

#### INFORMATION ABOUT ON-SITE SEWER FACILITY

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CONCERNING THE PROPERTY AT 16910 COUNTY ROAD 208 EAST BERNAND, TX 77435 A. DESCRIPTION OF ON-SITE SEWER FACILITY ON PROPERTY: Aerobic Treatment (1) Type of Treatment System: ☐ Septic Tank Unknown (2) Type of Distribution System: SPAINKLERS (3) ☐ Unknown (3) Approximate Location of Drain Field or Distribution System: IN THE PASTURE Unknown LOCATED IN FRONT OF THE HOUSE, (4) Installer: HURTS WAJTEWATER Unknown (5) Approximate Age: 19 YEARS Unknown **B. MAINTENANCE INFORMATION:** (1) Is Seller aware of any maintenance contract in effect for the on-site sewer facility? Yes No If yes, name of maintenance contractor: Hults WASTEWATER Phone: 361-771-3451 contract expiration date: August 2013 (Maintenance contracts must be in effect to operate aerobic treatment and certain non-standard" onsite sewer facilities.) (2) Approximate date any tanks were last pumped? 9 YEARS AGO? (3) Is Seller aware of any defect or malfunction in the on-site sewer facility? ☐ Yes ☐ No If yes, explain: (4) Does Seller have manufacturer or warranty information available for review? Yes No C. PLANNING MATERIALS, PERMITS, AND CONTRACTS: (1) The following items concerning the on-site sewer facility are attached: ☐ planning materials ☐ permit for original installation ☐ final inspection when OSSF was installed ☐ maintenance contract ☐ manufacturer information ☐ warranty information ☐ (2) "Planning materials" are the supporting materials that describe the on-site sewer facility that are submitted to the permitting authority in order to obtain a permit to install the on-site sewer facility. (3) It may be necessary for a buyer to have the permit to operate an on-site sewer facility

(TXR 1407) 1-7-04

Initialed for Identification by Buyer:

and Seller

Page 1 of 2

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transferred to the buyer.

D. INFORMATION FROM GOVERNMENTAL AGENCIES: Pamphlets describing on-site sewer facilities are available from the Texas Agricultural Extension Service. Information in the following table was obtained from Texas Commission on Environmental Quality (TCEQ) on 10/24/2002. The table estimates daily wastewater usage rates. Actual water usage data or other methods for calculating may be used if accurate and acceptable to TCEQ.

<u>Facility</u>	Usage (gal/day) without water- saving devices	Usage (gal/day) with water- saving devices
Single family dwelling (1–2 bedrooms; less than 1,500 sf)	225	180
Single family dwelling (3 bedrooms; less than 2,500 sf)	300	240
Single family dwelling (4 bedrooms; less than 3,500 sf)	375	300
Single family dwelling (5 bedrooms; less than 4,500 sf)	450	360
Single family dwelling (6 bedrooms; less than 5,500 sf)	525	420
Mobile home, condo, or townhouse (1-2 bedroom)	225	180
Mobile home, condo, or townhouse (each add'l bedroom)	75	60

This document is not a substitute for any inspections or warranties. This document was completed to the best of Seller's knowledge and belief on the date signed. Seller and real estate agents are not experts about on-site sewer facilities. Buyer is encouraged to have the on-site sewer facility inspected by an inspector of Buyer's choice.

Signature of Seller	5/2/23 Date	Signature of Seller	5-2-23 Date
Receipt acknowledged by:			
Signature of Buyer	Date	Signature of Buyer	Date

### WHARTON COUNTY ENGINEERING PERMIT & INSPECTION DEPARTMENT 1017 N. ALABAMA

WHARTON, TEXAS 77488 PHONE: (979) 532-8587 FAX: (979) 532-8947

## NOTICE OF APPROVAL OF AN ON-SITE

## SEWAGE FACILITY IN WHARTON COUNTY, TEXAS

PERMIT NUMBER         DATE ISSUED
PROPERTY OWNER Raymond & Decrick Ir.
PROPERTY LOCATION 11,910 CR 208
DESIGNED FOR 300 GALLONS PER DAY
TYPE
SURFACE APPLICATION
LOW PRESSURE DOSING
PUMPED EFFLUENT
STANDARD
OTHER
DRAINFIELD
<u>RUTY</u> SQUARE FEET (SURFACE APPLICATION)
TOTAL TRENCH LENGTH
TRENCH WIDTH
SEPTIC TANK
GALLON CAPACITY LOO GPD (AEROBIC)
NO IMPLIED OR FUNCTIONAL WARRANTY EXISTS ON THE PART OF WHARTON COUNTY OR ITS EMPLOYEES FOR THIS SEWAGE SYSTEM DUE TO UNFORSEEN VARIABLES WHICH MAY AFFECT OR IMPAIR SYSTEM OPERATION. ANY MODIFICATIONS TO THE STRUCTURE OR SYSTEM COMPONENTS MAY REQUIRE A NEW PERMIT.
INSPECTED BY: M MARTIN LICENSE # 1058039

Hurt's Wastewater Management P. O. Box 662 Ganado, TX 77962

> Raymond Derrick 16910 CR 208 East Bernard, TX 77435

### To Whom It May Concern:

Please find enclosed very important documents concerning the On-Site Sewage Facility at:

System Name:

Primary

Installation Address: 16910 CR 208

East Bernard, TX 77435

Permit Number:

1614

Installation Date:

7/22/2004

Brand Name:

Norweco

Model:

960-500

Serial Number:

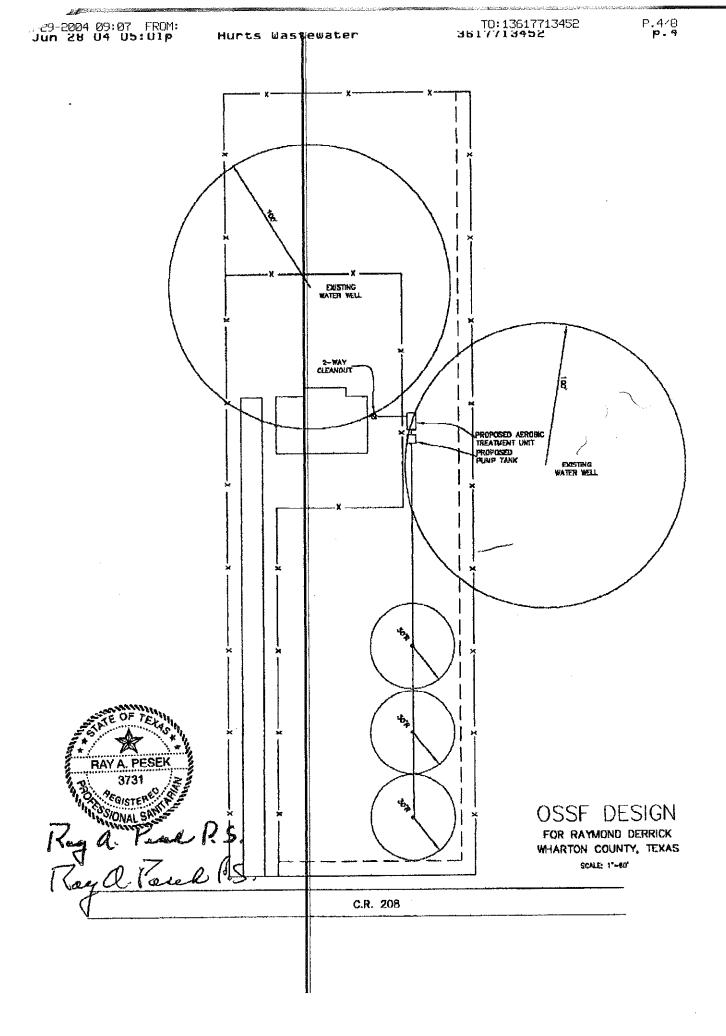
7265FT

We sincerely appreciate doing business with you.

