

# SYNERGY

*mobile wastewater treatment system*  
Powered by Quanics Inc.™

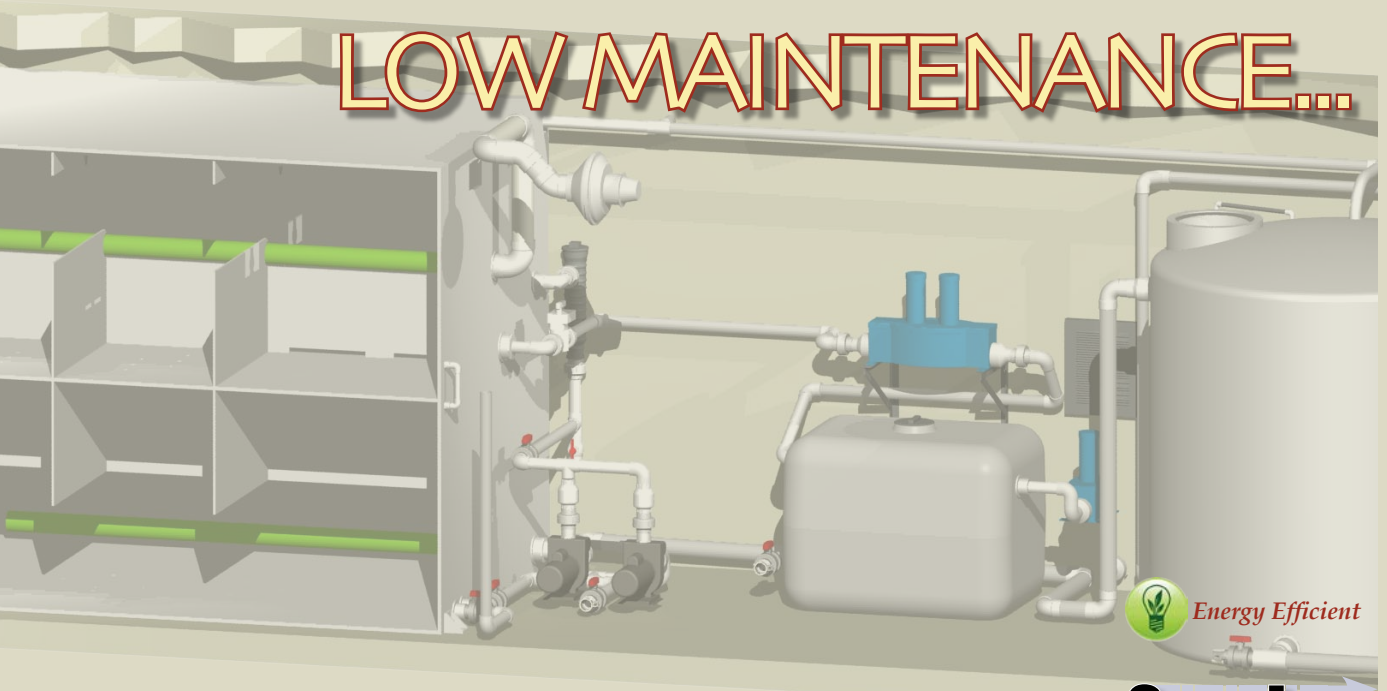


SIMPLE...

AFFORDABLE...

ENERGY EFFICIENT...

LOW MAINTENANCE...



Energy Efficient

**Quanics**  
Engineering Water Solutions®

**The SYNERGY™ System from Quanics® Inc. is a revolutionary new mobile advanced treatment system platform. The self-contained system combines the benefits of treatment, distribution, recirculation and disinfection into a single complete pre-engineered wastewater solution.**

### **SYNERGY Applications**

- Remote Camps
- Arctic Environments
- Disaster Relief
- Temporary Events
- Military Operations



### **Proven Treatment Capabilities**

The heart of the **SYNERGY** System is the proven performance of the AeroCell® open cell foam. The AeroCell foam media has been extensively tested throughout the world for almost twenty years. Independent third-party testing has revealed that open cell foam technology effectively treats wastewater to secondary and tertiary levels. Third-party testing has been conducted in the cold climates of Alaska to the heat of Texas with outstanding and consistent results.



### **Simple Operation**

The **SYNERGY** System has been designed and constructed with simplicity in mind. The system operation includes very few electrical or moving parts, no complex chemical feeding systems or instrumentation and very little oversight required.

