

Warranty Activation

To activate system warranty, Fuji Clean USA must receive Warranty Activation Card! Please see page 13.

Contractor Installation Manual

Residential Systems CE and CEN Models

Rev. 3-14-19

Please Note:

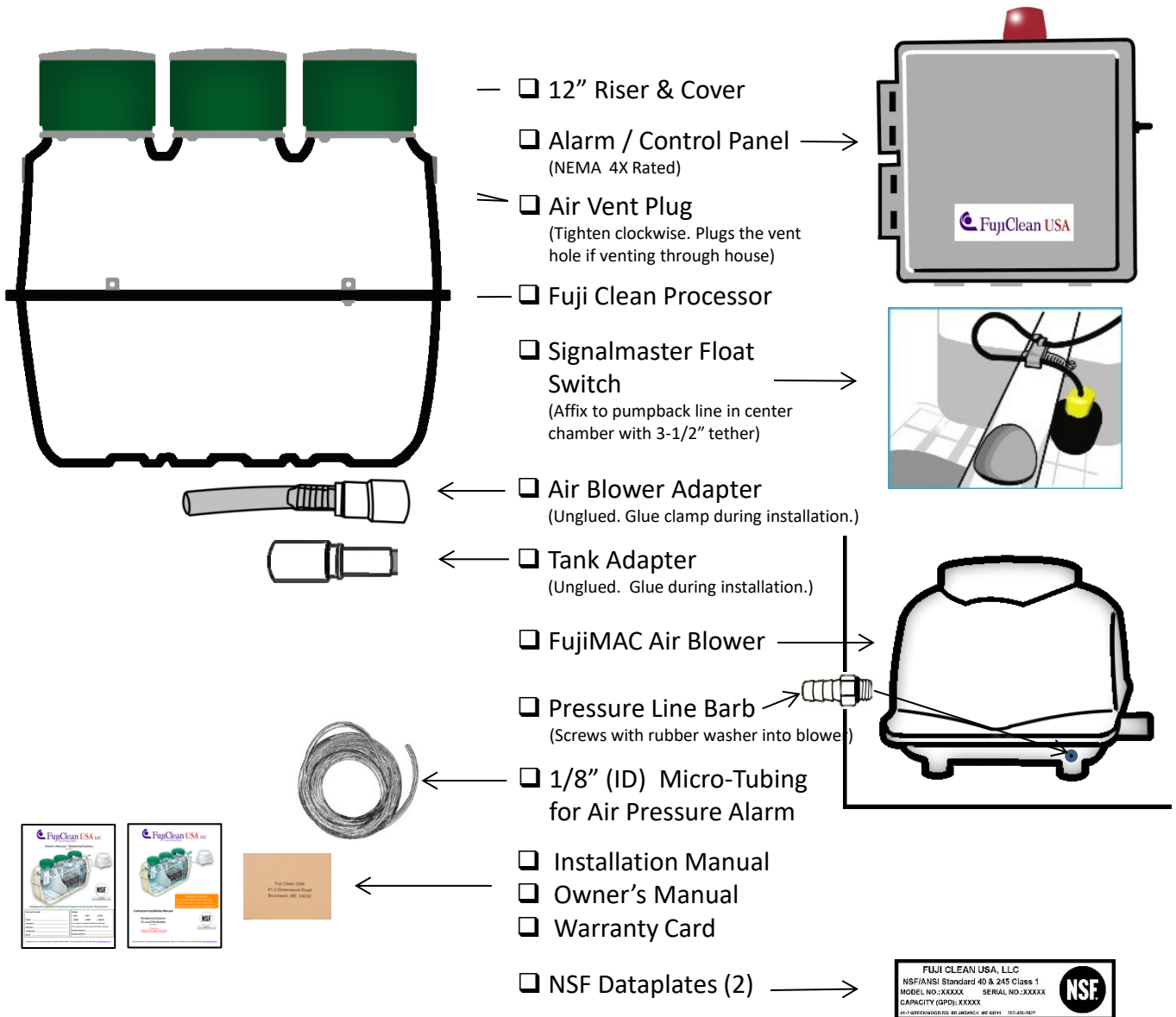
1. Product warranty requires proper system installation as described in this Manual.
2. It is the responsibility of the installing contractor to understand and adhere to all federal, state and local health and safety regulations.



Certified to
NSF/ANSI Standards 40 & 245

Thank you for choosing to install a Fuji Clean USA treatment system. We care that the system is installed properly and thoughtfully. Fuji Clean USA or your qualified distributor will train and certify you for proper installation. PLEASE contact your distributor or Fuji Clean USA for assistance or with ANY questions.

Equipment Supplied to Contractor



Contractor Installation Manual – Residential Systems

Equipment Supplied by Contractor

Risers and Covers per Site & Regulatory Requirements

Note: Tuf-Tite and Polylok Risers in 6" or 12" height increments and covers are available from your distributor. If not already installed, please refer to page 5 for installation instructions.

Allowed 24" riser height or less.

Model CE5: Three (3) 20" Risers

Models CE7, CE10 and CEN Series: Two (2) 20" Risers plus One (1) 24-inch

Insulation for Cold Climate Installations

To maintain optimal treatment conditions, Fuji Clean recommends insulated risers and covers as well as foam board or insulating material (min. R-Value 8) over the upper half of the treatment tank.

Septic Tank and/or Pump Station.

If local code or site conditions mandate. Fuji Clean system are designed to accept straight wastewater.

Fresh Water

Systems must be filled with fresh water to Low Water Mark (LWM) before start-up. Approx. gallons required per model: (CE5: 435; CE7: 610; CE10: 925; CEN5: 610; CEN7: 925; CEN10: 1,230).

Piping/Conduit

- 4" Schedule 40 for inlet and outlet lines.
- ¾" PVC conduit for air line (minimum 6-in. deep).
- Electrical conduit for float switch line (or use direct burial line).

Electrical

- Please use licensed electrician and adhere to applicable national/local electrical code(s).
- Two (2) standard 115V, 15A circuits for control/alarm panel connection.
- Float Switch Wire: #18 AWG (comes with standard 30'-ft. length). May extend up to 50-ft.
- Float Switch: May come pre-installed in treatment system. For electrical hookup, please refer to SJE Rhombus installation instructions.
- Miscellaneous fittings and connectors to assure watertight connections.

Anti-Float Devices, if necessary

- Please refer to high water, anti-float recommendations in this manual.

Materials for Blower / Controller Installation

- Concrete base (or equivalent) on which to set air blower.
- Protective cover for air blower (vented and able to achieve free airflow in all conditions).
- Materials or location on which to mount control panel and protect from elements.

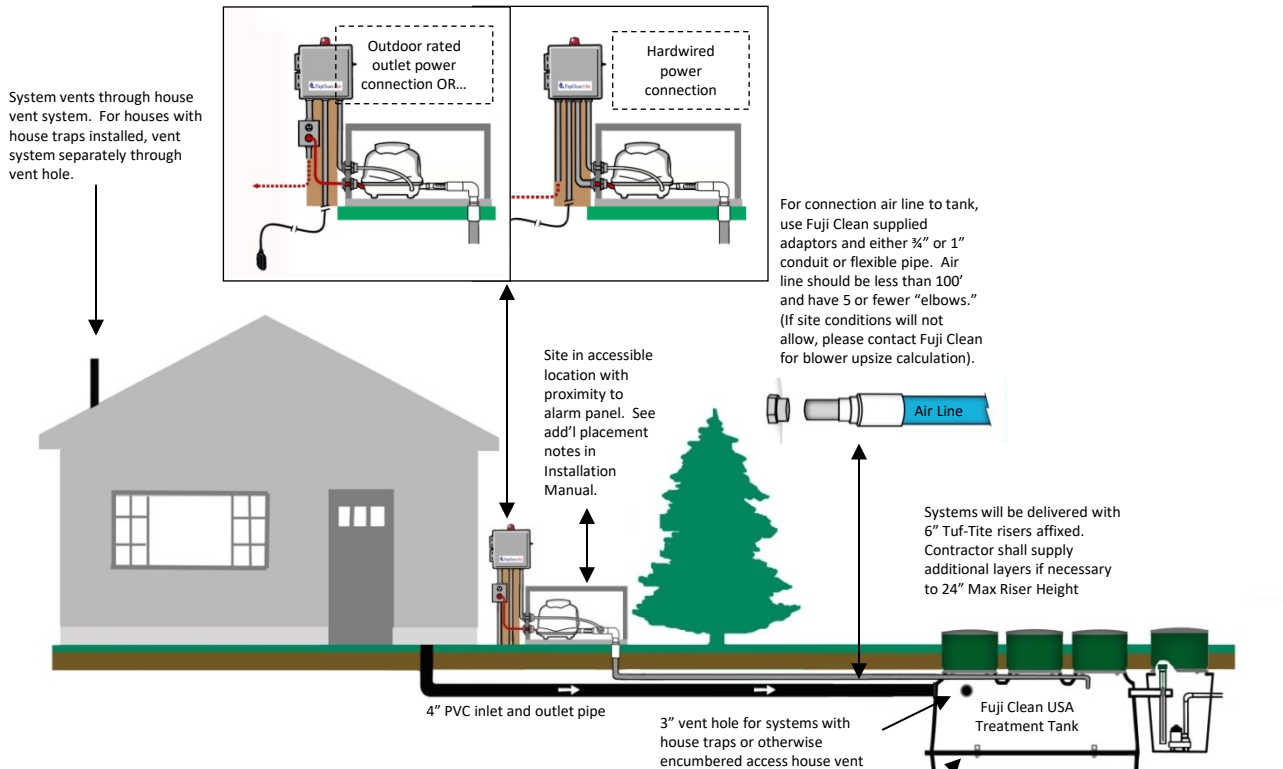
Crushed Stone, Fill, Loam etc.

