FujiClean USA™ LLC

Toward Clean Water…

Contractor Installation Manual

COMMERCIAL SYSTEMS

CE and CEN Models

Rev. 6-13-17

NSF

Certified to NSF/ANSI Standards 40 & 245

Warranty Activation

To activate system warranty, Fuji Clean USA must receive Warranty Activation Card! Please see page 12.

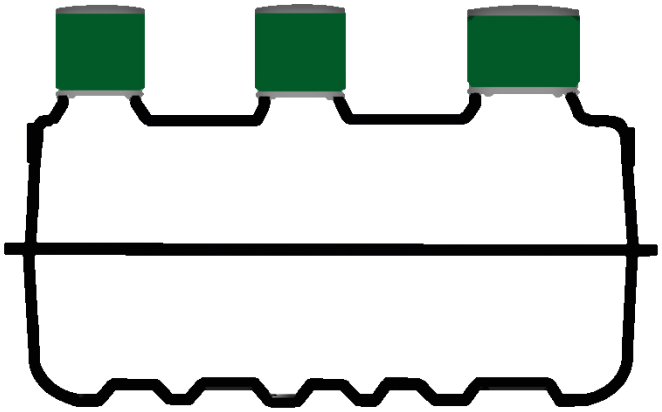
Fuji Clean USA ● 41-2 Greenwood Road ● Brunswick Maine 04011 ● Tel: 207-406-2927 ● Fax: 888-789-1977 ● www.fujicleanusa.com

FujiClean USA™ LLC

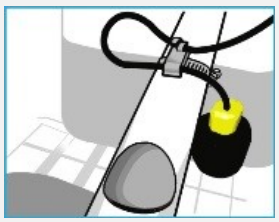
Toward Clean Water…

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.

uji Clean USA

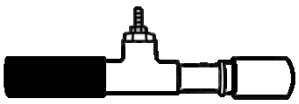


SJE Rhombus Signalmaster Float Switch



❑ Air Vent Plug (2)

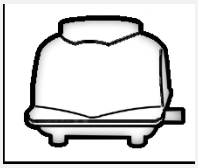
❑ NEMA 4X Rated Alarm/Controller

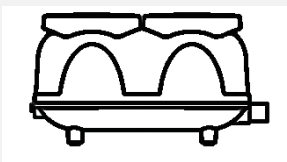


❑ Blower adaptor Fitting with Barb

❑ Inlet/Outlet 5x4 Bushing (2)

❑ Installation Manual





❑ Fuji Clean FujiMAC "R Series" UL Approved Air Blower
❑ (sized according to system)

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

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Contractor Installation Manual – Commercial Systems

Equipment Supplied by Contractor

Risers and Covers per Site & Regulatory Requirements
Note: Tuf-Tite Risers in 6" or 12" height increments and covers are available from your distributor or Fuji Clean USA. If not already installed, please refer to installation instructions in this Manual.
Allowed 24" riser height or less.

All Commercial Models: Two (2) Tuf-Tite 20" Risers plus One (1) 24-inch Riser and One (1) Tuf-Tite 24-RTT Adaptor and Two (2) Tuf-Tite RTR Adaptors (optional) for height parity.

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.
Septic tanks are not required. Fuji Clean systems 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: CE10: 925-gal.; CE14: 1,228-gal; CE21: 1,486-gal; CE30: 2,623-gal; CE6KG: 5,958-gal; CEN10: 1,228-gal; CEN21: 2,623-gal.

Piping / Conduit
- 4" for all models (CE21, CE30, CEN21 and CE6KG use 5" x 4" bushing adaptors, included).
- ¾" or 1" PVC conduit for air line. Flexible irrigation line, 100 PSI Max, (or equivalent) is also acceptable.
- Electrical conduit for float switch line (direct burial line is also acceptable if allowed by code.)

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' 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.

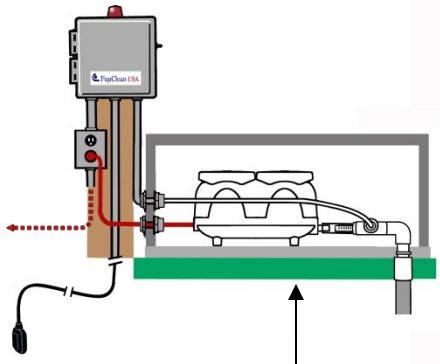
Materials for Air Blower / Controller Installation
- Concrete base (or equivalent) on which to set air blower.
- Protective cover for air blower (vented and able to achieve free airflow in all conditions).
- Materials or location on which to mount control panel and protect from elements.

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

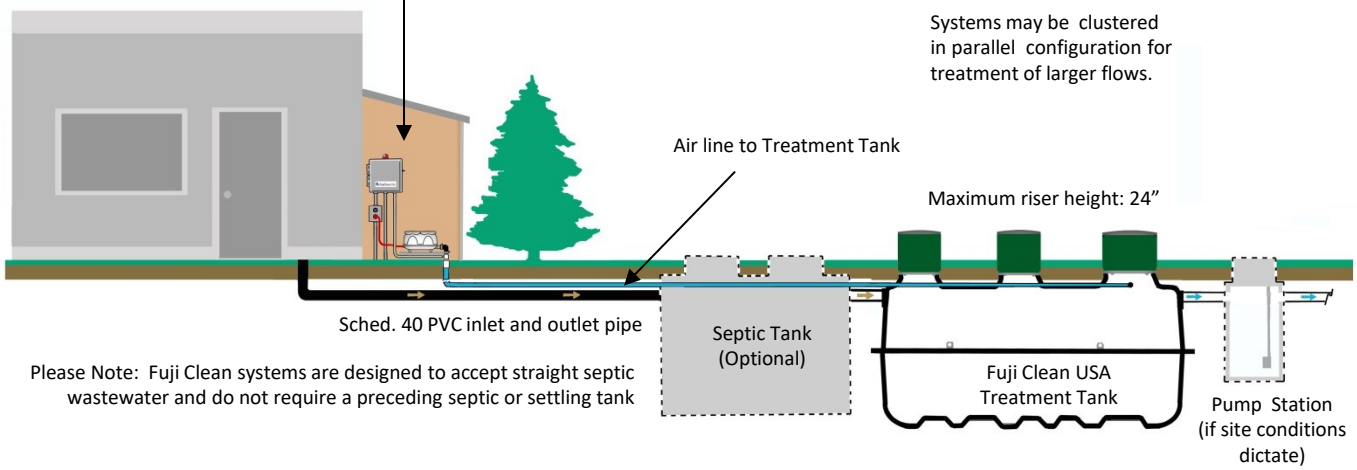
System Controller/Alarm including options for telecommunication, simplex and duplex pump control, flow monitoring and data logging.



