



Wastewater



prodeing[®]
Environment & Energy

Design, construction and operation of treatment plants for drinking water, process water, wastewater, water reuse, biogas desulphurization and energy cogeneration in municipal or industrial applications

- Domestic wastewater treatment systems WWTP for communities or municipalities to comply environmental regulations in discharges with traditional and state-of-the-art technologies.
- Physicochemical, aerobic, anaerobic, anoxic and N and P nutrients removal systems.
- The advanced technologies in municipal waters UBOX with mixed systems Anaerobic Aerobic AN-A, which combine biological systems with biogas purification. These designs require minimal footprint, are highly efficient in OPEX and do not emit offensive odors.
- Design, construction and commissioning of systems with equipment such as: SBR, MBR, MBBR, UASB, CAS activated sludge, trickling filters, etc.
- Compact, portable and modular domestic WWTP up to 5 lps.
- Leachate treatment from landfills.
- Design, consulting and auditing of municipal wastewater projects.
- Domestic wastewater treatment plants for urbanizations, citadels, shopping centers or condominiums.
- Water storage tanks construction in different materials such as: concrete, fiberglass (FRP) and metallic bolted or welded steel.
- Pumping systems, wastewater lifting stations.
- Domestic wastewater treatment systems for reuse.
- Solar panels for energy autonomy.


Domestic
wastewater

- Wastewater treatment systems for most of industry sectors, such as:

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|---------------------------------|---|------------------------|
| - Drinks and food | - Brewery | - Pulp and Paper |
| - Dairy products | - Meat processing | - Tuna/fishing |
| - Sauces and preserves | - Coffee processing | - Slaughter of animals |
| - Sugar mills and confectionery | - Vegetable oil extractors and refineries | - Among others |

To comply environmental regulations required in discharges with state-of-the-art technologies that have the best operating and total investment costs.

- BIOPAQ IC high-rate anaerobic reactor, which provides the best reliability in reducing organic load, requires minimal footprint, by design are sealed tanks to avoid biogas leaks and have the best operation and maintenance costs compared to other technologies on the market
- Execution of "turnkey projects", where synergy executing mechanical, electrical and civil works are the best option for our clients.
- Portable wastewater treatment plants with compact and modular options up to 5 lps.
- Adaptation of low-efficiency anaerobic reactors with high biomass loss to high-rate reactors with better performance.
- Supply of granular anaerobic sludge for high-rate reactors.
- Maintenance services (overhaul) or improvement (upgrade) of treatment plants.
- Water treatment for OIL & GAS sector, to treat produced waters for any disposal method.
- High conductivity water treatment with reverse osmosis or ion exchange resins
- Sludge treatment systems tailored to the client and portable for rent.


Non-
domestic
wastewater



BIOGAS
and Energy

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- Design, construction, installation and operation of cleaning systems for biogas generated in anaerobic wastewater treatment processes, solid waste biodigesters, sanitary landfills and other industrial applications that require biomethane cleaning and upgrading.
- Desulfurization systems: to remove hydrosulfuric acid (H₂S) from biogas stream, with state-of-the-art technology such as Thiopaq.
- Biogas drying to remove moisture until acceptable levels for correct equipment operation.
- Carbon dioxide (CO₂) removal to use it in different purposes.
- Siloxanes cleaning with highly effective methods.
- Design of biogas flaring equipment as emergency option in energetic valorization systems or as a combustion system in case of non-utilization.
- Supply of gas flow meter for storage and biogas use.



- Supply and equipment installation to use enriched biogas in:
 1. Electric power generation
 2. Thermal energy generation
 3. Biogas compression, pipelines and mixing systems with natural gas
 4. Biogas storage
- Equipment for electricity generation from biogas with its power components, energy delivery monitoring and control systems in transmission and network distribution synchronization.
- Cogeneration systems from biogas and heat recovery equipment useful in thermal energy processes.
- Trigeneration systems that produce electrical and thermal energy, either in heat and / or cold, from equipment that uses biogas as fuel.
- Renewable energies from solar panels for energy autonomy to reduce energy bill costs, improving return on investment.



WATER Drinking
and Process

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Drinking Water

- Conventional water treatment systems for human consumption in municipalities, which comply with national environmental standards for water for drinking water.
- Water purification by ascending / descending filtration systems with lower CAPEX and OPEX.
- Portable, modular and compact DWTP drinking water treatment plants up to 5 lps.
- Design, consulting and auditing of municipal drinking water projects.
- Drinking water or raw water storage tanks construction in different materials such as: concrete, fiberglass (FRP) and metallic bolted or welded steel.
- Design and construction of dam water intake, adduction systems, desanders, pumping systems and lifting stations.
- Filtration trains for removal of iron, manganese, arsenic and other special elements.
- Water treatment plants systems automation.
- Solar panels for energy autonomy .



Process Water

- Surface, well or rain water treatment systems with special physical-chemical characterizations.
- Designs made to guarantee reliability in water quality used in their processes, ease of operation to clients and optimizing footprint in industrial facilities.
- Execution of "turnkey projects", where synergy executing mechanical, electrical and civil works are the best option for our clients.
- Compact, portable and modular water treatment plants WTP, up to 5 lps.
- Ion exchange systems with resins.
- Water desalination systems.
- Ultrapure water with UF ultra filtration, NF nano filtration, RO reverse osmosis, EDI electro deionization membrane trains.
- Equipment supply such as: aeration towers, sedimentation modules, filter nozzles, gates and other accessories.
- Sludge treatment systems tailored to client needs and portable for renting.



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