- Fuji Clean USA is not responsible for design, installation or materials associated with leachfield or treated wastewater disposal area.

Please note: Proper installation permitting is the responsibility of the installing contractor.

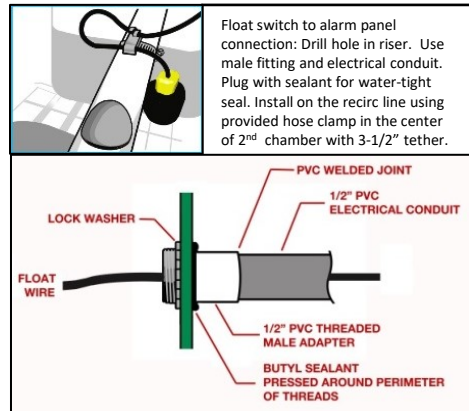
Installation Overview

Fuji Clean recommends a protective housing with solid base for blower placement. Contractor to supply material to locate and mount the alarm/control panel.



Please Note:

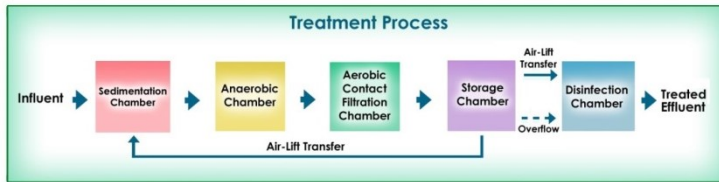
1. Fuji Clean systems are designed to accept straight septic wastewater and do not require a preceding septic or settling tank.
2. Fill tank with fresh water to LWL (Low Water Level) mark in all three chambers once tank is set.
3. See Installation Manual for uplift restraint detail.
4. "Clearwater" water softener backwash should be discharged directly to a separate drywell, leaching pool or other approved area.
5. Use licensed electrician for final wiring.
6. Using grommets or a waterproof adhesive, affix NSF labels in two locations, inside the inlet riser and on the inside of the controller.
7. Installing contractor responsible for final landscaping, seeding etc. Be certain that final grade pitches away from treatment tank covers.
8. Final inspection and startup shall be the responsibility of the Fuji Clean USA certified O&M provider.
9. Homeowner manual must be provided to and reviewed with homeowner to assure proper use.
10. Warranty Card (orange card supplied by Fuji Clean USA), must be returned to Fuji Clean USA to activate warranty.



Section 2. Treatment Process Overview

Fuji Clean's "contact filtration" treatment is a simple, well engineered process that consists of a controlled, circuitous flow train through anaerobic 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 3B. Disinfection Chamber (final zone before discharge – option for chlorination tablet disinfection)

Chamber 3A. Storage Chamber (settling zone)

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

Outlet

Inlet

Powered by the FujiMACR11 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.

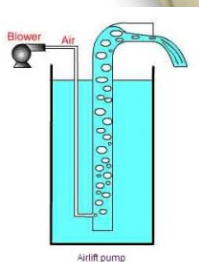
Chamber 3. Aerobic Contact Filtration Chamber
(both board and cylindrical hollow mesh media) oxygen rich zone for aerobic microbe digestion activity, solids filtration and nitrification of ammoniac nitrogens to nitrates

Overflow Effluent Weir

Chamber 1. Sedimentation Chamber (separates solids and greases)

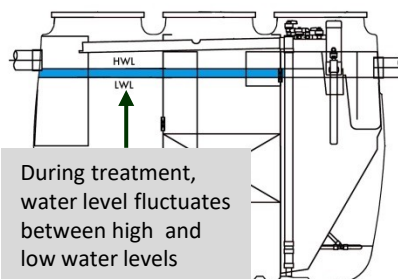
Chamber 2. Anaerobic Contact Filtration Chamber (spherical-skeleton filter media) organic matter decomposition by micro-organisms, suspended solids captured and nitrates are denitrified

Flow Equalization
When water level exceeds LWL, treated water is discharged through Chamber 3B via the Effluent Air Lift pump. If water level exceeds HWL, then treated water is also discharged through an overflow effluent weir.

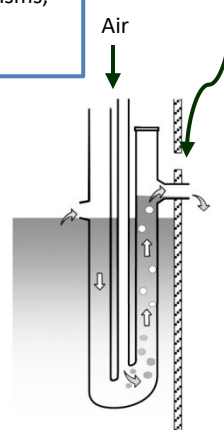


Airlift pump

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.



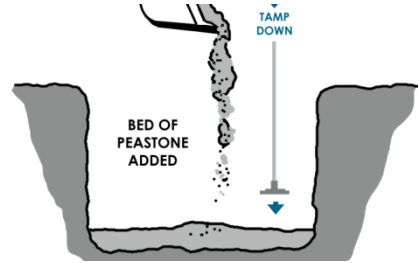
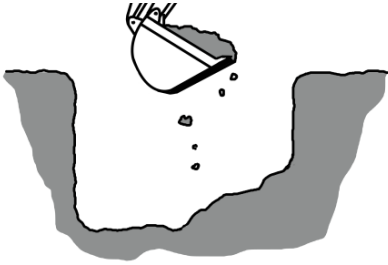
During treatment, water level fluctuates between high and low water levels



Installation Procedure

Unloading Instructions:

- Upon delivery, inspect Fuji Clean tank, both outside and inside for possible damage incurred during transport. If you find damage, or have a question, please contact your distributor immediately.



- **Step 1: Prepare excavation to be at least 1 to 2 feet larger than Fuji Clean system dimensions as listed below. Important Note: Riser height should not exceed 24".**

- **Step 2. Prepare 4"- 6" bed of stone (¼" to ½"), level to within 1/8".**

FUJI CLEAN USA DESIGN SPECIFICATION TABLE	Residential CE Series BOD, TSS, TN*			Residential CEN Series BOD, TSS, TN (Enhanced Nitrogen Removal)		
Model	CE5	CE7	CE10	CEN5	CEN7	CEN10
Tank Volume Total (gallons)	544	749	1,069	749	1,069	1,498
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 to 1/8")	49	53	61	53	61	62
Outlet Invert (inches, to 1/8")	47	51	59	51	59	59.5
Blower Size (Standard**)	80 L/min	80 L/min	100 L/min	80 L/min	100 L/min	100 L/min
Power Use (kWh/day)	1.2	1.2	1.7	1.2	1.7	1.7

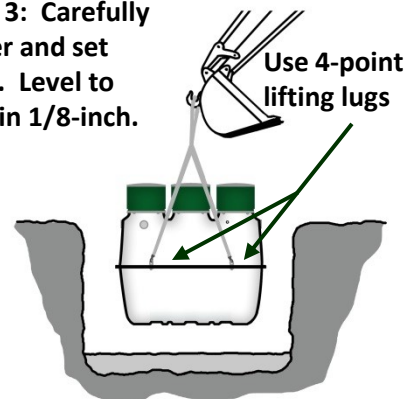
* TN data was obtained during CE testing, but not to NSF245 testing protocol. CEN testing was to NSF245 protocol.

** Assumes blower siting conforms to parameters outlined in Step 8 of this Manual and site is below 10,000 ft. in altitude. If site is above 10,000 ft., please refer to table below for recommended blower sizing.

