

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 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	AK600FP5
AK500CC	AK750C
AK500F	AK750F
AK500FC	AK750FF
AK500C3P	AK800C
AK5B1	AK800FF
AK5B2	AK1000C
AK5B3	AK1000F
AK600C	AK1000FF
AK600CC	AK1500C
AK600F	AK1500F
AK600FF	AK1500FF
AK600F3P	AK365F

Note: suffix C denotes Concrete
suffix F denotes Fiberglass
suffix FF denotes Fiberglass Flattop
suffix P denotes Trash or Pump Tank
suffix CC denotes Concrete with attached Chlorinator
suffix FC denotes Fiberglass with attached Chlorinator
suffix C3P denotes Concrete with 300 gal attached pretreatment
suffix F3P denotes Fiberglass with 300 gal attached pretreatment
suffix FP5 denotes Fiberglass with 500 gal pump tank

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

- alarm 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 signals, call dealer for service.

Checking Access Port odor. reference

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

Checking Inlet Filter
months and
cleaned

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

Checking Effluent
and
treated
pipe
that
be

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

Residual Removal
dependent
is
years, by

While the accumulation of residuals is largely
upon the characteristics of the wastewater treated, it
recommended that residuals be removed every 5
a state certified removal service. The service should
remove the lower (bottom) $\frac{1}{2}$ 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
should be

When collecting an effluent sample, the sample
taken at the closest point to the clarifier as possible.

The
before

water should have been flowing for two minutes
collecting the sample.

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SERVICE POLICY

Service Calls

initial two

needed

These

his

following:

Adjustment

replacement or

Examination

regime

Notification

improper

remedied.

and if covered by
correction of the problem.

The purchase price for the system includes an
year service policy which includes all service calls
due to equipment failures or manufacturers' defect.
service calls will be made by the installing dealer or
authorized representative and shall cover the

Adjust and servicing of air pump, including
cleaning of inlet filter if necessary.

Examination of the aeration zone to detect mixing
and presence of sour or rotten egg odor.

Immediate notification of owner in writing of any
operation observed which cannot be immediately
Notice shall advise owner of problem
warranty, the estimated date for

Inspection
during the

The unit is to be inspected every six (6) months
initial 2 year service policy period. Servicing should
include a check of the filter in the air compressor for
proper
air flow, and inspection of all electrical connections.
Check
for effluent quality including a visual check for color,
turbidity and scum overflow, and check for odors.

If a problem arises or service is required, please reference one of the two system
data plates.

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REPLACEMENT POLICY

During Warranty
calls,

There shall be no charge to the owner for the service
nor for repair or replacement of components covered
by
warranty, during the initial 2 year period.

Post Warranty

expired.

A continuing service policy is available from dealer to
system owners whose initial service policy has

DIRECTIONS FOR START UP/SHUT DOWN FOR AQUAKLEAR SYSTEMS

Due to 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.

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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 processes/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 ther direct or consequential damages, including but not limited to lost profits, lost income, labor changes, 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.