# Hurt's Wastewater Management Company 800-841-3447 : fx# 361-771-3452

T.C.E.Q. Usage Single Family D		Usage Rate: gallons per day w/out water saving devices	w/water saving devices
3 Bedrooms:	less than 1,500 sq. ft. less than 2,500 sq. ft. less than 3,500 sq. ft. less than 4,500 sq. ft.	225 300 375 450	180 240 300 360
6 Bedrooms: Each additional	less than 5,500 sq. ft. 1,500 sq. ft. add	525 75	420 60
Installation Pri	ices : Include appropriate	e trash and pump tank sizes.	
750 / 1000 / 125  Site evaluation	50 / 1500 g.p.d. Norweco / / Design / Permit : Totสใ	5300.00 John Hurt	July
(Good for 90 d	ays) Gold	Ven Crescent Volin Drowin 361	
Initials	Λ	Polin Drowin 361	-649-0637 cell
Note : '	will be an additional charg of mats to drive truck in. A  The above prices are based of the stub out. If there is	to mud the system in. Either the Additional amount charged subject on the home having one stub or more than one stub out, there wi	at and the tanks being located within 20'
	being positioned such as t	o require the installation of a lift	nt of multiple stub outs and the stub outs station, there will be additional charges.
Note:	An additional charge of \$2	250.00 for Risers will added if str	ub outs are more than 24".
Note :	Owners electrician responstub out. 40' of electrical	onsible for bringing 30amp 110 provided. Extra wire and condu	circuit (for 600 gpd only) within 5' of it will cost \$5.00 per foot.
Note:	Excess dirt will be left st (Hurt's not responsible f	ockpiled on job site. or damaging any unmarked un	derground lines.)
Note :	Home owner or Builder	is responsible for water supply to	fill tanks.
Note :	Hurt's not responsible for provided by Hurt's to be u	or back filling around tanks aft used for 4" pad under tanks and f	er dirt settles. One load of sand illing around 4" pipe from house.
Note:	payment is coming from receive that payment. V	the builder the homeowner is 1	s with Hurt's and homeowner. If responsible for making sure Hurt's rt's office only. If used there will be an
			<b>/</b>

pg. 5 - Hurt's copy



### Hurt's Wastewater Management, Ltd. P.O. Box 662 / 321 Hwy 172 Ganado, TX 77962

PAID

Date: 6/10/2022

Phone: (800) 841-3447 Fax: (361) 771-3452 www.hurtswastewater.com

To: Raymond & Kelley Derrick P.O. Box 1022 East Bernard, TX 77435

**Contract Period** 

Start Date: 8/3/2022 End Date: 8/3/2023

Permit #: 1614

No Email on File

Phone:

Subdivision:

Site: 16910 CR 208, East Bernard, TX 77435

County: Wharton

Installed: 7/22/2004

ID: 1589 3 visits per year - one every 4 months

Installer: Hurt's Wastewater Management, Ltd.

Agency: Wharton County Permit & Inspection Department

Mfg/Brand: Hurt's Wastewater Management, Ltd.-Norweco-

Hurt's Wastewater Management, Ltd.

Terms of Maintenance Contract

1.) Three (3) inspections per year (at least one every 4 Months). Inspections include adjustment and servicing of the mechanical, electrical and other applicable components to ensure proper function. This includes inspecting the control panel, aerators and filters. Replacement/repair costs will be charged directly to the homeowner. A Hurt's Wastewater Management, Ltd. employee will visit the site within 48 hours of a problem being reported. Inspections may be performed anytime during the month they are due, with a two week grace period before and after the month the inspections are due.

2.) The homeowner is responsible for maintaining a chlorine residual of at least 1.0 mg/L in the treatment system. This can be accomplished by

using chlorine (calcium hypochlorite) tablets for systems designed with a tablet chlorinator. Swimming pool tablets must not be used in the aerobic system designed for chlorine tablets because they cause corrosion of the components of the system. At the time of a service inspection, the service representative will inform the homeowner if the chlorinator does not contain sufficient tablets or liquid chlorine (whichever is applicable) to effectively disinfect the wastewater.

3.) The required routine reporting of system operation and function to the local authority, as required by OSSF regulation, will be covered by the policy. Any additional visits, inspections or sample collections required by specific County Agencies, TCEQ or any other regulatory agency in your

jurisdiction will not be covered by the policy.

4.) The contract may be voided if NON-BIODEGRADABLE MATERIALS are used in the system.

5.) All Commercial systems will have a BOD and TSS test performed annually. Additional charges will be charged to owner for BOD and TSS testing. This warranty is strictly limited to the above terms and does not include the cost of replacement components, chlorine or pumping of sludge buildup. The maintenance policy includes labor charges only for normal routine inspections and maintenance. Additional service calls are not covered by the policy. Service determined to be caused by abuse or neglect is not covered by the policy. Failure to pay for service call, labor, and/or replacement components not covered under warranty will void contract.

VIOLATIONS include shutting off the electric current to the system for more than 24 hours, disconnecting the alarm system, restricting ventilation to the aerator, overloading the system above its rated capacity, introducing excessive amounts of harmful matter into the system, or any other form of

unusual abuse.

The homeowner agrees to provide Hurt's Wastewater Management Ltd. with all gate combinations, keys, etc. necessary to gain access to the system for the purpose of conducting routine inspections or service calls prior to the start date of this contract and notify Hurt's Wastewater Management immediately with any changes and provide the new combinations or keys. By signing this form, both maintenance provider and homeowner agree to the terms of this policy.

THIS POLICY DOES NOT INCLUDE PUMPING SLUDGE FROM UNIT IF NECESSARY.

Please check your contract preference:

\$330.00 Service contract only, no chlorine (homeowner must install own chlorine)

\$405.00 Service contract with chlorine provided

\*\*Wharton County residents have been assessed a fee by the Wharton County Permit & Inspection Department. This fee is included in your contract

Hurt's Wastewater Management Ltd.:

Date: July 20, 2022 Phone: 113 818 - 2392

Phone: 7 7 79 22



PO Box 662 Ganado, TX 77962 1-800-841-3447 EIN: 20-1251185



## Sales Receipt

DATE	SALE RCPT#
4/25/2023	41425

SOLD TO		SITE ADDRESS	
Raymond Derrick P.O. Box 1022 East Bernard, TX 77435		16910 CR 208 East Bernard, TX 77435	и 0
	2		

	Sales Rep or Svc Tech	PAYMENT METHOD	CHECK NO.	Install or Svc Date
	Zuber	Check	3026	04/24/2023
DESCRIPTION	V	QTY	RATE	AMOUNT
Aerator Exchange 2 Year Warranty Fittings Labor, Truck, Tools Sales Tax			575.00 5.00 120.00 6.75%	575.00 5.00 120.00 39.15
Thank you for your business!			Total Paid	\$739.15

# SOURCE GOURNERT COMPANY

## **IR® BIO-KINETIC®**

TER TREATMENT SYSTEM

ANUAL

and technolog, the environmy yourself with the

#### HOW THE SINGUL

Developed to serve home the reach of city sewers, the extended aeration process.

method used by most municipal wastewater treatment facilities, this process involves a natural, biological breakdown of the organic matter in wastewater.

