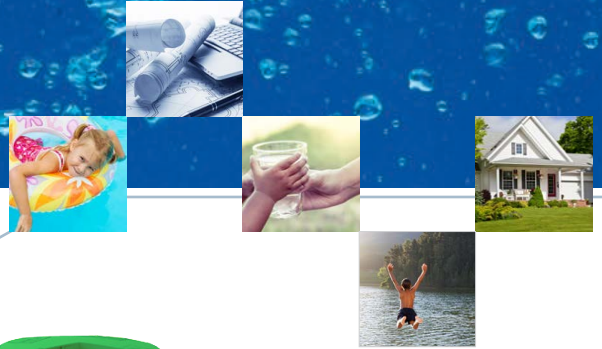
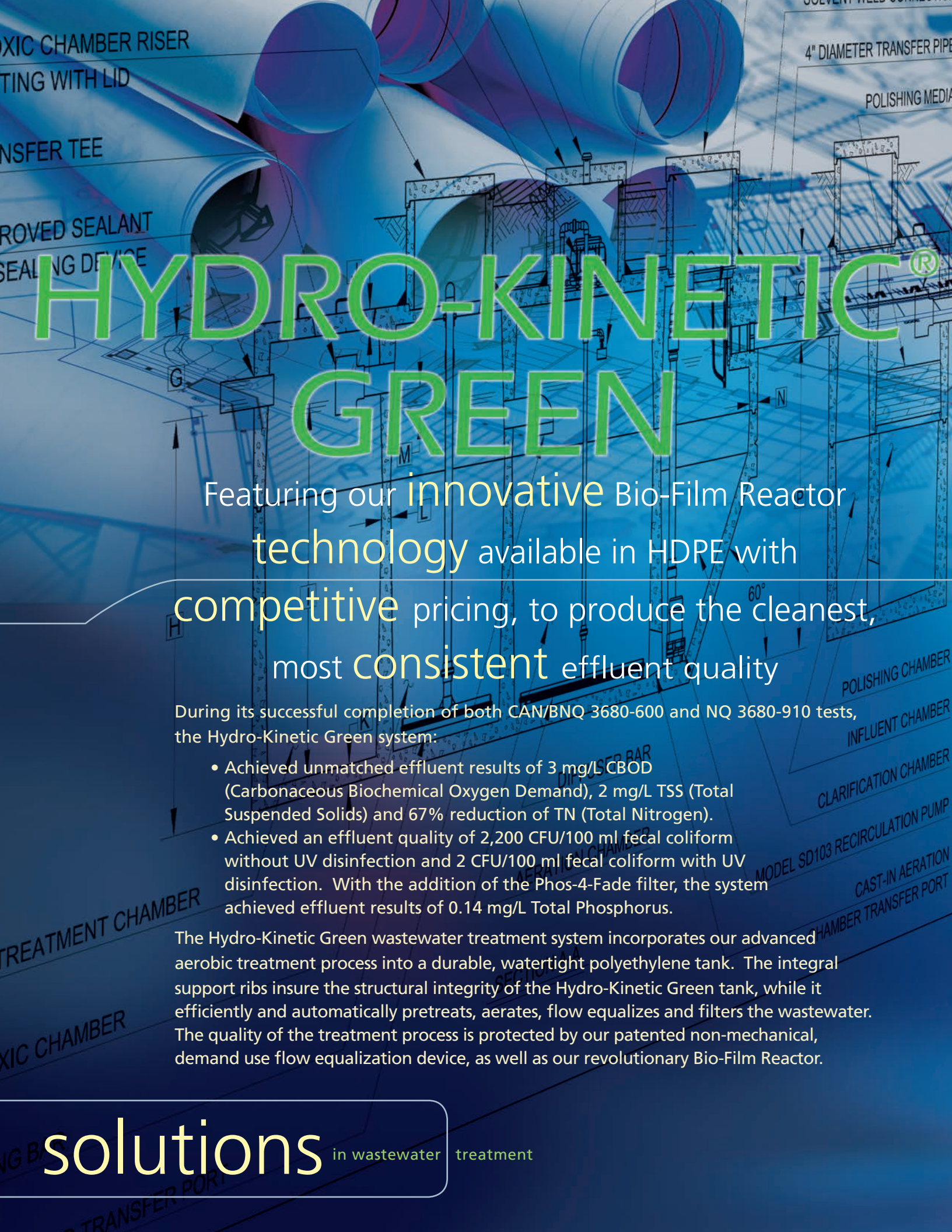