Recommended blower sizing for site above 10,000 ft. above sea level.

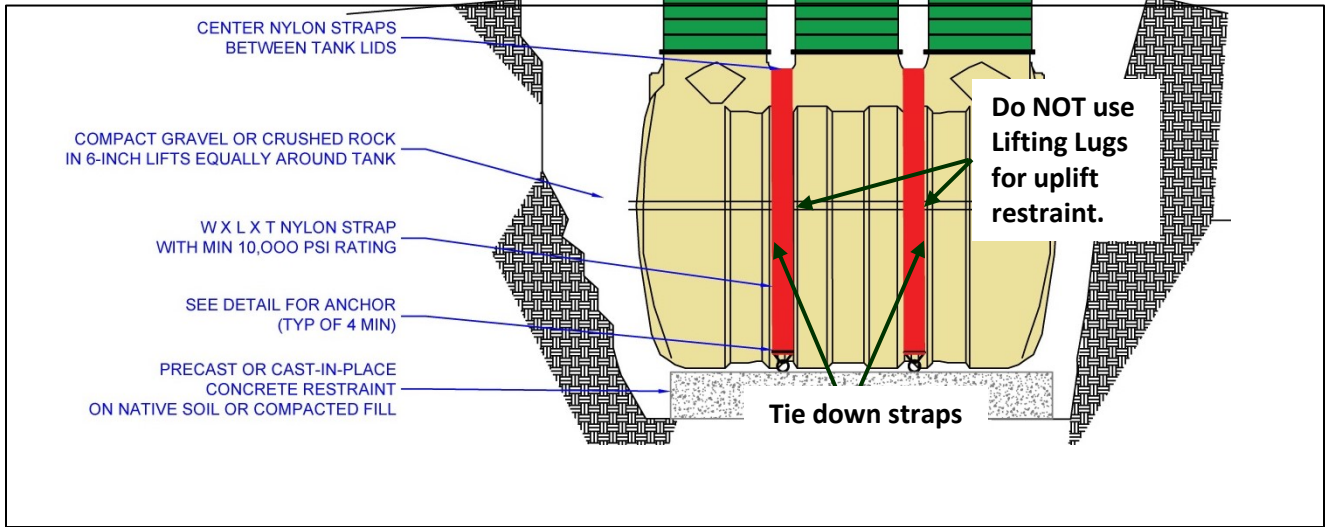
Blower Capacity vs Altitude		
	Aerator Size (L/min)	
Model	0-10,000 ft	> 10,000 ft
CE5/CEN5	80	100
CE7/CEN7	80	100
CE10/CEN10	100	120

- **Step 3: Carefully lower and set tank. Level to within 1/8-inch.**

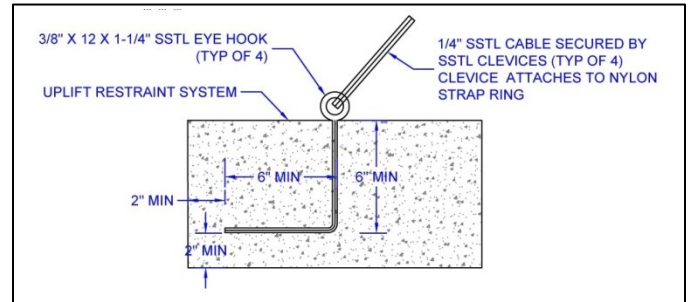


- ❑ **Step 4:** If any part of the tank is below the estimated seasonal high water table, then engineer shall provide buoyancy calculations to assure adequate tank uplift restraint. Recommended uplift restraint options include:

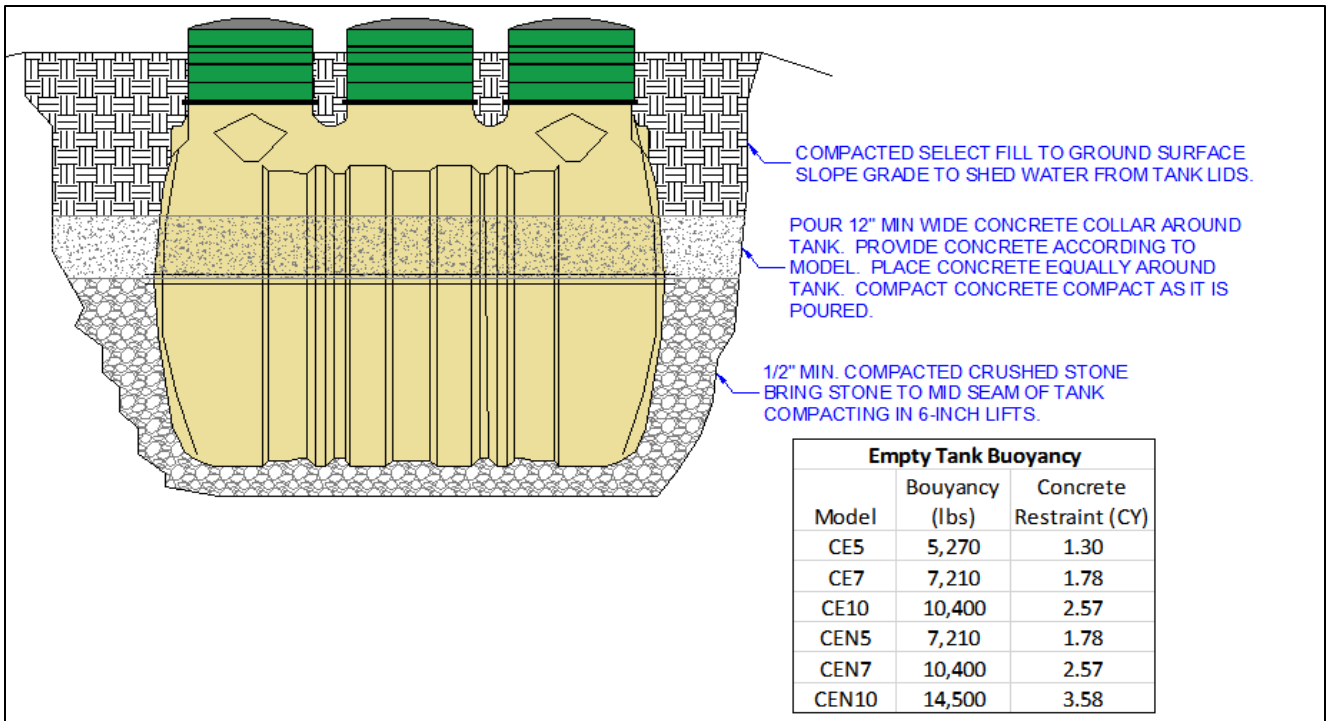
Uplift Restraint with Tie-Down Straps



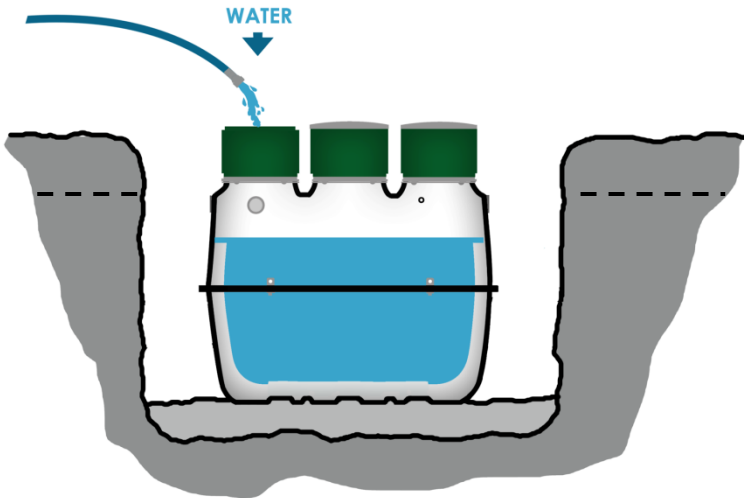
Cable tie-down detail.



