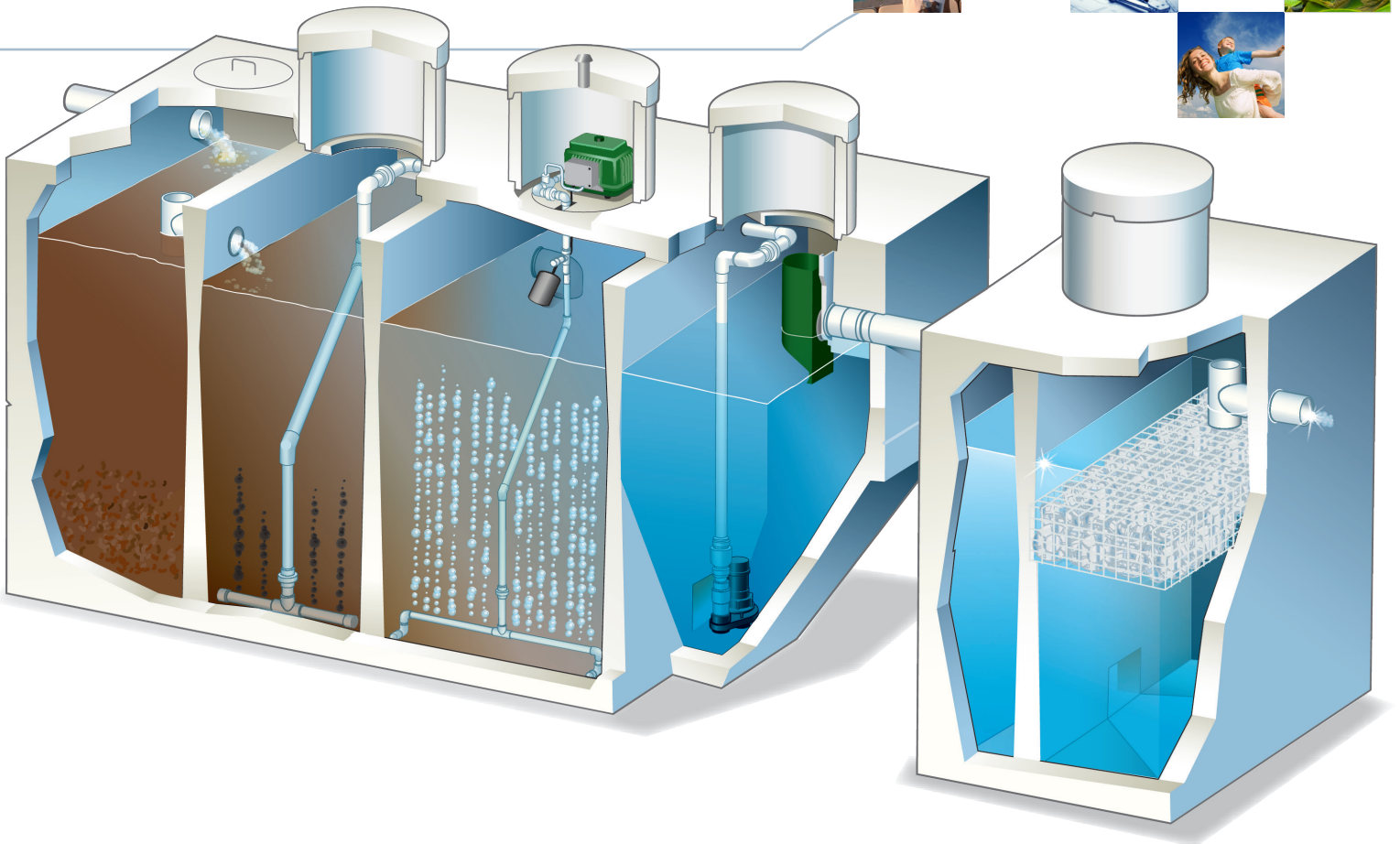


# HYDRO-KINETIC® FEU



**norweco®**

Engineering the future of water  
and wastewater treatment

TOXIC CHAMBER RISER  
...ING WITH LID

TRANSFER TEE

IMPROVED SEALANT  
SEALING DEVICE

4" DIAMETER TRANSFER PIPE

POLISHING MEDIA

# HYDRO-KINETIC®

A revolutionary wastewater treatment system that employs innovative Hydro-Kinetic® filtration technology to produce the cleanest, most consistent effluent quality available

