

2PAD two-phase anaerobic digestion system

biosolids treatment

→ APPLICATIONS

- municipal sludge treatment
- industrial sludge treatment

→ MAIN CHARACTERISTICS

- produces Class A biosolids
- makes digestion process more efficient

a unique two-phase anaerobic digestion system that produces Class A Biosolids, which can be land-applied without restrictions

ready for the resource revolution



biosolids technology: 2PAD

Whether you are retrofitting an existing plant or building a new one, the 2PAD System is ready to take your sludge to a new class - Class A Biosolids.

This unique two-phase anaerobic digestion system produces Class A Biosolids, which can be land-applied without restrictions in accordance with the EPA's 40 CFR Part 503 regulations.

Our innovative process separates the acid - and methane - forming digestion phases (acidogenesis and methanogenesis),

increasing the efficiency of both and, combined with the high temperature, destroys the pathogens to below detectable limits. A two - year pilot study confirmed the effectiveness of the 2PAD System to meet EPA requirements for Class A Biosolids. In fact, the 2PAD System has been granted "PFRP Conditional National Equivalency" by the Environmental Protection Agency, as recommended by the Pathogen Equivalency Committee.

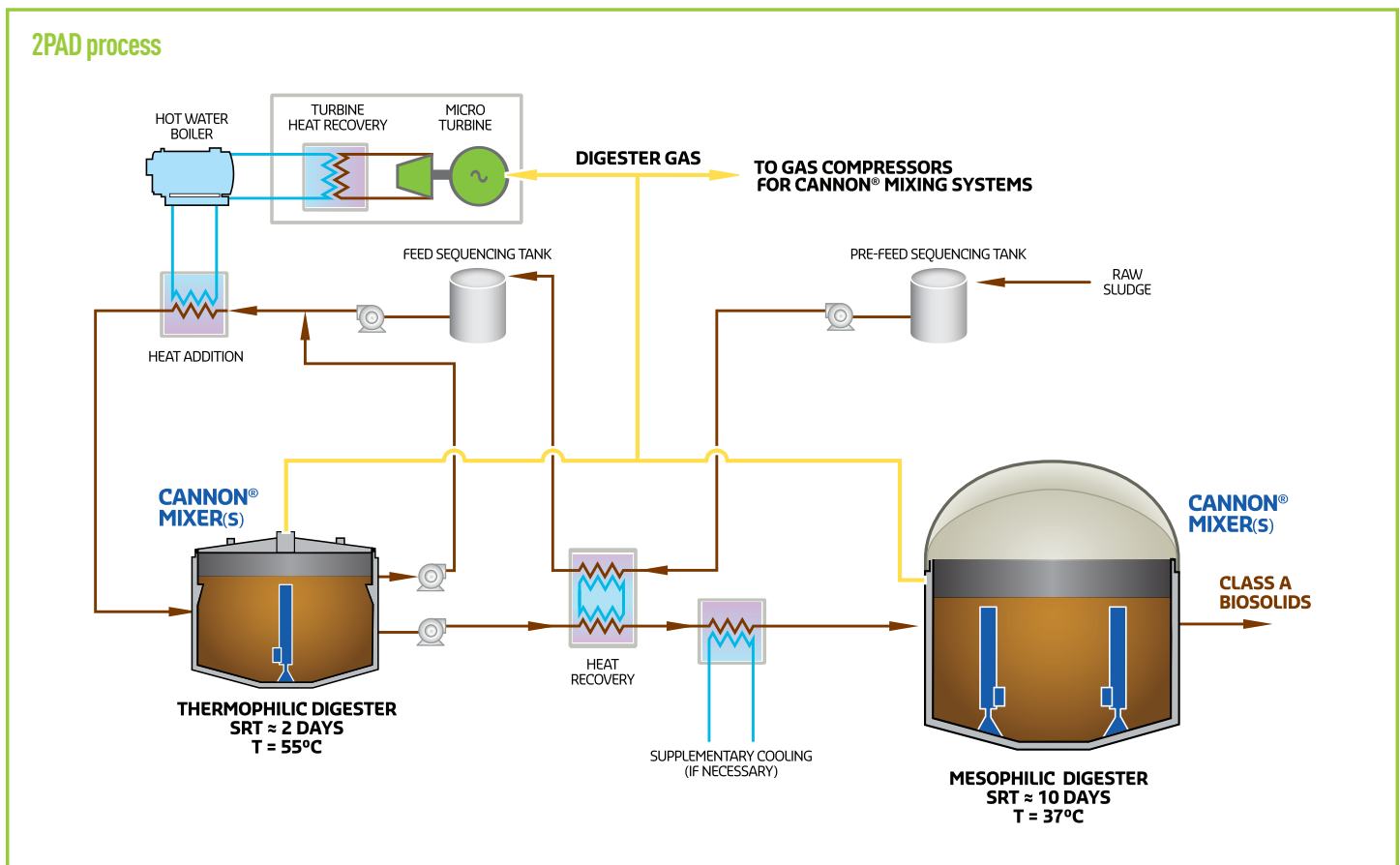


main features

- produces class A biosolids, which are bio-safe and can be land-applied without restrictions
- Separating the acid- and methane-forming phases makes the digestion process more efficient and more effective
- Aeration is not required, so energy costs are low
- Total hydraulic retention time is greatly reduced, which means smaller digesters can be used and associated costs are lower
- Foaming is virtually eliminated because nocardia bacteria, the typical cause of digester foaming, is destroyed in the thermophilic stage

process

- Raw sludge is heated as it passes through a heat recovery exchanger and then enters a thermophilic digester where it is held for two days and reaches a temperature of 55°C, maximizing pathogen destruction.
- The discharge goes through the heat recovery exchanger to cool the sludge, recover the heat, and partially heat the raw sludge.
- The cooled sludge is pumped into a mesophilic digester for ten days, where volatile solids are destroyed and gas is produced.
- The result is Class A Biosolids, which can be land - applied without restrictions.



