



FOOD & BEVERAGE SUPPORT SERVICES



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cloa-ci-na [kloh-see-na]

Origin:

Ancient Rome; cloaca [sewer]

1. Roman goddess of the sewers
2. Manufacturer and purveyor of package wastewater treatment plants and equipment

Cloacina, LLC is a manufacturer and purveyor of stainless steel package wastewater treatment plants and equipment located on the Central Coast of California. It is owned and managed by a family of licensed wastewater operators, project managers and maintenance mechanics, now four generations deep. Pride in craftsmanship. Unparalleled ingenuity. Environmental protection. At the heart of Cloacina, these are the values driving the design and production of each package wastewater treatment plant and piece of equipment. All products are proudly manufactured in America.

The high Biochemical Oxygen Demand (BOD) and fluctuating flows associated with food, wine and other beverage process waste make them challenging to treat. Facility managers and compliance officers often struggle to meet discharge requirements, the violation of which can lead to staggering fines by regulatory agencies.

Cloacina's MEMPAC-I, designed for high loading, is manufactured from stainless steel to combat the corrosive elements found in process waste. An automatic pH adjustment system with nutrient addition can be supplied to neutralize the waste stream. The multi-stage treatment process includes membrane clarification that reduces high BOD to within permit limits and prevents the discharge of solids into the sanitary sewer to meet discharge limitations. Solids management equipment decreases the volume of liquid waste hauled from the site. Flow can be monitored and sampled from multiple ports for reporting purposes. The advanced controls system automatically adjusts to production cycles, can be accessed by facility staff from any device with an Internet connection, alerts them when required maintenance is due and then logs tasks when completed. These features help food and beverage manufacturers meet their discharge requirements and maintain compliance with regulatory agencies.

FOOD & BEVERAGE INDUSTRY SUPPORT SERVICES

- Facility evaluations
- Process evaluations and modeling
- Package wastewater treatment plant design, manufacturing, installation and operation
- Custom systems designed for the client's specific waste stream and project phasing requirements
- Stand alone screening and headworks
- pH adjustment systems
- Lift stations
- Primary treatment prior to on-site treatment or sanitary sewer discharge
- Systems that can reclaim 100% of the treated effluent for irrigation or sanitation purposes



WHAT SETS OUR PRODUCTS APART?

Stainless steel tankage and equipment skids come standard on all models

Our plants are designed to last decades rather than years

Every Cloacina wastewater treatment plant and piece of equipment undergoes rigorous Factory Acceptance Testing (FAT) of the plumbing, mechanical, electrical and controls systems prior to shipping

Models are available for installation in small footprints, remote locations and extreme weather

Plants ship as factory-assembled, complete systems not as individual pieces of equipment that have to be assembled for the first time on-site

Clients can reclaim 100% of the treated effluent for irrigation and sanitation purposes

PACKAGE WASTEWATER TREATMENT REVOLUTIONIZED

MEMPAC™-M (MUNICIPAL)

Designed to meet strict municipal project and discharge requirements, the MEMPAC-M has the longest life cycle of any of Cloacina's membrane bioreactors and is designed to reclaim 100% of the treated effluent.



MEMPAC™-E (ECONOMY)

Designed for low flow ranges and budget-conscious clients, this model has standard designs and economized equipment selections while incorporating most of the revolutionary features of the MEMPAC line.



MEMPAC™-X (EXTERNAL TANKS)

The MEMPAC-X is a cost-effective solution for low flow domestic applications with stringent discharge requirements. It treats 5,000 GPD standard and can be expanded to treat up to 25,000 GPD with additional external tanks.



MEMPAC™-I (INDUSTRIAL)

The MEMPAC-I includes the screening, primary treatment, activated sludge and membrane clarification necessary to stabilize and treat the fluctuating influent strength and extreme loading of industrial waste.



DRYPAC™

The DRYPAC Aerated Sludge Handling System processes Waste Activated Sludge (WAS). All necessary chemical and polymer addition equipment is included and integrated into the controls system.



MEMPAC™-S (SCALPING)

The MEMPAC-S takes domestic wastewater out of the gravity sewer, treats it to reuse standards and then discharges it for irrigation purposes, industrial or commercial water usage or recharges groundwater using direct injection.



