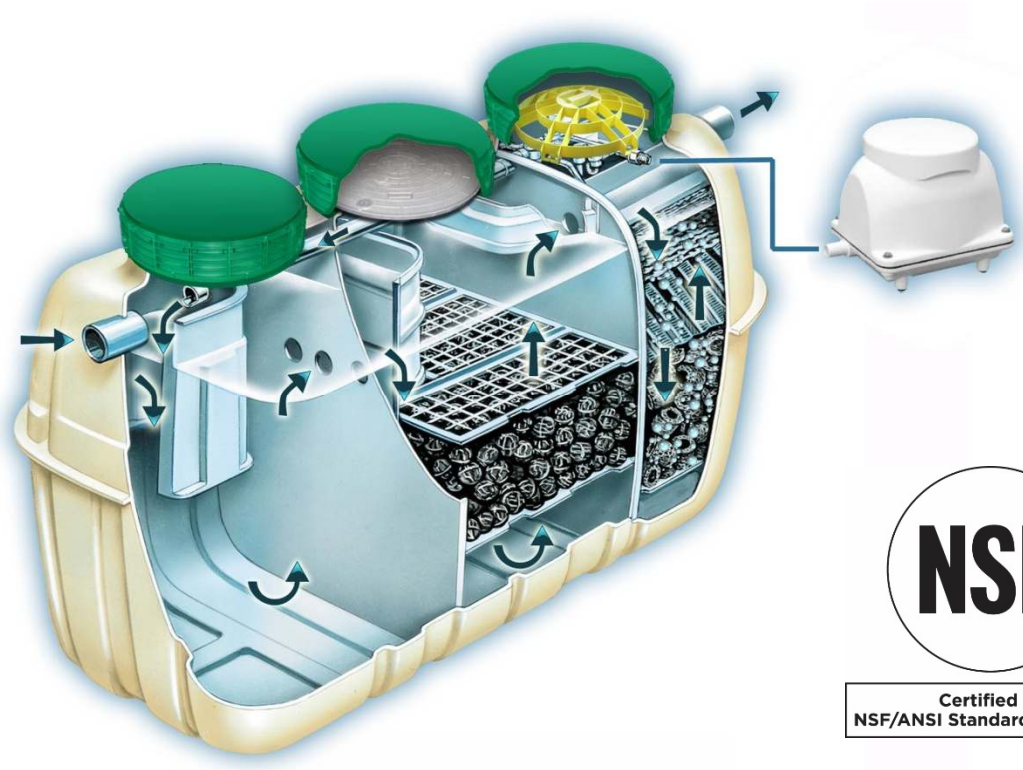
FujiClean USA™ LLC

Toward Clean Water…

INDIANA Owner's Manual – Residential Systems

REVISED: JUNE 18, 2018



Certified to
NSF/ANSI Standards 40 & 245

Intelligently Engineered Treatment Systems for Domestic Wastewater

Service Provider:

Name: _____

Company: _____

Address: _____

Telephone: _____

Email: _____

Model:

□ **CE5** □ **CE7** □ **CE10**

□ **CEN5** □ **CEN7** □ **CEN10**

CE models are certified to NSF/ANSI 40 Standards

CEN models are certified to NSF/ANSI 40/245 Standards

System Serial # _____

Blower Serial # _____

Fuji Clean USA ● 41-2 Greenwood Road ● Brunswick Maine 04011 ● Tel: 207-406-2927 ● Fax: 207-406-2929 ● www.fujicleanusa.com

Indiana State Department of Health
An Equal Opportunity Employer

Eric J. Holcomb
Governor

Kristina Box, MD, FACOG
State Health Commissioner

June 15, 2018

Scott Samuelson
Managing Director
Fuji Clean USA, LLC
41-2 Greenwood Road
Brunswick, ME 04011

Dear Mr. Samuelson:

Re: Approval of Fuji Clean USA, LLC CE- and CEN-Series Model units
For use in residential and commercial onsite sewage systems

The Fuji Clean USA CE- and CEN-Series Model units listed below are hereby approved for use in Indiana as an additional system component in an onsite sewage system by the Indiana State Department of Health (department), under the provisions of *410 IAC 6-8.3-52(h)*, *410 IAC 6-10.1-49(h)*, and the *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015. This approval is for the use in commercial onsite sewage systems and individual residential onsite sewage systems. Approval is effective this 14th day of June, 2018.

The Fuji Clean USA Approved Models are limited to:

ATU Series	Model	Flow Rating (GPD)	Min. Flow (GPD)	BOD Rating (lbs./day)	BOD (mg/L)		TSS (mg/L)	
					Min.	Max.	Min.	Max.
CE	5	450	45	0.52	100	300	100	350
CE	7	630	63	0.73	100	300	100	350
CE	10	900	90	1.04	100	300	100	350
CEN	5	450	45	0.69	100	300	100	350
CEN	7	630	63	0.97	100	300	100	350
CEN	10	900	90	1.38	100	300	100	350

Each Model is approved for options 1.a; 1.b; 1.c; and 2.a; *Indiana Standards for Aerobic Treatment Units*, published by the department on September 8, 2015.