Wastewater enters the pretreatment chamber where anaerobic bacterial action combines with the effects of gravity to precondition the waste before it flows into the aeration chamber. Once in the aeration chamber, aerobic bacteria utilize the organic matter in the wastewater biologically convert

the waste into stable substances. Following aeration, flow is transferred to the clarification chamber where the effects of gravity settle out biologically active material. The Bio-Static sludge return, located in the clarification chamber, creates hydraulic currents that gently transfer settled particles back to the aeration chamber. As clarified liquids pass through the Bio-Kinetic system, they are filtered, settled and flow equalized. As a result, complete pretreatment, aeration, clarification and final filtration are assured. The Singulair system reliably protects you, your property and the environment.

AERATION

ADVANTAGES

s and covers are reinforced by the licensed Norweco are cast-in-place to gth. All components the wastewater and ed entirely of molded

vered by a 1725 RPM, 115-, fractional horsepower motor. powered component in the

Singulair system. The aerator has been designed specifically for use in the Model 960. It costs less to operate and consumes fewer kilowatt hours of electricity than most major appliances.

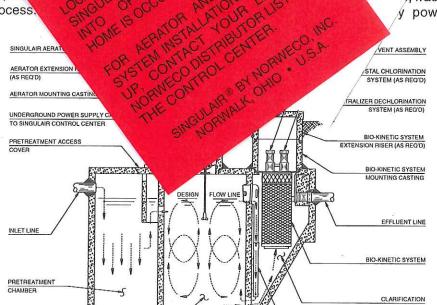
Singulair aerators are supplied with a prewired electrical control center contained in a corrosion resistant enclosure. The control center contains the Singulair time clock and selector switch that control aerator operation. The local distributor's name, address and telephone number are displayed

on the control center

cover. All system controls and necessary owner information are conveniently located at your fingertips.

BIO-STATIC SLUDGE RETURN

Non-mechanical flow equalization and final filtration is accomplished within the Singulair tank by the Bio-Kinetic system. This revolutionary device is installed in the clarification chamber and connected to the system outlet. Optional chlorination and dechlorination may be included in the Bio-Kinetic system if required. All Singulair components work together to assure complete pretreatment, aeration, clarification and final filtration.



PROFILE VIEW

SINGULAIR 500 GPD & 750 GPD



# SINGULAIR®

AERATOR MODEL NO. 960-500

AERATOR SERIAL NO. 7265FT

## INTRODUCTION

The Singulair system is the finest equipment available and utilizes the most up-to-date wastewater treatment technology. It is a sound investment that protects you and the environment. Please take the time to familiarize yourself with the contents of this manual.

## HOW THE SINGULAIR® SYSTEM WORKS

Developed to serve homes and small businesses beyond the reach of city sewers, the Singulair system employs the extended aeration process. Similar to the treatment

method used by most municipal wastewater treatment facilities, this process involves a natural, biological breakdown of the organic matter in wastewater.

Wastewater enters the pretreatment chamber where anaerobic bacterial action combines with the effects of gravity to precondition the waste before it flows into the aeration chamber. Once in the aeration chamber, aerobic bacteria utilize the organic matter in the wastewater biologically convert the waste into at

## FEATURES AND ADVANTA

Singulair tanks, access risers at precast concrete, manufactured distributor. Internal walls and ba insure uniformity and maximum s within the system that will conta provide treatment are construct plastic, stainless steel or rubber.

The Singulair aerator is powered volt, 60 hertz, single-phase, fractic It is the only electrically power

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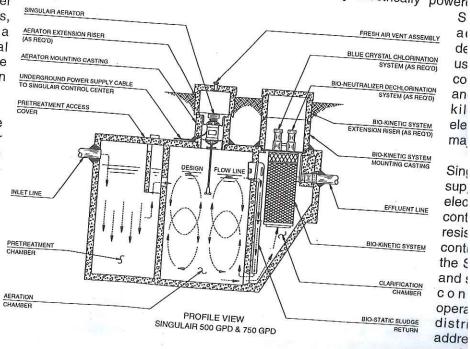
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### WARRANTY REGISTRATION

A Warranty Registration Card was attached to the control center before it was shipped from the factory. If this card has not been returned to Norweco, complete and mail it immediately. If it is not returned within thirty days of the installation date, the two year limited warranty and fifty year aerator exchange program will begin on the decomponent shipment from the factory.

If the control center is mounted iremove the aerator model record card and store not remove this ca necessary to call the note of the serial warranty and service name and aerator seria serial number with the distributor a ready referen ownership will not delay se.

### SUPPLEMENTAL SERVIC

For your reference, please docu

IMPORTANT SAVE FOR FUTURE REFERENCE NORWECO, INC. - NORWALK, OHIO - USA annation and should pracement instructions.

use

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SINGULAIR® L

The Si

OF

DESCRIPTION DATE

DISTRIBUTED LOCALLY BY:



220 REPUBLIC STREET NORWALK, OHIO, USA 44857-1196 TELEPHONE (419)668-4471 FAX (419)663-5440 www.norweco.com



## SNGULAIR® BIO-KNETIC®

**MODEL 960 WASTEWATER TREATMENT SYSTEM** 

## **OWNER'S MANUAL**

#### INTRODUCTION

The Singulair system is the finest equipment available and utilizes the most up-to-date wastewater treatment technology. It is a sound investment that protects you and the environment. Please take the time to familiarize yourself with the contents of this manual.

#### HOW THE SINGULAIR® SYSTEM WORKS

Developed to serve homes and small businesses beyond the reach of city sewers, the Singulair system employs the extended aeration process. Similar to the treatment

method used by most municipal wastewater treatment facilities, this process involves a natural, biological breakdown of the organic matter in wastewater.

Wastewater enters the pretreatment chamber where an aerobic bacterial action combines with the effects of gravity to precondition the waste before it flows into the aeration chamber. Once in the aeration chamber, aerobic bacteria utilize the organic matter in the waste water to biologically convert

the waste into stable substances. Following aeration, flow is transferred to the clarification chamber where the effects of gravity settle out biologically active material. The Bio-Static sludge return, located in the clarification chamber, creates hydraulic currents that gently transfer settled particles back to the aeration chamber. As clarified liquids pass through the Bio-Kinetic system, they are filtered, settled and flow equalized. As a result, complete pretreatment, aeration, clarification and final filtration are assured. The Singulair system reliably protects you, your property and the environment.

