



AquaKlear

WASTEWATER TREATMENT SYSTEMS

OWNER'S MANUAL CLASS I

COMMERCIAL & RESIDENTIAL
WASTEWATER TREATMENT SYSTEMS



REVISED 06/2023

AQUAKLEAR, INC.
876 N. BIERDEMAN ROAD
PEARL, MS 39208
(877) 936-7711



Certified to NSF/ANSI Standard 40

PRODUCT DESCRIPTION

The “AquaKlear” Wastewater Treatment system is an economical alternative for use in treating domestic wastewater generated by normal household activities. The system consists of a single tank extended aeration activated sludge system which is capable of producing a clear odorless effluent which meets applicable state discharge standards. This system has been successfully tested and listed by NSF International in accordance with NSF/ANSI Standard 40.

Raw wastewater flows into the aeration zone of the extended aeration system. Here, the oxygen supplied by the aeration system, along with the organic matter in the waste stream, creates an ideal environment for the growth of aerobic micro-organisms. These organisms convert the waste organic materials into gases and additional micro-organism cell material. In addition to supplying oxygen, the aeration system keeps the contents of the aeration zone well mixed to provide optimum exposure to the micro-organisms to the waste material. The action of the beneficial micro-organisms also result in a significant reduction in pathogenic bacteria.

After approximately 24 hours of detention in the aeration zone, the mixture enters the clarifier where quiescent conditions enable separation of the micro-organisms which are returned to the aeration zone and discharge of clear treated wastewater through the launder assembly. At the surface of the clarifier there is a skimmer which removes any floating solids and returns them to the aeration zone automatically, while not disturbing the quiescent conditions of the clarifier. Effluent may be discharged to an accepted discharge point that is in compliance with all state and local laws and regulations.

The “AquaKlear” Wastewater Treatment System exceeds all effluent water quality requirements for Class 1 designation (25 mg/L CBOD5 and 30 mg/L TSS) as set forth by NSF/ANSI Standard 40. The six month daily average for the AquaKlear, Inc. system is 10 mg/L CBOD5 and 11 mg/L TSS.