I. Fuji Clean USA, LLC. is required to:
   a) Provide tank connectors to ensure watertight pipe connections at the inlet and outlet of the treatment unit;
   b) Certify distributors, designers, installers, service providers and those involved in permitting of these technologies;
   c) Submit to the department a list of all certified installers, distributors, and service providers for the State of Indiana on a quarterly basis the first year and annually after that; and notify the department immediately of the removal of any certified installer, distributor, or service providers;

d) Submit for review and approval of the department any proposed changes to any system component or the Indiana Product Manuals prior to implementation of the changes;
e) Notify the department in writing of any scheduled training event at least 10 working days prior to the event;
f) Provide on-going consultation to health department staffs, designers, installers, and service providers;
g) Report to the department within 30 days the failure of any owner to renew a service contract for the operation and maintenance of any onsite sewage system that includes a Fuji Clean USA CE- or CEN- Series unit.

II. The Fuji Clean USA CE- and CEN-Series unit is subject to:
a) The review by the department of each individual project when the unit will be subject to intermittent flows. Further, all start-up and shut down procedures must be carried out by a certified service provider after local health department notification and consultation.
b) The review by the department for each individual residential project where:
1. A trash tank is proposed in lieu of a full sized septic tank in accordance with Section IV., *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015, or
2. A soil absorption field of reduced size is proposed in accordance with Section VII. F., *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015.

Unless plan review and permit issuance has been delegated to the local health department in accordance with Section V. C., *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015.
c) The applicable provisions of ISDH Rule 410 IAC 6-8.3, and ISDH Rule 410 IAC 6-10.1, including the discharge to a soil absorption field which meets all of the provisions of the applicable rule, except for system sizing as allowed in Section VII. F., *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015;
d) Treating only domestic and/or residential strength wastewater;
e) The applicable provisions of *Indiana Standards for Aerobic Treatment Units* published by the department on September 8, 2015;
f) The Fuji Clean USA Indiana Design, Contractor Installation, Operation and Maintenance, and Owner's Manuals; and
g) The provisions and criteria identified in this approval letter.

III. The Fuji Clean USA CE- and CEN-Series aerobic unit manufacturer, designer, distributor, installer, and service provider is subject to:
a) Fuji Clean USA, LLC Certification;
b) Maintaining a status of good standing with Fuji Clean USA, LLC.

This approval may be revoked or modified by the department for non-compliance, or if it is documented that it would not be in the best interests of public health for approvals to continue.

If you wish to request administrative review of this *Approval* pursuant to Indiana Code 4-21.5-3-5, you must file a petition for review within fifteen (15) days after this *Approval* is received. The petition for review and petition for stay of effectiveness must be postmarked no later than July 10, 2018.

The petition for review must be in writing and must include facts demonstrating that:

- The petitioner is a person to whom the *Approval* is specifically directed;
- The petitioner is aggrieved or adversely affected by the *Approval*; or
- The petitioner is entitled to review under any law.

If the petition for review is not filed timely, this *Approval* becomes FINAL. Any petition for review and petition for stay of effectiveness must be submitted in writing to:

Court Administrator
Office of Legal Affairs, #3H
Indiana State Department of Health
2 North Meridian Street
Indianapolis, IN 46204

If you do not object to this product submittal approval, you do not need to take any further action.

Sincerely,

Michael Mettler, REHS, Director
Environmental Public Health Division
317/233-7183
mmettler@isdh.in.gov

cc: Bennette D. Burks, P.E., AOSE, Fuji Clean USA, Technical Advisor for Indiana Approval
Local Health Departments
Onsite Staff

A. Overview and Indiana Rules

Fuji Clean USA (Fuji Clean), residential wastewater treatment systems have been approved in Indiana as Aerobic Treatment Units (ATU) for new and replacement/repair installations. Indiana designs that incorporate Fuji Clean technology shall include the following:

1. All system designers, installers and service providers must be Indiana Fuji Clean USA certified. Training is available on a regular basis in Indiana through Fuji Clean USA's Authorized Representative.
2. Design must be in compliance with the manufacturer's manuals, Indiana State Department of Health (ISDH) Rule [Indiana Standards for Aerobic Treatment Units (ATU), 410 IAC 6-8.3 and 410 IAC 6-10.1] and any applicable Local Health Department policies, and Local Ordinances.
3. Fuji Clean's TNI Approval Letter, with approved models, is included with this document. (Also on Department's website; "Approved TNI").
4. Fuji Clean's treatment system model selection shall be based on the Design Specification Summary in this Indiana Design Manual.
5. Fuji Clean ATU's will only accept sewage as defined in 410 IAC 6-8.3-41 and in 410 IAC 6-10.1-38.
6. Design will stipulate that water softener backwash shall not enter the Fuji Clean ATU and be managed by an option approved by the ISDH rules.
7. System O&M must be performed by an authorized service provider according to the requirements of the SI O&M program.
8. Soil Absorption system design shall meet or exceed the provisions of Rule 410 IAC 6-8.3, 6-10.1 and Indiana TNI Standards for the specific soil absorption field technology. A Fuji Clean unit utilizing a conventional soil absorption field technology may qualify for a 33 percent reduction in absorption field sizing.
9. Insulation shall be used per the Fuji Clean Installation Manual.
10. CAD and PDF drawings of systems are available at the website: www.fujicleanusa.com

Please contact Fuji Clean USA or its Indiana Authorized Representative with questions or for additional technical information.