equipment list

- Cannon Mixing System for each digester tank (complete mixing is critical for Class A approval)
- Heating equipment, including boiler, heat recovery exchanger, and other heat exchangers as required
- Gas safety and handling equipment
- Transfer pumps
- Digester covers
- PLC control system

2PAD

two-phase anaerobic digestion system



integrated treatment solutions

As a full treatment line specialist, SUEZ draws upon a broad portfolio of proven technologies to assist industries and municipalities meet their water and waste water treatment challenges. We provide integrated equipment solutions and services for a wide range of applications:

- industrial water and wastewater
- municipal drinking water
- municipal wastewater
- biosolids management

We also offer global expertise in the design, build, operation and maintenance of water treatment plants and systems, all delivered to your specific demands.

services

Aftermarket

SUEZ in North America sells parts and components for most SUEZ brand equipment as well as parts for demineralizers, thickeners, nozzles, pressure filters, and valves. We offer reliable spare parts at competitive prices. We maintain records of previous installations to quickly identify your requirements. Many items are shipped directly from stock for quick delivery.

Rebuilds, Retrofits and Upgrades

SUEZ in North America offers cost-effective rebuilds and upgrades for SUEZ provided systems, no matter what year they were built. If you are interested in an economical alternative to installing a whole new system, contact us for a proposal.

piloting

SUEZ in North America offers pilot systems and services for this and many other of our product offerings. Pilot studies are a practical means of optimizing physical-chemical and biological process designs and offer the client several benefits, such as:

- proof of system reliability
- optimal design conditions for the full-scale system
- raw water lab analysis
- regulatory approval

Please contact us if you would like to learn more about pilot studies for this system.

If interested in this product, check out some of our complementary products:

- ABW[®] Automatic Backwash Filter
- AquaDAF[®] Clarifier
- Cleargreen[®]
- Densadeg[®] Clarifier/Thickener
- Ferazur[®]/Mangazur[®]
- Meteor[®] IFAS/MBBR
- Ultragreen[™]
- Climber Screen[®]
- Vortex[®]
- 2PAD
- Thermylis[®] HTFB

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