

TRIANGULAR WAVE TECHNOLOGIES FLUID MANAGEMENT SYSTEMS

Biofilm & Bacteria Control for Medical, Dental and Laboratory Environments

“Eliminate the biofilm that serves as a breeding ground for disease causing bacteria, collecting in your pipes, tubing and equipment.”

A common problem in medical, dental and laboratory environments is the formation of biofilm and bacteria in water lines and tubing serving the equipment and instruments. Waterlines provide an environment conducive to the growth of bacteria, protozoa and fungi that arrive initially in small numbers through the water-feed line plumbing system. Over time, these microorganisms bond to the sides of water pipes and tubing forming biofilm. As water flows through the pipes and tubes, the biofilm sheds microorganisms and bacterial endotoxins into the water. To combat this, TWT introduces a system that marries the filtration process with the power of patented triangular wave deposit control and the disinfection power of ultraviolet light.

First, the water is filtered to remove lingering sediments, chlorine, heavy metals and organic carbon compounds. The filtering process features a sediment filter, the dual filter media of patented KDF 55 and Granular Activated Carbon, and a final Carbon Block Filter. An optional Meter Valve is also available to provide an automatic signal and shut off when it is time to reset and/or change the filters.

The progressive cartridge filtration system: The incoming water flow through each of these filters in sequence:

- The sediment filter removes any particulate matter.
- The dual media KDF/GAC provides state-of-the-art filtration. The KDF filter (a copper/zinc media) removes lead, mercury, iron and other heavy metals, plus chlorine, hydrogen sulfide, sulfur taste and odor and provides a bacteriostatic environment. The GAC filter (granular activated carbon) removes volatile organic chemicals, pesticides and herbicides, trihalomethane compounds, radon, solvents and hundreds of other man-made chemicals found in tap water.
- Final post sediment filtration provides complete end-to-end protection. A final assurance that any remaining pollutants are removed (such as cysts, remaining volatiles, chemicals and organic additives).

Second, the patented Triangular Wave Deposit Control System conditions the water before it enters the water lines for the equipment and instruments. The colloids in the water are conditioned so that they remain suspended and unable to attach to the water line walls or equipment and instruments. In addition, the conditioned water will attack the existing biofilm on the walls of the water lines and causing it to detach from the walls and remain suspended in the water. By eliminating the habitat provided by the biofilm, the bacteria will ultimately die off. The result is clean water lines and tubing with no biofilm and reduced bacterial contamination.

The deposit control feature (micro-processor and reaction chamber) provides the following benefits:

1. Removes and prevents scale build up and mineral deposits (descales the entire system over time)
2. Improves efficiency of all water-fed equipment and extends the useful life of this equipment.

3. Provides the effects of softened water without chemicals.
4. Is totally safe and maintenance-free.
5. Controls algae and bacteria (they are dispersed in the water and prevented from attaching to surfaces where they can feed and reproduce), thus they die.
6. Biofilm is removed and prevented from re-occurring; thus damage to vessel surfaces from bio-growth is eliminated.
7. In effect, a clean, corrosion-free water delivery system is restored and maintained in an environmentally safe and chemical-free manner.

Third, the Triangular Wave Ultraviolet Disinfection subsystem will then kill 99.9 % of any remaining bacteria and viruses by disrupting the microbes' DNA with ultraviolet light rays. Ultraviolet disinfection has been proven to be an effective non-chemical disinfection system.

**Water The Way
Nature Intended It!**

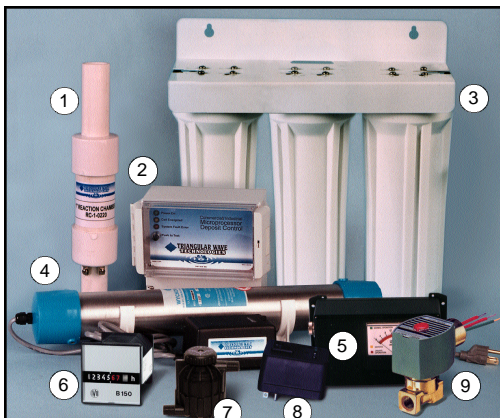


**NEW! The All-In-One Potable Water
Protection TWT-MD-1001/1002/1003**

This fluid management system is a compact, self-contained, wall-mounted unit for the treatment of water in the medical / dental / laboratory environment.