Uplift Restraint with Concrete Collar



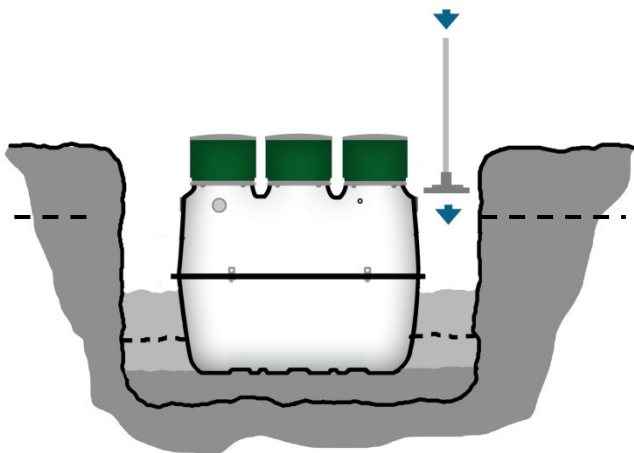
- ❑ Step 5: After rechecking that tank is level to 1/8-inch, (fore and aft as well as side to side), fill tank with fresh water to the low water line mark. Note: Alternate chambers while filling for evenly balanced fill.



Low water line in sedimentation chamber

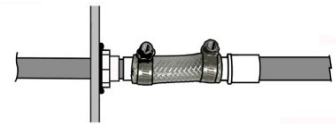
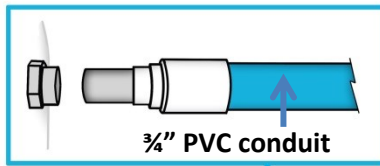


Please note: To assure tank water tightness, please check in 24 hours to be sure that the water level has not dropped. Please contact your distributor or Fuji Clean USA if water level has dropped.

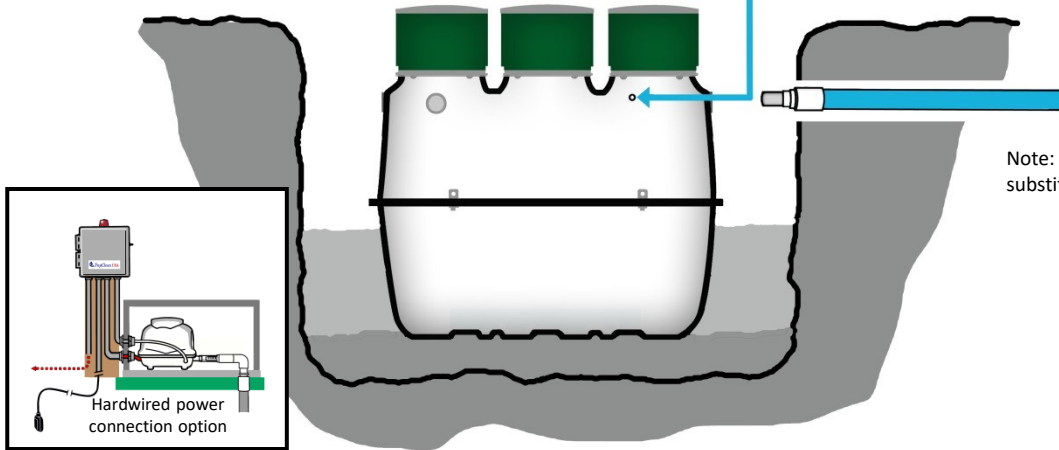


- ❑ Step 6: Backfill about ¾ way up tank in layered, compacted 6" lifts using peastone or equivalent material that form-fits into tank corrugations.

- ❑ **Step 7: Using supplied adaptors and fittings, attach air pipe fitting to tank and connect to $\frac{3}{4}$ " conduit in prepared trench (min. 6" deep) to location of air blower. Please note: $\frac{3}{4}$ " flexible irrigation line, 100 PSI Max, may also be used for the airline.**



Note: Some states and contractors require a flexible airline adaptor as shown. (adaptors supplied by Fuji Clean USA)



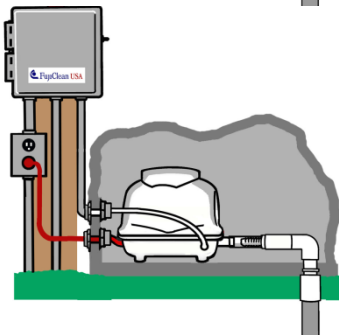
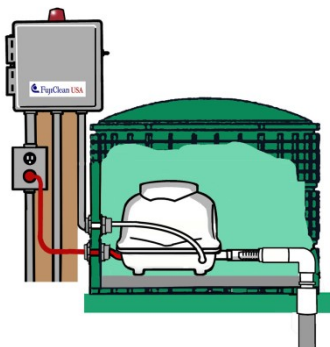
Note: 1-inch air line may be substituted for $\frac{3}{4}$ " line.

- ❑ **Step 8: Locating and Installing Blower/Control Panel.**

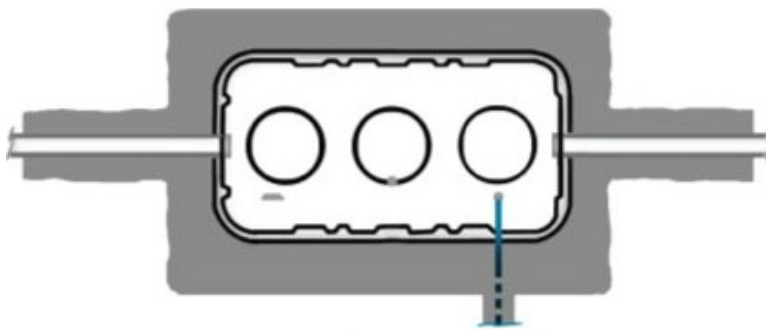
- ✓ **USING $\frac{3}{4}$ -INCH CONDUIT, LOCATE BLOWER WITHIN 100-FT. (AIR LINE) OF TREATMENT TANK AND WITH NO MORE THAN FIVE (5) ELBOWS. If site conditions prevent this, please contact your distributor or Fuji Clean USA for technical assistance.**

Air Blower shall be:

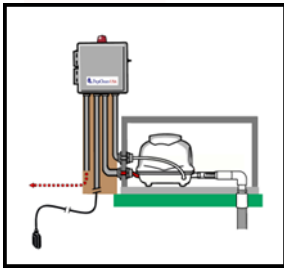
- ✓ in as close proximity to control panel as possible
- ✓ on a solid (e.g. concrete) pad to minimize vibrations
- ✓ in a location above water level
- ✓ away from grease exhaust fans.
- ✓ away from bedroom windows and other locations where operational sounds (although minimal) may be a nuisance
- ✓ In a location that allows unencumbered access for inspection and maintenance activity
- ✓ with proper electrical grounding
- ✓ with wiring and electrical connections made by a licensed electrician.
- ✓ with no objects on top of electrical cord.
- ✓ in a well-ventilated space out of direct sunlight and protected from elements such as direct rain or snowfall.
- ✓ **Hardwired to power in states and jurisdictions that require a hardwired connection.**



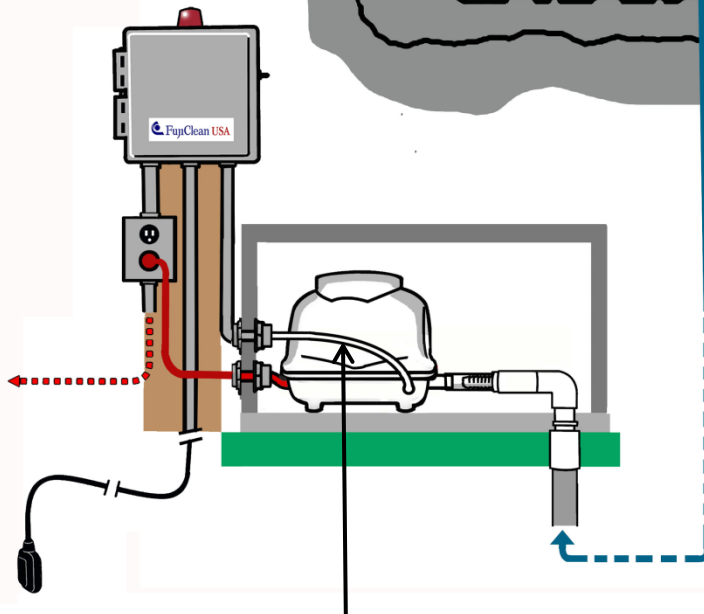
Two possible blower protection options. Be sure to vent covers to allow free air draw even in deep snow pack.