During its successful completion of both NSF/ANSI Standard 40 and 245 tests, the Hydro-Kinetic FEU system:

- Became the only NSF/ANSI Standard 40 and 245 certified residential wastewater treatment system to pass two consecutive back-to-back tests without performing routine maintenance for a full 12 months.
- Achieved unmatched effluent results of 2.1 mg/L CBOD (Carbonaceous Biochemical Oxygen Demand), 1.8 mg/L TSS (Total Suspended Solids) and 7.95 mg/L TN (Total Nitrogen).

It quietly, efficiently and automatically pretreats, aerates, flow equalizes and filters all wastewater returning only the purest effluent back to the receiving environment. Better yet, all treatment processes are managed by reliable components and user friendly controls. The integrity of the treatment process is protected by our patented non-mechanical, demand use flow equalization device, as well as our revolutionary Hydro-Kinetic filter.

TREATMENT CHAMBER

KINETIC CHAMBER

POLISHING CHAMBER

INFLUENT CHAMBER

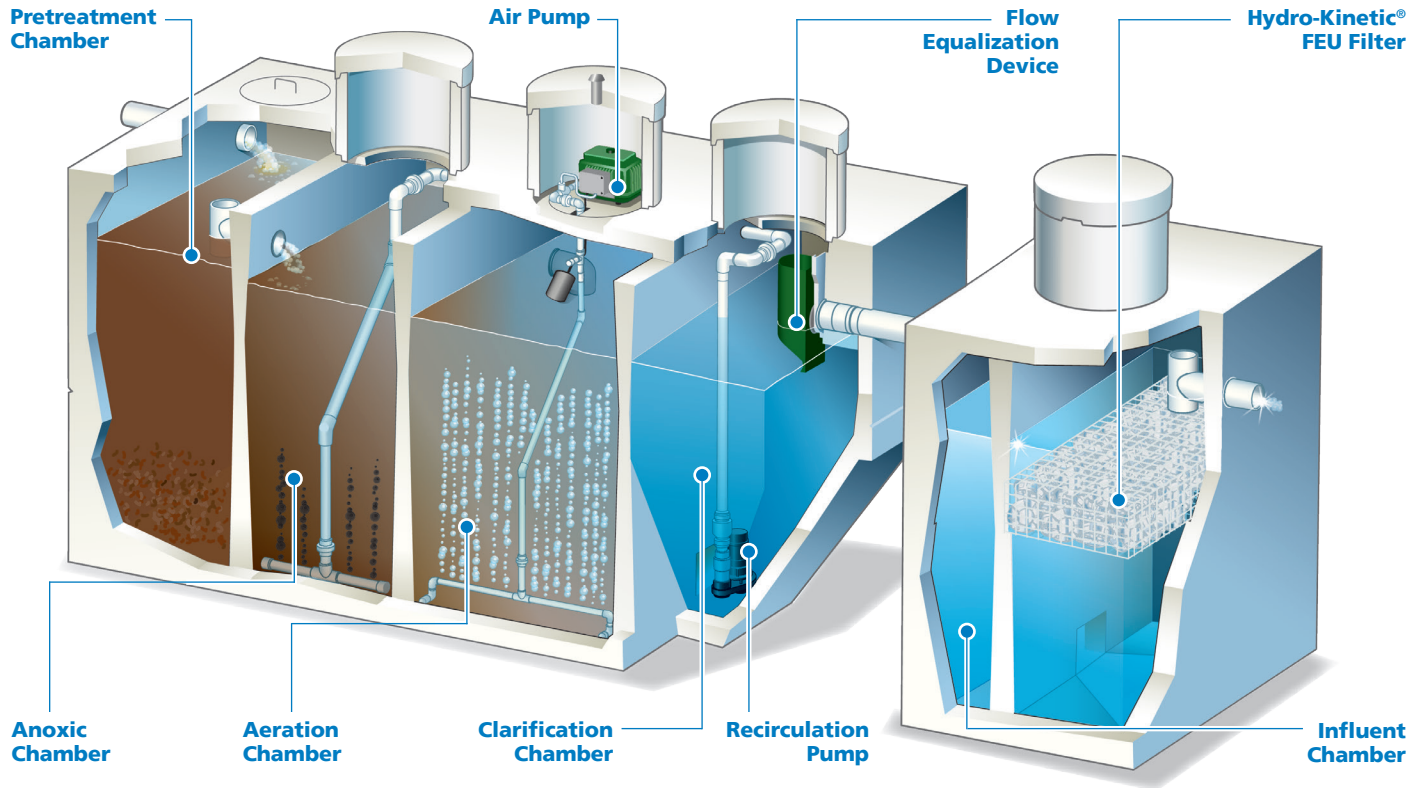
CLARIFICATION CHAMBER

MODEL SD103 RECIRCULATION PUMP

CAST-IN AERATION CHAMBER TRANSFER PORT

solutions in wastewater treatment

# Revolutionary in design, unparalleled in performance



## Pretreatment Chamber

Anaerobic bacteria and gravity precondition the wastewater here to protect the integrity of downstream treatment processes.

## Anoxic Chamber

Pretreatment Chamber effluent is mixed with nitrified liquid recirculated from the clarifier in measured doses, via a mixing bar in this chamber. Under carefully controlled conditions, bacteria remove nitrogen by consuming nitrate-bound oxygen during their respiratory process.