Factory Assembled & Mounted Fluid Management Systems

Applies all the needed elements for maximum fluid protection, management, and peace of mind in one simple packaged solution. State-of-the-art 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. TWT solutions are scalable to fit the volume you need - ask us to specify the system that works best for you!



Components*

1. TWT Reaction Chamber
2. TWT Deposit Controller
3. TWT Filters
4. Ultraviolet
5. UV Monitor
6. UV Hour Meter
7. TWT-MV-Filter Meter
8. UV Alarm
9. Solenoid Shut-off Valve

Optional Upgrades

*System components may change for specific models

Specifications

Model TWT-5C8-Series Deposit Controllers

Residential/Commercial Deposit Control System with Reaction Chamber

TWT-RC-1-0221 Reaction Chamber

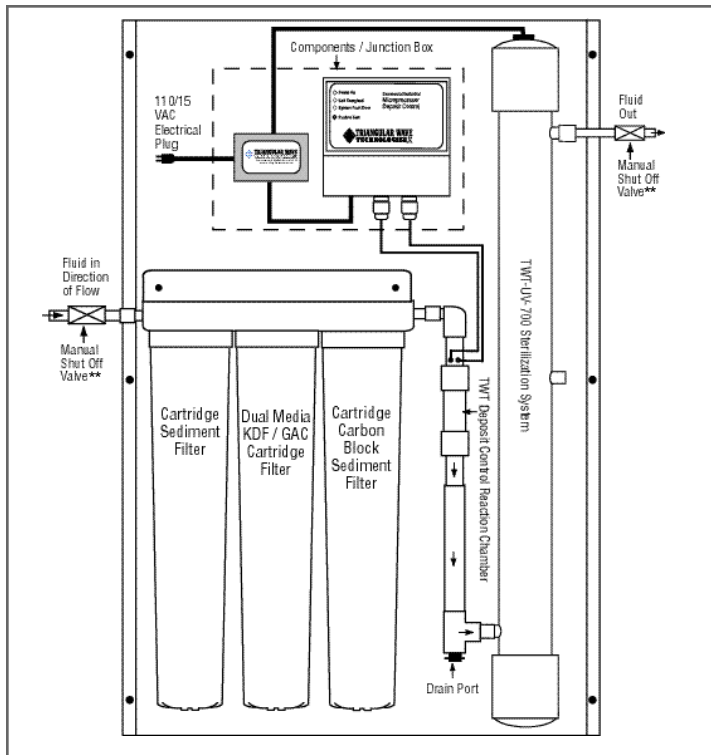
Factory wrapped 1 inch PVC pipe Solenoid Reaction Chamber for use with Microprocessor Deposit Control System.

TWT-MUC-102

Double Unit Water Filter System • Filtering capacity: 7500 gal.

TWT-MUC-103

Triple Unit Water Filter System • Filtering capacity: 7500 gal.



TWT-MD-1003 12 and above operatories

Rendering of Triangular Wave Technologies Fluid Management System. System consists of a Deposit Controller TWT-5C8-401 • TWT Reaction Chamber • UV-700 Disinfection System • TWT-MUC Filtration System

TWT-UV-700

Rated Flow: 30 Liters per minute / 8 Gallons per minute • U.V. Dose @ Maximum Flow: 21,400 mw/sec/cm2
Electrical Supply: 120V/60Hz/3 Amp/240V/50Hz/2 Amp / Power Consumption: 36 Watt / Maximum Operating Temperature: 37C (98.6F) / Maximum Operating Pressure: 125 psi - 8 Bar / Plumbing: 3/4" N.P.T. In-Out / Size: 38" x 6" x 3" (97 cm x 15cm x 7.5cm) Weight: 8 lbs (3.5 kg) / Body: 316 Stainless Steel

Specifications: Factory assembled and mounted 40" H x 26.5" W x 8" D • Weight: approx. 40 lbs.

Optional Upgrades upon request for units TWT-MD-1001 / 1002 / 1003***

TWT-MV Meter Valve – factory only upgrade***

Provides an automatic signal and shut off when it is time to reset and/or change the filters.

TWT-UV-Monitor lamp Output / TWT-UV-AA Alarm / TWT-UV-Hour Meter***

Monitoring system "heads up" warning that the UV lamp is due for replacement.