Plan view shows trench excavations for inlet and outlet lines



Note: Some states and installing contractors require hard wired blower connection



1/8" (ID) Vinyl Micro-Tubing
for Air Pressure Sensing Alarm

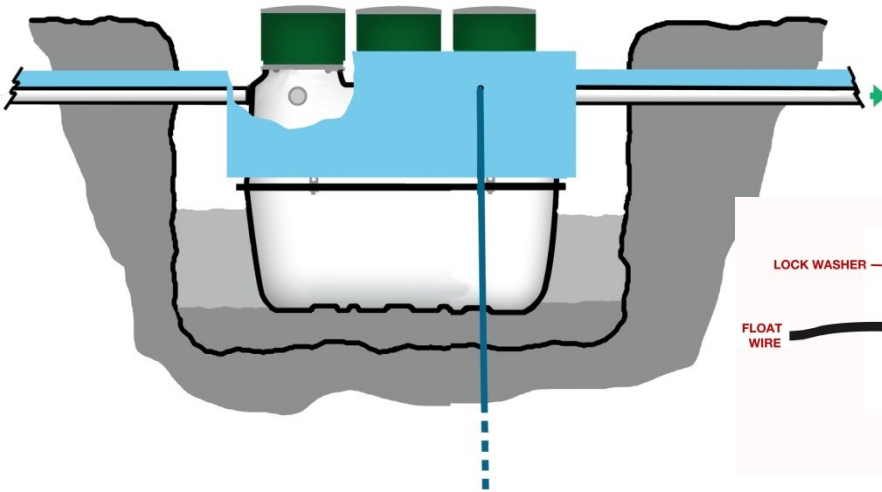
❑ Step 8 continued: Locating and Installing Blower/Control Panel cont.

Alarm Panel shall be:

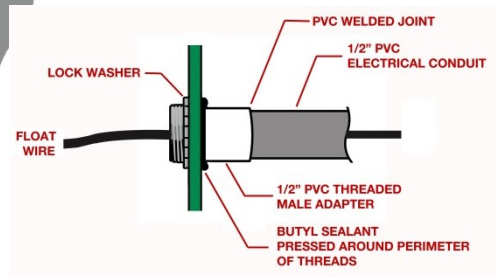
- ✓ in a well ventilated area as dry and protected from elements as possible
- ✓ in as close of proximity to FujiMAC Blower as possible
- ✓ wired by qualified electrician
- ✓ in a location that allows unencumbered access for inspection and maintenance activity

❑ For additional important detail about installing and maintaining blower, please review and refer to provided FujiMAC Blower Installation-Maintenance Manual, which is provided inside the blower box.

- ❑ **Step 9:** For cold climate installations, please install insulated risers and covers and cover upper half of treatment unit with min. R-8 value insulating material (i.e. foam board)



For connection of float switch cord to alarm panel, drill hole in riser and use male fitting and electrical conduit. Plug fitting with sealant standard that meets ASTM C990-96 to assure watertight seal and to prevent septic gas transmission into control panel.



- ❑ **Step 10:** Install Float Switch on pumpback line in 2nd chamber with 3-1/2" tether. Float switch electrical cord should exit riser wall through male adaptor (caulked watertight to prevent gas leakage) or watertight fitting. An interior connection to direct burial cable is also acceptable.



3-1/2" tether for float switch

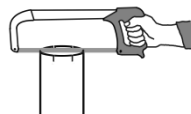
- ❑ **Step 11:** Prepare Tank Inlet and Outlet for 4" Sched. 40 Inlet and Outlet Lines



Seal around inlet and outlet tank fittings using a sealant that meets ASTM C990-96 standards



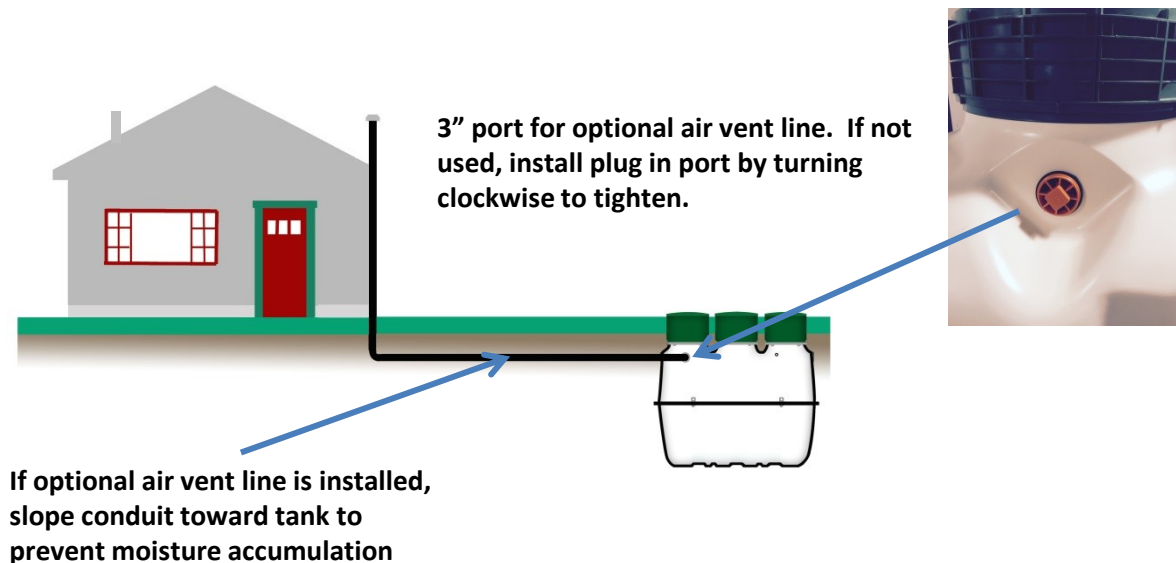
Approx.
1-inch
deep cuts



Apply primer and cement to 4" PVC inlet and outlet pipe sections.

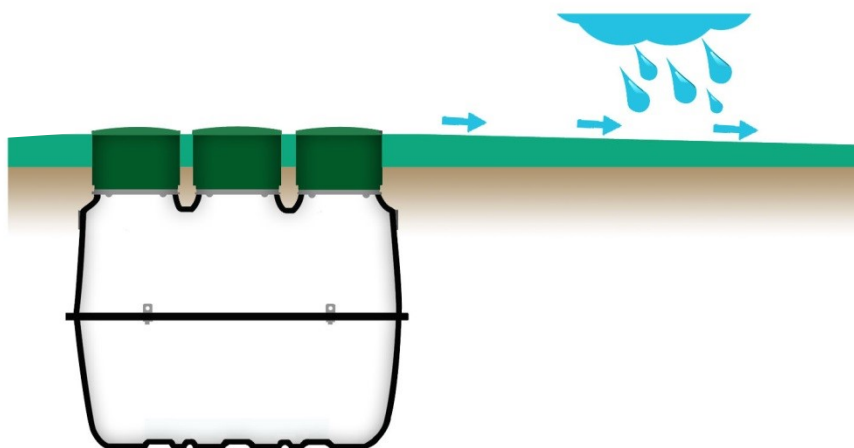
IMPORTANT NOTE: Inlet and outlet fittings are slightly tapered. 4" Sched. 40 pipe must be cut as shown to fit completely into fitting.

- ❑ **Step 12:** In nearly all cases, the Fuji Clean system will vent properly through the house septic influent line. In cases where there is a influent pump, or in severe downdraft locations, a separate vent should be considered. If you do choose to install a vent, be sure that the vent slopes toward the tank so that any moisture accumulation drips back down toward the tank.



- ❑ **Step 13:** During final landscaping, seeding etc., be sure to pitch final grade away from covers to sweep surface water away from treatment tank.

24" Max Riser Height



- ❑ **Step 14:** Fill out Warranty Activation Card (received with this Installation Manual) and return to Fuji Clean USA to activate system Warranty. If this card cannot be found, please contact Fuji Clean USA for voice or online Warranty activation. 207-406-2927.

System Components - Alarm / Control Panel

NEMA 4X rated, the Alarm/Control Panel monitors tank water level and blower operation. An audible horn and red beacon light will activate in the event of either a tank high water condition or if the blower ceases to operate (causing a drop in air pressure). Please note: upgraded controllers with telecommunication, alarm tracking and data logging capabilities are available.

A 3-way toggle switch (Test-Normal-Silence) allows check for proper operation by toggling the side panel switch to “Test” mode. When switch is released, it will return to normal operation.