Model Numbers

☐ AK500C

☐ AK500F

☐ AK5B3

☐ AK600C

☐ AK600CC

☐ AK600FF

☐ AK6PTC

☐ AK6PTF

☐ AK6B3

☐ AK750C

☐ AK750FF

☐ AK800C

☐ AK800FF

☐ AK800CA

☐ AK1000C

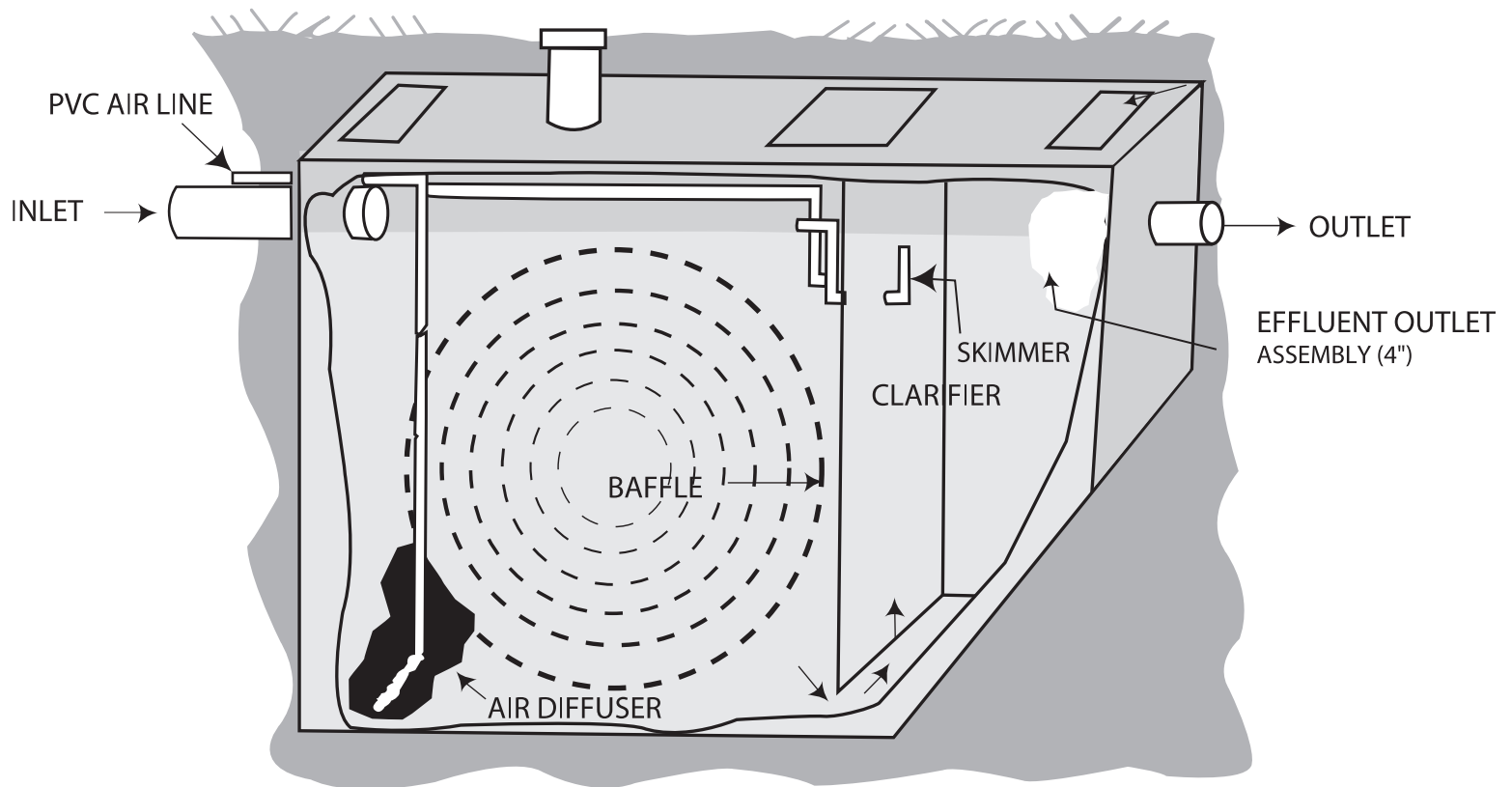
☐ AK1000CA

☐ AK1000FF

☐ AK1500C

☐ AK1500FF

Note: suffix C denotes Concrete
suffix F denotes Fiberglass
suffix FF denotes Fiberglass Flattop



FLOW PATH OF SYSTEM

OPERATING INSTRUCTIONS

Once installed, the blower will run continuously and the system will operate with a minimal amount of attention. It will take from 6 to 12 weeks after startup to develop an optimum population of micro-organisms. To insure proper operation and minimize maintenance requirements, the following materials should not be permitted to enter the system.

Items to Avoid

Strong disinfectant or bleaches (other than small amounts normally used in laundry and house cleaning - be conservative).

Oils, greases and chemical waste

Disposable diapers, tampons, sanitary napkins, cigarette butts and similar items.

Discharge from water softener.

The AquaKlear Wastewater Treatment System has been designed and tested to treat common and ordinarily expected wastewater and sewage from commercial and residential sources.

ROUTINE SYSTEM CHECKS

Checking Pump

Check air pump daily to be sure it is operating. Once accustomed to the soft humming sound of a properly operating unit, any unusual noise is an indication of a malfunction. If any unusual noise is detected, or if alarm signals, call dealer for service.

Checking Access Port

Check access port weekly for sour or "rotten egg" odor. If odor develops, call dealer for service. Always reference the system data plate when calling for service.

Checking Inlet Filter

Check inlet filter on air pump every three months and change or wash, if necessary. Filter should be cleaned or changed more often if conditions warrant.