Site	CBOD <sub>5</sub> (mg/L)	TSS (mg/L)	TN (mg/L)
NSF Standard 40 Testing	2	2	9
Alaska Cat. III w/Nitrogen Reduction	10	6	29
Comm. & Multi-Family Various Systems	19	13	Not tested



### **Features**

1. Appleton electrical plug
2. 3" Gravity cam-lock Inlet and heat trace outlet
3. 2" Pressure inlet, 2" gravity outlet cam-lock and heat trace outlet
4. External light and Alarm
5. Tanks vent
6. Standard fork pockets
7. Arctic rated access door



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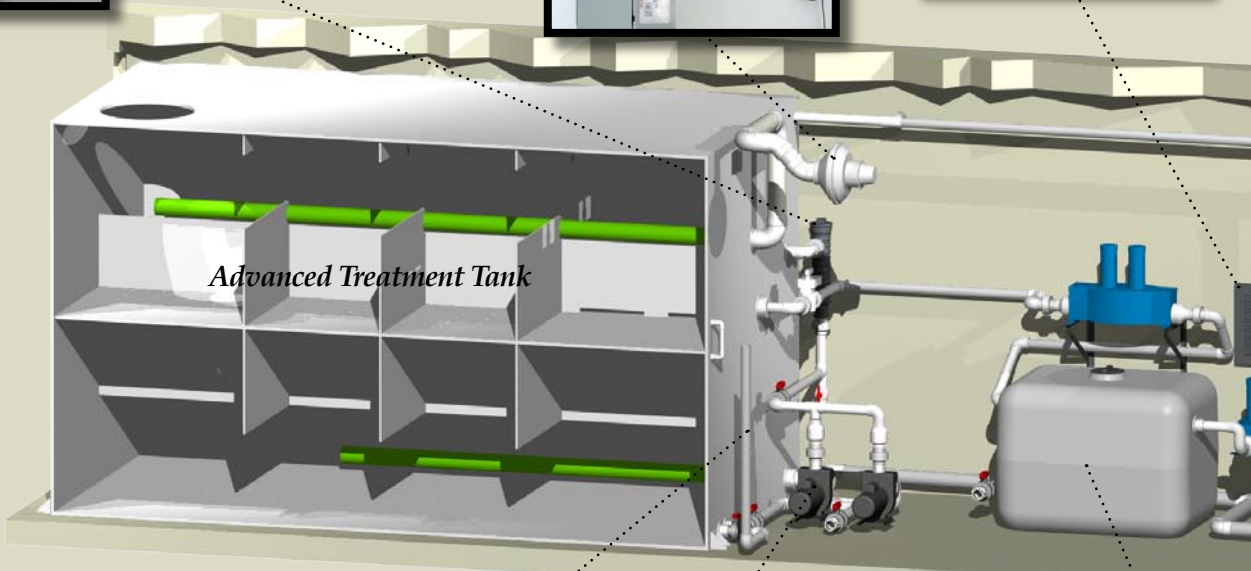
Powered by Quanics Inc <sup>TM</sup>

Speed Limit  
~~2500 mph~~  
 9pd



**Pressure Filter**  
 Final filtration of the effluent before being delivered to the spray nozzles occurs through the use of a wall mounted filter.

**Air Induction System**  
 This simple to operate system provides a constant stream of warm air into the middle of the treatment media.



**Standard 45' Wastewater Treatment Connex**  
 (Rated at 2500 gpd)

**Pressure Transducer**  
 Mounted inside a sight tube, the pressure transducer provides constant water level readings to the panel, controlling pump cycles and recirculation rates.



**Pumps**  
 Duplex self-priming centrifugal pumps provide dosing to the treatment modules at a maximum flow rate of 50 gpm.





Mobile •  
 Energy Efficient •  
 Low Maintenance •  
 Cost Effective •



**Load Center**  
 The SYNERGY unit is pre-wired and includes a 100 amp load center.

**Heater/fan**  
 Along with the insulated walls and floor, the entire treatment system is heated through three wall mounted thermostatically controlled electric heaters.