# HYDRO-KINETIC® GREEN



**norweco®**

Engineering the future of water  
and wastewater treatment



# HYDRO-KINETIC GREEN<sup>®</sup> GREEN

Featuring our innovative Bio-Film Reactor technology available in HDPE with competitive pricing, to produce the cleanest, most consistent effluent quality

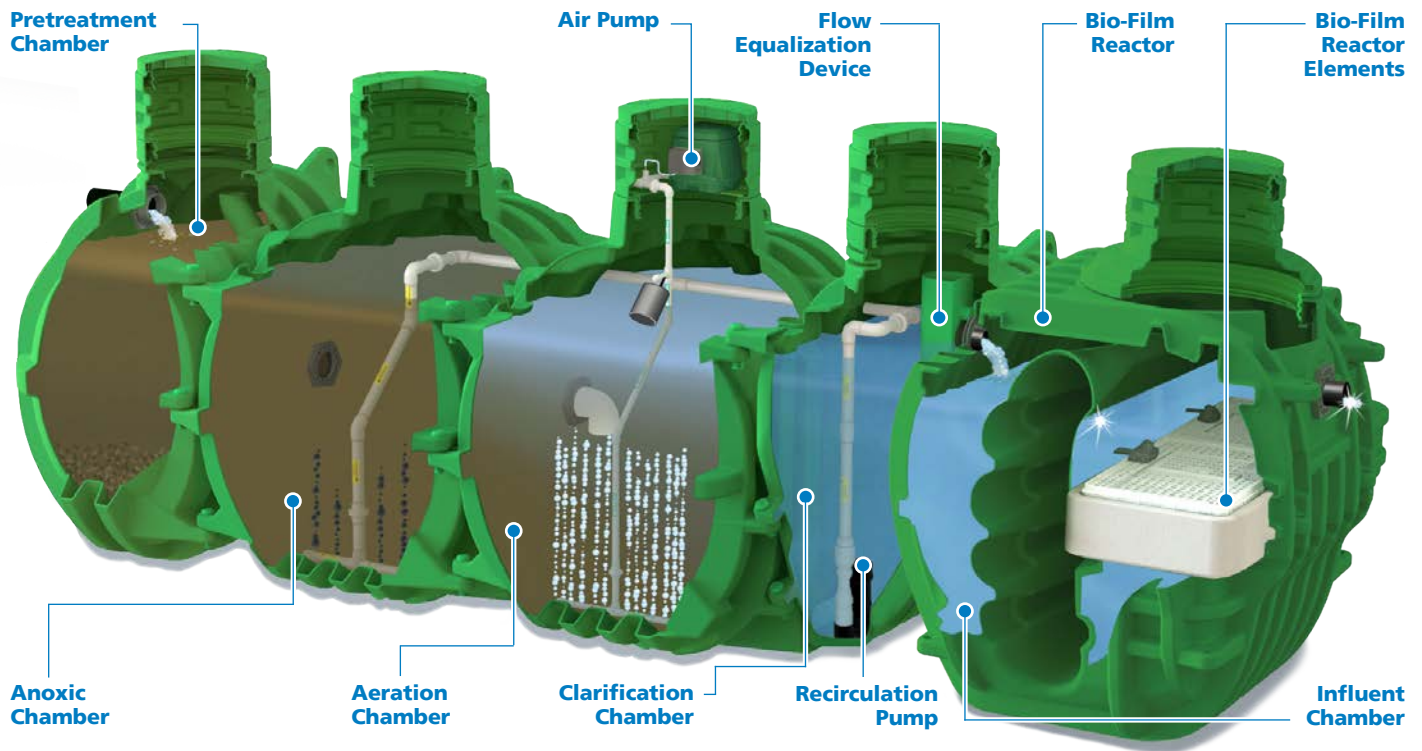
During its successful completion of both CAN/BNQ 3680-600 and NQ 3680-910 tests, the Hydro-Kinetic Green system:

- Achieved unmatched effluent results of 3 mg/L CBOD (Carbonaceous Biochemical Oxygen Demand), 2 mg/L TSS (Total Suspended Solids) and 67% reduction of TN (Total Nitrogen).
- Achieved an effluent quality of 2,200 CFU/100 ml fecal coliform without UV disinfection and 2 CFU/100 ml fecal coliform with UV disinfection. With the addition of the Phos-4-Fade filter, the system achieved effluent results of 0.14 mg/L Total Phosphorus.

The Hydro-Kinetic Green wastewater treatment system incorporates our advanced aerobic treatment process into a durable, watertight polyethylene tank. The integral support ribs insure the structural integrity of the Hydro-Kinetic Green tank, while it efficiently and automatically pretreats, aerates, flow equalizes and filters the wastewater. The quality of the treatment process is protected by our patented non-mechanical, demand use flow equalization device, as well as our revolutionary Bio-Film Reactor.

solutions in wastewater treatment

# Revolutionary HDPE design, unparalleled 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/A150 Air Pump

Our exclusive Model A100/A150 air pump is a precision engineered electro-mechanical device that has been specifically designed for use in the system. It requires minimal electricity to operate and utilizes a standard 115V power connection. 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. The pump features a  $\frac{1}{3}$  horsepower electric motor that is mounted in an oil-filled, watertight, corrosion resistant housing to assure long life.

## Flow Equalization Device

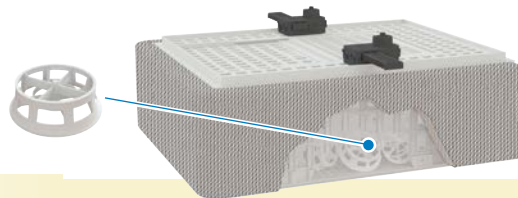
Controls flow through the treatment process and regulates the velocity of treated effluent that can leave the system, enhancing the efficiency of the attached growth filtration media in the Hydro-Kinetic Green system.

## Bio-Film Reactor

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

## Polyethylene Tank

Every tank is manufactured from rotationally molded, UV stabilized high density polyethylene, plus strategically located ribs, resulting in uncompromised tank integrity.



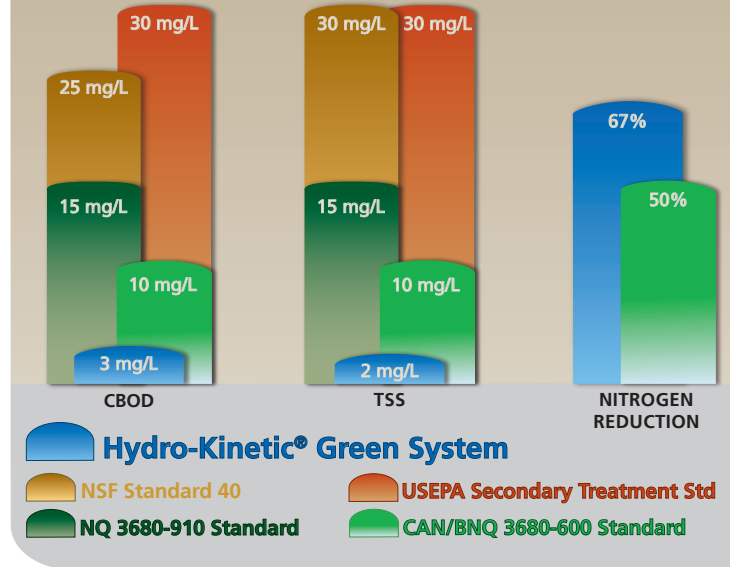
## Hydro-Kinetic Bio-Film Reactor® Elements