Checking Effluent

Check effluent pipe weekly. Effluent should be clear and odor free. Effluent samples should be collected after treated wastewater has been discharged from the end of the pipe for several minutes. Care should be taken to insure that there is no algae growing in the pipe end which may be collected in the effluent sample.

Residential Removal

While the accumulation of residuals is largely dependent upon the characteristics of the wastewater treated, it is recommended that residuals be removed every 5 years, by a state certified removal service. The service should remove the lower (bottom) 1/2 of the liquor in both chambers and then refill with clear water.

Intermittent Operation

The air pump should always be operating during intermittent use of the treatment system.

Electrical Wiring

An electrical wiring diagram is included in this manual.

Effluent Collection

When collecting an effluent sample, the sample should be taken at the closest point to the clarifier as possible. The water should have been flowing for two minutes before collecting the sample.

MODEL NO.

AKB

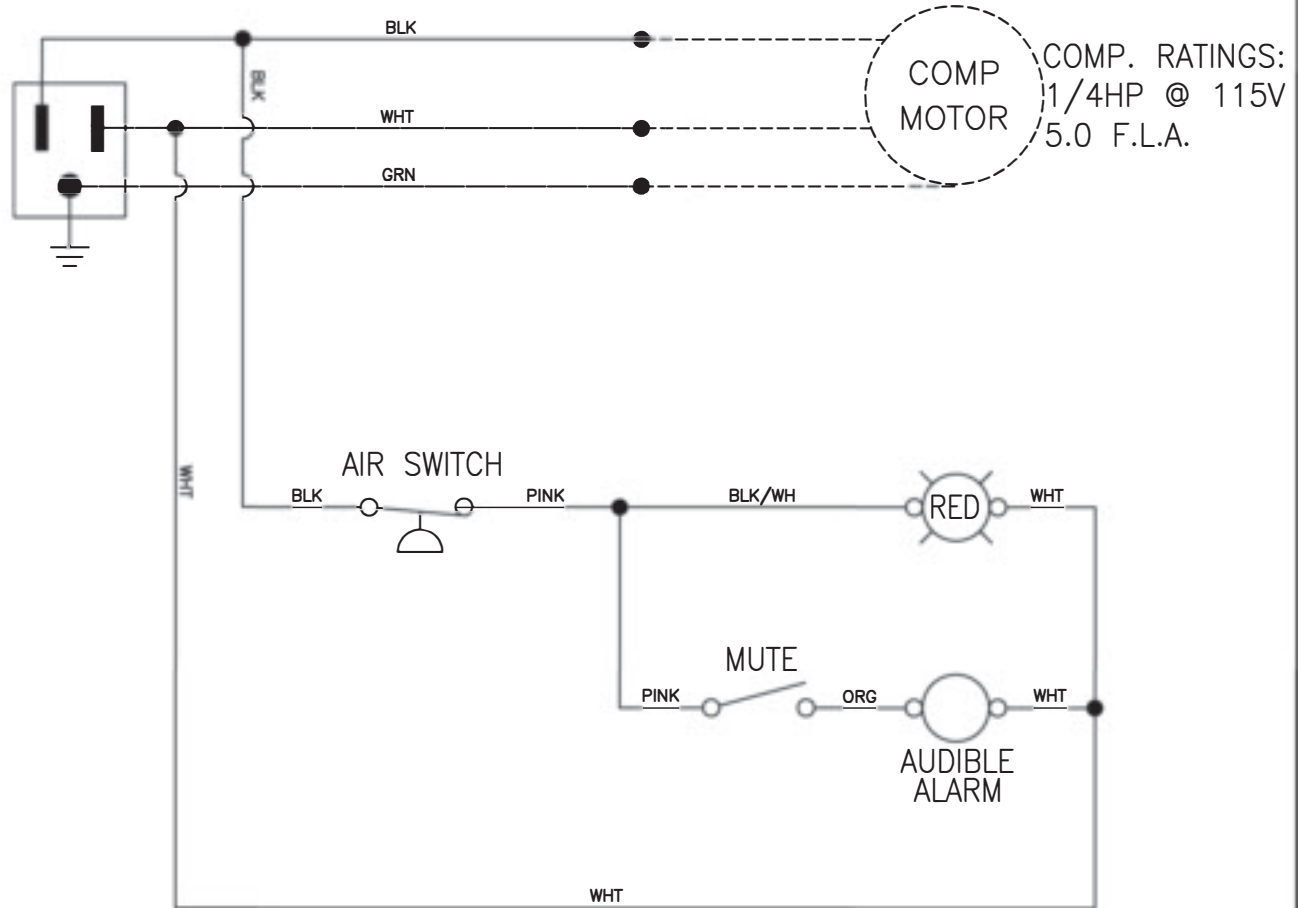
PUMP/COMPRESSOR POWER CIRCUIT

115V – 1PH–10A MAX.

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NOTE: MOTOR MUST HAVE
INTERNAL OVERLOAD PROTECTION.