#### **FEATURES AND ADVANTAGES**

Singulair tanks, access risers and covers are reinforced precast concrete, manufactured by the licensed Norweco distributor. Internal walls and baffles are cast-in-place to insure uniformity and maximum strength. All components within the system that will contact the wastewater and provide treatment are constructed entirely of molded plastic, stainless steel or rubber.

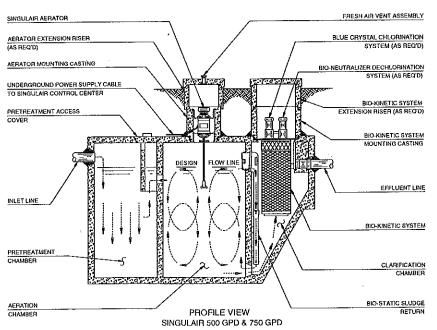
The Singulair aerator is powered by a 1725 RPM, 115-volt, 60 hertz, single-phase, fractional horsepower motor. It is the only electrically powered component in the

Singulair system. The aerator has been designed specifically for use in the Model 960. It costs less to operate and consumes fewer kilowatt hours of electricity than most major appliances.

Singulair aerators are supplied with a prewired electrical control center contained in a corrosion resistant enclosure. The control center contains the Singulair time clock and selector switch that control aerator operation. The local distributor's name, address and telephone number are displayed on the control center

on the control center cover. All system controls and necessary owner information are conveniently located at your fingertips.

Non-mechanical flow equalization and final filtration is accomplished within the Singulair tank by the Bio-Kinetic system. This revolutionary device is installed in the clarification chamber and connected to the system outlet. Optional chlorination and dechlorination may be included in the Bio-Kinetic system if required. All Singulair components work together to assure complete pretreatment, aeration, clarification and final filtration.



#### SINGULAIR® SYSTEM PERFORMANCE

Rivaling the performance of the most advanced wastewater treatment plants in the world, the Singulair system complies with U.S. EPA wastewater treatment guidelines for secondary treatment systems and meets all requirements of NSF Standard No. 40. In ecologically sensitive areas, the most stringent effluent standards are 10 mg/L CBOD and 10 mg/L TSS. Rated Class I after successfully completing the 7 month Standard 40 test protocol, the Singulair Model 960 averaged effluent of 6 mg/L CBOD and 10 mg/L TSS.

#### **OPERATIONAL REQUIREMENTS**

The Model 960 Singulair system is designed to treat only domestic wastewater. Domestic wastewater is defined as the waste generated from a typical residence. includes flows originating from: bathtubs, combination baths/showers, bidets, clothes washers, dishwashers, drinking fountains, water coolers, food grinders, kitchen sinks, lavatories, mop basins, service sinks, shower stalls, group showers, sinks, urinals, wash fountains, wash sinks. water closets and whirlpool baths. While the use of biodegradable detergents is recommended, the Model 960 system has been designed to handle any reasonable amount of bathroom, kitchen or laundry waste. However, some care should be exercised to insure that nonbiodegradable and/or toxic materials are not disposed of via the domestic wastewater plumbing. Do not use the plumbing system for disposal of lint, cooking grease, scouring pads, diapers, sanitary napkins, cotton balls, cotton swabs, cleaning rags, dental floss, strings, cigarette filters, rubber or plastic products, paints and thinning agents, drain cleaners or other harsh chemicals. These items could plug portions of the plumbing, interfere with biological treatment, accumulate in the treatment system and adversely affect system performance. Never connect roofing down spouts, footer drains, sump pump piping. garage and basement floor drains or water softener backwash to the treatment system. Water softener backwash will interfere with biological treatment and must be disposed of separately.

#### **ELECTRICAL REQUIREMENTS**

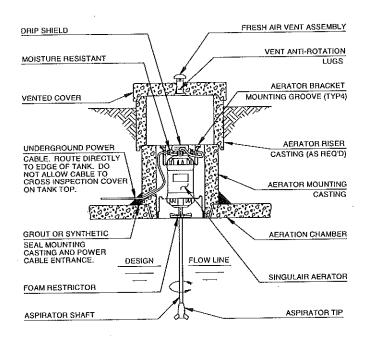
Each Singulair control center must be wired to a dedicated 115 VAC, single phase circuit. A 15 amp circuit is recommended (10 amp minimum). A wiring diagram is provided inside the control center enclosure. All electrical work must be performed in accordance with the requirements of the National Electrical Code and all applicable local codes. Electrical connections should be made only by a qualified electrician following proper procedures and using safe tools.

CAUTION: Any time service is required, first shut off the dedicated circuit breaker in the main electrical service panel. Next, shut off the selector switch in the Singulair control center. Failure to do so could result in personal injury or equipment damage.

#### SINGULAIR® AERATOR

The aerator has been specifically designed for use in the Singulair system and includes special alloy and molded plastic parts to prolong aerator life. Aerator bearings are pre-lubricated and sealed. Singulair aerators are installed in a concrete mounting casting above the aeration chamber. Fresh air enters the aerator through the drip shield and is drawn down the hollow aspirator shaft where it is introduced below the liquid surface. Only the molded plastic aspirator and the lower portion of the stainless steel aspirator shaft are submerged.

The aerator is not designed to run under water and will automatically shut off if a high water condition occurs. If the liquid rises to the level of the foam restrictor, the control center circuit breaker will automatically open to shut off power to the aerator, light the red warning light and sound the audible alarm.



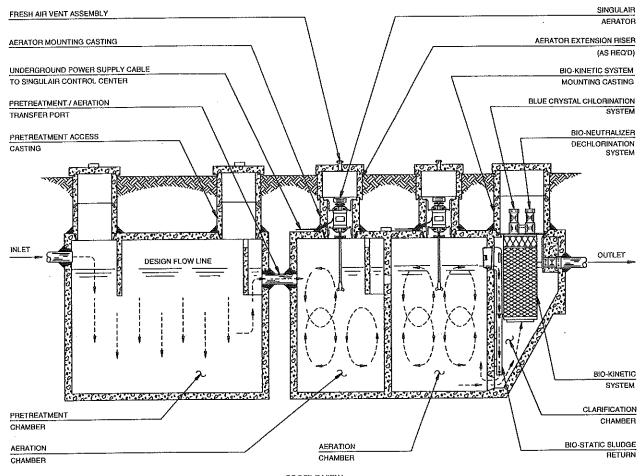
Each aerator is a precision engineered electro-mechanical device. Do not remove it from its installed position. Do not attempt any type of repair. Contact your local distributor if service is needed. Unauthorized tampering or repair will void important provisions of the limited warranty and exchange program.

#### FRESH AIR VENTING SYSTEM

An aerator vent assembly is cast into the concrete access cover above each aerator. The vent assembly supplies fresh air to the aerator, which is drawn through the aspirator and into the wastewater. Finished landscaping should be maintained six inches below the top of the vented access cover and graded to drain runoff away from the cover. Do not allow plants, shrubbery, mulch or landscaping of any type to restrict the flow of air to the vent assembly or obstruct the access cover.

### DISTRIBUTOR SERVICE PROGRAM

Semi-annual service inspections, at six month intervals for the first two years of system operation, are provided by your local Norweco distributor and are included in the original purchase price of the Singulair system. Costs for travel and labor are not charged to the owner. During an inspection, each mechanical aerator, Bio-Kinetic system and other plant components are serviced as outlined in the Singulair Service Manual. After the initial two year service program is completed, the local distributor will provide continued service at the owner's option. The service program should be renewed by the owner to insure maximum system performance.