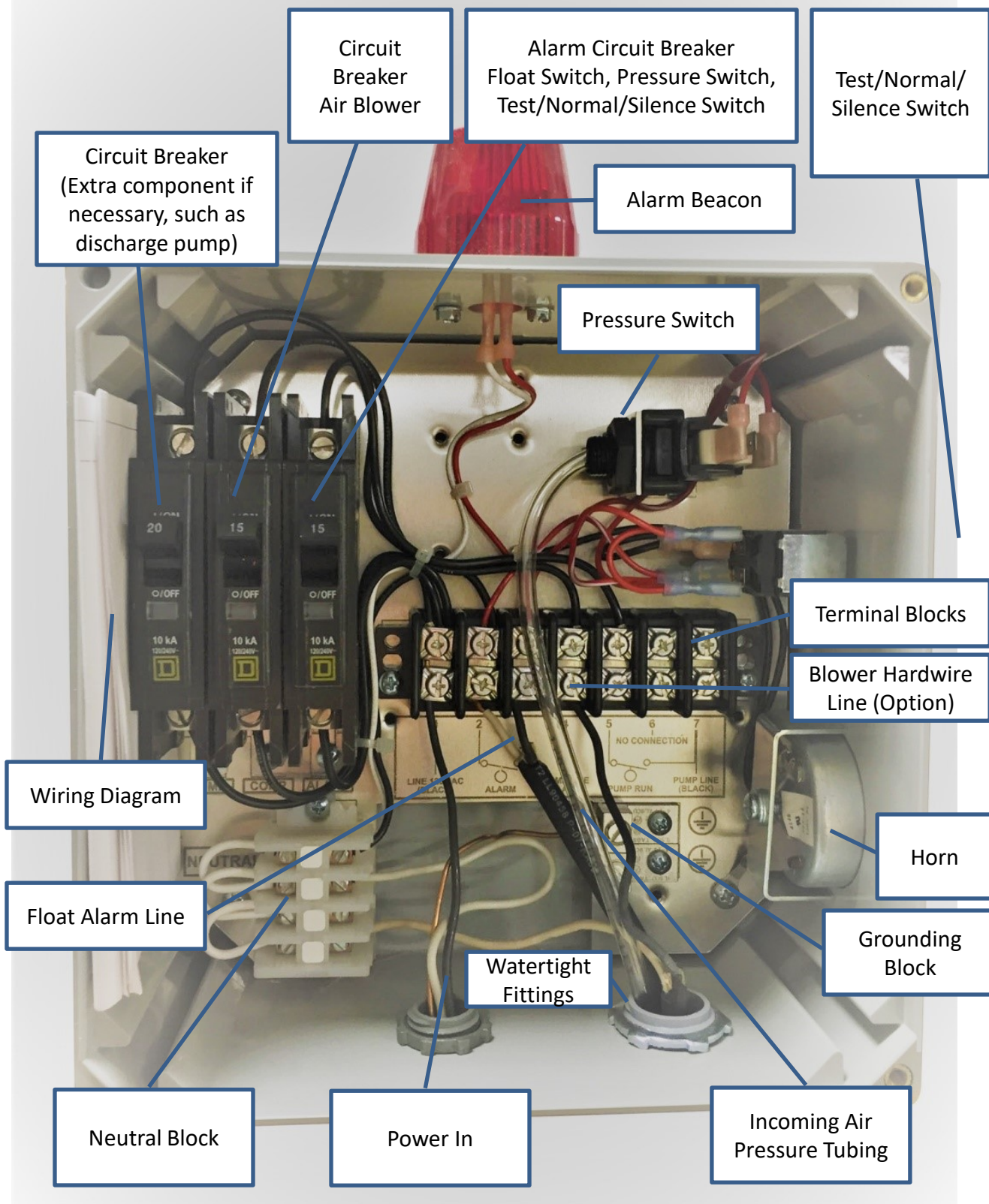
In the event of an alarm condition the “Silence” switch may be engaged to silence the audible alarm. The beacon will continue to flash until normal operation is restored and the alarm will reset. If a new alarm condition occurs, the “Silence” mode will expire and the unit’s horn will begin sounding again.

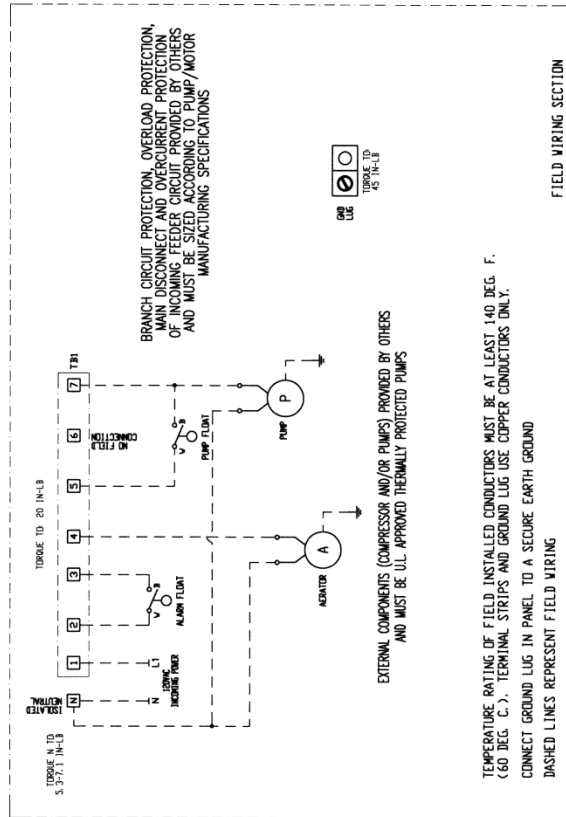
All conduits between panel and treatment tank must be sealed to prevent gas leakage into panel.

Fuji Clean USA offers a choice of customized alarm/control panels, each with different features. Control panel customization is also available to match unique site or job requirements. Please consult Fuji Clean USA for details.

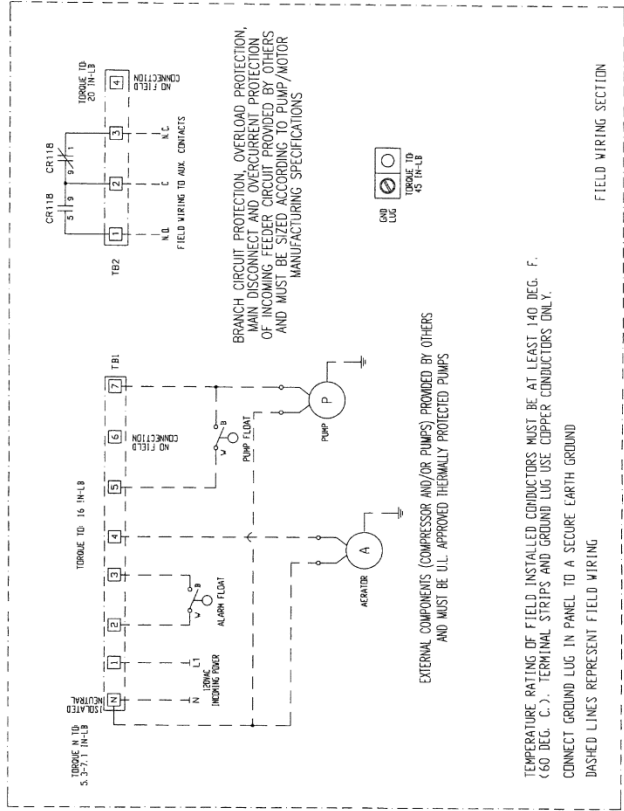
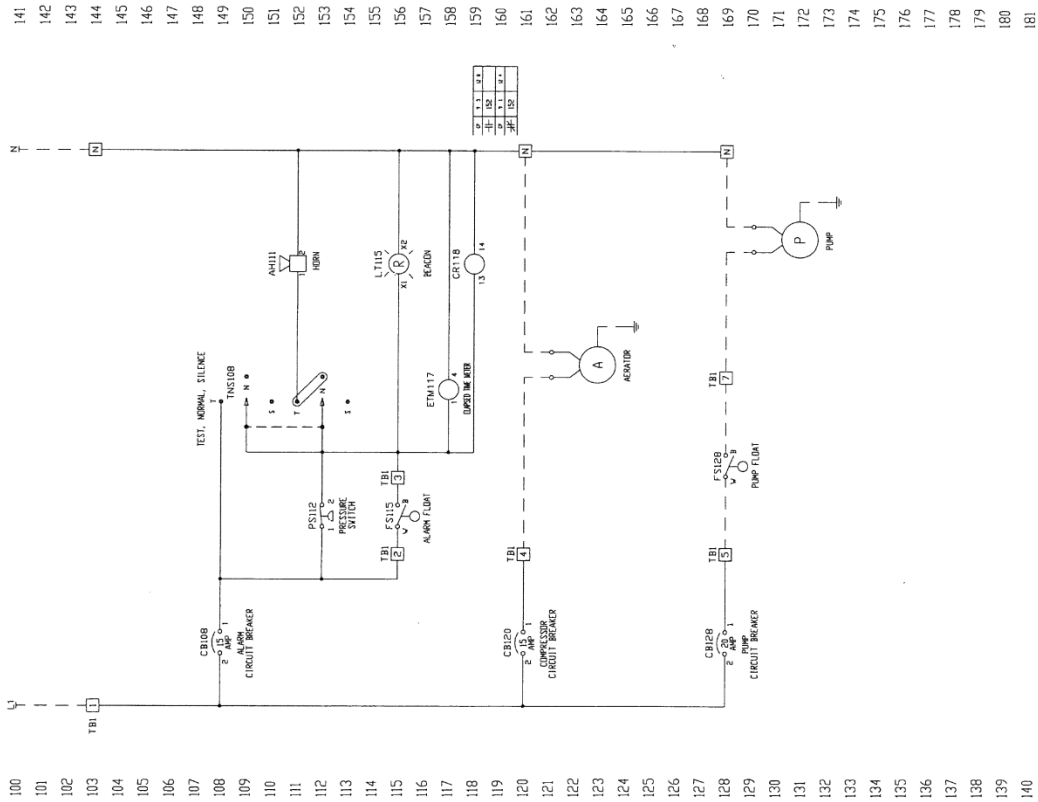
Model Features	Controller A	Controller C	Controller D	Controller E
SJE Rhombus Model #	1041972	1045040	IFS41W914X6A8AC10E27D	IFI41W914X6A8AC10E27D
NEMA 4X Weather Proof Enclosure	X	X	X	X
Three 120 Volt AC Breakers (Pump, Compressor, Alarm)	X	X	X	X
Alarm/Test/Normal/Silence Switch	X	X	X	X
Compressor Low Pressure Alarm Switch	X	X	X	X
Communication Contacts (Alarm Aux)		X	X	X
Elapsed Time Meter		X	X	X
Duplex Pump Demand or Timed Dosing Control			X	X
Data Logging Panel via USB Port to Flash Drive				X
UL Listed to Meet and/or Exceed Industry Safety Standards			X	X
Dual Safety Certification for U.S and Canada			X	X