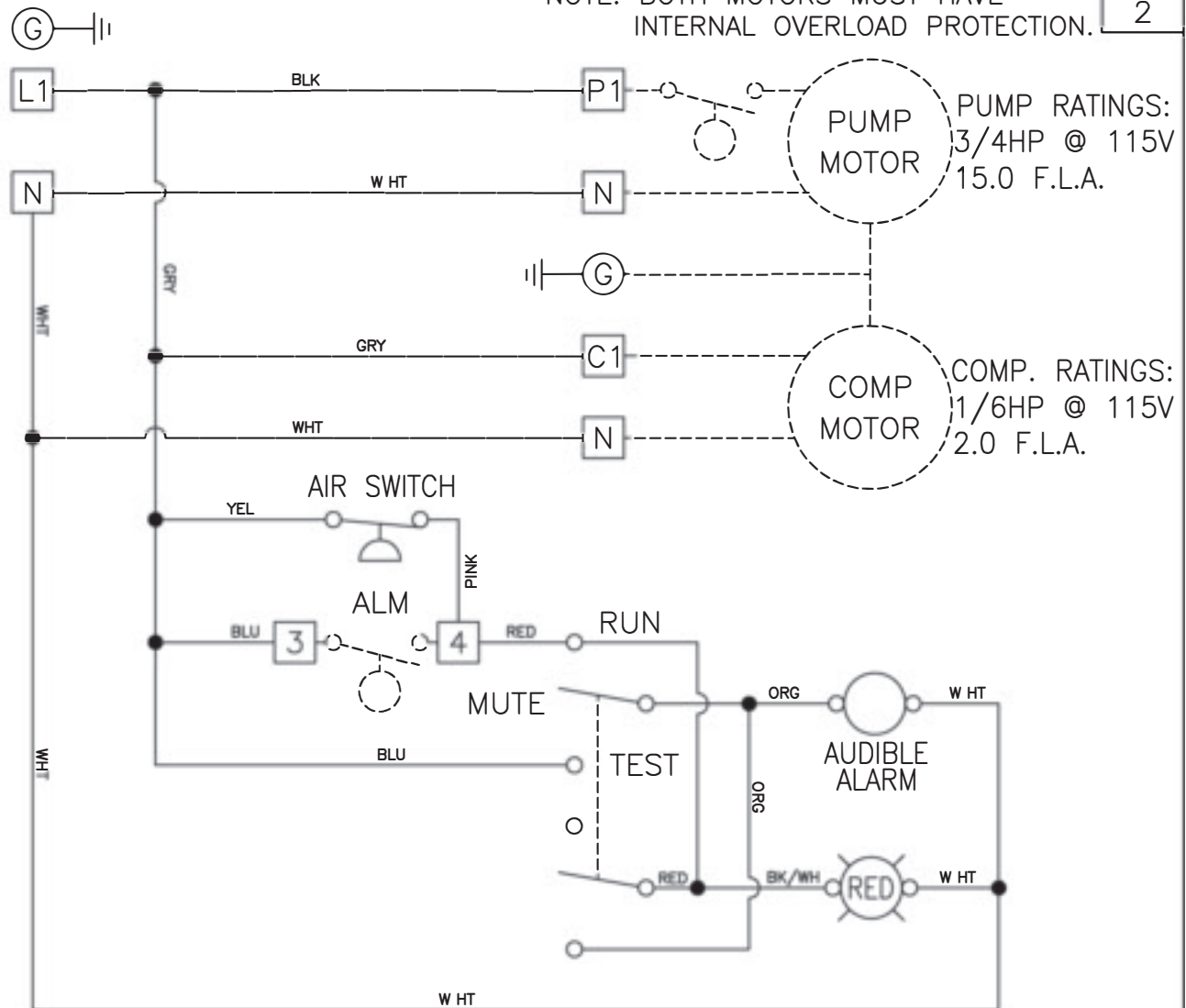


NOTES: MAIN PANEL DISCONNECT MUST BE PROVIDED BY INSTALLER.
DASHED LINES INDICATE ITEMS NOT CONTAINED IN THE PANEL.
FIELD WIRING MUST BE A MINIMUM OF 60°C COPPER WIRE.
ALL CONNECTIONS MADE TO COMPRESSOR MUST BE PROPERLY SIZED,
AND WATER TIGHT.

ALL INFORMATION CONTAINED IN THIS DRAWING IS
CONFIDENTIAL AND PROPRIETARY TO SEPTIC PRODUCTS, INC.

CHANGES	TOLERANCES	DRAWN BY	DATE
F	DECIMALS	D. MIDDLETON	12/01/11
E	.xxx = ±.005	MATERIAL SPECIFICATION: AS NOTED	
D	.xx = ±.010		
C	FRACTIONAL		
B	x/x = ±.1/64		
A	ANGLES		
	x° = ±1/2°		
		SCALE:	FULL

NOTE: BOTH MOTORS MUST HAVE
INTERNAL OVERLOAD PROTECTION.



NOTES: MAIN PANEL DISCONNECT MUST BE PROVIDED BY INSTALLER.
DASHED LINES INDICATE ITEMS NOT CONTAINED IN THE PANEL.
FIELD WIRING MUST BE A MINIMUM OF 60°C COPPER WIRE.
REQUIRED TORQUE FOR TERMINAL BLOCK SCREWS IS 9 in.-lbs.