H. Indiana Authorized Providers

1. Authorized Indiana Service Providers (to date):

   a. Tim Shopp,
      TJ Misc., Inc.
      2989 County Road 43, Waterloo, IN 46793
      Tel: 260-868-1043 (office); 260-417-1786 (mobile)

2. Authorized Indiana Installers (to date)

   a. Tim Shopp,
      TJ Misc., Inc.
      2989 County Road 43, Waterloo, IN 46793
      Tel: 260-868-1043 (office); 260-417-1786 (mobile)

3. Design and Installation Training

Installation training and certification will be provided by TJ Misc.. Inc. to designers, installers and those involved in permitting onsite systems. Training and certification is required prior to installation. TJ Misc. will provide certification and evidence of training and a copy of that certification and evidence will be maintained by TJ Misc. and will be provided to ISDH. TJ Misc. will directly supervise the first system installation for each installer to ensure that designs / installation instructions are being followed.

4. Operation and Maintenance Training:

Operation and Maintenance training and certification will be provided by TJ Misc. Inc. TJ Misc. will provide evidence of training and a copy of that evidence will be maintained by TJ Misc. Inc. and will be provided to ISDH. All authorized service providers shall follow provisions outlined in the Fuji Clean USA Indiana TNI Approval and Local Health Department requirements.

5. Notification:

ISDH shall be notified at least 10 working days in advance of any scheduled training events.

6. Additional Providers:

Fuji Clean USA, LLC, is committed to providing additional service providers as market demands increase.

Thank You!
Thank you for choosing a Fuji Clean USA treatment system. You have selected a technology from the world's #1 onsite treatment manufacturing company with over 2 million treatment systems installed and operating world-wide. We want you to understand your treatment system and how to treat it wisely. We also understand that you just want it to work. No drama! Your Fuji Clean system investment will not only assure the long-term health of your drainfield, but will also enhance the ecological health of your outside home environment.

What it Does
Your Fuji Clean treatment system is essentially your own personal wastewater treatment plant. Dirty "domestic" (i.e. household, from bathrooms, kitchen, sinks etc.) wastewater goes in and clean water comes out, which then flows into the environment, such as into a leachfield. Designed to produce a consistent, high-quality treated effluent, your Fuji Clean treatment system is a living biological ecosystem that relies on billions of living microbes to consume the pollutants in wastewater. Oxygen is introduced to keep the microbes alive and healthy (hence the air blower) and various forms of high surface area plastic "media" are incorporated into the system to provide space for microbes to live and consume waste material.

Why do I Have this System?
Not every onsite septic system requires treated effluent. The designer of your system likely specified treatment because site conditions (such as lot size, soil conditions, proximity to an environmentally sensitive area or effluent requirements) demanded treatment. Your Fuji Clean treatment system is simply an appliance to assure the long term health of wastewater disposal on your home site. It works for you. Thank you for treating it with respect and care.

The Fuji Clean Story
The lack of available land in Japan for on-site wastewater disposal has driven Japanese on-site wastewater treatment technology way ahead of the standard we typically experience in America. In Japan, treated domestic wastewater has to be discharged directly into storm water drains, so the quality of treated water must be consistently high to avoid serious public and environmental health issues.

In its 50-year history of manufacture and sales of wastewater treatment systems, Fuji Clean's innovative R&D scientists and engineers have continuously improved and refined the product into the compact, highly effective, and efficient wastewater treatment system that it is today and helped Fuji Clean Company grow into a world-wide market leader in the onsite wastewater treatment industry.

Fuji Clean USA offers you "boots-on-the-ground" in the U.S. market. We provide final pre-installation assembly and quality control inspection checks on all Fuji Clean systems. We pride ourselves on friendly, respectful and effective customer service, clear communication in all forms and offering first rate training support to your system distributor, contractor and service provider.

Service and Support
Your local distributor will provide you with a trained and certified service provider and a service plan, which will be in effect from the date of system installation. Please contact Fuji Clean USA directly if you need assistance locating your distributor or a certified service provider in your area.

Service providers typically will provide you with a service plan tailored to your system and state and local regulations. At a minimum, here is what you should expect from your Initial Service Policy covering the first two years of your system warranty:

1. Name and contact information for your service provider including emergency contact information. (Note: print this information on the cover of this Manual and be certain that your service provider has affixed contact information to inside of the alarm/control panel.

2. Provisions for 4 inspection/service visits made within 2 years of initial system installation.

3. A service plan that includes a check sheet or inspection report made available after each visit that includes at least the following information:
    a. Date.
    b. Purpose of visit.
    c. Evidence of inspection and specific maintenance to your treatment system (including the air blower).
    d. Reports of any problem or concern with a plan and schedule for corrective action.
    e. Report on effluent quality that includes description of effluent color, turbidity, scum overflow and odor.
    f. A clause that states that the owner shall be notified in writing about improper system operations that cannot be remedied at the time of inspection.
    g. Information on an extended service policy available for purchase by the owner with terms comparable to those in the initial service policy.

Fuji Clean USA requires that an "Extended Service Policy" is in place following the expiration of the Initial Service Policy (2 years from date of installation). Implementation of the Extended Service Policy shall be provided by a trained and certified service technician (trained by either Fuji Clean USA or one of its distributors).

System Layout:
Your Fuji Clean treatment system is designed to accept wastewater directly from your house, clean it using a proprietary "contact filtration" process and prepare it for final discharge such as to a soil absorption leachfield or drainfield. Oxygen, necessary for treatment, is introduced via a Fuji Clean Company manufactured, MAC "R" Series air blower, which is a state-of-the-art, top-in-class, linear diaphragm air pump. An alarm/controller monitors treatment activity and is triggered if the system floods or the blower stops operating.

Some sites may also include a septic or settling tank prior to treatment, often installed because of local or state requirements and some sites may also include a separate post-treatment pump station if treated water must be pumped uphill for final discharge.

