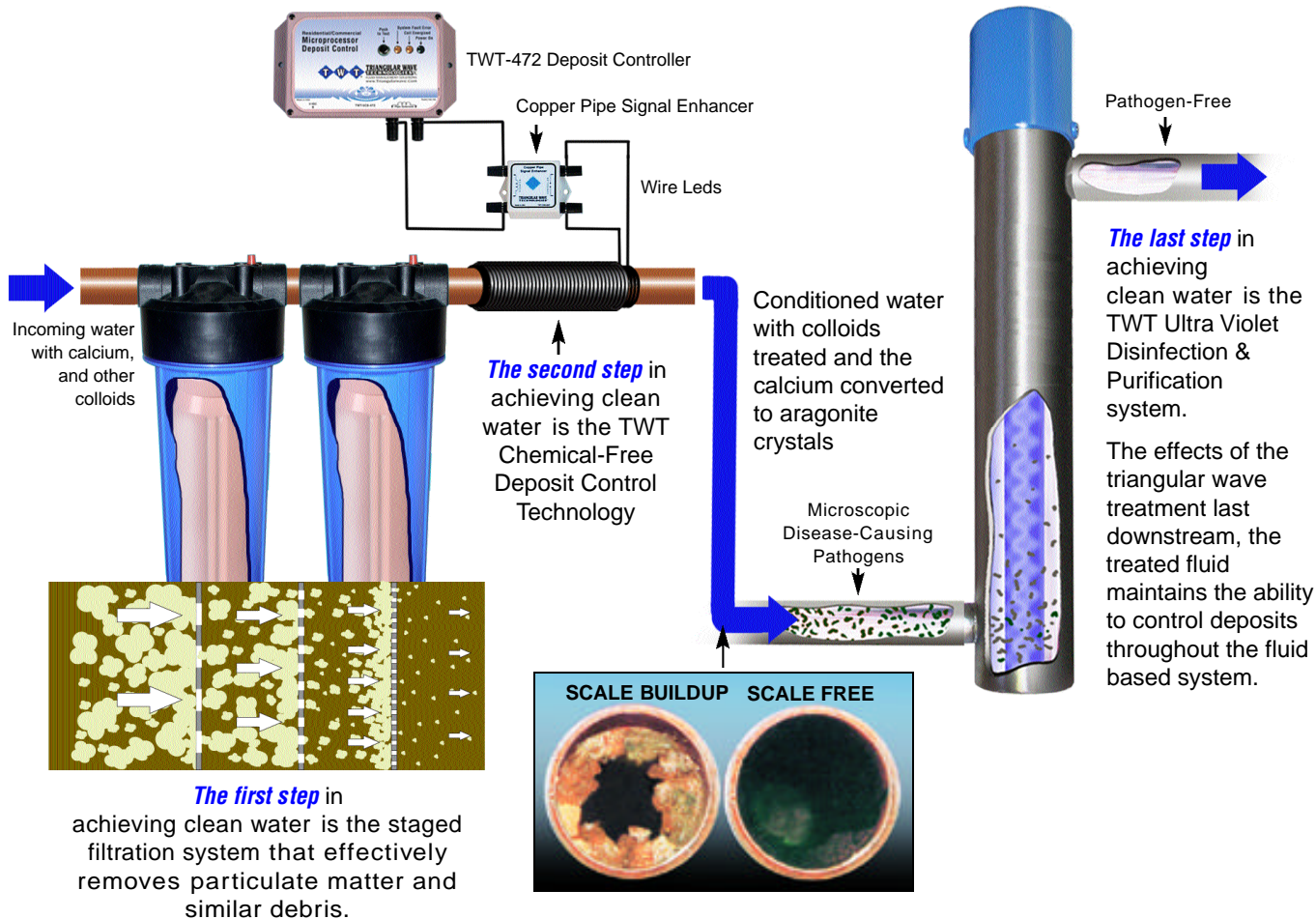
(All pumps, pipes, fittings and other related plumbing equipment needed, owners responsibility).

TWT All-In-One Kits are available for larger pipe applications, GPM requirements and process technologies made be up-graded, changed to meet your specific water treatment requirements upon request.

