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

**Equipment Supplied by Fuji Clean USA**

- Fuji Clean Processor
- Blower adaptor Fitting with Barb
- SJE Rhombus Signalmaster Float Switch
- Air Vent Plug
- Installation Manual
- Owner’s Manual
- Fuji Clean MAC “R Series” UL Approved Air Blower (sized according to system)
- NEMA 4X Rated Alarm/Controller
- 1/8” (ID) Vinyl Micro-Tubing for Air Pressure Sensing Alarm
**Contractor Installation Manual – Commercial Systems**

**Equipment Supplied by Contractor**

<table>
<thead>
<tr>
<th>Risers and Covers per Site &amp; Regulatory Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>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.</em></td>
</tr>
</tbody>
</table>

**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 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: 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” Schedule 40 for inlet and outlet lines (5” for Models, CE21, CE30, CEN21 and CE6KG)
- 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 if extension <50-ft. is required).
- Float Switch: Comes 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.
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.

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

“MAC R” Commercial Series linear diaphragm air pump, 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.

Maximum riser height: 24”

Adaptor and fittings (supplied by Fuji Clean USA) for connection between treatment tank and MAC 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.

**Chamber 3B. Disinfection Chamber** (final zone before discharge – option for chlorination tablet disinfection)

**Chamber 3A. Storage Chamber** (settling zone)

**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

**Chamber 3. Aerobic Contract 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

**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 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.

**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).

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

Please note: Systems typically are delivered with risers pre-installed. These instructions are provided only in cases where risers are not in place. Fuji Clean systems accept Tuf-Tite brand risers.

Trim tab struts (on 6” Tuf-Tite risers) with vibrating cutting tool and apply mastic or caulk along inside as shown. (Note: Sealant must meet at least ASTM C990-96 Standard).

Apply sealant for watertight seal.

Please Note! Shown with removed gray cover adaptor. Use end nipper pliers to cut plastic rivets. (Note: adaptors can be left in place for 20” openings – contractor's choice)

Press down until tabs are flush with access port rim.

Secure with stainless hardware.

After the Tuf-Tite 24-RTT adaptor is used, adjust for riser height differential on the remaining two 20-inch access ports using a Tuf-Tite 20-RTR Adaptor (provided by distributor) secured to the top of each riser. Please Note: Gray Fuji Clean adaptor and covers may be used or green Tuf-Tite covers as desired.

Two alternative riser configuration options are shown. The first includes using the Tuf-Tite risers installed and secured to the tank in an upside down configuration and then using the gray Fuji Clean adaptor ring and Fuji Clean cover as shown. The second, for 20” risers, shows how risers can affix to the adaptor ring. Please visit www.youtube.com (search for “Fuji Clean USA”) for video instructions.

Use sealant that meets ASTM C990-96 Standard here.
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”.

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

### DESIGN SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>CE10</th>
<th>CE14</th>
<th>CE21</th>
<th>CE30</th>
<th>CE6KG</th>
<th>CEN10</th>
<th>CEN21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load Hydraulic</td>
<td>900</td>
<td>1,000</td>
<td>1,800</td>
<td>2,700</td>
<td>6,000</td>
<td>900</td>
<td>1,900</td>
</tr>
<tr>
<td>Blower Model /</td>
<td>MAC100R MAC100R MAC150R MAC200R MAC200R (x3) MAC100R MAC200R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFM (Standard)</td>
<td>3.5 CFM 3.5 CFM 5.3 CFM 7.0 CFM 21 CFM 3.5 CFM 7.0 CFM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Use (kWh/day)</td>
<td>1.92</td>
<td>1.92</td>
<td>2.9</td>
<td>4.1</td>
<td>1.92</td>
<td>1.92</td>
<td>4.1</td>
</tr>
</tbody>
</table>