## Aeration Chamber

Here, safe, living aerobic bacteria convert the wastewater into stable substances. Flow equalization maximizes this biological oxidation and assures proper retention and treatment.

## Model A100 Air Pump

Our exclusive Model A100 air pump is a precision engineered electro-mechanical device that has been specifically designed for use in the system. It can be installed below grade or remotely located up to 75 feet from the system.

## Clarification Chamber

Flow equalization enhances the settling of biologically active substances inside the Clarification Chamber. Pretreated, aerated wastewater has now been converted to clarified liquids for discharge from this chamber.

## Model SD103 Recirculation Pump

This highly efficient recirculation pump is installed at the bottom of the Clarification Chamber and is used to transfer nitrified liquid back to the Anoxic Chamber for denitrification.

## Flow Equalization Device

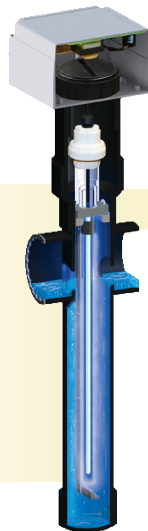
Controls flow through the treatment process and regulates the velocity of treated effluent that can leave the system, enhancing the efficiency of the attached growth filtration media in the Hydro-Kinetic system.

## Hydro-Kinetic® FEU Filter

Flow equalized liquid from the clarifier enters the Hydro-Kinetic filter where it flows downward and is evenly distributed beneath our exclusive Hydro-Kinetic filtration media. The liquid then travels through the proprietary attached growth filtration media where the final treatment takes place.

## Precast Concrete Tank

Every tank is constructed of high quality, non-corrosive materials under rigid quality control standards. The tank, access risers and covers are reinforced precast concrete manufactured locally by your licensed Norweco distributor.