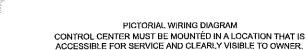
PROFILE VIEW SINGULAIR 1000 GPD, 1250 GPD & 1500 GPD

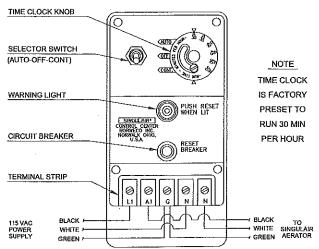
Ask your Norweco distributor about a renewable service contract. If you allow service coverage to expire, you can still obtain the professional assistance of a factory-trained technician. However, these special service calls will be performed on a time and materials basis. Professional service is important to proper system operation and should not be allowed to lapse. Be sure to consider the advantages of a renewable service contract.

The local Norweco distributor's service technician will perform the following services during each service inspection:

- ✓ Check aerator operation
- Check aerator power consumption
- Check aerator air delivery
- Clean stainless steel aspirator shaft
- Clean aspirator tip
- Clean fresh air vent in concrete cover
- ✓ Inspect aeration chamber contents
- Check operation of control center
- Adjust time clock when required
- ✓ Remove the Bio-Kinetic system
- Scrape the clarification chamber
- ✓ Inspect the Bio-Static sludge return

- Inspect outlet coupling
- ✓ Install a clean Bio-Kinetic system
- ✓ Fill Blue Crystal feed tube
- ✓ Fill Bio-Neutralizer feed tube
- ✓ Inspect effluent quality
- ✓ Inspect outlet line
- Inspect ground water relief point
- ✓ Inspect effluent disposal system
- Complete owner service record
- ✓ Complete health department notification
- Complete distributor service record
- ✓ Mail health department notification





BLACK WIRE MUST BE HOT LEAD - WHITE WIRE MUST BE NEUTRAL. SINGULAIR CONTROL CENTER MUST BE WIRED INTO A SEPARATE 10 AMP CIRCUIT AT MAIN ELECTRICAL DISTRIBUTION BOX.

#### SINGULAIR® CONTROL CENTER

Every Singulair aerator is supplied with a prewired electrical control center to permit fully automatic operation. The control center is contained in a sealed corrosion resistant enclosure for your safety and the protection of components and wiring. The control center should be located so the red warning light can be seen and the audible alarm heard. It should be mounted to minimize exposure to direct sunlight, freezing rain or conditions that might prevent routine inspection or access. If an electrical overload occurs for any reason, the red warning light will glow and the audible alarm will sound. To shut off the alarms and restart the aerator, push the reset button on the control center cover. This should reset the circuit breaker and allow the aerator to resume normal operation. If the alarms do not shut off after depressing the reset button or if the breaker continues to trip, call the local distributor.

#### TIME CLOCK

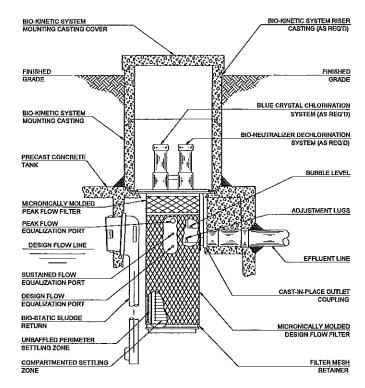
Each control center is supplied with an adjustable time clock that determines the operating cycle of the aerator. The time clock will not permit the aerator to run less than 30 minutes out of each hour and is adjustable in 5 minute increments up to 55 minutes per hour. Full time operation is achieved by moving the selector switch to the "continuous" position. The performance of the Singulair system has been certified to meet ANSI/NSF Standard 40 effluent quality requirements and U.S. EPA secondary treatment guidelines at the minimum time clock setting. The time clock is factory preset and should not be adjusted by the owner. Your factory-trained Norweco distributor will make necessary adjustments under the specific direction and authorization of the local regulatory agency. If you feel an adjustment is necessary, contact your local distributor.

#### **BIO-STATIC® SLUDGE RETURN**

Each Bio-Static sludge return is installed in the aeration/clarification chamber wall to provide return of settled solids. Aeration chamber hydraulic currents enter the sludge return(s) and are directed through the Bio-Static device into the clarification chamber. The hydraulic currents containing resuspended sludge are directed through the clarification chamber inlet zone and back to the aeration chamber for additional treatment. The Bio-Static sludge return accomplishes resuspension and return of settled solids without disturbing the contents of the clarification chamber. It has no moving parts and does not require service but its operation will be checked by your local distributor during each semi-annual service inspection.

#### **BIO-KINETIC® SYSTEM**

Bio-Kinetic systems provide non-mechanical flow equalization through all plant processes. Each system contains 3 separate filtration zones and 8 independent settling zones with optional chlorination dechlorination tablet feed systems. All components are manufactured from plastic, stainless steel or rubber and are connected to the outlet coupling. Bio-Kinetic systems are filled with hold down water and locked into position during installation. They are serviceable from grade and can be cleaned with normal water pressure. Do not remove a unit without disengaging the locking lugs and pumping out the internal chambers. Your local distributor has the necessary training, tools and equipment for removal and cleaning. If your Bio-Kinetic system is in need of service contact your local distributor. During each routine semi-annual service inspection your local distributor will remove and clean the Bio-Kinetic system or replace it with a unit from their service stock.



## NON-MECHANICAL FLOW EQUALIZATION

The patented design of the Bio-Kinetic system provides non-mechanical flow equalization for the Model 960 wastewater treatment plant. Equalization reduces incoming hydraulic surges (e.g. typical shower of 10 minutes duration, bathtub discharge of 5 minutes duration, clothes washer discharge of 2 minutes duration and dishwasher discharge of 2 minutes duration) throughout the system. The flow equalization provided by the Bio-Kinetic system causes wastewater to be held upstream of the final outlet during hydraulic surges, which preserves treatment integrity and enhances system operation. The actual rate at which the Bio-Kinetic system equalizes flow is variable and depends upon specific loading patterns and the duration of each flow surge. At the design loading pattern like the one used during the Standard 40 performance evaluation, the Model 960-500 GPD system equalizes all flow an average of 48%. As a result, hydraulic surges and periods of high wastewater flow are automatically reduced to protect the environment and all treatment plant processes on a demand use, as needed, basis.

## BLUE CRYSTAL® RESIDENTIAL DISINFECTING TABLETS

If local regulations require, an initial supply of Blue Crystal Disinfecting Tablets will be placed in the Bio-Kinetic system chlorine feed tube(s) at system start-up. Specifically formulated for use in the Singulair system, Blue Crystal Disinfecting Tablets provide efficient and reliable disinfection when effluent chlorination is desirable. Manufactured from calcium hypochlorite, Blue Crystal Disinfecting Tablets provide effective, economical bacteria killing power. Liquid entering the Bio-Kinetic system contacts the installed Blue Crystal Disinfecting Tablets, just downstream of the equalization ports. A fully charged feed tube will last an average of six months. During each semi-annual inspection, your local distributor's service technician will check system operation, the rate of tablet consumption and install tablets during routine service inspections.