Note: Kits are available in 110/20-V or 220/30-V Must specify with Purchase Order.

Email: info@triangularwave.com • triwaveinc@aol.com • websites: www.triangularwave.com • www.twtwatertreatment.com

TWT® Multi-Process Filtration, Conditioning, Treatment and Purification Technology



In effect, a clean, corrosion-free delivery system is restored and maintained in an environmentally safe and chemical-free manner. The result is clean water, pipes and tubing with no biofilm and bacterial contamination.

TWT water treatment systems are ideally suited for Wells, Homes, Offices, Factories, Farms, Medical/Dental, Laboratory Environments, Restaurants, Rain Water Harvesting, Landscaping, Irrigation and anywhere the need for cleaner water to use and drink is required.

TWT All-In-One Water Treatment Kits, component configuration can be upgraded, changed to meet your home, office or factory specific treatment requirements. (Filtration, Deposit Control and/or Ultra Violet Technology)

Application Guidelines

Filtration • Patented Deposit Control Technology UV Disinfection & Purification

Optional Copper Pipe Signal Enhancer

Copper pipes, although acceptable, are one of the more difficult of materials to work with. To overcome this...TWT has developed its Copper Pipe Signal Enhancer. This unit is placed between the Deposit Controller and the solenoid coil on the copper pipe. The function of the signal enhancer is to provide a proper impedance match and to ensure maximum energy transfer between the controller and the solenoid, which, in turn, ensures enhanced treatment of the fluid.

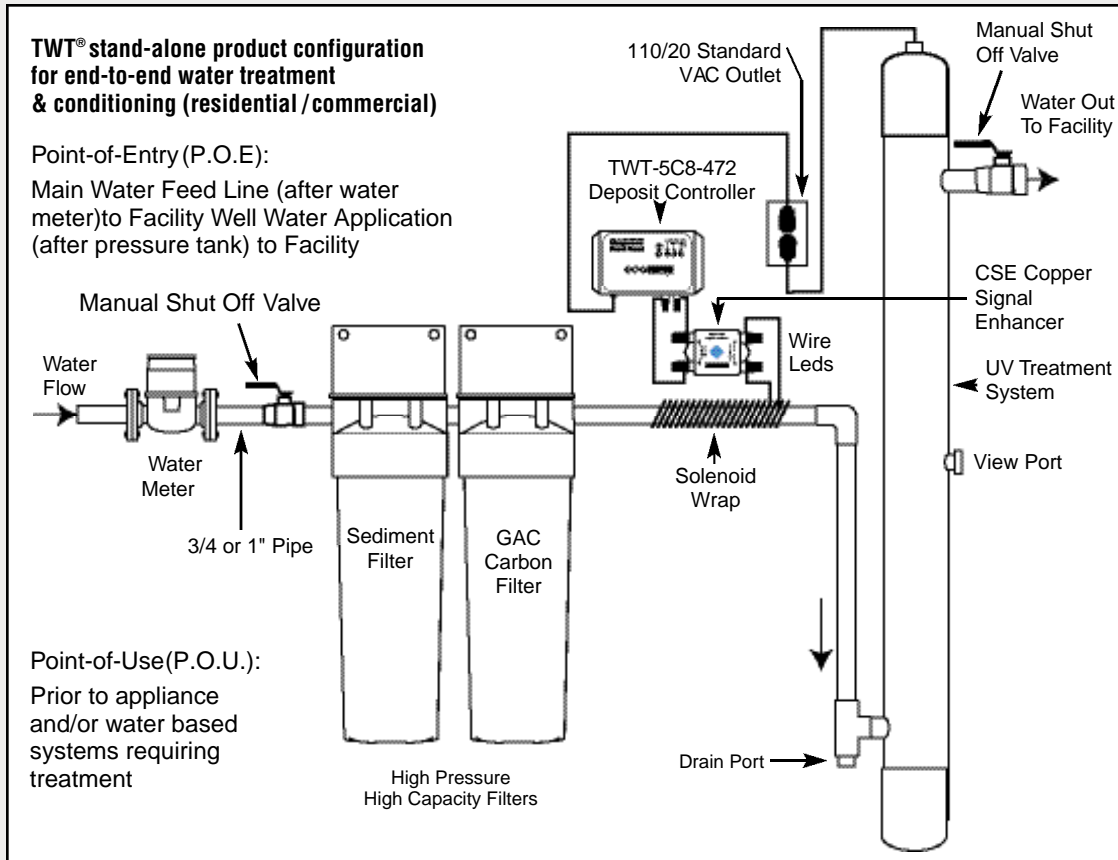
Magnetic pipe materials such as steel, galvanized steel, iron, ductile iron or cast iron become shields and prevent the proper energy transfer to the fluid path. For magnetic pipe applications we offer a full line of factory wrapped wire coil Reaction Chambers. TWT products are designed to provide comprehensive solutions to water and fluid management problems. The Copper Pipe Signal Enhancer and its equivalent for the magnetic pipe environment, TWT Reaction Chambers, offer the answer to limited signal penetration, ensuring optimal results. The copper signal enhancer is a passive signal / impedance matching circuit. This device provides a power boost to the conditioning signal in copper pipes. **Special Note:** Copper pipe signal enhancers are to be used on copper pipes only.



