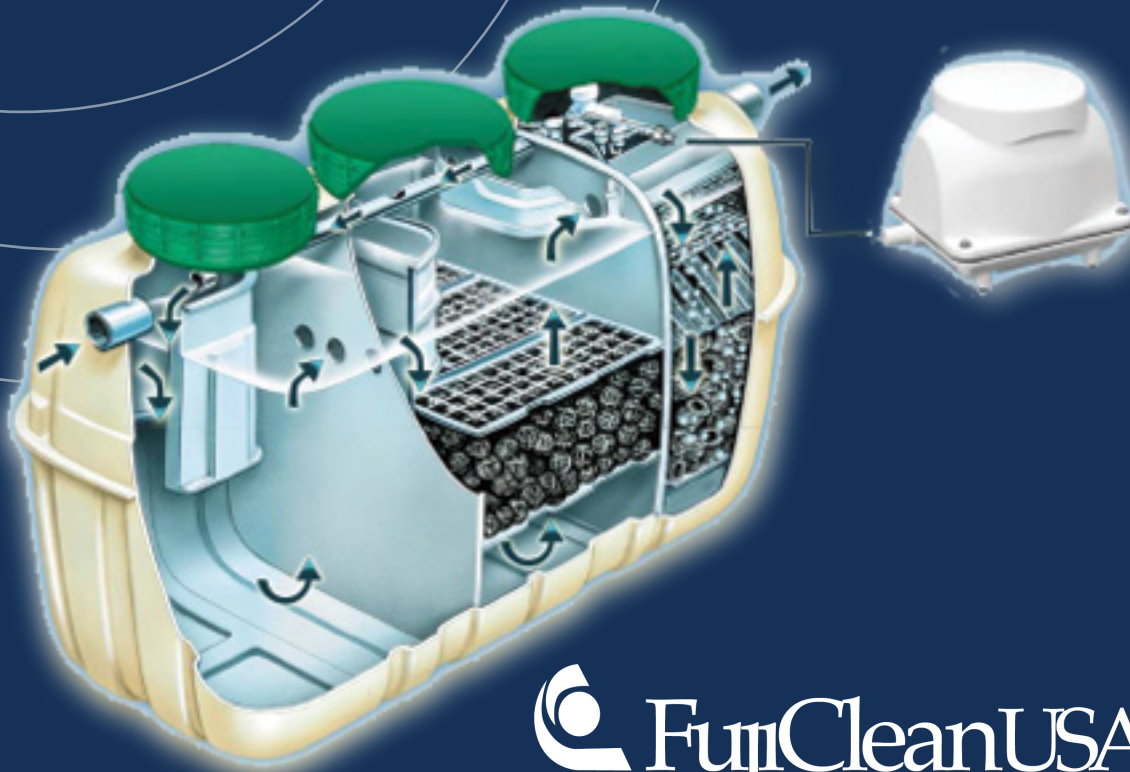


Integrated Septic Solutions

David Dow

401-318-4300

ddow@integratedsepticssolutions.com



 **FujiCleanUSA** LLC
Toward Clean Water...

Intelligently Engineered Wastewater Treatment



FUJI CLEAN IS APPROVED AS A RIDEM CATEGORY 1 TECHNOLOGY

Fuji Clean was approved as a Class 2, Category 2 technology on 11-27-19 and Category 1 on 3-11-21.

The purpose of Category 1 is to prevent large surge volumes of poorly treated effluent from entering the drainfield and to maintain the minimum standard of <20 mg/L BOD and TSS and <19 mg/L TN.

Fuji Clean satisfied Category 2 treatment performance requirements by submitting 3rd party field testing results. Fuji Clean satisfied Category 1 flow requirements by submitting internal process modulated flow data as well as 3rd party surge flow data.

1. Testing. Quarterly field test results from 3 different jurisdictions with a minimum of 10 systems in each jurisdiction for at least a year, were submitted for full Category 2 approval and demonstrated that Fuji Clean effluent quality consistently met the RIDEM Category 1 standard.

RIDEM Cat. 1 Standard	# Sites	BOD mg/L	TSS mg/L	TN mg/L	FOG mg/L
Maryland Data	12	9.7	7.7	11.0	1.5
Virginia Data	10	9.0	5.8	13.4	
Suffolk County, NY Data	10	10	10.4	14.4	

2. Modulating Flow. Fuji Clean demonstrated that over time, flow to the field up to 300 gpd is identical to a currently approved Category 1 system. Up to 400 gpd, Fuji Clean had only one fewer 15 gal. dose than a currently approved Cat. 1 system. The flow was broken into typical percentages of social dosing (morning, midday and evening) to the system over the course of the day.