FujiMAC "R" Commercial Series linear diaphragm air blower, typically 100 - 200 liters/min for commercial applications.

Multiple system configurations may be controlled independently (shown) or by one customized controller.

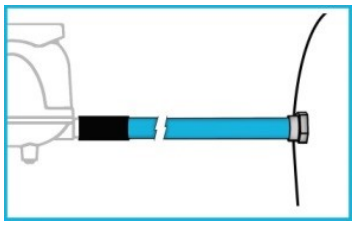
Systems may be clustered in parallel configuration for treatment of larger flows.



Please Note: Fuji Clean systems are designed to accept straight septic wastewater and do not require a preceding septic or settling tank

Fuji Clean commercial treatment systems are delivered plug & play ready with no onsite assembly required.

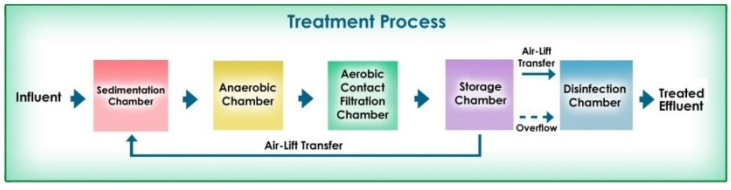
Adaptor and fittings (supplied by Fuji Clean USA) for connection between treatment tank and FujiMAC Series "R" Air blower.



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

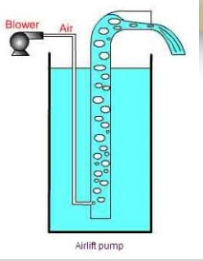
Powered by the FujiMAC "R" Series Blowers
State-of-the-art linear diaphragm air blowers manufactured by Fuji Clean Co. sized to provide about 2.8 cubic feet per minute to most residential systems.

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

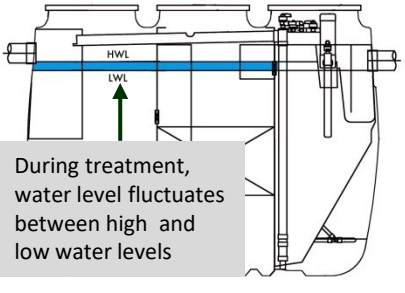
Overflow Effluent Weir

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

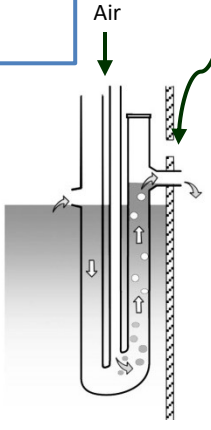
Chamber 1. Sedimentation Chamber (separates solids and greases)



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



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.

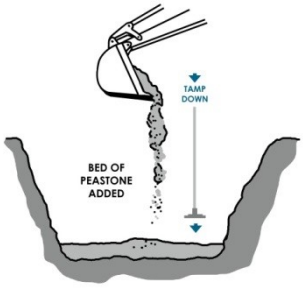
Installation Procedure

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".**

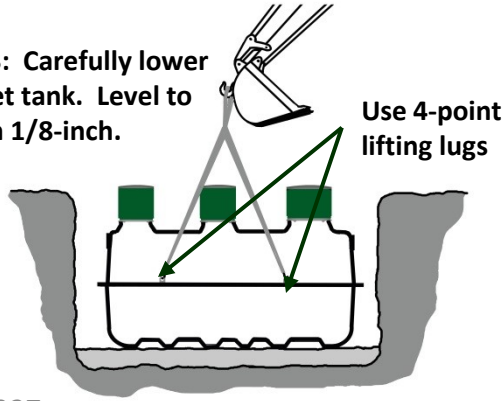


DESIGN SPECIFICATION TABLE	CE Series BOD, TSS, TN					CEN Series BOD, TSS, Enhanced TN	
Model	CE10	CE14	CE21	CE30	CE6KG	CEN10	CEN21
Load Hydraulic (GPD)	900	1,000	1,800	2,700	6,000	900	1,900
Blower Model / CFM (Standard)	MAC100R 3.5 CFM	MAC100R 3.5 CFM	MAC150R 5.3 CFM	MAC200R 7.0 CFM	MAC200R (x3) 21.0 CFM	MAC100R 3.5 CFM	MAC200R 7.0 CFM
Power Use (kWh/day)	1.92	1.92	2.9	4.1	1.92	1.92	4.1
Tank Detail:							
Height (inches)	73.6	77.4	81.3	87.2	87.2	77.4	87.2
Length (inches)	98.8	118.9	152.8	183.7	434.7	118.9	183.7
Width (inches)	56.7	68.9	72.4	78.3	115.3	68.9	78.3
Weight (lbs.)	705	926	1,168	1,543	2,900	926	1,543
Inlet Invert	61	62	65.1	71	67	62	71
Outlet Invert	59	59.5	63.1	69	64	59.5	69
Access Ports (number)	3	3	3	3	7	3	3
Access Port Diameter (inches)	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	2@20" 1@24"	4@24"x24" 3@24"x48"	2@20" 1@24"	2@20" 1@24"

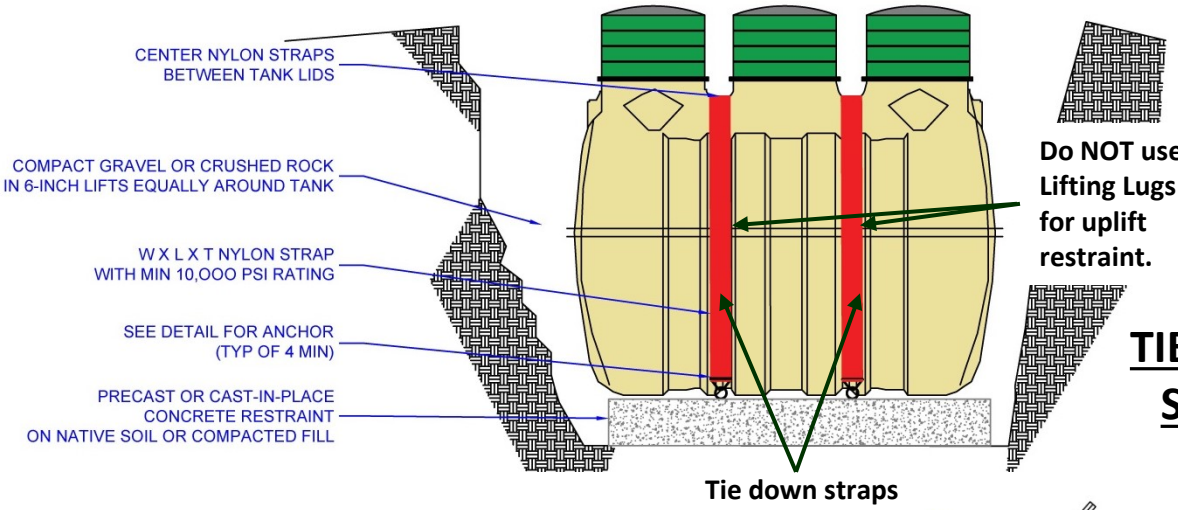
Recommended blower sizing for sites above 10,000 ft. above sea level.