Your Fuji Clean USA system has been engineered to be simple to operate, quiet and hassle-free. It should be inspected and maintained on a semi-annual basis.

System Location:
Fuji Clean systems are designed to be installed with at-grade access covers. Your controller and air blower should be located in a protected area that is accessible for service, and if possible, sited for minimal aesthetic disruption.

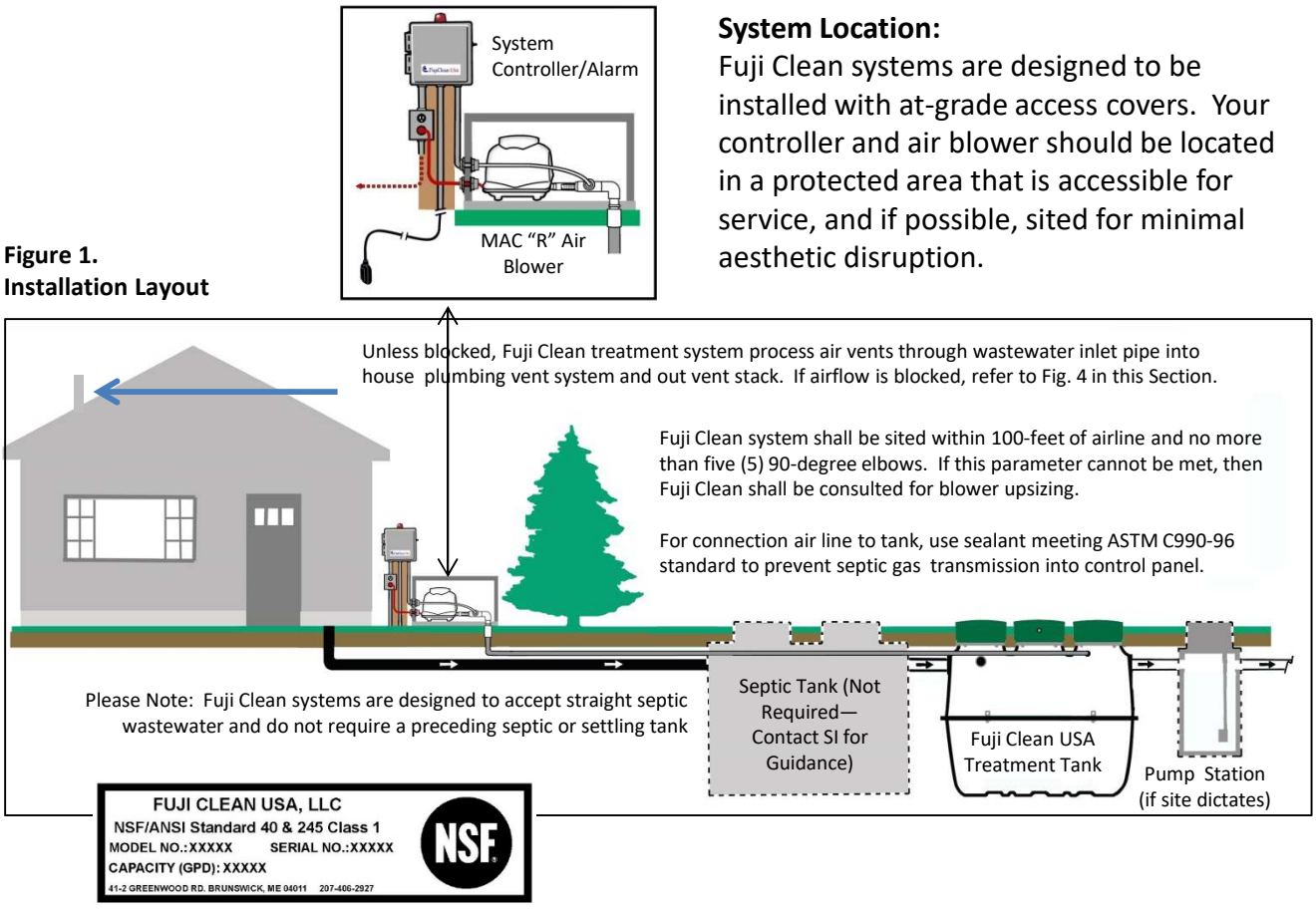


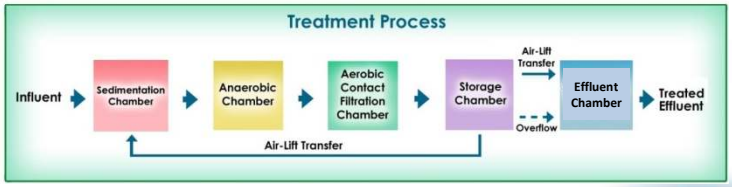
Figure 1.
Installation Layout

This NSF label, located both on the control/alarm panel and inside the treatment system (typically on the inside riser) of all Fuji Clean USA systems , will indicated that this system meets the requirements set forth in NSF/ANSI Standard 40 & 245, which is a purification performance standard for the treatment of domestic strength wastewater. If you are interested in additional details on this 3rd party testing and certification process, please contact Fuji Clean USA, your distributor or NSF International (www.nsf.org).

E. Treatment Process Overview

Fuji Clean's "contact filtration" treatment is a simple, well engineered process that consists of a controlled, circuitous flow train through anoxic and aerobic chambers and in direct contact with assorted proprietary fixed film medias on which biological digestion of organic matter occurs. Media is also designed and positioned to provide mechanical filtration of process wastewater.

