Water is a scarce element which is nevertheless used extensively in almost any industry and municipality around the world. Making sure used water or wastewater is treated before released into the environment again is therefore a key-process for every self-respecting company and authority.

**Principle**
The new 3rd generation UNITANK® is a very performing and modern wastewater treatment system based on widely-known biological treatment processes:
Applications
UNITANK® is used for industrial and municipal wastewater treatment. It can be used as a "stand alone" installation or in combination with other UNITANK® configurations for a wide range of wastewater types.

It's extremely suitable for the treatment of most organic wastewaters from:

- the food industry such as breweries, softdrinks, sugar refineries, dairies, ...
- textile industry
- chemical industry
- petrochemical industry
- pharmaceutical industry

It goes without saying that 3rd generation UNITANK® can be perfectly designed for any type and amount of domestic sewage water.

Process Description
The UNITANK® BASIC configuration consists of one reactor divided into three compartments. These are hydraulically connected by an opening in the common connecting walls. Each compartment is equipped with an aeration system. The outer compartments also have an overflow system (SEOS) for effluent discharge, meaning that each outer compartment can serve either as aeration or sedimentation tank.

Wastewater can be fed into each compartment. Excess biosolids are pumped from the central compartment towards the biosolids conditioning tank.

UNITANK® BASIC operates according to a simple cycle consisting of two main phases and two short intermediate phases in sequence.

A typical feature is the absence of a separate sedimentation tank with scraper and the absence of a sludge recirculation. UNITANK® is a perfect match of the classic "fully mixed" activated sludge systems and the discontinuous working "batch" systems (SBR), taking the best of both technologies. UNITANK® can be built in a rectangular as well as in a circular shape. The latter version is either available in concrete or in steel.

The UNITANK® ADVANCED configuration is specially designed for advanced biological removal of nitrogen and/or phosphorus. The concept has one or two extra compartments (anoxic and/or anaerobic) and a system for internal recirculation of mixed liquor.

As for UNITANK® BASIC, the UNITANK® ADVANCED operates according to a cycle of two main phases and two short intermediate phases in sequence.

Features
- Advanced treatment, complying with strict effluent requirements
- Very compact installation - easy to integrate into any factory site
- Odour and noise free
- Fully automated, reliable and flexible operation
- Economical use of energy and chemicals
- Modular, easily extendable
- Basic concept, enabling quick design and construction
- Useful for a very wide range of wastewater types
- Very favourable price/quality ratio

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UNITANK® BASIC - Rectangular configuration - Pemex Refinery - Mexico.

UNITANK® ADVANCED - Circular configuration - Rousselot - Argentina.