- ❑ **Step 15: Finalize Controller Wiring.** Please have licensed electrician refer to wiring diagram in this manual and enclosed separately in alarm/control panel. Upgraded Fuji Clean controllers are available with options such as telecommunications or flow monitoring. Contact Fuji Clean USA for details.



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Controller "C" Wiring Diagram



NOTES: FIELD WIRING CONTAINS PROTECTIVE DEVICES AND IT SHALL BE THE RESPONSIBILITY OF THE USER TO MAKE SURE THE WIRING IS DONE IN ACCORDANCE WITH THE FIELD WIRING SECTION.									
REV	DATE	BY	CHKD BY	DATE	CHKD BY	DATE	CHKD BY	DATE	CHKD BY
1	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
2	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
3	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
4	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
5	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
6	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
7	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
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16	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
17	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
18	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
19	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
20	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
21	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
22	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15
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81	10/1/15	JL	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15	8/11/15

Float Switch Information

The SJE Rhombus Signalmaster float switch is pre-mounted in Fuji Clean USA treatment systems. This information from SJE Rhombus is supplied for informed, proper handling during the installation process.

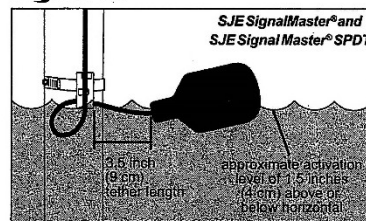
SJE SIGNALMASTER®



- Mechanically activated.
- Control differential of 1.5 inches above or below horizontal.
- Not sensitive to rotation.
- Mounting options: mounting clamp or cable weight.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus® supplier for replacements.

Figure A



⚠ WARNING



ELECTRICAL SHOCK HAZARD

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠ WARNING



EXPLOSION OR FIRE HAZARD

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electric Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating with in boxes, conduit bodies, fittings, float housing, or cable.

PREVENTATIVE MAINTENANCE

- Periodically check the product. Check that the cable has not become worn or that the housing has not been damaged so as to impair the protection of the product. Replace the product immediately if any damage is found or suspected.
- Periodically check to see that the float is free to move and operate the switch.
- Use only SJE Rhombus replacement parts.
- The Sensor Float and Sensor Float Mini control switches contain mercury and **MUST** be recycle or disposed of according to local, state and federal codes.

SJE-RHOMBUS® THREE-YEAR LIMITED WARRANTY

SJE-RHOMBUS® warrants to the original consumer that this product shall be free of manufacturing defects for three years after the date of consumer purchase. During that time period and subject to the conditions set forth below, **SJE-RHOMBUS®** will repair or replace, for the original consumer, any component which proves to be defective due to defective materials or workmanship of **SJE-RHOMBUS®**.

THIS EXPRESS WARRANTY DOES NOT APPLY TO THE MOTOR START KIT COMPONENT. SJE-RHOMBUS® MAKES NO WARRANTIES OF ANY TYPE WITH RESPECT TO THE MOTOR START KIT.

ELECTRICAL WIRING AND SERVICING OF THIS PRODUCT MUST BE PERFORMED BY A LICENSED ELECTRICIAN.

THIS WARRANTY DOES NOT APPLY: (A) to damage due to lightning or conditions beyond the control of **SJE-RHOMBUS®**; (B) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (C) to failures resulting from abuse, misuse, accident, or negligence; (D) to units which are not installed in accordance with applicable local codes, ordinances, or accepted trade practices, and (E) to units repaired and/or modified without prior authorization from **SJE-RHOMBUS®**.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. 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 gives you specific legal rights, and you may also have other rights which vary from state to state.

TO OBTAIN WARRANTY SERVICE: The consumer shall assume all responsibility and expense for removal, reinstallation, and freight. Any item to be repaired or replaced under this warranty must be returned to **SJE-RHOMBUS®**, or such place as designated by **SJE-RHOMBUS®**.

ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. SJE-RHOMBUS® SHALL NOT, IN ANY MANNER, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF A BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.

Start-Up Procedures

☐ 1. Outside Environment Check.

The system is accessible and nothing inhibits access to maintenance.

- Surface water is draining away from risers and covers.
- No signs of physical damage to the treatment system, piping, alarms or components
- No unusual smells around the system.
- No unusually loud blower noise, such as rattling.

☐ 2. Blower Box Check.

- Open the blower box, make sure that it is operating properly.
- Inspect all fittings and vents to ensure they are clean and dry and that blower is located so that it is protected from dust and particles, will remain dry and not be submerged.

☐ 3. Blower Operation and Blower Alarm Check.

- Make sure the blower operates properly.
- Turn off the blower (unplug or turn off at alarm/control panel breaker switch) for few moments to check that the alarm is triggered.

Open all access covers and secure the area around the access openings.

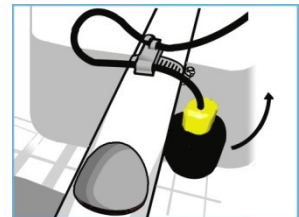
☐ 4. Water Level is at LWL.

- Check that tank has been filled to LWL mark in Chamber 1.



☐ 5. High Water Float Switch Check.

- Check that the high water float switch is operating freely. Lift up the high water float switch to check that the alarm is triggered.
- (Note: Float should have 3.5" tether. Activation horizon is 1.5" above or below level horizon).



☐ 6. Set Recirculation Control Valve. (gray)

The recirculation valve (gray) should be set to its default setting range according to the table below for ALL flows. At the discretion of the system's start-up technician, within each default range, the valve shall be at the lower end for anticipated below average hydraulic flows and at the higher end for hydraulic flows that are anticipated to be above average.



Model	CE5	CE7	CE10
Default Valve Setting (%)	30% to 35%	25% to 30%	25% to 30%

☐ **7. Check Recirculation Flow Rate.**

- Normal recirculation flow should be level with the top edge of the airlift pumpback line cut-out spilling into Chamber 1, the Sedimentation Chamber.



☐ **8. Check/Set Aeration Balance Control Valve (blue).**

- The default, normal setting for the Aeration Control Valve is 50%.
- Visually observe the airflow rates on each side of the plant by checking to see if bubbles are evenly distributed on both sides of Chamber 3, The Aeration Chamber. If there is an obvious discrepancy in airflow between the two sides, adjust the Aeration Balance Control Valve so that the airflow is equal. Important!