CAUTION: The improper handling of Blue Crystal tablets may cause personal injury or property damage. Keep out of the reach of children and do not allow the tablets or feed tube to contact skin, eves, or clothing. Tablets may be fatal if swallowed and tablet dust is irritating to the eyes, nose and throat. Do not handle the tablets or feed tubes without first carefully reading the product container label and/or the handling and storage instructions. Do not add tablets to any dispensing device or storage container containing remnants of any other product, especially petroleum based products or swimming pool chlorine. Mixing of these chemicals may cause a violent reaction leading to fire or explosion. For additional information about Blue Crystal tablets contact your local distributor.

## BIO-NEUTRALIZER® DECHLORINATION TABLETS

In environmentally sensitive areas, environmental regulations may require the use of Bio-Neutralizer Dechlorination Tablets. Manufactured as an efficient and dependable means to chemically neutralize both free and combined chlorine. Bio-Neutralizer Dechlorination Tablets provide consistent reduction or elimination of chlorine residual without unnecessarily reducing the level of dissolved oxygen in system effluent. Bio-Neutralizer Dechlorination Tablets utilize a unique chemical mixture for chlorine reduction and environmental protection. As liquid passes through the final discharge zone of the Bio-Kinetic system, the flow contacts the installed Bio-Neutralizer tablets and residual chlorine is removed from the system effluent. A fully charged feed tube will last an average of six months. During each semi-annual inspection, your local distributor's service technician will check system operation, the rate of tablet consumption and install tablets during routine service inspections.

CAUTION: Bio-Neutralizer tablets or feed tubes should not be mixed with Blue Crystal tablets. Do not handle the tablets or feed tubes without first carefully reading the product container label and/or the handling and storage instructions. For additional information about Bio-Neutralizer tablets contact your local distributor.

#### **NO OWNER MAINTENANCE**

The Singulair system is inspected and serviced by a licensed, factory-trained distributor, therefore, no owner maintenance is required during the warranty period. The Singulair system does not require pumping as often as a septic tank. Under normal use only the pretreatment chamber should be pumped. The local distributor will inspect the aeration chamber contents and plant effluent at six month intervals to determine if the pretreatment chamber is discharging excessive solids. Every three years, the pretreatment chamber should be inspected. The pretreatment chamber will normally require pumping at three to five year intervals. Contact your local distributor prior to tank pumping for complete information on removal of equipment, access to individual chambers, coordination of services and proper disposal of tank contents. A tank pumping service licensed by the local regulatory agency must be used for removal and disposal of tank contents. The tank pumper should consult with local authorities to determine the proper disposal method.

If a period of intermittent use, or an extended period of non-use of the system is anticipated, contact the local distributor for instructions. Your local licensed distributor has comprehensive Singulair service instructions and has been factory-trained in trouble-shooting procedures. Contact your local distributor if you require service or information regarding tank pumping.

#### WARRANTY REGISTRATION

A Warranty Registration Card was attached to the control center before it was shipped from the factory. If this card has not been returned to Norweco, complete and mail it immediately. If it is not returned within thirty days of the installation date, the two year limited warranty and fifty year aerator exchange program will begin on the date of component shipment from the factory.

If the control center is mounted in an outdoor location, remove the aerator model number and serial number record card and store it in a safe location. Otherwise, do not remove this card from the control center. If it is necessary to call the local distributor for service, make note of the serial number before calling. Distributor warranty and service records are cross-indexed by owner name and aerator serial number. Supplying the aerator serial number with the service request will give the distributor a ready reference so that changes in system ownership will not delay service.

#### SINGULAIR® LIMITED WARRANTY

The Singulair aerator enjoys the distinction of being the only aerator on the market today backed by a fifty year warranty and exchange program. Each Singulair aerator, control center, Bio-Kinetic system and any other components manufactured by Norweco, are warranted to be free from defects in material and workmanship, under normal use and service. for a period of two years. The two year limited warranty is included in the original purchase price of every comprehensive aerator Singulair system. The exchange program offers Singulair owners an additional forty-eight years of protection. Owners with a Singulair system may exchange any aerator up to fifty years of age for a replacement unit at a prorated cost. If the Singulair aerator fails, do not use or dismantle the unit. The local, licensed distributor has detailed warranty and exchange information and should

be contacted for service or replacement instructions.

#### SUPPLEMENTAL SERVICE RECORD

For your reference, please document service performed on the following chart:

DATE	DESCRIPTION		
	·		
	·		

# NORWALK WASTEWATER EQUIPMENT COMPANY

220 REPUBLIC STREET NORWALK, OHIO, USA 44857-1196 TELEPHONE (419)668-4471 FAX (419)663-5440 www.norweco.com **DISTRIBUTED LOCALLY BY:** 

Singulair<sup>®</sup>, Modulair<sup>®</sup>, Travalair<sup>®</sup>, Lift-Rail<sup>®</sup>, Microsonic<sup>®</sup>, Norweco<sup>®</sup>, Bio-Dynamic<sup>®</sup>, Bio-Sanitizer<sup>®</sup>, Bio-Neutralizer<sup>®</sup>, Bio-Kinetic<sup>®</sup>, Bio-Static<sup>®</sup>, Bio-Gem<sup>®</sup>, Blue Crystal<sup>®</sup>, Grease Buster<sup>®</sup> and "BUSTER" logo<sup>®</sup> are registered trademarks of Norwalk Wastewater Equipment Company, Inc.



# SINGULAIR® BIO-KINETIC®

WASTEWATER TREATMENT SYSTEM

Automatically reduces all domestic wastewater to a clear, odorless liquid in just 24 hours

Enhances property value while protecting the environment



Energy efficient

Automatic operation

Precast concrete tank

500 to 1500 gallons per day

(NSF.)

Certified to ANSI/NSF Standard 40

Class I



# **SINGULAIR®**

# THE STATE-OF-THE-ART ALTERNATIVE TO THE TROUBLESOME SEPTIC TANK...

The Singulair plant quietly, efficiently and automatically treats all incoming wastewater in just twenty-four hours. Incorporating the most up-to-date technology, the system reduces all domestic wastewater to a clear, odorless liquid. The Singulair plant employs the extended aeration process, similar to the treatment method used by most municipal wastewater treatment facilities. This process involves a natural, biological breakdown of the organic matter in the wastewater. Once complete treatment has been accomplished, a stabilized effluent is safely returned to the environment. The Singulair system is a trouble-free answer to wastewater disposal. It contributes to property value and insures a safe, sanitary home environment.

# FLOW EQUALIZED THROUGH ALL TREATMENT STAGES...

Flow equalization guarantees adequate retention in each treatment stage. Wastewater enters the system and is equalized within the pretreatment chamber, while anaerobic bacteria and gravity precondition the waste before it flows into the aeration chamber. In the aeration chamber, aerobic bacteria convert the waste into stable substances. Flow equalization maximizes this biological oxidation and insures twenty-four hour retention. Following aeration, the liquids flow into the clarification chamber where flow equalization enhances the settling of biologically active substances. As the fine particles settle, they are returned to the aeration chamber by the Bio-Static sludge return. Only clarified liquids enter the final treatment stage, the Bio-Kinetic system. This revolutionary device incorporates filtration, settling, non-mechanical flow equalization, optional disinfection, adjustable outlet weir and optional dechlorination. Throughout all treatment stages, flow equalization assures process efficiency and effluent quality.