Blower Capacity vs. Altitude		
	Blower Size (CFM)	
Model	0-10,000 ft	> 10,000 ft
CE10/CE14/CEN10	3.5	5.3
CE21	5.3	7.0
CE30/CEN21	7.0	7.0 + 3.5

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

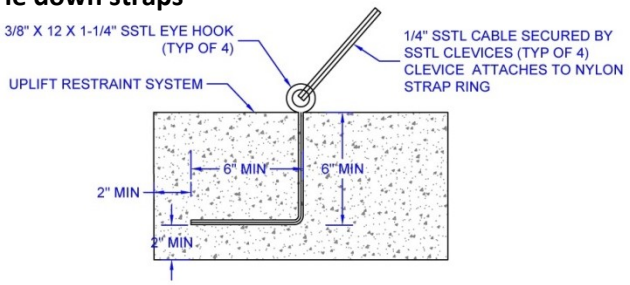


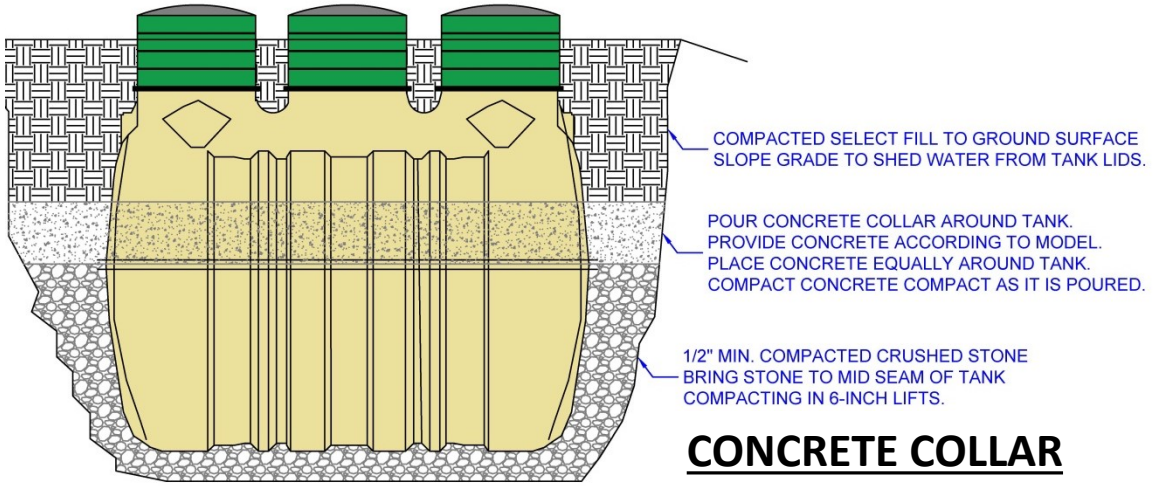
❑ **Step 4: If any part of the tank is below the estimated seasonal high water table, then engineer shall provide buoyancy calculations to assure adequate tank uplift restraint.**



TIE-DOWN STRAPS

Suggested uplift restraint configurations include tie down straps using deadmen, concrete base or concrete collar. Alternative design restraint systems are acceptable so long as they are approved in advance by the administrative authority and design engineer.

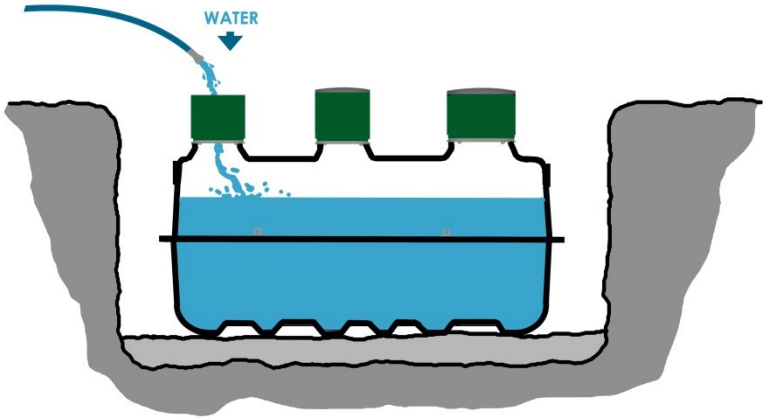




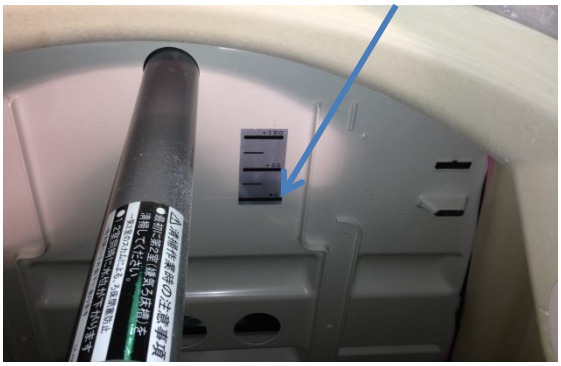
CONCRETE COLLAR

Model	CE10	CE14/ CEN10	CE21	CE30/ CEN21	CE6KG
Weight (Lbs.)	705	926	1,168	1,543	2,900
Approx. Surface Area (sq. ft.) Weight Bearing Soil Interface	35	51	68	90	312
Empty Tank Buoyancy (Lbs)	10,400	14,500	22,100	31,500	72,200
Recommended # of hold down straps	2	2	4	4	6

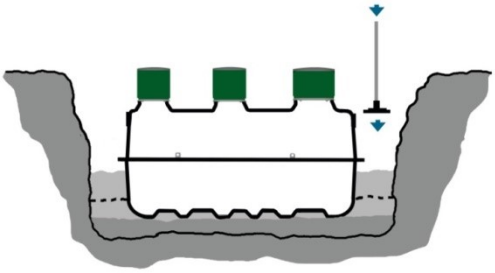
❑ **Step 5: After rechecking that tank is level to 1/8-inch, (fore and aft as well as side to side), fill tank with fresh water to the low water line mark. Note: Alternate chambers while filling for evenly balanced fill.**



