

TRIANGULAR WAVE TECHNOLOGIES, INC. (TWT®) PRODUCT SUMMERY

Sorted by Technology

P.O.E. Point-of-Entry • P.O.U. Point-of-Use

Commercial • Industrial • Residential

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TWT, Inc. offers a full range of products & systems designed to address fluid problems wherever fluid flows. From patented deposit control technology to pre and post filtration needs, ionization, iron removal, disinfection, and ultraviolet purification treatment and conditioning, TWT has the versatile, efficient, cost-effective methods to solve your fluid management problems end to end.

- **Versatile Fluid Management Systems To Effectively Meet The Needs Of Any Industry and Application**
- **Controls scale, bio-film & corrosion**
- **Enhance operating efficiency & life cycle of equipment**
- **Saves water & energy**
- **Protection for new equipment: TWT provides new equipment with the ability to enhance it's features and benefit**
- **Treatment for existing equipment: Retrofit existing equipment to improve its operating efficiency and life cycle**

TWT® Patented Deposit Control—Technologically Advanced Method for Water & Fluid Management Providing Comprehensive End-To-End Treatment & Conditioning (chemical-free)

TWT Patented Deposit Control System

The basic component in 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 small 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 the 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.

TWT Reaction Chamber:

The TWT Reaction Chamber is part of the patented TWT Deposit Control Technology, the function of which is to control scale and bio-film in the plumbing infrastructure, fixtures, and water-fed appliances found in the facility being treated. The Reaction Chamber provides a chamber through which the water flows and is exposed to the triangular wave signal that lies at the heart of the deposit control technology. As the fluid passes through, it is treated and then carries that treatment downstream, to condition the rest of the plumbing system, non-chemically and reliably.

To use in conjunction with the TWT Deposit Control Systems when required, Triangular Wave Technologies, Inc. has developed a line of factory-wrapped wire Reaction Chambers to address magnetic pipe environments. –*Typically, wire coil cannot be installed on any magnetic pipe, such as steel, galvanized steel, ductile iron, or cast iron.* If a coil is applied to such a pipe, the pipe becomes a shield and prevents the wave energy from entering the fluid path. The TWT Reaction Chambers solve this problem by providing an easily installed section of non-magnetic pipe to provide the proper pipe material for the Deposit Control System to work as designed. The TWT Reaction Chambers are fully sealed, protecting their two layers of factory-wrapped coil. The PVC, Stainless Steel and the Industrial Reaction Chamber systems are designed and manufactured to meet the highest quality specifications.

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.

Ionization—for bacteria, algae, fungus control in Pools, Spas, HVAC

IonGuard Purification System:

The IonGuard Purification System is an electrolytic copper /silver ion generator. The system units contain specially cast copper /silver alloy electrodes. These electrodes are mounted in a housing designed for easy access (HVAC & Pool Environments). The IonGuard Purification System purifies water through a process called ionization. This process utilizes a low voltage direct current [DC] to place precise and minute amounts of copper and silver ions into water systems. Copper ions kill algae and silver ions kill bacteria (integrate with TWT deposit control technology for enhanced results).

Ultraviolet Disinfection / Purification—high intensity bacteria control for potable water, waste water, food service, sanitary, pharmaceutical applications and anywhere the need for safe water required.

Ultraviolet Disinfection/Purification Systems:

The UV disinfection technology used in the system to provide safe, potable drinking 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 contaminants with a 99.9% kill rate” The output water is thus disinfected and offers exceptionally high quality for human consumption.

Ozone Disinfection

The Ozonator is a natural, safe way to purify water in many different applications. It eliminates the need for chemicals which can be irritating to people and costly to budget. The Ozonator converts Oxygen (O₂) into (O₃) by the action of the corona discharge system. Ozone is then injected into the water where it destroys viruses, bacteria and many other micro-organisms. taste, odor and color disappear and iron oxide, hydrogen sulphide, lignite and tannin are precipitated out, leaving your water pure and clean.

Filtration Systems—Commercial • Industrial • Residential

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, streams or other water sources 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.

Chemical-Free Iron Removal Systems -for 12 to 50 ppm iron.

The Rust-Erase iron filter system is designed to effectively eliminate rust from your water supply economically and thoroughly. No more unsightly rust stains in the toilet, tub and sink., the laundry will be cleaner, too! The Rust-Erase Iron Filter works automatically. Every drop of water coming through the line is filtered to remove rust and other particles. The pre-set timer periodically activates the back-wash mechanism which keeps the filter medium fresh and effective for many years. Media is good for approximately 3 - 5 years or more depending on water conditions.

Effects of iron and manganese in water– When exposed to air, dissolved iron or manganese reacts with oxygen and is converted by oxidation to a colored, solid material that settles out of the water. Iron changes to white, then yellow and finally to a reddish-brown color. Manganese forms a black residue. High concentrations of these sediments cause reddish-brown or black stains on laundry and facility fixtures. Another result of iron and manganese in water is the presence of harmless bacteria in soil, shallow groundwater supplies and some surface water that secrete large amounts of red-brown (iron) or black-brown (manganese) slime that stain toilet tanks.