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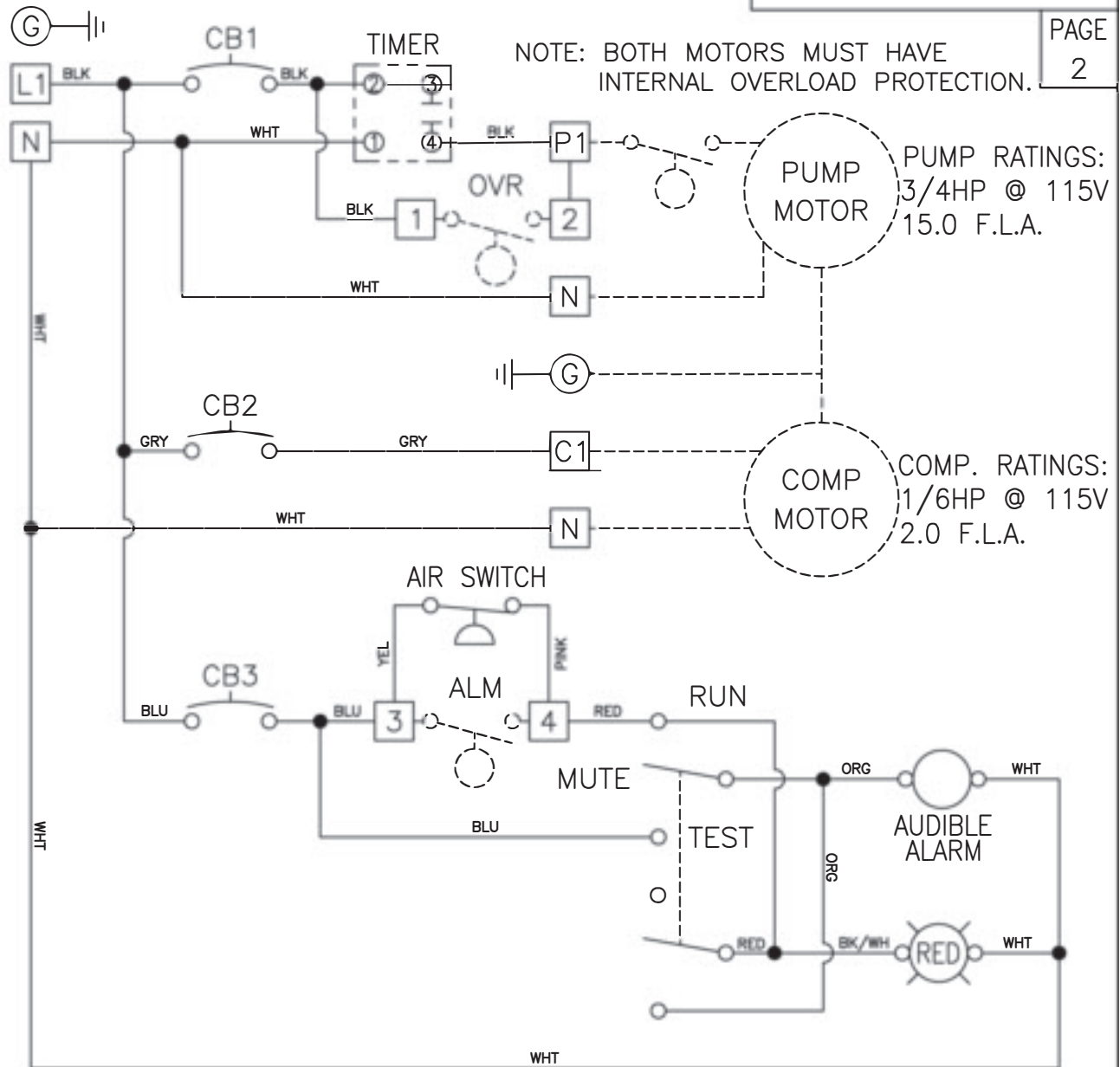
CHANGES		TOLERANCES	DRAWN BY	DATE
F		DECIMALS	D. MIDDLETON	06/20/04
E		.xxx = $\pm .005$	MATERIAL SPECIFICATION: AS NOTED	
D		.xx = $\pm .010$		
C		FRACTIONAL		
B		x/x = $\pm .1/64$		
A		ANGLES		
		x° = $\pm 1/2^\circ$	SCALE: FULL	

PUMP/COMPRESSOR POWER CIRCUIT 115V – 1PH

MODEL NO.

AKT

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2



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B	X/X = ±.1/64		
A	ANGLES		
	X° = ±1/2°		

SCALE:
FULL

Initial Service Policy

Service Calls

A two-year initial service policy will be furnished to the owner by the original installer or their authorized representative. The cost of the initial service policy is included in the original purchase price. This service policy includes provisions for four inspections/service visits (scheduled once every six months over a two-year period) during which electrical, mechanical, and other applicable component are inspected, adjusted, and serviced including an effluent quality inspection consisting of a visual assessment for color, turbidity, scum overflow and an olfactory assessment for odor.

The owner will be notified, in writing, about improper system operations that cannot be remedied at the time of inspection.

If a mechanical or electrical component must undergo off-site repairs, the authorized representative will maintain a stock of components that may be temporarily installed until repairs are completed.