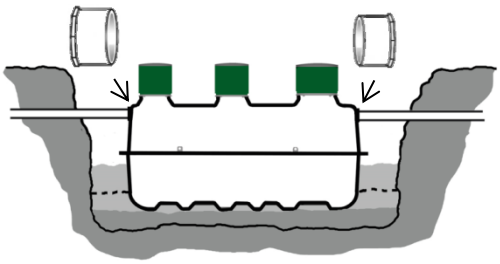
Low water line mark in sedimentation chamber



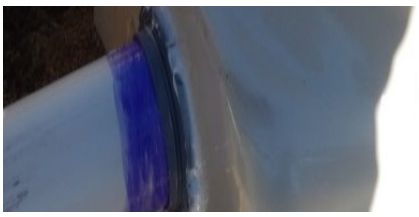
Please note: To assure tank water tightness, please check in 24 hours to be sure that the water level has not dropped. Please contact your distributor or Fuji Clean USA if water level has dropped.



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

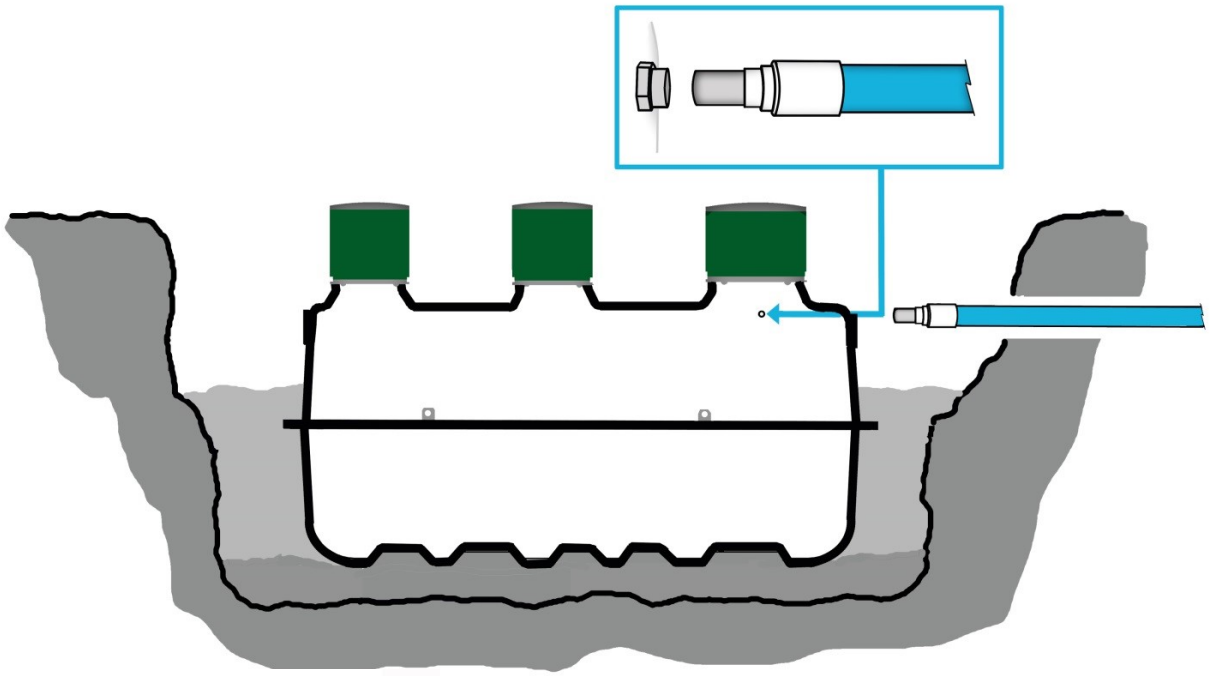


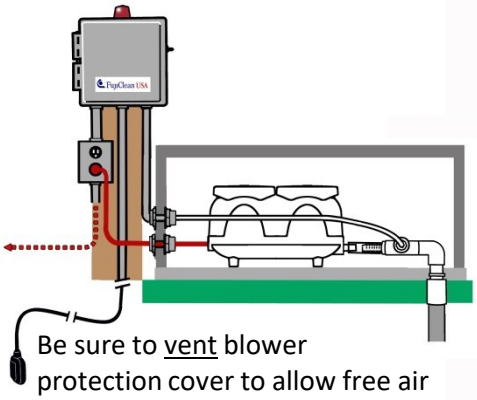
❑ **Step 6 continued: Install inlet and outlet pipes. Note that 5x4 reducer bushings are included with system if needed.**



❑ **Step 6 continued: Seal around inlet and outlet tank fittings using a sealant that meets ASTM C990-96 standards. Apply primer and cement to 4" PVC pipe sections.**

❑ **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: ¾" or 1" flexible irrigation line, 100 PSI Max, (or equivalent) may also be used for the airline.**
(Note: adaptors not necessary for air line to tank connection for Fuji Clean models, CE21 & 30 and CEN21. Use 3/4" conduit).





Be sure to vent blower protection cover to allow free air draw even in deep snow pack.

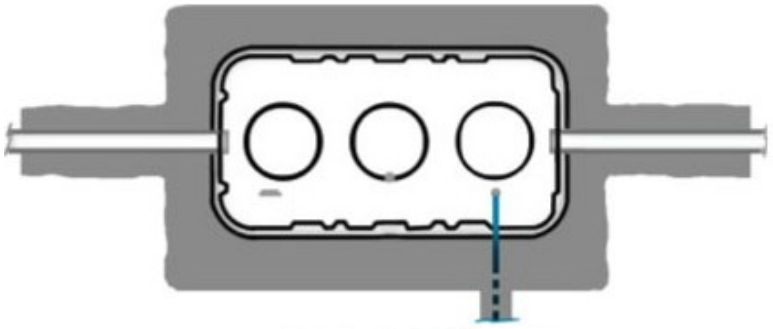
Please contact Fuji Clean USA for design and installation assistance for larger flow, multiple blower, projects.