### RIVALS THE PERFORMANCE OF THE MOST ADVANCED WASTEWATER TREATMENT EQUIPMENT IN THE WORLD...

The Singulair plant is the only onsite wastewater treatment system performance certified and fully listed by NSF International and the Canadian Standards Association. The Singulair system complies with U.S. EPA guidelines and meets all requirements of NSF Standard 40. The entire system is listed by CSA for safety, reliability and quality. These certifications insure that the Singulair system will reliably protect you, your family and the environment.

### CONTROL CENTER WITH TIME CLOCK AUTOMATICALLY REDUCES OPERATING COSTS...



Every Singulair aerator is supplied with a prewired electrical control center for fully automatic operation. The control center is contained in a gasketed, lockable, corrosion resistant enclosure for safety and protection of components and wiring. Each control center is equipped with a resettable circuit breaker, on/off/automatic selector switch, red warning light, adjustable time clock and audible alarm. The

time clock is factory preset for normal operating conditions, but can be adjusted by your factory-trained Norweco distributor if necessary. The Singulair system has been performance certified with the aerator operating only 30 minutes per hour. Intermittent operation results in direct savings in electrical costs and longer aerator life. The distributor's name, address and telephone number are prominently displayed on the control center cover. All system controls and necessary owner information are conveniently located at your fingertips.



# OPTIONAL BLUE CRYSTAL® RESIDENTIAL DISINFECTING TABLETS

Specifically formulated for use in the Singulair system, Blue Crystal tablets provide efficient and reliable disinfection when chlorination is desirable. Manufactured from pure calcium hypochlorite, Blue Crystal tablets provide consistent chlorine dosage to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. Each tablet contains a minimum of 70% available chlorine and can be used to provide positive disinfection when required. Packaged in resealable containers, Blue Crystal tablets are available from your local distributor in 10 lb. or 100 lb. polyethylene pails.

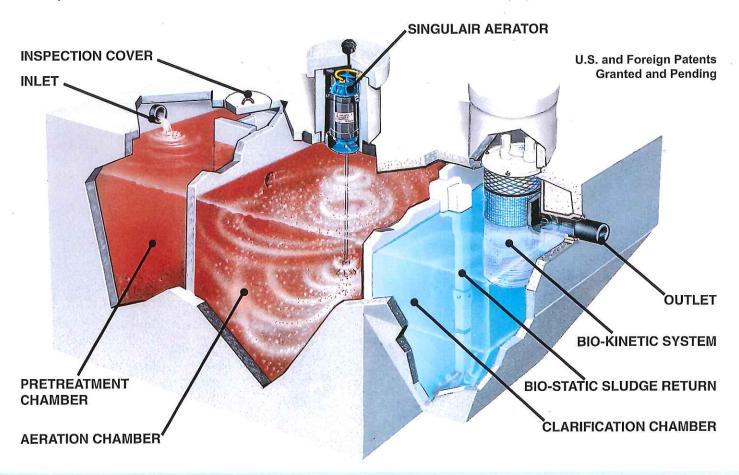
# BIO-KINETIC®

# WASTEV

### A UNIQUE NEW DESIGN THAT EXCEEDS GOVERNING CRITERIA AND ASSURES YEARS OF RELIABLE TREATMENT AND TROUBLE-FREE OPERATION...

- 50% less energy required—the Singulair aerator operates only 30 minutes per hour, providing substantial savings over continuous-run systems.
- NSF and CSA listed to internationally recognized performance standards—certified testing insures quality, reliability, safety and long life.
- Frequent tank pumping eliminated—48 hour retention in the Singulair system reduces pumping frequency compared to smaller capacity systems.
- Low operating cost—the Singulair aerator is the only electrical component. The fractional horsepower aerator motor requires less electrical energy than most major appliances.
- Low installation cost—the Singulair plant may be installed to treat all domestic wastewater at a cost comparable to that of a septic system.
- Increases property value—insures a safe, sanitary home environment. Eliminates the unsightly and unsanitary conditions associated with troublesome septic tanks.

- Durable, reliable components installed safely below grade—no exposed power cords, compressors, filters or air lines accessible to children or pets.
- Precast concrete pretreatment chamber included eliminates the need to purchase a separate tank.
- State-of-the-art design—incorporating the revolutionary Bio-Kinetic system, all flow through the Singulair plant is uniformly distributed throughout all four treatment stages.
- Fully warranted components—backed by the longest warranty and exchange program in the industry.
- Equalizes hydraulic surges—at the Standard 40 500 GPD design loading pattern, all flow is equalized an average of 48%.
- Consistent treatment—variations in flow from guests, parties or vacations do not affect performance.
- Local distribution and service—all Singulair systems are installed and serviced by licensed, factory-trained Norweco distributors. Their company name and address are displayed on the control center cover.



# ATER TREATMENT SYSTEM

# LOW RPM ENERGY EFFICIENT AERATOR INSTALLED SAFELY BELOW GRADE...

The Singulair aerator is powered by a 1725 RPM, 115 volt, fractional horsepower motor. The aerator is the only electrically powered component and has been designed specifically for use in the Singulair system. It costs less to operate and consumes fewer kilowatt-hours of electricity than most major appliances. Manufactured according to UL and CSA standards, the 1725 RPM motor reduces heat build up and dramatically increases bearing life. Tested and certified to operate only 30 minutes per hour, the aerator provides quiet, reliable operation. The Singulair aerator operating twelve hours per day creates substantial savings compared to the cost of continuous-run systems.

# PRECISION ENGINEERED FOR COMPREHENSIVE OWNER PROTECTION...

The aerator motor is constructed from the finest available component parts, including lifetime lubricated and permanently sealed ball bearings. The moisture resistant electrical connector, sealed bearings, and air intake port with drip shield are located well above the normal operating liquid level in the tank. Only the stainless steel aspirator shaft and reinforced nylon aspirator are in contact with the liquid. Unlike air lines and diffusers that are located at the bottom of the aeration chamber and prone to clogging, the aspirator of the Singulair system infuses fresh air near the chamber surface. Each aerator is individually tested in a specially designed tank simulating in-use conditions and must pass an extensive quality control checklist prior to shipment. Electrical and mechanical instrumentation is used to confirm manufacturing tolerances and proper operation. These comprehensive design features and stringent quality control procedures insure the Singulair aerator will provide years of trouble-free service.

# PRECAST CONCRETE TANK AND NON-CORROSIVE COMPONENT PARTS...

Each Singulair system is constructed of high quality, noncorrosive materials under rigid quality control conditions. The tank, access risers and covers are reinforced precast concrete, manufactured locally by the licensed Norweco distributor. Each aerator's air intake, aspirator shaft, foam restrictor, fresh air vent and aspirator are made of stainless steel or special molded plastics. The Bio-Kinetic system is constructed entirely of plastic, stainless steel or rubber components that are impervious to the environment.