All installers are required to follow the minimum requirements of inspections set forth by their local and state regulations.

Extended Service Policy

An extended service policy may be made available, for purchase by the owner, from an authorized representative with terms comparable to those of the initial service policy.

DIRECTIONS FOR START UP/SHUT DOWN FOR AQUAKLEAR SYSTEMS

Due to the many different situations which give cause for shut down and start up of AquaKlear wastewater treatment systems, the following addresses a worst case situation for both.

Shut Down For Extended Period: (water supply to building shut off)

The air compressor should be disconnected and removed, air line capped and compressor stored in a safe place (for protection from theft). Unit should be left in this condition (all tanks full) until start up.

Start up Procedures After Extended Shut Down:

Replace and reconnect air compressor, pump empty the aeration zone, clarifying zone, and refill with potable water. Turn air compressor on, check for proper air flow, and allow homeowner to begin using system.

For Intermittent Use:

Unit should be in full operational mode at all times.

LIMITED WARRANTY

AquaKlear, Inc. warrants the parts in each treatment process/device to be free from defects in material and workmanship for a period of three years from the date of installation for treating household wastewater. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply. Sole obligation under this warranty is as follows: AquaKlear, Inc. shall fulfill this warranty by repairing or exchanging any component part, F.O.B. factory, that in AquaKlear, Inc.'s judgment shows evidence of defects, provided said component part has been paid for and is returned through an authorized dealer, transportation prepaid. The warrantee must also specify the nature of the defect to the manufacturer.

This warranty does not cover treatment processes/devices that have been flooded by external means, or that have been disassembled by unauthorized persons, improperly installed, subjected to external damage or damage due to altered or improper wiring or overload protection.

This warranty applies only to the treatment process/device and does not include any of the house wiring, plumbing, drainage, or disposal system. AquaKlear, Inc. is not responsible for any delay or damages caused by defective components or materials, or for loss incurred because of interruption of service, or for any other special or consequential damages or incidental expenses arising from the manufacture, sale, or use of this process/device.

AquaKlear, Inc. reserves the right to revise, change or modify the construction and design of the treatment process/device for household wastewater or any component part or parts thereof without incurring any obligation to make such changes for modifications in previously sold equipment. AquaKlear, Inc. also reserves the right, in making replacements of component parts under this warranty, to furnish a component part which, in its judgment, is equivalent to the company part replaced.

Under no circumstances will AquaKlear, Inc. be responsible to the warrantee for any other direct or consequential damages, including but not limited to lost profits, lost income, labor charges, delays in production, and/or idle production, which damages are caused by a defect in material and/or workmanship in its parts. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty is expressly in lieu of any other expressed or implied warranty, excluding any warranty or merchantability or fitness, and of any other obligation on the part of AquaKlear, Inc.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

DATA PLATE



AQUAKLEAR, INC.

876 N. Bierdeman Rd. • Pearl, MS 39208

Model No. AK500 (Applicable Suffix)

Capacity: 500 g.p.d.

Serial Number:

Performance Rated: Class I



Certified to NSF/ANSI Standard 40

SERVICE LABEL

DO NOT OIL COMPRESSOR
FOR FACTORY SERVICE CALL:

AQUAKLEAR, INC.

876 N. Bierdeman Rd. • Pearl, MS 39208

601-936-7711

For Local Service Call:

Warranty Registration Certification

Mail Certificate - Complete certificate, detach and mail to the AquaKlear address within thirty (30) days of purchase.

Serial Number:	Model Number:	
Date of Installation:		
Purchaser's Name:		
Address:		
City:	State:	Zip:
Dealer's Name:		
Address:		
City:	State:	Zip:

HOMEOWNER'S COPY - Please retain for your records

Serial Number:	Model Number:	
Date of Installation:		
Purchaser's Name:		
Address:		
City:	State:	Zip:
Dealer's Name:		
Address:		
City:	State:	Zip:

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