TWT-5C8-472 Residential Commercial:
For pipes up to 1" Voltage: 9 vdc Transformer

Satisfaction Guaranteed

Freed water molecules dissolving existing scale



TWT stand-alone products will vary in size, capacity and gpm treatment requirements (above schematic rendering not to scale, for reference only).

Hard Water Problems Solved Easily!

Triangular Wave Patented Deposit Control System (TWT®) Technologically Advanced Method for Water & Fluid Management...CHEMICAL-FREE Your Simple and Safe Solution

- ***Eliminates Deposits in Pipes, Fixtures and Equipment***
(Softens and removes hard scale build-up around plumbing fixtures)
- ***Controls Algae and Bacteria***
(Prevents the formation of biofilm, the breeding ground for algae and bacteria)
- ***Reduces Soap Scum and Improves Lather of Soap***
- ***Reduces Detergent and Soap Use***
- ***Removes Existing Scale on Heat Exchangers Over Time, Which Improves Heat Transfer for Greater Efficiency***
- ***Salt and CHEMICAL-FREE Water Conditioning***
- ***Pennies Per Day to Operate***
- ***Cost Effective***
- ***Easy to follow application & installation manual***
- ***Energy Savings***
(Initial estimates indicate savings of between 15% to 30% on water heating bills in hard water areas)
- ***Reduced Household Maintenance***
(Prevents scale build-up and dissolves existing scale, making water heaters more efficient)
- ***Provides The effect Of Softened water***
(The water is scum-free and gives the benefits of soft water on skin, hair, clothes, and food preparation)
- ***Requires Little Or No Maintenance***
(No moving parts. design life cycle at 20 plus years)
- ***Portable and Compact***
(can be disconnected and brought with you when moving)
- ***Easy Installation***
(Requires little or no plumbing. A domestic electrical supply is all that is required (other voltage/current sources available upon request).

Sensing Environmental Needs with Intelligent Solutions

TWT® The Ultimate in Water Treatment & Conditioning

GO GREEN-SAVE GREEN

- • ***Control Scale Deposits***
- • ***Corrosion • Bacteria • Algae***
- • ***Colloids In Your Water/Fluid Based Systems***
- ***Conserve Water, Save Energy... Non-Chemical, Efficient, Safe, And Cost-Effective***
- ***Technologically Advanced Methods for Water Conditioning & Treatment (Chemical-Free)***
- ***Comprehensive Whole Home/Office Systems, Your Simple And Safe Method!...TWT® The Smart Water Solution***
- ***Value Added Technology***
- ***No Matter How Tough The Job... TWT® Has The Solution***
- ***Cleaner Water is Healthier Water!***
- ***TWT® Is Your Simple and Safe Solution***

In order to ensure the greatest level of performance and satisfaction in your work with the TWT products & systems, we recommend that you contact our engineering staff, who will be pleased to work closely with you to determine the optimal application and installation for your specific needs.

DON'T WAIT...Contact us today for a free consultation! A luxury you CAN afford