### Tank Detail:

<table>
<thead>
<tr>
<th>Height (inches)</th>
<th>73.6</th>
<th>77.4</th>
<th>81.3</th>
<th>87.2</th>
<th>87.2</th>
<th>77.4</th>
<th>87.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (inches)</td>
<td>98.8</td>
<td>118.9</td>
<td>152.8</td>
<td>183.7</td>
<td>434.7</td>
<td>118.9</td>
<td>183.7</td>
</tr>
<tr>
<td>Width (inches)</td>
<td>56.7</td>
<td>68.9</td>
<td>72.4</td>
<td>78.3</td>
<td>115.3</td>
<td>68.9</td>
<td>78.3</td>
</tr>
<tr>
<td>Weight (lbs.)</td>
<td>705</td>
<td>926</td>
<td>1,168</td>
<td>1,543</td>
<td>926</td>
<td>1,543</td>
<td></td>
</tr>
<tr>
<td>Inlet Invert</td>
<td>61</td>
<td>62</td>
<td>65.1</td>
<td>71</td>
<td>67</td>
<td>62</td>
<td>71</td>
</tr>
<tr>
<td>Outlet Invert</td>
<td>59</td>
<td>59.5</td>
<td>63.1</td>
<td>69</td>
<td>64</td>
<td>59.5</td>
<td>69</td>
</tr>
<tr>
<td>Access Ports (number)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Access Port Diameter (inches)</td>
<td>2@20” @20” 1@24”</td>
<td>2@20” 1@24” 1@24”</td>
<td>2@20” 1@24” 1@24”</td>
<td>4@24”x24” 3@24”x48”</td>
<td>2@20” 1@24” 1@24”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

### Blower Capacity vs. Altitude

<table>
<thead>
<tr>
<th>Model</th>
<th>Blower Size (CFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE10/CE14/CEN10</td>
<td>3.5 \ 5.3</td>
</tr>
<tr>
<td>CE21</td>
<td>5.3 \ 7.0</td>
</tr>
<tr>
<td>CE30/CEN21</td>
<td>7.0 \ 7.0 + 3.5</td>
</tr>
</tbody>
</table>

Fuji Clean USA * 207-406-2927 * www.fujicleanusa.com
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.

Suggested uplift restraint configurations include tie down straps using deadmen and 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

<table>
<thead>
<tr>
<th>Model</th>
<th>CE10</th>
<th>CE14/CEN10</th>
<th>CE21</th>
<th>CE30/CEN21</th>
<th>CE6KG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (Lbs.)</td>
<td>705</td>
<td>926</td>
<td>1,168</td>
<td>1,543</td>
<td>2,900</td>
</tr>
<tr>
<td>Approx. Surface Area (sq. ft.)</td>
<td>35</td>
<td>51</td>
<td>68</td>
<td>90</td>
<td>312</td>
</tr>
<tr>
<td>Weight Bearing Soil Interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty tank buoyancy (Lbs)</td>
<td>10,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- 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](image)

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 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 ¾” conduit).

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

☆ 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.

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.
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 MACBlower 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 MACBlower 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).

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  (Note: 5” Sched. 40 for CE30 and CEN21).
Step 12: In nearly all cases, the Fuji Clean system will vent properly through the building’s 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.

If optional air vent line is installed, slope conduit toward tank to prevent moisture accumulation.

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 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.
Step 15: Finalize Controller Wiring. Please have licensed electrician refer to wiring diagram in this manual and enclosed separately in alarm/control panel. PLEASE NOTE: Upgraded Fuji Clean USA controllers are available. Please refer to table on following page and 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.

<table>
<thead>
<tr>
<th>Model Features</th>
<th>Controller A</th>
<th>Controller C</th>
<th>Controller D</th>
<th>Controller E</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJE Rhombus Model #</td>
<td>1041972</td>
<td>1045040</td>
<td>IFS41W914X6A8 AC10E27D</td>
<td>IFI41W914X6A8A C10E27D</td>
</tr>
<tr>
<td>NEMA 4X Weather Proof Enclosure</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Three 120 Volt AC Breakers (Pump, Compressor, Alarm)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Alarm/Test/ Normal/Silence Switch</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Compressor Low Pressure Alarm Switch</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Communication Contacts (Alarm Aux)</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Elapsed Time Meter</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Duplex Pump Demand or Timed Dosing Control</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Data Logging Panel via USB Port to Flash Drive</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>UL Listed to Meet and/or Exceed Industry Safety</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Standards</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Dual Safety Certification for U.S and Canada</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
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.

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External components (compressor and/or pumps) provided by others and must be U.L. approved thermally protected pumps.

Branch circuit protection, overload protection and main disconnect provided by others and must be sized according to pump/motor manufacturing specifications.

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
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.

---

**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.

**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 within 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.

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**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 (highlighted in black on each control valve). 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.
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 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 Owner’s Manual.
## TROUBLESHOOTING

### Air Blower

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

☐ 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 MACBlower 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” (or 5” with larger models) 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 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 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 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 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