3. Accommodating Surge Flow. At the Massachusetts Alternative Septic System Test Center, Fuji Clean demonstrated that its smallest DEM approved system (CEN5 - 500 gpd), could successfully treat a surge flow of 300 gallons, over the course of 3 hours, with BOD, TSS and TN **never** exceeding the Category 1 standard. The flow was more than RIDEM requested for the test. To put this into perspective, according to the most recent report from the Water Research Foundation, based on 21,000 households, the average **daily** home water use is 136 gallons.

QUESTIONS AND ANSWERS FOR RHODE ISLAND SEPTIC SYSTEM PROFESSIONALS

Q: “Why should I change to the Fuji Clean and redo calculations and my plan template?”

- A:**
1. As a Category 1 system, all drainfields and designs (sizing, loading rates, configuration of all components following the Fuji Clean) are exactly the same as what you are currently designing. Pump basin size and float arrangements are all the same.
 2. Piping design is easy; 4” pipe in and out and one ¾” airline are the only connections at the tank.
 3. Small footprint allows designs on extremely tight sites, giving you flexibility in meeting setbacks and avoiding or reducing variance requirements.
 4. Designing for tight sites with narrow access or lots of plantings and landscape features is made easier by the system’s small size and reduced weight. A CEN5 to CEN10 unit can be picked up, maneuvered and set with a mini excavator. There is only one tank. Dimensions and weights of approved systems are:

RIDEM Approved Model	Flow (GPD)	Length (ft/in)	Width (ft/in)	Height (ft/in)	Weight (lbs)
CEN5	500	8’0”	4’1”	5’5”	463
CEN7	700	8’3”	4’9”	6’1”	705
CEN10	1000	9’11”	5’9”	6’5”	926

Q: “I want a system that makes life easier for installers. A happy installer makes my job easier.”

- A:**
1. One hole, one tank, one ¾” airline. Fuji Clean is considered the easiest single tank system to install by experienced contractors. Pipework is minimal and only three risers to grade. Electric wiring is simple: one simplex panel accommodates the blower and one drain field pump. No time dosing to worry about so timer settings are avoided. No waiting for concrete tank and coordinating delivery. No boom truck size and weight to worry about.

Q: “I know that ATU’s are only as good as their maintenance. How does Fuji address maintenance?”

- A:**
1. Fuji systems are simple to maintain. The most important step in the semi-annual maintenance protocol is backflushing, which consists of moving air around the system using three dials. Maximizing denitrification is as easy as turning a dial located in the Fuji tank. No timer settings to adjust.
 2. No heavy, messy filters or pumps to pull from the tank and clean, reducing potential contact with wastewater. **If the maintenance is easy, it is more likely to get done.**
 3. There are no moving parts inside the Fuji Clean system. Air is the only thing that moves. Repair is limited to replacing diaphragms in the blower; these should last 5 years or so before a rebuild is necessary. A FujiMAC RII blower rebuild typically takes between 20 and 30 minutes and is done in the field.
 4. Fuji Clean USA and Integrated Septic Solutions (ISS) are fully committed to training and certifying O&M personnel and managing maintenance on all Rhode Island systems. A certified installer and maintenance provider database is available for review at any time by contacting ISS.

Q: “If my homeowner isn’t happy, then I’m not happy. What am I going to hear from homeowners?”

- A:**
- If our experience in Rhode Island is similar to other states, you will most likely hear nothing.
- o Upfront cost of system is generally lower than current Cat. 1 approved system; no septic tank, less machine and labor time.
 - o Power Use: 1.2 kWh/day for models CEN5 and CEN7 (4-6 bedroom houses) or about \$5.40/month at \$0.15/kWh power cost.
 - o Noise: blower is practically silent
 - o Aesthetic: 3 at-grade riser covers. Small (football size) blower placed in basin below grade with flush access.

Q: “My job depends on dependability and I need a track record before I’m comfortable spec’ing a new system?”

- A:**
- Fuji Clean is the largest onsite treatment system manufacturer in the world with over 2 million systems in the ground. The U.S. headquarters and assembly operation are in New England. Integrated Septic Solutions and associates know the Rhode Island wastewater industry.