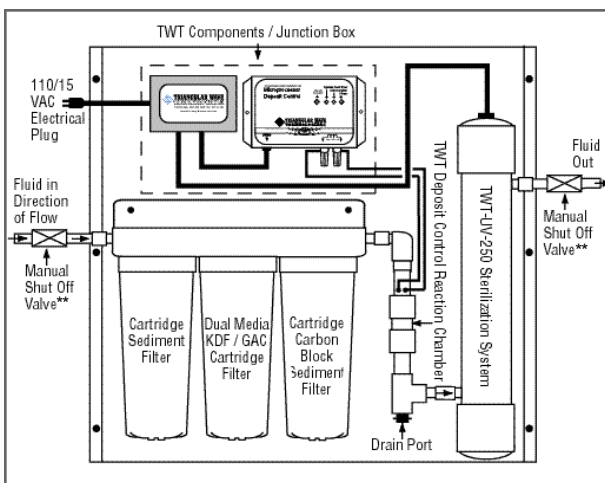
TWT-SV Solenoid Shut-Off Valve***

The Solenoid Shut-Off Valve is a backflow cutoff for use as a safety measure in the event of a system shutdown. Its use is strongly recommended for the medical and dental environments, and anywhere else that the highest degree of disinfection protection is required.

***Factory only upgrade - specify at time of purchase only

Triangular Wave Technologies, Inc. is dedicated to complete fluid management solutions, utilizing state-of-the-art technology and products. All components of our systems are selected and assembled to conform with universally recognized design standards for electrical, plumbing and environmental needs. Long term performance is ensured by our strict Quality Control methods.

For additional information visit our Web Site at www.triangularwave.com



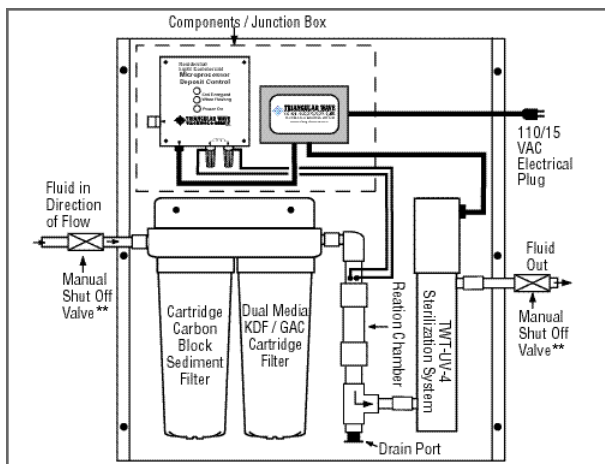
TWT-MD-1002 Up to 12 operatories

Triangular Wave Technologies Fluid Management System. System consists of a Deposit Controller TWT-5C8-472 • TWT Reaction Chamber • UV-250 Disinfection System and TWT-MUC Filtration System

TWT-UV-250

Rated Flow: 16 Liters per minute / 4 Gallons per minute • U.V. Dose @ Rated Flow: 31,500 mw/sec/cm2
Maximum Flow: 22 liters per minute / 5 Gallons per minute • U.V. Dose @ Maximum Flow: 22,500 mw/sec/cm2
• Power Consumption: 72 Watt • Maximum Operating Temperature: 37C (98.6F) • Maximum Operating Pressure: 100psi - 7 Bar • Plumbing: N.P.T. • Body: 316 Stainless Steel

Specifications: Factory assembled and mounted 24" H x 26.5" W x 8" D • Weight: approx. 30 lbs.



TWT-MD-1001 Point of use

Triangular Wave Technologies Water Fluid Management System. System consists of a Deposit Controller TWT-5C8-471 • TWT Reaction Chamber • UV-4 Disinfection System and TWT-MUC Filtration System

TWT-UV-4

Rated Flow: 3.75 Liters per minute/1 Gallon per minute • U.V. Dose @ Rated Flow: 29,500 mw/sec/cm2
Maximum Flow: 5.8 Liters per minute • U.V. Dose @ Maximum Flow: 18,500 mw/sec/cm2
• Power Consumption: 12 Watt • Maximum Operating Temperature: 37C Maximum Operating Pressure: 100 psi - 7 Bar • Plumbing: 1/4" N.P.T. In-Out • Body: 316 Stainless Steel

Specifications: Factory assembled and mounted 24" H x 22" W x 8" D • Weight: approx. 25 lbs.

Note: Above systems are fully integrated and factory assembled and mounted, offering end to end fluid management and treatment solutions, systems are designed for installation on pipes 1-inch or less

System engineering design, weight and system component assembly may vary based on application and industry specific needs

****Shut off valves owner/plumber installation**

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