FLOW ENTERS THE REACTOR WHERE IT MOVES DOWNWARD AND IS EVENLY DISTRIBUTED BENEATH OUR PATENTED REACTOR ELEMENTS. LIQUID THEN TRAVELS UPWARD THROUGH PROPRIETARY ATTACHED GROWTH FILTRATION MEDIA WHERE FINAL POLISHING TAKES PLACE. THIS INNOVATIVE TREATMENT PROCESS PRODUCES UNSURPASSED EFFLUENT QUALITY TO INSURE THE PUREST WATER IS RETURNED TO THE ENVIRONMENT.

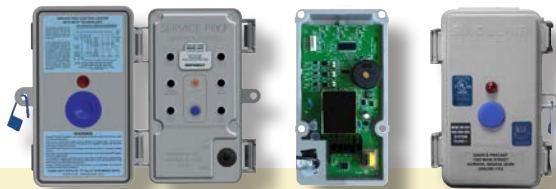
## Consider the facts:

- The Hydro-Kinetic Green system meets or exceeds regulatory standards and is performance certified and listed to BNQ Standards CAN/BNQ 3680-600 and NQ 3680-910. The system achieved an astounding effluent quality of 3 mg/L CBOD, 2 mg/L TSS and 67% reduction of Total Nitrogen.
- The system achieved an effluent quality of 2,200 CFU/100 ml fecal coliform without UV disinfection and 2 CFU/100 ml fecal coliform with UV disinfection. With the addition of the Phos-4-Fade filter, the system achieved effluent results of 0.14 mg/L Total Phosphorus.
- Contained in a rugged, heavy duty, UV protected polyethylene tank, the Hydro-Kinetic Green treatment system weighs less than 1,275 pounds and can easily be installed with a backhoe.
- The patented internal and external ribbed design assures long term tank integrity and minimizes the potential for tank damage due to careless pumping or hydraulic forces.
- The Bio-Film Reactor 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.
- 70-hour retention in the Hydro-Kinetic Green system insures adequate exposure to all treatment processes and reduces pumping frequency as compared to smaller capacity systems.

## Unmatched Effluent Results



- The inherently strong ribbed-arch shape of the Hydro-Kinetic Green tank allows the use of most native soils for backfill and minimizes the need for water during the installation process.
- 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 Green system with pride. You'll find their name and contact info conveniently posted on the system's control center.

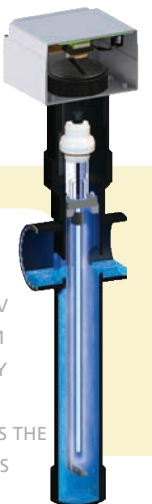


### SERVICE PRO® Model 801P

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.

### 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 DUAL-PASS DESIGN ASSURES THE INTEGRITY OF THE TREATMENT PROCESS. THE AT 1500 IS THE ONLY UV TREATMENT SYSTEM LISTED BY UNDERWRITERS LABORATORIES FOR RESIDENTIAL APPLICATIONS.





Norweco distributors are located throughout North America 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® Green

As a designer, choosing to incorporate the Hydro-Kinetic Green 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 Green system.

As a homeowner, getting the highest quality product is essential. The Hydro-Kinetic Green system arrives to the jobsite complete, including delivery, tank setting, equipment installation and plant start-up. An annual service contract is required so that your system continues to perform at the highest level to protect you and your investment. Service contracts are available from your local Norweco distributor.



## comprehensive protection, guaranteed



The Hydro-Kinetic Green 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 Green 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 Green 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®, WASTP®, Grease Buster® and "BUSTER" logo are all registered trademarks of Norwalk Wastewater Equipment Company, Inc.*