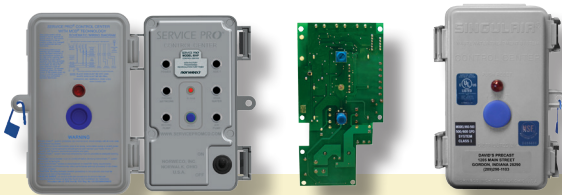


## AT 1500 Ultraviolet Disinfection System

CAPABLE OF MEETING EVEN THE MOST STRINGENT ENVIRONMENTAL REQUIREMENTS, THE MODEL AT 1500 UV DISINFECTION SYSTEM REDUCES BACTERIA LEVELS FROM SECONDARY EFFLUENT TO MEET STRICT WATER QUALITY STANDARDS. THE AT 1500 IS THE ONLY UV TREATMENT SYSTEM LISTED BY UNDERWRITERS LABORATORIES FOR RESIDENTIAL APPLICATIONS.

## Consider the facts:

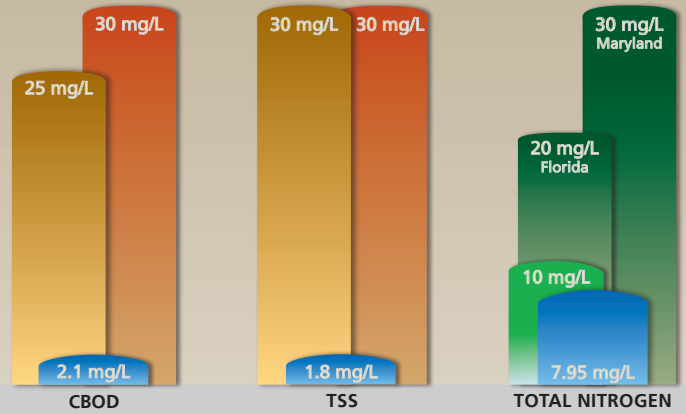
- The Hydro-Kinetic FEU system meets or exceeds regulatory standards and is performance certified and listed by NSF International to Standards 40 and 245. The system achieved an astounding effluent quality of 2.1 mg/L CBOD, 1.8 mg/L TSS and 7.95 mg/L TN.
- The system produced these unmatched effluent results while being tested for 12 continuous months without service. The Hydro-Kinetic system passed two consecutive 6 month tests with flying colors, including duplicate multi-stress sequences.
- We have engineered the Model A100 air pump to maximize operational efficiency and increase service life. It requires minimal electricity to operate and utilizes a standard 115V power connection. Multiple air pump mounting locations are available.
- The Model SD103 recirculation pump features a ½ horsepower electric motor that is securely mounted in an oil-filled, watertight, corrosion resistant housing with lubricated ball bearings to assure long life. The recirculation pump features a 2" discharge connection.
- The Hydro-Kinetic FEU filter provides final treatment of the wastewater to a near pristine state. As liquid flows up through our proprietary attached growth filtration media, final polishing takes place insuring only the highest quality effluent is safely returned to the environment.



### SERVICE PRO® Model 801P

EVERY SYSTEM COMES WITH THE SERVICE PRO MODEL 801P CONTROL CENTER THAT USES MCD TECHNOLOGY TO PROVIDE MONITORING, COMPLIANCE AND DIAGNOSTIC FUNCTIONS FOR THE TREATMENT SYSTEM. EACH CONTROL CENTER INCLUDES A TIME CLOCK, ALARM LIGHT, RESET BUTTON, POWER SWITCH, POWER LIGHT, PHONE/NETWORK LIGHT, RECIRCULATION PUMP ALARM, AIR PUMP ALARM, HIGH WATER ALARM AND ADDITIONAL AUXILIARY COMPONENT INPUT.

## Unmatched Effluent Results



### Hydro-Kinetic® FEU System

Standard 40

USEPA Secondary Treatment Std

USEPA Drinking Water Std

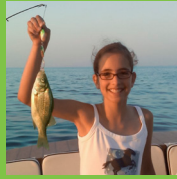
State Wastewater Regulations

- 70-hour retention in the Hydro-Kinetic system insures adequate exposure to all treatment processes and reduces pumping frequency as compared to smaller capacity systems.
- Our patented non-mechanical flow equalization device guarantees that all incoming wastewater is fully treated, regardless of heavy use periods.
- All flow is equalized an average of 50% at the NSF Standard 40/245 600 GPD (gallons per day) design loading pattern.
- Durable, reliable components are safely installed out-of-sight below grade. No exposed power cords or air lines that are above ground.
- Your local licensed Norweco distributor sells, installs and services your Hydro-Kinetic system with pride. You'll find their name and contact info conveniently posted on the system's control center.