The system includes two air lift pumps (see diagram below) The Recirculating Airlift Pump returns process water and sludge from the aerobic zone to the sedimentation chamber, recirculating 2-4 times inflow per day for CE models and 4-6 times inflow for CEN (enhanced denitrification) models. The Effluent Airlift Pump is designed to help equalize flow and discharge treated effluent.



Two Air Lift Pumps. One Recirculating Air Lift pump sending process water and solids back to Chamber 1, and one Effluent Air Lift Pump for measured discharge of treated effluent. (See airlift pump info below).

Chamber 3A. Storage Chamber

Outlet

Sludge Transfer (Recirculating air lift pumpback) See airlift pump info below.

Inlet

Powered by the MACBlower "R" Series Blowers State-of-the-art linear diaphragm air blowers manufactured by Fuji Clean Co sized to provide about 2.8 cubic feet per minute to most residential systems.

Figure 6. Treatment Overview

Chamber 1. Sedimentation Chamber (separates solids and greases)

Chamber 2. Anoxic Contact Filtration Chamber (spherical-skeleton filter media) organic matter decomposition by micro-organisms, suspended solids captured and nitrates are denitrified

Chamber 3. Aerobic Contact Filtration Chamber (both board and cylindrical hollow mesh media) oxygen rich zone for aerobic microbe digestion activity, solids filtration and nitrification of ammoniac nitrogens to nitrates

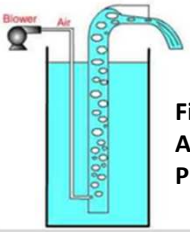
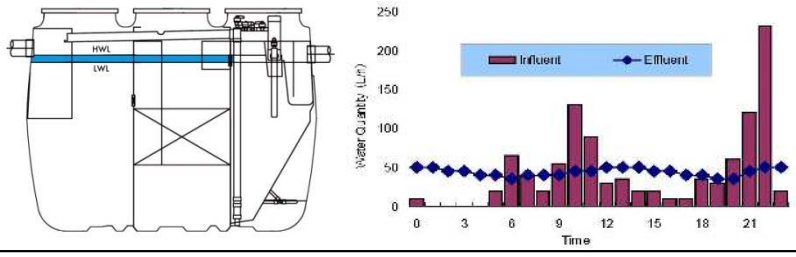


Figure 6A. Airlift Pumps

Airlift Pumps. This generic illustration shows the mechanics of the "airlift pumps" used in this system, which are simple pipe conduits through which pressurized air (from blower) is introduced at the bottom and by fluid pressure, water is carried up the pipe by ascending bubbles.

Figure 6B. Flow Variability Accommodation

Water level rises and falls between LWL and HWL in the first two chambers smoothing out inflow fluctuations.



Which Fuji Clean System Do I Have?

Your system designer or engineer has specified your specific Fuji Clean USA system model based on three main criteria:

1. Wastewater Volume (or Hydraulic Load, typically expressed as gpd, or gallons per day): Usually based on the number of bedrooms in a residential house
2. Wastewater Strength (or Biologic Load): For example, wastewater characteristics from a restaurant will differ and typically be of higher strength than domestic wastewater coming from a residential house.
3. Effluent Requirements: Typically based on state or local regulations, designating how much of what type of pollutants may be discharged to the environment.

Fuji Clean USA has two major residential series models; the CE-Series and the CEN-Series. Both models are designed to remove organic pollutants (as measured by BOD_5, which stands for "Biochemical Oxygen Demand," and is a measure of the concentration of oxygen, expressed as mg/L, utilized by microorganisms in the oxidation of organic matter during a 5-day period at a temperature of 68-degrees F) and solids (as measured by TSS, Total Suspended Solids, which is the quantity of solids, expressed as mg/L, which can be readily removed from a well-mixed sample with standard laboratory filtering procedures).

While the CE models remove some of the nutrient, Nitrogen, (expressed as TN for Total Nitrogen), from the waste stream, the CEN-Series systems are specifically designed to remove higher levels of nitrogen from the waste stream, hence the "N" designation.

The table below, specifies size, expected measure of treatment based on residential strength waste and the associated size and power draw for each Fuji Clean USA system model.

FUJI CLEAN USA Indiana Specifications	CE Series BOD, TSS, TN*			CEN Series BOD, TSS, Enhanced TN Removal		
Model	**CE5**	**CE7**	**CE10**	**CEN5**	**CEN7**	**CEN10**
Bedrooms	3	4	6	3	4	6
Design Daily Flow (GPD)**	450	630	900	450	630	900
Tank Detail:						
Height (inches)	61.8	65.7	73.6	65.7	73.6	77.4
Length (inches)	85	95.7	98.8	95.7	98.8	118.9
Width (inches)	43.7	49.2	56.7	49.2	56.7	68.9
Weight (lbs.)	397	463	705	463	705	926
Inlet Invert (inches, rounded to 1/8")	49	53	61	53	61	77.25
Outlet Invert (inches, rounded to1/8")	47	51	59	51	59	75.25
Access Ports (number)	3	3	3	3	3	3
Access Port Diameter (inches)	3@20"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"
Volume Total (gallons)	540	749	1069	749	1069	1498
Uplift Restraint (lbs./In)****	77	100	127	100	127	170

How to Keep Your System Healthy

So, you've made an investment in your Fuji Clean treatment system. You have a service provider and service plan. Now, you just have to respect your system and treat it right.

Here's the common-sense bottom line…. Remember that your treatment system is a living system. Billions of living microbes consume pollutants from your wastewater. Excessive fats, oils and greases can smother living microbes. Toxic substances can poison them. Therefore, please refrain from introducing items such as these into your system.