Integrated Water: Treatment & Conditioning Systems:

MD Series Integrated Water Treatment Systems

TWT® technologically advanced method for water management. 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 Controller, Reaction Chamber, and UV Disinfection units are combined to provide a start-to-finish answer to simplified prevention, treatment and management of water line contamination dangers. *The TWT All-In-One Fluid management water disinfection/purification systems are unique, compact, self-contained units for the treatment of water. (well and ground water application)*

DP Series Integrated Water Treatment Systems

Technologically advanced method for water management. Triangular Wave Technologies, Inc. TWT® Patented Deposit Control/Ultraviolet Disinfection / Purification systems, TWT® systems are factory engineered and assembled, applying the needed elements for maximum fluid protection, in one simple packaged solution. TWT Microprocessor Deposit Controller, Reaction Chamber, and UV Disinfection units are combined to provide a simplified prevention, treatment and management of water line contamination dangers. The TWT water disinfection/purification systems are unique, compact, self-contained units for the treatment of water. *(municipal water application)*

Bacterial Reduction Systems

Technologically Advanced Fluid Treatment Methods for the Meat, Poultry and Other Related Processing Industries. Filtration • Deposit Control Technology • Ozone and/or UV Disinfection /Purification Combined for maximum effectiveness. *(bacteria reduction guaranteed) “The Competitive edge”*

Total Water Control System for large cooling system applications - computer controlled system featuring Deposit Controller, Ultra-violet Disinfection or Ionguard and Filtration. Low pressure systems to 6,000 gpm, high pressure systems to 36,000 gpm for cooling tower, process water and other industrial applications.

Transportable Water Treatment Systems

The most economical and efficient way to produce safe drinking water in temporary situations

The TWT Transportable Water Treatment System is an integrated system of exactly selected components customized to remedy specific water treatment problems in temporary installations, remote areas or crisis situations. First developed for use in military camps related to the 1996 UN peace-keeping mission in Bosnia, the TWT are well suited to a wide range of applications. TWT systems are designed to produce safe drinking water, dependably and economically, from a wide range of problem input sources. The self-contained, transportable system filters out contaminants such as heavy metals, pesticides and parasites from any non-salt water source and kills all micro-organisms including virulent bacteria and viruses.

HydroBlend Combined with TWT– An Enhanced Hot Water Solution

HydroBlend is a unique composition blended to exhibit enhanced lime-scale (calcium carbonate) prevention and corrosion control. Combined with Triangular Wave Technology it is superior in the treatment of scaling caused by hard water minerals. Plus it helps to control staining caused by the precipitation of iron and manganese. The most important advantage in using HydroBlend with TWT® is that HydroBlend is not affected by high temperatures, retaining its full ability end-to-end. This provides the greatest amount of scale prevention available.

Custom Engineered Systems to your Exacting Specifications:

TWT has extensive design, engineering, manufacturing, consulting and training ability to work with customers worldwide, and to use its products and/or systems in whole or component form, as a component assembly, or as an accessory to their primary product. Take advantage of our outstanding manufacturing and marketing expertise — let TWT custom design a product and/or system to meet your specific application, system integration, and/or retro-fit program needs.

Our unique capabilities and custom design expertise have and continue to successfully solve a wide variety of problems for a wide variety of customers (Commercial • Industrial • Residential).

- **FROM IDEAS TO FINAL PRODUCTION**
- **EFFICIENT ENGINEERING DESIGN TEAM STATE -OF-THE-ART PRODUCTION EQUIPMENT AND FACILITY TO MEET THE EVER CHALLENGING PRODUCTION REQUIREMENTS**
- **TECHNICAL AND TEST DEPARTMENT WITH OUTSTANDING QUALITY CONTROL GUARANTEED**
- **COST EFFECTIVE AND DELIVERED ON TIME**
- **IN ORDER TO ENSURE THE GREATEST LEVEL OF PERFORMANCE AND SATISFACTION IN YOUR WORK WITH TWT PRODUCTS AND SYSTEMS, WE RECOMMEND THAT YOU CONTACT OUR ENGINEERING STAFF, WHO WILL BE PLEASED TO WORK CLOSELY WITH YOU TO DETERMINE THE OPTIMAL INSTALLATION FOR YOUR INDUSTRY SPECIFIC NEEDS.**

**Thank you for your time, interest in our products, systems and technology.
We at TWT, Inc. look forward to being a valued part of your operation.**

Notes:

Systems and/or subsystems of larger sizes/capacities or alternate materials available by special order.

Accessories, spare parts and consumables for all products and systems available upon request

Worldwide distribution

**To learn more about TWT® products, systems and technologies visit Triangular Wave Technologies, Inc. comprehensive website. The valuable technical resource for all involved in water and fluid management.
www.Triangularwave.com**