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

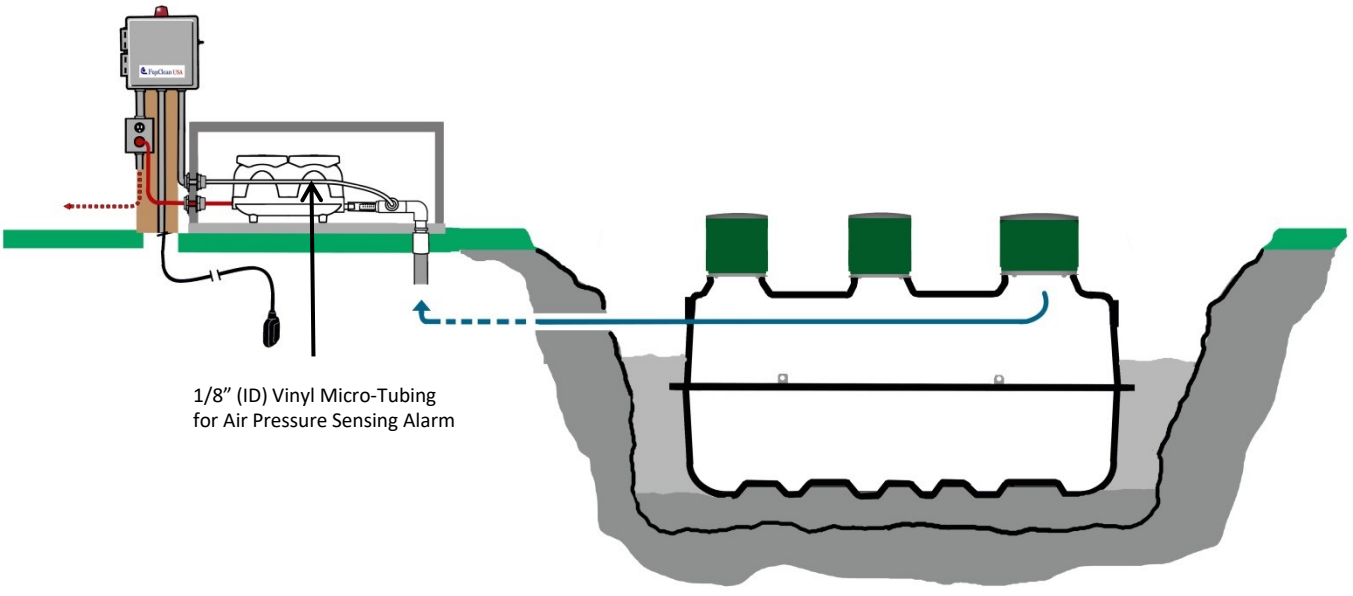
✓ **USING ¾-INCH (or 1-INCH) CONDUIT, LOCATE BLOWER WITHIN 100-FT. OF TREATMENT TANK AND WITH NO MORE THAN FIVE (5) ELBOWS. If site conditions prevent this, please contact your distributor or Fuji Clean USA for technical assistance. Note: CE6KG airline diameter is 1-1/2"**

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**



Plan view shows trench excavations for inlet and outlet lines

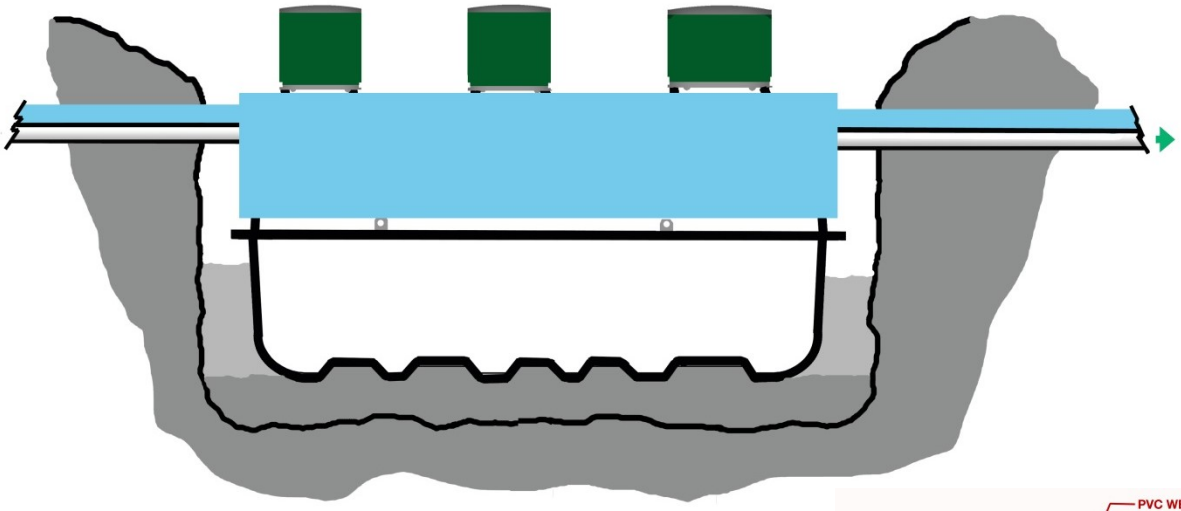


❑ **Step 8 continued: Locating and Installing Blower/Control Panel cont.**

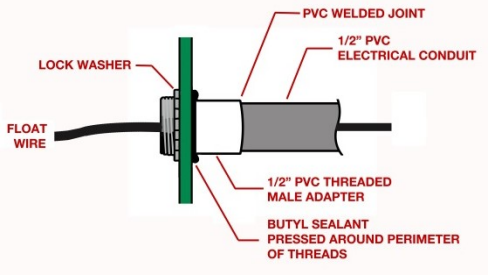
<u>Alarm Panel</u> shall be:

- ✓ **in a well ventilated area as dry and protected from elements as possible**
- ✓ **in as close of proximity to FujiMAC air 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).**