MEMPAC™ - MINI

The MEMPAC-MINI is a complete stainless steel wastewater treatment system for low flow and re-use applications. A compact version of other MEMPAC models, the typical footprint for the equipment skid is less than forty square feet.



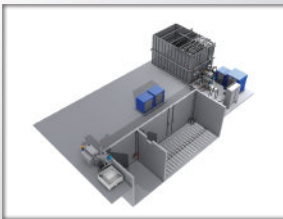
PRIMEPAC™

The PRIMEPAC is designed to significantly decrease BOD, balance pH and increase the capacity of an existing pond or treatment system without significant capital expenditures and operating expenses.



MEMPAC™-H (HYBRID)

The MEMPAC-H is a hybrid package designed for both municipal and industrial clients that need wastewater treatment equipment but either already have or intend to supply their own tankage and piping.



HEADPAC™

The HEADPAC Headworks System removes inorganics from waste streams through a variety of screening options. It arrives as a complete system ready to be installed with minimal site work.



CEMPAC™

Cloacina's CEMPAC incorporates Silicon Carbide (SiC) membranes into a package sludge thickening system. Clients can now thicken sludge without the use of polymers and their downstream effects!



TO LEARN MORE ABOUT CLOACINA'S
REVOLUTIONARY PRODUCT LINE VISIT:
CLOACINA.COM/CLOACINA-LINE-CARD

REPRESENTATIVE PROJECTS

CARNEROS WAREHOUSING - MEMPAC-I10

INFLUENT PARAMETERS

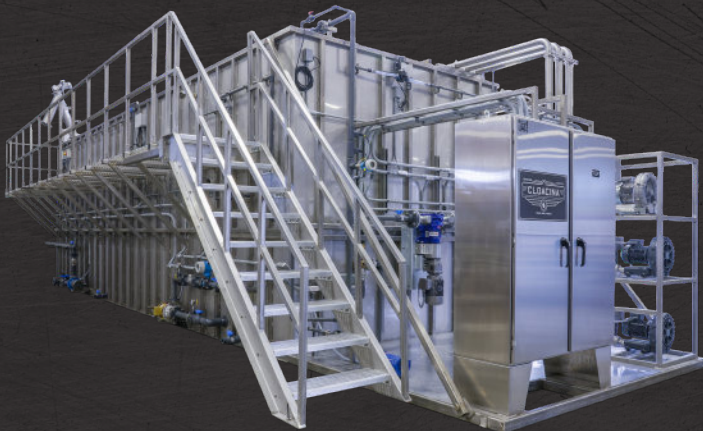
AVERAGE DAILY FLOW	10,000 GPD
BIOCHEMICAL OXYGEN DEMAND	5,000 MG/L
TOTAL SUSPENDED SOLIDS	600 MG/L
INFLUENT TYPE	WINERY WASTE

EFFLUENT QUALITY

BIOCHEMICAL OXYGEN DEMAND	<10 MG/L
TOTAL SUSPENDED SOLIDS	< 10 MG/L



SUNNYGEM - MEMPAC-I10



INFLUENT PARAMETERS

AVERAGE DAILY FLOW	10,000 GPD
BIOCHEMICAL OXYGEN DEMAND	1,800 MG/L
TOTAL SUSPENDED SOLIDS	750 MG/L
INFLUENT TYPE	FOOD PROCESSING

EFFLUENT QUALITY

BIOCHEMICAL OXYGEN DEMAND	< 10 MG/L
TOTAL SUSPENDED SOLIDS	< 10 MG/L

INFLUENT PARAMETERS

AVERAGE DAILY FLOW	500 GPD
BIOCHEMICAL OXYGEN DEMAND	8,000 MG/L
TOTAL SUSPENDED SOLIDS	800 MG/L
INFLUENT TYPE	WINERY WASTE

EFFLUENT QUALITY

BIOCHEMICAL OXYGEN DEMAND	< 10 MG/L
TOTAL SUSPENDED SOLIDS	< 10 MG/L

CAL POLY WINE AND VITICULTURE - MEMPAC-I5