KEEP THESE ITEMS OUT OF YOUR SYSTEM!
THEY WILL HARM THE LIVING ORGANISMS
WORKING TO CONSUME POLLUTANTS FROM YOUR WASTEWATER!

CHEMICALS					
Excessive Bleach	Paint & Paint Thinners	Antibiotic Pills	Herbicides & Insecticides	Motor Oil and Antifreeze	Chemical De-Clogging Agents
TRASH					
Sanitary Napkins	Cigarette Butts	Condoms	Baby Wipes / Paper Towels	Dental Floss	Kitty Litter
FOOD					
Excessive Cooking Grease	Coffee Grounds	Fruit and Vegetable Peels	Peppermint Oil		
EXCESS NON-WASTEWATER FLOW					
Roof Drains	Foundation Drains	Swimming Pool Main Drains	Hot Tub Drains	Area Drains	

GARBAGE DISPOSALS AND WATER SOFTENERS

Garbage disposals and water softeners are not recommended for this or any onsite septic system. These devices inject heavy and inconsistent organic loads into the system, which can interfere with normal processing. Discharge water softeners in accordance with applicable plumbing regulations at a location not connected to the Fuji Clean unit.

WELL DISINFECTING

Sometimes a contaminated well must be disinfected with bleach. In this event, we recommend that you flush chlorinated water from the system through outdoor faucets to prevent an excessive slug of chlorine from entering your treatment system.

System Components: Controller and Alarm

Your Fuji Clean system is equipped with a simple control panel that monitors system operation. There are two types of events that will trigger an alarm (both audio and visual).

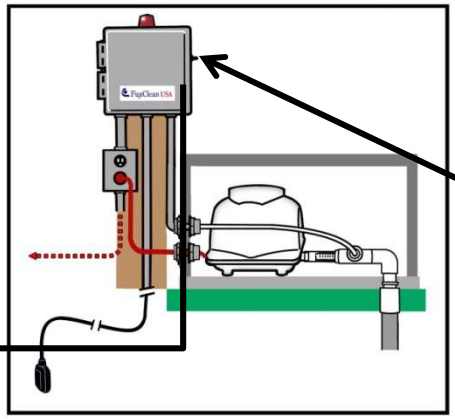
1. High-Water Alarm: Triggered if the water in the tank reaches levels well above standard operating levels. This is a very rare event, but may occur for example if run-off ground water infiltrates the treatment tank or if a post-treatment discharge pump station malfunctions and water backs up.

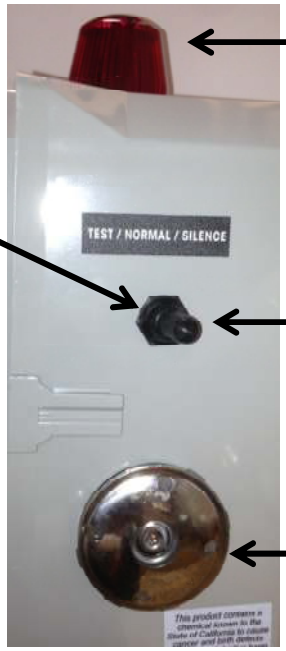
2. Blower Fault Alarm: Triggered if the air blower stops operating and there is a drop in air pressure to the system.

In either case, if the alarm is triggered, push the toggle switch to "Silence," and contact your service provider for assistance. If requested, system reference information is posted on the data plate affixed to the alarm controller panel. (See detail) Your service provider may be able to resolve the problem over the phone (for example there may be debris blocking the air intake to the air blower), or may need to come onsite to service the system.

Please note, following an alarm event, the red beacon will remain on while the system is in "silent" mode, until the system controller is reset to run in "Normal" mode.

At any time, you may pull the Toggle Switch to the "Test" position to assure that the light beacon and horn alarm are operating properly. Reset the switch to "Normal" for normal operation.





Red Beacon

Toggle Switch

Alarm Horn

You may reference the NSF data plate located inside the alarm panel in communication with your service provider.

System Components: MAC Blower
A separate Owner's Manual is provided for your air blower. Please keep both manuals together and accessible to your system service provider.

Frequently Asked Questions:

Our system is on our vacation home. Should I turn it off when we are not home? Fuji Clean systems are designed to accommodate variable and intermittent flows, including only weekend use, but this assume that the air blower operates continuously regardless of inflow. However, for seasonal use properties, the air blower may be shut down if the system is not going to be used for an extended period of time. The blower should be re-started at least three days in advance of system use if possible.

What if inclement weather causes a power outage? During a power outage, the blower will cease operation. Water quality to the drainfield will not diminish for the first 24 hours. After approximately 24-hours, treatment quality may begin to slowly diminish but will rebound quickly once power is restored.

Does my system need servicing? Your Fuji Clean system is designed to require minimal service, but inspection and service every 6-months is necessary during the first two years of service to assure proper operation. States vary in terms of mandatory service requirements after the initial 2-year warranty/service period expires, but Fuji Clean USA's extended service policy mandates that your system be maintained properly, which calls for semi-annual inspection/service visits from a trained and certified service provider. (This schedule may be altered for seasonal, and part-time sites). Your certified service provider will review details of initial (first two years) and extended (2 years +) service.

Does my system need to be pumped out? Like an ordinary septic tank, sludge must be removed from your system periodically (such as once every 2 years). Your service provider will measure sludge build-up during each inspection and will provide pump-out guidance for you. Pump out frequency depends on waste stream strength and use. Please consult with your service provider to help determine the pump-out frequency that is best for you.