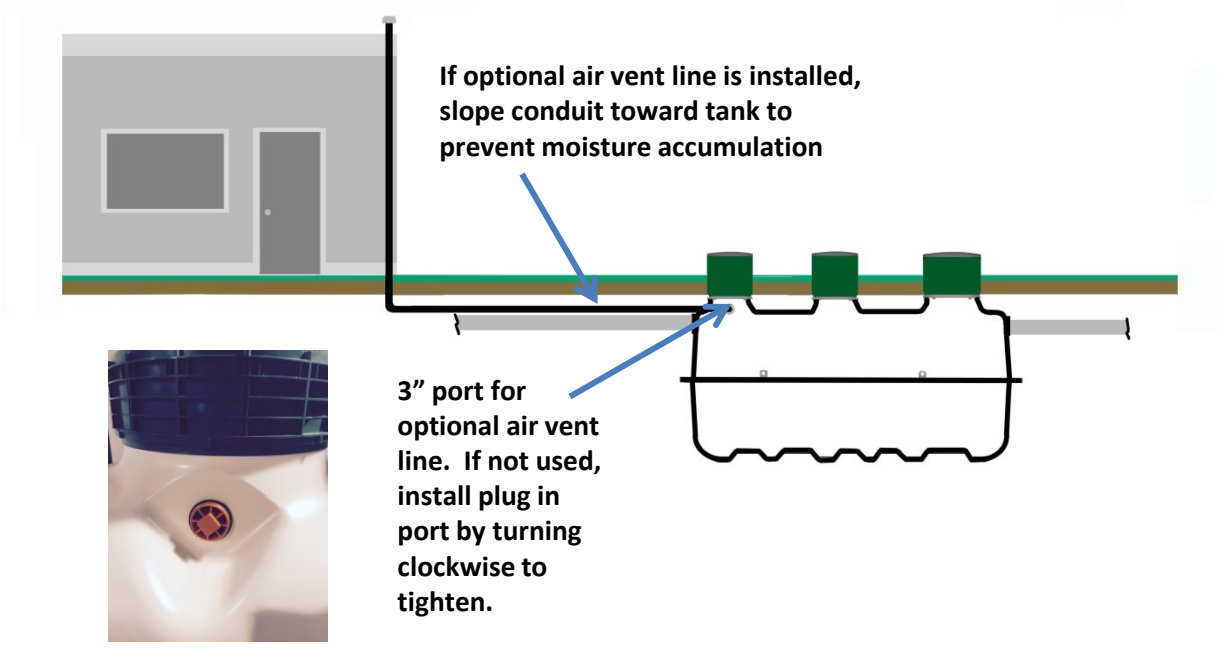


❑ **Step 10: Float switch electrical cord should exit riser wall through a male adaptor (caulked watertight to prevent septic gas leakage) or watertight fitting. An interior connection to direct burial cable is also an acceptable option.**

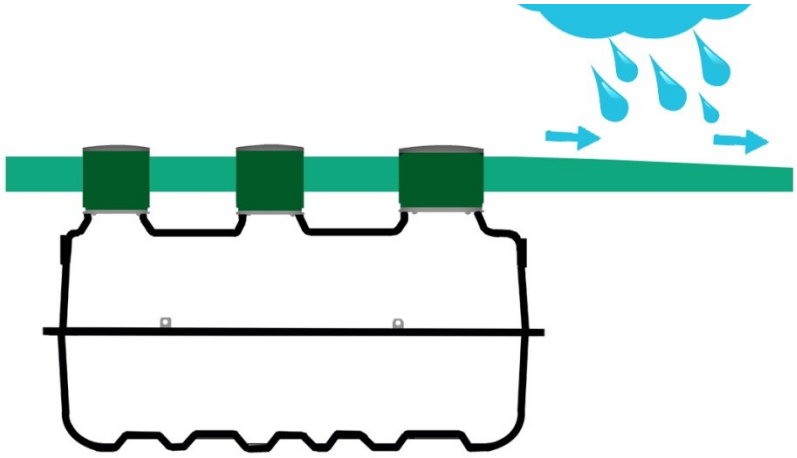


For connection of float switch cord to alarm panel, drill hole in riser and use male fitting and electrical conduit. Plug fitting with sealant standard that meets ASTM C990-96 to assure water-tight seal and to prevent septic gas transmission into control panel.

❑ **Step 11: In nearly all cases, the Fuji Clean system will vent properly through the building's 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.**

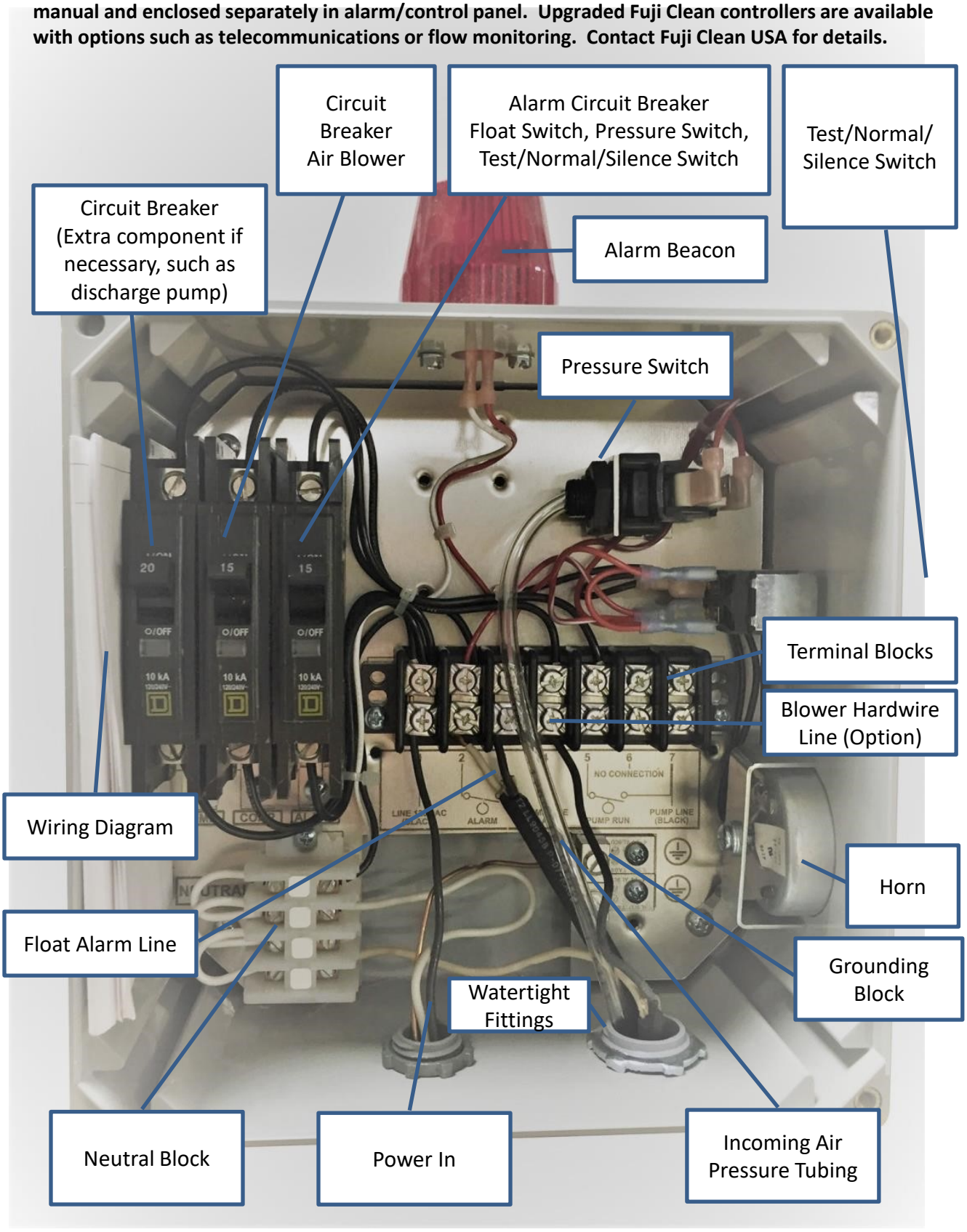


❑ **Step 12: During final landscaping, seeding etc., be sure to pitch final grade away from covers to sweep surface water away from treatment tank.**