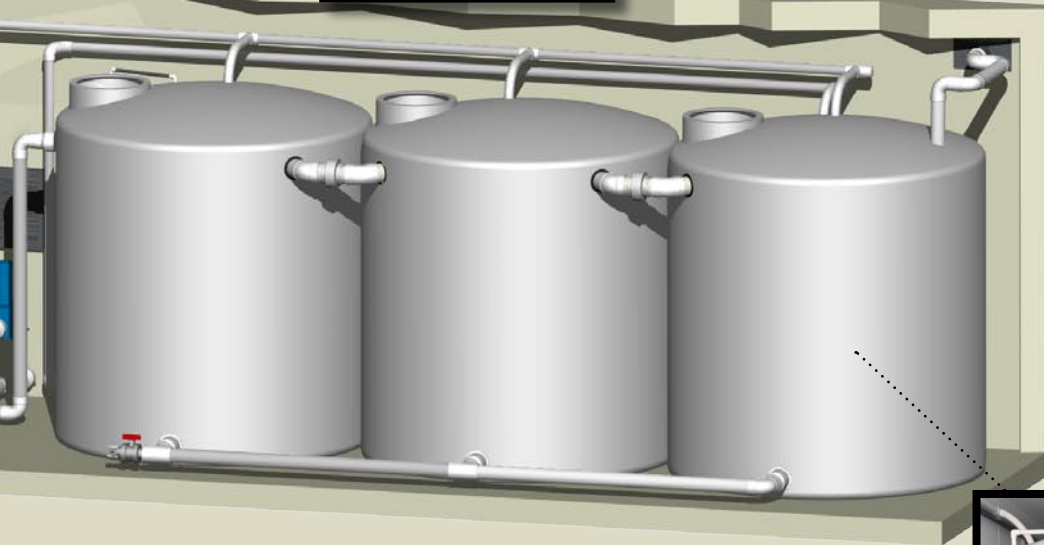
**Seasonal Drains**

Everything that holds water can be drained for moving or for winterizing. Each drain includes a cam-lock fitting.



**Energy Efficient**

The Quanics SYNERGY wastewater treatment connex's are as much as five times more energy efficient than any activated sludge treatment system.

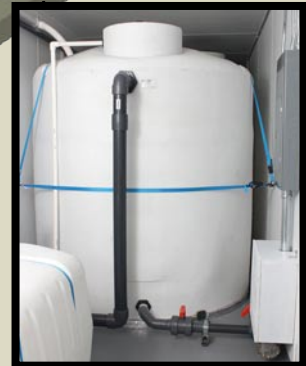


**Primary Treatment Tanks**

5000 gallons (total) of primary treatment tankage

**Control Panel**

The duplex pumps are controlled by an easy to operate alternating control panel. The panel includes a water level display and easy to use HOA switches visible through a clear outer door.



**Chlorine Disinfection**

Disinfection is achieved through the use of standard chlorine/dechlorination tablet feeders. A 200-gallon fiberglass chlorine contact chamber provides increased retention for maximum disinfection.

Products shown covered by U.S. and/or international patents. Other U.S. and/or international patents may be pending.

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### **An Affordable Solution**

The **SYNERGY™** System provides economic benefits in terms of its infrastructure costs, daily operational costs and personnel requirements.

The initial capital expenditure of the **SYNERGY** System is significantly lower than the outdated or complex technologies currently in use. Due to the reduced complexity of the system, daily operational costs are as much as 80% lower than activated sludge and membrane technologies.

The ease of operation allows increased economic benefits to the owner through reduced operator oversight. A single operator could actually successfully operate multiple systems simultaneously.

### **Low Maintenance Requirements**

The **SYNERGY** System contains only a few pumps, filters and distribution mechanisms that must be maintained on a regular basis. The actual treatment technology is a fixed film media filter, which produces little to no sludge. The treatment requires no chemical addition for proper operation, no backwashing and there are no complicated controls, blowers and etc. that must be constantly monitored and adjusted. The simplistic approach to treatment is fast becoming the preferred methodology worldwide.



### **Energy Conservation**

The Quanics **SYNERGY** wastewater treatment trailers are as much as five times more energy efficient than any activated sludge treatment system.

**Operational costs  
are as much as  
80% lower!**



*AeroCell foam cube media at one year*



*Post-treatment effluent sample  
from NSF testing facility*

#### **Benefits**

**Modular Design** - Multiple **SYNERGY** units may be combined for larger flows.

**Environmentally Friendly** - Unsurpassed treatment levels. Open trench dispersal in most cases.

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- **No more disposal fees!**
- **Completely self contained system!**
- **No more dedicated maintenance personnel!**

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Engineering Water Solutions®

### Standard Features

- 45' insulated/heated connex
- Primary/Secondary treatment tanks
- Recirculation
- Pressure Filter
- Control Panel w/transducer
- Air induction system
- Load center
- Side door entry
- Lighting and electrical
- Chlorination/Dechlorination
- Operation & maintenance manual



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