### Blue Crystal® Residential Disinfecting Tablets and Bio-Max® Dechlorination Tablets

PURE CALCIUM HYPOCHLORITE TABLETS FORMULATED FOR USE IN RESIDENTIAL SYSTEMS, BLUE CRYSTAL TABLETS CONTAIN 70% AVAILABLE CHLORINE TO PROVIDE EFFICIENT, RELIABLE DISINFECTION. BIO-MAX TABLETS PROVIDE A CONVENIENT SOURCE TO INSTANTLY REMOVE CHLORINE FROM WASTEWATER, POTABLE WATER AND PROCESS WATER. EACH TABLET CONTAINS 92% SODIUM SULFITE.



Norweco distributors are located throughout the United States and much of the rest of the world. Research, product development, manufacturing, marketing and sales support are conducted inside our offices and factory in Norwalk, Ohio USA. Everyone at Norweco is committed to shaping the future of our industry.

engineering

the future

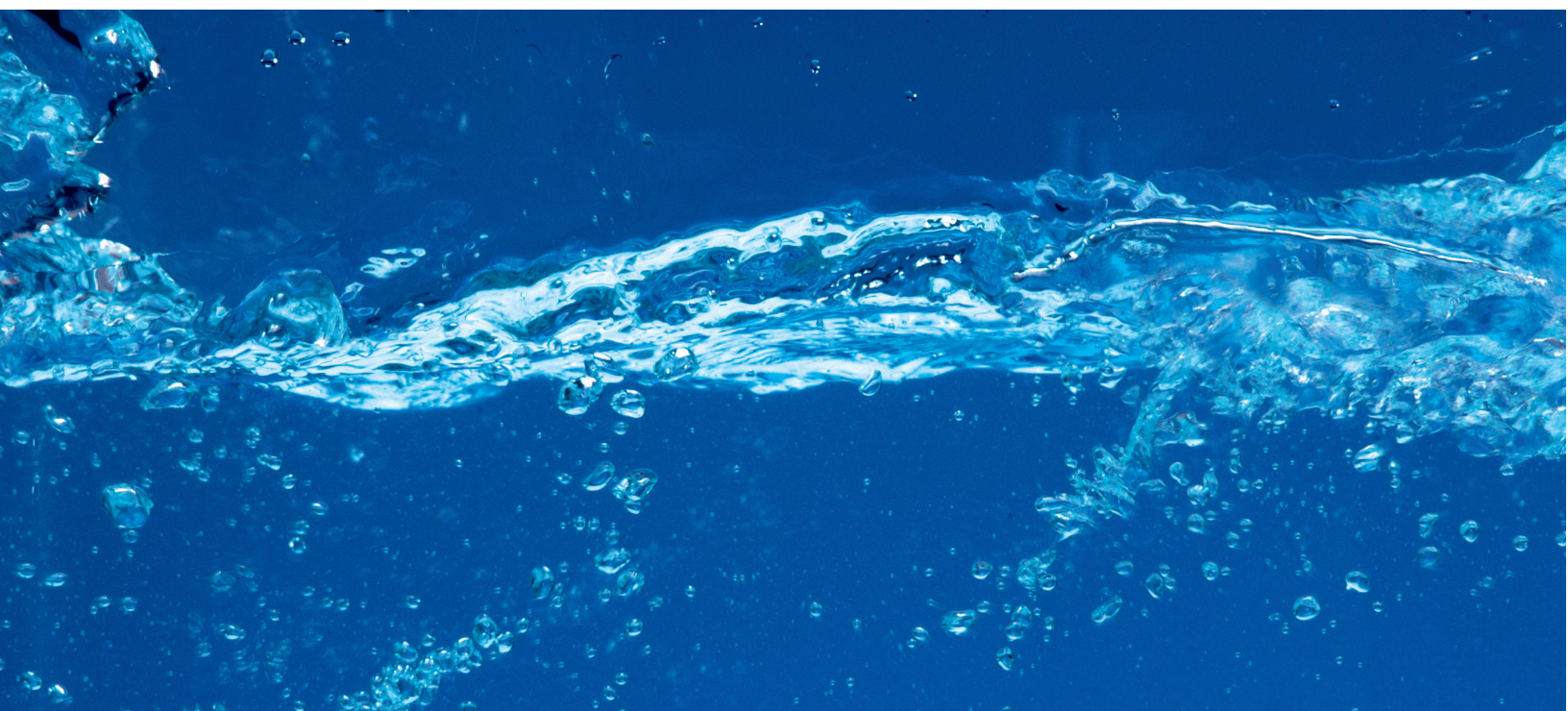
of water and wastewater treatment

### Specify Hydro-Kinetic®

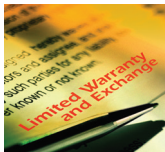
As a designer, choosing to incorporate the Hydro-Kinetic system in your project will insure that you achieve successful treatment while offering outstanding quality and reliability. At the same time, the reputation of your company will be protected for years to come. Your local Norweco distributor is fully trained to assist you in the design, installation and operation of a Norweco Hydro-Kinetic FEU (Flow Equalized Upflow) system.

As a homeowner, getting the highest quality product is essential. The Hydro-Kinetic system arrives to the jobsite complete, including delivery, tank setting, equipment installation, plant start-up and service. A series of service and adjustment inspections are prescheduled for the first two years of operation at the time your system is installed. These inspections are included in the sale so that your system continues to perform at the highest level to protect you and your investment. Extended service contracts are also available from your local Norweco distributor.