# BACKED BY OUR EXCLUSIVE FIFTY YEAR WARRANTY AND EXCHANGE PROGRAM...



The Singulair aerator enjoys the distinction of being the only aerator on the market today backed by a fifty year warranty and exchange program. Norweco warrants each aerator, control center and Bio-Kinetic system to be free from defects in

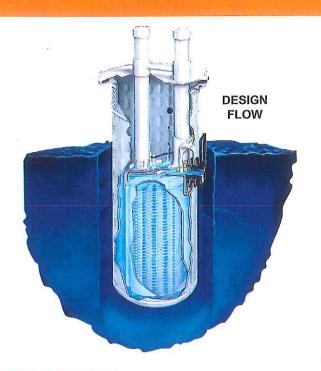
material and workmanship under normal use and service for a period of two years. The exchange program offers an additional forty-eight years of protection. Aerators up to fifty years of age may be exchanged at a prorated cost. A comprehensive Owner's Manual is supplied with each system and provides a complete description of operation and maintenance. To insure proper operation, semi-annual service inspections for the first two years of system operation are included in the original purchase price of the Singulair system. The local, licensed distributor has detailed warranty and exchange information.

### OPTIONAL BIO-NEUTRALIZER® DECHLORINATION TABLETS

Formulated and manufactured as an efficient and dependable means to chemically neutralize both free and combined chlorine, these tablets dissolve slowly and evenly, providing consistent reduction or elimination of chlorine residual. They are a reliable, safe and economical method for reduction of residual chlorine if you are located in an area near environmentally sensitive surface waters. Packaged in easily handled and resealable containers, Bio-Neutralizer tablets are available from your local Norweco distributor in 25 lb. and 45 lb. polyethylene pails.



# BIO-KINETIC® SYSTEM



### ELIMINATES THE NEED FOR SAND, GRAVEL OR SYNTHETIC FILTERS AND PROVIDES TROUBLE-FREE PERFORMANCE...

Modern families with working parents and hectic schedu promote concentrated periods of water usage in short periods time. In today's home, excessive hydraulic flows are common a often cause problems with septic tanks, sand filters or a treatment system without flow equalization. The non-mechaniflow equalizing design of the Bio-Kinetic system insures that incoming wastewater is properly treated prior to discharge. Clarifi liquids enter the Bio-Kinetic system through the filter media and a held in the baffled perimeter settling zone. Liquids exit the perime settling zone through the flow equalization ports. These po control the flow through all upstream and downstream process and regulate the amount of liquid that can enter the Bio-Kine system. When incoming flow exceeds the hydraulic discharge ra of the equalization ports, it is retained upstream of the Bio-Kine system within the first three treatment stages.

SUSTAINED

**FLOW** 

#### **FEATURES**

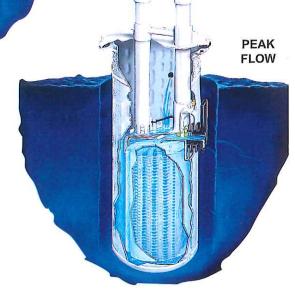
- Three positive filtration zones
- Eight independent settling zones
- Adjustable outlet weir
- Leveling lugs with level
- Adjustable flow deck
- Design flow equalization
- Sustained flow equalization
- Peak flow equalization
- Design flow filter
- Peak flow filter
- Lock-down lugs
- Optional chlorination
- Optional dechlorination



If the incoming wastewater flow increases beyond the discharge rate of the design flow equalization ports, the liquid level will automatically rise to a pair of sustained flow equalization ports. With four flow equalization ports in use, the rate of flow will not exceed the design flow discharge rate. After complete equalization, optional disinfection may be added before all flow follows the multi-directional path to the system outlet. Even during periods of extreme hydraulic or organic overload, effluent quality is maintained. The Bio-Kinetic system has been designed with peak flow filter media and peak flow equalization ports held safely in reserve, well above the sustained flow liquid level. Norweco's Bio-Kinetic system combines up-to-the-minute technology with state-of-the-art design to provide today's answer for the protection of tomorrow's environment.

#### **ADVANTAGES**

- Assures complete treatmer
- No additional tankage
- Automatic operation
- Patented design
- No moving parts
- Serviceable from grade
- Minimizes chlorine usage
- No electrical requirements
- Eliminates operational ups
- State-of-the-art technology
- Corrosion resistant materia
- Fully warranted





## **MODULAIR® WASTEWATER TREATMENT PLANTS**

For semi-commercial applications - 1,500 to 100,000 GPD. Tanks are precast concrete covered with galvanized metal grating. Equipment is factory assembled and tested. Ideal for small subdivisions, factories, schools, shopping centers, etc.

#### TRAVALAIR® WASTEWATER TREATMENT PLANTS

Featuring Norweco's exclusive TRAVALAIR sludge return and surface skimmer system. Flexible in design - capable of serving communities of 10,000 people. Automatic sludge collection and return completely eliminate hopper scraping.

#### LIFT-RAIL® PUMPING STATIONS

Featuring guide rails and telescopic hoist with winch for rapid pump removal and inspection. Available to handle any pumping application - installed and ready to operate in less than a week. Controls are installed at ground level in a weatherproof enclosure.

### WASTEWATER TREATMENT PRODUCTS YOU CAN RELY ON FROM A COMPANY **COMMITTED TO PROTECTING** THE ENVIRONMENT...

Originally founded in 1906, Norweco has years of experience in the pollution control field. An impressive list of installations including the Army Corps of Engineers, FHA, Department of Energy, numerous Fortune 500 firms, the Atomic Energy Commission, Department of Defense, U.S. Department of Natural Resources and U.S. EPA funded projects demonstrate the field proven acceptability of Norweco's products.

Norweco is fully committed to manufacture only the highest quality products to insure the protection of our environment. Seen regularly as students or instructors, Norweco personnel participate in nationally accredited educational and regulatory programs to insure that designs, equipment and manufacturing processes remain on the cutting edge of environmental technology.

Designed to internationally recognized performance standards, Norweco products are sold throughout the world. The Singulair Bio-Kinetic wastewater treatment system is a quality product backed by a local expert, manufactured, sold, installed and serviced with pride.



220 REPUBLIC STREET NORWALK, OHIO, USA 44857-1196 TELEPHONE (419)668-4471 FAX (419)663-5440 www.norweco.com

### LOCAL AVAILABILITY THROUGH A WORLDWIDE NETWORK OF **LICENSED, FACTORY-TRAINED DISTRIBUTORS...**

All Norweco wastewater treatment systems are sold, installed and serviced by factory-trained Norweco distributors. They are fully trained regarding installation of the product and are able to provide all necessary job coordination to insure a simple, economic installation. All Norweco distributors have completed a nationally accredited Singulair factory-training program and they have a thorough understanding of the product and its application.

Each system is sold complete including delivery, tank setting, equipment installation, plant start-up and service. Even a series of service and adjustment inspections, prescheduled for the first two years of operation, is included in the sale. Extended service contracts are also available from licensed Norweco distributors. Regular maintenance insures that your Norweco wastewater treatment system will continue to perform at the highest level, protecting you, vour investment and the environment.

"Progress through service since 1906" sums it up nicely. A quality product-serviced by a local expert-has earned Norweco a reputation for excellence.

### **DISTRIBUTED LOCALLY BY:**

Hurt's Wastewater Management Company 1-800-841-3447



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