❑ **Step 13: 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.**

❑ **Step 14: 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.**



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

The table below summarizes Fuji Clean standard commercial system controller selections.

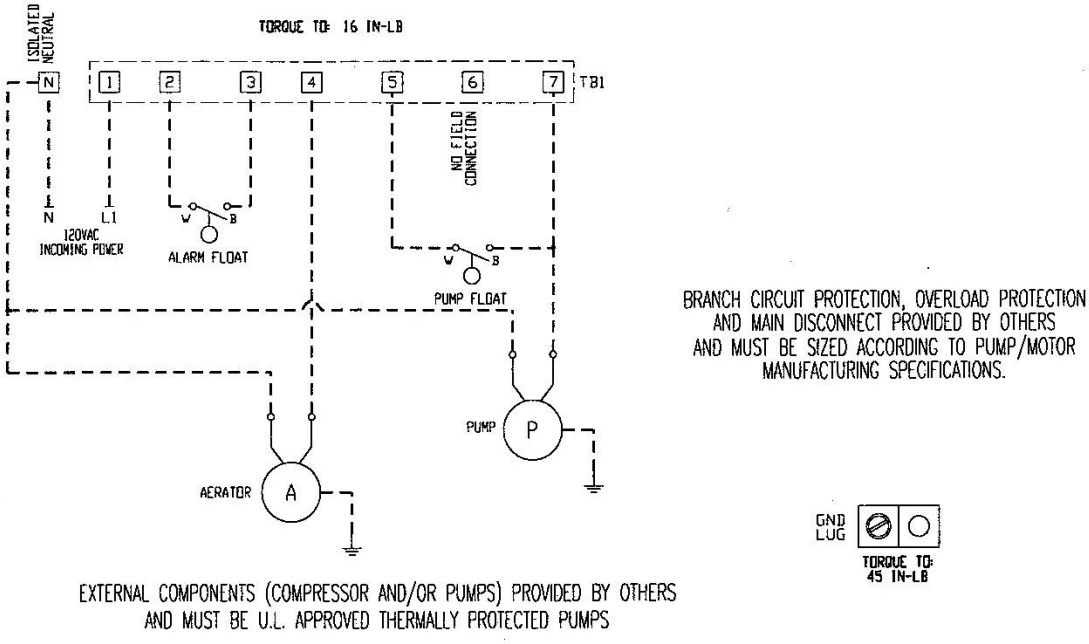
Please contact Fuji Clean USA for details and additional technical specifications.

Model Features	Controller A	Controller C	Controller D	Controller E
SJE Rhombus Model #	1041972	1045040	IFS41W914X6A8 AC10E27D	IFI41W914X6A8A C10E27D
NEMA 4X Weather Proof Enclosure	X	X	X	X
Three 120 Volt AC Breakers (Pump, Air Blower, Alarm)	X	X	X	X
Alarm/Test/ Normal/Silence Switch	X	X	X	X
Air Blower/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

Control Panel Wiring Diagram p.1

Please provide wiring diagram to licensed electrician for making proper electrical connections. (A copy of this diagram is also provided inside NEMA 4X rated control panel enclosure).

Please Note: The basic Fuji Clean control panel does not come equipped with a timer or timing device. Please contact your distributor for this and other alarm/controller upgrade options.



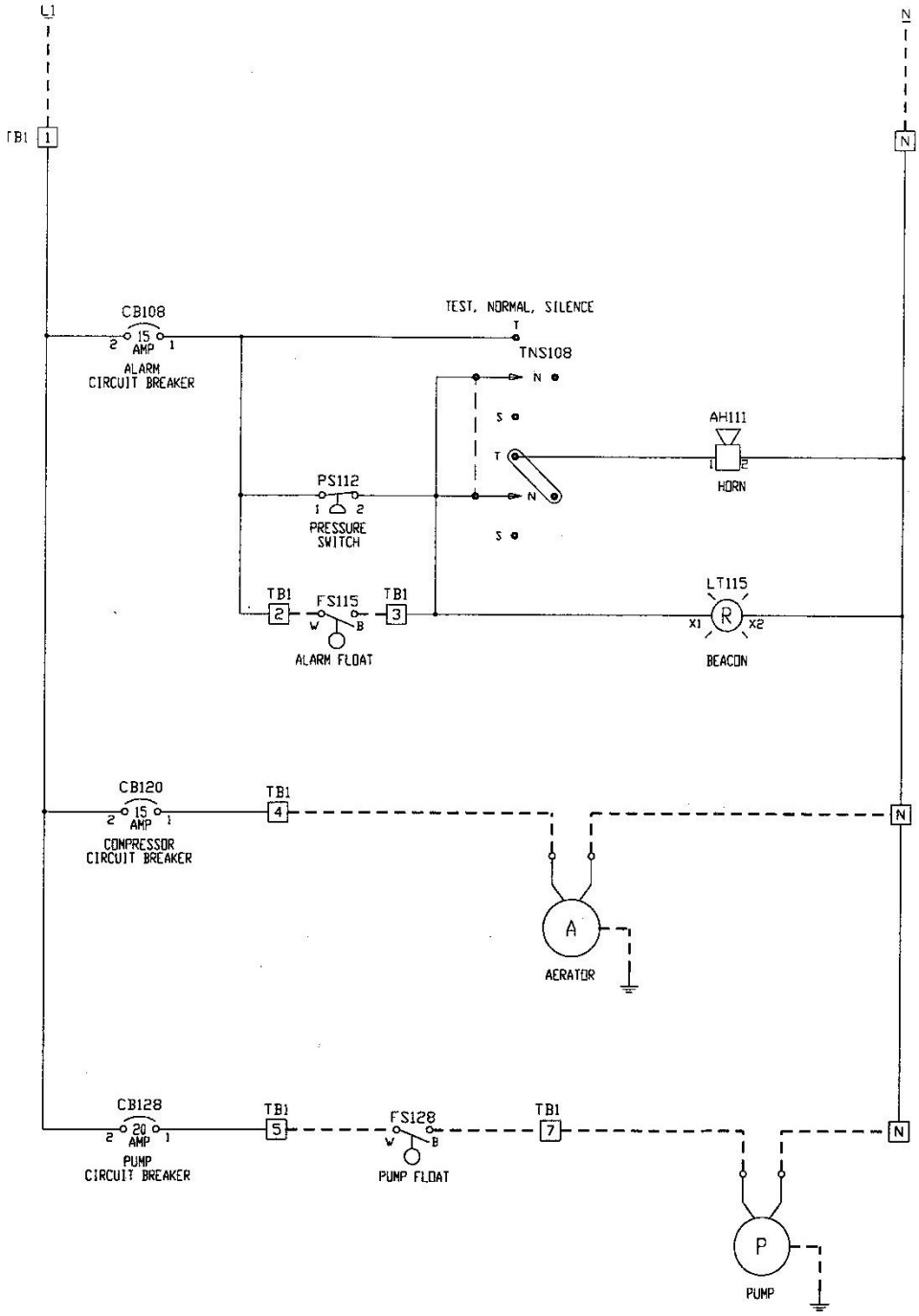
TEMPERATURE RATING OF FIELD INSTALLED CONDUCTORS MUST BE AT LEAST 140 DEG. F. (60 DEG. C.). TERMINAL STRIPS AND GROUND LUG USE COPPER CONDUCTORS ONLY.