How much will it cost in electricity to run my system? Since your Fuji Clean USA system has been designed to operate continuously, it is easy to calculate power cost. All residential units draw 1.3 kWh of power per day except for the CE10, CEN7 and CEN10, which draw 1.9 kWh of power per day. Simply multiply your local cost of power by the draw per day to calculate daily power cost.

Can I use a garbage disposal with my system?
As noted in another section of this manual of how to maintain your system's health, garbage disposals are not recommended for this or any onsite septic system due to the heavy and inconsistent organic loads injected into the system, which can interfere with normal processing. Use of a garbage disposal may increase the frequency of sludge pumpouts.

Fuji Clean USA, LLC Limited Warranty

Period of Coverage
Fuji Clean USA, LLC warrants the parts in each treatment unit to be free of defects in material and workmanship for a period of two years from date of system installation at the site where residential wastewater is to be treated. An Extended Warranty shall be made available by Fuji Clean USA, its authorized dealers or service providers after the initial two-year coverage period.

Obligations of Fuji Clean USA, LLC
At its sole expense, Fuji Clean USA, LLC will service and repair the installed unit including all parts and labor that show evidence of defect or unacceptable performance for any reason when operated within design parameters, provided that all financial obligations of the owner/purchaser are in compliance the Sales Agreement provided by an authorized dealer of Fuji Clean USA treatment systems. Determination of defect or unacceptable performance shall be made by a Fuji Clean USA authorized dealer, distributor and/or service provider.

Exclusions
This Warranty does not apply to Fuji Clean USA units that have been tampered with or altered by unauthorized persons, improperly installed or have been subject to external physical damage or acts of god. Further, this Warranty does not cover systems that have been flooded by external means or damage done by altered or improper wiring or overload protection. Additionally, this Warranty does not apply if the system has been operated beyond its maximum design capacity or permit, if the approved design has been altered after the fact, or if the system has been contaminated with disinfecting tablets, excessive use of bleach or other chemicals injurious to biological growth.

Other Provisions
This Warranty only applies to the Fuji Clean USA, LLC treatment processing system and does not include any wiring, plumbing, drainage, disposal or leaching systems. Fuji Clean USA, LLC or its dealers or authorized service providers also reserves the right, to furnish a component part which, in their judgment, is equivalent to the company part replaced. Further, owner agrees to provide to Fuji Clean USA, or its authorized dealers or service providers with clear access to the processor covers on a year round basis.

Under no circumstances will Fuji Clean USA, LLC be liable for direct or consequential damages including but not limited to lost profits, lost income, labor charges, delays in production or idle production time or habitability which results from any defects in material and/or workmanship of Fuji Clean USA, LLC's system or units.

This Warranty is expressly in lieu of any other expressed or implied warranties. Further, any implied warranties for merchantability and fitness for a particular purpose are hereby disclaimed.

This Warranty provides the owner/purchaser specific legal rights. You may have other rights, which vary from state to state.

Troubleshooting Guide

This Troubleshooting Guide is provided to help identify system malfunctions or problems. However, please be aware that in most cases, system inspection, maintenance, repair and adjustment requires the services of your trained service provider, whose contact information can be found on the cover of this manual and/or on the inside of your control/alarm panel. System covers should only be opened by a trained and certified service technician!

You are always welcome to contact Fuji Clean USA for additional assistance or if you have comments or questions.

TROUBLESHOOTING	
General	
SYMPTOM	**SOLUTION**
Water is ponding around risers and covers	Landscaping is necessary (possibly involving addition of fill material) so that water drains away from risers and covers. Note: risers may be added to the unit as necessary, but service personnel must be able to reach into the unit and move controls. Recommended maximum riser height is 24-inches.
Strong and unusual odor exists even with the manhole lids closed.	During the first few weeks of operation there may be noticeable odor from the system. This should cease once the bacteria are established. If odor persists, seeding material may be added to both anaerobic and aeration chambers, and/or the recirculation rate may be increased to 35%, the upper end of the normal operation range. If odor continues to persist, please contact manufacturer for instructions. Installation of a vent may be necessary.
Blower is making an unusually loud noise	Normal blower operation is quiet. Typically a loud or rattling blower noise is created when the blower is in contact with its housing, or has slipped off its base platform.

TROUBLESHOOTING

General

SYMPTOM	SOLUTION
Alarm beacon is lit and/or audible alarm horn is sounding.	System alarm is triggered by either too much water flowing through the system or the air from the blower is not reaching the system. Please silence the horn by pushing the toggle switch located on the right side of the alarm/control panel the “Silent” mode. Please call you service technician for assistance. Service technician contact information can be found on the cover of this Manual or on the inside of the alarm/control box. Please note: Alarm beacon will stay lit even if horn is silenced.
There is a water back-up in the house	Fuji Clean systems are equipped with a system overflow relief weir so it is extremely unlikely that a septic system backup is caused by your Fuji Clean system. More likely any backup will be the result of clogging in a preceding septic tank (usually the effluent filter) or possible from a pump station that is not operating. However, a pump station fault should trigger an alarm. Contact your service provider immediately.

Troubleshooting Guide – for Service Professionals

This Troubleshooting Guide is provided to assist your service professional. A much more detailed guide as well as explanation of service procedures is provided in the Fuji Clean USA Operation and Maintenance Manual. Please do not remove system covers unless you are a trained and certified Fuji Clean USA service technician.