☐ **9. Check/Set Effluent Airlift Valve (white).** The Effluent Control Valve is initially set to 40% and there is typically no need for it to be adjusted under standard conditions.



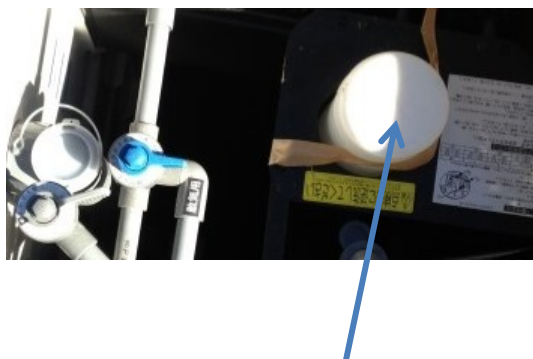
☐ **10. Check Effluent Airlift Pipe.**

Check the observation port in the airlift line to see if there is smooth water flow from the effluent airlift pump. If not, then check to be sure that there isn't a clog in the airlift pipe with a cleaning brush.



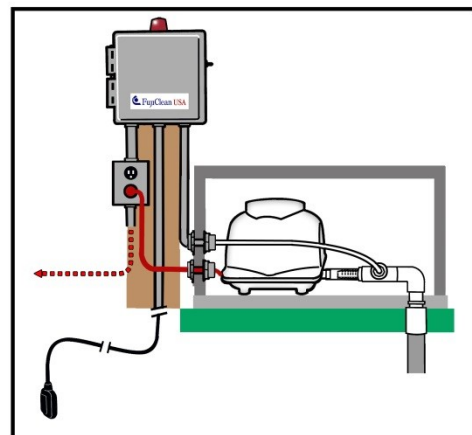
☐ **11. Add Disinfectant Tablets to Chlorinator (if appropriate)**

- If chlorine tablets are to be used for disinfection, check to be sure that they are removed from packaging and placed in the disinfectant cylinder.
- Be sure that disinfectant cylinder remains closed for all start-up steps to prevent corrosive activity to exposed metallic surfaces.
- Note: Chlorine dissolve rate can be adjusted by rotating the bottom cap of the Chlorinator.



☐ **12. Check Alarm/Control Panel**

- Check to be sure that Alarm/Control Panel is located in a secure, accessible location.
- Check fittings and wire connections are tight and secure. This includes connection between air hose and pressure switch.
- Important: Check to be sure that all panel penetrations are air and watertight. Be sure no gas from treatment system can leak into Alarm/Controller.
- Be sure electrical cord between blower and outlet is free and clear and no object is on cord.
- Check to be sure that panel is closed, secure and toggle switch is set to "Normal" setting.



☐ **13. Final Site Preparation**

- Close and secure all access covers.
- Close and secure blower cover.

☐ **14. Owner Communication**

- Be sure that home/business owner has a copy of the Fuji Clean USA Owner's Manual (with Warranty information included).
- Be sure that service provider contact information is affixed to Alarm/Control Panel as well as on Homeowner's Manual.

FujiClean USA LLC
Smart Clean Water
 Owner's Manual – Residential Systems



Intelligently Engineered Treatment Systems for Domestic Wastewater

Service Provider:		Model:	
Name:	_____	DES	DES7
Company:	_____	DES8	DES7
Address:	_____	DES9	DES10
Telephone:	_____	DES11	DES12
Email:	_____	DES13	DES14
		Blower Serial #	_____

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.



Fuji Clean USA Installation Procedure Checklist

Note: Please consult Installation Manual for detailed instructions.

Unloading Instructions:

- ☐ Upon delivery, inspect Fuji Clean tank, both outside and inside for possible damage incurred during transport. If you find damage, or have a question, please contact your distributor immediately.
- ☐ **Step 1: Prepare excavation to be at least 1 to 2 feet larger than the Fuji Clean tank dimensions. Note: Riser height should not exceed 24".**
- ☐ **Step 2: Prepare 4" - 6" bed of stone (¾" to ½"), level to within 1/8".**
- ☐ **Step 3: Use 4-point lifting lugs. Carefully lower and set tank. Level to within 1/8-inch.**
- ☐ **Step 4: If any part of the tank is below the estimated seasonal high water table, adequate tank uplift restraint measures should be taken. Please refer to Installation Manual for recommended options.**
- ☐ **Step 5: Re-check that tank is level to 1/8-inch, (fore and aft as well as side to side) and then fill tank with fresh water to the low water line (marked inside tank). Start 24-hour water tightness test. (Please contact your distributor or Fuji Clean USA if water level has dropped after 24 hours).**
- ☐ **Step 6: Backfill about ¾ way up tank in layered, compacted 6" lifts using peastone or equivalent material that form-fits into tank corrugations.**
- ☐ **Step 7: Using supplied adaptors and fittings, attach air pipe fitting to tank and connect to ¾" or 1" conduit in prepared trench (min. 6" deep) to location of air blower. Please note: flexible irrigation line, 100 PSI Max, may also be used for the airline.**
- ☐ **Step 8: Locate blower within 100-ft. of treatment tank with no more than 5 elbows. If site conditions prevent this configuration, please contact your distributor or Fuji Clean USA for technical assistance.**

Air Blower shall be:

- ✓ in as close proximity to control panel as possible
- ✓ on a solid (e.g. concrete) pad to minimize vibrations
- ✓ in a location above water level
- ✓ away from grease exhaust fans.
- ✓ away from bedroom windows and other locations where operational sounds (although minimal) may be a nuisance
- ✓ In a location that allows unencumbered access for inspection and maintenance activity
- ✓ with proper electrical grounding
- ✓ with wiring and electrical connections made by a licensed electrician.
- ✓ with no objects on top of electrical cord.
- ✓ in a well-ventilated space out of direct sunlight and protected from elements such as direct rain or snowfall.

Fuji Clean USA Installation Procedure Checklist cont.

Alarm Panel shall be:

- ✓ in a well ventilated area as dry and protected from elements as possible
- ✓ in as close of proximity to the FujiMAC blower as possible
- ✓ wired by qualified electrician
- ✓ in a location that allows unencumbered access for inspection and maintenance activity

- ☐ **Step 9:** For cold climate installations, please install insulated risers and covers and cover upper half of treatment unit with min. R-8 value insulating material (i.e. foam board)
- ☐ **Step 10:** Float switch electrical cord should exit riser wall through a male adaptor (caulked watertight to prevent septic gas leakage) or watertight fitting. An interior connection to direct burial cable is also an acceptable option.
- ☐ **Step 11:** Prepare Tank Inlet and Outlet for 4" Sched. 40 Inlet and Outlet Lines (secure with PVC cement).
- ☐ **Step 12:** In nearly all cases, the Fuji Clean system will vent properly through the house septic influent line. In cases where there is an influent pump, or in severe downdraft locations, a separate vent should be considered. If you do choose to install a vent, be sure that the vent slopes toward the tank so that any moisture accumulation drips back down toward the tank.
- ☐ **Step 13:** During final landscaping, seeding etc., be sure to pitch final grade away from covers to sweep surface water away from treatment tank.
- ☐ **Step 15:** Finalize Controller Wiring. Please have licensed electrician refer to wiring diagram (in Installer Manual and enclosed in alarm/control panel). Upgraded Fuji Clean controllers are available if telecommunications, elapsed time meter or other functions are required. Contact Fuji Clean USA for details.
- ☐ **Step 14:** Provide homeowner with Owner's Manual. Send Warranty Card to Fuji Clean USA.
- ☐ **Step 16:** Follow start-up procedure detailed in Installation Manual:
 - ☐ 1. Outside Environment Check.
 - ☐ 2. Blower Box Check.
 - ☐ 3. Blower Operation and Blower Alarm Check
 - ☐ 4. Water Level is at LWL.
 - ☐ 5. High Water Float Switch Check.
 - ☐ 6. Set Recirculation Control Valve. (gray)
 - ☐ 7. Check Recirculation Flow Rate.
 - ☐ 8. Check/Set Aeration Balance Control Valve (blue).
 - ☐ 9. Check/Set Effluent Airlift Valve (white).
 - ☐ 10. Check Effluent Airlift Pipe.
 - ☐ 11. Add Disinfectant Tablets to Chlorinator (if appropriate)
 - ☐ 12. Check Alarm/Control Panel
 - ☐ 13. Final Site Preparation
 - ☐ 14. Owner Communication - Service Provider and Manual Delivery