CONNECT GROUND LUG IN PANEL TO A SECURE EARTH GROUND

DASHED LINES REPRESENT FIELD WIRING

FIELD WIRING SECTION

Control Panel Wiring Diagram p.2



Float Switch Information

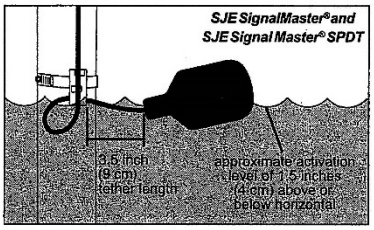
The SJE Rhombus Signalmaster float switch is pre-mounted in Fuji Clean USA treatment systems. This information from SJE Rhombus is supplied for informed, proper handling during the installation process.

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



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.

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 a few moments to check that the alarm is triggered.

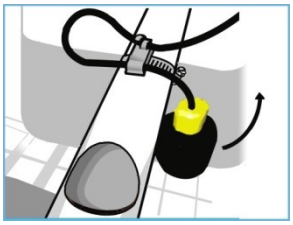
Open all access covers and secure the area around the access openings.

☐ **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 (highlighted in black on each control valve). At the discretion of the system’s start-up technician, <u>within each default range</u>, 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.

☐ **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%.

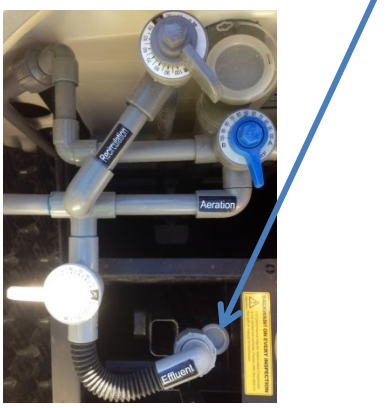
- Visually observe the airflow rates on each side of the plant by checking to see if bubbles are evenly distributed on both sides of Chamber 3, The Aeration Chamber. If there is an obvious discrepancy in airflow between the two sides, adjust the Aeration Balance Control Valve so that the airflow is equal.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

☐ **9. Check/Set Effluent Airlift Valve (white).**

The Effluent Control Valve is initially set to it's default setting (as highlighted in black) and there is typically no need for it to be adjusted under standard conditions.

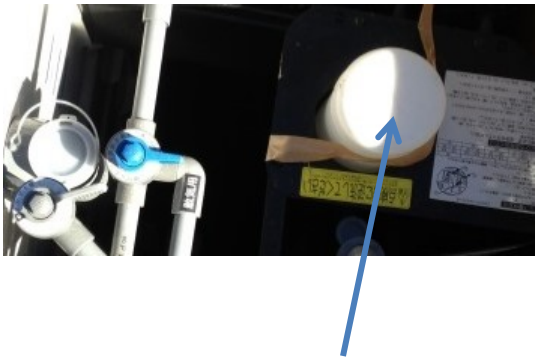
☐ **10. Check Effluent Airlift Pipe.**

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.



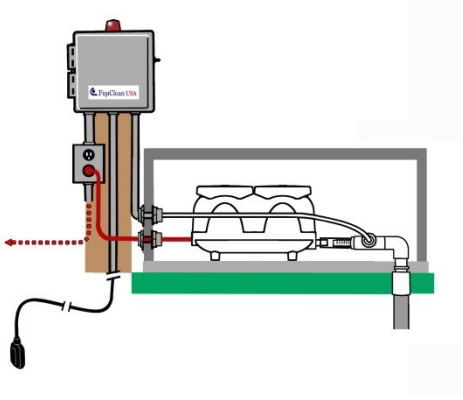
☐ **11. Add Disinfectant Tablets to Chlorinator (if appropriate).**

- 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; they should be 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 <u>toggle switch is set to "Normal" setting</u>.



☐ **13. Final Site Preparation.**

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

☐ **14. Owner Communication**

- Be sure that business owner has a copy of the Fuji Clean USA Warranty information.
- Be sure that service provider contact information is affixed to Alarm/Control Panel.


FujiClean USA LLC

Fuji Clean USA, LLC Limited Warranty

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.

FujiClean USA™ LLC
Toward Clean Water…

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 (¼" 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. Install inlet/outlet lines using 5x4 reducing bushing if necessary.**

- ❑ **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 FujiMAC air 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: In nearly all cases, the Fuji Clean system will vent properly through the building's 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 12: During final landscaping, seeding etc., be sure to pitch final grade away from covers to sweep surface water away from treatment tank.**

❑ **Step 13: Complete Warranty Activation Card.**

❑ **Step 14: Finalize Controller Wiring. Please have licensed electrician refer to wiring diagram (in Installer Manual and enclosed separately in alarm/control panel). Upgraded Fuji Clean USA controllers are available if telecommunications, elapsed time meter, data logging or other functions are required. Please contact Fuji Clean USA for details.**

❑ **Step 15: 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 Warranty Delivery**