TROUBLESHOOTING	
Chamber 1. Sedimentation Chamber	
SYMPTOM	**SOLUTION**
Inlet pipe is blocked	Remove the blockage.
Excessive scum accumulations. (Scum layer reaches the top of the influent baffle)	Measure sludge level. If the depth of sludge accumulation is less than 24-inches (or 18-inches in Chamber 2), break the scum layer, otherwise have the plant pumped out.
Excessive sludge accumulations. (Depth of sludge layer exceeds 24-inches)	If the sludge exceeds the holding capacity, have the plant pumped out.
Foreign materials, excessive oil or fat entering the system.	Remind the homeowner to refrain from disposing harmful substances into their system. (Please refer to Homeowner's Manual for listing.)

TROUBLESHOOTING

Chamber 2. Anaerobic Filtration Chamber

SYMPTOM	SOLUTION
Excessive scum accumulation. (less than 4-inches)	If Chamber 1, the Sedimentation Chamber still has the remaining sludge holding capacity, (less than 24-inches of sludge build-up), transfer the scum to the sedimentation chamber, otherwise have the plant pumped out.
Excessive scum accumulation. (more than 4-inches)	Have the plant pumped out.
Excessive sludge accumulations	If the bottom sludge layer is thicker than 18-inches and excessive sludge has accumulated on the filtration media, have the plant pumped out.
Filtration media is blocked up. (The water level in Chamber 2's media is lower than that in the baffle.)	Perform a degassing operation on the filtration media. (Poke media with a section of PVC pipe. See O&M procedure #12). If the problem still persists even after the degassing and sludge transfer operation, pressure wash the filtration media using an effluent pump and hose affixed to a PVC pipe.
Foreign materials, excessive oil or fat entering the system.	Remind the homeowner to refrain from disposing prohibited substances and limited-use substances.

TROUBLESHOOTING

Chamber 3. Aerobic Contact Filtration Chamber

SYMPTOM	SOLUTION
Bubbles are not evenly distributed throughout the chamber or there are no bubbles at all.	• Adjust the aeration control valve. • Check to make sure that there is no leakage from the aeration pipework. • Check to make sure that the blower operates properly. • Clean the aeration pipes • Perform a backwash operation. (O&M Procedure #12).
Dissolved Oxygen is less than 1.0mg/L.	• Check to make sure that the blower operates properly. • Perform a backwash operation. (O&M Procedure #12).
Recirculation rate is unable to be adjusted or no recirculation at all.	• Adjust the recirculation control valve. • Check to make sure that there is no leakage from the aeration pipework. • Check to make sure that the blower operates properly.
Recirculation flow rate is too high	• Clean the aeration pipes
Recirculation flow rate is too low	• Clean the recirculation airlift pump.
Excessive foaming.	• Some foaming may occur during the early stage of operation. This should cease once the bacteria are established. Seeding may also be effective. Please contact your distributor for additional seeding information.
Excessive suspended solids.	• Perform a backwash operation.
Cold water is hampering treatment	The following measures will allow greater oxygen penetration into biofilm. • Increase frequency of backwash • Increase blower size • Perform desludge operation (i.e. sludge pumpout)

TROUBLESHOOTING

Chamber 3a. Storage Chamber

SYMPTOM	SOLUTION
Scum forming.	• Transfer the scum to Chamber 1, the Sedimentation Chamber, using a pump, ladle or suitable container. • Increase the recirculation rate (within the normal operating range).
Excessive sludge accumulations.	• Transfer the sludge to Chamber 1, the Sedimentation Chamber, using a pump, ladle or suitable container.
pH is too low or too high. (pH < 5.8 or pH > 8.6)	• Check to make sure the recirculation rate is appropriate. • Remind homeowner of what cannot be put into this system (refer to Homeowner's Manual). • Install a slow-release lime dispersal system into the sedimentation chamber to raise the pH. Please contact Fuji Clean USA for details.
Excessive biofilm on the chamber wall.	• Clean the wall with brush or water pressure and transfer solids to the sedimentation chamber.
Effluent airlift pump is not working.	• Clean the airlift pump. • Flush the effluent control valve. • Check to make sure there is no leakage from the blower pipework. • Check to make sure that the blower operates properly.

TROUBLESHOOTING

Air Blower

What to observe	Status	How to solve the problem
Blower is not working		
Power plug	Power plug is disconnected.	Connect the power plug to the outlet.
Alarm triggered (if alarm exists)	Diaphragm is damaged. Auto-stop function is activated.	Replace the diaphragm kit. Re-insert the auto-stop piece.
	Check if blower is electrified.	Replace the power cable.
		Replace the auto-stop piece.
		Replace the electric magnet.
	Internal flat terminal has fallen out.	Secure the terminal.
Blower is making an abnormal or excessive operating noise.		
Installed condition	Blower is not secured.	Secure blower in horizontal position.
Oscillator	Oscillator is damaged.	Clean the inside of aeration pipe by rotating valve and adjust aeration level to be even.
	Oscillator nut is loose.	Tighten oscillator nut.
Low air volume or misplaced air from aeration pipes (treatment plant)		
Faulty diaphragm	Diaphragm, outlet.	Replace diaphragm using diaphragm kit.
Aeration leak	Grommet partition	Check internal parts assembly and re-attach the pump.
Air filter is clogged	Air filter	Clean or replace air filter.
Aeration pipes	Pipes are disconnected.	Reattach / repair pipes.
	Clogging	Clean the inside of aeration pipes.