Today's Answer for the Protection of Tomorrow's Environment



## comprehensive protection, guaranteed



The Hydro-Kinetic wastewater treatment system, Service Pro control center, and all Norweco components are warranted against defects in material and workmanship under normal use and service by our comprehensive 2 year Limited Warranty. A Warranty Registration Card and Owner's Manual are included with purchase. Warranty information is detailed on the back page of the Hydro-Kinetic System Owner's Manual.

### Other Products

#### Singulair® Wastewater Treatment Plants

FOR RESIDENTIAL APPLICATIONS

#### Modulair® Wastewater Treatment Plants

FOR SEMI-COMMERCIAL APPLICATIONS

#### Travalair® Wastewater Treatment Plants

FEATURING AUTO SLUDGE AND SKIMMER SYSTEM

***norweco***®

*Engineering the future of water  
and wastewater treatment*

220 Republic Street

Norwalk, Ohio, U.S.A. 44857-1156

PH: 419.668.4471

FAX: 419.663.5440

[www.norweco.com](http://www.norweco.com)

The Hydro-Kinetic system components are listed, licensed, and/or certified by each of the following agencies/organizations.



### Progress Through Service Since 1906

*We engineer, manufacture, install, and maintain advanced water and wastewater treatment technologies for residential properties, communities, and commercial properties that are not connected to sewer lines. Norweco treatment systems are in service all over the world.*

*Norweco®, Norweco.com®, Singulair®, Modulair®, Travalair®, Singulair Green®, Ribbit Rivet®, Hydro-Kinetic®, Hydro-Kinetic Bio-Film Reactor®, Evenair®, Lift-Rail®, Microsonic®, Bio-Dynamic®, Bio-Sanitizer®, Bio-Neutralizer®, Bio-Kinetic®, Bio-Static®, Bio-Gem®, Bio-Max®, Bio-Perc®, Blue Crystal®, Phos-4-Fade®, Enviro-C®, ClearCheck®, ChemCheck®, Tri-Max®, Hydra-Max®, Service Pro®, MCD®, TNT®, WASP®, Grease Buster® and "BUSTER" logo are all registered trademarks of Norwalk Wastewater Equipment Company, Inc.*